

COUNTY OF TULARE
RESOURCE MANAGEMENT AGENCY



5961 South Mooney Boulevard
Visalia, CA 93277

Pixley Community Plan
General Plan Amendment (GPA 14-002)

Draft Environmental Impact Report

April 2015

Prepared by

County of Tulare Resource Management Agency
Planning Branch and
Environmental Planning Division

Table of Contents

Draft Environmental Impact Report Pixley Community Plan

Executive Summary

Project Description.....	page ES-2
Project Location	page ES-3
Project Components	page ES-5
Project Objectives & Benefits.....	page ES-6
Summary of Chapters	page ES-9
Statement of Potential Impacts & Mitigation Measures	page ES-16

Chapter 1 - Introduction

Project Summary.....	page 1-1
Local Regulatory Context.....	page 1-1
Scope and Methodology	page 1-1
Identification of Potentially Significant Impacts	page 1-3
Consideration of Significant Impacts.....	page 1-3
Mitigation Measures	page 1-4
Organization of the EIR.....	page 1-5
Environmental Review Process	page 1-7
Organizations Consulted.....	page 1-8
References.....	page 1-10

Chapter 2 - Project Description, Objectives, and Environmental Setting

Introduction	page 2-1
Project Location	page 2-1
Project Description.....	page 2-5
Surrounding Land Use	page 2-6
Zoning and Land Use.....	page 2-6
Regulatory Setting	page 2-9
Project Objectives	page 2-9

Chapter 3 - Impact Analysis

Aesthetics (3.1)	page 3.1-1
Agricultural Land and Forestry Resources (3.2)	page 3.2-1
Air Quality (3.3).....	page 3.3-1
Biological Resources (3.4).....	page 3.4-1
Cultural Resources (3.5)	page 3.5-1
Geology and Soils (3.6)	page 3.6-1
Greenhouse Gas Emissions (3.7)	page 3.7-1
Hazards and Hazardous Materials (3.8).....	page 3.8-1
Hydrology and Water Quality (3.9)	page 3.9-1
Land Use and Planning (3.10)	page 3.10-1
Mineral Resources (3.11).....	page 3.11-1
Noise (3.12).....	page 3.12-1
Population/Housing (3.13).....	page 3.13-1
Public Services (3.14)	page 3.14-1
Recreation (3.15).....	page 3.15-1
Transportation/Traffic (3.16)	page 3.16-1
Utilities/Service Systems (3.17).....	page 3.17-1
Mandatory Findings of Significance (3.18)	page 3.18-1

Chapter 4 - Summary of Cumulative Impacts

Cumulative Impact Analysis under CEQA.....	page 4-1
Past, Present, Probable Future Projects.....	page 4-3
Summary of Cumulative Impacts	page 4-9
References	page 4-15

Chapter 5 - Alternatives

Introduction.....	page 5-1
Factors Considered in Selection of Alternatives.....	page 5-3
Factors Considered in Analysis of Alternatives.....	page 5-6
Potential Impacts of Alternatives.....	page 5-7
Environmentally Superior Alternative.....	page 5-9
Alternatives Analysis	page 5-9

Chapter 6 - Economic, Social, & Growth Inducing Effects

Introduction.....	page 6-1
Environmental Setting	page 6-3
Economic Impacts.....	page 6-5
Economic Benefits of Proposed Project	page 6-5

Social Effects	page 6-8
Growth Inducement	page 6-17
References	page 6-22

Chapter 7 - Unmitigable Impacts

No Environmental Effects That Cannot be Avoided	page 7-1
No Irreversible Impacts.....	page 7-1
No Statement of Overriding Considerations	page 7-1
Project Benefit Statement	page 7-2
References	page 7-12

Chapter 8 - Mitigation Monitoring and Reporting Program

Mitigation Monitoring Program.....	page 8-1
------------------------------------	----------

Chapter 9 - EIR Preparation

Figures

Figure ES-1	Pixley UDB Map and Study Area
Figure 2-1	Vicinity Map
Figure 2-2	Study Area Boundary Map
Figure 2-3	Existing Pixley Zoning Map
Figure 2-4	Proposed Pixley Zoning Map
Figure 2-5	Existing Pixley Land Uses
Figure 2-6	Proposed Pixley Land Uses
Figure 3.2-1	Agriculture Preserve Map
Figure 3.2-2	2010 Farmland Mapping Monitoring Program (FMMP) Map
Figure 3.4-1	CNDDDB Recorded Occurrences of Special-Status Species within 5 miles of the Project Site
Figure 3.9-1	Water Balance
Figure 3.9-2	Pixley Public Utilities District Boundary and Sphere of Influence
Figure 3.9-3	Pixley Flood Zones Map
Figure 3.11-1	Mineral Resource Zones
Figure 3.12-1	Noise Receptor Locations
Figure 3.16-1	Complete Streets – Pixley
Figure 3.16-2	Transit Route Map – Southeast-County

Tables

EXECUTIVE SUMMARY CHAPTER

Table ES-1	Mitigation Monitoring Reporting Program Summary
-------------------	--

RESOURCES CHAPTERS

Table 3.1-1	General Plan Land Uses
Table 3.2-1	2012 Tulare County Lands under Williamson Act or Farmland Security Zone Contracts
Table 3.3-1	Air Quality Monitoring Summary
Table 3.3-2	Basin Attainment Status
Table 3.3-3	State & National Criteria Air Pollutant Standards, Effects, and Sources
Table 3.3-4	GAMAQI Thresholds of Significance for Criteria Pollutants
Table 3.3-5	Construction Emissions
Table 3.3-6	Operational Air Pollutant Emissions at Plan Horizon Year
Table 3.7-1	Emissions by Sector in 2007
Table 3.7-2	GHG Construction Emissions
Table 3.7-3	GHG Operational Emissions
Table 3.7-4	Total Change in GHG
Table 3.7-5	General Plan Policies having GHG Emission Reductions
Table 3.7-6	Consistency with Scoping Plan Reduction Measures
Table 3.8-1	Transport of Hazardous Waste
Table 3.8-2	Hazardous Waste and Substances Site List (Cortese). Pixley 2014
Table 3.9-1	Tulare Lake Hydrologic water balance for 1998-2005 (thousand acre-feet)
Table 3.9-2	Irrigation Districts in Tulare County
Table 3.9-3	Recorded Water Usage
Table 3.10-1	Pixley Projected Land Demand (commercial & industrial)
Table 3.12-1	Land Use Compatibility for Community Noise Environments
Table 3.12-2	Receptor Locations
Table 3.12-3	Existing Noise Levels
Table 3.12-4	Existing Noise Levels for Roadway Segments
Table 3.12-5	Traffic Noise Impacts for the Future Year 3032 Scenario
Table 3.12-6	Roadway Segment Noise Levels for the Future Year 2032 Scenario
Table 3.12-7	Estimated Existing and Future Traffic Noise Levels
Table 3.12-8	Vibration Source Levels for Construction Equipment
Table 3.12-9	Vibration Construction Equipment
Table 3.12-10	Construction Equipment Noise
Table 3.13-1	Pixley's Population (2000 & 2010)
Table 3.13-2	Projected Annual Growth Rates
Table 3.13-3	Pixley Population and Projections 2010-2030
Table 3.13-4	Pixley Housing Development Projections

Table 3.13-5	Regional Housing Needs Assessment Plan
Table 3.13-6	Tulare County’s Population
Table 3.13-7	Estimated Housing Units, Unincorporated Tulare County, 2012
Table 3.13-8	Housing Units (2000 & 2010)
Table 3.13-9	2007-2010 American Community Survey: Unit Types
Table 3.13-10	2007-2010 American Community Survey: Tenure
Table 3.13-11	Ownership and Housing Size (2000 & 2010)
Table 3.13-12	2009 Housing Conditions Survey
Table 3.13-13	Percentages of Substandard Housing Units, Unincorporated Communities in Tulare County 1192 – 2009
Table 3.13-14	2005 – 2009 American Community Survey: Age of Structures in Pixley
Table 3.13-15	Average Household Size (2000 & 2010)
Table 3.13-16	Vacancy Rate (2000 & 2010)
Table 3.13-17	2007 – 2011 American Community Survey: Renter Cost
Table 3.13-18	2007 – 2011 American Community Survey: Owner Cost
Table 3.14-1	Tulare County Fire Department’s 2013 Incident Reports
Table 3.14-2	Recreational Areas in Tulare County
Table 3.14-3	Tulare County Libraries
Table 3.14-4	Fire Staffing and Responses Time Standards
Table 3.15-1	National Park and Forest Facilities
Table 3.15-2	Recreational Areas in Tulare County
Table 3.16-1	Uninterrupted Traffic Flow Facilities LOS
Table 3.16-2	Interrupted Traffic Flow Facilities LOS
Table 3.16-3	Project’s Impact to Existing LOS
Table 3.16-4	Unsignalized Intersections LOS Definitions

SUMMARY OF CUMULATIVE IMPACTS

Table 4-1	Regional Population Projections and Planning Efforts
Table 4-2	Checklist Items with Less Than Significant Impacts with Mitigation
Table 4-3	Checklist Items with Less Than Significant Impacts
Table 4-4	Checklist Items with No Impacts

ALTERNATIVES CHAPTER

Table 5-1	Alternatives Potential Impact Analysis
Table 5-2	Alternatives Analysis

ECONOMIC, SOCIAL EFFECTS & GROWTH INDUCING CHAPTER

Table 6-1	Summary of Economic, Social and Growth Inducing Impacts
Table 6-2	Pixley’s Occupation Distribution
Table 6-3	Number of Establishments in Pixley
Table 6-4	2007-2011 American Community Survey: Unemployment

Table 6-5	2007-2011 American Community Survey: Income
Table 6-6	2007-2011 American Community Survey: Poverty
Table 6-7	Pixley Population Projections
Table 6-8	Pixley Housing Development Projections
Table 6-9	Current and forecasted Commercial and Industrial Land Use Demand
Table 6-10	Discussion of Potential Growth Inducing Impacts

MITIGATION MONITORING REPORTING PROGRAM CHAPTER

Table 8-1	Mitigation Monitoring Reporting Program
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Appendices

Appendix A: Air Quality Analysis Report

First Carbon Solutions, “County of Tulare – Pixley Community Plan Update Air Quality Analysis Report”, September 2014

Appendix B: Biological Resources Assessment

“Pixley Community Plan Update Biological Evaluation Tulare County, California” prepared by Live Oak Associates, Inc. May 2014

Appendix C: Cultural Record Searches

“Pixley Community Plan Update Cultural Resources Assessment Tulare County, California”, prepared by Sierra Valley Cultural Planning Inc., July 2014

Appendix D: Greenhouse Gas Analysis Report

First Carbon Solutions, “County of Tulare – Pixley Community Plan Update Green House Gas Analysis Report”, September 2014

Appendix E: Noise

“Pixley Noise Study Report” prepared by VRPA Technologies, November 2014

Appendix F: Traffic

“The Pixley Community Plan Traffic Impact Assessment (Pixley TIA) and Circulation Plan”, prepared by VRPA Technologies, June 2014

Appendix G: Water Supply and Quality

“Pixley Water Usage Memorandum”, page 1, prepared by Provost & Pritchard. February 2015

Appendix H: CEQA Notices (Notice of Preparation)

Executive Summary

This Draft Environmental Impact Report (EIR) will conclude that the proposed Pixley Community Plan Update (Project or proposed Project) will not result in any *Significant and Unavoidable Project or Cumulative Impacts*.

The EIR has been prepared consistent with the California Environmental Quality Act (CEQA). Its intent is to inform the public and the Tulare County Planning Commission of the potential environmental impacts the proposed Project would have on resources as specified in the CEQA Guidelines. This EIR, in its entirety, addresses and discloses potential environmental effects associated with construction and operation of the proposed Project, including direct, indirect, and cumulative impacts in the following resource areas:

Aesthetics	Agriculture and Forestry Resources
Air Quality	Biological Resources
Cultural Resources	Geology and Soils
Greenhouse Gas Emissions	Hazards and Hazardous Materials
Hydrology and Water Quality	Land Use and Planning
Mineral Resources	Noise
Population and-Housing	Public Services
Recreation	Transportation/Traffic
Utilities-and Service Systems	Mandatory Findings of Significance

Although the Mandatory Findings of Significance is not a resource per se, it is required as it essentially provides a summary conclusion of the Project's potential on Long Term Impacts, Cumulative Impacts, and Impacts to Species, Impacts to Historical Resources, and Impacts on Human Beings. It is at this discussion where the EIR concludes that no significant adverse environmental impacts from the Project will occur.

The California Environmental Quality Act (CEQA) requires that local government agencies, prior to taking action on projects over which they have discretionary approval authority, consider the environmental consequences of such projects. An Environmental Impact Report (EIR) is a public disclosure document designed to provide local and state governmental agency decision makers with an objective analysis of potential environmental consequences to support informed decision-making. This EIR (**State of California Clearinghouse #2012111059**) has been prepared by Tulare County in accordance with CEQA Guidelines §15120 through §15131 and §15161 regulating EIRs to evaluate the environmental consequences of the Pixley Community Plan General Plan Amendment, and Zone Ordinance Amendment, to discuss alternatives to the proposed Project, and to propose mitigation measures that will offset, minimize or avoid identified significant environmental impacts. This document focuses on issues determined to be potentially significant as discussed in the Initial Study and the public scoping process completed for this project, as well as comments received on the Notice of Preparation (NOP) circulated by Tulare County in February-March 2014.

PROJECT DESCRIPTION

On December 10, 2013 the Tulare County Board of Supervisors (BOS) approved, the Planning Branch proposal to update the Pixley Community Plan. The Pixley Community Plan Update General Plan Amendment (GPA 14-002) will become consistent with the recent approval of the General Plan 2030 Update, and will include the following primary goals and objectives.

- 1) Land Use and Environmental Planning - Promote development within planning areas next to the Regional Highway 99 Corridor in order to implement the following General Plan goals:
 - a) Update the affected Urban Development Boundaries to include newly expanded Enterprise Zone areas;
 - b) Ensure that the text and mapping of the Community Plan Designations and Zoning Reclassifications address various development matters such as encouraging Agricultural Adaptive Reuse activities, recognizing Non-Conforming Use activities, and facilitating Ministerial Permit approvals;
 - c) Encourage infill development within Urban Development Boundaries, thereby discouraging leapfrog development within Tulare County;
 - d) Reduce development pressure on agriculturally-designated lands within the Valley Floor, thereby encouraging agricultural production to flourish;
 - e) Reduce vehicle miles travelled throughout the County, thereby positively affecting air quality and greenhouse gas reduction; and
 - f) Help to improve the circulation, transit and railroad transportation system within this community, including, but not limited to, laying the groundwork for the construction of key projects such as Safe Routes to Schools, Complete Streets, and Bike Lanes/Pedestrian Paths.
- 2) Improvements for a “disadvantaged community” - It is expected that the community planning areas will be improved for the following reasons:
 - a) With faster project processing resulting from an updated community plan, increased employment opportunities are more likely to be provided by the private sector as proposed project developments can be approved as expeditiously as possible;
 - b) Increased housing grant awards are more likely to occur based on updated community plans that are consistent with the policies of the recently adopted (August 2013) General Plan Update and Housing Element; and
 - c) With updated community plans, enhanced infrastructure grant awards are more likely, thereby providing access to funding to install or upgrade road, water, wastewater, and storm water facilities.
- 3) Strengthening Relationship with TCAG - An important benefit of this expedited community plan process will be the opportunity for RMA to strengthen the County’s relationship with the Tulare County Association of Governments (TCAG) in that this and other community plans will help to facilitate the funding and implementation of several key transportation programs such as Safe Routes to Schools, Complete Streets, and Bike/Pedestrian Projects.

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Pixley Community Plan

By pursuing these transportation programs through a heightened collaborative process, the likelihood of getting actual projects in the ground will be realized faster than historically achieved. In doing so, these communities and others can become safer and healthier by providing a more efficient transportation network.

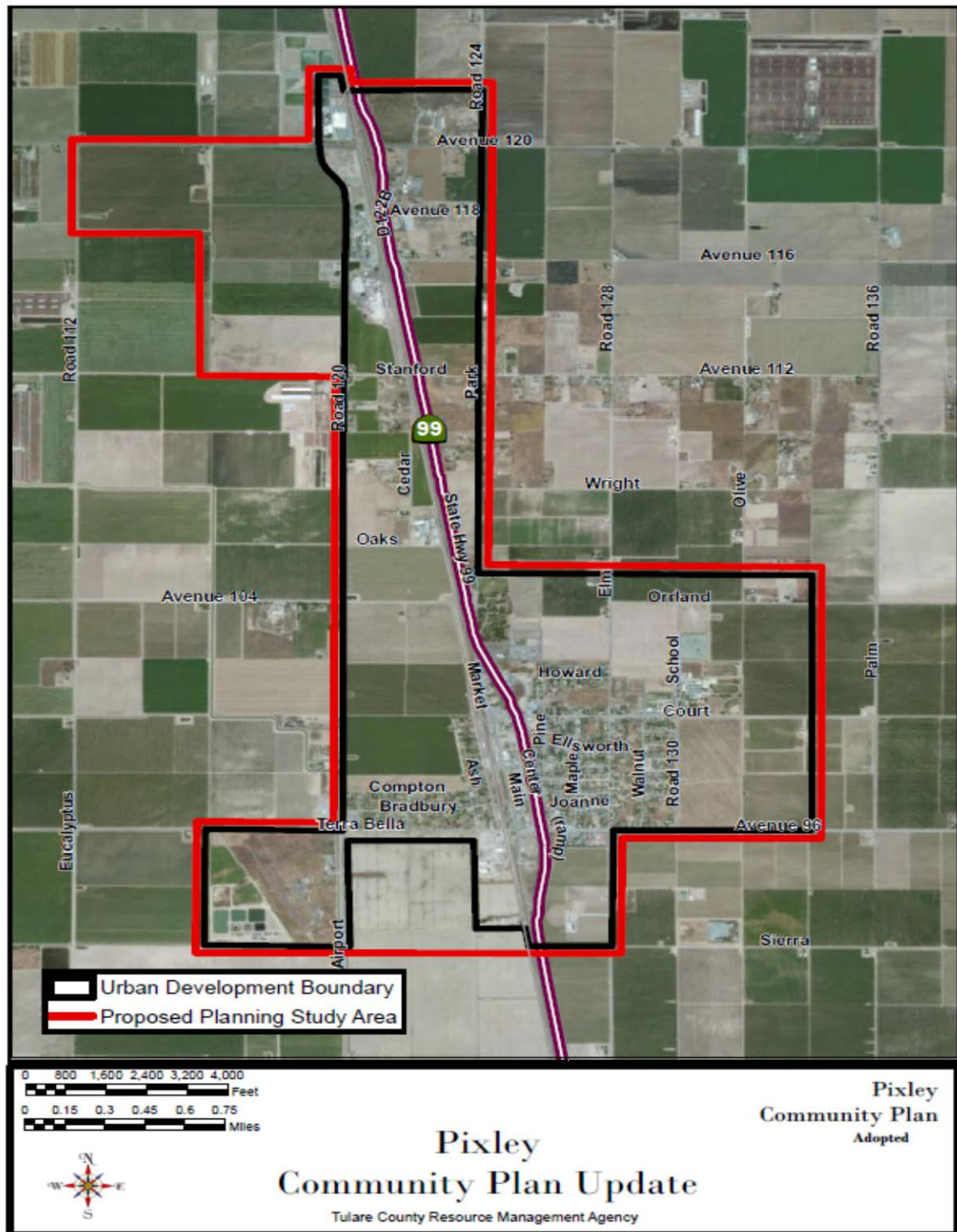
PROJECT LOCATION

Tulare County is located in central California in the heart of the San Joaquin Valley (See Figure ES-1). The County is composed of eight incorporated cities and numerous unincorporated communities. Most of the unincorporated communities and all of the cities are located on the Valley floor. The foothills and Sequoia and Kings Canyon National Parks form the eastern half of the County.

Pixley is a rural unincorporated community of 2,457 persons located in the southwest portion of Tulare County, approximately 25 miles south of the City of Visalia and approximately 63 miles south of Fresno adjacent to State SR 99. The community is predominantly a rural, agriculturally-related service center. It not only serves as an area where agriculturally oriented enterprises are located, it also serves as a bedroom community where area farm workers reside.

Pixley is located in the southwest portion of Tulare County between the communities of Tipton and Earlimart adjacent to State Route (SR) 99. Pixley is generally square in shape and is bisected in a north-south direction by SR 99, which runs east of and parallel to the Union Pacific Railroad (U.P.R.R.) tracks. Local roads that provide access across SR 99 include East Court Avenue, Davis Avenue, and Terra Bella Avenue (interchange). Local railroad crossings are located at Davis Avenue and Terra Bella Avenue. Pixley is an agriculturally oriented service community surrounded on all sides by lands in agricultural production, scattered rural residential uses, and vacant land. There is also a non-operational public airport (Harmon Field) southwest of the community. Industrial development is present north and south of the community. Most of the commercial development within Pixley is located between the U.P.R.R. tracks and SR 99.

Figure ES-1
Pixley UDB Map and Study Area



PROJECT COMPONENTS

The Pixley Community Plan Update components are described later in this section, and will become consistent with the General Plan 2030 Update, and will include the following primary goals and objectives.

- 4) **Land Use and Environmental Planning** - Promote development within planning areas next to the Regional Highway 99 Corridor in order to implement the following General Plan goals:
 - a) Update the affected Urban Development Boundaries to include newly expanded Enterprise Zone areas;
 - b) Ensure that the text and mapping of the Community Plan Designations and Zoning Reclassifications address various development matters such as encouraging Agricultural Adaptive Reuse activities, recognizing Non-Conforming Use activities, and facilitating Ministerial Permit approvals;
 - c) Encourage infill development within Urban Development Boundaries, thereby discouraging leapfrog development within Tulare County;
 - d) Reduce development pressure on agriculturally-designated lands within the Valley Floor, thereby encouraging agricultural production to flourish;
 - e) Reduce vehicle miles travelled throughout the County, thereby positively affecting air quality and greenhouse gas reduction; and
 - f) Help to improve the circulation, transit and railroad transportation system within this community, including, but not limited to, laying the groundwork for the construction of key projects such as Safe Routes to Schools, Complete Streets, and Bike Lanes/Pedestrian Paths.
- 5) **Improvements for a “disadvantaged community”** - It is expected that the community planning areas will be improved for the following reasons:
 - a) With faster project processing resulting from an updated community plan, increased employment opportunities are more likely to be provided by the private sector as proposed project developments can be approved as expeditiously as possible;
 - b) Increased housing grant awards are more likely to occur based on updated community plans that are consistent with the policies of the recently adopted (August 2013) General Plan Update and Housing Element; and
 - c) With updated community plans, enhanced infrastructure grant awards are more likely, thereby providing access to funding to install or upgrade road, water, wastewater, and storm water facilities.
- 6) **Strengthening Relationship with TCAG** - An important benefit of this expedited community plan process will be the opportunity for RMA to strengthen the County’s relationship with the Tulare County Association of Governments (TCAG) in that this and

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Pixley Community Plan

other community plans will help to facilitate the funding and implementation of several key transportation programs such as Safe Routes to Schools, Complete Streets, and Bike/Pedestrian Projects.

By pursuing these transportation programs through a heightened collaborative process, the likelihood of getting actual projects in the ground will be realized faster than historically achieved. In doing so, these communities and others can become safer and healthier by providing a more efficient transportation network.

PROJECT OBJECTIVES & BENEFITS

Objectives of the Project

The following objectives have been proposed by the Project developer, as presented in the “Project Description”.

- Objective 1: Implement the 2030 Tulare County General Plan
- Objective 2: Land Use and Environmental Planning
- Objective 3: Amend the Tulare County Zone Ordinance to include a Mixed-Use Zone, specifically to the Pixley Community Plan Area,
- Objective 4: Improvements for a “disadvantaged community”
- Objective 5: Tulare County 2030 General Plan – Climate Action Plan
- Objective 6: Strengthening Relationship with TCAG
- Objective 7: Efficient Business Operations
- Objective 8: Minimize Further Unproductive Capital Investment
- Objective 9: Minimize Costs
- Objective 9: Lessen Significant Impacts
- Objective 10: Physical Feasibility
- Objective 11: Project Specific Elements

Project Benefits:

Project Benefit # 1 – Implementation of AB 32

AB 32 has defined plans and programs for Year 2020, with the vision of Year 2050 that sets a goal to have an 80% reduction of greenhouse gas (GHG) emissions compared to the 1990 base year. AB 32 resulted in the adoption of the AB 32 Scoping Plan in 2008 that included a series of measures adopted by the California Air Resources Board (CARB). The key components of AB 32 are a reduction of (GHG) emission to 1997 models by the year 2020 and implements the objectives for the Year 2050 goal.

Project Benefit # 2: - Sustainability

Tulare County Climate Action Plan (CAP). In light of AB 32, the County of Tulare Board of Supervisors adopted its General Plan 2030 Update on August 28, 2012 and included a

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Pixley Community Plan

Climate Action Plan (or CAP). This Climate Action Plan identifies specific General Plan policies that encourage solid waste reduction. The proposed Project was developed to support and implement the efforts made by Tulare County to address climate change through its General Plan and Climate Action Plan.

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. Nine (9) General Plan policies that relate to Sustainability; below is a summary of some of those policies.

- PF-3.4 Mixed Use Opportunities
- LU-1.1 Smart Growth and Healthy Communities
- LU-1.8 Encourage Infill Development
- LU-7.15 Energy Conservation
- LU-7.16 Water Conservation
- LU-7.17 Shared Parking Facilities
- AQ-3.3 Street Design
- AQ-3.5 Alternative Energy Design
- AQ-3.6 Mixed Land Uses

TCAG Sustainable Communities Strategy (2014 Regional Transportation Plan)

AB 32 requires the California Air Resources Board to set greenhouse gas emission targets. Under SB 375 Metropolitan Planning Organizations like TCAG are required to create a Sustainable Communities Strategy consistent with AB 32 to regulate development in relation to vehicle miles traveled. TCAG included this strategy in the 2014 Regional Transportation Plan.

Project Benefit # 3 - Lessen Significant Impacts

Each alternative should be analyzed to assess the potential to reduce significant impacts. (On a cumulative basis, alternative sites generally require the construction of duplicate buildings. The creations of additional buildings require the use of additional resources, which on a cumulative basis would increase impacts to environment in general.)

Project Benefit # 4 - Physical Feasibility (Land Size and Configuration Constraints)

Physical feasibility is required because if a site for a particular alternative is too small, or if the components of the proposed Project cannot be configured on the site, then the alternative would not be feasible and should be eliminated from review.

Project Benefit # 5 - Project Specific Elements

Overall, all elements (including Project's, Rezoning of Properties within the Study Area were studied.

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Pixley Community Plan

- a) The County is proposing more than 6 land use and zoning districts. These changes are reflective of updating the designations to be consistent with the land uses within the General Plan and to bring existing non-compliant properties into conformity with the Tulare County Zoning Code. This required looking at the existing properties, meetings with the Community, and review of aerial maps and County records to analyze and decide on which properties were updated.
- b) Mixed Use Zone. The Pixley Community Plan includes a mixed use zone. This Community Plan Update requires the updating the Tulare County Zoning Code to reflect a mixed use zoning district specifically within the Pixley Community in compliance with the mixed use designation in the 2030 General Plan.
- c) Complete Streets. The Pixley Complete Streets Program was approved by the Board of Supervisors on September 9, 2014 for inclusion in the Circulation Element of this Community Plan Update. The Pixley Complete Streets Program has thoroughly analyzed the alternative forms of transportation, including transit, bicycle ways, and pedestrian circulation. The Complete Streets Program also contemplates use of alternative transportation and facilities for all users from the elderly to children and will be useful in proposing Safe Routes to School and other Public Benefit Projects in the Community.
- d) Expansion of the Urban Development Boundary (see **Figure ES-1**) to accommodate future industrial and commercial uses and to include the Pixley Public Utilities District service area boundary and sphere of influence.

Project Benefit # 6: - Implementation of Countywide General Plan Policies

Tulare County's General Plan Policies that are in with the Project's purpose and objectives are included in each CEQA Checklist Resource chapter contained in Chapters 3-1 thru 3-17. Two hundred thirty one (231) General Policies apply to this Project. Following is a summarized listing and numerical accounting of applicable General Policies by resource:

Tulare County's General Plan Policies that are in with the Project's purpose and objectives are included in each CEQA Checklist Resource chapter contained in Chapters 3-1 thru 3-17. Two hundred thirty (231) General Policies apply to this Project. Following is a summarized listing and numerical accounting of applicable General Policies by resource:

- I. AESTHETICS – 14 Policies
- II. AGRICULTURAL LANDS & FORESTRY RESOURCES – 12 Policies
- III. AIR QUALITY – 33 Policies
- IV. BIOLOGICAL RESOURCES – 12 Policies
- V. CULTURAL RESOURCES – 6 Policies
- VI. GEOLOGY AND SOILS – 5 Policies
- VII. GREENHOUSE GAS EMISSIONS – 6 Policies
- VIII. HAZARDS AND HAZARDOUS MATERIALS – 6 Policies

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Pixley Community Plan

IX.	HYDROLOGY AND WATER QUALITY - 24 Policies
X.	LAND USE AND PLANNING - 24 Policies
XI.	MINERAL RESOURCES – 12 Policies
XII.	NOISE – 14 Policies
XIII.	POPULATION AND HOUSING – 10 Policies
XIV.	PUBLIC SERVICES – 14 Policies
XV.	RECREATION – 7 Policies
XVI.	TRANSPORTATION/TRAFFIC – 14 Policies
XVII.	UTILITIES AND SERVICE SYSTEMS - 18 Policies

SUMMARY OF CHAPTERS

Chapter 1 Introduction

The Introduction discussion contained in Chapter 1 consists of a Project Summary; Identification of Potentially Significant Impacts; Consideration of Significant Impacts; Mitigation Measures; Organization of the EIR; and Environmental Review Process. Below is a summary of each of these components within Chapter 1:

Project Summary: The 2014 Pixley Community Plan Update is being updated to implement the 2030 Tulare County General Plan (2012). Among the entitlements to be updated are the General Plan Amendment, changes to Zoning District Boundaries, and the Zoning Code Ordinance creating a New Mixed Use Zoning District only for the Pixley Community. Consistent with the General Plan and the Study Area Boundary the land uses and alternative land use patterns were considered based on expansion to the Urban Development Boundary and their impacts to the environment. In addition, a Complete Streets Program was approved by the Board of Supervisors in September 2014 for inclusion in the Circulation Element of this Community Plan Update. The Pixley Complete Streets Program has thoroughly analyzed the alternative forms of transportation, including transit, bicycle ways, pedestrian circulation.

The Urban Development Boundary is proposed for northward expansion to include approximately +/- 280 acres of the 3 R Land's Parcels (6 parcels) and +/- 20 acres of the CDI expansion are. The UDB southerly expansion includes areas south of Terra Bella Ave., north of Sierra Ave. between Road 128 and Road 120 representing, +/- 200 acres. In total, this represents a UDB expansion of 504 acres, or 23%, which as part of the Community Plan process is expected and consistent with the General Plan and the General Plan Policies related to UDB's.

Local Regulatory Context: The Tulare County General Plan Update 2030 was adopted on August 28, 2012. As part of the General Plan an EIR was prepared as was a background report. The General Plan background report contained contextual environmental analysis for the General Plan. The Housing Element for 2009-2014 was adopted on May 8, 2012, and certified by State of California Department of Housing and Community Development on June 1, 2012.

Draft Environmental Impact Report
Pixley Community Plan

Identification of Potentially Significant Impacts: Indicates that the EIR must identify potentially significant impacts consistent with CEQA Guidelines Section 15002 (h).

Consideration of Significant Impacts: Indicates that the EIR must consider significant impacts consistent with CEQA Guidelines Section 15126.2,

Mitigation Measures: Indicates that the EIR is required to contain mitigation measures consistent with CEQA Guidelines Section 15126.4

Organization of the EIR: Summarizes the content of each Chapter in the EIR.

Environmental Review Process: Summarizes steps taken prior to release of the draft EIR such as the Notice of Preparation, Scoping Meeting, and comments received from persons and/or agencies in response to the Notice of Preparation.

Chapter 2 Project Description, Objectives, and Environmental Setting

In order to orient the reader to this EIR, Chapter 2 provides an Introduction which describes the need for this EIR. The 2014 Pixley Community Plan Update is being updated to implement the 2030 Tulare County General Plan (2012). Among the entitlements to be updated are the General Plan Amendment, changes to Zoning District Boundaries, and the Zoning Code Ordinance creating a New Mixed Use Zoning District or the Pixley Community. Total site acreage consists of approximately 1,992 acres.

In summary, Chapter 2 contains the following:

- Project Location: The Project will be located within the Urban Development Boundary of the unincorporated community of Pixley, California.
- Vicinity of Project Site: Southeast Tulare County as shown in Figure 2-3.
- Surrounding Land Uses: The project area contains a mix of agricultural, residential, commercial, industrial, and public facilities (e.g., schools, sheriff and fire department substations, library, community park, etc.)
- Project Setting: Describes the proposed use, summary of facilities of the Project, construction at the site, operational parameters, and a detailed description of the Project.
- Regulatory Setting: Applicable statutes, rules, regulations, standards, policies, etc. of the County of Tulare, local or special districts, utilities, and State and Federal government.
- Project Objectives: (See page ES-6)

Chapter 3 Impact Analysis [of Resources]

The CEQA Guidelines includes a Checklist of resources that must be addressed in an EIR. These resources are listed earlier on page ES-1. There are 17 specific resources and a Mandatory Findings of Significance discussed in Chapter 3. The resources are discussed in separate sections of Chapter 3 and each section is structured as follows:

Draft Environmental Impact Report
Pixley Community Plan

- Summary of Findings;
- Introduction, including Thresholds of Significance;
- Environmental Settings;
- Regulatory Settings such as applicable Federal, State, and Local laws, statutes, rules, regulations, and policies;
- Impact Evaluation including Project Impacts, Cumulative Impacts, Mitigation Measures, and Conclusion;
- Definitions and Acronyms; and
- References.

Some resources required expertise to evaluate the potential Project's impact to the resource. As such, qualified experts prepared studies, evaluations, assessments, modeling, etc. (studies) to quantify and/or qualify potential resource impacts. The studies are contained in Appendices A through G. Among the studies were air quality, biological, cultural (archaeological, historical, cultural), noise, and traffic.

Chapter 4 Summary of Cumulative Impacts

A critically important component of an EIR is the Cumulative Impacts discussion. Chapter 4 discusses a Cumulative Impact Analysis under CEQA; Past, Present, Probable Future Projects; and Summary of Cumulative Impacts. Whereas a project in and of itself may not result in an adverse environmental impact, its cumulative effect may. The CEQA Guidelines require a discussion of cumulative impacts per Section 15130. Discussion of Cumulative Impacts, and defines cumulative impacts per Section 15355, Cumulative Impacts, as "Cumulative impacts" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

With the exception of Air Quality, Greenhouse Gas Emissions, Biological, and Hydrological resources, Chapter 4 defines Tulare County as the geographic extent of the impact analysis. The geographic area is considered the appropriate extent because:

1. The proposed Project is geographically located in Tulare County and the County of Tulare is the Lead Agency;
2. Tulare County General Plan policies apply to the proposed Project;
3. Within the Pixley Community Plan are; and

The basis for other resource specific cumulative impact analysis includes:

- Land Use Impacts are: based on the County of Tulare 2030 General Plan, the Pixley Community Plan, (GPA 98-03, July 13, 1999), and the North Pixley Commercial/Industrial Specific Plan (PD-M-1&2, 1999);
- Air Quality and Green House Gas Emissions are: based on the San Joaquin Valley Air Basin;
- Mandatory Findings of Significance are: based on the San Joaquin Valley, the State California, and the Western United States;

Draft Environmental Impact Report
Pixley Community Plan

- Biological Resources are: based on the San Joaquin Valley, the State of California, and the Western United States; and,
- Hydrology is: based on the Tulare County, the Tulare Lake Basin, and, the Tule Lake Sub-basin aquifer.

The Summary of Cumulative Impacts section discusses mitigable and unmitigable impacts. Checklist Item criteria that would result in no impacts or less than significant impacts are discussed in the Chapter 3 and are not reiterated in Chapter 4. As noted in Chapter 4, there are no Significant and Unavoidable Impacts; and Less than Significant Impacts with Mitigation are summarized in Table 4-3 (Checklist Items with Less than Significant with Mitigation). There are a number of cumulative impacts that do not need mitigation; these impacts are listed in Table 4-4 (Checklist Items with Less than Significant Impacts). Chapter 8 contains a complete list of Mitigation Measures to be implemented as part of the proposed Project. Chapter 4 also contains a No Impacts summary in Table 4-5 (Checklist Items with No Impacts).

Chapter 5 Alternatives

CEQA Guidelines Section 15126.6 requires that a reasonable range of Alternatives to the proposed Project be discussed in the EIR. The proposed Project site is the superior location. The conclusion contained in Chapter 5 is based on the criteria established for the site, an evaluation of a reasonable potential site, and the 4 reasonable Alternatives. The 4 Alternatives evaluated are:

Alternative 1 No Project;
Alternative 2 Larger UDB Expansion;
Alternative 3 Proposed UDB; and
Alternative 4 No Expansion of UDB;

The proposed Alternatives were analyzed based on ten evaluation criteria which include each of the objectives of the Project and the assessment of the potential environmental impacts. Each Alternative considered did not meet all the evaluation criteria as identified in Table 5-4 (Alternatives Evaluation) contained in Chapter 5. Following is a summary of the Alternatives:

Alternative A - No Project Alternative – This Alternative would preclude the approval and implementation of the Pixley Community Plan. Under the *No Project Alternative*, the County of Tulare would be required to make planning and capital improvement decisions based on the Urban Boundaries Element, adopted in 1974, and the Tulare County Area General Plan, adopted in 1966. Both planning documents are outdated as they relate to the Pixley area. They do not provide suitable directions for the public, Planning Commission or Board of Supervisors in regards to where future growth should be directed, the alignment of new roadways, the location of various public buildings and grounds, the design of new development, and the means of financing new growth; particularly regarding the ability to qualify for public funding from agencies such as Caltrans, Community Development Block Grants, Valley Air District, and other agencies which require adopted plans and/or matching funds. In addition, development in the planning area would continue to be regulated by the

Draft Environmental Impact Report
Pixley Community Plan

county's zone plan for the Pixley area. Two agricultural zones, A-1 and AE, and the RA (rural residential) zone district, pose long-term planning difficulties for Pixley in that these districts allow for the creation of small lot, one-half to five acres in area. This kind of development in and around Pixley prevents the effective utilization of land for urban growth and conservation of agricultural land. The *No Project Alternative* will not eliminate the environmental impacts in this EIR. Population growth and urban development will still occur in the Pixley planning area, even without the adoption of the Community Plan.

Without the adoption of the Community Plan, the County of Tulare will be required to accommodate future urban development through numerous general plan amendments, zone changes, and conditional use permits. This approach to managing urban development in a community is disjointed, inefficient, does not comply with the objectives and benefits of the project in creating a sustainable, integrated, and healthy community. For these reasons, the *No Project Alternative* has been rejected by the County of Tulare

- ***Alternative B - The Large UDB Expansion*** - provides for an increase in the area beyond the existing and proposed UDB (urban development boundary) line. The UDB line would encompass additional land (approximately 486 total acres) in the southwest quadrant of the planning area (approximately 230 acres); an area north of Harmon Field (approximately 103 acres); and an area west and north of the proposed UDB (approximately 153 acres) between Avenue 104 and Terra Bella Avenue (Avenue 96) west of Airport Street (Road 120) and east of the Pixley Irrigation District Canal.

Land within this expanded UDB line would be designated as Light Industrial Reserve for the 230 acre area; Mixed Use for the 103 acre area, and Residential Reserve for the 153 acre area. Industrial development could involve a food processing facility, a manufacturing operation, or some type of facility that could generate energy (for example, biomass or ethanol plant). The location for this potential industrial area is desirable in that rail service is available as well as access to and from State Route 99. A limiting factor could be the capacity of the treatment plant to handle effluent generated by these industrial uses. Water may be another limiting factor, especially if an industrial user requires water from the Pixley Public Utilities District.

This alternative would result in an additional 486 acres being removed from agricultural uses when compared to the proposed Pixley Community Plan. This potential conversion of agricultural land to industrial uses will have a more substantial impact on the environment than the proposed Community Plan. More substantial environmental impacts associated with converting 486 acres of agricultural uses (mostly in the form of farmland) to industrial uses would also likely result in significant impacts to water supply, wastewater treatment, traffic, and air quality. Lastly, the additional 486 acres far exceeds the projected 343 acres of commercial and industrial land uses need as shown on Table 6.9 in Chapter 6 Economic, Social, & Growth Inducing Effects of this DEIR. As indicated in Chapter 6, the forecasted need is based on growth rates from the Harmon Field Preliminary Industrial Development Plan.

For the reasons stated above, *Alternative B Larger UDB Expansion* has been rejected by the County of Tulare.

- ***Alternative C. Proposed Land Use Plan*** – (UDB Expansion to 2,596 acres) Under this scenario, the proposed plan recommends mixed land overlay zoning and amending the underlying land use to light industrial the former Harmon Field Airport site and at the southwest corner of Avenue 112 and Road 124 for consistency and compatibility with existing infrastructure. This scenario also primarily directs residential growth north and east of existing residential development and, to a lesser extent, west of SR 99. Industrial growth would continue to be directed to the north (primarily west of SR 99) and includes light industrial reserve designations to the south (primarily west of SR 99 and, to a lesser extent, east of SR 99). The Harmon Field area would be designated as mixed use overlay on Industrial designated land. The growth focus is advocated by residents of the community.

Alternative D. No Expansion of UDB – Under this scenario, there would be no expansion of the current Pixley UDB which has been in existence since 1999. This alternative would be limited to addressing land use and zoning inconsistencies. This approach is too narrow to meet the economic development objectives contained in the draft Pixley Community Plan and would not accommodate land uses needed to further planned growth. Without expanding the UDB, the Plan fails to meet the objectives or the benefits of the Community Plan. For the reasons stated above, *Alternative D No Expansion of UDB* has been rejected by the County of Tulare.

As summarized in **Table 5-1** in Chapter 5 Alternatives, the environmentally superior alternative for this project would be *Alternative C* (Proposed UDB). Other than the *No Project Alternative*, this is the only alternative that would reduce the significance of most environmental impacts associated with the proposed Project. As described above, build-out of *Alternative D* would convert less open space and prime agricultural farmland than the proposed project. This alternative also has the potential to result in fewer impacts to water and sewer; however, it does not meet the economic development objectives of the draft Pixley Community Plan. As such, the proposed Project is the environmentally superior alternative.

Chapter 6 Economic, Social, & Growth Inducing Impacts

This Chapter discusses the Economic, Social, and Growth Inducing effects of the Project. It contains **Table 6-1** which provides the CEQA requirements and a summary of the impact analysis as follows:

- **Economic Effects** - The proposed Project will not result in adverse impacts to the region. It will result in increases in economic benefits to the region over time (i.e., the 2032 planning period). As development occurs, the Project will result in temporary construction-related jobs and permanent jobs in retail, highway commercial, services, and light industrial sectors. Overall, the proposed Project will result in employment of additional persons.

Draft Environmental Impact Report
Pixley Community Plan

- Social Effects - The proposed Project will not result in a disproportionate effect on minority populations, low income populations, or Native Americans. The proposed Project does not pose any adverse environmental justice issues that would require mitigation.
- Growth Inducing Effects - The proposed Project will not result in significant growth inducing impacts. The intent of the Project is to provide opportunities, such as Mixed-Use land use designations, to stimulate economic development to meet the needs of existing and future community and nearby residents. Development along the State Route 99 Corridor is anticipated to capture pass through traffic. As such, the Project will not result in new housing. Growth inducing impacts will be Less Than Significant.

The overall conclusion contained in Chapter 6 is implementation of the proposed Project will result in less than significant environmental impacts, either individually or cumulatively, caused by either economic, social, or growth inducing effects.

Chapter 7 Unmitigable Impacts

This discussion provides determinations consistent with CEQA Guidelines Sections 15126.2 (b) Environmental Effects That Cannot Be Avoided, 15126.2 (c) Irreversible Impacts, and Statement of Overriding Considerations.

This Project will not result in significant and unavoidable impacts. All impacts have been found to be less than significant, or have been mitigated to a level considered less than significant. Further, the resources committed to the Project are standard resources necessary for the construction and operation of the proposed anaerobic digester and ancillary operations. Lastly, based on the analysis contained in the No Environmental Impacts That Cannot Be Avoided and the No Irreversible Impact sections contained in Chapter 7, a Statement of Overriding Considerations is not necessary. The Project's merits and objectives are discussed in the Project Description and are found to be consistent with the intent of the County of Tulare and its 2030 General Plan and the Pixley Community Plan. Thus, the Project's benefits would outweigh any unavoidable and unmitigable impacts to warrant a Statement of Overriding Considerations.

Chapter 8 Mitigation Monitoring and Reporting Program

A summary of the Mitigation Monitoring and Reporting Program is contained at the end of this Executive Summary. CEQA Section 21081.6 requires adoption of a reporting or monitoring program for those measures placed on a project to mitigate or avoid adverse effects on the environment. The mitigation monitoring and reporting program is required to ensure compliance during a project's implementation. Consistent with CEQA requirements, the Mitigation Monitoring and Reporting Program contained in this EIR include the following elements:

Draft Environmental Impact Report
Pixley Community Plan

- **Action and Procedure.** The mitigation measures are recorded with the action and procedure necessary to ensure compliance. In some instances, one action may be used to verify implementation of several mitigation measures.
- **Compliance and Verification.** A procedure for compliance and verification has been outlined for each action necessary. This procedure designates who will take action, what action will be taken and when, and to whom and when compliance will be reported.
- **Flexibility.** The program has been designed to be flexible. As monitoring progresses, changes to compliance procedures may be necessary based upon recommendations by those responsible for the Mitigation Monitoring and Reporting Program. As changes are made, new monitoring compliance procedures and records will be developed and incorporated into the program.

Chapter 9 EIR Preparation

Key persons from the County of Tulare and the consulting firms that contributed to preparation of the Draft Environmental Impact Report (Draft EIR) are identified.

- The sitting Tulare County Board of Supervisors; the sitting Planning Commission; Jean Rousseau, County Administrative Officer; Tulare County Resource Management Agency Director/Environmental Assessment Officer, Michael C. Spata; Michael Washam, Assistant Director-Planning; Hector Guerra, Chief, Environmental Planning Division; Aaron Bock, MCRP, J.D., LEED AP, Chief, Planning & Projects Processing Division and staff (Jessica Willis, Planner IV; and Susan Simon, Planner III, Environmental Planning Division; David Bryant, Planner IV and Sung H. Kwon, MCRP, MBA, AICP, Planner IV Planning & Projects Processing Division) are noted.
- This EIR could not have been accomplished without the consulting firms that prepared technical studies to support the analyses contained herein. First Carbon Solutions prepared the Air Quality and Greenhouse Gases studies, Live Oak Associates, Inc. prepared the Biological Evaluation; Sierra Valley Cultural Planning prepared the Cultural Resources Assessment; and Noise Study Report and Traffic Impact Assessments were prepared by VRPA Technologies, Inc.

SUMMARY OF POTENTIAL IMPACTS & MITIGATION MEASURES

The following is a summary of the Mitigation Monitoring and Reporting Program (MMRP). The MMRP can be found in its entirety in Chapter 8 of the DEIR

Draft Environmental Impact Report
Pixley Community Plan

Table 8-1
Mitigation Monitoring Reporting Program

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
Biological							
San Joaquin Kit Fox							
4-1	(Pre-construction Surveys). Pre-construction surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance, construction activities, and/or any project activity likely to impact the San Joaquin kit fox. These surveys will be conducted in accordance with the USFWS Standard Recommendations. The primary objective is to identify kit fox habitat features (e.g. potential dens and refugia) on the project site and evaluate their use by kit foxes through use of remote monitoring techniques such as motion-triggered cameras and tracking medium. If an active kit fox den is detected within or immediately adjacent to the area of work, the USFWS and CDFW shall be contacted immediately.	Prior to a project's initiation	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
4-2	<i>(Avoidance)</i> . Should an active kit fox den be detected within or immediately adjacent to the area of work, a disturbance-free buffer will be established around the den in consultation with the USFWS and CDFW, to be maintained until a qualified biologist has determined that the den is no longer occupied. Known kit fox dens may not be destroyed until they have been vacant for a period of at least three days, as demonstrated by use of motion-triggered cameras or tracking medium, and then only after obtaining take authorization from the USFWS.	Prior to initiation of construction	Issuance of building permit				
4-3	<i>(Minimization)</i> . Construction activities shall be carried out in a manner that minimizes disturbance to kit foxes. Minimization measures include, but are not limited to: restriction of project-related vehicle traffic to established roads, construction areas, and other designated areas; inspection and covering of structures (e.g., pipes), as well as installation of escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of rodenticide	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	and herbicide use; and proper disposal of food items and trash. Construction activities shall be carried out in a manner that minimizes disturbance to kit foxes. Minimization measures include, but are not limited to: restriction of project-related vehicle traffic to established roads, construction areas, and other designated areas; inspection and covering of structures (e.g., pipes), as well as installation of escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of rodenticide and herbicide use; and proper disposal of food items and trash.						
4-4	(Employee Education Program). Prior to the start of construction the applicant will retain a qualified biologist to conduct a tailgate meeting to train all construction staff that will be involved with the project on the San Joaquin kit fox. This training will include a description of the kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	protection under the Endangered Species Act; and a list of the measures being taken to reduce impacts to the species during project construction and implementation.						
4-5	(Mortality Reporting). The Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified in writing within three working days in case of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and any other pertinent information.	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			
Burrowing Owl							
4-6	(Pre-construction Surveys). A pre-construction survey for burrowing owls will be conducted by a qualified biologist within 30 days of the onset of project-related activities involving ground disturbance or heavy equipment use. The survey area will include all suitable habitat on and within 500 feet of project impact areas, where accessible.	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
4-7	<i>(Avoidance of Active Nests).</i> If pre-construction surveys and subsequent project activities are undertaken during the breeding season (February 1-August 31) and active nest burrows are located within or near project impact areas, a 250-foot construction setback will be established around active owl nests, or alternate avoidance measures implemented in consultation with CDFW. The buffer areas will be enclosed with temporary fencing to prevent construction equipment and workers from entering the setback area. Buffers will remain in place for the duration of the breeding season, unless otherwise arranged with CDFW. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described below.	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			
4-8	<i>Passive Relocation of Resident Owls).</i> During the non-breeding season (September 1-January 31), resident owls occupying burrows in project impact areas may be passively relocated to alternative habitat in	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	accordance with a relocation plan prepared by a qualified biologist. Passive relocation may include one or more of the following elements: 1) establishing a minimum 50 foot buffer around all active burrowing owl burrows, 2) removing all suitable burrows outside the 50 foot buffer and up to 160 feet outside of the impact areas as necessary, 3) installing one-way doors on all potential owl burrows within the 50 foot buffer, 4) leaving one-way doors in place for 48 hours to ensure owls have vacated the burrows, and 5) removing the doors and excavating the remaining burrows within the 50 foot buffer.			Wildlife Service			
American Badger							
4-9	(Preconstruction Surveys). A preconstruction survey for American badgers will be conducted by a qualified biologist within 30 days of the onset of project-related activities involving ground disturbance or heavy equipment use. Preconstruction surveys will be conducted in all	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	suitable denning habitat of the individual project area.						
4-10	(Avoidance). Should an active natal den be identified during the preconstruction surveys, a disturbance-free buffer will be established around the den and maintained until a qualified biologist has determined that the cubs have dispersed or the den has been abandoned.	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			
<i>Nesting Raptors and Migratory Birds (including Swainson's Hawk, White-tailed Kite, and Loggerhead Shrike)</i>							
4-11	(Avoidance). In order to avoid impacts to nesting raptors and migratory birds, individual projects within the PPSA will be constructed, where possible, outside the nesting season, or between September 1 st and January 31 st .	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			
4-12	(Preconstruction Surveys). If project activities must occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys for active raptor and migratory bird nests within 30 days of the onset of these activities. The survey will include the proposed	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	work area(s) and surrounding lands within 500 feet. If no nesting pairs are found within the survey area, no further mitigation is required.						
4-13	(Establish Buffers). Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged.	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			
Roosting Bats							
4-14	(Temporal Avoidance). To avoid potential impacts to maternity bat roosts, removal of buildings and trees should occur outside of the period between April 1 and September 30, the time frame within which colony-nesting bats generally assemble, give birth, nurse their young, and ultimately disperse.	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			
4-15	Preconstruction Surveys). If removal of buildings or trees is to occur between April 1 and September 30 (general maternity bat			County of Tulare Economic Development &			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	roost season), then within 30 days prior to these activities, a qualified biologist will survey affected buildings and trees for the presence of bats. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for nighttime emergence of bats from roost sites. If no bats are observed to be roosting or breeding, then no further action would be required, and construction could proceed.			Planning and Public Works Department and Cal Fish and Wildlife Service			
4-16	(Minimization). If a non-breeding bat colony is detected during preconstruction surveys, the individuals will be humanely evicted via partial dismantlement of trees or structures prior to full removal under the direction of a qualified biologist to ensure that no harm or “take” of any bats occurs as a result of construction activities.	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			
4-17	(Avoidance of Maternity Roosts). If a maternity colony is detected during preconstruction surveys, a disturbance-free buffer will be established around the colony and remain in place until a qualified biologist deems that the nursery is no longer active. The disturbance-free buffer will range from 50 to 100 feet as determined by the biologist.	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
Cultural Resources							
5-1	In the event that historical, archaeological or paleontological resources are discovered during site excavation, the County shall require that grading and construction work on the Project site be immediately suspended until the significance of the features can be determined by a qualified archaeologist or paleontologist. In this event, the property owner shall retain a qualified archaeologist/paleontologist to provide recommendations for measures necessary to protect any site determined to contain or constitute an historical resource, a unique archaeological resource, or a unique paleontological resource or to undertake data recover, excavation analysis, and curation of archaeological or paleontological materials. County staff shall consider such recommendations and implement them where they are feasible in light of Project design as previously approved by the County.		Retention of professional paleontologist/ ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Economic Development & Planning and Public Works Department			
5-2	The property owner shall avoid and minimize impacts to paleontological resources. If a potentially significant paleontological resource is encountered during ground disturbing activities, all construction within a 100-foot radius of the find shall immediately cease until a	Prior to issuance of grading permits Ongoing monitoring	Retention of professional paleontologist/ ongoing monitoring/ submittal of Report of	County of Tulare Economic Development & Planning and Public Works Department			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	qualified paleontologist determines whether the resources requires further study. The owner shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall notify the Tulare County Resource Management Agency and the Project proponent of the procedures that must be followed before construction is allowed to resume at the location of the find. If the find is determined to be significant and the Tulare County Resource Management Agency determines avoidance is not feasible, the paleontologist shall design and implement a data recovery plan consistent with applicable standards. The plan shall be submitted to the Tulare County Resource Management Agency for review and approval. Upon approval, the plan shall be incorporated into the Project.	during subsurface excavation	Findings, if applicable				
5-3	Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public	Prior to issuance of grading permits Ongoing monitoring during subsurface excavation	Retention of professional paleontologist/ ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Economic Development & Planning and Public Works Department			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program						
Mitigation Measure	Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
<p>Resources Code Sec. 5097). In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:</p> <ol style="list-style-type: none"> 1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until: <ol style="list-style-type: none"> a. The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and b. If the coroner determines the remains to be Native American: <ol style="list-style-type: none"> i. The coroner shall contact the Native American Heritage Commission within 24 hours. ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American. iii. The most likely descendent may make recommendations 						

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program						
Mitigation Measure	Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
<p>to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or</p> <p>2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.</p> <p>a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.</p> <p>b. The descendant fails to make a recommendation; or</p> <p>c. The landowner or his authorized representative rejects the recommendation of the</p>						

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	descendent.						
Hazards & Hazardous Material							
8-1	Prior to issuance of building permits for any new use within the Project area that proposes to use large quantities of hazardous materials, the County of Tulare shall review the project application for compatibility with existing and planned land uses. The review process shall focus on the location of existing and planned sensitive receptors (e.g., residential uses and schools) and whether the proposed hazardous material usage would expose such uses to unacceptable safety risks. If necessary, the County of Tulare will condition the proposed hazardous materials user to incorporate appropriate protection measures (e.g., containment facilities)	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare			
Hydrology & Water Quality							
9-1	Continue to require metering of all domestic and commercial connections. Develop and maintain a progressive, tiered water rate to encourage water conservation.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare Economic Development & Planning and Public Works Department			
9-2	Retrofit homes with water-efficient faucets, showers and toilets.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare Economic Development & Planning and			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
				Public Works Department			
9-3	Limit permissible landscape area for each residence to 2,500 square feet or less.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare Economic Development & Planning and Public Works Department			
9-4	Adopt limited outdoor watering days and hours (now in force statewide, as of August 1, 2014, by order of the Department of Water Resources) Adopt limited outdoor watering days and hours (now in force statewide, as of August 1, 2014, by order of the Department of Water Resources)	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare Economic Development & Planning and Public Works Department			
9-5	Mandate use of native and drought-tolerant species for all landscaping.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare Economic Development & Planning and Public Works Department			
9-6	Acquire a new surface water supply that could be shown to benefit the basin and offset the pumping that comes with growth.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare Economic Development & Planning and Public Works Department			
9-7	Where applicable, future developments within the Project area shall obtain a	Prior to issuance of	Issuance of building	County of Tulare Economic			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	General Stormwater Industrial Facility Permit from the Central Valley Water Board, prior to obtaining building permits for construction or expansion. The facility operator(s) shall prepare, retain on site, and implement a SWPPP as part of the General Stormwater Industrial Facility Permit.	grading permits.	permit.	Development & Planning and Public Works Department			
		Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare Economic Development & Planning and Public Works Department			
		Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare Economic Development & Planning and Public Works Department			
Noise							
12-1	The hours of future construction shall be limited to 7:00 a.m. to 7:00 p.m. Monday through Friday or weekends (if allowed by the County) where residential uses are within 200 feet of where the activity is taking place. If residential uses are beyond 300 feet limited work hours are not required.	Prior to issuance of grading permits and on-going monitoring. Citizen reports of	Issuance of building permit.	County of Tulare Economic Development & Planning and Public Works Department			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
		noise beyond hours of construction allowance.					

Draft Environmental Impact Report
Pixley Community Plan

Introduction

Chapter 1

PROJECT SUMMARY

The 2014 Pixley Community Plan Update (General Plan Amendment No. 14-002) is being updated to implement the 2030 Tulare County General Plan (2012). Among the entitlements to be updated are the General Plan Amendment, changes to Zoning District Boundaries, and the Zoning Code Ordinance creating a New Mixed Use Zoning District only for the Pixley Community Plan Update. Consistent with the General Plan and the Study Area Boundary the land uses and alternative land use patterns were considered based on expansion to the Urban Development Boundary and their impacts to the environment. In addition, a Complete Streets Program was approved by the Board of Supervisors in September 2014 for inclusion in the Circulation Element of this Community Plan Update. The Pixley Complete Streets Program has thoroughly analyzed the alternative forms of transportation, including transit, bicycle ways, pedestrian circulation.

The County is proposing six (6) land use and zoning districts, including a Mixed Use zone. Also in the process is an update to the Zoning Code to include a mixed use zoning district in compliance with the mixed use designation in the 2030 General Plan. The Preferred Alternative does not discuss any changes to the Urban Development Boundary (UDB). However, the environmentally and economically superior alternative (Alternative B), contemplates expanding the Urban Development Boundary northward to include approximately +/- 280 acres of the 3 R Land's Parcels (6 parcels) and +/- 20 acres of the California Dairies Inc. The Urban Development Boundary expansion southerly includes areas south of Terra Bella Avenue, north of Sierra Avenue between Road 128 and Road 120, representing +/- 200 acres.

LOCAL REGULATORY CONTEXT

The Tulare County General Plan Update 2030 was adopted on August 28, 2012. As part of the General Plan an EIR was prepared, as was a background report. The General Plan background report contained contextual environmental analysis for the General Plan. The Housing Element for 2009-2014 was adopted on May 8, 2012, and certified by State of California Department of Housing and Community Development on June 1, 2012.

SCOPE AND METHODOLOGY

The County of Tulare has determined that a project level EIR fulfills the requirements of CEQA and is the appropriate level of evaluation to address the potential environmental impacts of the proposed project. A project level EIR is described in Section 15161 of the State CEQA Guidelines as one that examines the environmental impacts of a specific development project. A project level EIR must examine all phases of the project, including planning, construction, and operation.

Draft Environmental Impact Report
Pixley Community Plan

This document addresses environmental impacts to the level that they can be assessed without undue speculation (CEQA Guidelines Section 15145). This *Draft Environmental Impact Report (DEIR)* acknowledges this uncertainty and incorporates these realities into the methodology to evaluate the environmental effects of the Plan, given its long term planning horizon. The degree of specificity in an EIR corresponds to the degree of specificity of the underlying activity being evaluated (CEQA Guidelines Section 15146). Also, the adequacy of an EIR is determined in terms of what is reasonably feasible, in light of factors such as the magnitude of the project at issue, the severity of its likely environmental impacts, and the geographic scope of the project (CEQA Guidelines Sections 15151 and 15204(a)).

CEQA Guidelines Section 15002 (a) specifies that, “[t]he basic purposes of CEQA are to:

- (1) Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities.
- (2) Identify ways that environmental damage can be avoided or significantly reduced.
- (3) Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- (4) Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.”¹

CEQA Guidelines Section 15002 (f) specifies that, “[a]n environmental impact report (EIR) is the public document used by the governmental agency to analyze the significant environmental effects of a proposed project, to identify alternatives, and to disclose possible ways to reduce or avoid the possible environmental damage... An EIR is prepared when the public agency finds substantial evidence that the project may have a significant effect on the environment... When the agency finds that there is no substantial evidence that a project may have a significant environmental effect, the agency will prepare a “Negative Declaration” instead of an EIR...”²

Pursuant to CEQA Guidelines Section 15021 Duty to Minimize Environmental Damage and Balance Competing Public Objectives:

- “(a) CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible.
- (1) In regulating public or private activities, agencies are required to give major consideration to preventing environmental damage.
 - (2) A public agency should not approve a project as proposed if there are feasible alternatives or mitigation measures available that would substantially lessen any significant effects that the project would have on the environment.
- (b) In deciding whether changes in a project are feasible, an agency may consider specific economic, environmental, legal, social, and technological factors.
- (c) The duty to prevent or minimize environmental damage is implemented through the findings required by Section 15091.

¹ CEQA Guidelines, Section 15002 (a)

² CEQA Guidelines, Section 15002 (f)

- (d) CEQA recognizes that in determining whether and how a project should be approved, a public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social factors and in particular the goal of providing a decent home and satisfying living environment for every Californian. An agency shall prepare a statement of overriding considerations as described in Section 15093 to reflect the ultimate balancing of competing public objectives when the agency decides to approve a project that will cause one or more significant effects on the environment.”³

IDENTIFICATION OF POTENTIALLY SIGNIFICANT IMPACTS

CEQA Guidelines Section 15002 (h) addresses potentially significant impacts, to wit, “CEQA requires more than merely preparing environmental documents. The EIR by itself does not control the way in which a project can be built or carried out. Rather, when an EIR shows that a project could cause substantial adverse changes in the environment, the governmental agency must respond to the information by one or more of the following methods:

- (1) Changing a proposed project;
- (2) Imposing conditions on the approval of the project;
- (3) Adopting plans or ordinances to control a broader class of projects to avoid the adverse changes;
- (4) Choosing an alternative way of meeting the same need;
- (5) Disapproving the project;
- (6) Finding that changes in, or alterations, the project are not feasible;
- (7) Finding that the unavoidable, significant environmental damage is acceptable as provided in Section 15093.”⁴ (See Chapter 7)

This *Draft EIR* identifies potentially significant impacts that would be anticipated to result from implementation of the proposed Project. Significant impacts are defined as a “substantial or potentially substantial, adverse change in the environment” (Public Resources Code Section 21068). Significant impacts must be determined by applying explicit significance criteria to compare the future Plan conditions to the existing environmental setting (CEQA Guidelines Section 15126.2(a)).

The existing setting is described in detail in each resource section of Chapter 3 of this document and represents the most recent, reliable, and representative data to describe current regional conditions. The criteria for determining significance are also included in each resource section in Chapter 3 of this document.

CONSIDERATION OF SIGNIFICANT IMPACTS

Pursuant to CEQA Guidelines Section 15126.2, “[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of

³ Ibid., Section 15021

⁴ 2013 CEQA Guidelines, Section 15002 (h)

preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”⁵

MITIGATION MEASURES

CEQA Guidelines Section 15126.4 specifies that:

- “(1) An EIR shall describe feasible measures which could minimize significant adverse impacts, including where relevant, inefficient and unnecessary consumption of energy.
 - (A) The discussion of mitigation measures shall distinguish between the measures which are proposed by project proponents to be included in the project and other measures proposed by the lead, responsible or trustee agency or other persons which are not included but the lead agency determines could reasonably be expected to reduce adverse impacts if required as conditions of approving the project. This discussion shall identify mitigation measures for each significant environmental effect identified in the EIR.
 - (B) Where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. Formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way.
 - (C) Energy conservation measures, as well as other appropriate mitigation measures, shall be discussed when relevant. Examples of energy conservation measures are provided in Appendix F.
 - (D) If a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed but in less detail than the significant effects of the project as proposed. (*Stevens v. City of Glendale* (1981) 125 Cal.App.3d 986.)

⁵ Ibid., Section 15126.2

- (2) Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments. In the case of the adoption of a plan, policy, regulation, or other public project, mitigation measures can be incorporated into the plan, policy, regulation, or project design.
- (3) Mitigation measures are not required for effects which are not found to be significant.
- (4) Mitigation measures must be consistent with all applicable constitutional requirements, including the following:
 - (A) There must be an essential nexus (i.e. connection) between the mitigation measure and a legitimate governmental interest. *Nollan v. California Coastal Commission*, 483 U.S. 825 (1987); and
 - (B) The mitigation measure must be “roughly proportional” to the impacts of the project. *Dolan v. City of Tigard*, 512 U.S. 374 (1994). Where the mitigation measure is an ad hoc exaction, it must be “roughly proportional” to the impacts of the project. *Ehrlich v. City of Culver City* (1996) 12 Cal.4th 854.
- (5) If the lead agency determines that a mitigation measure cannot be legally imposed, the measure need not be proposed or analyzed. Instead, the EIR may simply reference that fact and briefly explain the reasons underlying the lead agency's determination.”⁶

ORGANIZATION OF THE EIR

Executive Summary

The Executive Summary Chapter summarizes the analysis in this Draft Environmental Impact Report.

CHAPTER 1

Provides a brief introduction to the Environmental Analysis Required by the California Environmental Quality Act (CEQA).

CHAPTER 2

Describes the proposed Project. The chapter also includes the objectives of the proposed Project. The environmental setting is described and the regulatory context within which the proposed project is evaluated is outlined.

CHAPTER 3

Includes the Environmental Analysis by each resource. Within each resource the analysis includes the following:

Summary of Findings

Each chapter notes a summary of findings.

⁶ 2013 CEQA Guidelines, Section 15126.4

Introduction

Each chapter will begin with a summary of impacts, pertinent CEQA requirements, applicable definitions and/or acronyms, and thresholds of significance.

Environmental Setting

Each environmental resource analysis in Chapter 3 will outline the environmental setting for that resource. In addition, methodology is explained when complex analysis is required.

Regulatory Setting

Each environmental analysis resource in Chapter 3 will outline the regulatory setting for that resource.

Project Impact Analysis

Each evaluation criteria will be reviewed for Project-specific potential impacts.

Cumulative Impact Analysis

Each evaluation criteria will be reviewed for cumulative potential impacts.

Mitigation Measures

Mitigation Measures will be proposed as deemed applicable.

Conclusion

Each conclusion will outline whether recommended mitigation measures will, based on the impact evaluation criteria, substantially reduce or eliminate potentially significant environmental impacts. If impacts cannot be mitigated, unavoidable significant impacts will be identified.

Definitions/Acronyms

Some sub-chapters of Chapter 3 will have appropriate definitions and/or acronyms.

References

Reference documents used in each chapter are listed at the end of each sub-chapter.

CHAPTER 4

Summarizes the cumulative impacts addressed in Chapter 3.

CHAPTER 5

Describes and evaluates alternatives to the proposed Project. The proposed Project is compared to each alternative, and the potential environmental impacts of each are analyzed.

CHAPTER 6

Evaluates or describes CEQA-required subject areas: Economic Effects, Social Effects, and Growth Inducement.

CHAPTER 7

Evaluates or describes CEQA-required subject areas: Environmental Effects That Cannot be Avoided, Irreversible Impacts, and (if required) a Statement of Overriding Considerations.

CHAPTER 8

Provides a Mitigation Monitoring and Reporting Program that summarizes the environmental issues, the significant mitigation measures, and the agency or agencies responsible for monitoring and reporting on the implementation of the mitigation measures.

CHAPTER 9

Outlines persons preparing the EIR and sources utilized in the Analysis.

APPENDICES

Following the text of this *Draft EIR*, several appendices and technical studies have been included as reference material.

ENVIRONMENTAL REVIEW PROCESS

Notice of Preparation

Pursuant to CEQA Guidelines §15082, the Notice of Preparation (NOP) for the proposed Project was circulated for review and comment on February 24, 2014 and circulated for a 30-day comment period ending March 26, 2014. Tulare County RMA received several comments on the NOP. Comments were received from the following agencies, individuals, and/or organizations:

- Ken Chiang, P. E., State of California Public Utilities Commission (March 27, 2014)
- David Warner, San Joaquin Valley Air Pollution Control District, Central Region, (March 20, 2014 - District CEQA Ref. No. 20140099)

Draft Environmental Impact Report Pixley Community Plan

A copy of the Amended NOP is included in **Appendix G**, including copies of letters received in response to the Original and Amended NOP.

Consistent with CEQA Guidelines Section 15103, “Responsible and Trustee Agencies, and the Office of Planning and Research shall provide a response to a Notice of Preparation to the Lead Agency within 45 days after receipt of the notice. If they fail to reply within the 45 days with either a response or a well justified request for additional time, the lead agency may assume that none of those entities have a response to make and may ignore a late response.”⁷

The Scoping Meeting was duly noticed in a newspaper of general circulation (Visalia Times-Delta) and held on March 6, 2014 at 3:00 PM at the County of Tulare Resource Management Agency’s Main Conference Room.

At this scoping meeting, oral comments were received from Mr. Ralph Friend.

Section 15093 of the State CEQA Guidelines requires decision-makers to balance the benefits of a proposed project against any unavoidable adverse environmental effects of the project. If the benefits of the project outweigh the unavoidable adverse environmental effects, then the decision-makers may adopt a statement of overriding considerations, which are finding that the environmental effects are acceptable in light of the project’s benefits to the public.

Draft Environmental Impact Report

As noted in CEQA Guidelines Section 15105 (a), a Draft EIR that is submitted to the State Clearinghouse shall have a minimum review period of 45 days, unless a shortened review period is approved for exceptional circumstances (CEQA, Section 15205(d)). This Draft Environmental Impact Report will be circulated publicly for a **45 day review** period beginning on **April 10, 2015**. Following completion of the 45-day public review period ending **May 26, 2015**, staff will prepare responses to comments and a Final Environmental Impact Report will be prepared. The Final Environmental Impact Report will then be forwarded to the County of Tulare Board of Supervisors for consideration of certification. A Notice of Determination will then be filed with the County of Tulare Clerk and also forwarded to OPR.

ORGANIZATIONS CONSULTED

1) State and Federal:

- a) California Department of Conservation, Division of Land Resource Protection
- b) California Department of Fish and Wildlife Region #4
- c) California Water Resources Control Board #5
- d) California Department of Toxic Substance Control
- e) California Environmental Protection Agency

⁷ 2013 CEQA Guidelines, Section 15103

Draft Environmental Impact Report
Pixley Community Plan

- f) California Department of Transportation (Caltrans) District #6
- g) Native American Heritage Commission
- h) United States Fish & Wildlife Service

2) **Local and Regional:**

- a) Tulare County Resource Management Agency:
 - i) Public Works Branch
 - ii) Flood Control
 - iii) Fire
 - iv) Planning Branch: Project Review, Environmental Planning, and Building Divisions
- b) Health and Human Services Agency, Environmental Health Services Division
- c) Goshen Community Services District
- d) Tulare County Association of Governments (TCAG)
- e) Pixley Union School District
- f) Tulare County Fire Warden
- g) Tulare County Sheriff's Office
- h) San Joaquin Valley Unified Air Pollution Control District (Air District)
- i) Regional Water Quality Control Board, Central Region
- j) Southern California Edison
- k) Southern California Gas Company

REFERENCES

CEQA Guidelines

Project Description, Setting, & Objectives

Chapter 2

INTRODUCTION

In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, Section 21000 et seq.), the County of Tulare Resource Management Agency (RMA) is preparing this Environmental Impact Report (EIR) to evaluate the potential environmental effects associated with a comprehensive update to the Pixley Community Plan.

Pixley's current Community Plan was adopted in 1992, with minor modifications adopted in 1997 (via GPA 92-06), is over 26 years old. The 1997 Pixley Community Plan is a collection of goals, objectives, and policies for the physical development of the Community. The Pixley Urban Development Boundary (UDB), which includes the North Pixley Specific Plan area, consists of approximately 1,992 acres (See Figure 2-1).

"On December 21, 1999, The Board of Supervisors adopted a Specific Plan for the Planned Commercial/Industrial area north of Pixley as identified in the adopted Pixley Community Plan (GPA 92-06), and a rezoning plan (PZ 99-013) for those properties affected by the adoption of the Pixley Specific Plan. The Specific Plan includes development standards, and the timing, location, and funding of infrastructure needed to support future development in that area in accordance with California Government Code sections 65450 through 65456. The adopted rezoning plan designates approximately 693 acres for PD-M-1 (Planned Development, Light Manufacturing) and 34 acres for PD-M-2 (Planned Development, Heavy Manufacturing)."¹

The Governor's Office of Planning and Research (OPR) States in their Planner's Guide "Specific Plans differ from area and Community Plans in the following ways:

- A specific Plan is not a component of a General Plan. It is a separately adopted general Plan implementation document.
- Specific Plans are described by statute (§65450 et seq.). There are no statutes that specify the contents of area Plans.
- The purpose of a specific Plan is the "systematic implementation" (§65450) of the general Plan. Community Plans have an emphasis on implementation. They are used to refine the policies of the general Plan relating to a defined geographic area.
- Although a specific Plan must be "prepared, adopted, and amended in the same manner as General Plans" (§65453), it may be adopted by resolution or ordinance and may be amended as often as necessary. Community and area Plans may only be adopted or amended by resolution, and the number of amendments is subject to the limits set out in §65358 for general Plan amendments."

¹ Tulare County Planning Commission Memorandum, May 3, 2000.

The primary purpose of this Plan is to outline Community goals regarding physical development and to promote the general welfare of the Community. This Plan serves as a general guide for both public and private sector decisions affecting the Community and provides for the overall direction, density, and type of growth consistent with, and to meet with, the needs of the Community.

PROJECT LOCATION

Tulare County is located in central California in the heart of the San Joaquin Valley. The County is composed of eight incorporated cities and numerous unincorporated communities. Most of the unincorporated communities and all of the cities are located on the Valley floor. The foothills and Sequoia and Kings Canyon National Parks form the eastern half of the County.

A rural unincorporated community of 3,310 persons² in Tulare County, Pixley is located in the southwest portion of the County between the unincorporated communities of Tipton and Earlimart along State Route (SR) 99. It is approximately 12 miles south of the City of Tulare and about 25 south of Visalia, the County Seat. The community is predominantly a rural, agriculturally related service center. It not only serves as an area where agriculturally oriented businesses are located, it also serves as a bedroom community where many of the area's farm workers reside.

Pixley is generally square in shape and is bisected in a north-south direction by SR 99, which runs east of and parallel to the Southern Pacific Railroad (S.P.R.R.) tracks. Local roads that provide access across SR 99 include East Court Avenue, Davis Avenue, and Terra Bella Avenue (interchange). Local railroad crossings are located at Davis Avenue and Terra Bella Avenue. Pixley is an agriculturally oriented service Community surrounded on all sides by lands in agricultural production, scattered rural residential uses, and vacant land. There is also a public airport southwest of the Community. Industrial development is present north and south of the Community. Most of the commercial development within Pixley is located between the S.P.R.R. tracks and SR 99.

² 2010 U.S. Census, see <http://www.census.gov/2010census/popmap/ipmtext.php?fl=06:0657512>

**Figure 2-1
Vicinity Map**

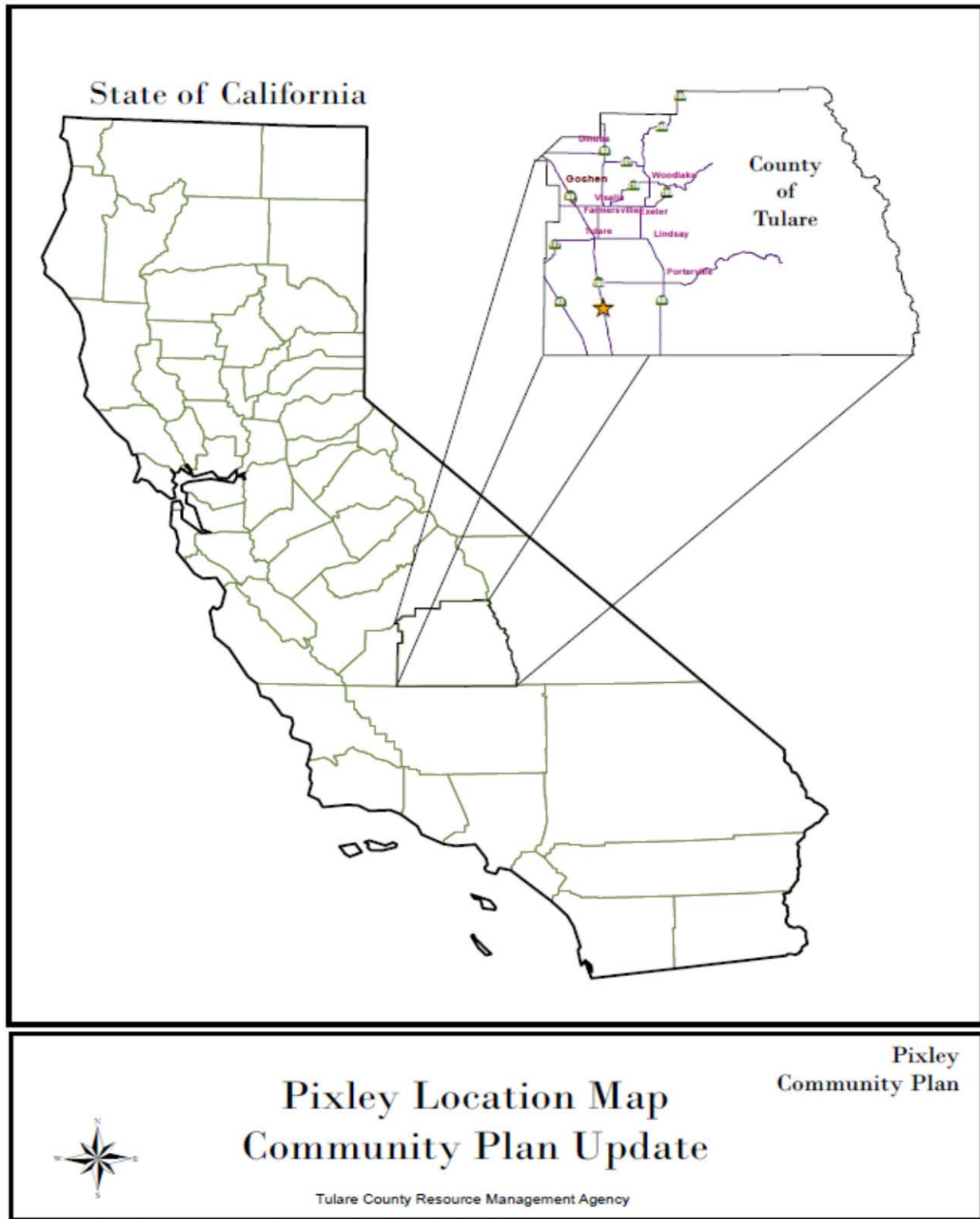
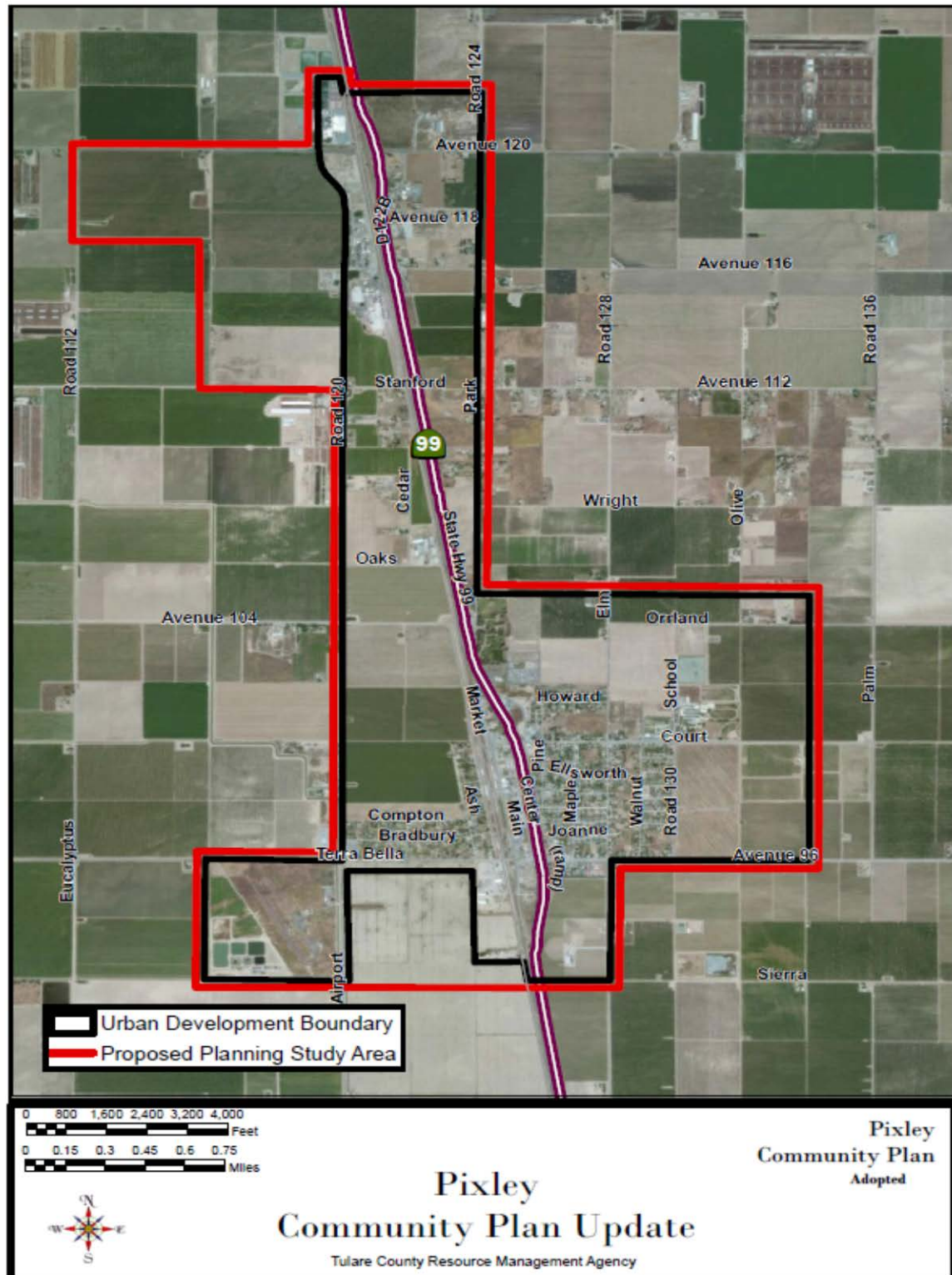


Figure 2-2
Study Area Boundary Map



PROJECT DESCRIPTION

On December 10, 2013, the Tulare County Board of Supervisors (BOS) approved the Planning Branch proposal to update the Pixley Community Plan. The Pixley Community Plan Update (General Plan Amendment No. 14-002) will become consistent with the recent approval of the General Plan 2030 Update, and will include the following primary goals and objectives.

- 1) Land Use and Environmental Planning - Promote development within planning areas next to the Regional State Route 99 Corridor in order to implement the following General Plan goals:
 - a) Update the affected Urban Development Boundaries to include newly expanded Enterprise Zone areas
 - b) Ensure that the text and mapping of the Community Plan Designations and Zoning Reclassifications address various development matters such as encouraging Agricultural Adaptive Reuse activities, recognizing Non-Conforming Use activities, and facilitating Ministerial Permit approvals;
 - c) Encourage infill development within Urban Development Boundaries, thereby discouraging leapfrog development within Tulare County;
 - d) Reduce development pressure on agriculturally-designated lands within the Valley Floor, thereby encouraging agricultural production to flourish;
 - e) Reduce vehicle miles travelled throughout the County, thereby positively affecting air quality and greenhouse gas reduction; and
 - f) Help to improve the circulation, transit and railroad transportation system within this community, including, but not limited to, laying the groundwork for the construction of key projects such as Safe Routes to Schools, Complete Streets, and Bike Lanes/Pedestrian Paths.
- 2) Improvements for a “disadvantaged community” - It is expected that the community planning areas will be improved for the following reasons:
 - a) With faster project processing resulting from an updated community plan, increased employment opportunities are more likely to be provided by the private sector as proposed project developments can be approved as expeditiously as possible;
 - b) Increased housing grant awards are more likely to occur based on updated community plans that are consistent with the policies of the recently adopted (August 2013) General Plan Update and Housing Element; and
 - c) With updated community plans, enhanced infrastructure grant awards are more likely, thereby providing access to funding to install or upgrade road, water, wastewater, and storm water facilities.
- 3) Strengthening Relationship with TCAG - An important benefit of this expedited community plan process will be the opportunity for RMA to strengthen the County’s relationship with the Tulare County Association of Governments (TCAG) in that this and other community plans will help to facilitate the funding and implementation of several key

transportation programs such as Safe Routes to Schools, Complete Streets, and Bike/Pedestrian Projects.

By pursuing these transportation programs through a heightened collaborative process, the likelihood of getting actual projects in the ground will be realized faster than historically achieved. In doing so, these communities and others can become safer and healthier by providing a more efficient transportation network.

SURROUNDING LAND USE

The Project area contains a mix of agricultural, residential, commercial, industrial, and public facilities (e.g., schools, sheriff and fire department substations, library, community park, etc.).

The Project area is completely surrounded by agricultural land uses. Orchards, vineyards, row crops and a dairy are immediately adjacent to or nearby the community. According to the Tulare County General Plan Update, agricultural products are one of the County's most important resources. Prime Farmland and Farmland of local Importance is located within and adjacent to the Pixley Plan Area. Pixley Airport (Harmon Field) is located adjacent to and southwest of the community. The Pixley National Wildlife Refuge is located approximately 4.5 miles southwest of the community.

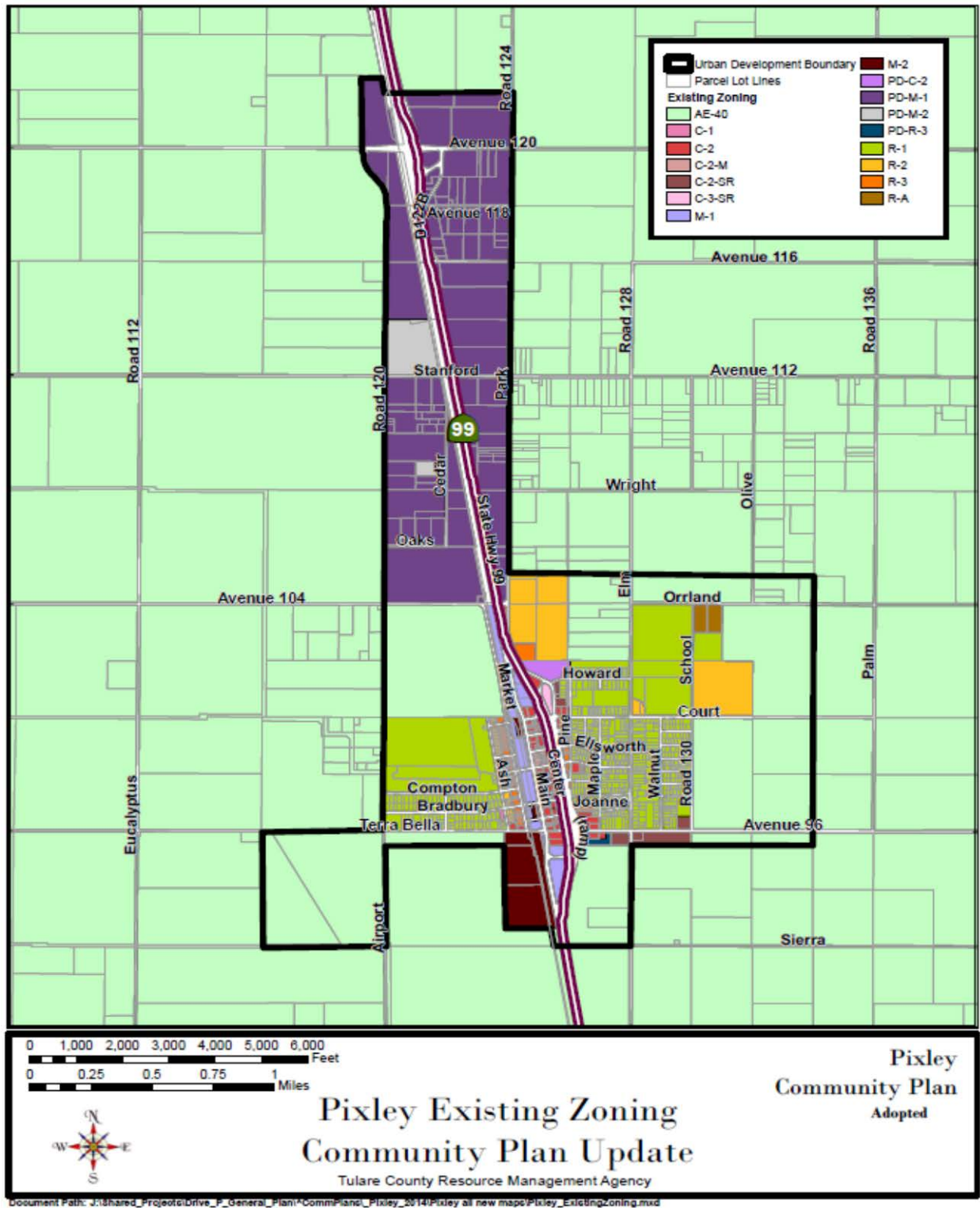
ZONING AND LAND USE

Existing Zoning is shown in **Figure 2-3**. Table 3.1-1 provides acreage for each respective zone. The proposed Project will result in minimal zone changes. Areas that will be added to the Urban Development Boundary will likely be reclassified from agricultural zoning to Light Industrial zoning. These areas are south of Avenue 120 west of SR 99, south of Avenue 96 east of SR 99, and adjacent to Pixley Airport southwest of Avenue 96 and Airport Road (See **Figure2-4** Proposed Zoning Map).

Existing Pixley Community Plan Land Use Designations are shown in **Figure 2-5**. **Table 3.1-1** provides acreage for each respective planned land use. Areas that will be added to the Urban Development Boundary will likely be re-designated from agricultural land uses to Light Industrial or Industrial Reserve. These areas are south of Avenue 120 west of SR 99, south of Avenue 96 east of SR 99, and adjacent to Pixley Airport southwest of Avenue 96 and Airport Road.

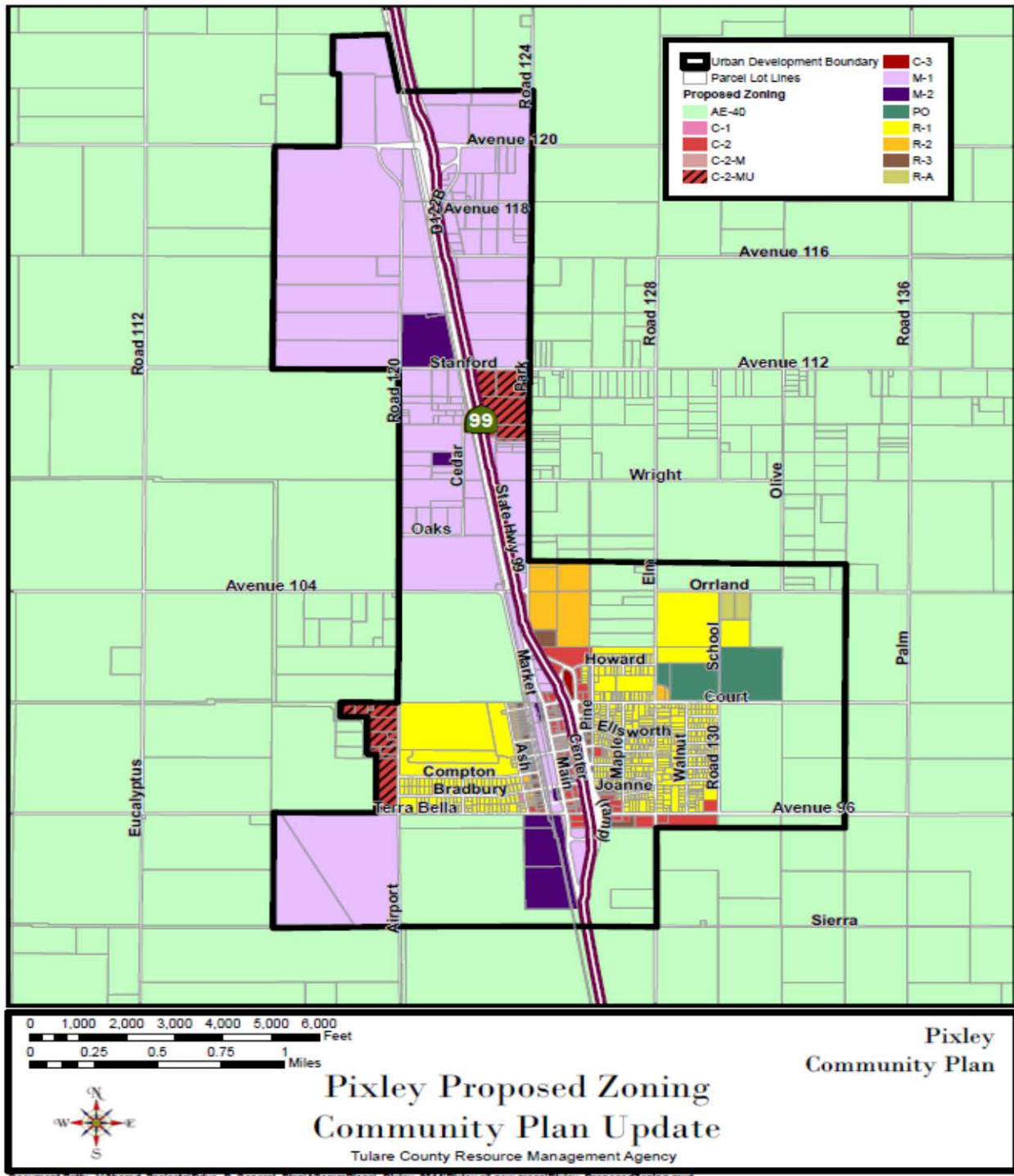
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Pixley Community Plan

Figure 2-3
Existing Pixley Zoning Map



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Pixley Community Plan

Figure 2-4
Proposed Pixley Zoning Map



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Pixley Community Plan

Figure 2-5
Existing Pixley Land Uses

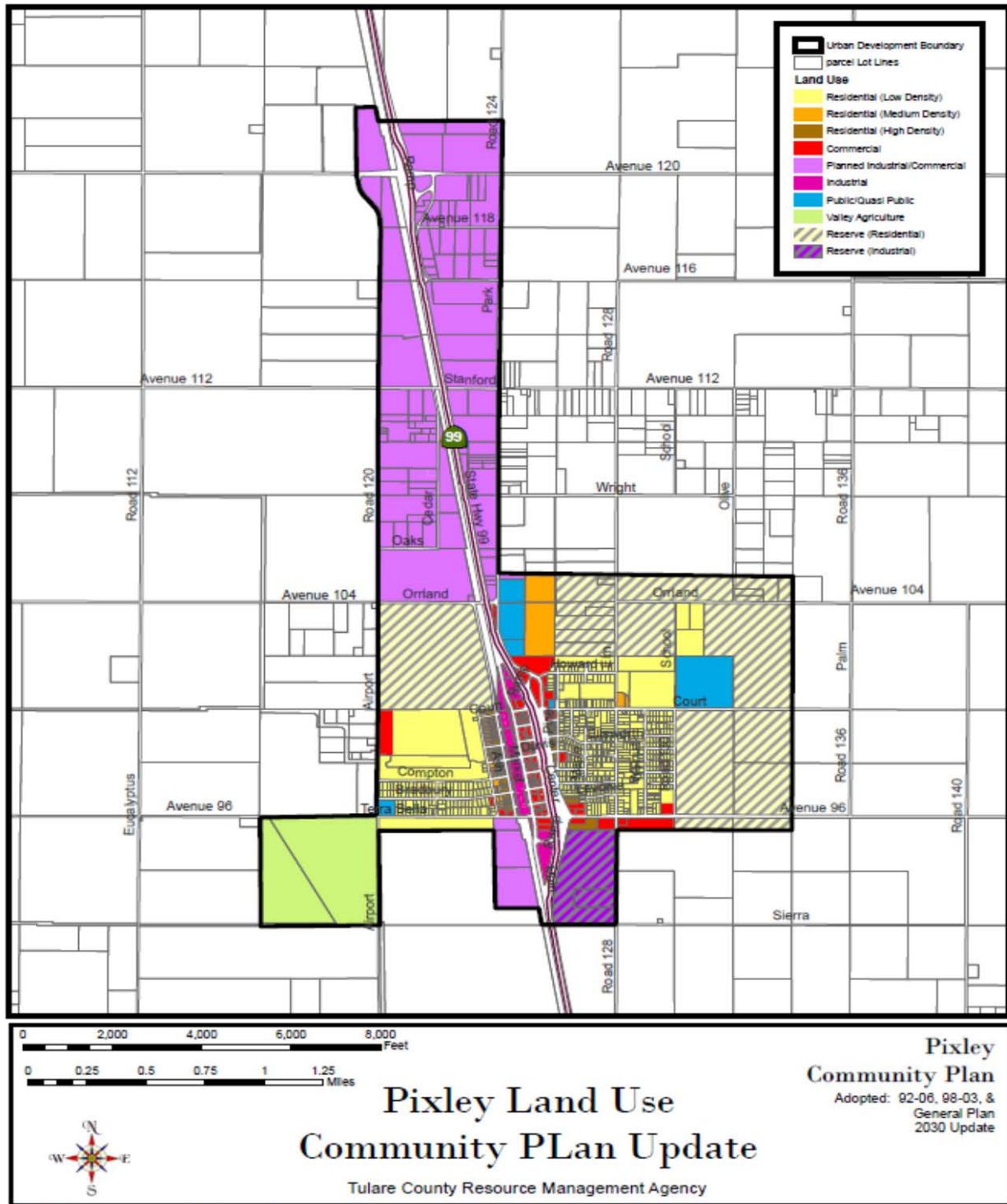
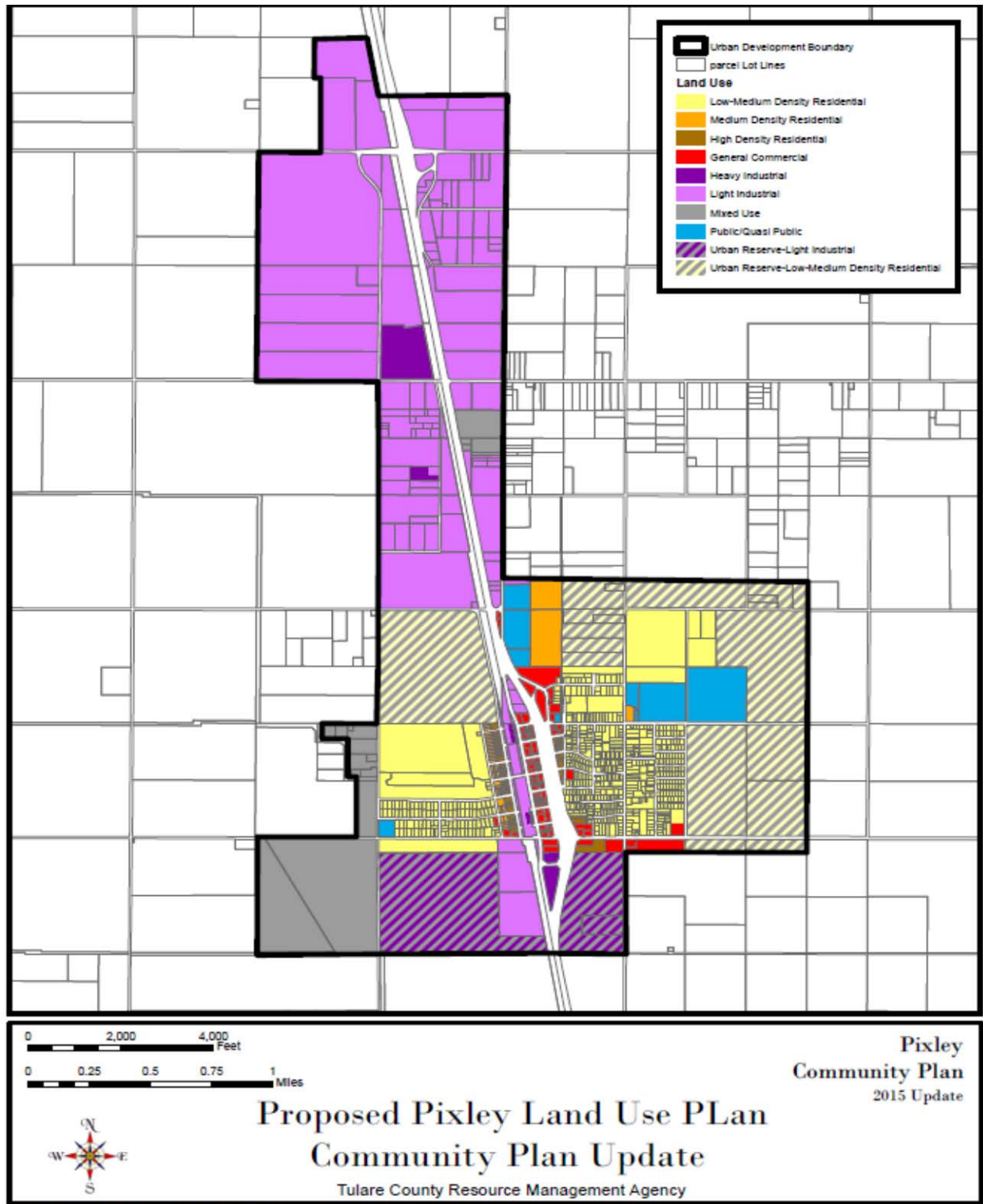


Figure 2-6
Proposed Pixley Land Uses



REGULATORY SETTING

State and Federal:

- Central Valley Regional Water Quality Control Board – Region #5
- California Department of Conservation – Division of Land Resource Protection
- California Department of Fish and Wildlife Region #4
- California Department of Toxic Substance Control
- California Environmental Protection Agency
- California Department of Transportation District #6
- California Department of Public Health
- California Energy Commission
- California Public Utilities Commission
- Native American Heritage Commission
- United States Fish & Wildlife Services
- San Joaquin Valley Unified Air Pollution Control District

Local:

- Lower Tule Irrigation District/Pixley Irrigation District
- Tulare County Health and Human Services Agency, Public Health Division
- Tulare County Health and Human Services Agency, Environmental Health Division
- Tulare County Resource Management Agency:
 - Tulare County Flood Control Division
 - Tulare County Fire Department
 - Planning Branch (Environmental Planning, Project Review, Building and Housing Divisions)
 - Public Works Branch

PROJECT OBJECTIVES

Objective 1: Implementation of AB 32

AB 32 has defined plans and programs for Year 2020, with the vision of Year 2050 that sets a goal to have an 80% reduction of greenhouse gas (GHG) emissions compared to the 1990 base year. AB 32 resulted in the adoption of the AB 32 Scoping Plan in 2008 that included a series of measures adopted by the California Air Resources Board (CARB). The key components of AB 32 are a reduction of (GHG) emission to 1997 models by the year 2020 and implements the objectives for the Year 2050 goal.

Objective 2: Sustainability

a) General Plan Update 2030 – Tulare County Climate Action Plan (CAP)

In light of AB 32, the County of Tulare Board of Supervisors adopted its General Plan 2030 Update on August 28, 2012 and included a Climate Action Plan (or CAP). This Climate Action Plan identifies specific General Plan policies that encourage solid waste reduction. The proposed Project was developed to support and implement the efforts made by Tulare County to address climate change through its General Plan and Climate Action Plan.

b) Tulare County General Plan (Sustainability) Policies

The Tulare County General Plan has a number of policies that apply to projects within the County of Tulare. General Plan policies that relate to Sustainability include the following.

PF-3.4 Mixed Use Opportunities - Unless or until a traditional plan approach is requested by the hamlet and such a plan is adopted, land use designations within the HDB shall be the mixed use land use designations as provided in Chapter 4-Land Use that promotes the integration of a compatible mix of residential types and densities, commercial uses, public facilities and services, and employment opportunities.

LU-1.1 Smart Growth and Healthy Communities - The County shall promote the principles of smart growth and healthy communities in UDBs and HDBs, including:

1. Creating walkable neighborhoods,
2. Providing a mix of residential densities,
3. Creating a strong sense of place,
4. Mixing land uses,
5. Directing growth toward existing communities,
6. Building compactly,
7. Discouraging sprawl,
8. Encouraging infill,
9. Preserving open space,
10. Creating a range of housing opportunities and choices,
11. Utilizing planned community zoning to provide for the orderly pre-planning and long term development of large tracks of land which may contain a variety of land uses, but are under unified ownership or development control, and
12. Encouraging connectivity between new and existing development.

LU-1.8 Encourage Infill Development - The County shall encourage and provide incentives for infill development to occur in communities and hamlets within or adjacent to existing development in order to maximize the use of land within existing urban areas, minimize the conversion of existing agricultural land, and minimize environmental concerns associated with new development.

LU-7.15 Energy Conservation - The County shall encourage the use of solar power and energy conservation building techniques in all new development.

LU-7.16 Water Conservation - The County shall encourage the inclusion of “extra-ordinary” water conservation and demand management measures for residential, commercial, and industrial indoor and outdoor water uses in all new urban development.

LU-7.17 Shared Parking Facilities - The County shall encourage, where feasible, the use of shared parking facilities. Such areas could include developments with different day/night uses.

AQ-3.3 Street Design - The County shall promote street design that provides an environment which encourages transit use, biking, and pedestrian movements.

AQ-3.5 Alternative Energy Design - The County shall encourage all new development, including rehabilitation, renovation, and redevelopment, to incorporate energy conservation and green building practices to maximum extent feasible. Such practices include, but are not limited to: building orientation and shading, landscaping, and the use of active and passive solar heating and water systems.

AQ-3.6 Mixed Land Uses - The County shall encourage the clustering of land uses that generate high trip volumes, especially when such uses can be mixed with support services and where they can be served by public transportation

c). TCAG Sustainable Communities Strategy (2014 Regional Transportation Plan)

AB 32 requires the California Air Resources Board to set greenhouse gas emission targets. Under SB 375 Metropolitan Planning Organizations like TCAG are required to create a Sustainable Communities Strategy consistent with AB 32 to regulate development in relation to vehicle miles traveled. TCAG included this strategy in the 2014 Regional Transportation Plan. A highlight of the implementation strategies include:

- Encourage jurisdictions in Tulare County to consider bicycle lanes, public transit, transit-oriented and mixed-use development, pedestrian networks, rain and other complete streets development during updates of general plan or other local plans.
- Implement a Complete Streets Program whereby agencies will prepare plans to accommodate all transportation users, including pedestrians, bicyclists, transit riders, and motor vehicle operators and riders, and implement those plans as aggressively as feasible.
- Provide for continued coordination and evaluation of the planned circulation system among cities and the county.
- Fund the development of capital improvement programs for complete streets and active transportation-type plans, as funds are available.
- Evaluate intersections, bridges, interchanges, and rail grade crossings for needed safety improvements.
- Develop funding strategies for safety projects in cooperation with Caltrans and member agencies.
- Examine alternative funding sources for streets, roads, state highways, rail systems, transit, bicycle, pedestrian, and other transportation mode improvements.
- Utilize Cap and Trade funds available for transit, if available, for projects in Tulare County.

Draft Environmental Impact Report
Pixley Community Plan

- Encourage local agencies to support implementation of bicycle support facilities such as bike racks, showers, and other facilities during the project review process.
- Utilize Cap and Trade funds available for bicycle and pedestrian projects, if available, for projects in Tulare County.
- Encourage mixed-use developments in urbanized areas.
- Encourage provision of an adequate supply of housing for the region's workforce and adequate sites to accommodate business expansion to minimize interregional trips and long-distance commuting.
- Support and participate in efforts and coalitions promoting use of Cap and Trade funding for projects that help reduce greenhouse gas emissions in Tulare County.
- Support investment in bicycle and pedestrian systems, giving attention to projects and networks that will allow residents to walk and bicycle to frequented destinations, including schools, parks, healthcare institutions and transit stops.
- Provide environmental justice communities opportunities for input into transportation plans, programs, and projects in a manner consistent with Title VI of the 1964 Civil Rights Act and Executive Order 12898 on Environmental Justice, including the prohibition of intentional discrimination and adverse disparate impact with regard to race, ethnicity or national origin.

These implementation strategies are compatible with the Tulare County General Plan policies.

Objective 8: Lessen Significant Impacts - Each alternative should be analyzed to assess the potential to reduce significant impacts. (On a cumulative basis, alternative sites generally require the construction of duplicate buildings. The creations of additional buildings require the use of additional resources, which on a cumulative basis would increase impacts to environment in general.)

Objective 9: Physical Feasibility (Land Size and Configuration Constraints) - Physical feasibility is required because if a site for a particular alternative is too small, or if the components of the proposed Project cannot be configured on the site, then the alternative would not be feasible and should be eliminated from review.

Objective 10: Project Specific Elements - Overall all elements (including Project's, Rezoning of Properties within the Study Area were studied

- a) County is proposing more than 6 land use and zoning districts. These changes are reflective of updating the designations to be consistent with the land uses within the General Plan and to bring existing non-compliant properties into conformity with the Tulare County Zoning Code. This required looking at the existing properties, meetings with the Community, and review of aerial maps and County records to analyze and decide on which properties were updated.
- b) Mixed Use Zone. The Pixley Community Plan includes a mixed use zone. This Community Plan Update requires the updating the Tulare County Zoning Code to reflect a mixed use zoning district specifically within the Pixley Community in compliance with the mixed use designation in the 2030 General Plan.

- c) Complete Streets. The Pixley Complete Streets Program was approved by the Board of Supervisors on September 9, 2014 for inclusion in the Circulation Element of this Community Plan Update. The Pixley Complete Streets Program has thoroughly analyzed the alternative forms of transportation, including transit, bicycle ways, and pedestrian circulation. The Complete Streets Program also contemplates use of alternative transportation and facilities for all users from the elderly to children and will be useful in proposing Safe Routes to School and other Public Benefit Projects in the Community.
- d) The Preferred Alternative does not discuss any changes to the Urban Development Boundary (UDB). However, the environmentally and economically superior alternative (Alternative C), contemplates expanding the Urban Development Boundary northward to include approximately +/- 280 acres of the 3 R Land's Parcels (6 parcels) and +/- 20 acres of the California Dairies Inc. The Urban Development Boundary expansion southerly includes areas south of Terra Bella Avenue, north of Sierra Avenue between Road 128 and Road 120, representing +/- 200 acres.

Aesthetics

Chapter 3.1

SUMMARY OF FINDINGS

The proposed Project will result in ***Less Than Significant Impacts*** to Aesthetics. No mitigation measures will be required. A detailed review of potential impacts is provided in the analysis below.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

CEQA requires that significant impacts on the environment be identified and, where possible, measures be added to minimize or eliminate impacts (CEQA Guidelines Section 15382). A “[s]ignificant effect on the environment” means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the Project...” (CEQA Guidelines Section 15382). With respect to aesthetics, potentially significant CEQA impacts include visual impacts to scenic highways, the visual character of the site, and impacts from lighting.

This section describes the existing visual environment in the vicinity of the Project area using accepted methodology to evaluate aesthetic/visual landscape quality and light/glare. Aesthetic considerations tend to be subjective. The methodologies used to evaluate aesthetic impacts to visual character are qualitative in nature, and are based on photographic documentation of the site and surrounding area.

The proposed Project site is located in the agricultural (Valley) portion of Tulare County. The Environmental Setting Section describes scenic and aesthetic resources in the region, with special emphasis on the proposed Project site and vicinity. The Regulatory setting provides a description of applicable State and local regulatory policies. A description of the potential impacts of the proposed Project is also provided and includes the identification of feasible mitigation to avoid or lessen the impacts.

The analyses of the existing visual setting and potential visual impacts resulting from the proposed Project are based primarily on information provided by the Project applicant.

Thresholds of Significance:

- Impact on a scenic vista
- Impact on a scenic highway
- Impact on visual quality
- Creation of glare or impacts on nighttime views

ENVIRONMENTAL SETTING

Visual Character of the Region

Tulare County is located in a predominately agricultural region of central California. The terrain in the County varies. The western portion of the County includes a portion of the San Joaquin Valley (Valley), and is generally flat, with large agricultural areas with generally compact, interspersed towns. In the eastern portion of the County are foothills and the Sierra Nevada mountain range. The Project site is located on the Valley floor, which is very fertile and has been intensively cultivated for many decades. Agriculture and related industries such as agricultural packing and shipping operations, and small and medium sized manufacturing plants, make up the economic base of the Valley region. Many communities are small and rural, surrounded by agricultural uses such as row crops, orchards, and dairies. From several locations on major roads and highways throughout the County, electric towers and telephone poles are noticeable. Mature trees, residential, commercial, and industrial development, utility structures, and other vertical forms are visible in the region because of the flat terrain. Where such vertical elements are absent, views are expansive. Most structures are small; usually one story in height, though occasionally two story structures can be seen at commercial or industrial (such as agricultural-industrial) complexes. The County provides a wide range of views from both mobile and stationary locations...¹

REGULATORY SETTING

The following environmental regulatory settings were summarized, in part, from information contained in the Tulare County General Plan Update 2030 Recirculated Draft EIR (February 2010).

Federal Agencies & Regulations

None that apply the proposed Project.

State Agencies & Regulations

Title 24 Outdoor Lighting Standards

Title 24 Outdoor Lighting Standards were adopted by the State of California Energy Commission (Commission) (Title 24, Parts 1 and 6, Building Energy Efficiency Standards (Standards) on November 5, 2003 and went into effect on October 1, 2005. The changes included new requirements for outdoor lighting, which vary according to which “lighting Zone” the equipment is in. The Commission defines rural areas as Lighting Zone 2. Existing outdoor lighting systems are not required to meet these lighting allowances.

¹ General Plan Update 2030: Recirculated Draft EIR (RDEIR) p. 3.1-11

Scenic Highway Program

The California Scenic Highway Program was established by the state Legislature in 1963 for the purpose of protecting and enhancing the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been officially designated. The state laws governing the scenic highways program are found in The Streets and Highways Code Sections 260-263. In Tulare County, portions of State Routes 190, 198, and 180 are eligible for state scenic highway designation.²

Local Policy & Regulations

The Tulare County General Plan Update 2030 Part 1: Goals and Policies Report (GPR) (August 2012) includes a number of goals and policies relating to scenic protection of County resources. The Goals and Policies Report Framework Concept Number Three (#3) addresses Scenic Landscapes:

“The scenic landscapes in Tulare County will continue to be one of the County’s most visible assets. The Tulare County General Plan emphasizes the enhancement and preservation of these resources as critical to the future of the County. The County will continue to assess the recreational, tourism, quality of life, and economic benefits that scenic landscapes provide and implement programs that preserve and use this resource to the fullest extent.”³

Scenic Roadways

“Tulare County’s existing General Plan identifies State designated scenic highways and County designated eligible highways [see Figure 3.1-7]. There are three highway segments designated as eligible by the State. These include State Route 198 from Visalia to Three Rivers, State Route 190 from Porterville to Ponderosa, and State Route 180 extending through Federal land in the northern portion of Tulare County. State Route 198 closely follows around Lake Kaweah and the Kaweah River, while State Route 190 follows around Lake Success and the Tule River. Both Scenic Highways travel through agricultural areas of the valley floor to the foothills and the Sierra Nevada Range... Additionally, the General Plan Update identifies preserving the rural agricultural character of SR 99 and SR 65, as valuable to the County and communities.”⁴

² TCGPU: Goals and Policies Report Part 1 Figure 7-1, p. 7-5

³ TCGPU Goals and Policies Report, p. A-2

⁴ Goals and Policies Report p. 7-2 (August 2012)

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to Projects within the County of Tulare. General Plan policies that relate to the proposed Project are listed below.

LU-5.3 Storage Screening - The County shall require adequate landscaping and screening of industrial storage areas to minimize visual impacts and enhance the quality of the environment.

LU-5.6 Industrial Use Buffer - Unless mitigated, the County shall prohibit new heavy industrial uses to a minimum of 500 feet from schools, hospitals, or populated residential areas (more than 10 dwelling units within a quarter mile diameter area). The buffer area may be used for activities not creating impacts to adjoining sensitive land uses for uses accessory to the heavy industrial use. The establishment of a buffer may not be required when mitigated or may not apply to industrial uses that do not impact adjoining uses identified herein. The buffer area shall be landscaped and maintained.

LU-7.6 Screening - The County shall require landscaping to adequately screen new industrial uses to minimize visual impacts.

LU-7.14 Contextual and Compatible Design - The County shall ensure that new development respects Tulare County's heritage by requiring that development respond to its context, be compatible with the traditions and character of each community, and develop in an orderly fashion which is compatible with the scale of surrounding structures.

LU-7.19 Minimize Lighting Impacts - The County shall ensure that lighting in residential areas and along County roadways shall be designed to prevent artificial lighting from reflecting into adjacent natural or open space areas unless required for public safety.

SL-1.1 Natural Landscapes - During review of discretionary approvals, including parcel and subdivision maps, the County shall as appropriate, require new development to not significantly impact or block views of Tulare County's natural landscapes. To this end, the County may require new development to:

1. Be sited to minimize obstruction of views from public lands and rights-of- ways,
2. Be designed to reduce visual prominence by keeping development below ridge lines, using regionally familiar architectural forms, materials, and colors that blend structures into the landscape,
3. Screen parking areas from view,
4. Include landscaping that screens the development,
5. Limit the impact of new roadways and grading on natural settings, and,
6. Include signage that is compatible and in character with the location and building design.

SL-1.2 Working Landscapes - The County shall require that new non-agricultural structures and infrastructure located in or adjacent to croplands, orchards, vineyards, and open rangelands

be sited so as to not obstruct important viewsheds and to be designed to reflect unique relationships with the landscape by:

1. Referencing traditional agricultural building forms and materials,
2. Screening and breaking up parking and paving with landscaping, and
3. Minimizing light pollution and bright signage.

SL-2.1 Designated Scenic Routes and Highways - The County shall protect views of natural and working landscapes along the County's highways and roads by maintaining a designated system of County scenic routes and State scenic highways by:

1. Requiring development within existing eligible State scenic highway corridors to adhere to land use and design standards and guidelines required by the State Scenic Highway Program,
2. Supporting and encouraging citizen initiatives working for formal designation of eligible segments of State Highway 198 and State Highway 190 as State scenic highways,
3. Formalizing a system of County scenic routes throughout the County ..., and
4. Requiring development located within County scenic route corridors to adhere to local design guidelines and standards.

ERM-1.4 Protect Riparian Areas - The County shall protect riparian areas through habitat preservation, designation as open space or recreational land uses, bank stabilization, and development controls.

ERM-1.5 Riparian Management Plans and Mining Reclamation Plans - The County shall require mining reclamation plans and other management plans to include measures that protect, maintain, and restore riparian resources and habitats.

ERM-1.6 Management of Wetlands - The County shall support the preservation and management of wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitats.

ERM-1.8 Open Space Buffers - The County shall require buffer areas between development projects and significant watercourses, riparian vegetation, wetlands, and other sensitive habitats and natural communities. These buffers should be sufficient to assure the continued existence of the waterways and riparian habitat in their natural state.

ERM-5.19 Night Sky Protection - Upon demonstrated interest by a community, mountain service center, or hamlet, the County will determine the best means by which to protect the visibility of the night sky.

ERM-1.15 Minimize Lighting Impacts - The County shall ensure that lighting associated with new development or facilities (including street lighting, recreational facilities, and parking) shall be designed to prevent artificial lighting from illuminating adjacent natural areas at a level greater than one foot candle above ambient conditions.

IMPACT EVALUATION

Will the proposed Project:

a) Have a substantial adverse effect on a scenic vista?

Project Impact Analysis: *No Impact*

No proposed development projects are part of this amendment. And, according to Tulare County General Plan, there are no designated scenic vistas on or adjacent to the Project area. The Project site is located in the Valley portion of the County, which is relatively flat. On clear days there is a view of foothills and the Sierra Nevada Mountains that can be seen to the east. Therefore, implementation of the Project will not have a significant adverse impact to a designated scenic vista. There will be *No Impact* to this resource.

Cumulative Impact Analysis: *No Impact*

The geographic area of this cumulative analysis is the San Joaquin Valley portion of Tulare County. As there are no impacts on scenic vistas on-site or in the Project vicinity, there will be *No Cumulative Impacts* related to this Checklist Item.

Mitigation Measure(s): *None Required*

Conclusion: *No Impact*

As noted previously, there will be *No program-specific or Cumulative Impacts* related to this Checklist Item.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Project Impact Analysis: *No Impact*

The proposed Project site includes a variety of uses such as residential, highway commercial, light industrial, public use (elementary school), and agriculturally productive lands. The Community is completely surrounded by agriculturally productive lands (such as vineyards, orchards, and row crops).

There are no significant scenic resources known to exist in the immediate vicinity of the Project area. Pixley is bisected in a northwest-southeasterly direction by State Route (SR) 99 and is not designated as an eligible State Scenic Highway. As such, the proposed

Draft Environmental Impact Report
Pixley Community Plan

Community Plan update will not damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state or county designated scenic highway or county designated scenic road. Therefore, there will be ***No Impact***.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background report, and Tulare County 2030 General Plan EIR.

As noted earlier, no Project-specific impacts will occur. Therefore, ***No Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted previously, there will be ***No Project-specific or Cumulative Impacts*** related to this Checklist Item.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Project Impact Analysis: ***Less Than Significant Impact***

The existing Pixley Community Plan contains approximately 2,064 acres within the adopted Urban Development Boundary.

The proposed Project will result in a net increase in forecasted land demand phased in over a 28 year period is 533 acres. Changes, however, would be gradual and the Plan update includes policies which would minimize impacts associated with visual character.

Therefore, ***Less Than Significant*** Program—specific Impacts related to this Checklist Item will occur.

Draft Environmental Impact Report
Pixley Community Plan

Table 3.1-1 Existing General Plan Land Uses	Existing Acres	Needed Acres
*Agriculture	154.63	
*Mixed Use		250.14
Residential		
Low-Medium Density	351.13	374.08
Medium Density	40.61	39.97
High Density	15.90	14.94
Public Quasi	64.50	89.61
Commercial	58.98	51.24
Industrial		
Heavy	31.69	42.90
Light	664.43	99.37
Urban Reserve		
Residential	560.80	525.08
Light Industrial	67.43	214.86
Vacant Land		735.28
Rights-of-Way	292.5	276.81
TOTAL	2,064	2,596

*The Agricultural Land Use designation will be replaced by the proposed Mix Use designation. Also, the land formerly known as Harmon Airport will be consolidated into the Mix Use land designation.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

As the proposed Project will not create significant Project-specific visual impacts, the proposed Project will result in ***No Significant Cumulative Impacts*** related to this Checklist Item.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted previously, ***Less Than Significant Program-Specific and Cumulative Impacts*** related to this Checklist Item will occur.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Future development within the Pixley Community Plan area, and an expected overall increase in the intensity of development in the area, would result in additional lighting and increased light emanating from the area. New lighting will be installed with the new buildings and site improvements to illuminate entries, parking areas, sidewalks and open spaces, for safety and security, and to highlight architectural features. Compliance with General Plan Policy ERM-5.19 Night Sky Protection, and Title 24 lighting power allowances would adequately control unnecessary brightness of lighting, debilitating glare, and sky glow. Therefore, the light and glare impacts of the Pixley Community Plan area will be ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Program will not result in any significant off-site impacts. Therefore, ***No Significant Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted previously, ***Less Than Significant Program-specific and Cumulative Impacts*** related to this Checklist Item will occur.

DEFINITIONS

Definitions

Scenic landscapes - Landscapes that include agricultural lands, woodlands, forestlands, watercourses, mountains, meadows, structures, communities, and other types of scenery that contribute to the visual beauty of Tulare County.

Natural Landscapes - An expanse of naturally-formed scenery that contribute to the visual beauty of Tulare County.

Working Landscapes - These are landscapes shaped by human activities that produce economic commodities such as agricultural lands, ranch lands, and timber lands. They may also include picturesque commercial districts in communities, crops, orchards, agricultural structures, stands of timber, and canals.”

Viewshed - An area of land, water, or other environmental features that is visible from a fixed vantage point. Viewsheds tend to be areas of particular scenic or historic value that are deemed worthy of preservation against development or other change. The preservation of viewsheds is typically the goal in the designation of open space areas, green belts, and urban separators.

REFERENCES

Caltrans, California Scenic Highway Program: “Frequently Asked Questions,” which can be accessed at: <http://www.dot.ca.gov/hq/LandArch/scenic/faq.htm>

Caltrans, “Visual and Aesthetics Review,” in Standard Environmental Reference, Chapter 27, which can be accessed at:
<http://www.dot.ca.gov/ser/vol1/sec3/community/ch27via/chap27via.htm>

State of California, Governor’s Office of Planning and Research, “Thresholds of Significance: Criteria for Defining Environmental Significance,” *CEQA Technical Advice Series* which can be accessed at: <http://ceres.ca.gov/ceqa/more/tas/Threshold.html>

Tulare County 2030 General Plan, August 2012

Tulare County 2030 General Plan: Recirculated Draft EIR (RDEIR), February 2010

CEQA Guidelines

Agricultural Land and Forestry Resources

Chapter 3.2

SUMMARY OF FINDINGS

The proposed Project will result in *Less Than Significant Impacts* to Agricultural Land and Forestry Resources. No mitigation measures will be required. A detailed review of potential impacts is provided in the analysis below.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Agricultural Land and Forestry Resources. As required in CEQA Guidelines Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

The environmental setting provides a description of the Agricultural Lands and Forestry Resources in the County. The regulatory setting provides a description of applicable Federal,

¹CEQA Guidelines, Section 15126.2 (a)

Draft Environmental Impact Report Pixley Community Plan

State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The Department of Conservation identifies the location of prime Agricultural Land resource areas and Williamson Act Contract lands. Thresholds of potential significance will include the following:

- Conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance
- Conflict with Williamson Act Contracts
- Convert Forest Land

ENVIRONMENTAL SETTING

“Tulare County exhibits a diverse ecosystems landscape created through the extensive amount of topographic relief (elevations range from approximately 200 to 14,000 feet above sea level). The County is essentially divided into three eco-regions. The majority of the western portion of the County comprises the Great Valley Section, the majority of the eastern portion of the County is in the Sierra Nevada Section, and a small section between these two sections comprises the Sierra Nevada Foothill Area.”²

Agricultural Productivity

The Project site is located in the San Joaquin Valley portion of Tulare County. This area is characterized by rich, highly productive farmland. Agriculture is the most important sector in Tulare County’s economy, and agriculture and related industries make Tulare County one of the two most productive agricultural counties in the United States, according to Tulare County Farm Bureau statistics.^{3 4} Agricultural lands (crop and commodity production and grazing) also provide the County’s most visible source of open space lands. As such, the protection of agricultural lands and continued growth and production of agriculture industries is essential to all County residents.⁵

The *2014 Tulare County Annual Crop and Livestock Report* listed Tulare County’s total gross production value for 2013 as \$7,809,626,000. Milk was the leading agricultural commodity in Tulare County in 2013, representing 27.6% of the total crop and livestock value. The 2013 report listed over 120 different commodities, forty-five of which had a gross value greater than

² Tulare County 2030 General Plan RDEIR, page 3.11-5

³ Tulare County Farm Bureau, “Agricultural Facts,” <http://www.tulcofb.org/index.php?page=agfacts>

⁴ Tulare County Agricultural Commissioner, 2014 Tulare County Agricultural Crop and Livestock Report, <http://agcomm.co.tulare.ca.us/default/index.cfm/standards-and-quarantine/crop-reports1/>

⁵ Tulare County 2030 General Plan, page 3-4

Draft Environmental Impact Report
Pixley Community Plan

\$1 million. The top agricultural commodities in the County in 2013, based on total/gross value were milk, grapes, oranges, cattle & calves, pistachio nuts, walnuts, almonds, corn – grain & silage, nectarines, and alfalfa (hay and silage) (source: 2014 Tulare County Annual Crop and Livestock Report prepared by the office of the Tulare County Agricultural Commissioner/Sealer, published June 2013).

According to the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP, 2010), agricultural lands in Tulare County included 859,991 acres of important farmland (designated as FMMP Prime, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance) and 440,042 acres of grazing land, for a total of 1,300,033 acres of agricultural land.

According to the Tulare County Subvention Report (November 21, 2012), much of Tulare County's farmland is under California Land Conservation Act (Williamson Act) contracts, a program designed to prevent premature conversion of farmland to residential or other urban uses. As of January 1, 2012, there were 1,096,299 acres of farmland under Williamson Act or Farmland Security Zone contracts in Tulare County. This total includes 571,904 acres of Williamson Act prime, 513,243 acres nonprime, and 11,152 acres of Farmland Security Zone lands (The acreage totals also include 6,040 acres Williamson Act prime contracted land in nonrenewal and 7,513 acres of Williamson Act nonprime in nonrenewal.)

Table 3.2-1
2012 Tulare County Lands under Williamson Act or Farmland Security Zone Contracts

Acres	Category
571,904	*Total prime = Prime active + NR Prime
513,243	*Total Nonprime = Nonprime active + NR Prime
11,152	Farmland Security Zone
1,096,299	TOTAL ACRES in Williamson Act and Farmland Security Zone contracts

**Prime total includes 6039.75 acres in nonrenewal; Nonprime total includes 7512.56 acres in nonrenewal*

Source: Data compiled from 2012 Tulare County Subvention Report

Important Farmland Trends

Using data collected by the FMMP, farmland acreage has been consistently decreasing for each two-year period since 1998. In the 2010 FMMP analysis, Tulare County lost 17,502 acres of important farmland, and 17,748 acres of total farmland between 2008 and 2010.⁶

“For Tulare County and the surrounding region, the reported major cause of this conversion is the downgrading of important farmlands to other agricultural uses (e.g., such as expanded or new livestock facilities, replacing irrigated farmland with non-irrigated crops, or land that has been fallow for six years or longer).”⁷

⁶ California Department of Conservation, Division of Land Resource Protection, FMMP, “Tulare County 2008-2010 Land Use Conversion” Report, Table A-44

⁷ Tulare County 2030 General Plan RDEIR, page 3.10 to 3.13

Draft Environmental Impact Report
Pixley Community Plan

Figure 3.2-1
Agriculture Preserve Map

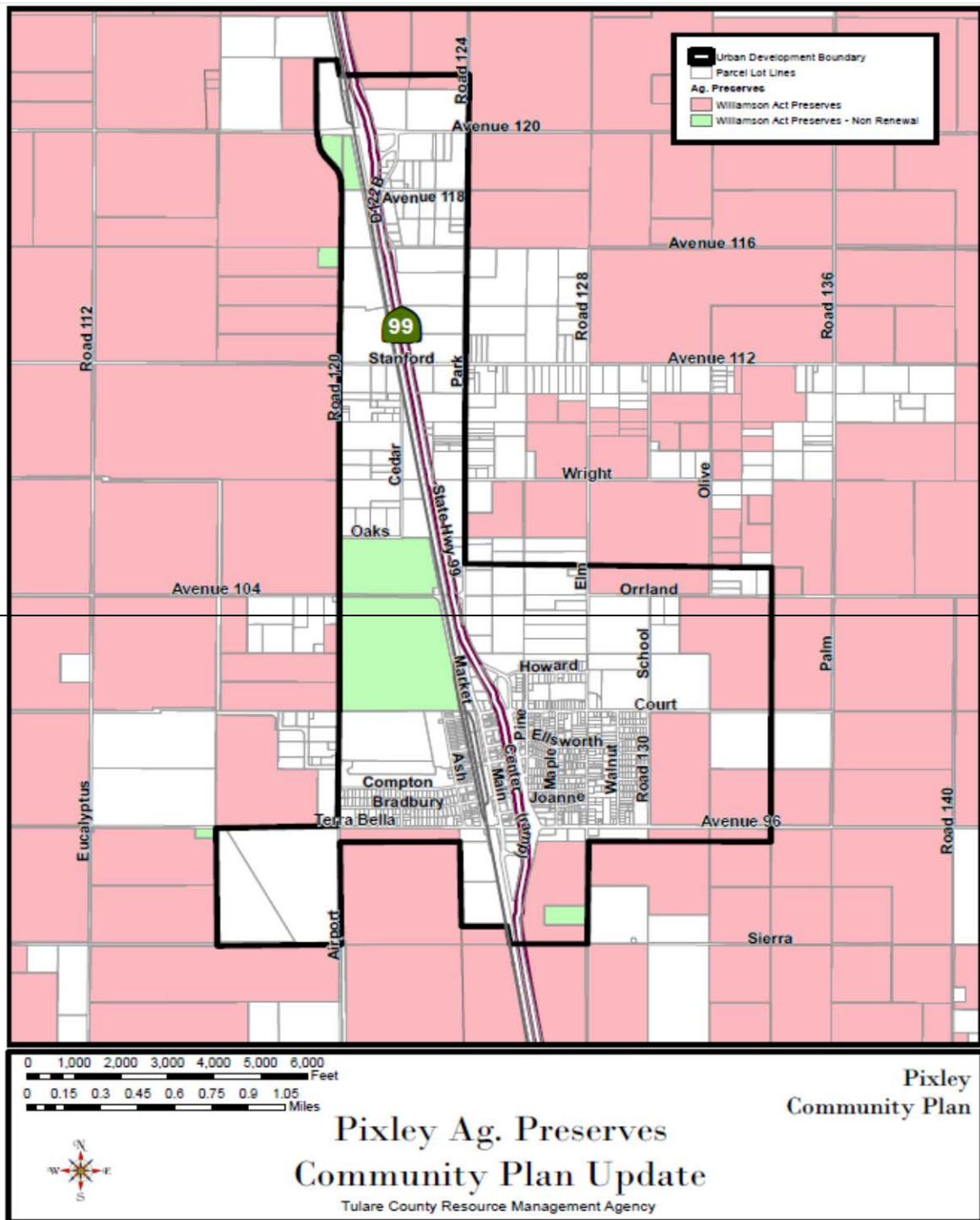
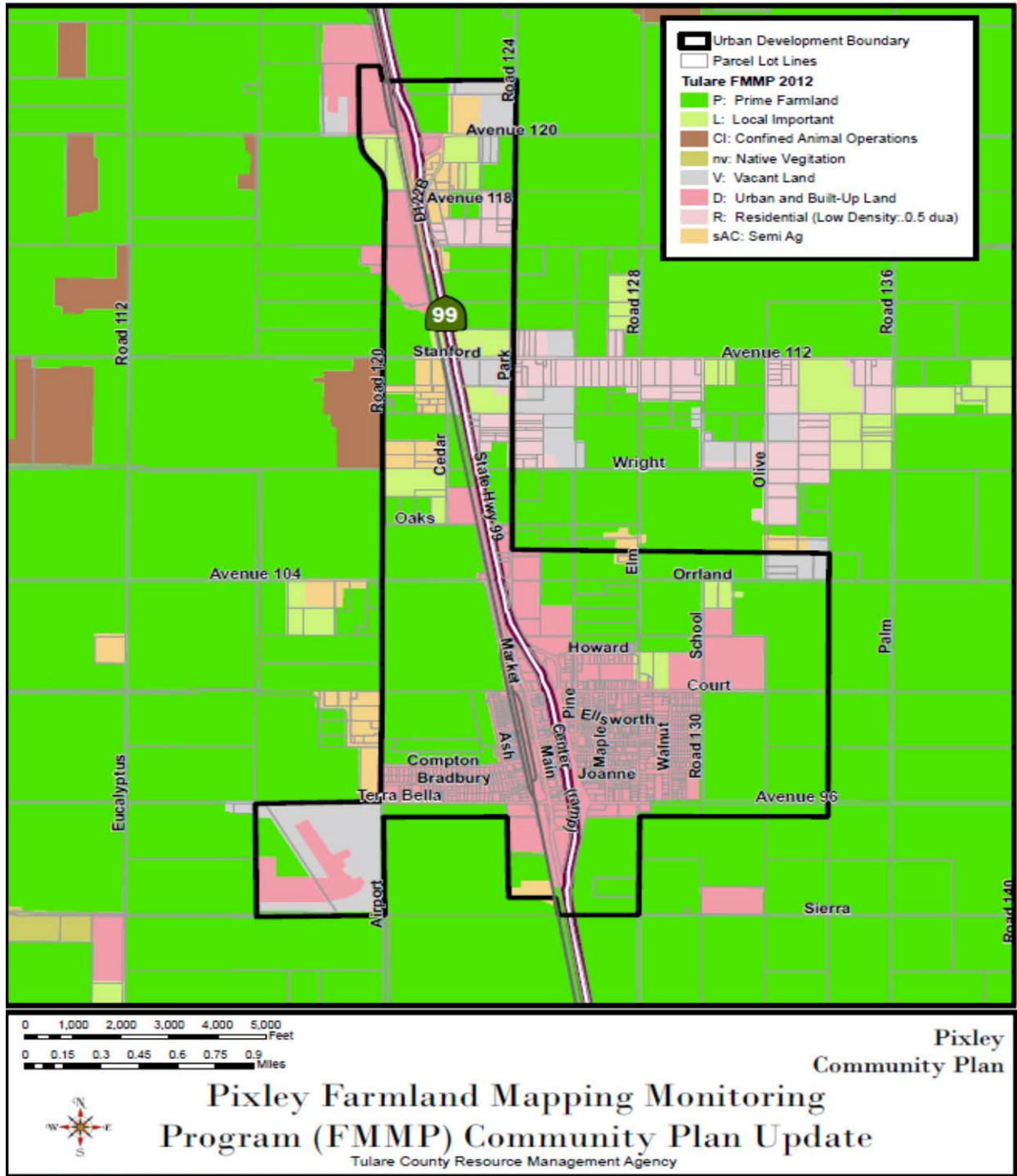


Figure 3.2-2
2010 Farmland Mapping Monitoring Program (FMMP) Map



Forest Lands

“Timberlands that are available for harvesting are located in the eastern portion of Tulare County in the Sequoia National Forest. Hardwoods found in the Sequoia National Forest are occasionally harvested for fuel wood, in addition to use for timber production. Since most of the timberlands are located in Sequoia National Forest, the U.S. Forest Service has principal jurisdiction, which encompasses over 3 million acres. The U.S. Forest Service leases these federal lands for timber harvests.”⁸

REGULATORY SETTING

Federal Agencies & Regulations

Federal Farmland Protection Act (FFPA)

“The FPPA is intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that to the extent possible federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland... Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a Federal agency or with assistance from a Federal agency.”⁹

US Forest Service

“The U.S. Department of Agriculture Forest Service is a Federal agency that manages public lands in national forests and grasslands. The Forest Service is also the largest forestry research organization in the world, and provides technical and financial assistance to state and private forestry agencies. Gifford Pinchot, the first Chief of the Forest Service, summed up the purpose of the Forest Service—“to provide the greatest amount of good for the greatest amount of people in the long run.”¹⁰

State Agencies & Regulations

California Department of Conservation: Farmland Mapping and Monitoring Program

“The California Department of Conservation (DOC), under the Division of Land Resource Protection, has developed the Farmland Mapping and Monitoring Program (FMMP), which monitors the conversion of the state’s farmland to and from agricultural use. Data is collected at the county level to produce a series of maps identifying eight land use classifications using a minimum mapping unit of 10 acres. The program also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The program maintains an inventory of state agricultural land and updates the “Important Farmland Series Maps” every two years

⁸ General Plan Background Report, page 4-17

⁹ Federal Farmland Protection Act, <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/alphabetical/fppa>

¹⁰ US Forest Service, “About Us – Meet the Forest Service”, <http://www.fs.fed.us/aboutus/meetfs.shtml>

(Department of Conservation, 2000).”¹¹

Williamson Act: California Land Conservation Act of 1965

“The California Land Conservation Act (CLCA) of 1965, Sections 51200 et seq. of the California Government Code, commonly referred to as the “Williamson Act”, enables local governments to restrict the use of specific parcels of land to agricultural or related open space use. Landowners enter into contracts with participating cities and counties and agree to restrict their land to agriculture or open space use for a minimum of ten years. In return, landowners receive property tax assessments that are much lower than normal because they are based upon farming and open space uses as opposed to full market (speculative) value. Local governments receive an annual subvention of forgone property tax revenues from the state via the Open Space Subvention Act of 1971.”¹²

California Department of Forestry and Fire Protection (CAL FIRE)

“CAL FIRE manages eight Demonstration State Forests that provide for commercial timber production, public recreation, and research and demonstration of good forest management practices. CAL FIRE foresters can be found in urban areas working to increase the number of trees planted in our cities, or preventing the spread of disease by identifying and removing infected trees. A Native American burial ground in the path of a logging operation or fire may be verified and saved due to a CAL FIRE archaeologist's review of the area. And, an improved strain of trees, resistant to disease and pests, may be nurtured and introduced by a CAL FIRE forester.”¹³

Local Policy & Regulations

Tulare County General Plan Policies

The General Plan has policies that apply to projects within Tulare County. General Plan policies that are applicable to the proposed Project are listed below.

AG-1.1 Primary Land Use - The County shall maintain agriculture as the primary land use in the valley region of the County, not only in recognition of the economic importance of agriculture, but also in terms of agriculture’s real contribution to the conservation of open space and natural resources.

AG-1.3 Williamson Act - The County should promote the use of the California Land Conservation Act (Williamson Act) on all agricultural lands throughout the County located outside established UDBs. However, this policy carries with it a caveat that support for the

¹¹ General Plan Background Report, page 4-12

¹² Ibid. Page 4-13

¹³ California Department of Forestry and Fire Protection, <http://www.fire.ca.gov/about/about.php>

Williamson Act as a tax reduction component is premised on continued funding of the State subvention program that offsets the loss of property taxes.

AG-1.4 Williamson Act in UDBs and HDBs - The County shall support non-renewal or cancellation processes that meet State law for lands within UDBs and HDBs.

AG-1.6 Conservation Easements - The County shall consider developing an Agricultural Conservation Easement Program (ACEP) to help protect and preserve agricultural lands (including “Important Farmlands”), as defined in this Element. This program may require payment of an in-lieu fee sufficient to purchase a farmland conservation easement, farmland deed restriction, or other farmland conservation mechanism as a condition of approval for conservation of important agricultural land to non-agricultural use. If available, the ACEP shall be used for replacement lands determined to be of statewide significance (Prime or other Important Farmlands), or sensitive and necessary for the preservation of agricultural land, including land that may be a part of a community separator as part of a comprehensive program to establish community separators. The in-lieu fee or other conservation mechanism shall recognize the importance of land value and shall require equivalent mitigation.

AG-1.7 Preservation of Agricultural Lands - The County shall promote the preservation of its agricultural economic base and open space resources through the implementation of resource management programs such as the Williamson Act, Rural Valley Lands Plan, Foothill Growth Management Plan or similar types of strategies and the identification of growth boundaries for all urban areas located in the County.

AG-1.8 Agriculture within Urban Boundaries - The County shall not approve applications for preserves or regular Williamson Act contracts on lands located within a UDB and/or HDB unless it is demonstrated that the restriction of such land will not detrimentally affect the growth of the community involved for the succeeding 10 years, that the property in question has special public values for open space, conservation, other comparable uses, or that the contract is consistent with the publicly desirable future use and control of the land in question. If proposed within a UDB of an incorporated city, the County shall give written notice to the affected city pursuant to Government Code §51233.

AG-1.9 Agricultural Preserves Outside Urban Boundaries - The County shall grant approval of individual applications for agricultural preserves located outside a UDB provided that the property involved meets the requirements of the Williamson Act and the regulations of Tulare County.

AG-1.10 Extension of Infrastructure into Agricultural Areas - The County shall oppose extension of urban services, such as sewer lines, water lines, or other urban infrastructure, into areas designated for agriculture use unless necessary to resolve a public health situation. Where necessary to address a public health issue, services should be located in public rights-of-way in order to prevent interference with agricultural operations and to provide ease of access for operation and maintenance. Service capacity and length of lines should be designed to prevent the conversion of agricultural lands into urban/suburban uses.

AG-1.11 Agricultural Buffers - The County shall examine the feasibility of employing agricultural buffers between agricultural and non-agricultural uses, and along the edges of UDBs and HDBs. Considering factors include the type of operation and chemicals used for spraying, building orientation, planting of trees for screening, location of existing and future rights-of-way (roads, railroads, canals, power lines, etc.), and unique site conditions.

AG-1.17 Agricultural Water Resources - The County shall seek to protect and enhance surface water and groundwater resources critical to agriculture.

LU-2.3 Open Space Character - The County shall require that all new development requiring a County discretionary approval, including parcel and subdivision maps, be planned and designed to maintain the scenic open space character of open space resources including, but not limited to, agricultural areas, rangeland, riparian areas, etc., within the view corridors of highways. New development shall utilize natural landforms and vegetation in the least visually disruptive way possible and use design, construction and maintenance techniques that minimize the visibility of structures on hilltops, hillsides, ridgelines, steep slopes, and canyons.

LU-2.6 Industrial Development - Other than provided in Policy LU-2.5: Agricultural Support Facilities, the County shall, and the cities should, through their industrial development policies, approve only those agriculturally-oriented or related industries and uses that can demonstrate, whether by location and/or controlled methods of operation, that they will not adversely affect agricultural production or the County's natural resources. These uses should be located inside UDBs, HDBs, PCAs and regional growth corridors unless necessary for the support of agricultural operations or as provided in Policy LU-2.5: Agricultural Support Facilities.

IMPACT EVALUATION

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

- a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural uses?

Project Impact Analysis: *Less Than Significant Impact*

Pixley is basically square in shape and is bisected in a northwest-southeasterly direction by State Route 99 and again by the Union Pacific Railroad (UPRR), which divides the community into two (2) distinct areas. Pixley is currently a highway-oriented service center with predominantly single-family residences surrounded on all sides by lands in agricultural production.

The proposed amendment will not result in the addition of any acreage to the existing Community Plan's Urban Development Boundary (UDB) area. The land use pattern will remain as currently defined. Existing uses include a mix of single-family residences, highway and general commercial, light and heavy industrial, public (school), and agricultural uses.

As the Project does not include any immediate development proposals and it will not result in the expansion beyond its current planning area. The Project will not result in the Conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use.

For the reasons above, Project-specific impacts to Important Farmlands are ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the entire State of California. This cumulative analysis is based on the Statewide FMMP map provided by the California State Department of Conservation. Therefore, ***Less Than Significant Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

Project Impact Analysis: ***Less Than Significant Impact***

Development within the UDB would result in the eventual construction of homes, retail, roadways, business centers, and other non-agricultural uses. Development within the UDB would occur in a series of phases over the planned 28-year period. There is Prime Farmland and Farmland of Statewide Importance located within and adjacent to the UDB. No specific development project is proposed as part of this Project.

The potential incompatibilities associated with noise, odors, and dust from agricultural activities would be intermittent, would occur at some distance away from the UDB area, and should be expected in any urban edge area. In this case, implementation of the Right-to-Farm Ordinance would give every new home buyer the opportunity to evaluate the personal significance of these potential minor nuisances. Furthermore, the Right-to-Farm Ordinance allows existing agricultural operations to continue, unhindered so that farmers do not have to alter their operations in accordance with future resident's desires. Additionally, a buffer would be created to minimize potential conflicts between future UDB residents and existing agricultural operations. It would provide a transition area between future residents and existing agricultural operations. This buffer will minimize the amount of noise, dust, odors, and pesticide drift that would affect future residents.

The Project will not result in the conversion of any prime agricultural land as defined in Section 51201(C) of the Govt. Code to non-agricultural use. It will not conflict with existing zoning for agriculture use, or a Williamson Act contract. The proposed Project is not expected to encourage the non-renewal or cancellation of other nearby Williamson Act contracted lands. Therefore, ***Less Than Significant Impact*** will result from the proposed Project.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the entire State of California. This cumulative analysis is based on provisions of the California Land Conservation Act of 1965 (Williamson Act) and on Tulare County allowed uses in agricultural zones.

While there are Williamson Act-contracted lands adjacent to the Project site, it is not anticipated that the proposed Project will cause the conversion of adjacent agricultural uses. Therefore, ***Less Than Significant Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

- c) **Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code § 12220(q)), timberland (as defined by Public Resources Code § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?**

Project Impact Analysis: ***No Impact***

The Project site and surrounding areas are located in the Valley portion of Tulare County and have agricultural zoning. The area contains no lands zoned or identified as forest land or timberland. The proposed Project will not conflict with existing zoning for forest land or cause rezoning of forest land. As such, ***No Project-specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project is not located within a forestland zone or would require the change of a forestland zone. As such ***No Cumulative Impacts*** to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** to this Checklist Item will occur.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

Project Impact Analysis: ***No Impact***

As noted earlier, the proposed Project is not located within a forest land zone or will require the change of a forest land zone. As such, ***No Project-specific Impacts*** to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the proposed Project is not located within a forest land zone or will require the change of a forest land zone. As such, ***No Cumulative Impacts*** to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, *No Project-specific or Cumulative Impacts* to this Checklist Item will occur.

- e) **Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of agricultural use or conversion of forest land to non-forest use?**

Project Impact Analysis: ***Less Than Significant Impact***

The Project will not result in the loss of forest land or conversion of forest land to non-forest use, nor will it involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use. It could, during the 28-year timeframe of this Community Plan, result in conversion of farmland to future non-agricultural use (industrial, commercial, and residential). However, no specific development proposals are part of this Community Plan Update. Therefore, a ***Less Than Significant Impact*** will result from the proposed Project.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the proposed Project is not anticipated to impact adjacent farmland beyond the Urban Development Boundary and no forest land exists near the Project. Therefore, ***Less Than Significant Cumulative Impacts*** to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

DEFINITIONS/ACRONYMS

Definitions

“The California Department of Conservation, Division of Land Resource Protection, maintains the Farmland Mapping and Monitoring Program (FMMP), which monitors the conversion of the state’s farmland to and from agricultural use. The map series identifies eight classifications (discussed below) and uses a minimum mapping unit size of 10 acres. The program also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The program maintains an inventory of state agricultural land and updates its “Important Farmland Series Maps” every two years. Although the program monitors a wide variety of farmland types (more fully described below), Important Farmland consists of lands classified as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland.”¹⁴

Prime Farmland (P) - Prime Farmland is farmland with the best combination of physical and chemical features to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Farmland of Statewide Importance (S) - Farmland of Statewide Importance is similar to Prime Farmland but has minor shortcomings, such as greater slopes or a lesser ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Unique Farmland (U) - Unique Farmland has lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include nonirrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.

Farmland of Local Importance (L) - Farmland of Local Importance is land important to the local agricultural economy as determined by each county’s board of supervisors and a local advisory committee.

Grazing Land (G) - Grazing Land is land on which the vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen’s Association, the University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.

Urban and Built-Up Land (D) - Urban and Built-Up Land is land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public

¹⁴ General Plan Update RDEIR, page 3.10-4

administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.”¹⁵

Other Land (X) - Other Land is land not included in any other mapping category. Common examples include low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

Water (W) - Water is defined as perennial water bodies with an extent of at least 40 acres. While the number of agricultural lands classified as Important Farmlands (i.e., Prime Farmland, Farmland of Statewide Importance, and Unique Farmland) have been decreasing over the past several years, the total acreage for all categories of farmland (including grazing land) remained relatively stable between the years 1998 and 2006 (see Table 3.10-4). The locations of these farmland types are identified in Figure 3.10-1. The farmlands are concentrated in the Rural Valley/Foothill Planning areas. No important farmlands are located in the Mountain Area.

Acronyms

CLCA	California Land Conservation Act (Williamson Act)
FFPA	Federal Farmland Protection Act
FMMP	Farmland Mapping and Monitoring Program

¹⁵ Ibid. page 3.10-4 and 3.10-5

REFERENCES

Tulare County 2030 General Plan, August 2012

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Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program, which can be accessed at:
<http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx>

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Tulare County 2030 General Plan Background Report, February 2010

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Tulare County Agricultural Commissioner, “2013 Tulare County Annual Crop and Livestock Report”, June 2014, which can be accessed at:
<http://agcomm.co.tulare.ca.us/default/index.cfm/standards-and-quarantine/crop-reports1/>

Tulare County Resource Management Agency, Tulare County Subvention Report for Fiscal Year 2012-2013 (submitted to Department of Conservation, November 2012)

California Department of Forestry and Fire Protection, which can be accessed at:
<http://www.fire.ca.gov/about/about.php>

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<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/alphabetical/fppa>

US Forest Service, “About Us – Meet the Forest Service”, which can be accessed at:
<http://www.fs.fed.us/aboutus/meetfs.shtml>

CEQA Guidelines

Air Quality

Chapter 3.3

SUMMARY OF FINDINGS

The proposed Project will result in *Less Than Significant Impacts* to Air Quality. A detailed review of potential impacts is provided in the following analysis. An Air Quality Analysis conducted by consultants First Carbon Solutions is included as Appendix “A” of this document which is used as the basis for determining this Project will result in less than significant impacts.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Air Quality. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazardous areas.”¹

The environmental setting provides a description of the Air Quality in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory

¹ CEQA Guidelines, Section 15126.2 (a)

policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist item questions. The following are potential thresholds for significance.

- Result in an exceedence of criteria pollutants as established in the 1990 Clean Air Act amendments.
- Result in an exceedence of San Joaquin Valley Unified Air Pollution Control District (SJVAPCD) criteria pollutant threshold. (See GAMAQI Thresholds of Significance for Criteria pollutants below, page 3.3-16)
- Result in nuisance odors.
- Result in emissions of toxic air contaminants (TAC).
- Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard.

ENVIRONMENTAL SETTING

Topography

“The topography of a region is important for air quality because mountains can block airflow that would help disperse pollutants and can channel air from upwind areas that transports pollutants to downwind areas. The District covers the entirety of the Air Basin. The Air Basin is generally shaped like a bowl. It is open in the north and is surrounded by mountain ranges on all other sides. The Sierra Nevada mountains are along the eastern boundary (8,000 to 14,000 feet in elevation), the Coast Ranges are along the western boundary (3,000 feet in elevation), and the Tehachapi Mountains are along the southern boundary (6,000 to 8,000 feet in elevation).”²

Climate

“The climate is important for air quality because of differences in the atmosphere’s ability to trap pollutants close to the ground creating adverse air quality or to rapidly disperse pollutants over wide area preventing high concentrations from accumulating under different climatic conditions. The Air Basin has an “inland Mediterranean” climate and is characterized by long, hot, dry summers and short, foggy winters. Sunlight can be a catalyst in the formation of some air pollutants (such as ozone); the Air Basin averages over 260 sunny days per year.

² Air Quality Analysis Report, page 7

Draft Environmental Impact Report
Pixley Community Plan

...the average temperatures in Visalia, which is the closest station to Pixley located approximately 25.03 miles northeast, typically range from the mid-40s to 90s (Western Regional Climate Center 2011). Further..., the majority of the annual rainfall in the area occurs between November and April. The average annual precipitation in Visalia is 10.95 inches.

Dominant airflows provide the driving mechanism for transport and dispersion of air pollution. The mountains surrounding the Air Basin form natural horizontal barriers to the dispersion of air contaminants. The wind generally flows south-southeast through the valley, through the Tehachapi Pass and into the Southeast Desert Air Basin portion of Kern County. As the wind moves through the Air Basin, it mixes with the air pollution generated locally, generally transporting air pollutants from the north to the south in the summer and in a reverse flow in the winter.”³

“The SJVAB is highly susceptible to pollutant accumulation over time due to the transport of pollutants into the SJVAB from upwind sources. Stationary emission sources in the County include the use of cleaning and surface coatings and industrial processes, road dust, local burning, construction/demolition activities, and fuel combustion. Mobile emissions are primarily generated from the operation of vehicles. According to air quality monitoring data, the SJVAB has been in violation for exceeding ozone ... emission standards for many years.”⁴ As of April 2015, the District is in nonattainment for federal and state ozone and PM_{2.5} standards, attainment for federal PM₁₀ standards, and nonattainment for state PM₁₀ standards.

Existing Air Quality Conditions

“The existing local air quality can be characterized by reviewing relevant air pollution concentration data near the project area for comparison to the NAAQS and CAAQS. Air samples are collected continuously for some pollutants and periodically for other pollutants, depending on the type of monitoring equipment installed. Monitoring sites are usually chosen to be representative of emissions in a community...The amount over the standards and the number of days each year that standards were exceeded provide a good indicator of severity of the air quality problems in the local area.”⁵ Table 3.3-1 summarizes the published air monitoring data for the most recent 3-year period available.

“The EPA and the ARB designate air basins where ambient air quality standards are exceeded as “nonattainment” areas. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered “unclassified.” National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Each standard has a different definition, or “form” of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual PM_{2.5} standard is met if the 3-year average of the annual average PM_{2.5} concentration is less than or

³ Ibid., page 7 and 8

⁴ Tulare County 2030 General Plan RDEIR, page 3.3-9

⁵ Air Quality Analysis Report, page 16

Draft Environmental Impact Report
Pixley Community Plan

equal to the standard.”⁶ The current attainment designations for the basin are shown in Table 3.3-2.

Table 3.3-1 Air Quality Monitoring Summary					
Air Pollutant	Averaging Time	Item	2008	2009	2010
Ozone	1-hour	Max 1-hour (ppm)*	0.095	0.092	0.103
		Days > State Standard (0.09 ppm)	82	80	52
	8-hour	Max 8-hour (ppm)	47	44	23
		Days > State Standard (0.07 ppm)	2.29	2.22	ID
		Days > National Standard (0.075 ppm)	0	0	0
Carbon monoxide	8-hour	Max 8-hour (ppm)	0	0	0
		Days > National/State Standard (9 ppm)	3.27	3.17	ID
Nitrogen dioxide	Annual	Annual Average (ppm)	0	0	0
	1-hour	Max 1-hour (ppm)	0	0	0
		Days > State Standard (0.18 ppm)	0.012	0.012	0.012
Sulfur dioxide	Annual	Annual Average (ppm)	0.058	0.061	0.062
	24-hour	Max 24-hour (ppm)	0	0	0
Inhalable coarse particles (PM10)	Annual	Annual Average (µg/m3)	34	38.1	44.5
	24 hour	24-hour (µg/m3)	78.1	75.7	155.0
		Est. Days > State Standard (50 µg/m3)	11	15	16
		Est. Days > National Standard (150 µg/m3)	0	0	1
Fine particulate matter (PM2.5)	Annual	Annual Average (µg/m3)	17	17	17
	24-hour	24-hour (µg/m3)	68.7	63.7	116.1
		Est. Days > National Standard (35 µg/m3)	ID	ID	ID
Notes and Abbreviations:> = exceed ; ppm = parts per million; µg/m³ = micrograms per cubic meter; ID = insufficient data; ND = no data; max = maximum; The ARB does not report 1-hour average CO concentrations in its database; therefore, the 1-hour CO concentration was derived by dividing the 8-hour concentration by 0.7. State Standard = California Ambient Air Quality Standard; National Standard = National Ambient Air Quality Standard Ozone and PM _{2.5} data from Porterville – 1839 Newcomb Street Station; Nitrogen dioxide and PM ₁₀ data from Visalia-N. Church Street Station; Carbon monoxide data from Fresno-First Station. Sources: California Air Resources Board 2014.					

⁶ Air Quality Analysis Report, page 19

Draft Environmental Impact Report
Pixley Community Plan

**Table 3.3-2
Basin Attainment Status**

Pollutant	Designation	
	National	State
Ozone—1-hour	No Federal Standard	Nonattainment/Severe
Ozone—8-hour	Nonattainment/Extreme	Nonattainment
PM10	Attainment	Nonattainment
PM2.5	Nonattainment	Nonattainment
Carbon monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen dioxide	Attainment/Unclassified	Attainment
Sulfur dioxide	Attainment/Unclassified	Attainment
Lead	No Designation/Classification	Attainment
Hydrogen sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility-reducing particles	No Federal Standard	Unclassified
Vinyl chloride	No Federal Standard	Unclassified

Source: Air Quality Analysis Report

Table 3.3-3 below provides the federal and state ambient air quality standards and identifies the properties and health effects of each of the criteria pollutants.

Table 3.3-3 State & National Criteria Air Pollutant Standards, Effects, and Sources					
Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone	1 hour	0.09 ppm	---	(a) Decrease of pulmonary function and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans;	Formed when reactive organic gases (ROG) and nitrogen oxides (NO _x) react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
	8 hours	0.07 ppm ^a	0.075 ppm		

Draft Environmental Impact Report
Pixley Community Plan

Table 3.3-3 State & National Criteria Air Pollutant Standards, Effects, and Sources					
				(e) Vegetation damage; (f) Property damage.	
Carbon Monoxide	1 hour	20 ppm	35 ppm	(a) Aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses.	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm		
Nitrogen Dioxide	1 hour	0.18 ppm	100 ppb	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration - Colors atmosphere reddish-brown.	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
	Annual Average	0.030	0.053 ppm		
Sulfur Dioxide	1 hour	0.25 ppm	75 ppb	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	3 hours	---	0.5 ppm		
	24 hours	0.04 ppm	0.14 ppm ^b		
	Annual Average	---	0.03 ppm ^b		
Respirable Particulate Matter (PM ₁₀)	24 hours	50 mg/m ³	150 mg/m ³	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; (c) Increased risk of premature death from heart or lung diseases in the elderly. Daily fluctuations in PM _{2.5}	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	Annual Average	20 mg/m ³	---		
Fine	24 hours	---	35 mg/m ³		Fuel combustion in motor

Draft Environmental Impact Report
Pixley Community Plan

Table 3.3-3 State & National Criteria Air Pollutant Standards, Effects, and Sources					
Particulate Matter (PM _{2.5})	Annual Average	12 mg/m ³	15 mg/m ³	levels have been related to hospital admissions for acute respiratory conditions, school absences, and increased medication use in children and adults with asthma.	vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NO _x , sulfur oxides, and organics.
Lead	Rolling 3-Month Average NAAQS/Monthly Avg. State	1.5 mg/m ³	0.15 mg/m ³	Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction. The more serious effects of lead poisoning include behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs. Lead may also contribute to high blood pressure and heart disease.	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Quarterly	---	1.5 mg/m ³		
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard	High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause headache, nausea, vomiting, and cough. Long exposure can cause pulmonary edema.	Geothermal Power Plants, Petroleum Production and refining
Sulfates	24 hour	25 mg/m ³	No National Standard	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage.	Produced by the reaction in the air of SO ₂ .
Visibility Reducing Particles	8 hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standard	Reduces visibility, reduced airport safety, lower real estate value, and discourages tourism.	See PM _{2.5} .
<p><i>ppm = parts per million; ppb = parts per billion; mg/m³ = micrograms per cubic meter.</i></p> <p><i>a This concentration was approved by the Air Resources Board on April 28, 2005 and became effective May 17, 2006. SOURCE OF STANDARDS: California Air Resources Board, 2008a. Ambient Air Quality Standards, available at http://www.arb.ca.gov/research/aaqs/aaqs2.pdf Standards last updated November 17, 2008. California Air Resources Board, 2001. ARB Fact Sheet: Air Pollution Sources, Effects and Control, which can be accessed at: http://www.arb.ca.gov/research/health/fs/fs2/fs2.htm, page last updated December 2005. SOURCE OF EFFECTS: SCAQMD, Table 2-1 page 2-2, 2007 and U.S. EPA, 2010.</i></p> <p><i>b Applicable for certain areas only; does not apply to the SJVAB</i></p>					

REGULATORY SETTING

Federal Agencies & Regulations

Federal Clean Air Act

“The Federal Clean Air Act (CAA), adopted in 1970 and amended twice thereafter (including the 1990 amendments), establishes the framework for modern air pollution control. The act directs the Environmental Protection Agency (EPA) to establish ambient air standards, the National Ambient Air Quality Standards (NAAQS)... for six pollutants: ozone, carbon monoxide, lead, nitrogen dioxide, particulate matter (less than 10 microns in diameter [PM10] and less than 2.5 microns in diameter [PM2.5]), and sulfur dioxide. The standards are divided into primary and secondary standards; the former are set to protect human health with an adequate margin of safety and the latter to protect environmental values, such as plant and animal life.

Areas that do not meet the ambient air quality standards are called “non-attainment areas”. The Federal CAA requires each state to submit a State Implementation Plan (SIP) for non-attainment areas. The SIP, which is reviewed and approved by the EPA, must demonstrate how the federal standards will be achieved. Failing to submit a plan or secure approval could lead to the denial of federal funding and permits for such improvements as highway construction and sewage treatment plants. For cases in which the SIP is submitted by the State but fails to demonstrate achievement of the standards, the EPA is directed to prepare a federal implementation plan or EPA can “bump up” the air basin in question to a classification with a later attainment date that allows time for additional reductions needed to demonstrate attainment, as is the case for the San Joaquin Valley.

SIPs are not single documents. They are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations and federal controls. The California SIP relies on the same core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations and limits on emissions from consumer products. California State law makes the California Air Resources Board (CARB) the lead agency for all purposes related to the SIP. Local Air Districts and other agencies, such as the Bureau of Automotive Repair and the Department of Pesticide Regulation, prepare SIP elements and submit them to CARB for review and approval. The CARB forwards SIP revisions to the EPA for approval and publication in the Federal Register.”⁷

State Agencies & Regulations

California Clean Air Act

“The California Legislature enacted the California Clean Air Act (CCAA) in 1988 to address air quality issues of concern not adequately addressed by the federal CAA at the time. California’s air quality problems were and are some of the most severe in the nation and required additional actions beyond the federal mandates. The California Air Resources Board (ARB) administers California Ambient Air Quality Standards (CAAQS) for the 10 air pollutants designated in the CCAA. The 10 state air pollutants are the six federal standards listed above as well visibility-

⁷ Tulare County 2030 General Plan RDEIR, pages 3.3-1 to 3.3-2

Draft Environmental Impact Report
Pixley Community Plan

reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride. EPA authorized California to adopt its own regulations for motor vehicles and other sources that are more stringent than similar federal regulations implementing the CAA. Generally, the planning requirements of the CCAA are less stringent than federal CAA; therefore, consistency with the CAA will also demonstrate consistency with the CCAA.”⁸

Table 3.3-3 State & National Criteria Air Pollutant Standards, Effects, and Sources					
Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone	1 hour	0.09 ppm	---	(a) Decrease of pulmonary function and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; (f) Property damage.	Formed when reactive organic gases (ROG) and nitrogen oxides (NO _x) react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
	8 hours	0.07 ppm ^a	0.075 ppm		
Carbon Monoxide	1 hour	20 ppm	35 ppm	(a) Aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses.	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm		
Nitrogen Dioxide	1 hour	0.18 ppm	100 ppb	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration - Colors atmosphere reddish-brown.	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
	Annual Average	0.030	0.053 ppm		

⁸ Air Quality Impact Report, page 9

Draft Environmental Impact Report
Pixley Community Plan

Table 3.3-3 State & National Criteria Air Pollutant Standards, Effects, and Sources					
Sulfur Dioxide	1 hour	0.25 ppm	75 ppb	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	3 hours	---	0.5 ppm		
	24 hours	0.04 ppm	0.14 ppm ^b		
	Annual Average	---	0.03 ppm ^b		
Respirable Particulate Matter (PM10)	24 hours	50 mg/m ³	150 mg/m ³	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; (c) Increased risk of premature death from heart or lung diseases in the elderly.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	Annual Average	20 mg/m ³	---		
Fine Particulate Matter (PM2.5)	24 hours	---	35 mg/m ³	Daily fluctuations in PM2.5 levels have been related to hospital admissions for acute respiratory conditions, school absences, and increased medication use in children and adults with asthma.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NO _x , sulfur oxides, and organics.
	Annual Average	12 mg/m ³	15 mg/m ³		
Lead	Rolling 3-Month Average NAAQS/Monthly Avg. State	1.5 mg/m ³	0.15 mg/m ³	Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction. The more serious effects of lead poisoning include behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs. Lead may also contribute to high blood pressure and heart disease.	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Quarterly	---	1.5 mg/m ³		
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard	High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause headache, nausea, vomiting, and cough. Long exposure can cause pulmonary edema.	Geothermal Power Plants, Petroleum Production and refining

Draft Environmental Impact Report
Pixley Community Plan

Table 3.3-3 State & National Criteria Air Pollutant Standards, Effects, and Sources					
Sulfates	24 hour	25 mg/m ³	No National Standard	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage.	Produced by the reaction in the air of SO ₂ .
Visibility Reducing Particles	8 hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standard	Reduces visibility, reduced airport safety, lower real estate value, and discourages tourism.	See PM2.5.
<p><i>ppm = parts per million; ppb = parts per billion; mg/m³ = micrograms per cubic meter.</i></p> <p><i>a This concentration was approved by the Air Resources Board on April 28, 2005 and became effective May 17, 2006. SOURCE OF STANDARDS: California Air Resources Board, 2008a. Ambient Air Quality Standards, available at http://www.arb.ca.gov/research/aaqs/aaqs2.pdf Standards last updated November 17, 2008. California Air Resources Board, 2001. ARB Fact Sheet: Air Pollution Sources, Effects and Control, which can be accessed at: http://www.arb.ca.gov/research/health/fs/fs2/fs2.htm, page last updated December 2005. SOURCE OF EFFECTS: SCAQMD, Table 2-1 page 2-2, 2007 and U.S. EPA, 2010.</i></p> <p><i>b Applicable for certain areas only; does not apply to the SJVAB</i></p>					

State Agencies & Regulations

California Clean Air Act

“The California CAA of 1988 establishes an air quality management process that generally parallels the federal process. The California CAA, however, focuses on attainment of the State ambient air quality standards., which, for certain pollutants and averaging periods are more stringent than the comparable federal standards. Responsibility for meeting California’s standards is addressed by the CARB and local air pollution control districts (such as the eight county AIR DISTRICT, which administers air quality regulations for Tulare County). Compliance strategies are presented in district-level air quality attainment plans.

The California CAA requires that Air Districts prepare an air quality attainment plan if the district violates State air quality standards for criteria pollutants including carbon monoxide, sulfur dioxide, nitrogen dioxide, PM2.5, or ozone. Locally prepared attainment plans are not required for areas that violate the State PM10 standards. The California CAA requires that the State air quality standards be met as expeditiously as practicable but does not set precise attainment deadlines. Instead, the act established increasingly stringent requirements for areas that will require more time to achieve the standards.

The air quality attainment plan requirements established by the California CAA are based on the severity of air pollution caused by locally generated emissions. Upwind air pollution control

districts are required to establish and implement emission control programs commensurate with the extent of pollutant transport to downwind districts.”⁹

California Air Resources Board

“The CARB is responsible for establishing and reviewing the State ambient air quality standards, compiling the California State Implementation Plan (SIP) and securing approval of that plan from the U.S. EPA. As noted previously, federal clean air laws require areas with unhealthy levels of ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop SIPs. SIPs are comprehensive plans that describe how an area will attain NAAQS. The 1990 amendments to the Federal CAA set deadlines for attainment based on the severity of an area’s air pollution problem. State law makes CARB the lead agency for all purposes related to the SIP. The California SIP is periodically modified by the CARB to reflect the latest emission inventories, planning documents, and rules and regulations of various air basins. The CARB produces a major part of the SIP for pollution sources that are statewide in scope; however, it relies on the local Air Districts to provide emissions inventory data and additional strategies for sources under their jurisdiction. The SIP consists of the emission standards for vehicular sources and consumer products set by the CARB, and attainment plans adopted by the local air agencies as approved by CARB. The EPA reviews the air quality SIPs to verify conformity with CAA mandates and to ensure that they will achieve air quality goals when implemented. If EPA determines that a SIP is inadequate, it may prepare a Federal Implementation Plan for the nonattainment area, and may impose additional control measures. In addition to preparation of the SIP, the CARB also regulates mobile emission sources in California, such as construction equipment, trucks, automobiles, and oversees the activities of air quality management districts and air pollution control districts, which are organized at the county or regional level. The local or regional Air Districts are primarily responsible for regulating stationary emission sources at industrial and commercial facilities within their jurisdiction and for preparing the air quality plans that are required under the Federal CAA and California CAA.”¹⁰

“Low-Emission Vehicle Program. The ARB first adopted Low-Emission Vehicle (LEV) program standards in 1990. These first LEV standards ran from 1994 through 2003. LEV II regulations, running from 2004 through 2010, represent continuing progress in emission reductions. As the State’s passenger vehicle fleet continues to grow and more sport utility vehicles and pickup trucks are used as passenger cars rather than work vehicles, the more stringent LEV II standards were needed to provide reductions necessary for California to meet federally mandated clean air goals outlined in the 1994 State Implementation Plan (SIP). In 2012, ARB adopted the LEV III amendments to California’s Low-Emission Vehicle (LEV) regulations to provide reductions needed to achieve the latest ozone and PM2.5 standards. These amendments include more stringent emission standards for both criteria pollutants and greenhouse gases for new passenger vehicles.”¹¹

“On-Road Heavy-Duty Vehicles Program. The ARB has adopted standards for emissions from various types of new on-road heavy-duty vehicles. Section 1956.8, Title 13, California Code of

⁹ Tulare County 2030 General Plan RDEIR, page 3.3-1

¹⁰ Tulare County 2030 General Plan RDEIR, pages 3.3-6 to 3.3-7

¹¹ Air Quality Analysis Report, page 21

Regulations contains California's emission standards for on-road heavy-duty engines and vehicles, and test procedures. ARB has also adopted programs to reduce emissions from in-use heavy-duty vehicles including the Heavy-Duty Diesel Vehicle Idling Reduction Program, the Heavy-Duty Diesel In-Use Compliance Program, the Public Bus Fleet Rule and Engine Standards, and the School Bus Program and others."¹²

“ARB Regulation for In-Use Off-Road Diesel Vehicles. On July 26, 2007, the ARB adopted a regulation to reduce DPM and NOx emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. The ARB is enforcing that part of the rule with fines up to \$10,000 per day for each vehicle in violation. Performance requirements of the rule are based on a fleet's average NOx emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by installing exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirements making the first compliance deadline January 1, 2014 for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501-5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less).”¹³

“ARB Airborne Toxic Control Measure for Asbestos. In July 2001, the ARB approved an Air Toxic Control Measure for construction, grading, quarrying and surface mining operations to minimize emissions of naturally occurring asbestos. The regulation requires application of best management practices to control fugitive dust in areas known to have naturally occurring asbestos and requires notification to the local air district prior to commencement of ground-disturbing activities. The measure establishes specific testing, notification and engineering controls prior to grading, quarrying or surface mining in construction zones where naturally occurring asbestos is located on projects of any size. There are additional notification and engineering controls at work sites larger than one acre in size. These projects require the submittal of a “Dust Mitigation Plan” and approval by the air district prior to the start of a project... The measure applies to road construction and maintenance, construction and grading operations, and quarries and surface mines when the activity occurs in an area where naturally occurring asbestos is likely to be found. Areas are subject to the regulation if they are identified on maps published by the Department of Conservation as ultramafic rock units or if the Air Pollution Control Officer or owner/operator has knowledge of the presence of ultramafic rock, serpentine, or naturally occurring asbestos on the site. The measure also applies if ultramafic rock, serpentine, or asbestos is discovered during any operation or activity. Review of the Department of Conservation maps shows no ultramafic rock has been found near Pixley.”

“Diesel Risk Reduction Plan. The ARB's Diesel Risk Reduction Plan has led to the adoption of new state regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles to reduce DPM emissions by about 90 percent overall from year 2000 levels as stated on page 1 of the plan. The projected emission benefits associated with the full

¹² Ibid., page 21

¹³ Ibid., pages 21 and 22

implementation of this plan, including federal measures, are reductions in DPM emissions and associated cancer risks of 75 percent by 2010 and 85 percent by 2020.”¹⁴

Local Policy & Regulations

San Joaquin Valley Unified Air Pollution Control District (SJVAPCD or Air District)

“The San Joaquin Valley Air District is a public health agency whose mission is to improve the health and quality of life for all Valley residents through efficient, effective and entrepreneurial air quality-management strategies.”¹⁵ The Air District’s core values include:

“Protection of Public Health – The District shall continue to strive to protect the health of Valley residents through efforts to meet health-based state and federal ambient air-quality standards, based on science and prioritized where possible using health-risk reduction strategies.

Active and effective air pollution control efforts with minimal disruption to the Valley’s economic prosperity – District staff shall work diligently to adopt and fully implement cost-effective air pollution-control measures, provide meaningful incentives for reducing emissions, and develop creative alternatives for achieving emissions reductions.

Outstanding Customer Service – District staff shall work to provide excellent customer service for stakeholders in activities including: rule and plan development; permitting and emissions inventory functions; compliance activities; financial and grant-funding transactions; and responses to public complaints and inquiries.

Ingenuity and innovation - The District values innovation and ingenuity in meeting the challenges we face. Examples of this spirit of innovation include developing programs that provide new incentives for emissions reductions, and providing alternate compliance strategies that supplement traditional regulatory efforts and generate more emissions reductions than could otherwise be reasonably obtained.

Accountability to the public – The District serves, and is ultimately accountable to, the people of the Valley for the wise and appropriate use of public resources, and for accomplishing the District’s mission with integrity and honesty.

Open and transparent public processes – The District shall continue to provide meaningful opportunities for public input and be responsive to all public inquiries.

Recognition of the uniqueness of the San Joaquin Valley – The Valley’s meteorology, topography and economy differ significantly from those in other jurisdictions. Although it is valuable to review and evaluate efforts of other agencies, we must consistently look for solutions that fully consider the Valley’s unique needs.

¹⁴ Ibid., pages 22 and 23

¹⁵ http://www.valleyair.org/General_info/aboutdist.htm#Mission

Continuous improvement –The District works to continually improve its internal operations and processes, and strives to streamline District operations through optimally utilizing information technology and human resources.

Effective and efficient use of public funds – The District shall continually strive to efficiently use all resources and to minimize costs associated with District functions.

Respect for the opinions and interest of all Valley residents – The District shall respect the interests and opinions of all Valley residents and fully consider these opinions, working collaboratively, in carrying out the District’s mission.”¹⁶

To achieve these core values the Air District has a comprehensive list of rules to limit air quality impacts. The specific rules that apply to the proposed Project are listed and described in the Response to Checklist items below.

Specific Air Quality Issues

Ozone

“The SJVAB has severe ozone problems. The EPA has required the Air District to demonstrate in a plan, substantiated with modeling, that the ozone NAAQS could be met by the November 15, 2005 deadline. However, the district could not provide this demonstration for several reasons, including that its achievement would require regulation of certain source categories not currently under the jurisdiction of the district. According to the district, in order to meet the standard the SJVAB must reduce the total emissions inventory by an additional 30 percent (300 tons per day). Because attainment by the deadline could not be demonstrated by the mandated deadlines, the federal sanction clock was started. The clock was to be stopped if the Air District SIP could demonstrate compliance with specified federal requirements by November 15, 2005. However, the district recognized that it could not achieve demonstration in time. Therefore, the district, through petition by the State on behalf of AIR DISTRICT, sought a change in the federal nonattainment classification from “severe” to “extreme” nonattainment with the ozone standard. An extreme nonattainment designation would effectively move the compliance deadline to year 2010 before federal sanctions would begin.

On February 23, 2004, EPA publicly announced its intention to grant the request by the State of California to voluntarily reclassify the SJVAB from a “severe” to an “extreme” 1-hour ozone nonattainment area. The EPA stated that, except for a demonstration of attainment of the ozone standard by 2005, the Air District has submitted all of the required severe area plan requirements and they were deemed complete. The CARB submitted the 2004 Extreme Ozone Attainment Demonstration Plan to EPA on November 15, 2004. On August 21, 2008, the District adopted Clarifications for the 2004 Extreme Ozone Attainment Demonstration Plan for 1-hour Ozone, and on October 16, 2008, EPA proposed to approve the District's 2004 Extreme Ozone Attainment Demonstration Plan for 1-hour Ozone.”¹⁷

¹⁶ http://www.valleyair.org/General_info/aboutdist.htm#Mission

¹⁷ Tulare County 2030 General Plan RDEIR, pages 3.3-12 and 3.3-13

As indicated in the Air Quality Analysis prepared by consultant First Carbon Solutions; “The planning requirements for the 1-hour plan remain in effect until replaced by a federal 8-hour ozone attainment plan. The EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan, including revisions to the plan, on March 8, 2010, effective April 7, 2010. However, the Air Basin failed to attain the standard in 2010 and was subject to a \$29-million Clean Air Act penalty. The penalty is being collected through an additional \$12 motor vehicle registration surcharge for each passenger vehicle registered in the Air Basin that will be applied to pollution reduction programs in the region. The District also instituted a more robust ozone episodic program to reduce emissions on days with the potential to exceed the ozone standards.

On May 6, 2014, the District submitted a formal request that the EPA determine that the Valley has attained the federal 1-hour ozone standard and to eliminate the \$29 million Clean Air Act penalty. Per federal requirements, the District’s submittal includes a clean data finding (2011-2013) and a finding that attainment is due to permanent and enforceable emissions reductions.

As part of the clean data finding, the District requested EPA concurrence that an exceedance at Fresno-Drummond on August 10, 2012 was due to an exceptional event. Alternatively, the District also provided compelling evidence that the Valley would attain the 1-hour ozone standard but for the influence of international air pollutant transport, allowing nonattainment penalties to be lifted under CAA 179B.

EPA originally classified the Air Basin as serious nonattainment for the 1997 federal 8-hour ozone standard with an attainment date of 2013. On April 30, 2007, the District’s Governing Board adopted the 2007 Ozone Plan, which contained analysis showing a 2013 attainment target to be infeasible. The 2007 Ozone Plan details the plan for achieving attainment on schedule with an “extreme nonattainment” deadline of 2024. At its adoption of the 2007 Ozone Plan, the District also requested a reclassification to extreme nonattainment. ARB approved the plan in June 2007, and EPA approved the request for reclassification to extreme nonattainment on April 15, 2010.

The 2007 Ozone Plan contains measures to reduce ozone and particulate matter precursor emissions to bring the Basin into attainment with the federal 8-hour ozone standard. The 2007 Ozone Plan calls for a 75-percent reduction of NO_x and a 25-percent reduction of ROG. Figure 2 displays the anticipated NO_x reductions attributed in the 2007 Ozone Plan (SJVPACD 2007). The plan, with innovative measures and a “dual path” strategy, assures expeditious attainment of the federal 8-hour ozone standard for all Basin residents. The District Governing Board adopted the 2007 Ozone Plan on April 30, 2007. The ARB approved the plan on June 14, 2007. The 2007 Ozone Plan requires yet to be determined “Advanced Technology” to achieve additional reductions after 2021 to attain the standard at all monitoring stations in the Basin by 2024 as allowed for areas designated extreme nonattainment by the federal CAA.”¹⁸

“The County continues to evaluate and consider a variety of Federal, State, and Air District programs in order to respond to the non-attainment designation for Ozone that the SJVAB has received, and will continue to adopt resolutions to implement these programs. The Tulare County

¹⁸ Air Quality Analysis Report, pages 22 and 23

Draft Environmental Impact Report
Pixley Community Plan

Board of Supervisor resolutions are described below. These resolutions were adopted in 2002 and 2004, respectively.”¹⁹

“Resolution 2002-0157. Resolution 2002-0157, as adopted on March 5, 2002, requires the County to commit to implementing the Reasonably Available Control Measures included in the Resolution. The following Reasonably Available Control Measures were included in the resolution:

- Increasing transit service to the unincorporated communities of Woodville, Poplar and Cotton Center;
- Purchase of three new buses and installation of additional bicycle racks on buses;
- Public outreach to encourage the use of alternative modes of transportation;
- Providing preferential parking for carpools and vanpools;
- Removing on-street parking and providing bus pullouts in curbs to improve traffic flow;
- Supporting the purchase of hybrid vehicles for the County fleet;
- Mandating that the General Plan 2030 Update implement land use policies supporting public transit and vehicle trip reduction; and
- Programming \$13,264,000 of highway widening projects.

“Resolution 2004-0067. As part of a follow up effort to Resolution 2002-0157 and to address the federal reclassification to Extreme non-attainment for ozone, the County Board of Supervisors adopted Resolution 2004-067. The resolution contains additional Reasonably Available Control Measures as summarized below:

- Encouraging land use patterns which support public transit and alternative modes of transportation;
- Exploring concepts of Livable Communities as they address housing incentives and transportation;
- Consideration of incentives to encourage developments in unincorporated communities that are sensitive to air quality concerns; and
- Exploring ways to enhance van/carpool incentives, alternative work schedules, and other Transportation Demand Management strategies.”²⁰

PM10

“On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM10 NAAQS and approved the PM10 Maintenance Plan. However, prior to this redesignation, Tulare County Board of Supervisors adopted the following resolution (Resolution 2002-0812) on October 29, 2002. Although now designated in attainment of the federal PM10 standard, all requirements included in the AIR DISTRICT PM10 Plan are still in effect. The resolution

¹⁹ Tulare County 2030 General Plan RDEIR, pages 3.3-12 and 3.3-13

²⁰ Ibid., page 3.3-13

contains the following Best Available Control Measures (BACMs) to be implemented in order to reduce PM₁₀ emissions in the County:

- Paving or stabilizing of unpaved roads and alleys;
- Paving, vegetating, chemically stabilizing unpaved access points onto paved roads;
- Curbing, paving, or stabilizing shoulders on paved roads;
- Frequent routine sweeping or cleaning of paved roads;
- Intensive street cleaning requirements for industrial paved roads and streets providing access to industrial/ construction sites; and
- Debris removal after wind and rain runoff when blocking roadways.”²¹

PM 2.5

“The 2008 PM_{2.5} Plan builds upon the comprehensive strategy adopted in the 2007 Ozone Plan to bring the Basin into attainment of the 1997 national standards for PM_{2.5}. The EPA has identified NO_x and sulfur dioxide as precursors that must be addressed in air quality plans for the 1997 PM_{2.5} standards. The 2008 PM_{2.5} Plan is a continuation of the District’s strategy to improve the air quality in the Basin. The EPA issued final approval of the 2008 PM_{2.5} Plan on November 9, 2011 effective January 9, 2012. EPA approved the emissions inventory, the reasonably available control measures/reasonably available control technology demonstration, reasonable further progress demonstration, attainment demonstration and associated air quality modeling, and the transportation conformity motor vehicle emissions budgets. EPA also granted California’s request to extend the attainment deadline for the San Joaquin Valley to April 5, 2015 and approved commitments to measures and reductions by the District and the ARB. Finally, it disapproved the SIP’s contingency provisions and issued a protective finding for transportation conformity determinations.

In December 2012, the District adopted the 2012 PM_{2.5} Plan to bring the San Joaquin Valley into attainment of the EPA’s 2006 24-hour PM_{2.5} standard of 35 µg/m³. The ARB approved the District’s 2012 PM_{2.5} Plan for the 2006 standard at a public hearing on January 24, 2013 (SJVAPCD 2012a). This plan seeks to bring the Valley into attainment with the standard by 2019, with the expectation that most areas will achieve attainment before that time.”²²

Criteria Pollutants

Although all criteria pollutants are to be evaluated, the primary pollutants of concern during project construction and operation are ROG, NO_x, PM₁₀, and PM_{2.5}. Ozone is a secondary pollutant that is formed in the atmosphere sometimes miles away from the source of emissions through reactions of ROG and NO_x emissions in the presence of sunlight. Therefore, ROG and NO_x are termed ozone precursors. The SJVAB often exceeds the state and national ozone standards. Therefore, if the project emits a substantial quantity of ozone precursors, the project may contribute to an exceedance of the ozone standard. The SJVAB also exceeds air quality

²¹ Ibid., page 3.3-14

²² Air Quality Analysis Report, page 25

Draft Environmental Impact Report
Pixley Community Plan

standards for PM₁₀, and PM_{2.5}; therefore, substantial project emissions may contribute to an exceedance for these pollutants.

To assess air quality impacts, the District has established significance thresholds to assist Lead Agencies in determining whether a project may have a significant air quality impact²³. The District's thresholds of significance for criteria pollutants, which are based on District Rule 2201 New Source Review offset thresholds, are provided below in Table 3.3-4.

As shown in the table, the District has three sets of significance thresholds for each pollutant based on the source of the emissions. According to the GAMAQI, "The District identifies thresholds that separate a project's short-term emissions from its long-term emissions. The short-term emissions are mainly related to the construction phase of a project and are recognized to be short in duration. The long-term emissions are mainly related to the activities that will occur indefinitely as a result of project operations."²⁴

Table 3.3-4 – Criteria Pollutant Emission Significance Thresholds

Pollutant / Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non- Permitted Equipment and Activities
	Emissions (tpy)	Emissions (tpy)	Emissions (tpy)
CO	100	100	100
NO_x	10	10	10
ROG	10	10	10
SO_x	27	27	27
PM₁₀	15	15	15
PM_{2.5}	15	15	15
Source: Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI) 2015, San Joaquin Valley, Air Pollution Control District, March 19, 2015..			

Operational emissions are further separated into permitted and non-permitted equipment and activities. Stationary (permitted) sources that comply or will comply with Air District rules and regulations are generally not considered to have a significant air quality impact. Specifically, the GAMAQI states, "District Regulation II ensures that stationary source emissions will be reduced or mitigated to below the District's significance thresholds. However, the Lead Agency can, and should, make an exception to this determination if special circumstances suggest that the emissions from any permitted or exempt source may cause a significant air quality impact. For example, if a source may emit objectionable odors, then odor impacts on nearby receptors should be considered a potentially significant air quality impact. District implementation of New Source Review (NSR) ensures that there is no net increase in emissions above specified

²³ Air District, GAMAQI, page 74.

²⁴ Ibid., page 75.

thresholds from New and Modified Stationary Sources for all nonattainment pollutants and their precursors. Furthermore, in general, permitted sources emitting more than the NSR Offset Thresholds for any criteria pollutant must offset all emission increases in excess of the thresholds. However, under certain circumstances, the District may be precluded by state law or other District rule requirements from requiring a stationary source to offset emissions increases.”²⁵

Toxic Air Contaminants

“The operation of any project with the potential to expose sensitive receptors to substantial levels of toxic air contaminants (TAC’s) would be deemed to have a potentially significant impact. More specifically, proposed development projects that have the potential to expose the public to TAC’s in excess of the following thresholds would be considered to have a significant air quality impact:

- Probability of contracting cancer for the Maximally Exposed Individual²⁶ exceeds 10 in one million.
- Ground-level concentrations of non-carcinogenic TAC’s would result in a Hazard Index greater than 1 for the Maximally Exposed Individual.

Application of these standards would typically apply to the preparation of more detailed project-specific health risk assessments (based on a detailed air dispersion modeling effort) that would occur as individual projects are considered under the proposed project. For this programmatic assessment of the proposed project, the assessment of TAC’s is conducted at a qualitative level with specific policies and implementation measures provided to address the potential impacts associated with this issue.”²⁷

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project are listed below.

AQ-1.1 Cooperation with Other Agencies - The County shall cooperate with other local, regional, Federal, and State agencies in developing and implementing air quality plans to achieve State and federal Ambient Air Quality Standards. The County shall partner with the SJVAPCD, Tulare County Association of Governments (TCAG), and the California Air Resource Board to achieve better air quality conditions locally and regionally.

AQ-1.2 Cooperation with Local Jurisdictions - The County shall participate with cities, surrounding counties, and regional agencies to address cross-jurisdictional transportation and air quality issues.

²⁵ Ibid., page 76.

²⁶ Maximally Exposed Individual represents the worst-case risk estimate based on a theoretical person continuously exposed for 70 years at the point of highest compound concentration in air.

²⁷ Tulare County 2030 General Plan RDEIR, pages 3.3-15 and 3.3-16

AQ-1.3 Cumulative Air Quality Impacts - The County shall require development to be located, designed, and constructed in a manner that would minimize cumulative air quality impacts. Applicants shall be required to propose alternatives as part of the State CEQA process that reduce air emissions and enhance, rather than harm, the environment.

AQ-1.4 Air Quality Land Use Compatibility - The County shall evaluate the compatibility of industrial or other developments which are likely to cause undesirable air pollution with regard to proximity to sensitive land uses, and wind direction and circulation in an effort to alleviate effects upon sensitive receptors.

AQ-1.5 California Environmental Quality Act (CEQA) Compliance - The County shall ensure that air quality impacts identified during the CEQA review process are consistently and reasonably mitigated when feasible.

AQ-1.7 Support Statewide Climate Change Solutions - The County shall monitor and support the efforts of Cal/EPA, CARB, and the SJVAPCD, under AB 32 (Health and Safety Code §38501 et seq.), to develop a recommended list of emission reduction strategies. As appropriate, the County will evaluate each new project under the updated General Plan to determine its consistency with the emission reduction strategies.

AQ-1.8 Greenhouse Gas Emissions Reduction Plan/Climate Action Plan - The County will develop a Greenhouse Gas Emissions Reduction Plan (Plan) that identifies greenhouse gas emissions within the County as well as ways to reduce those emissions. The Plan will incorporate the requirements adopted by the California Air Resources Board specific to this issue. In addition, the County will work with the Tulare County Association of Governments and other applicable agencies to include the following key items in the regional planning efforts.

1. Inventory all known, or reasonably discoverable, sources of greenhouse gases in the County,
2. Inventory the greenhouse gas emissions in the most current year available, and those projected for year 2020, and
3. Set a target for the reduction of emissions attributable to the County's discretionary land use decisions and its own internal government operations.

AQ-1.9 Support Off-Site Measures to Reduce Greenhouse Gas Emissions - The County will support and encourage the use of off-site measures or the purchase of carbon offsets to reduce greenhouse gas emissions.

AQ-1.10 Alternative Fuel Vehicle Infrastructure - County shall support the development of necessary facilities and infrastructure needed to encourage the use of low or zero-emission vehicles (e.g. electric vehicle charging facilities and conveniently located alternative fueling stations, including CNG filling stations).

AQ-2.1 Transportation Demand Management Programs - The County shall coordinate and provide support for County Transportation Demand Management programs with other public and private agencies, including programs developed by the TCAG and the SJVAPCD.

AQ-2.2 Indirect Source Review - The County shall require major development projects, as defined by the SJVAPCD, to reasonably mitigate air quality impacts associated with the project. The County shall notify developers of SJVAPCD Rule 9510 – Indirect Source Review requirements and work with SJVAPCD to determine mitigations, as feasible, that may include, but are not limited to the following:

1. Providing bicycle access and parking facilities,
2. Increasing density,
3. Encouraging mixed use developments,
4. Providing walkable and pedestrian-oriented neighborhoods,
5. Providing increased access to public transportation,
6. Providing preferential parking for high-occupancy vehicles, car pools, or alternative fuels vehicles, and
7. Establishing telecommuting programs or satellite work centers.

AQ-2.3 Transportation and Air Quality - When developing the regional transportation system, the County shall work with TCAG to comprehensively study methods of transportation which may contribute to a reduction in air pollution in Tulare County. Some possible alternatives that should be studied are:

1. Commuter trains (Light Rail, Amtrak, or High Speed Rail) connecting with Sacramento, Los Angeles, and San Francisco, with attractive services scheduled up and down the Valley,
2. Public transportation such as buses and light rail, to serve between communities of the Valley, publicly subsidized if feasible,
3. Intermodal public transit such as buses provided with bicycle racks, bicycle parking at bus stations, bus service to train stations and airports, and park and ride facilities, and
4. Community transportation systems supportive of alternative transportation modes, such as cycling or walking trails, with particular attention to high-density areas.

AQ-2.4 Transportation Management Associations - The County shall encourage commercial, retail, and residential developments to participate in or create Transportation Management Associations (TMAs) that may assist in the reduction of pollutants through strategies that support carpooling or other alternative transportation modes.

AQ-2.5 Ridesharing - The County shall continue to encourage ridesharing programs such as employer-based rideshare programs.

AQ-3.1 Location of Support Services - The County shall encourage the location of ancillary employee services (including, but not limited to, child care, restaurants, banking facilities, convenience markets) near major employment centers for the purpose of reducing midday vehicle trips.

AQ-3.2 Infill near Employment - The County shall identify opportunities for infill development projects near employment areas within all unincorporated communities and hamlets to reduce vehicle trips.

AQ-3.3 Street Design - The County shall promote street design that provides an environment which encourages transit use, biking, and pedestrian movements.

AQ-3.4 Landscape - The County shall encourage the use of ecologically based landscape design principles that can improve local air quality by absorbing CO₂, producing oxygen, providing shade that reduces energy required for cooling, and filtering particulates. These principles include, but are not limited to, the incorporation of parks, landscaped medians, and landscaping within development.

AQ-3.5 Alternative Energy Design - The County shall encourage all new development, including rehabilitation, renovation, and redevelopment, to incorporate energy conservation and green building practices to maximum extent feasible. Such practices include, but are not limited to: building orientation and shading, landscaping, and the use of active and passive solar heating and water systems.

AQ-3.6 Mixed Land Uses - The County shall encourage the clustering of land uses that generate high trip volumes, especially when such uses can be mixed with support services and where they can be served by public transportation.

AQ-4.1 Air Pollution Control Technology - The County shall utilize the BACM and RACM as adopted by the County to support SJVAPCD air quality attainment plans to achieve and maintain healthful air quality and high visibility standards. These measures shall be applied to new development approvals and permit modifications as appropriate.

AQ-4.2 Dust Suppression Measures - The County shall require developers to implement dust suppression measures during excavation, grading, and site preparation activities consistent with SJVAPCD Regulation VIII – Fugitive Dust Prohibitions. Techniques may include, but are not limited to, the following:

1. Site watering or application of dust suppressants,
2. Phasing or extension of grading operations,
3. Covering of stockpiles,
4. Suspension of grading activities during high wind periods (typically winds greater than 25 miles per hour), and
5. Re-vegetation of graded areas.

AQ-4.3 Paving or Treatment of Roadways for Reduced Air Emissions - The County shall require that all new roads be paved or treated to reduce dust generation where feasible as required by SJVAPCD Regulation VIII, Rule 8061- Paved and Unpaved Roads. For new projects with unpaved roads, funding for roadway maintenance shall be adequately addressed and secured.

AQ-4.4 Wood Burning Devices - The County shall require the use of natural gas where service is available or the installation of low-emission, EPA-certified fireplace inserts in all open hearth fireplaces in new homes as required under the SJVAPCD Rule 4901 – Wood Burning Fireplaces and Wood Burning Heaters. The County shall promote the use of natural gas over wood products in space heating devices and fireplaces in all existing and new homes.

AQ-4.5 Public Awareness - The County shall promote public awareness of the seriousness and extent of the existing air quality problems.

AQ-4.6 Asbestos Airborne Toxic Control and Dust Protection - Asbestos is of concern to Tulare County because it occurs naturally in surface deposits of several types of ultramafic materials (materials that contain magnesium and iron and a very small amount of silica). Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining.

LU-1.1 Smart Growth and Healthy Communities - The County shall promote the principles of smart growth and healthy communities in UDBs and HDBs, including: 1) creating walkable neighborhoods; 2) providing a mix of residential densities; 3) creating a strong sense of place; 4) mixing land uses; 5) directing growth toward existing communities; 6) building compactly; 7) discouraging sprawl; 8) encouraging infill; 9) preserving open space; 10) creating a range of housing opportunities and choices; 11) utilizing planned community zoning to provide for the orderly pre-planning and long term development of large tracks of land which may contain a variety of land uses, but are under unified ownership or development control; and 12) encouraging connectivity between new and existing development.

LU-1.4 Compact Development - The County shall actively support the development of compact mixed use projects that reduce travel distances.

LU-1.8 Encourage Infill Development - The County shall encourage and provide incentives for infill development in order to maximize the use of land within existing urban areas, minimize the conversion of existing agricultural land, and minimize environmental concerns associated with new development.

LU-3.2 Cluster Development - The County shall encourage proposed residential development to be clustered onto portions of the site that are more suitable to accommodating the development, and shall require access either directly onto a public road or via a privately-maintained road designed to meet County road standards.

LU-3.3 High-Density Residential Locations - The County shall encourage high-density residential development (greater than 14 dwelling units per gross acre) to locate along collector roadways and transit routes, and near public facilities (e.g., schools, parks), shopping, recreation, and entertainment.

TC-5.1 Bicycle/Pedestrian Trail System - The County shall coordinate with TCAG and other agencies to develop a Countywide integrated multi-purpose trail system that provides a linked

network with access to recreational, cultural, and employment facilities, as well as offering a recreational experience apart from that available at neighborhood and community parks.

TC-5.2 Consider Non-Motorized Modes in Planning and Development - The County shall consider incorporating facilities for non-motorized users, such as bike routes, sidewalks, and trails when constructing or improving transportation facilities and when reviewing new development proposals. For developments with 50 or more dwelling units or non-residential projects with an equivalent travel demand, the feasibility of such facilities shall be evaluated.

Impact Evaluation

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

Project Impact Analysis: *Less Than Significant Impact*

As noted earlier, the San Joaquin Valley Air Basin (SJVAB) is designated nonattainment of state and federal health based air quality standards for ozone and PM_{2.5}. The SJVAB is designated nonattainment of state PM₁₀. To meet Federal Clean Air Act (CAA) requirements, the San Joaquin Valley Air Pollution Control District (SJVAPCD or Air District) has multiple Air Quality Attainment Plan (AQAP) documents, including:

- 2004 Extreme Ozone Attainment Demonstration Plan (EOADP) for attainment of the 1-hour ozone standard
- 2007 Ozone Plan for attainment of the 8-hour ozone standard
- 2007 PM₁₀ Maintenance Plan and Request for Redesignation
- 2008 PM_{2.5} Plan
- 2009 Reasonably Available Control Technology (RACT) Demonstration for Ozone State Implementation Plan (SIP)
- 2012 PM_{2.5} Plan

As indicated in the Air Quality Analysis (see Appendix “A”) prepared by consultants First Carbon Solutions; “The CEQA Guidelines indicate that a significant impact would occur if the proposed project would conflict with or obstruct implementation of the applicable air quality plan. The GAMAQI does not provide specific guidance on analyzing conformity with the Air Quality Plan (AQP). Therefore, this document proposes the following criteria for determining project consistency with the current AQPs:

1. Will the project result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in

the AQPs? This measure is determined by comparison to the regional and localized thresholds identified by the District for Regional and Local Air Pollutants.

2. Will the project conform to the assumptions in the AQPs?
3. Will the project comply with applicable control measures in the AQPs?

The use of the criteria listed above is a standard approach for CEQA analysis of projects in the District's jurisdiction, as well as within other air districts, for the following reasons:

- Significant contribution to existing or new exceedances of the air quality standards would be inconsistent with the goal of attaining the air quality standards.
- AQP emissions inventories and attainment modeling are based on growth assumptions for the area within the air district's jurisdiction.
- AQPs rely on a set of air district-initiated control measures as well as implementation of federal and state measures to reduce emissions within their jurisdictions, with the goal of attaining the air quality standards.

AQPs are plans for reaching attainment of air quality standards. The assumptions, inputs, and control measures are analyzed to determine if the Air Basin can reach attainment for the ambient air quality standards. In order to show attainment of the standards, the District analyzes the growth projections in the valley, contributing factors in air pollutant emissions and formations, and existing and future emissions controls. The District then formulates a control strategy to reach attainment.

Contribution to Air Quality Violations

A measure of determining if the project is consistent with the air quality plans is if the project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the air quality plans. Because of the region's nonattainment status for ozone, PM_{2.5}, and PM₁₀, if project-generated emissions of either of the ozone precursor pollutants (ROG and NO_x), PM₁₀, or PM_{2.5} would exceed the District's significance thresholds and were not included in the plan's growth forecast, then the project may be considered to conflict with the attainment plans. Projects requiring a General Plan Amendment may not be included in the air quality plans growth forecast. However, adding additional vacant land to the inventory may not result in an increase in the actual amount of land developed by the plan's attainment year.

As discussed in Impact AIR-3 below, emissions of ROG, NO_x, PM₁₀, and PM_{2.5} associated with the construction and operation of the project would not exceed the District's significance thresholds. As shown in Impact AIR-2 below, the project would not result in CO hotspots that would violate CO standards. Therefore, the project would not make a significant contribution to air quality violations.

Consistency with Assumptions in AQPs

The primary way of determining consistency with the AQP's assumptions is determining consistency with the applicable General Plan to ensure that the project's population density and land use are consistent with the growth assumptions used in the AQPs for the air basin. The Pixley Community Plan Update does not propose additional land for development beyond that already designated by the Tulare County General Plan. Therefore, the project is consistent with the assumptions of the AQPs and has a less than significant impact for this criterion.

Control Measures

The AQP contains a number of control measures, which are enforceable requirements through the adoption of rules and regulations. A detailed description of rules and regulations that apply to this project is provided in Section 2.2, Regulatory Setting. The project will comply with all of the District's applicable rules and regulations. Therefore, the project complies with this criterion and would not conflict with or obstruct implementation of the applicable air quality attainment plan.

For these reasons, it is appropriate to conclude that the proposed Project complies with the applicable air quality plans and will not result in a significant impact. Therefore, this impact is ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is San Joaquin Air Basin. This cumulative analysis is based on the information provided in the Air Quality and Greenhouse Gas Analysis Report.

The proposed Project will not create significant Project-specific impacts related to SJVAPCD's Air Quality Attainment Plans. Therefore, the potential cumulative impacts related to this Checklist item will be ***Less Than Significant***.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Impact*** Project-specific and cumulative impacts will occur.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Project Impact Analysis: ***Less Than Significant Impact***

As indicated in the Air Quality Analysis (see Appendix “A”) prepared by consultants First Carbon Solutions; “Air pollutant emissions have regional effects and localized effects. This analysis assesses the regional effects of the project’s criteria pollutant emissions in comparison to District thresholds of significance for short-term construction activities and long-term operation of the project. Localized emissions from project construction and operation are also assessed using concentration based thresholds compared with ambient air quality standards or significance thresholds. The primary pollutants of concern during project construction and operation are ROG, NO_x, PM₁₀, and PM_{2.5}.

The SJVAPCD current GAMAQI adopted March 19, 2015 contains thresholds for ROG, NO_x, PM₁₀, and PM_{2.5} based on Rule 2201 New Source Review offset thresholds.

Ozone is a secondary pollutant that is formed in the atmosphere sometimes miles away from the source of emissions through reactions of ROG and NO_x emissions in the presence of sunlight. Therefore, ROG and NO_x are termed ozone precursors. The Air Basin often exceeds the state and national ozone standards. Therefore, if the project emits a substantial quantity of ozone precursors, the project may contribute to an exceedance of the ozone standard. The Basin also exceeds air quality standards for PM₁₀, and PM_{2.5}; therefore, substantial project emissions may contribute to an exceedance for these pollutants. The District annual emission significance thresholds used for the project to define substantial contribution from both construction and operational emissions are as follows:

- 10 tons per year ROG
- 10 tons per year NO_x
- 15 tons per year PM₁₀
- 15 tons per year PM_{2.5}
- 27 tons per year SO_x
- 100 tons per year CO

Sulfur dioxide and CO are not included in the regional analysis because these pollutants are in attainment.... Additionally, only minor amounts of sulfur dioxide are emitted during construction and operation, as shown in the output files contained in Appendix A [of the Air Quality Study]. CO emissions also do not exceed 100 tons per year as shown in Appendix A [of the Air Quality Study].

Construction Emissions

Construction emissions associated with the project are shown in Table 10 [Table 3.3-5]. The analysis is based on the annual average amount of construction between 2014 and 2030 modeled with a 2014 modeling assumptions in CalEEMod. The year 2014 represents the highest annual emissions because emissions from construction equipment decline over time as older equipment is retired or retrofitted with new pollution control devices. As shown in Table 10 [Table 3.3-5], the emissions are below the significance thresholds and, therefore, are less than significant on a project basis.

Operational Emissions

Operational emissions occur over the lifetime of the project and are from two main sources: small, distributed sources known as area sources and motor vehicles, or mobile sources. The operational emissions are based on the incremental development of the Plan area between 2014 and 2030 plan horizon year. Emissions are presented from the unmitigated modeling output from CalEEMod to provide a conservative analysis. For assumptions in estimating the emissions, please refer to Section 3, Modeling Parameters and Assumptions. Operational emissions are shown in Table 11 [Table 3.3-6]. As shown in the table, the emissions are below the adopted and recommended District significance thresholds and, therefore, would result in a less than significant impact.”

Table 3.3-5: Construction Air Pollutant Emissions

Source	Emissions (tons per year)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Site Preparation	0.12	1.25	0.22	0.14
Grading	0.40	4.64	0.45	0.30
Building	3.38	23.69	2.20	1.61
Paving	0.08	0.82	0.05	0.04
Coating	5.62	0.10	0.01	0.01
Total	9.59	30.50	2.93	2.11
Averaged Over 16 years	0.60	1.91	0.18	0.13
<i>Significance threshold</i>	<i>10</i>	<i>10</i>	<i>15</i>	<i>15</i>
Exceed threshold – significant impact?	No	No	No	No
<i>Notes:</i> <i>ROG = reactive organic gases NO_x = nitrogen oxides PM₁₀ and PM_{2.5} = particulate matter</i> <i>Source: Appendix A.</i>				

Localized Pollutant Analysis

No specific projects are proposed within the Pixley Community Plan that would allow an analysis to determine localized air pollutant impacts. The County will determine whether a localized pollutant analysis is required on a project by project basis. The SJVAPCD has requested that projects analyze the potential to generate or substantially contribute to a localized exceedance of criteria pollutants. A significant impact would result if the change in the NO₂, SO₂, or CO pollutant impacts from the addition of the project plus the background concentrations of these pollutants contributed by other local and regional emission sources

exceeds the most restrictive ambient air quality standards. In locations that already exceed standards for these pollutants, significance is based on a significant impact level (SIL) that represents the amount that is considered a cumulatively considerable contribution to an existing violation of an air quality standard. Although the Air Basin has not violated the national ambient air quality standards or PM₁₀ in the past 5 years, it has violated the state standard for PM₁₀ during the past several years. The Air Basin also exceeds both the national and state PM_{2.5} air standards. However, the District has not adopted local significance thresholds specifically for either PM₁₀ or PM_{2.5}. For PM₁₀ and PM_{2.5}, a significant impact would occur if the net change in PM₁₀ or PM_{2.5} exceeds the respective SILs.

Table 3.3-6: Operational Air Pollutant Emissions at Plan Horizon Year

Source	Emissions (tons per year)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Area	3.18	0.02	0.02	0.02
Energy	0.07	0.61	0.05	0.05
Mobile	2.90	4.90	4.99	1.39
Total	6.15	5.53	5.05	1.45
<i>Significance threshold</i>	<i>10</i>	<i>10</i>	<i>15</i>	<i>15</i>
Exceed threshold - significant impact?	No	No	No	No
<i>1. Notes:</i> <i>2. ROG = reactive organic gases; NO_x = nitrogen oxides PM₁₀ and PM_{2.5} = particulate matter</i> <i>3. Area source emissions include emissions from natural gas, landscape, and painting.</i> <i>4. The Plan horizon year is 2030.</i> <i>5. Source: Appendix A.</i>				

The District has provided guidance for screening localized impacts in its GAMAQI that establishes a screening threshold of 100 pounds per day of any criteria pollutant. If a project exceeds 100 pounds per day of any criteria pollutant then ambient air quality modeling would be necessary. If the project does not exceed 100 pounds per day of any criteria pollutant, then it can be assumed that it would not cause a violation of an ambient air quality standard.

Construction: Localized Concentrations of PM₁₀, PM_{2.5}, CO, and NO₂

Local construction impacts would be short-term in nature lasting only during the duration of individual construction projects. Because of the short duration and limited amount of construction anticipated for the Plan area, application of best management practices to minimize construction emissions, and levels of emissions less than the SJVAPCD's emission significance thresholds, localized construction concentrations are considered less than significant. It should also be noted that the construction emissions would be less than 100 pounds per day for each of the criteria pollutants. Therefore, based on the District's GAMAQI, the construction emissions would not cause an ambient air quality standard violation.

Operation: Localized Concentrations of PM₁₀, PM_{2.5}, CO, and NO₂

Since the Pixley Community Plan does not identify specific development projects, the potential for localized impacts cannot be determined. Localized impacts could occur in areas with a single large source of emissions such as a power plant or with multiple sources concentrated in a small area such as a distribution center. The County will review individual projects for potential impacts and confer with the District to determine projects where additional analysis would be required. The County may also rely on the District's GAMAQI to determine if criteria pollutant emissions exceed 100 pounds per day.

Operation: Carbon Monoxide Hot Spot Analysis

Carbon monoxide (CO) "hot spot" thresholds ensure that emissions of CO associated with traffic impacts from a project in combination with CO emissions from existing and forecasted regional traffic do not exceed state or national ambient air quality standards for CO at any traffic intersection impacted by a project. Project concentrations may be considered significant if a CO hot spot intersection analysis determines that project generated CO concentrations cause a localized violation of the state CO 1-hour standard of 20 ppm, state CO 8-hour standard of 9 ppm, national CO 1-hour standard of 35 ppm, or national CO 8-hour standard of 9 ppm.

A CO hot spot is a localized concentration of CO that is above the state or national 1-hour or 8-hour CO ambient air standards. Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles. The current maximum 8-hour background concentration for CO reported for the nearest monitoring site in Table 2 [of the AQA] is 2.22 ppm and the current maximum 1-hour background concentration is 3.17 ppm.

The SJVAPCD's GAMAQI states that a CO hot spot analysis should be conducted if (1) a traffic study for a project indicates that the LOS on one or more streets or at one or more intersection in the project vicinity will be reduced to LOS E or F; or (2) a traffic study indicates that a project will substantially worsen an already existing LOS F at one or more intersections. The Pixley Community Plan area does not experience significant traffic congestion or volumes needed to generate a CO hotspot and the growth projected for the community is minimal. The Transportation Impact Analysis prepared by the traffic consultant, VRPA Technologies, Inc., showed that no intersection would exceed LOS D. Therefore, no additional analysis is required to demonstrate that this impact is less than significant.

Hydrogen Sulfide

The development of the Pixley Community Plan area is not expected to generate hydrogen sulfide because the type of development allowed by zoning and regulation does not typically generate it in any substantial quantity. Therefore, the project would not result in an exceedance of the California ambient air quality standard for hydrogen sulfide or cause any related health impact.

Lead

The development of the Pixley Community Plan area is not expected to generate lead because the proposed land use does not typically generate this pollutant in any substantial quantity. Lead is no longer an additive to gasoline. Therefore, the project would not result in an exceedance of the national or state ambient air quality standards for lead or cause any health impact.

Visibility-Reducing Particles

Visibility-reducing particles are suspended particulates that reduce visibility. During construction (grading), fugitive dust (PM₁₀ and PM_{2.5}) is generated. The majority of this fugitive dust will remain localized and will be deposited near the project site. Fugitive dust during grading should not substantially impact local visibility. In addition, compliance with Regulation VIII will reduce fugitive dust impacts during grading. The main source of operational PM₁₀ and PM_{2.5} from the project is from road dust. This road dust emissions are localized and most of it would be deposited near the road and would not cause a substantial impact to visibility.

Vinyl Chloride

The vinyl chloride ambient air quality standard refers to the amount of vinyl chloride in the ambient air. The emissions of vinyl chloride are typically associated with the plants that make products containing polyvinyl chloride (PVC). The project will not generate vinyl chloride gas emissions. Therefore, the project would not result in an exceedance of the California ambient air quality standard for vinyl chloride and would not result in related health impacts.

Sulfur Dioxide

The project will emit a small amount of sulfur dioxide during operation and construction. There is no identified threshold for sulfur dioxide emissions in the District's 2002 Guide. The District's GAMAQI provides a threshold of 27 tons per year. The Air Basin is in attainment for sulfur dioxide. In addition, any project emissions will be very minor. As shown in Appendix A, the project would have significantly fewer sulfur dioxide emissions during construction and operation than the District's draft threshold. Therefore, project emissions of sulfur dioxide are less than significant."

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measure

None Required.

Level of Significance After Mitigation

No Mitigation necessary as the impact will be *Less Than Significant*.

Conclusion: *Less Than Significant Impact*

As noted earlier, *Less Than Significant Impact Project-specific and Cumulative Impacts* will occur as a result of this Project.

- c) **Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?**

Project Impact Analysis: *Less Than Significant Impact*

As indicated in the Air Quality Analysis (see Appendix “A”) prepared by consultants First Carbon Solutions; “The cumulative air quality analysis prepared for the project follows guidance from the SJVAPCD. In general, to result in a less than significant impact, the following must be true:

1. *Emissions analysis:* emissions of nonattainment pollutants must be below the SJVAPCD’s project level significance thresholds. This is an approach recommended by the SJVAPCD in its GAMAQI.
2. *Summary of projections:* the project must be consistent with current air quality attainment plans including control measures and regulations. This is an approach consistent with Section 15130(b) of the CEQA guidelines.
3. *Cumulative health impacts:* the project must result in less than significant cumulative health effects from the nonattainment pollutants. This approach correlates the significance of the regional analysis with health effects, consistent with the court decision, *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1219-20.

Emissions Analysis

Ozone is a secondary pollutant that can be formed miles away from the source of emissions through reactions of ROG and NO_x emissions in the presence of sunlight. Therefore, ROG and NO_x are termed ozone precursors. The Air Basin often exceeds the ozone standards. Therefore, if the project emits a substantial quantity of ozone precursors, the project may contribute to an exceedance of the ozone standard. The District established significance thresholds for ozone precursors, ROG and NO_x, and has published them in its GAMAQI. For typical projects, operation-related emissions that exceed the threshold of 10 tons per year for ROG or NO_x would be considered significant. The GAMAQI document contains thresholds for PM₁₀ and PM_{2.5} of 15 tons per year each, which are used in this impact

analysis. Cumulative health impacts of ozone and/or particulate matter would result if these thresholds are exceeded.

The criteria pollutant emissions analysis assessed whether the project would exceed District thresholds of significance. As shown in Table 10 and Table 11, criteria pollutant emissions would not exceed any threshold of significance during project construction or operation. Therefore, the unmitigated project emissions would not cumulatively contribute to a significant impact according to this criterion.

Summary of Projections

Section 15130(b) of the CEQA Guidelines states:

The following elements are necessary to an adequate discussion of significant cumulative impacts: 1) Either: (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact.

In accordance with CEQA Guidelines Section 15130(b), this analysis of cumulative impacts is based on a summary of projections analysis. Under the amended CEQA Guidelines, cumulative impacts may be analyzed using other plans that evaluate relevant cumulative effects. The air quality attainment plans describe and evaluate the future projected emissions sources in the Basin and set forth a strategy to meet both state and federal CAA planning requirements and federal ambient air quality standards. Therefore, the plans are relevant plans for a CEQA cumulative impacts analysis. As discussed in Impact AIR-1, the project is consistent with the air quality attainment plans. Therefore, according to this criterion, this impact is less than significant.

Cumulative Health Impacts from Criteria Pollutants

The Basin is in nonattainment for ozone, PM₁₀, and PM_{2.5}, which means that the background levels of those pollutants are at times higher than the ambient air quality standards. The air quality standards were set to protect public health, including the health of sensitive individuals (such as the elderly, children, and the sick). Therefore, when the concentration of those pollutants exceeds the standard, it is likely that some sensitive individuals in the population would experience health effects that were described in Table 1. However, the health effects are a factor of the dose-response curve. Concentration of the pollutant in the air (dose), the length of time exposed, and the response of the individual are factors involved in the severity and nature of health impacts. If a significant health impact results from project emissions, it does not mean that 100 percent of the population would experience health effects.

ROG and NO_x have significance thresholds because they are ozone precursor emissions. The significance thresholds for ROG and NO_x are not designed to be indicators of health effects from ROG and NO_x individually. However, one could conclude that a project would make cumulatively considerable contribution to the existing health impacts of ozone and/or secondary particulate matter if the thresholds are exceeded. The impacts are not considered a project-specific impact because project emissions of ROG and NO_x emissions from a single project would not result in a measurable change in ozone or particulate concentrations; however, the combined effects of many projects dispersed throughout the region could potentially increase concentrations or slow progress toward achieving the air quality standards. The combination of unmitigated project emissions with pollutants from other sources within the Basin could cumulatively contribute to a significant impact.

The emissions analysis shown above indicates that the increase in emissions would not exceed the District's regional significance thresholds. The Project would not result in significant cumulative health impacts."

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures *None Required.*

Level of Significance After Mitigation

Less Than Significant Impact.

Conclusion:

The Project will not exceed SJVAPCD thresholds during construction or operation-related activities, as such; the cumulative impact of the Project to air quality is ***Less Than Significant***.

d) Expose sensitive receptors to substantial pollutant concentrations?

Project Impact Analysis: *Less Than Significant Impact*

As indicated in the Air Quality Analysis (see Appendix "A") prepared by consultants First Carbon Solutions:

"Sensitive Receptors

Those individuals who are sensitive to air pollution include children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. The District considers a sensitive receptor to be a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools.

Construction: ROG

During architectural coatings (painting), ROG is emitted. The amount emitted is dependent on the amount of ROG (or VOC) in the paint. ROG emissions are typically an indoor air quality health hazard concern and not an outdoor air quality health hazard concern. Therefore, exposure of ROG during architectural coatings is a less than significant health impact. VOC emissions from architectural coatings are regulated under District Rule 4601-Architectural Coatings, which requires increasingly stringent reductions in VOC the content of the various coatings.

There are three types of asphalt that are typically used in paving: asphalt cements, cutback asphalts, and emulsified asphalts. However, District Rule 4641 prohibits the use of the following types of asphalt: rapid cure cutback asphalt; medium cure cutback asphalt; slow cure asphalt that contains more than one-half (0.5) percent of organic compounds that evaporate at 500 degrees Fahrenheit (°F) or lower; and emulsified asphalt containing organic compounds, in excess of 3 percent by volume, that evaporate at 500°F or lower. An exception to this is medium cure asphalt when the National Weather Service official forecast of the high temperature for the 24-hour period following application is below 50°F.

The acute (short-term) health effects from worker direct exposure to asphalt fumes include irritation of the eyes, nose, and throat. Other effects include respiratory tract symptoms and pulmonary function changes. The studies were based on occupational exposure of fumes. Residents are not in the immediate vicinity of the fumes; therefore, they would not be subjected to concentrations high enough to evoke a negative response. In addition, the restrictions that are placed on asphalt in the San Joaquin Valley reduce ROG emissions from asphalt and exposure. The impact to nearby sensitive receptors from ROG during construction is less than significant.

Operation: ROG

During operation, ROG would be emitted primarily from motor vehicles. Direct exposure to ROG from project motor vehicles would not result in health effects, because the ROG would be distributed across the entire road network over many miles and dispersed in the air. The concentrations would not be great enough to result in direct health effects.

Construction: NO_x, PM₁₀, PM_{2.5}

The District has provided guidance indicating that projects that emit less than 100 pound per day of criteria pollutants would not cause an ambient air quality standard violation. As shown in Table 10, the construction emissions would not exceed 100 pounds per day; therefore, they would not cause an air quality standard violation. However, as discussed in Impact AIR-3, the specific location and timing of construction projects is not known. Therefore, localized impacts from construction equipment cannot be determined and would be speculative. Tulare County will consult with the SJVAPCD on individual projects to

determine if screening or modeling would be required to identify potentially significant impacts.

Operation: PM₁₀, PM_{2.5}, CO, NO₂

The District has provided guidance indicating that projects that emit less than 100 pound per day of criteria pollutants would not cause an ambient air quality standard violation. As shown in Table 11, the construction emissions would not exceed 100 pounds per day; therefore, they would not cause an air quality standard violation. However, as discussed in Impact AIR-2, localized concentrations of PM₁₀, PM_{2.5}, CO, and NO₂ cannot be determined prior to identifying specific projects and their emissions. Therefore, localized impacts from project operations cannot be determined and would be speculative. Tulare County will consult with the SJVAPCD on individual projects to determine if screening or modeling would be required to identify potentially significant impacts.

Construction: Toxic Air Contaminants

The specific location and timing of construction projects is not known. Therefore, localized impacts from TAC emissions from construction equipment cannot be determined and would be speculative. Tulare County will consult with the SJVAPCD on individual projects to determine if screening or modeling would be required to identify potentially significant impacts.

Operation: Toxic Air Contaminants

No new sources of TAC emissions are specifically proposed in the Pixley Community Plan and the location of projects containing sensitive receptors has not been determined. Therefore, impacts from TAC emissions on sensitive receptors would be speculative. In order to ensure that development of the Pixley Community Plan area does not expose sensitive receptors to significant impacts from TAC emissions, Tulare County will review individual projects proposed within the Plan area to determine if the ARB Air Quality Land Use Handbook screening criteria presented in Table 8 are exceeded. Projects that exceed the screening criteria will undergo analysis using screening models or may require dispersion modeling and a health risk assessment. Tulare County will consult with the SJVAPCD for guidance on the appropriate screening tools and modeling protocols.

Valley Fever

Valley fever, or coccidioidomycosis, is an infection caused by inhalation of the spores of the fungus, *Coccidioides immitis* (*C. immitis*). The spores live in soil and can live for an extended time in harsh environmental conditions. Activities or conditions that increase the amount of fugitive dust contribute to greater exposure, and they include dust storms, grading, and recreational off-road activities.

The San Joaquin Valley is considered an endemic area for valley fever. By geographic region, hospitalizations for valley fever in the San Joaquin Valley increased from 230 (6.9 per

100,000 population) in 2000 to 701 (17.7 per 100,000 population) in 2007. Within the region, Kern County reported the highest hospitalization rates, increasing from 121 (18.2 per 100,000 population) in 2000 to 285 (34.9 per 100,000 population) in 2007, and peaking in 2005 at 353 hospitalizations (45.8 per 100,000 population). The Centers for Disease Control and Prevention indicates that 752 of the 8,657 persons (8.7 percent) hospitalized in California between 2000 and 2007 for valley fever died (CDC 2009).

The distribution of *C. immitis* within endemic areas is not uniform and growth sites are commonly small (a few tens of meters) and widely scattered. Known sites appear to have some ecological factors in common suggesting that certain physical, chemical, and biological conditions are more favorable for *C. immitis* growth. Avoidance, when possible, of sites favorable for the occurrence of *C. immitis* is a prudent risk management strategy. Listed below are ecological factors and sites favorable for the occurrence of *C. immitis*:

- 1) Rodent burrows (often a favorable site for *C. immitis*, perhaps because temperatures are more moderate and humidity higher than on the ground surface)
- 2) Old (prehistoric) Indian campsites near fire pits
- 3) Areas with sparse vegetation and alkaline soils
- 4) Areas with high salinity soils
- 5) Areas adjacent to arroyos (where residual moisture may be available)
- 6) Packrat middens
- 7) Upper 30 cm of the soil horizon, especially in virgin undisturbed soils
- 8) Sandy well aerated soil with relatively high water holding capacities

Sites within endemic areas less favorable for the occurrence of *C. immitis* include:

- 1) Cultivated fields
- 2) Heavily vegetated areas (e.g. grassy lawns)
- 3) Higher elevations (above 7,000 feet)
- 4) Areas where commercial fertilizers (e.g. ammonium sulfate) have been applied
- 5) Areas that are continually wet
- 6) Paved (asphalt or concrete) or oiled areas
- 7) Soils containing abundant microorganisms
- 8) Heavily urbanized areas where there is little undisturbed virgin soil (USGS 2000).

The Pixley Community Plan area is in an area with a long history of cultivation where fertilizers have been applied, and soil moisture has been maintained through irrigation. These factors would lead to a low probability of having *C. immitis* growth sites and exposure from disturbed soil.

Construction activities would generate fugitive dust that could contain *C. immitis* spores. The project will minimize the generation of fugitive dust during construction activities by

complying with the District's Regulation VIII. Therefore, this regulation would reduce valley fever impacts to less than significant.

During project operations, dust emissions are anticipated to be negligible, because most of the project area would be occupied by buildings, pavement, and landscaped areas. This condition would preclude the possibility of the project from generating fugitive dust that may contribute to valley fever exposure. Impacts would be less than significant.

Naturally Occurring Asbestos

Asbestos is the name given to a number of naturally occurring fibrous silicate minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings in the United States. Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining. The risk of disease is dependent upon the intensity and duration of exposure. When inhaled, asbestos fibers may remain in the lungs and with time may be linked to such diseases as asbestosis, lung cancer, and mesothelioma. According to a map of areas where naturally occurring asbestos in California are likely to occur (U.S. Geological Survey 2011), there are no such areas in the project area. Therefore, development of the project is not anticipated to expose receptors to naturally occurring asbestos. Impacts would be less than significant."

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None Required.

Level of Significance After Mitigation

Less Than Significant Impact.

Conclusion:

Less Than Significant Impact

As noted earlier, the Project is not anticipated to result in significant Project-specific or cumulative impacts on any known sensitive receptors. Therefore, ***Less Than Significant Impacts*** will occur.

e) Create objectionable odors affecting a substantial number of people?

Project Impact Analysis:

Less Than Significant Impact

As indicated in the Air Quality Analysis (see Appendix “A”) prepared by consultants First Carbon Solutions:

“Impact Analysis

Thresholds of Significance

Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, schools, etc., warrant the closest scrutiny, but consideration could also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas.

Two situations create a potential for odor impact. The first occurs when a new odor source is located near an existing sensitive receptor. The second occurs when a new sensitive receptor locates near an existing source of odor. The District has determined the common land use types that are known to produce odors in the Basin. These types are shown in Table 9 in Section 3.5.2, District Significant Thresholds [of the GAMAQI].

According to the SJVAPCD’s GAMAQI, analysis of potential odor impacts should be conducted for the following two situations:

Generators: projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate, and

Receivers: residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

No specific projects containing sensitive receptors are proposed near potential odor sources and no new projects are proposed that are considered odor generators near existing sensitive receptors. However, as the Pixley Community Plan is built out, the potential exists for odor impacts to occur. To ensure potential impacts are addressed, if proposed projects were to result in sensitive receptors being located closer to an odor generator in the list in Table 9 [of the GAMAQI] than the recommended distances, a more detailed analysis including a review of District odor complaint records is recommended. The detailed analysis would involve contacting the District’s Compliance Division for information regarding odor complaints. For a project locating near an existing source of odors, the project should be identified as having a significant odor impact if it is proposed for a site that is closer to an existing odor source than any location where there have been:

- More than one *confirmed* complaint per year averaged over a three-year period, or
- Three *unconfirmed* complaints per year averaged over a three-year period.

Agricultural operations are exempt from the District’s nuisance rule. Therefore, odors from dairies and in field composting operations would not be subject to complaint reporting.

However, the Tulare County General Plan Recirculated Environmental Impact Report (REIR) indicated that General Plan Policies AQ-3.1 through AQ-3.6, LU-1.1 through LU-1.4, and LU-1.8 would help to minimize this impact by avoiding inappropriate siting of sensitive land uses near other incompatible uses. SJVAPCD regulations on dairy and feedlot operations would also help to reduce this potential impact. The REIR concluded that compliance with policies and regulations would be adequate to reduce this impact to less than significant.”²⁸

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures ***None Required.***

Level of Significance After Mitigation

Less Than Significant Impact.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin.

The proposed Project will not result in significant Project-specific impacts related to odors. As such, ***Less Than Significant Cumulative Impacts*** will occur.

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** will occur.

²⁸ Op. Cit. 52-53

DEFINITIONS

Definitions

Ambient Air Quality Standards - These standards measure outdoor air quality. They identify the maximum acceptable average concentrations of air pollutants during a specified period of time. These standards have been adopted at a State and Federal level.

Best Available Control Measures (BACM) - A set of programs that identify and implement potentially best available control measures affecting local air quality issues.

Carbon Dioxide (CO₂) - A naturally occurring gas, and also a by-product of burning fossil fuels and biomass, as well as land-use changes and other industrial processes. It is the principal anthropogenic greenhouse gas that affects the Earth's radiative balance. It is the reference gas against which other greenhouse gases are measured and therefore has a Global Warming Potential of 1.

Carbon Monoxide (CO) - Carbon monoxide is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels and is emitted directly into the air (unlike ozone).

Climate Change - Climate change refers to a statistically significant variation in either the mean state of the climate or in its variability, persisting for an extended period (typically decades or longer). Climate change may be due to natural internal processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or in land use.

Greenhouse Gas - Any gas that absorbs infrared radiation in the atmosphere. Greenhouse gases include, but are not limited to, water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrochlorofluorocarbons (HCFCs), ozone (O₃), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆).

Hydrogen Sulfide (H₂S) - Hydrogen sulfide is a highly toxic flammable gas. Because it is heavier than air, it tends to accumulate at the bottom of poorly ventilated spaces.

Lead (Pb) - Lead is the only substance which is currently listed as both a criteria air pollutant and a toxic air contaminant. Smelters and battery plants are the major sources of the pollutant "lead" in the air. The highest concentrations of lead are found in the vicinity of nonferrous smelters and other stationary sources of lead emissions. The EPA's health-based national air quality standard for lead is 1.5 micrograms per cubic meter (µg/m₃) [measured as a quarterly average].

Mobile Source - A mobile emission source is a moving object, such as on-road and off-road vehicles, boats, airplanes, lawn equipment, and small utility engines.

Nitrogen Oxides (Oxides of Nitrogen, NO_x) - NO_x are compounds of nitric oxide (NO) and nitrogen dioxide (NO₂). NO_x are primarily created from the combustion process and are a major

contributor to ozone smog and acid rain formation. NO_x also forms ammonium nitrate particulate in chemical reactions that occur when NO_x forms nitric acid and combines with ammonia. Ammonium nitrate particulate is an important contributor to PM₁₀ and PM_{2.5}.

Ozone (O₃) - Ozone is a pungent, colorless, toxic gas created in the atmosphere rather than emitted directly into the air. O₃ is produced in complex atmospheric reactions involving oxides of nitrogen, reactive organic gases (ROG), and ultraviolet energy from the sun in a photochemical reaction. Motor vehicles are the major sources of O₃ precursors.

Ozone Precursors - Chemicals such as non-methane hydrocarbons, also referred to as ROG, and oxides of nitrogen, occurring either naturally or as a result of human activities, which contribute to the formation of ozone, a major component of smog.

Photochemical - Some air pollutants are direct emissions, such as the CO produced by an automobile's engine. Other pollutants, primarily O₃, are formed when two or more chemicals react (using energy from the sun) in the atmosphere to form a new chemical. This is a photochemical reaction.

Particulate Matter 2.5 Micrometers (PM_{2.5}) - The federal government has recently added standards for smaller dust particulates. PM_{2.5} refers to dust/particulates/aerosols that are 2.5 microns in diameter or smaller. Particles of this size can be inhaled more deeply in the lungs and the chemical composition of some particles is toxic and has serious health impacts.

Particulate Matter 10 Micrometers (PM₁₀) - Dust and other particulates exhibit a range of particle sizes. Federal and State air quality regulations reflect the fact that smaller particles are easier to inhale and can be more damaging to health. PM₁₀ refers to dust/particulates that are 10 microns in diameter or smaller. The fraction of PM between PM_{2.5} and PM₁₀ is comprised primarily of fugitive dust. The particles between PM₁₀ and PM_{2.5} are primarily combustion products and secondary particles formed by chemical reactions in the atmosphere.

Reactive Organic Gas (ROG) - A photo chemically reactive chemical gas composed of non-methane hydrocarbons that may contribute to the formation of smog. This is also sometimes referred to as Volatile Organic Compounds (VOCs).

Reasonable Available Control Measures (RACM) - A broadly defined term referring to technologies and other measures that can be used to control pollution. They include Reasonably Available Control Technology and other measures. In the case of PM₁₀, RACM refers to approaches for controlling small or dispersed source categories such as road dust, woodstoves, and open burning. Regional Transportation Planning Agencies are required to implement RACM for transportation sources as part of the federal ozone attainment plan process in partnership with the Air District.

Reasonable Available Control Technologies (RACT) - Devices, systems, process modifications, or other apparatus or techniques that are reasonably available, taking into account: the necessity of imposing such controls in order to attain and maintain a national ambient air

quality standard; the social, environmental, and economic impact of such controls; and alternative means of providing for attainment and maintenance of such a standard.

San Joaquin Valley Air Basin (SJVAB) - An air basin is a geographic area that exhibits similar meteorological and geographic conditions. California is divided into 15 air basins to assist with the statewide regional management of air quality issues. The SJVAB extends in the Central Valley from San Joaquin County in the north to the valley portion of Kern County in the south.

San Joaquin Valley Unified Air Pollution Control District (Air District) - The Air District is the regulatory agency responsible for developing air quality plans, monitoring air quality, developing air quality regulations, and permitting programs on stationary/industrial sources and agriculture and reporting air quality data for the SJVAB. The Air District also regulates indirect sources and has limited authority over transportation sources through the implementation of transportation control measures (TCM).

Sensitive Receptors - Sensitive receptors are defined as land uses that typically accommodate sensitive population groups such as long-term health care facilities, rehabilitation centers, retirement homes, convalescent homes, residences, schools, childcare centers, and playgrounds.

Sensitive Population Groups - Sensitive population groups are a subset of the general population that are at greater risk than the general population to the effects of air pollution. These groups include the elderly, infants and children, and individuals with respiratory problems, such as asthma.

Sulfur Dioxide (SO₂) - Sulfur dioxide belongs to the family of SO_x. These gases are formed when fuel containing sulfur (mainly coal and oil) is burned, and during metal smelting and other industrial processes.

Stationary Source - A stationary emission source is a non-mobile source, such as a power plant, refinery, or manufacturing facility.

Sulfates - Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. SO_x can form sulfuric acid in the atmosphere that in the presence of ammonia forms ammonium sulfate particulates, a small but important component of PM₁₀ and PM_{2.5}. Sulfates increase the acidity of the atmosphere and form acid rain.

Transportation Conformity - A federal requirement for transportation plans and Projects to demonstrate that they will not result in emissions that exceed attainment plan emission budgets or exceed air quality standards.

Transportation Control Measures (TCMs) - Any measure that is identified for the purposes of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions.

Transportation Management Associations (TMAs) - Groups of employers uniting together to work collectively to manage transportation demand in a particular area.

Tulare County Association of Governments (TCAG) - TCAG is the Transportation Planning Agency (TPA) for Tulare County. TCAG is also designated as a Metropolitan Planning Organization (MPO), the agency responsible for preparing long range Regional Transportation Plans and demonstrating Transportation Conformity with air quality plans.

Wood-burning Devices - Wood-burning devices are designed to burn “solid fuels” such as cordwood, pellet fuel, manufactured logs, or any other non-gaseous or non-liquid fuels.

Abbreviations and Acronyms

ACM	Asbestos Containing Materials
BACM	Best Available Control Measures
CAA	Clean Air Act
CARB	California Air Resources Board
CH ₄	Methane
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
EPA	Environmental Protection Agency
GAMAQI	Guide for Assessing and Mitigating Air Quality Impacts
HCFCs	Hydrochlorofluorocarbons
HFCs	Hydrofluorocarbons
HI	Hazard Index
H ₂ S	Hydrogen Sulfide
NAAQS	National Ambient Air Quality Standards
NO ₂	Nitrogen Dioxide
NESHAPs	National Environmental Standards for Hazardous Air Pollutants
O ₃	Ozone
Pb	Lead
PFCs	Perfluorocarbons
PM _{2.5}	Particulate Matter 2.5 Micrometers
PM ₁₀	Particulate Matter 10 Micrometers
RACM	Reasonable Available Control Measures
RACT	Reasonable Available Control Technologies
ROG	Reactive Organic Gases
SEKI	Sequoia and Kings Canyon National Park
SIP	State Implementation Plan
SF ₆	Sulfur Hexafluoride
SO ₂	Sulfur Dioxide
SJVAPCD	San Joaquin Valley Unified Air Pollution Control District
SJVAB	San Joaquin Valley Air Basin
TAC	Toxic Air Contaminants
TCAG	Tulare County Association of Governments
TCM	Transportation Control Measures
VOC	Volatile Organic Compound

REFERENCES

Tulare County 2030 General Plan, Recirculated Draft Environmental Impact Report (RDEIR), February 2010

“County of Tulare – Pixley Community Plan Update Air Quality Analysis Report” prepared by First Carbon Solutions, September 2014 [included as Appendix “A” of this DEIR]

San Joaquin Valley Unified Air Pollution Control District Draft 2012 Guidelines for Assessing and Mitigating Air Quality Impacts, March 2015 which can be accessed at:
http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf

CEQA Guidelines

Biological Resources

Chapter 3.4

SUMMARY OF FINDINGS

The proposed Project will result in *Less Than Significant Impacts* to Biological Resources with mitigation. A detailed review of potential impacts is provided in the following analysis. A Biological Evaluation conducted by consultants Live Oak Associates, Inc., is included as Appendix “B” of this document which is used as the basis for determining this Project will result in less than significant impacts. A detailed review of potential impacts is provided in the following analysis.

“Live Oak Associates, Inc. (LOA) conducted an investigation of the biological resources of the Pixley Community Plan Proposed Planning Study Area (PPSA) in the community of Pixley in Tulare County, California and evaluated likely impacts to such resources resulting from development of the PPSA. The approximately 640-acre PPSA consists of two separate blocks of land west of State Highway 99. In April of 2014, LOA surveyed the PPSA for biotic habitats, the plants and animals occurring in those habitats, and significant habitat values that may be protected by state and federal law.

Habitats/land uses identified within the PPSA included orchards, agricultural fields, industrial/residential lands, ruderal areas, a livestock facility, three irrigation basins, and an irrigation ditch. A mosaic of agricultural, industrial, and residential/commercial land uses surround the PPSA, within a region dominated by similar land uses. The only potential jurisdictional waters identified within the PPSA was a small section of irrigation ditch that connects with Deer Creek both upstream and downstream.

Impacts associated with future development of PPSA would be less than significant, as defined by the California Environmental Quality Act (CEQA), for special status plant species, wildlife movement corridors, Waters of the U.S., downstream water quality, and sensitive habitats. Loss of habitat for special status animal species would also be considered less than significant under CEQA.

Potentially significant impacts associated with future development of the PPSA include construction mortality of the San Joaquin kit fox, burrowing owl, American badger, nesting raptors and migratory birds including the Swainson’s hawk, loggerhead shrike, and tricolored blackbird, and colonially roosting bats. Project avoidance of active nests, dens, and roost sites identified during preconstruction surveys and implementation of minimization measures consistent with the USFWS *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* will ensure that impacts to all special status animal species are reduced to a less than significant level.”¹

¹ Pixley Community Plan Update Biological Evaluation Tulare County, California” prepared by Live Oak Associates, Inc. May 2014. Page i

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

“Whenever possible, public agencies are required to avoid or minimize environmental impacts by implementing practical alternatives or mitigation measures. According to Section 15382 of the CEQA Guidelines, a significant effect on the environment means a “substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the Project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest.”²

The California Environmental Quality Act (CEQA; California Public Resources Code §§ 21000-21177) requires that State agencies, local governments, and special districts evaluate and disclose impacts from "Projects" in the State. CEQA Guidelines Section 15380 clearly indicates that species of special concern (SSCs) should be included in an analysis of Project impacts if they can be shown to meet the criteria of sensitivity.³

CEQA Guidelines Sections 15063 and 15065 address how an impact is identified as significant. These sections are particularly relevant to SSCs. Project-level impacts to listed rare, threatened, or endangered species are generally considered significant, and therefore require lead agencies to prepare an Environmental Impact Report to fully analyze and evaluate the impacts. In determining to assign "impact significance" to populations of non-listed species, factors which are usually considered include population-level effects, proportion of the species' range affected by a Project, regional effects, and impacts to habitat features.⁴

This section of the Draft Environmental Impact Report (DEIR) for the Project meets CEQA requirements by addressing potential impacts to biological resources on the proposed Project site, which is located in a portion of the San Joaquin Valley in Tulare County. The “Environmental Setting” section provides a description of biological resources in the region, with special emphasis on the proposed Project site and vicinity. The “Regulatory Setting” provides a description of applicable State and local regulatory policies. A description of the potential impacts of the proposed Project is also provided and includes the identification of feasible mitigation to avoid or lessen the impacts.

Thresholds of Significance

The geographical area may be either statewide or nationwide, depending on the sensitive status of the species. Standards for listing as federal endangered species are determined by the Federal Endangered Species Act, administered by U.S. Department of Fish and Wildlife. Standards for listing of California special status species (Endangered, Threatened, Candidate Endangered, Candidate Threatened, and Sensitive Species) are administered by the California Department of

² DFW, <http://www.dfg.ca.gov/wildlife/nongame/ssc/>

³ Ibid.

⁴ Op. Cit.

Fish and Wildlife (DFW). These requirements are described in further detail in the “Regulatory” section of this document.

ENVIRONMENTAL SETTING

As indicated in the Biological Evaluation (Appendix “B” of this DEIR), “The PPSA [Proposed Planning Study Area] is located in the central San Joaquin Valley north, east, and west of the community of Pixley. The valley is bordered by the Sierra Nevada to the east, the Tehachapi Mountains to the south, the California coastal ranges to the west, and the Sacramento-San Joaquin Delta to the north.

Like most of California, the central San Joaquin Valley (and the PPSA) experiences a Mediterranean climate. Warm dry summers are followed by cool moist winters. Summer temperatures commonly exceed 90 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely exceed 70 degrees Fahrenheit, with daytime highs often below 60 degrees Fahrenheit. Annual precipitation in the vicinity of the PPSA is about 11 inches, almost 90% of which falls between the months of November and April. Nearly all precipitation falls in the form of rain.

“The principal drainage of the PPSA vicinity is the St. John’s River, a distributary channel of the Kaweah River. The St. John’s River emerges from the Kaweah River approximately 20 miles east of the PPSA, and flows from east to west approximately 3 miles north of the PPSA before merging with Cottonwood Creek to form Cross Creek. Cross Creek follows a meandering course south and is ultimately constrained to a set of engineered channels before joining the Tule River approximately 18 miles south of the PPSA. The drainages in the vicinity of the PPSA historically contained large areas of riparian, wetland, and aquatic ecosystems that supported a diversity of native plants and animals. Presently, these drainages support only a fraction of the riparian habitat they once supported and the aquatic habitat has been greatly degraded from agricultural runoff and irregular flows. In essence, the drainages have been reduced to a series of distributary channels supplying water to farmland in the region.

The PPSA is situated within a matrix of agricultural lands, industrial complexes, and residential/commercial development associated with the community of Pixley. The northern block of the PPSA is bordered by agricultural fields to the north and east; agricultural fields, remnant non-native grassland, and residential areas to the south; and Highway 99 to the west. The eastern block of the PPSA is bordered by ruderal grassland and residential areas to the north, ruderal grassland to the east, and residential and commercial areas to the south and west. The western block of the PPSA is bordered by orchard to the north; Highway 99 and residential, commercial, and industrial areas to the east; and agricultural fields, orchard, and residential areas to the south and west.”⁵

⁵ Ibid. 5-6

Project Site

“The PPSA consists of agricultural fields, orchard land, a small livestock facility, an industrial complex, and two residential properties. The topography of the site is relatively level, with an average elevation of 265 feet National Geodetic Vertical Datum (NGVD).

Three soil mapping units were identified within the PPSA: Tagus loam, 0-2 percent slopes, Akers-Akers saline sodic, 0-2 percent slopes, and Hanford sandy loam, 0-2 percent slopes (NRCS 2014). Depressions within the Akers-Akers complex and drainages within the Hanford sandy loam soil mapping units are considered hydric. Hydric soils are defined as saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions such that under sufficiently wet conditions hydrophytic vegetation is supported. However, due to long-term management, soils of the site exhibited no characteristics of hydric soils.”⁶

Biotic Habitats/Land Uses

“Seven land use/habitat types were observed within the PPSA during the April 2014 biological field survey: agricultural field, orchard, ruderal, industrial/residential, livestock facility, irrigation basin, and irrigation ditch (Figures 3a and 3b). A list of the vascular plant species observed within the PPSA and the terrestrial vertebrates using, or potentially using, the PPSA are provided in Appendices A and B, respectively. Selected photographs of the PPSA are presented in Appendix C [of the Biological Evaluation].

Agricultural Field

Agricultural field comprised much of the northern and western blocks of the PPSA. The northern block contained approximately 350 acres of fields planted to winter wheat (*Triticum* sp.), corn (*Zea mays* ssp. *mays*), and beans, as well as two fields totaling approximately 70 acres that had recently been prepped for planting. The western block contained approximately 430 acres of fields planted to winter wheat and alfalfa (*Medicago sativa*). Agricultural fields were absent from the eastern block of the PPSA. Agricultural fields of the PPSA were generally devoid of vegetation other than the planted crop.

Intensive agricultural practices on the agricultural fields of the PPSA likely limit their value to wildlife; however, some wildlife species undoubtedly occur in the fields. Amphibians with the potential to use agricultural fields of the PPSA include Pacific chorus frogs (*Pseudacris regilla*) and western toads (*Bufo boreas*), both of which may breed in nearby irrigation ditches and subsequently disperse through the fields. Reptiles that could occur in the fields include the side-blotched lizard (*Uta stansburiana*), western whiptail (*Cnemidophorus tigris*), Pacific gopher snake (*Pituophis catenifer catenifer*), and common kingsnake (*Lampropeltis getulus*).

Agricultural fields also provide foraging habitat for a number of avian species. Common resident species likely to forage in the agricultural fields of the PPSA include mourning doves

⁶ Op. Cit. 6

(*Zenaida macroura*) and American crows (*Corvus brachyrhynchos*), as well as mixed flocks of Brewer's blackbirds (*Euphagus cyanocephalus*), brown-headed cowbirds (*Molothrus ater*), and European starlings (*Sturnus vulgaris*); all but the brown-headed cowbird were observed during the field survey. Summer migrants that would be common on agricultural lands of the PPSA include the western kingbird (*Tyrannus verticalis*), while common winter migrants include the savannah sparrow (*Passerella sandwichensis*) and American pipit (*Anthus rubescens*); both kingbirds and pipits were observed during the field survey.

Although less common, certain birds may use agricultural fields of the PPSA for nesting. For example, both red-winged blackbirds (*Agelaius phoeniceus*) and tricolored blackbirds (*Agelaius tricolor*) may nest in wheat. During the April 2014 survey, a large number of red-winged blackbirds were observed flying in and out of several of the wheat fields of the PPSA. Although no nests were observed, any nests that would have been present would have likely been obscured by the wheat crop, which was 2-3 feet high and extremely dense.

A few mammal species may also occur within the agricultural fields of the PPSA. Small mammals such as deer mice (*Peromyscus maniculatus*) and California voles (*Microtus californicus*) would occur in fluctuating numbers depending on the season and yearly agricultural practices. Botta's pocket gophers (*Thomomys bottae*) and California ground squirrels (*Otospermophilus beecheyi*) could burrow around the perimeter of active fields, or within fields during fallow periods. Other small mammals that may occur from time to time within the agricultural fields of the PPSA include black-tailed hares (*Lepus californicus*) and Audubon cottontail rabbits (*Sylvilagus audubonii*). Various species of bat may also forage over the fields of the PPSA for flying insects.

The presence of amphibians, reptiles, birds and small mammals is likely to attract foraging raptors and mammalian predators. Raptors such as red-tailed hawks (*Buteo jamaicensis*) and American kestrels (*Falco sparverius*) would likely forage over agricultural fields of the PPSA; red-tailed hawks were commonly observed during the field survey. Mammalian predators occurring in agricultural fields of the PPSA would most likely be limited to raccoons (*Procyon lotor*), striped skunks (*Mephitis mephitis*), coyotes (*Canis latrans*) and red foxes (*Vulpes vulpes*), as these species are relatively tolerant of human disturbance.

Orchard/Vineyard

Walnut (*Juglans* sp.) and *Prunus* sp. orchards at various stages of maturity accounted for approximately 295 acres of the western block of the PPSA. The northern block of the PPSA contained approximately 70 acres of walnut orchard, as well as a small vineyard of approximately 5 acres. Orchard/vineyard land was absent from the eastern block of the PPSA. Being highly maintained, these orchards and vineyards were mostly barren in the understory.

Due to intensive disturbance and the lack of aquatic habitat, orchards and vineyards provide marginal habitat for amphibians; however, Pacific chorus frogs and western toads may disperse through orchard lands during the winter and spring. A limited number of reptile species would be expected to forage in orchards of the PPSA due to the lack of sun required by these species

for thermal regulation; however, the western fence lizard (*Sceloporus occidentalis*), Pacific gopher snake, common kingsnake, and western rattlesnake (*Crotalus viridis*) may occasionally occur.

Orchards and vineyards provide foraging and nesting habitat for a number of avian species. Mature orchards could be used for nesting by the American robin (*Turdus migratorius*), mourning dove, and western kingbird; at the time of the field survey, robins appeared to be nesting in a mature walnut orchard at the PPSA's western extent. Winter migrants such as the white-crowned sparrow (*Zonotrichia leucophrys*) may forage on dormant buds in the orchards and vineyard of the PPSA, while resident birds such as the European starling and house finch (*Haemorrhous mexicanus*) would be expected to forage on ripening fruit.

A few small mammal species would be expected to occur within the orchards and vineyard of the PPSA. These include deer mice, California voles, house mice (*Mus musculus*), Botta's pocket gophers, and Audubon cottontail rabbits. Various species of bat may forage over orchard and vineyard habitat for flying insects, or glean insects from the leaves of trees and vines.

Foraging raptors and mammalian predators may occur in the orchards and vineyard of the PPSA from time to time. Raptors adapted to hunt within the tree canopy such as Cooper's hawks (*Accipiter cooperii*) and sharp-shinned hawks (*Accipiter striatus*) may forage for small birds in orchards, and red-tailed hawks and American kestrels may forage over vineyards. Mammalian predators potentially occurring in the orchards and vineyard of the PPSA would be the same as those described for agricultural fields.

Residential/Industrial

Residential and industrial areas accounted for approximately 25 acres of the PPSA. Seven rural residences were located along the borders of agricultural fields in the western block of the PPSA, and two were situated within orchards in the northern block of the PPSA. The eastern block of the PPSA contained numerous residences on small lots, a small manufacturing facility, and a portion of a larger automobile salvage yard. Residential areas of the PPSA generally consisted of houses and associated structures, landscaped areas with grass, trees, and shrubs, and paved and gravel surfaces. The manufacturing facility consisted of buildings, containers, and paved surfaces. The salvage yard was not accessible during the field survey, but a perimeter investigation and analysis of aerial imagery suggests this area consists almost entirely of non-operational cars and trucks on an earthen substrate, interspersed with dirt roads and several buildings. Ornamental trees and shrubs that had been planted in residential areas of the PPSA included white mulberry (*Morus alba*), Italian cypress (*Cupressus sempervirens*), Washington fan palm (*Washingtonia filifera*), blue gum eucalyptus (*Eucalyptus globulus*), coast redwood (*Sequoia sempervirens*), cultivated pine (*Pinus* sp.), oleander (*Nerium oleander*), privet (*Ligustrum* sp.), and cultivated rose (*Rosa* sp.). The salvage yard contained several trees and shrubs, which from the perimeter of the property appeared to include weeping willow (*Salix* sp.), blue gum, and fan palm. The manufacturing facility appeared devoid of vegetation.

A number of wildlife species adapted to human disturbance could be expected to occur in residential/industrial areas of the PPSA. For example, amphibians such as Pacific chorus frogs and western toads might disperse through industrial/residential land during the winter and spring, and reptiles such as the western fence lizard and common garter snake (*Thamnophis sirtalis*) could forage in this land use type. Buildings and other human-made structures located on residential/industrial lands of the PPSA provide potential nesting habitat for a number of avian species such as the house finch, house sparrow (*Passer domesticus*), and Eurasian collared dove (*Streptopelia decaocto*); all were observed during the field survey. Trees and shrubs associated with residences could be used for nesting by a variety of avian species, including the Bullock's oriole (*Icterus bullockii*), northern mockingbird (*Mimus polyglottos*), and Anna's hummingbird (*Calypte anna*). Mammal species attracted to this land use type may include the house mouse, Norway rat (*Rattus norvegicus*), and Virginia opossum (*Didelphis virginiana*).

Birds of prey may occasionally forage over the residential/industrial areas. The red-tailed hawk and American kestrel are likely visitors. Red-tailed hawks were commonly observed during the field survey.

Vacant Lots

Interspersed with the residential and industrial areas in the eastern block of the PPSA were approximately 12 acres of vacant lots. These lands included ruderal disked fields, barren areas that appeared to be undergoing site preparation for building, two backyard pastures, a small stand of blue gum eucalyptus, and one lot upon which the demolition of a home had recently taken place. The northern block of the PPSA contained a single, 5-acre vacant lot upon which several buildings had recently been demolished. Vacant lots were absent from the western block of the PPSA. Where vegetation was present in vacant lots, it generally consisted of non-native grasses such as barnyard barley (*Hordeum murinum* spp. *leporinum*) and ripgut brome (*Bromus diandrus*) and weedy forbs such as red-stemmed filaree and bull mallow (*Malva nicaeensis*).

Wildlife use of vacant lots is expected to be similar to that described for the residential/industrial land use, with the addition of burrowing rodents such as the California ground squirrel and Botta's pocket gopher. At the time of the field survey, California ground squirrel burrows were plentiful in a backyard pasture fronting Road 76 in the eastern block of the PPSA.

Ruderal

Interspersed with the residential and industrial areas in the eastern block of the PPSA were approximately 12 acres of vacant lots. These lands included ruderal disked fields, barren areas that appeared to be undergoing site preparation for building, two backyard pastures, a small stand of blue gum eucalyptus, and one lot upon which the demolition of a home had recently taken place. The northern block of the PPSA contained a single, 5-acre vacant lot upon which several buildings had recently been demolished. Vacant lots were absent from the western block of the PPSA. Where vegetation was present in vacant lots, it generally consisted of non-native grasses such as barnyard barley (*Hordeum murinum* spp. *leporinum*) and ripgut brome (*Bromus diandrus*) and weedy forbs such as red-stemmed filaree and bull mallow (*Malva nicaeensis*).

Wildlife use of vacant lots is expected to be similar to that described for the residential/industrial land use, with the addition of burrowing rodents such as the California ground squirrel and Botta's pocket gopher. At the time of the field survey, California ground squirrel burrows were plentiful in a backyard pasture fronting Road 76 in the eastern block of the PPSA.

Agricultural Basin

Agricultural field comprised much of both portions of the PPSA. A highly-maintained corn field (*Zea mays* ssp. *mays*) and recently harvested dry-farmed oat field (*Avena barbata*), both approximately 75 acres in size, were observed within the northeastern portion of the northern block of the PPSA, and an 80-acre wheat (*Triticum* sp.) field was observed at the southern extent of this block. A 130-acre corn field and a 40-acre portion of a larger, weedy fallow field comprised almost the entirety of the southern block of the PPSA. With the exception of the fallow field, all agricultural fields were devoid of other vegetation besides the agricultural crop. The fallow field contained remnant corn in addition to barnyard barley (*Hordeum murinum* ssp. *leporinum*), white goosefoot (*Chenopodium album*), mayweed (*Anthemis cotula*), and Bermuda grass (*Cynodon dactylon*).

Intensive agricultural practices on the agricultural fields of the PPSA likely limit their value to wildlife; however, some wildlife species undoubtedly occur in the fields. Amphibians with the potential to use agricultural fields of the PPSA include Pacific chorus frogs (*Pseudacris regilla*) and western toads (*Bufo boreas*), both of which may breed in nearby irrigation ditches and subsequently disperse through the fields. Reptiles that could occur in the fields include the side-blotched lizard (*Uta stansburiana*), western whiptail (*Cnemidophorus tigris*), Pacific gopher snake (*Pituophis catenifer catenifer*), and common kingsnake (*Lampropeltis getulus*).

Agricultural fields also provide foraging habitat for a number of avian species. Common resident species likely to forage in the agricultural fields of the PPSA include mourning doves (*Zenaida macroura*) and American crows (*Corvus brachyrhynchos*), as well as mixed flocks of Brewer's blackbirds (*Euphagus cyanocephalus*), brown-headed cowbirds (*Molothrus ater*), and European starlings (*Sturnus vulgaris*); all but the Brewer's blackbird were observed during the field survey. Summer migrants that would be common on agricultural lands of the PPSA include the western kingbird (*Tyrannus verticalis*), also observed during the survey, while common winter migrants include the savannah sparrow (*Passerella sandwichensis*) and American pipit (*Anthus rubescens*).

Although less common, certain birds may use agricultural fields of the PPSA for nesting. For example, both red-winged blackbirds (*Agelaius phoeniceus*) and tricolored blackbirds (*Agelaius tricolor*) may nest in wheat. During the April 2014 survey, a large number of red-winged blackbirds were observed flying in and out of a wheat field bordering the northern block of the PPSA to the west, and a smaller number appeared to be using the on-site wheat field. Although no nests were observed, any nests that would have been present would have likely been obscured by the wheat crop, which was 2-3 feet high and extremely dense.

A few mammal species may also occur within the agricultural fields of the PPSA. Small mammals such as deer mice (*Peromyscus maniculatus*) and California voles (*Microtus californicus*) would occur in fluctuating numbers depending on the season and yearly agricultural practices. Botta's pocket gophers (*Thomomys bottae*) and California ground squirrels (*Otospermophilus beecheyi*) could burrow around the perimeter of active fields, or within fields during fallow periods. Other small mammals that may occur from time to time within the agricultural fields of the PPSA include black-tailed hares (*Lepus californicus*) and Audubon cottontail rabbits (*Sylvilagus audubonii*). Various species of bat may also forage over the fields of the PPSA for flying insects.

The presence of amphibians, reptiles, birds and small mammals is likely to attract foraging raptors and mammalian predators. Raptors such as red-tailed hawks (*Buteo jamaicensis*), northern harriers (*Circus cyaneus*), and American kestrels (*Falco sparverius*) would likely forage over agricultural fields of the PPSA; all were observed during the field survey. Mammalian predators occurring in agricultural fields of the PPSA would most likely be limited to raccoons (*Procyon lotor*), striped skunks (*Mephitis mephitis*), coyotes (*Canis latrans*) and red foxes (*Vulpes vulpes*), as these species are relatively tolerant of human disturbance.

Orchard

Two orchards were observed within the northern block of the PPSA during the April 2014 field survey. A 70-acre immature almond (*Prunus dulcis*) orchard occurred in the southeastern portion of this block, and an area of approximately 110 acres was being prepared for orchard planting in the northwestern portion of this block. Being highly maintained, these orchards were mostly barren in the understory.

Due to intensive disturbance and the lack of aquatic habitat, orchards provide marginal habitat for amphibians; however, Pacific chorus frogs and western toads may disperse through orchard lands during the winter and spring. A limited number of reptile species would be expected to forage in orchards of the PPSA due to the lack of sun required by these species for thermal regulation; however, the western fence lizard (*Sceloporus occidentalis*), Pacific gopher snake, common kingsnake, and western rattlesnake (*Crotalus viridis*) may occasionally occur.

Orchards provide foraging and nesting habitat for a number of avian species. Once the orchards of the PPSA become mature, they could be used for nesting by the American robin (*Turdus migratorius*), mourning dove, and western kingbird. The latter two species were observed during the field survey. Winter migrants such as the white-crowned sparrow (*Zonotrichia leucophrys*) and yellow-rumped warbler (*Setophaga coronata*) would also be expected to use orchards of the PPSA for foraging and cover.

A few small mammal species would be expected to occur within the orchards of the PPSA. These include deer mice, California voles, house mice (*Mus musculus*), Botta's pocket gophers, and Audubon cottontail rabbits. Various species of bat may forage over orchard habitat for flying insects, or glean insects from the leaves of trees.

Foraging raptors and mammalian predators may occur in orchards of the PPSA from time to time. Raptors adapted to hunt within the tree canopy such as Cooper's hawks (*Accipiter cooperii*) and sharp-shinned hawks (*Accipiter striatus*) may forage for small birds in orchards. Mammalian predators potentially occurring in orchards of the PPSA would be the same as those described for agricultural fields.

Ruderal

Ruderal (disturbed) areas consisted of the roads and road margins of the PPSA, and the barren or sparsely vegetated strips of land bordering the industrial/residential areas, irrigation basins, and irrigation ditch. Ruderal areas contained a sparse cover of common agricultural weeds, which included mayweed (*Anthemis cotula*), wild oats (*Avena fatua*), Canada horseweed (*Erigeron canadensis*), common morning glory (*Convolvulus arvensis*), and Bermuda grass. The ruderal margin of Road 116 in the northern block of the PPSA contained several walnut and mulberry trees, and one Washington fan palm (*Washingtonia filifera*).

Although the wildlife habitat value of ruderal lands within the PPSA is relatively low, these lands certainly support some wildlife species. The reptile and amphibian species listed for agricultural fields could potentially use ruderal habitats of the PPSA, as well. Mourning doves and northern mockingbirds could be expected to occur on these ruderal lands, as could the disturbance-tolerant killdeer (*Charadrius vociferous*), which often nests on gravel or bare ground; all three species were observed during the field survey. The walnut and mulberry trees along the ruderal margin of Road 116 could be used for nesting by western kingbirds or Bullock's orioles, and the fan palm could be used by hooded orioles (*Icterus cucullatus*) and European starlings.

Small mammals that would be expected to occur on ruderal lands of the PPSA include California ground squirrels, Botta's pocket gophers, deer mice, California voles, and house mice. Several California ground squirrel burrows were observed under the walnut and mulberry trees along Road 116. Mammalian predators with the potential to occur on ruderal lands of the study area include disturbance-tolerant species such as the raccoon, red fox, and coyote.

Industrial/Residential

Industrial/residential areas comprised a small portion of the PPSA. One residence was located along the northern boundary of the northern block of the PPSA (Avenue 120), and an agricultural industrial complex and associated residence was located along that block's eastern boundary (Road 120). Both residential areas included houses and associated structures, landscaped areas with grass, trees, and shrubs, and paved and gravel surfaces. The agricultural industrial complex had a gravel substrate and was used for storing equipment and pipes. Ornamental vegetation that had been planted in concentrated areas around the industrial/residential lands included walnut (*Juglans* sp.), mulberry (*Morus alba*), Raywood ash (*Fraxinus oxycarpa* 'Raywood'), coast redwood (*Sequoia sempervirens*), Atlas cedar (*Cedrus atlantica*), iris (*Iris* sp.), California poppy (*Eschscholzia californica*), and cultivated rose (*Rosa* sp.).

A number of wildlife species adapted to human disturbance could be expected to occur in the industrial/residential land of the PPSA. For example, amphibians such as Pacific chorus frogs and western toads might disperse through industrial/residential land during the winter and spring, and reptiles such as the western fence lizard and common garter snake (*Thamnophis sirtalis*) could forage in this land use type. Buildings and other human-made structures located within the industrial/residential land of the PPSA provide potential nesting habitat for a number of avian species such as the house finch (*Haemorhous mexicanus*), house sparrow (*Passer domesticus*), and Eurasian collared dove (*Streptopelia decaocto*); all were observed during the field survey. Trees and shrubs associated with the two residences could be used for nesting by a variety of avian species, including the Bullock's oriole (*Icterus bullockii*), northern mockingbird (*Mimus polyglottos*), and Anna's hummingbird (*Calypte anna*). Mammal species attracted to this land use type may include the house mouse, Norway rat (*Rattus norvegicus*), and Virginia opossum

(*Didelphis virginiana*).

Birds of prey may occasionally forage over the industrial/residential areas. The red-tailed hawk and American kestrel are likely visitors; both were observed on or near industrial/residential land of the site during the field survey.

Livestock Facility

A small livestock facility was located near the northern boundary of the northern block of the PPSA. It appeared to consist entirely of a 2-acre feedlot containing dairy cattle. There were no structures in the immediate vicinity of the feedlot, suggesting that the facility functioned only to raise (or contain) cattle, and not to produce milk. The feedlot was barren of vegetation.

Several wildlife species adapted to livestock operations and/or tolerant of human disturbance could be expected to occur in or around the feedlot. Certain avian species feed opportunistically on arthropods kicked up by cattle; among these are brown-headed cowbirds, Brewer's blackbirds, and cattle egret (*Bubulcus ibis*). Reptiles, amphibians, and mammals likely to occur in the feedlot would be the same as those discussed for the industrial/residential land use type.

Irrigation Basin

Three irrigation basins were identified within the PPSA. Two of the basins were found in the northern block of the PPSA and one basin was found in the southern block. The northern basin of the northern block contained a mix of upland and wetland vegetation including, but not limited to, fiddle dock (*Rumex pulcher*), prostrate knotweed (*Polygonum aviculare*), annual bluegrass (*Poa annua*), and barnyard grass (*Leptochloa fusca* ssp. *fascicularis*). The southern basin of the northern block was inundated and unvegetated. The irrigation basin of the southern block of the PPSA was dominated by fiddle dock, tumbling mustard (*Sisymbrium altissimum*), ryegrass (*Lolium multiflorum*) and white goosefoot.

Wildlife use of irrigation basins would vary depending on the timing and degree to which the basins are inundated or saturated. During periods of inundation, amphibians such as the Pacific chorus frog and western toad could opportunistically breed in the basins and subsequently

disperse through surrounding lands. During dry periods, reptile and amphibian use of the basins would be similar to that described for agricultural fields of the PPSA.

Birds expected to use the basins during periods of inundation may include the great blue heron (*Ardea herodias*) and great egret (*Ardea alba*), assuming amphibian and/or invertebrate prey is present. Black phoebes (*Sayornis nigricans*) may glean insects from the surface of the water, or extract mud from the banks for nest-building. When the basins are saturated but not inundated, avian use may include those species that feed on mudflats, such as the killdeer. When the basins are dry, avian use would be similar to that described for agricultural fields and ruderal habitats of the study area.

Periodic inundation likely precludes occupation of the basin floors by burrowing rodents; however, Botta's pocket gophers and California ground squirrels could burrow on the banks. Deer mice and western harvest mice could also inhabit the margins of the basins and could forage for insects, seeds, and plant parts in the basins when the basins are dry. Mammalian predator and raptor use of the basins would be similar to that described for other habitats of the PPSA.

Irrigation Ditch

An earthen irrigation ditch approximately 30 feet in width passed through the southwestern corner of the southern block of the PPSA. The ditch entered the PPSA from the south along the western boundary of the fallow field, and traveled north for approximately 150 feet before turning to the west, traveling an additional 50 feet, then exiting the PPSA under Road 120. The ditch was dry during the spring field survey. Even during the peak of spring, all vegetation observed within the ditch was brown and dried, suggesting spraying with herbicide. The vegetation that was observed was dominated by bearded sprangletop (*Leptochloa fusca* ssp. *fascicularis*), with sparse Bermuda grass, tall flatsedge (*Cyperus eragrostis*), and Russian thistle (*Salsola tragus*).

Due to the lack of vegetation in the irrigation ditch, this habitat would be of limited value to native wildlife. However, the introduced bullfrog (*Lithobates catesbeianus*) and mosquitofish (*Gambusia affinis*) may occur in the ditch during periods of inundation; these and other prey species may attract wading birds such as the great blue heron and great egret. The cliff swallow (*Petrochelidon pyrrhonota*) could potentially nest on the Road 120 bridge over the ditch; this species was frequently observed during the April 2014 survey nesting on bridges and other structures adjacent to the PPSA.”⁷

Special Status Plants and Animals

The Biological Evaluation identified potential special status species which might occur onsite or in the project vicinity. “Several species of plants and animals within the state of California have low populations and/or limited distributions. Such species may be considered “rare” and are vulnerable to extirpation as the state’s human population grows and the habitats these species occupy are converted to agricultural and urban uses. As described more fully in Section 3.2,

⁷ Op. Cit. 9-15

state and federal laws have provided the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. A sizable number of native plants and animals have been formally designated as “threatened” or “endangered” under state and federal endangered species legislation. Others have been designated as candidates for such listing. Still others have been designated as “species of special concern” by the CDFW. The California Native Plant Society (CNPS) has developed its own set of lists of native plants considered rare, threatened, or endangered. Collectively, these plants and animals are referred to as “special status species.”

A number of special status plants and animals occur in the vicinity of the PPSA (Figures 4 and 5). These species, and their potential to occur within the PPSA, are listed in Table 1 in the following pages. Sources of information for this table included *California’s Wildlife, Volumes I, II, and III* (Zeiner et. al 1988-1990), *California Natural Diversity Data Base* (CDFW 2014), *Endangered and Threatened Wildlife and Plants* (USFWS 2011), *Annual Report on the Status of California State Listed Threatened and Endangered Animals and Plants* (CDFW 2014), and *The California Native Plant Society’s Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2014). It is important to note that the California Natural Diversity Data Base (CNDDB) is a volunteer database; therefore, it may not contain all known literature records.

A search of published accounts for all of the relevant special status plant and animal species was conducted for the *Pixley* and *Tipton* USGS 7.5-minute quadrangle in which the PPSA occurs, and for the ten surrounding quadrangles (*Alpaugh, Taylor Weir, Woodville, Sausalito School, Delano East, Delano West, Allensworth, Paige, Tulare* and *Cairns Corner*) using the CNDDB Rarefind 5 (2014) program.”⁸

⁸ Op. Cit.15-16

Draft Environmental Impact Report
Pixley Community Plan

**Table 3.4.1 [Table 1 of the Biological Evaluation]
LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR
IN THE VICINITY OF THE PIXLEY PPSA**

PLANTS (adapted from CDFW 2014 and CNPS 2014) <i>Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act</i>			
Species	Status	Habitat	Occurrence within the PPSA
California Jewelflower (<i>Caulanthus californicus</i>)	FE, CE	Occurs in chenopod scrub, pinyon and juniper woodland, and sandy valley and foothill grassland; blooms February–May; elevation 250-3,300 ft.	Absent. Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
San Joaquin Adobe Sunburst (<i>Pseudobahia peirsonii</i>)	FT, CE CNPS 1B	This annual sunflower occurs in grasslands of the Sierra Nevada foothills in heavy clay soils of the Porterville and Centerville series. Blooms March-April; elevation 300-2,625 ft.	Absent. Suitable heavy clay soils of the Porterville and Centerville series are absent from the PPSA.
CNPS-Listed Plants			
Earlimart Orache (<i>Atriplex cordulata</i> var. <i>erecticaulis</i>)	CNPS 1B	Occurs in valley and foothill grassland between 130 and 330 ft. in elevation; blooms August-September.	Absent. Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Lost Hills Crownscale (<i>Atriplex coronata</i> var. <i>vallicola</i>)	CNPS 1B	Found in chenopod scrub and valley and foothill grasslands; alkaline soils; blooms April-August; elevations to 2,080 ft.	Absent. Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Brittlescale (<i>Atriplex depressa</i>)	CNPS 1B	Occurs in relatively barren areas with alkaline clay soils in chenopod scrub, playas, grasslands, and vernal pools of the Central Valley; blooms April-October; elevations below 1,050 ft.	Absent. Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Lesser Saltscale (<i>Atriplex minuscula</i>)	CNPS 1B	Occurs widely scattered locations of California’s Central Valley with sandy alkaline soils in chenopod scrub, valley grasslands, and vernal pools; blooms May-October; elevation 50-660 ft.	Absent. Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Vernal Pool Smallscale (<i>Atriplex persistens</i>)	CNPS 1B	Occurs in alkaline vernal pools; blooms July-Oct.; elevations below 400 ft.	Absent. Vernal pool habitat is absent from the PPSA.
Subtle Orache (<i>Atriplex subtilis</i>)	CNPS 1B	Occurs in valley and foothill grassland; blooms August-October; elevation 130-330 ft.	Absent. Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Alkali Mariposa-Lily (<i>Calochortus striatus</i>)	CNPS 1B	Found in chaparral, chenopod scrub, and meadows and seeps; alkaline soils; blooms April-June; elevations to 5,000 ft.	Absent. Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Recurved Larkspur (<i>Delphinium recurvatum</i>)	CNPS 1B	Occurs on alkaline soils in chenopod scrub, cismontane woodland, and grasslands; blooms March-June; elevations below 2,500 ft.	Absent. Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Spiny-Sepaled Button Celery (<i>Eryngium spinoseplum</i>)	CNPS 1B	This annual/perennial occurs in vernal pools and valley and foothill grasslands of the San Joaquin Valley and the Tulare Basin; blooms April-May; elevation 330-840 ft.	Absent. Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Coulter’s Goldfields	CNPS 1B	Occurs in alkaline soils of playas and	Absent. Vernal pools and playas are

Draft Environmental Impact Report
Pixley Community Plan

Table 3.4.1 [Table 1 of the Biological Evaluation] LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE PIXLEY PPSA			
<i>(Lasthenia glabrata</i> spp. <i>coulteri)</i>		vernal pools; blooms February-June; elevation up to 4000 ft.	absent from the PPSA.
ANIMALS (adapted from CDFW 2014) <i>Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act</i>			
Vernal Pool Fairy Shrimp (<i>Branchinecta lynchi</i>)	FT	Occurs in vernal pools, clear to tea-colored water in grass or mud-bottomed swales, and basalt depression pools.	Absent. Habitat suitable for this species is absent from the PPSA.
Valley Elderberry Longhorn Beetle (VELB) (<i>Desmocerus californicus dimorphus</i>)	FT	Lives in mature elderberry shrubs of California's Central Valley and Sierra Foothills, generally along waterways and in floodplains.	Absent. No elderberry shrubs were observed during the April 2014 field survey. The only vegetated portions of the PPSA for which full visual coverage was not possible were orchard interiors and portions of residential and industrial areas that were obscured from the road. Elderberry shrubs are presumed absent from the PPSA's orchards due to intensive maintenance practices within. While it is possible that elderberry shrubs occur in the residential/industrial areas, VELB are presumed absent because of the isolation of any on-site shrubs from intact elderberry habitat and source populations of VELB. The CNDDB lists no VELB occurrences within a 10-mile radius of the PPSA.
Blunt-Nosed Leopard Lizard (<i>Gambelia sila</i>)	FE, CE, CFP	Occurs in semiarid grasslands, alkali flats, and washes. Avoids densely vegetated areas. Inhabits the San Joaquin Valley and adjacent valleys and foothills north to southern Merced County.	Absent. Any potential blunt-nosed leopard lizard habitat that may have once been present has been eliminated through intensive agricultural uses.
Swainson's Hawk (<i>Buteo swainsoni</i>)	CT	This breeding-season migrant to California nests in mature trees in riparian areas and oak savannah, and occasionally in lone trees at the margins of agricultural fields. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations.	Possible. The PPSA does not contain likely nesting habitat for Swainson's hawks, but hawks could forage over the agricultural fields of the site.
Western Snowy Plover (<i>Charadrius alexandrinus nivosus</i>)	FT, CSC	Breeding migrant to the San Joaquin Valley, where it may be found on salt pond levees and shores of large alkali lakes. Requires sandy, gravelly, or friable soils for nesting.	Unlikely. The irrigation basins of the PPSA are not typical of where this species usually nests; moreover, the PPSA is situated several miles outside of the known breeding distribution of the western snowy plover in the San Joaquin Valley. The nearest nesting occurrence of this species is approximately 11 miles to the southwest.
Nelson's Antelope Squirrel (<i>Ammospermophilus nelsoni</i>)	CT	Occurs in the San Joaquin Valley in broken terrain with small gullies and washes. Suitable habitats include	Absent. Any potential Nelson's antelope squirrel habitat that may have once been present has been eliminated

Draft Environmental Impact Report
Pixley Community Plan

**Table 3.4.1 [Table 1 of the Biological Evaluation]
LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR
IN THE VICINITY OF THE PIXLEY PPSA**

		widely spaced alkali scrub and annual grassland.	through intensive agricultural uses.
Tipton Kangaroo Rat (<i>Dipodomys nitratooides nitratooides</i>)	FE, CE	Occupies underground burrows in valley saltbush scrub and valley sink scrub habitats in the southern San Joaquin Valley.	Absent. Any potential Tipton's kangaroo rat habitat that may have once been present has been eliminated through intensive agricultural uses.
San Joaquin Kit Fox (SJKF) (<i>Vulpes macrotis mutica</i>)	FE, CT	Frequents desert alkali scrub and annual grasslands and may forage in adjacent agricultural habitats. Utilizes enlarged (6 to 10 inches in diameter) ground squirrel burrows as denning habitat.	Possible. Intensive agricultural practices, highly modified habitats, and ongoing disturbance make kit fox occupation of the PPSA unlikely. However, individual SJKF may pass through or forage on the PPSA from time to time. The CNDDDB lists 12 occurrences of SJKF within 10 miles of PPSA boundaries; all but one sighting are from more than 20 years ago.
State Species of Special Concern or Fully Protected			
Kern Brook Lamprey (<i>Entosphenus hubbsi</i>)	CSC	Requires perennial waters. Occurs in the Friant-Kern Canal and the lower Merced, Kaweah, Kings, and San Joaquin Rivers.	Absent. Perennial waters required by this species are absent from the PPSA.
Western Spadefoot (<i>Spea hammondi</i>)	CSC	Mainly occurs in grasslands of San Joaquin Valley. Vernal pools or other temporary wetlands are required for breeding. Aestivates in underground refugia such as rodent burrows, typically within 1,200 ft. of aquatic habitat.	Absent. Vernal pool complexes suitable for breeding by the western spadefoot are absent from the PPSA and surrounding lands within approximately 3 miles. Rodent burrows within the PPSA are located within marginal habitats too remote from potential breeding habitat to be used for aestivation by the spadefoot of the eastern block of the PPSA.
Coast Horned Lizard (<i>Phrynosoma blainvillii</i>)	CSC	Occurs in the lower Sierra foothills and throughout the central and southern California coast in relatively open areas.	Absent. Any potential coast horned lizard habitat that may have once been present has been eliminated through intensive agricultural uses.
San Joaquin Coachwhip (<i>Coluber flagellum ruddocki</i>)	CSC	Occurs in open, dry areas including grassland and saltbrush scrub. Takes refuge in rodent burrows and under shaded vegetation.	Absent. Any potential San Joaquin coachwhip habitat that may have once been present has been eliminated through intensive agricultural uses.
Northern Harrier (<i>Circus cyaneus</i>)	CSC	Frequents meadows, grasslands, open rangelands, freshwater emergent wetlands. Nests on ground, generally in wet areas, although grassland, pasture, and cultivated fields may be used.	Present. This species may forage within and adjacent to the PPSA, but breeding habitat is absent. A northern harrier was observed flying over the PPSA's almond orchard during the April 2014 survey.
Lesser Sandhill Crane (<i>Grus canadensis canadensis</i>)	CSC	Winters in the Central Valley, where it frequents grasslands, moist croplands with rice or corn stubble, and emergent wetlands. Breeds in the Arctic.	Possible. Lesser sandhill cranes could forage in agricultural fields of the PPSA post-harvest. This subspecies winters on the nearby Pixley National Wildlife Refuge, but does not breed in California.
White-tailed Kite (<i>Elanus leucurus</i>)	CFP	Occurs in savannah, open woodlands, marshes, desert grassland, and cultivated fields. Prefer lightly	Possible. The PPSA does not contain likely nesting habitat for white-tailed kites, but kites could forage over the

Draft Environmental Impact Report
Pixley Community Plan

**Table 3.4.1 [Table 1 of the Biological Evaluation]
LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR
IN THE VICINITY OF THE PIXLEY PPSA**

		grazed or ungrazed fields for foraging.	agricultural fields of the site.
Burrowing Owl (<i>Athene cunicularia</i>)	CSC	Frequents open, dry annual or perennial grasslands, deserts, and scrublands characterized by low growing vegetation. Dependent upon burrowing mammals, most notably the California ground squirrel, for nest burrows.	Possible. Suitably-sized burrows on the PPSA were observed under the walnut and mulberry trees lining Road 116; these burrows represent unlikely roosting/nesting habitat for burrowing owls. However, burrowing owls could roost/nest in the ruderal grasslands of Harmon Field immediately west of the southern block of the PPSA, and forage in on-site agricultural fields.
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	CSC	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low herbaceous cover. In the Central Valley, nests in riparian area, desert scrub, and occasionally agricultural hedgerows.	Possible. Marginal nesting habitat for shrikes is available in trees of the PPSA, and shrikes could forage in on-site agricultural fields.
Tricolored Blackbird (<i>Agelaius tricolor</i>)	CSC	Breeds in colonies near fresh water, primarily emergent wetlands, with tall thickets. Forages in grassland and cropland habitats.	Possible. Suitable foraging habitat for tricolored blackbirds occurs in the agricultural fields of the PPSA, and tricolored blackbirds could conceivably nest in the wheat field of the PPSA's northern block.
Dulzura Pocket Mouse (<i>Chaetodipus californicus femoralis</i>)	CSC	Occupies a wide variety of habitats including woodland, chaparral, and annual grassland, and particularly in chaparral/grassland edge zones.	Absent. Any potential Dulzura pocket mouse habitat that may have once been present has been eliminated through intensive agricultural uses.
Pallid Bat (<i>Antrozous pallidus</i>)	CSC	Found in grasslands, chaparral, and woodlands, where it feeds on ground- and vegetation-dwelling arthropods, and occasionally take insects in flight. Prefers to roost in rock crevices, but may also use tree cavities, caves, bridges, and buildings.	Possible. Individuals of this species could potentially roost in trees or buildings of the PPSA, and forage in or over agricultural fields and orchards.
Western Mastiff Bat (<i>Eumops perotis</i> ssp. <i>californicus</i>)	CSC	Found in open, arid to semi-arid habitats, where it feeds on insects in flight. Roosts most commonly in crevices in cliff faces, but may also use high buildings, trees, and tunnels.	Possible. Individuals of this species could potentially roost in trees or buildings of the PPSA, and forage in flight over agricultural fields.
American Badger (<i>Taxidea taxus</i>)	CSC	Uncommon resident statewide; most abundant in drier open stages of most shrub, forest, and herbaceous habitats.	Possible. Badgers may occasionally pass through the PPSA, foraging in agricultural fields of the site and possibly denning in the margins of these fields or other ruderal areas.

OCCURRENCE EXPLANATIONS: Key for terms or codes used in Table 3.4.1

Present: Species observed on the site at time of field surveys or during recent past.

Possible: Species not observed on the site, but it could occur there from time to time.

Unlikely: Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient.

Absent: Species not observed on the site, and precluded from occurring there because habitat requirements not met.

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FPE	Federally Endangered (Proposed)	CR	California Rare
FPT	Federal Endangered (Proposed)	CFP	California Fully Protected
FC	Federal Candidate	CSC	California Species of Special Concern

Draft Environmental Impact Report
Pixley Community Plan

**Table 3.4.1 [Table 1 of the Biological Evaluation]
LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR
IN THE VICINITY OF THE PIXLEY PPSA**

CNPS	California Native Plant Society Listing		
1A	Plants Presumed Extinct in California	2	Plants Rare, Threatened, or Endangered in
1B	Plants Rare, Threatened, or Endangered in California and elsewhere		California, but more common elsewhere

There are two habitat conservation plans that apply in Tulare County: 1) Recovery Plan for Upland Species of the San Joaquin Valley, and 2) the Kern Water Bank Habitat Conservation Plan. The Kern Water Bank Habitat Conservation Plan also applies to Tulare County. This plan; however, only applies to an area in Allensworth.

Whenever possible, public agencies are required to avoid or minimize environmental impacts by implementing practical alternatives or mitigation measures. According to Section 15382 of the CEQA Guidelines, a significant effect on the environment means a “substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest.”

REGULATORY SETTING

Applicable Federal, State, and local regulations specific to biological resources are described below. The following environmental regulatory settings were summarized, in part, from information contained in the Tulare County General Plan 2010 Background Report.

Federal Agencies & Regulations

Federal Endangered Species Act

“The U.S. Fish and Wildlife Service (USFWS) administers the Federal Endangered Species Act (16 USC Section 153 et seq.) and thereby has jurisdiction over federally listed threatened, endangered, and proposed species. Projects that may result in a “take” of a listed species or critical habitat must consult with the USFWS. “Take” is broadly defined as harassment, harm, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collection; any attempt to engage in such conduct; or destruction of habitat that prevents an endangered species from recovering (16 USC 1532, 50 CFR 17.3). Federal agencies that propose, fund, or must issue a permit for a project that may affect a listed species or critical habitat are required to consult with the USFWS under Section 7 of the Federal Endangered Species Act. If it is determined that a federally listed species or critical habitat may be adversely affected by the federal action, the USFWS will issue a “Biological Opinion” to the federal agency that describes minimization and avoidance measures that must be implemented as part of the federal action. Projects that do not have a federal nexus must apply for a take permit under Section 10 of the Act. Section 10 of the Act requires that the project applicant prepare a habitat conservation plan as part of the permit

application (16 USC 1539).”⁹

“Under Section 4 of the Federal Endangered Species Act, a species can be removed, or delisted, from the list of threatened and endangered species. Delisting is a formal action made by the USFWS and is the result of a determined successful recovery of a species. This action requires posts in the federal registry and a public comment period before a final determination is made by the USFWS.”¹⁰

Habitat Conservation Plans

“Habitat Conservation Plans (HCPs) are required for a non-federal entity that has requested a take permit of a federal listed species or critical habitat under Section 10 of the Endangered Species Act. HCPs are designed to offset harmful effects of a proposed project on federally listed species. These plans are utilized to achieve long-term biological and regulatory goals. Implementation of HCPs allows development and projects to occur while providing conservation measures that protect federally listed species or their critical habitat and offset the incidental take of a proposed project. HCPs substantially reduce the burden of the Endangered Species Act on small landowners by providing efficient mechanisms for compliance with the ESA, thereby distributing the economic and logistic effects of compliance. A broad range of landowner activities can be legally protected under these plans (County of Tulare, 2010 Background Report, pages 9-6 and 9-7, 2010a). There are generally two types of HCPs, project-specific HCPs which typically protect a few species and have a short duration and multi-species HCPs which typically cover the development of a larger area and have a longer duration.”¹¹

There are two habitat conservation plans that apply in Tulare County: The Kern Water Habitat Conservation Plan, which applies to an area in Allensworth; and the U.S. Fish and Wildlife’s “The Recovery Plan for Upland Species in the San Joaquin Valley,” which includes sensitive species in the San Joaquin Valley, several of which may be found in Tulare County.

Migratory Bird Treaty and Bald and Golden Eagle Protection Act

“The Migratory Bird Treaty Act (MBTA, 16 USC Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668) protect certain species of birds from direct “take”. The MBTA protects migrant bird species from take by setting hunting limits and seasons and protecting occupied nests and eggs. The Bald and Golden Eagle Protection Act (16 USC Sections 668-668d) prohibits the take or commerce of any part of Bald and Golden Eagles. The USFWS administers both acts, and reviews federal agency actions that may affect species protected by the acts.”¹²

Clean Water Act - Section 404

“Wetlands and other waters of the U.S. are subject to the jurisdiction of the U.S. Army Corp of Engineers (USACE) and U.S. Environmental Protection Agency (EPA) under Section 404 of the

⁹ Tulare County 2030 General Plan RDEIR, page 3.11-1

¹⁰ Ibid.

¹¹ Op. Cit. 3.11-2

¹² Op. Cit.

Draft Environmental Impact Report
Pixley Community Plan

Clean Water Act (33 U.S.C. 1251 et seq., 1972). Together, the EPA and the USACE determine whether they have jurisdiction over the non-navigable tributaries that are not relatively permanent based on a fact-specific analysis to determine if there is a significant nexus. These non-navigable tributaries include wetlands adjacent to non-navigable tributaries that are not relatively permanent and wetlands adjacent to but that does not directly abut a relatively permanent non-navigable tributary.”¹³

“Wet areas that are not regulated by this Act do not have a hydrologic link to other waters of the U.S., either through surface or subsurface flow and include ditches that drain uplands, swales or other erosional features. The USACE has the authority to issue a permit for any discharge, fill, or dredge of wetlands on a case-by-case basis, or by a general permit. General permits are handled through a Nationwide Permit (NWP) process. These permits allow specific activities that generally create minimal environmental effects. Projects that qualify under the NWP program must fulfill several general and specific conditions under each applicable NWP. If a proposed project cannot meet the conditions of each applicable NWP, an individual permit would likely be required from the USACE.”¹⁴

State Agencies & Regulations

California Department of Fish and Wildlife (formerly Dept. of Fish and Game)

The California Department of Fish and Wildlife (DFW) regulates the modification of the bed, bank, or channel of a waterway under Sections 1601-1607 of the California Fish and Game Code. Also included are modifications that divert, obstruct, or change the natural flow of a waterway. Any party who proposes an activity that may modify a feature regulated by the Fish and Game Code must notify DFW before project construction. DFW will then decide whether to enter into a Streambed Alteration Agreement with the project applicant either under Section 1601 (for public entities) or Section 1603 (for private entities) of the Fish and Game Code.

California Endangered Species Act

DFW administers the California Endangered Species Act of 1984 (Fish and Game Code Section 2080), which regulates the listing and “take” of endangered and threatened State-listed species. A “take” may be permitted by California Department of Fish and Game through implementing a management agreement. “Take” is defined by the California Endangered Species Act as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill” a State-listed species (Fish and Game Code Sec. 86). Under State laws, DFW is empowered to review projects for their potential impacts to State-listed species and their habitats.

The DFW maintains lists for Candidate-Endangered Species (SCE) and Candidate-Threatened Species (SCT). California candidate species are afforded the same level of protection as State-listed species. California also designates Species of Special Concern (CSC) that are species of limited distribution, declining populations, diminishing habitat, or unusual scientific,

¹³ Op. Cit. 3.11-1 and 3.11-2

¹⁴ Op. Cit..

recreational, or educational value. These species do not have the same legal protection as listed species, but may be added to official lists in the future. The CSC list is intended by DFW as a management tool for consideration in future land use decisions (Fish and Game Code Section 2080).¹⁵

All State lead agencies must consult with DFW under the California Endangered Species Act when a proposed project may affect State-listed species. DFW would determine if a project under review would jeopardize or result in taking of a State-listed species, or destroy or adversely modify its essential habitat, also known as a “jeopardy finding” (Fish and Game Code Sec. 2090). For projects where DFW has made a jeopardy finding, DFW must specify reasonable and prudent alternatives to the proposed project to the State lead agency (Fish and Game Code Sec. 2090 et seq.).¹⁶

Natural Communities Conservation Planning Act

The Natural Communities Conservation Planning Act allows a process for developing natural community conservation plans (NCCPs) under DFW direction. NCCPs allow for regional protection of wildlife diversity, while allowing compatible development. DFW may permit takings of State-listed species whose conservation and management are provided in a NCCP, once a NCCP is prepared (Fish and Game Code Secs. 2800 et seq.).¹⁷

Federally and State-Protected Lands

Ownership of California’s wildlands is divided primarily between federal, state, and private entities. State-owned land is managed under the leadership of the Departments of Fish and Game (DFW), Parks and Recreation, and Forestry and Fire Protection (CDF). Tulare County has protected lands in the form of wildlife refuges, national parks, and other lands that have large limitations on appropriate land uses. Some areas are created to protect special status species and their ecosystems.¹⁸

California Wetlands Conservation Policy

The California Wetlands Conservation Policy’s goal is to establish a policy framework and strategy that will ensure no overall net loss and achieve a long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California. Additionally, the policy aims to reduce procedural complexity in the administration of State and federal wetlands conservation programs and to encourage partnerships with a primary focus on landowner incentive programs and cooperative planning efforts. These objectives are achieved through three policy means: statewide policy initiatives, three geographically based regional strategies in which wetland programs can be implemented, and creation of interagency wetlands task force to direct and coordinate administration and implementation of the policy. Leading agencies include the Resources Agency and the California Environmental Protection Agency (Cal/EPA) in

¹⁵ General Plan Background Report., pages 9-7 and 9-8

¹⁶ Ibid. 9-8

¹⁷ Op. Cit.

¹⁸ Op. Cit. 9-9

cooperation with Business, Transportation and Housing Agency, Department of Flood and Agriculture, Trade and Commerce Agency, Governor's Office of Planning and Research, Department of Fish and Game, Department of Water Resources, and the State Water Resources Control Board.¹⁹

Birds of Prey

Birds of Prey are protected under the California Fish and Game Code Section 3503.5, which states:

"It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."

This includes any construction disturbance which could lead to nest abandonment, which is considered a "taking" by the DFW.

CEQA and Oak Woodland Protection

CEQA Statute Section 21083.4, "Counties; Conversion of Oak Woodlands; Mitigation Alternatives," requires that counties determine whether a development will have potential impacts on oak woodlands:

21083.4(a): "For purposes of this section, "oak" means a native tree species in the genus *Quercus*, not designated as Group A or Group B commercial species pursuant to regulations adopted by the State Board of Forestry and Fire Protection pursuant to Section 4526, and that is 5 inches or more in diameter at breast height."

21083.4(b): "...a county shall determine whether a project within its jurisdiction may result in a conversion of oak woodlands that will have a significant effect on the environment. If a county determines that there may be a significant effect to oak woodlands, the county shall require one or more of the...[listed] oak woodlands mitigation alternatives..."

Local Policy & Regulations

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to Projects within County of Tulare. General Plan policies that relate to the proposed Project are listed below.

ERM-1.1 Protection of Rare and Endangered Species - The County shall ensure the protection of environmentally sensitive wildlife and plant life, including those species designated as rare, threatened, and/or endangered by State and/or Federal government, through compatible land use development.

¹⁹ Op. Cit.

ERM-1.2 Development in Environmentally Sensitive Areas - The County shall limit or modify proposed development within areas that contain sensitive habitat for special status species and direct development into less significant habitat areas. Development in natural habitats shall be controlled so as to minimize erosion and maximize beneficial vegetative growth.

ERM-1.4 Protect Riparian Areas - The County shall protect riparian areas through habitat preservation, designation as open space or recreational land uses, bank stabilization, and development controls.

ERM-1.5 Riparian Management Plans and Mining Reclamation Plans - The County shall require mining reclamation plans and other management plans to include measures that protect, maintain, and restore riparian resources and habitats.

ERM-1.6 Management of Wetlands - The County shall support the preservation and management of wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitats.

ERM-1.7 Planting of Native Vegetation - The County shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native vegetation and wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained.

ERM-1.12 Management of Oak Woodland Communities - The County shall support the conservation and management of oak woodland communities and their habitats.

ERM-1.14 Mitigation and Conservation Banking Program - The County shall support the establishment and administration of a mitigation banking program, including working cooperatively with TCAG, Federal, State, not-for-profit and other agencies and groups to evaluate and identify appropriate lands for protection and recovery of threatened and endangered species impacted during the land development process.

ERM-1.16 Cooperate with Wildlife Agencies - The County shall cooperate with State and federal wildlife agencies to address linkages between habitat areas.

ERM-1.17 Conservation Plan Coordination - The County shall coordinate with local, State, and federal habitat conservation planning efforts (including Section 10 Habitat Conservation Plan) to protect critical habitat areas that support endangered species and other special-status species.

ERM-2.7 Minimize Adverse Impacts - The County will minimize the adverse effects on environmental features such as water quality and quantity, air quality, flood plains, geophysical characteristics, biotic, archaeological, and aesthetic factors.

IMPACT EVALUATION

Would the Project:

- a) **Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

Project Impact Analysis: *Less Than Significant Impact With Mitigation*

As noted earlier, consultants Live Oak Associates, Inc. (LOA) conducted an investigation of the biological resources of the Pixley Community Plan Proposed Planning Study Area (PPSA) in the outskirts of the community of Pixley and evaluated likely impacts to such resources resulting from development of the PPSA. The PPSA consists primarily of agricultural fields, orchard, residential areas, an auto salvage yard, and disturbed grassland.

The 640-acre PPSA is proposed for inclusion in the Pixley Community Plan area. The following subsections assume that all habitats of the PPSA will be impacted by future development under a number of individual projects. Potentially significant project impacts to biological resources and mitigations are discussed below.

According to the CNDDDB search (and as seen in Table 3.4-1), __ Special Status plant species and __ Special Status animal species are known to occur in the general proposed Project vicinity. Field surveys were conducted by LOA in April of 2014 and it was determined that of the __ Special Status species, there was only the possibility of __ species to actually be in the area, due to the disturbance on the site and the quality of habitat on and around the proposed Project site.

“...San Joaquin kit fox is known from the vicinity of the PPSA, and individuals may occasionally pass through or forage/den within the PPSA. If a kit fox were present at the time of future construction activities in the PPSA, then it would be at risk of project-related injury or mortality. Kit fox mortality as a result of future development of the PPSA would violate the state and federal Endangered Species Acts, and is considered a potentially significant impact under CEQA.”²⁰

“...Burrowing owls have the potential to nest or roost in the PPSA’s ruderal areas or fallow field. If one or more owls were present in these areas at the time of construction, then construction activities would have the potential to injure or kill these individuals. Mortality of individual burrowing owls would violate California Fish and Game Code and the federal Migratory Bird Treaty Act, and is considered a significant impact of the project under CEQA.”²¹

²⁰ Op. Cit. 33-34

²¹ Op. Cit. 37

“Although habitats of the PPSA are primarily marginal to unsuitable for the American badger, badgers may occasionally pass through the PPSA, foraging in agricultural fields and possibly denning in ruderal areas. In the event that one or more badgers were denning in an individual project area at the time of construction, these individuals would be at risk of construction-related injury or mortality. Construction mortality of American badgers is a potentially significant impact of future development of the PPSA.”²²

“The majority of the PPSA consists of habitat that could be used for nesting by one or more avian species protected by the federal Migratory Bird Treaty Act and related state laws. Tree-nesting songbirds and raptors may nest in the PPSA’s orchards or residential areas, or in the few trees along the ruderal margin of Road 116. Red-winged or tricolored blackbirds may nest in the PPSA’s wheat field. Killdeer may nest on bare ground or gravel surfaces in ruderal or industrial areas of the PPSA, and the house finch may nest in the PPSA’s buildings. Cliff swallows could nest on the Road 120 bridge over the PPSA’s irrigation ditch. Although the Swainson’s hawk, white-tailed kite (*Elanus leucurus*), and loggerhead shrike (*Lanius ludovicianus*) are not likely to nest within the PPSA for reasons discussed elsewhere (see Sections 2.5.1 and 3.4.3), the PPSA contains trees and is within the range of these species, so their nesting on the site is considered a theoretical possibility. Raptors and migratory birds nesting within the PPSA at the time that individual projects are implemented have the potential to be injured or killed by project activities. In addition to direct “take” of nesting birds, project activities could disturb birds nesting within or adjacent to work areas such that they would abandon their nests. Project activities that adversely affect the nesting success of raptors and migratory birds or result in the mortality of individual birds constitute a violation of state and federal laws and are considered a potentially significant impact under CEQA.”²³

“Development of the PPSA may result in the removal of buildings and mature trees that provide potential roosting habitat for bats. If trees or buildings removed by construction activities contain colonial roosts, many individual bats could be killed. Such a mortality event is considered a potentially significant impact of the project under CEQA.”²⁴

Based on this analysis, implementation of Mitigation Measures 4-1 through 4-17 would reduce potential Project-specific impacts related to this Checklist Item to Less Than Significant.

Cumulative Impact Analysis: *Less Than Significant Impact With Mitigation*

The geographic area of this cumulative analysis is the San Joaquin Valley. While the study area is limited to Tulare County, sensitive species with similar habitat requirements may exist in other portions of the San Joaquin Valley, and therefore cumulative impacts would extend beyond Tulare County political boundaries.

²² Op. Cit. 39

²³ Op. Cit. 40

²⁴ Op. Cit. 41

The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As the proposed Project does not result in significant loss of habitat or direct impact to these special status species, ***Less Than Significant Cumulative Impacts*** with Mitigation will occur. Consultants LOA recommended the following Mitigation Measures as contained in the Biological Evaluation (See Appendix “B” of this DEIR). For easier reading, the Mitigation Measures contained in the Biological Evaluation have been sequenced and numbered differently rather than using the format contained in the Biological Evaluation.

Mitigation Measure(s):

Mitigation. Prior to the construction of any projects within the PPSA, the following measures adapted from the U.S. Fish and Wildlife Service 2011 *Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance* (Appendix E) will be implemented.

Project-Related Mortality of San Joaquin Kit Fox:

- 4-1** ***“(Pre-construction Surveys).*** Pre-construction surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance, construction activities, and/or any project activity likely to impact the San Joaquin kit fox. These surveys will be conducted in accordance with the USFWS *Standard Recommendations*. The primary objective is to identify kit fox habitat features (e.g. potential dens and refugia) on the project site and evaluate their use by kit foxes through use of remote monitoring techniques such as motion-triggered cameras and tracking medium. If an active kit fox den is detected within or immediately adjacent to the area of work, the USFWS and CDFW shall be contacted immediately.
- 4-2** ***(Avoidance).*** Should an active kit fox den be detected within or immediately adjacent to the area of work, a disturbance-free buffer will be established around the den in consultation with the USFWS and CDFW, to be maintained until a qualified biologist has determined that the den is no longer occupied. Known kit fox dens may not be destroyed until they have been vacant for a period of at least three days, as demonstrated by use of motion-triggered cameras or tracking medium, and then only after obtaining take authorization from the USFWS.
- 4-3** ***(Minimization).*** Construction activities shall be carried out in a manner that minimizes disturbance to kit foxes. Minimization measures include, but are not limited to: restriction of project-related vehicle traffic to established roads, construction areas, and other designated areas; inspection and covering of structures (e.g., pipes), as well as installation of escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of rodenticide and herbicide use; and proper disposal of food items and trash.

- 4-4** (*Employee Education Program*). Prior to the start of construction the applicant will retain a qualified biologist to conduct a tailgate meeting to train all construction staff that will be involved with the project on the San Joaquin kit fox. This training will include a description of the kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of the measures being taken to reduce impacts to the species during project construction and implementation.
- 4-5** (*Mortality Reporting*). The Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified in writing within three working days in case of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and any other pertinent information.”²⁵

Project-Related Mortality of Burrowing Owl

Mitigation. Prior to the initiation of project-related activities involving ground disturbance or heavy equipment use on those portions of the PPSA that contain suitable burrowing owl habitat, the following measures will be implemented, adapted from the *Staff Report on Burrowing Owl Mitigation* (CDFG 1995 and 2012).

- 4-6** “(*Pre-construction Surveys*). A pre-construction survey for burrowing owls will be conducted by a qualified biologist within 30 days of the onset of project-related activities involving ground disturbance or heavy equipment use. The survey area will include all suitable habitat on and within 500 feet of project impact areas, where accessible.
- 4-7** (*Avoidance of Active Nests*). If pre-construction surveys and subsequent project activities are undertaken during the breeding season (February 1-August 31) and active nest burrows are located within or near project impact areas, a 250-foot construction setback will be established around active owl nests, or alternate avoidance measures implemented in consultation with CDFW. The buffer areas will be enclosed with temporary fencing to prevent construction equipment and workers from entering the setback area. Buffers will remain in place for the duration of the breeding season, unless otherwise arranged with CDFW. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described below.
- 4-8** (*Passive Relocation of Resident Owls*). During the non-breeding season (September 1-January 31), resident owls occupying burrows in project impact areas may be passively relocated to alternative habitat in accordance with a relocation plan prepared by a qualified biologist. Passive relocation may include one or more of the following elements: 1) establishing a minimum 50 foot buffer around all active burrowing owl burrows, 2) removing all suitable burrows outside the 50 foot buffer and up to 160 feet outside of the impact areas as necessary, 3) installing one-way doors on all potential owl burrows within the 50 foot buffer, 4) leaving one-way doors in place for 48 hours to

²⁵ Op. Cit. 36-37

ensure owls have vacated the burrows, and 5) removing the doors and excavating the remaining burrows within the 50 foot buffer.”²⁶

Project-Related Mortality of American Badger

Mitigation. The following measures will be implemented to avoid and minimize the potential for project-related mortality of American badgers:

- 4-9** “(**Preconstruction Surveys**). A preconstruction survey for American badgers will be conducted by a qualified biologist within 30 days of the onset of project-related activities involving ground disturbance or heavy equipment use. Preconstruction surveys will be conducted in all suitable denning habitat of the individual project area.
- 4-10** (**Avoidance**). Should an active natal den be identified during the preconstruction surveys, a disturbance-free buffer will be established around the den and maintained until a qualified biologist has determined that the cubs have dispersed or the den has been abandoned.”²⁷

Project-Related Mortality/Disturbance of Nesting Raptors and Migratory Birds (Including Swainson’s Hawk, White-tailed Kite, and Loggerhead Shrike)

Mitigation. The following measures will be implemented prior to the start of project activities within the PPSA:

- 4-11** “(**Avoidance**). In order to avoid impacts to nesting raptors and migratory birds, individual projects within the PPSA will be constructed, where possible, outside the nesting season, or between September 1st and January 31st.
- 4-12** (**Preconstruction Surveys**). If project activities must occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys for active raptor and migratory bird nests within 30 days of the onset of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet. If no nesting pairs are found within the survey area, no further mitigation is required.
- 4-13** (**Establish Buffers**). Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged.”²⁸

²⁶ Op. Cit. 37-38

²⁷ Op. Cit.

²⁸ Op. Cit. 40-41

Project-Related Mortality of Roosting Bats

Mitigation. The following measures will be implemented for construction activities involving the removal of buildings or mature trees:

- 4-14** *“(Temporal Avoidance).* To avoid potential impacts to maternity bat roosts, removal of buildings and trees should occur outside of the period between April 1 and September 30, the time frame within which colony-nesting bats generally assemble, give birth, nurse their young, and ultimately disperse.
- 4-15** *(Preconstruction Surveys).* If removal of buildings or trees is to occur between April 1 and September 30 (general maternity bat roost season), then within 30 days prior to these activities, a qualified biologist will survey affected buildings and trees for the presence of bats. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for nighttime emergence of bats from roost sites. If no bats are observed to be roosting or breeding, then no further action would be required, and construction could proceed.
- 4-16** *(Minimization).* If a non-breeding bat colony is detected during preconstruction surveys, the individuals will be humanely evicted via partial dismantlement of trees or structures prior to full removal under the direction of a qualified biologist to ensure that no harm or “take” of any bats occurs as a result of construction activities.
- 4-17** *(Avoidance of Maternity Roosts).* If a maternity colony is detected during preconstruction surveys, a disturbance-free buffer will be established around the colony and remain in place until a qualified biologist deems that the nursery is no longer active. The disturbance-free buffer will range from 50 to 100 feet as determined by the biologist.”²⁹

Implementation of the above measure will reduce impacts to San Joaquin kit fox, burrowing owl, American badger, nesting raptors and migratory birds, and roosting bats to a ***Less Than Significant Level***.

Conclusion:

Less Than Significant Impact With Mitigation

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts With Mitigation*** related to this Checklist Item will occur.

- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?**

²⁹ Op. Cit. 41-42

Draft Environmental Impact Report
Pixley Community Plan

Project Impact Analysis: *No Impact*

LOA noted in the Biological Evaluation that “Riparian habitat is absent from the PPSA.”³⁰ Also as discussed, “designated critical habitat is absent from the PPSA. The nearest units of critical habitat are located along Cross Creek, approximately 3 miles southwest of the southern block of the PPSA on the Pixley National Wildlife Refuge.”³¹

Cumulative Impact Analysis: *No Impact*

The geographic area of this cumulative analysis is the San Joaquin Valley. While the study area is limited to Tulare County, sensitive species with similar habitat requirements may exist in other portions of the San Joaquin Valley; and therefore, cumulative impacts will extend beyond Tulare County political boundaries.

The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As the proposed Project does not result in loss of habitat or direct impact to these special status species, *No Cumulative Impacts* will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *No Impact*

- c) **Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

Project Impact Analysis: *No Impact*

LOA noted in the Biological Evaluation that, “the only hydrologic feature on the PPSA is a 200 linear foot stretch of an unnamed irrigation ditch. The ditch would likely be considered jurisdictional by the USACE; however, the jurisdictional status of water features is determined by the USACE upon review and verification of a wetland delineation prepared for the project area. Future development of the PPSA may result in impacts to the ditch. Because this potentially jurisdictional feature consists of a highly maintained irrigation ditch with minimal wetland function or value and covers an area of only about 0.2 acre, these impacts would be considered less than significant under CEQA. Regardless of the size of impact, impacts to waters of the U.S. are subject to the permit requirements of Section 404 and 401 of the Clean Water Act. If the unnamed irrigation ditch is considered jurisdictional by the USACE, the placement of fill within this ditch would require 1) a Clean Water Act permit from the USACE, and 2) a Water Quality Certification from the RWQCB. These

³⁰ Op. Cit.46

³¹ Op. Cit.

permits cannot be issued without an accepted preliminary jurisdictional determination or a verified approved wetland delineation by the USACE.”³²

Based on this analysis, implementation of any mitigation measures is not warranted as there will be no Project-specific impacts related to this Checklist Item.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley. While the study area is limited to Tulare County, sensitive species with similar habitat requirements may exist in other portions of the San Joaquin Valley, and therefore cumulative impacts would extend beyond Tulare County political boundaries.

The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As the proposed Project would not result in significant impacts to potential waters of the U.S., LOA determined that no mitigation measures are warranted.

Mitigation Measure(s): ***None Required.***

Project-Related Impacts to Waters of the United States

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

Project Impact Analysis: ***No Impact***

LOA noted in the Biological Evaluation that “The PPSA consists of and is surrounded by developed and/or highly disturbed lands that do not contain important movement corridors for native wildlife. Birds using the Pacific flyway will continue to do so following project development. Future development of the PPSA will result in a less than significant effect on regional wildlife movements.”³³ As such, ***No Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

³² Op. Cit. 45

³³ Op. Cit. 45

The geographic area of this cumulative analysis is the San Joaquin Valley. While the study area is limited to Tulare County, corridors for fish and wildlife species with similar habitat requirements may exist in other portions of the San Joaquin Valley, and therefore cumulative impacts will extend beyond Tulare County political boundaries.

The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. As the proposed Project does not impact important movement corridors, ***No Cumulative Impacts*** will occur.

Mitigation Measure(s) ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific and Cumulative Impacts*** related to this Checklist item will occur.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Project Impact Analysis: ***No Impact***

No trees will be removed as a result of the proposed Project. LOA noted in the Biological Evaluation that “individual projects will be implemented in accordance with the goals and policies of the Tulare County General Plan.”³⁴ ***No Project-specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is California. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

There would be impacts to biological resources as a result of the Project; therefore, there are no conflicting policies. ***No Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

No Project-specific and Cumulative Impacts related to this Checklist Item will occur.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

³⁴ Op. Cit. 47

Project Impact Analysis: ***No Impact***

As noted earlier, “No known HCPs [Habitat Conservation Plans] or NCCPs [Natural Community Conservation Plan] are in effect for the area.”³⁵ ***No Project-specific Impacts*** relate to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is California. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

With no Program-specific impacts related to habitat conservation plans, ***No Cumulative Impacts*** will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

No Program-specific or Cumulative Impacts related to this Checklist Item will occur.

³⁵ Op. Cit.

DEFINITIONS AND ACRONYMS

DEFINITIONS

CEQA Guidelines Section 15380 provides definitions for the terms “species,” “endangered,” “threatened” and “rare”:

“Endangered, Rare or Threatened Species

(a) "Species" as used in this section means a species or subspecies of animal or plant or a variety of plant.

(b) A species of animal or plant is:

(1) "Endangered" when its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors; or

(2) "Rare" when either:

(A) Although not presently threatened with extinction, the species is existing in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or

(B) The species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered "threatened" as that term is used in the Federal Endangered Species Act.

(c) A species of animal or plant shall be presumed to be endangered, rare or threatened, as it is listed in:

(1) Sections 670.2 or 670.5, Title 14, California Code of Regulations; or

(2) Title 50, Code of Federal Regulations Section 17.11 or 17.12 pursuant to the Federal Endangered Species Act as rare, threatened, or endangered.

(d) A species not included in any listing identified in subdivision (c) shall nevertheless be considered to be endangered, rare or threatened, if the species can be shown to meet the criteria in subdivision (b).

(e) This definition shall not include any species of the Class Insecta which is a pest whose protection under the provisions of CEQA would present an overwhelming and overriding risk to man as determined by:

(1) The Director of Food and Agriculture with regard to economic pests; or

(2) The Director of Health Services with regard to health risks.”³⁶

³⁶ CEQA Guidelines, Section 15380

Draft Environmental Impact Report
Pixley Community Plan

ACRONYMS

DFW	California Department of Fish and Wildlife
DPR	California Department of Parks and Recreation
CDF	California Department of Forestry and Fire Protection (CalFire)
CSC	Species of Special Concern (DFW)
Cal/EPA	California Environmental Protection Agency
HCP	Habitat Conservation Plan
LOA	Live Oak Associates
MBTA	Migratory Bird Treaty Act (Federal)
NCCP	Natural Communities Conservation Planning Act
NWP	Nationwide Permit
PSP	(Tulare County) Special Use Permit
SCE	Candidate-Endangered Species
SCT	Candidate-Threatened Species
SSC	Species of Special Concern
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service

REFERENCES

CEQA Guidelines

Pixley Community Plan Update Biological Evaluation Tulare County, California prepared by Live Oak Associates, Inc. May 2014

Tulare County 2030 General Plan: Background Report, February 2010

Tulare County 2030 General Plan, August 2012

Tulare County 2030 General Plan Recirculated Draft Environmental Impact Report (RDEIR), February 2010

U.S. Fish & Wildlife Service, Recovery Plan for Upland Species of the San Joaquin Valley, California, (1998)

Cultural Resources

Chapter 3.5

SUMMARY OF FINDINGS

The proposed Project will result in *Less Than Significant Impacts* to Cultural Resources with mitigation. Sierra Valley Cultural Planning completed a cultural resources assessment, records search, and survey (see Appendix “C”). A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

Several CEQA statutes and guidelines address requirements for cultural resources, including historic and archaeological resources.¹ If a proposed Project may cause a substantial adverse effect on the significance of a historical resource, then the Project may be considered to have a significant effect on the environment, and the impacts must be evaluated under CEQA (Section 21084.1). The definition of “historical resources” is included in Section 15064.5 of CEQA Guidelines, and includes both historical and archaeological resources. “Substantial adverse change” is defined as “physical demolition, destruction, relocation, or alteration of the resource...”

Section 15064.5 also provides guidelines when there is a probable likelihood of Native American remains existing in the Project site. Provisions for the accidental discovery of historical or unique archaeological resources accidentally discovered during construction include a recommendation for evaluation by a qualified archaeologist, with followup as necessary.

Public Resources Code Section 5097.5 prohibits excavation or removal of any “vertebrate paleontological site...or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands.”

This section of the DEIR for the Project meets CEQA requirements by addressing potential impacts to cultural resources on the proposed Project site. The “Environmental Setting” section provides a description of cultural resources in the region, with special emphasis on the proposed Project site and vicinity. The “Regulatory Setting” section provides a description of applicable State and local regulatory policies. Results of cultural resources reports from CHRIS are included. A description of potential impacts is provided, along with feasible mitigation measures to reduce the impacts to less than significant.

¹ “CEQA and Historical Resources” CEQA Technical Advice Series” <http://ceres.ca.gov/ceqa/more/tas/page3.html>

CEQA Thresholds of Significance

Under CEQA Guidelines Section 15064.5. (b) “A Project with an effect that may cause a substantial adverse change in the significance of an historical resource is a Project that may have a significant effect on the environment.

- (1) Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.
- (2) The significance of an historical resource is materially impaired when a Project:
 - (A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
 - (B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the Project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
 - (C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.
- (3) Generally, a Project that follows the Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior’s Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on the historical resource.
- (4) A lead agency shall identify potentially feasible measures to mitigate significant adverse changes in the significance of an historical resource. The lead agency shall ensure that any adopted measures to mitigate or avoid significant adverse changes are fully enforceable through permit conditions, agreements, or other measures.
- (5) When a Project will affect state-owned historical resources, as described in Public Resources Code Section 5024, and the lead agency is a state agency, the lead agency shall consult with the State Historic Preservation Officer as provided in Public Resources

Code Section 5024.5. Consultation should be coordinated in a timely fashion with the preparation of environmental documents.”²

ENVIRONMENTAL SETTING

As indicated in the Cultural Resources Assessment (Appendix “C”), the Proposed Planning Study Area is located in the central San Joaquin Valley north, east, and west of the community of Pixley. The valley is bordered by the Sierra Nevada to the east, the Tehachapi Mountains to the south, the California coastal ranges to the west, and the Sacramento-San Joaquin Delta to the north.

Background

“Prior to EuroAmerican exploration and settlement in the region, the central San Joaquin Valley was extensive grassland covered with spring-flowering herbs. Stands of trees -- sycamore, cottonwoods, box elders and willows -- lined the stream and river courses with groves of valley oaks in well-watered localities with rich soil. Rivers yielded fish, mussels, and pond turtles; migratory waterfowl nested in the dense tules along the river sloughs downstream. When the Spanish first set foot in the area, they found the deer and tule elk trails to be so broad and extensive that they first supposed that the area was occupied by cattle. Grizzly bears occupied the open grassland and riparian corridors on the valley floor and adjacent foothills. Smaller mammals and birds, including jackrabbits, ground squirrels, and quail were abundant. Native Americans occupants of the region describe abundant sedge beds, along with rich areas of deer grass, plants that figure prominently in the construction of Native American basketry items.”³

Prehistoric Period Summary

“The San Joaquin Valley and adjacent Sierran foothills and Coast Range have a long and complex cultural history with distinct regional patterns that extend back more than 11,000 years (McGuire 1995). The first generally agreed-upon evidence for the presence of prehistoric peoples in the region is represented by the distinctive basally-thinned and fluted projectile points, found on the margins of extinct lakes in the San Joaquin Valley. These projectiles, often compared to Clovis points, have been found at three localities in the San Joaquin Valley including along the Pleistocene shorelines of former Tulare Lake. Based on evidence from these sites and other well-dated contexts elsewhere, these Paleo-Indian hunters who used these spear points existed during a narrow time range of 11550 cal B.C. to 8550 cal B.C. (Rosenthal et al. 2007).

As a result of climate change at the end of the Pleistocene, a period of extensive deposition occurred throughout the lowlands of central California, burying many older landforms and providing a distinct break between Pleistocene and subsequent occupations during the Holocene. Another period of deposition, also a product of climate change, had similar results around 7550

² 2013 CEQA Guidelines, Section 15064.5 (b)

³ Pixley Community Plan Update Cultural Resources Assessment Tulare County, California, prepared by Sierra Valley Cultural Planning Inc. July 2014. Page 4

cal B.C., burying some of the oldest archaeological deposits discovered in California (Rosenthal and Meyer 2004).

The Lower Archaic (8550-5550 cal B.C.) is characterized by an apparent contrast in economies, although it is possible they may be seasonal expressions of the same economy. Archaeological deposits which date to this period on the valley floor frequently include only large stemmed spear points, suggesting an emphasis on large game such as artiodactyls (Wallace 1991). Recent discoveries in the adjacent Sierra Nevada have yielded distinct milling assemblages which clearly indicate a reliance on plant foods. Investigations at Copperopolis (LaJeunesse and Pryor 1996) argue that nut crops were the primary target of seasonal plant exploitation. Assemblages at these foothill sites include dense accumulations of handstones, millingslabs, and various cobble-core tools, representing “frequently visited camps in a seasonally structured settlement system” (Rosenthal et al. 2007:152). During the Lower Archaic, regional interaction spheres were well established. Marine shell from the central California coast has been found in early Holocene contexts in the Great Basin east of the Sierra Nevada, and eastern Sierra obsidian comprises a large percentage of flaked stone debitage and tools recovered from sites on both sides of the Sierra (Rosenthal et al. 2007:152).

About 8,000 years ago, many California cultures shifted the main focus of their subsistence strategies from hunting to nut and seed gathering, as evidenced by the increase in food-grinding implements found in archeological sites dating to this period. This cultural pattern is best known for southern California, where it has been termed the Milling Stone Horizon (Wallace 1954, 1978a), but recent studies suggest that the horizon may be more widespread than originally described and is found throughout the central region during the Middle Archaic Period. Dates associated with this period vary between 9,000 and 2,000 cal BP, although most cluster in the 6,800 to 4,500 cal BP range (Basgall and True 1985).

On the valley floor, early Middle Archaic sites are relatively rare; this changes significantly toward the end of the Middle Archaic. In central California late Middle Archaic settlement focused on river courses on the valley floor. “Extended residential settlement at these sites is indicated by refined and specialized tool assemblages and features, a wide range of nonutilitarian artifacts, abundant trade objects, and plant and animal remains indicative of year-round occupation” (Rosenthal et al. 2007:154). Again, climate change apparently influence this shift, with warmer, drier conditions prevailing throughout California. The shorelines of many lakes, including Tulare Lake, contracted substantially, while at the same time rising sea levels favored the expansion of the San Joaquin/Sacramento Delta region, with newly formed wetlands extending eastward from the San Francisco Bay.

In contrast with rare early Middle Archaic sites on the valley floor, early Middle Archaic sites are relatively common in the Sierran foothills, and their recovered, mainly utilitarian assemblages show relatively little change from the preceding period with a continued emphasis on acorns and pine nuts. Few bone or shell artifacts, beads, or ornaments have been recovered from these localities. Projectile points from this period reflect a high degree of regional morphological variability, with an emphasis on local toolstone material supplemented with a small amount of obsidian from eastern sources. In contrast with the more elaborate mortuary assemblages and extended burial mode documented at Valley sites, burials sites documented at some foothill sites such as CA-FRE-61 on Wahtoke Creek are reminiscent of “re-burial” features

reported from Milling Stone Horizon sites in southern California. These re-burials are characterized by re-interment of incomplete skeletons often capped with inverted millingstones (McGuire 1995:57).

A return to colder and wetter conditions marked the Upper Archaic in Central California (550 cal B.C. to cal A.D. 1100). Previously desiccated lakes returned to spill levels and increased freshwater flowed in the San Joaquin and Sacramento watershed. Cultural patterns as reflected in the archeological record, particularly specialized subsistence practices, emerged during this period. The archeological record becomes more complex, as specialized adaptations to locally available resources were developed and valley populations expanded into the lower Sierran foothills. New and specialized technologies expanded and distinct shell bead types occurred across the region. The range of subsistence resources utilized and exchange systems expanded significantly from the previous period. In the Central Valley, archaeological evidence of social stratification and craft specialization is indicated by well-made artifacts such as charmstones and beads, often found as mortuary items.

The period between approximately cal A.D. 1000 and Euro-American contact is referred to as the Emergent Period. The Emergent Period is marked by the introduction of bow and arrow technology which replaced the dart and atlatl at about cal A.D. 1000 and 1300. In the San Joaquin region, villages and small residential sites developed along the many stream courses in the lower foothills and along the river channels and sloughs of the valley floor. A local form of pottery was developed in the southern Sierran foothills along the Kaweah River. While many sites with rich archaeological assemblages have been documented in the northern Central Valley, relatively few sites have been documented from this period in the southern Sierran foothills and adjacent valley floor, despite the fact that the ethnographic record suggests dense populations for this region.”⁴

Ethnographic Summary

“Prior to EuroAmerican settlement, most of the San Joaquin Valley and the bordering foothills of the Sierra Nevada were inhabited by speakers of Yokutsan languages. The present study area falls within the easternmost area of the *Wowol* Yokuts territory. The *Wowol* Yokuts occupied the southeastern shore of Tule Lake west of the study area. Their principal village, *Sukwutnu*, was located approximately 15 miles west of the town of Delano (Latta 1999:195). Atwell Island was the site of another *Wowol* village called *Chawlowin* (Gayton calls this village Wititsolowin [Gayton 1948:9]). Gayton identified the village *Yiwomni* in an area roughly 10 miles west of Pixley (1948:9).

Due to the abundance and diversity of wildlife habitats and plant communities within the Sierran foothills and nearby San Joaquin Valley and higher elevations of the Sierra Nevada, Native American population densities in the region were quite high (Baumhoff 1963). While the acorn was the dietary staple, the diversity of accessible natural resources provided an omnivorous diet. The reader is referred to Gayton (1948), Kroeber (1925), Latta (1999), and Wallace (1978b) for additional information on pre-contact Yokuts subsistence and culture. Figure 1[of the Cultural

⁴ Pixley Community Plan Update Cultural Resources Assessment Tulare County, California, prepared by Sierra Valley Cultural Planning Inc. July 2014. Page 4-5

Resource Assessment]) depicts the territory of the location of *Wowol* Yokut relative to the study area.”⁵

Historic Period Summary

“The San Joaquin Valley was visited in the early 1800s by Spanish expeditions exploring the interior in search of potential mission sites. One of the earliest Americans to explore the Tulare area was Jedediah Strong Smith in 1826-27. In 1832-33 Colonel Jose J. Warner, a member of the Ewing-Young trapping expedition, passed through the San Joaquin Valley. Warner described Native villages densely packed along the valley waterways, from the foothills down into the slough area. The next year he revisited the area following a devastating malaria epidemic. Whereas the previous year the region had been densely occupied by Native peoples, during this trip not more than five Indians were observed between the head of the Sacramento Valley and the Kings River (Cook 1955).

EuroAmerican appreciation for the land did not include acceptance of its indigenous human populations, and pressure was exerted upon the US military to remove the Native population from the region, leaving the region open for American settlement and resource development. EuroAmerican settlement of the region began in 1851 with the establishment of Fort Miller on the San Joaquin River. Hostilities between Native inhabitants and American settlers initially prevented widespread settlement of the region; however, by 1860 such threats had been reduced and settlers began taking up large tracts in the region.

In late 1849 or early 1850, a party under the leadership of John Wood settled on the south bank of the Kaweah River, about seven miles east of the present city of Visalia (Hoover et al. 1990:508). In April, 1852, Tulare County was created, with the county seat initially located at Woodsville. In 1853 the county seat was removed to Fort Visalia, located in the area bounded by Oak, Center, Garden and Bridge streets.

Many of the early EuroAmerican settlers in the region were successful gold miners, eager to settle in this new land and reinvest their profits. The earliest economic development of the area focused on cattle. Miller and Lux, the cattle kings, claimed ownership to hundreds of thousands of acres in the San Joaquin Valley. Agriculture, particularly winter wheat cultivation, gained importance following passage of the “No Fence” law of 1874 (Clough 1996:29). Crop production later shifted to orchard and vineyard crops, particularly oranges.

Conflicts between ranchers and farmers over water rights led to the passage of the Wright Act in 1887 (JRP 2000). The Wright Act enabled the creation of irrigation districts within the state. These districts were often controlled by large land owners and provided little relief to small farm owners. Later in the 1930s, state and federal government took on a much larger role in providing reliable water conveyance. In 1933 California voters approved the Central Valley Project, which called for construction of a huge system of canals and dams/reservoirs throughout the state. In 1935 the Federal government released funds for construction of the project, and two years later

⁵ Pixley Community Plan Update Cultural Resources Assessment Tulare County, California, prepared by Sierra Valley Cultural Planning Inc. July 2014. Page 5-6

Draft Environmental Impact Report
Pixley Community Plan

the U.S. Bureau of Reclamation was given authority to take over the project (JRP 2000:74). The Friant-Kern Canal was authorized for construction by Congress in the Central Valley Project Act of 1937, and the canal was built between 1945 and 1951. The Friant-Kern Canal conveys water from Lake Millerton to Bakersfield, covering a distance of 152 miles.

The following description of the history of Pixley is taken directly from Annie R. Mitchell's *The Way It Was: The Colorful History of Tulare County* (1976:131-132):

Pixley was, in a sense, created by the Southern Pacific Railroad when the line came through the county in 1872. It had the usual land pattern use, first rangeland and then homesteaders who planted grain.

In 1886 the Pixley Townsite Company was incorporated by three men from San Francisco: Darwin Allen, William Bradbury, and Frank Pixley. Pixley, for whom the community was named, had been Attorney General under Governor Leland Stanford. He became a well know newspaperman as editor of the Argonaut. When the company was formed, Pixley had a loading platform by the railroad, but Frank Pixley persuaded the railroad to build a depot and a three-story hotel. Pixley prospered as hundreds of tons of grain were shipped from its warehouses. Artesian water was available for irrigation, and the future looked assured. Then a series of sire, poor crops, and low prices induced many families to leave. Pixley was almost a ghost town.

The first of a series of five train robberies along the Southern Pacific Railroad line occurred in Pixley in 1889; this was followed by robberies in Goshen, Alilia (Earlimart), Ceres, and Collis (Kerman). The robberies were variously attributed to the Dalton Gang and Evans and Sontag (Menefee 1913:148-154; Mitchell 1976:49-57).

In 1933, Pixley was one of the towns in California involved in the San Joaquin cotton strike, a labor action by agricultural workers seeking higher wages. The California Agricultural Workers Industrial Union was headquartered at the Pixley Hotel. On October 10, 1933, Delfino Davila and Delores Hernandez, two Chicano strikers, were killed in a confrontation between strikers and an armed group of farmers in front of the Pixley Hotel as the strikers were about to enter their headquarters for a meeting; eight others were wounded. Five thousand workers gathered in Tulare for the dead strikers' funerals, one of the largest agricultural demonstrations in California's history. Eight cotton growers were indicted in the violence against the workers, but were later acquitted (Ross 1974).

Pixley Airport was established in February 1949 as a base for crop duster activity (source). The town renamed its airport after resident Roy Harmon, who was posthumously awarded the Medal of Honor for WW2 actions; today it is known as Harmon Field. The airstrip included a 2000 foot paved northwest/southeast runway and a paved parallel taxiway, and a single building on the east side of the

Draft Environmental Impact Report
Pixley Community Plan

field. Harmon Field was closed by the EPA in 1994 due to chemical contamination from 40 years of use (Freeman 2013).

In 2010 the population of Pixley was noted as 3,310. The majority of residences are single family homes. Numerous buildings date to the early/middle 1900s, although the vast majority of constructions appears to date to post 1950.”⁶

EXISTING RESOURCES

“Records Search Results

Prior to a windshield survey of the study area, a records search was conducted by the author at the Southern San Joaquin Valley Information Center of the California Historical Resources Information System at CSU Bakersfield to identify areas previously surveyed and identify known cultural resources present within or in close proximity to the study area. Three previously identified historic-period sites have been recorded within the study area (Map 3) [of the Cultural Resource Assessment]).

There are no other resources within or in the immediate vicinity of the study area that are listed on the National Register of Historic Places, the California Register of Historic Resources, California Points of Historical Interest, State Historic Landmarks, or the California Inventory of Historic Resources.

Eleven cultural resources surveys have been completed within the study area (Map 4) [of the Cultural Resource Assessment]). Two studies has been completed within one-half mile radius of the study area. All records search materials are included as Attachment A.”⁷

“Cultural Resource Identification within the Pixley Planning Study Area

Based on current information, there are three known cultural resource sites within or immediately adjacent to the study area. These include three non-Native American historic-era sites (See Map 3) [of the Cultural Resource Assessment]). No Native American resources have been identified within or in close proximity to the study.

P-54-003232 - This resource marks the former location of the Pixley Hotel, originally named the Artesia Hotel, the location of which was on the northeast corner of Compton Avenue and South Main Street. The resource was recorded in 1980 as part of a cultural resource survey of sites prominent in Chicano/ Latino history. At that time the building was described as a deteriorating two-story brick structure, the first floor of which had been altered to accommodate retail shops. By 1994 the structure had been razed. In 1933 Pixley Hotel was the headquarters of the California Agricultural Workers Industrial Union, and was the site of a confrontation between strikers and an armed group of farmers in which two workers were killed and eight others

⁶ Pixley Community Plan Update Cultural Resources Assessment Tulare County, California, prepared by Sierra Valley Cultural Planning Inc. July 2014. Page 6-11

⁷ Pixley Community Plan Update Cultural Resources Assessment Tulare County, California, prepared by Sierra Valley Cultural Planning Inc. July 2014. Page 11-15

wounded during the San Joaquin Cotton Strike of 1933. At present, the gated lot is used for vehicle storage; a single-wide mobile structure and a garage are present.

P-54-003397 - This resource includes the foundation of the former Southern Pacific Railroad Station. The original railroad station was built ca. 1886, and burned down in 1931 (Edwards 2001). A new modern Art Deco station was built in 1937 on this site. The foundation conforms to the footprint of the 1937 station. The station served Pixley until 1960, at which time a private party purchased the building and moved it north of downtown and used it for a number of years (Hudlow 1999). The resource was recorded in 1999 as part of a Tulare County redevelopment project by Hudlow Cultural Resources Associates (Figure 8) [of the Cultural Resource Assessment]).

P-54-003398 – Site P-54-003398 is a former twentieth-century fish pond situated at the eastern edge of Pixley’s town park across from Compton Avenue, between the Southern Pacific railroad corridor and Main Street to the east. The fish pond was emptied sometime before ca. 1940, and the structure was subsequently used to house the Pixley community Christmas tree. The tree was removed prior to 1989 and now houses a community commemorative marker placed by the Tulare County Historical Society and the Pixley Women’s Club in 1989. The marker commemorates the history of the area’s late nineteenth and early twentieth century artesian wells. Pixley was located within a belt of artesian wells. The Pixley well was described as a “monster” well, dug to a depth of 960 feet. It supplied the town’s water needs for over half a century. The resource was recorded in 1999 as part of a Tulare County redevelopment project by Hudlow Cultural Resources Associates (Figure 9) [of the Cultural Resource Assessment]).”⁸

“Previous Cultural Resource Investigations within the Study Area

Eleven cultural resource studies have been completed within the study area. Two studies has been completed within one-half mile radius of the study area.

In 1977 an archaeological survey was completed of a railroad crossing at Terra Bella Avenue (Avenue 96) 25 yards west of Main Street (Road 125). The study was completed by R. J. Cantwell, consulting archaeologist. No resources were identified (see Map 4, TU 195) [of the Cultural Resource Assessment]).

In 1978 Cantwell surveyed a 4-mile length of Road 120 extending north from Avenue 64 to Avenue 96 (see Map 4, TU 230). In the same year Cantwell surveyed a 1-mile segment of Palm Street extending north from East Orrland Avenue to Avenue 112, 0.25 mile east of the study area (TU 226) [of the Cultural Resource Assessment]). No resources were identified during wither survey.

A 2.51-acre parcel was surveyed in 1988 by Peak & Associates, Inc. The parcel is bounded by Terra Bella Avenue on the north, Road 128 (Elm Street) on the east. No resources were identified (see Map 4, TU 406) [of the Cultural Resource Assessment]).

⁸ Pixley Community Plan Update Cultural Resources Assessment Tulare County, California, prepared by Sierra Valley Cultural Planning Inc. July 2014. Page

Draft Environmental Impact Report
Pixley Community Plan

Two cultural resources (P-54-003398 and -003398 described above) were recorded during a survey of a 2-acre parcel adjacent on the east to the Southern Pacific right-of-way and the west side of Main Street south of Davis Avenue. The survey was completed in 1999 as part of a Tulare County redevelopment project by Hudlow Cultural Resources Associates (see Map 4, TU 1023) [of the Cultural Resource Assessment]].

In June 2003 a cultural resources assessment was completed by Catherine Lewis Pruett of Three Girls and a Shovel of 14 acres at the existing Pixley wastewater treatment facility. No resources were identified (see Map 4, TU 1162) [of the Cultural Resource Assessment]].

In October 2003 Jill Gardner of the Center for Archaeological Research at California State University Bakersfield completed a cultural resources assessment of a 30-acre parcel on behalf of Calgren Renewable Fuels for the proposed construction of an ethanol production facility at the junction of State Route 99 and Avenue 120, northwest of Pixley. No resources were identified (see Map 4, TU 1173) [of the Cultural Resource Assessment]].

In 2006 SWCA Environmental Consultants completed a linear cultural resources survey parallel to the Southern Pacific Railroad which extend southern from Madera County to Kern County. No resources were identified in that portion of the survey area that crosses through the present study area (see Map 4, TU 1324) [of the Cultural Resource Assessment]].

In 2007 Rebecca Orfila of the Center for Archaeological Research at California State University Bakersfield completed a cultural resources assessment of a linear corridor extending east along Avenue 96 (County Highway J24) from the Southern Cal Edison Pixley Substation. No resources were identified (see Map 4, TU 1465) [of the Cultural Resource Assessment]].

In 2007 survey work was completed at 10 power pole locations in Kings and Tulare counties as part of the Southern California Edison Company's Deteriorated Power Pole Replacement Project. The specific pole location in the Pixley area was approximately 0.1 miles east of the study area on the north side of Wright Avenue east of N. Park Drive. No resources were identified (see Map 4, TU 1596) [of the Cultural Resource Assessment]].

Two cultural resources assessments were completed for placement of communications antennas on the existing Pixley Water Tower located at 11247 South Center Street east of South Main Street (Lorna Billat of EarthTouch in 2008 [TU 1393], and Wayne Bonner of Michael Brandman Associates in 2009 [TU 1567]). The water tower was evaluated for listing on the National Register of Historic Places by Dana Supernowicz of Historic Resources Associated in 2008 and recommended as ineligible for listing due to the ubiquitous nature of this type and design of water tower, and the fact that numerous similar water towers remain standing throughout the region. Further, the installation would have no effect on cultural sites previously recorded in close proximity to the water tank (P-54-003398 and -003398 described above).

As part of the proposed Pixley Irrigation Distribution System Expansion, Catherine Lewis Pruett of Three Girls and a Shovel surveyed a linear alignment on the north side of Avenue 116

extending east from North Park Drive (see Map 4, TU 1629) [of the Cultural Resource Assessment]. No resources were identified as a result of this study, completed in July 2011.”⁹

“Native American Consultation

The Native American Heritage Commission (NAHC) was contacted on 1 June 2014 in order to determine whether Native American sacred sites have been identified either within or in close proximity to the study area. The request was resent on June 16, 2014. The NAHC responded in a letter dated June 30, 2014, stating that a records search of the NAHC Sacred Lands Inventory failed to indicate the presence of Native American traditional sites/places within the project study area. The NAHC notes that the absence of surface visible archaeological features does not preclude their presence below surface. The NAHC advised that when specific projects become public, that the County or appropriate jurisdiction inform the Native American contacts provided by the NAHC as to the nature of the proposed project. As part of the consultation process, the NAHC recommends that local government and project developers contact tribal governments and Native American individuals on the list provided in order to determine of the proposed action might impact any cultural places or sacred sites. If a response is not received in two weeks of notification, the NAHC recommends that a follow-up telephone call be made to ensure the project information has been received. NAHC correspondence and the Native American contact list is included in Attachment B [of the Cultural Resource Assessment].”¹⁰

“Windshield Survey of the Study Area

On June 18 the author completed a windshield survey of the study area to field check previously recorded resources and identify any structures and/or other features which may be eligible for listing in the California Register of Historic Resources. Numerous structures appear to date to the period prior to 1950, although many of these have been modified to include additions, aluminum windows, and other more modern features. Several structures appear to date to the early 1900s and appear relatively unmodified. A good example is a Craftsman style residence located at 2289 N. Cedar Street (see Figure 10) [of the Cultural Resource Assessment]. Most commercial and industrial structures appear to be modern in construction, although several numerous storefronts, particularly in the historic downtown area, appear to be remnants of older buildings, such as the Las Margaritas Bar on S Main Street north of Compton Avenue which appears to be the first floor remnant of the Allen Building pictured in (Figure 2) [of the Cultural Resource Assessment] and constructed in 1886-7 (Figure 11) [of the Cultural Resource Assessment]. Also present are remnants of the eucalyptus grove planted in 1908; the grove is now located within a park north of the town center. A dilapidated historic-era residence was noted within the park boundaries and was constructed at about the same time as the grove was planted, either in its present location or elsewhere and subsequently moved to the park. Finally, Harmon Field, although abandoned, retains characteristic elements such as its runway and gate (Figure 4) [of the Cultural Resource Assessment].”¹¹

⁹ Pixley Community Plan Update Cultural Resources Assessment Tulare County, California, prepared by Sierra Valley Cultural Planning Inc. July 2014. Page 15-18

¹⁰ Ibid. 18

¹¹ Op. Cit.

REGULATORY SETTING

Federal Agencies & Regulations

The National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) established federal regulations for the purpose of protecting significant cultural resources. The legislation established the National Register of Historic Places and the National Historic Landmarks Program. It mandated the establishment of the State Historic Preservation Office (SHPO), responsible for implementing statewide historic preservation programs in each state. A key aspect of SHPO responsibilities include surveying, evaluating and nominating significant historic buildings, sites, structures, districts and objects to the National Register. The NHPA also established requirements federal agencies to consider the effects of proposed federal Projects on historic properties (Section 106, NHPA). Federal agencies and recipients of federal funding are required to initiate consultation with the State Historic Preservation Officer (SHPO) as part of the Section 106 review process.¹²

State Agencies & Regulations

California State Office of Historic Preservation (OHP)

The California State Office of Historic Preservation (OHP) is responsible for administering federally and state mandated historic preservation programs to further the identification, evaluation, registration and protection of California's irreplaceable archaeological and historical resources under the direction of the State Historic Preservation Officer (SHPO), appointed by the governor, and the State Historical Resources Commission, a nine-member state review board appointed by the governor.¹³

Among OHP's responsibilities are identifying, evaluating, and registering historic properties; and ensuring compliance with federal and state regulations. The OHP administers the State Register of Historical Resources and maintains the California Historical Resources Information System (CHRIS) database. The CHRIS database includes statewide Historical Resources Inventory (HRI) database. The records are maintained and managed under contract by eleven independent regional Information Centers. Tulare, Fresno, Kern, Kings and Madera counties are served by the Southern San Joaquin Valley Historical Resources Information Center (Center), located in Bakersfield, CA. The Center provides information on known historic and cultural resources to governments, institutions and individuals.¹⁴

A historical resource may be eligible for inclusion in the California Register of Historical Resources (CRHR) if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

¹² Advisory Council on Historic Preservation, <http://www.achp.gov/nrcriteria.html> (updated March 11, 2008)

¹³ Advisory Council on Historic Preservation, State Historic Preservation Officers, <http://www.achp.gov/shpo.html>, (updated Feb. 24, 2009)

¹⁴ California Office of Historic Preservation, About OHP, http://ohp.parks.ca.gov/?page_id=1066

- Is associated with the lives of persons important to our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.¹⁵

Native American Cultural Places (PRC 5097.9 and 5097.993)

The Native American Heritage Commission (NAHC) performs a Sacred Lands File search for sites located on or near the Project site upon request. The NAHC also provides local governments with a consultation list of tribal governments with traditional lands or cultural places located within the Project Area of Potential Effect.

“The Mission of the Native American Heritage Commission is to provide protection to Native American burials from vandalism and inadvertent destruction, provide a procedure for the notification of most likely descendants regarding the discovery of Native American human remains and associated grave goods, bring legal action to prevent severe and irreparable damage to sacred shrines, ceremonial sites, sanctified cemeteries and place of worship on public property, and maintain an inventory of sacred places.”¹⁶

CEQA Guidelines: Historical Resources Definition

CEQA Guidelines Section 15064.5(a) defines a historical resource as:

- “(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code §5024.1, Title 14 CCR, Section 4850 et seq.).
- (2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- (3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the California Register of

¹⁵ California Register: Criteria for Designation, http://www.ohp.parks.ca.gov/?page_id=21238

¹⁶ <http://www.nahc.ca.gov/sp.html#Mission%20Statement>

Draft Environmental Impact Report
Pixley Community Plan

Historical Resources (Pub. Res. Code §5024.1, Title 14 CCR, Section 4852) including the following:

- (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
 - (B) Is associated with the lives of persons important in our past;
 - (C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
 - (D) Has yielded, or may be likely to yield, information important in prehistory or history.
- (4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.”¹⁷

CEQA Guidelines: Archaeological Resources

Section 15064.5(c) of CEQA Guidelines provides specific guidance on the treatment of archaeological resources as noted below.

- “(1) When a Project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).
- (2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
- (3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archaeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the Project location contains unique archaeological resources.
- (4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the Project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted

¹⁷ CEQA Guidelines, Section 15064.5(a)

in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.”¹⁸

CEQA Guidelines: Human Remains

Public Resources Code Sections 5097.94 and 5097.98 provide guidance on the disposition of Native American burials (human remains), and fall within the jurisdiction of the Native American Heritage Commission:

“(d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the Project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any Items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:

(1)The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).

(2)The requirements of CEQA and the Coastal Act.¹⁹

“(e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

(1)There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

(A)The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and

(B)If the coroner determines the remains to be Native American:

1.The coroner shall contact the Native American Heritage Commission within 24 hours.

2.The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.

3.The most likely descendent may make recommendations to the

¹⁸ CEQA Guidelines, Section 15064.5(c)

¹⁹ Ibid. Section 15064.5(d)

Draft Environmental Impact Report
Pixley Community Plan

landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or

(2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.

(A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.

(B) The descendant identified fails to make a recommendation; or

(C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.²⁰

“(f) As part of the objectives, criteria, and procedures required by Section 21082 of the Public Resources Code, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place.”²¹

CEQA Guidelines: Paleontological Resources

Public Resources Code Section 5097.5 prohibits excavation or removal of any “vertebrate paleontological site... or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands.”

Tribal Consultation Requirements: SB 18 (Burton, 2004)

On September 29, 2004, Governor Schwarzenegger signed Senate Bill 18, Tribal Consultation Guidelines, into law. SB 18, enacted March 1, 2005, creates a mechanism for California Native American Tribes to identify culturally significant sites that are located within public or private lands within the city or county’s jurisdiction. SB 18 requires cities and counties to contact, and

²⁰ Ibid. Section 15064.5 (e)

²¹ Ibid. Section 15064.5(f)

offer to consult with, California Native American Tribes before adopting or amending a General Plan, a Specific Plan, or when designating land as Open Space, for the purpose of protecting

Native American Cultural Places (PRC 5097.9 and 5097.993). The Native American Heritage Commission (NAHC) provides local governments with a consultation list of tribal governments with traditional lands or cultural places located within the Project Area of Potential Effect. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe.²²

Local Policy & Regulations

Tulare County General Plan Policies

The General Plan has a number of policies that apply to Projects within Tulare County. General Plan policies that relate to the proposed Project are listed as follows:

ERM-6.1 Evaluation of Cultural and Archaeological Resources - The County shall participate in and support efforts to identify its significant cultural and archaeological resources using appropriate State and Federal standards.

ERM-6.2 Protection of Resources with Potential State or Federal Designations - The County shall protect cultural and archaeological sites with demonstrated potential for placement on the National Register of Historic Places and/or inclusion in the California State Office of Historic Preservation's California Points of Interest and California Inventory of Historic Resources. Such sites may be of Statewide or local significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, or other values as determined by a qualified archaeological professional.

ERM-6.3 Alteration of Sites with Identified Cultural Resources - When planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development can be permitted in these areas only after a site specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and Mitigation Measures proposed for any impacts the development may have on the resource.

ERM-6.4 Mitigation - If preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of records.

ERM-6.9 Confidentiality of Archaeological Sites - The County shall, within its power, maintain confidentiality regarding the locations of archaeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.

²² Government Code §65352.3

ERM-6.10 Grading Cultural Resources Sites - The County shall ensure all grading activities conform to the County's Grading Ordinance and California Code of Regulations, Title 20, § 2501 et. seq.

IMPACT EVALUATION

Would the Project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?

Project Impact Analysis: *Less Than Significant Impact With Mitigation*

Sierra Valley Cultural Planning, conducted a Windshield Survey of the Pixley Community Planning Area on June 18, 2014. Numerous structures appear to date to the period prior to 1950, although many of these have been modified. A number of structures appeared to date to the early 1990's and appeared relatively unmodified. a Craftsman style residence located at 2289 N. Cedar Street (see Figure 10) [of the Cultural Resource Assessment].²³ "Most commercial and industrial structures appear to be modern in construction, although several numerous storefronts, particularly in the historic downtown area, appear to be remnants of older buildings, such as the Las Margaritas Bar on S Main Street north of Compton Avenue which appears to be the first floor remnant of the Allen Building pictured in Figure 2 and constructed in 1886-7 (Figure 11) [of the Cultural Resource Assessment]. Also present are remnants of the eucalyptus grove planted in 1908; the grove is now located within a park north of the town center. A dilapidated historic-era residence was noted within the park boundaries and was constructed at about the same time as the grove was planted, either in its present location or elsewhere and subsequently moved to the park. Finally, Harmon Field, although abandoned, retains characteristic elements such as its runway and gate (Figure 4) [of the Cultural Resource Assessment]".

As noted above, based on current information, there are three documented cultural resources sites within the Pixley Planning Study Area. In addition to these a resources, a number of historic-era structures (older than 50 years in age) exist in the study area but have not been formally recorded."²⁴

"Prior to a windshield survey of the study area, a records search was conducted by the author at the Southern San Joaquin Valley Information Center of the California Historical Resources Information System at CSU Bakersfield to identify areas previously surveyed and identify known cultural resources present within or in close proximity to the study area. Three previously identified historic-period sites have been recorded within the study area (Map 3) [of the Cultural Resource Assessment].

There are no other resources within or in the immediate vicinity of the study area that are listed on the National Register of Historic Places, the California Register of Historic

²³ Pixley Community Plan Update Cultural Resources Assessment Tulare County, California, prepared by Sierra Valley Cultural Planning Inc. July 2014. Page 19

²⁴ Ibid.

Draft Environmental Impact Report
Pixley Community Plan

Resources, California Points of Historical Interest, State Historic Landmarks, or the California Inventory of Historic Resources.

Eleven cultural resources surveys have been completed within the study area (Map 4) [of the Cultural Resource Assessment]. Two studies has been completed within one-half mile radius of the study area. All records search materials are included as Attachment A [of the Cultural Resource Assessment].”²⁵

As noted earlier, the Native American Heritage Commission (NAHC) was contacted on 1 June of 2014. The request was resent on June 16, 2014. The NAHC indicated in a letter dated June 30, 2014, (see Appendix B [of the Cultural Resources Assessment]) that a records search of the NAHC Sacred Lands Inventory failed to indicate the presence of Native American traditional sites/places within the Project area.

The Project does not include any immediate development proposals however, “Very little of the area within the Pixley Planning area has been surveyed, and potentially significant resources may exist. Utilization of the available data is integral to planning for future uses and activities and to determine the best management strategy for such resources at this phase of the planning process. All actions taken pursuant to the Pixley Community Plan shall be planned and implemented in coordination with provisions and implementing guidelines of the California Environmental Quality Act (CEQA), as amended March 18, 2010, which states that identification and evaluation of historical resources is required for any action that may result in a potential adverse effect on the significance of such resources, which includes archaeological resources. Once specific projects are planned, targeted studies can be conducted to avoid or minimize impacts to significant cultural resources.”²⁶

The records search included historic sites listed on the National Register of Historic Places, California Register of Historic Resources, California Points of Historical Interest, State Historic Landmarks, and California Inventory of Historic Resources. Consultants Sierra Valley Cultural Planning (Consultants) noted “No Native American Resources have been identified within or in close proximity to the study area.”²⁷ Despite the absence of know Native American Resources, the Consultants recommended the following: “The following recommendations are offered to ensure that cultural resources are afforded an appropriate level of protection and preservation, while also allowing for future planning and development:

- Incorporate within the Pixley Community Plan the identification and management of potentially sensitive prehistoric and historic-period resources;
- Ensure that the local Native American communities are included in all planning and development activities (see Attachment B);
- Conduct intensive cultural resources field inventories prior to development of specific projects that could disturb or destroy sensitive and significant cultural resources.”²⁸

²⁵ Op. Cit.12

²⁶ Op. Cit. 21

²⁷ Op. Cit.12

²⁸ Op. Cit. 21

Despite the absence of documented cultural resources within the project area, undiscovered potentially significant resources might still exist in the area. Based on this analysis, implementation of Mitigation Measure 5-1 would reduce potential Project-specific impacts related to this Checklist Item to a level considered *Less Than Significant*.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. The proposed Project will be mitigated *Less Than Significant Project-specific and Cumulative Impacts*.

Mitigation Measure(s):

- 5-1 In the event that historical, archaeological or paleontological resources are discovered during site excavation, the County shall require that grading and construction work on the Project site be immediately suspended until the significance of the features can be determined by a qualified archaeologist or paleontologist. In this event, the property owner shall retain a qualified archaeologist/paleontologist to provide recommendations for measures necessary to protect any site determined to contain or constitute an historical resource, a unique archaeological resource, or a unique paleontological resource or to undertake data recover, excavation analysis, and curation of archaeological or paleontological materials. County staff shall consider such recommendations and implement them where they are feasible in light of Project design as previously approved by the County.**

Conclusion: ***Less Than Significant Impact With Mitigation***

With implementation of Mitigation Measure 5-1, potential Project-specific and cumulative impacts related to this Checklist Item will be reduced to a level of *Less Than Significant*.

- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?**

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

As noted in Response to Item 3.5.a), a cultural resources records search was conducted of the area. No archaeological deposits or isolated finds were identified during that search.

Although no archaeological deposits have been identified, there is the potential that archaeological resources may be discovered. With the implementation of Mitigation

Measure 5-1, ***Less Than Significant Impacts With Mitigation*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. The proposed Project will be mitigated to ***Less Than Significant Project-specific and Cumulative*** levels.

Mitigation Measure(s):

See Mitigation Measure 5-1

Conclusion: ***Less Than Significant Impact With Mitigation***

With implementation of Mitigation Measure 5-1, potential Project-specific and cumulative impacts related to this Checklist Item will be reduced ***Less Than Significant*** levels.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

As noted in Response to Item 3.5.a), a cultural resources records search was conducted of the site. No paleontological resources or sites, or unique geologic features were identified during that search.

Although it cannot conclusively be demonstrated that no subsurface paleontological resources are present, it is possible to mitigate potentially significant impacts with Mitigation Measure 5-2. With implementation the Mitigation Measure 5-2, Project-specific impacts related to this Checklist Item will be reduced to ***Less Than Significant*** levels.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will only contribute to cumulative impacts related to this Checklist Item, if Project specific impacts were to occur. As such, the proposed Project will result in ***Less Than Significant Project-specific and Cumulative Impact*** levels.

Mitigation Measure(s):

- 5-2** **The property owner shall avoid and minimize impacts to paleontological resources. If a potentially significant paleontological resource is encountered during ground disturbing activities, all construction within a 100-foot radius of the find shall immediately cease until a qualified paleontologist determines whether the resources requires further study. The owner shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall notify the Tulare County Resource Management Agency and the Project proponent of the procedures that must be followed before construction is allowed to resume at the location of the find. If the find is determined to be significant and the Tulare County Resource Management Agency determines avoidance is not feasible, the paleontologist shall design and implement a data recovery plan consistent with applicable standards. The plan shall be submitted to the Tulare County Resource Management Agency for review and approval. Upon approval, the plan shall be incorporated into the Project.**

Conclusion:

Less than Significant Impact with Mitigation

It is not anticipated that Native American remains will be found at any site. However, consistent with CEQA requirements, Mitigation Measure 5-3 is included in the unlikely event that if Native American remains are unearthed during any ground disturbance activities, all work will immediately halt and the Native American Heritage Association will be contacted to assess the findings and make appropriate mitigation recommendations. As Project-specific impacts will be mitigated to a less than significant level, Cumulative Impacts will result in a level of ***Less Than Significant Project-specific and Cumulative Impacts with Mitigation.***

d) Disturb any human remains, including those interred outside of formal cemeteries?

Project Impact Analysis:

Less Than Significant Impact With Mitigation

As noted in Response to Item 3.5.a), a cultural resources records search was conducted of the area. No development is proposed. Although it cannot conclusively be demonstrated that no subsurface human remains are present, it is possible to mitigate potentially significant impacts with the following Mitigation Measure. With implementation of Mitigation Measure 5-3, this Checklist Item will be reduced to ***Less Than Significant Project-specific Impacts.***

Cumulative Impact Analysis:

Less Than Significant Impact With Mitigation

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

It is not anticipated that Native American remains will be found at any site. However, consistent with CEQA requirements, Mitigation Measure 5-3 is included in the unlikely event that if Native American remains are unearthed during any ground disturbance activities, all work will immediately halt and the Native American Heritage Association will be contacted to assess the findings and make appropriate mitigation recommendations. As Project-specific impacts will be mitigated to a less than significant level, Cumulative Impacts will result in a level of *Less Than Significant Project-specific and Cumulative Impacts With Mitigation*.

Mitigation Measure(s):

- 5-3 Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during Project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:**
- 1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:**
 - a. The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and**
 - b.If the coroner determines the remains to be Native American:**
 - i.The coroner shall contact the Native American Heritage Commission within 24 hours.**
 - ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.**
 - iii. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or**
 - 2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.**
 - a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.**
 - b. The descendant fails to make a recommendation; or**

c. The landowner or his authorized representative rejects the recommendation of the descendent.

Conclusion: *Less Than Significant Impact With Mitigation*

With implementation of Mitigation Measure 5-3, potential Project-specific and cumulative impacts related to this Checklist Item will be reduced *Less Than Significant* levels.

DEFINITIONS/ACRONYMS

Acronyms

CHRIS	California Historic Resources Information System
CRHR	California Register of Historical Resources
HABS/HAER	Historic American Building Survey/Historic American Engineering Record
NAHC	The Native American Heritage Commission
NHPA	National Historic Preservation Act of 1966
OHP	California State Office of Historic Preservation
SHPO	State Historic Preservation Officers

REFERENCES

Advisory Council on Historic Preservation, State Historic Preservation Officers, which can be accessed at: <http://www.achp.gov/shpo.html>, updated Feb. 24, 2009

Advisory Council on Historic Preservation, which can be accessed at: <http://www.achp.gov/nrcriteria.html>, updated March 11, 2008

CEQA Guidelines

California Office of Historic Preservation, which can be accessed at: http://ohp.par+ks.ca.gov/?page_id=1066

CEQA and Historical Resources: CEQA Technical Advice Series, which can be accessed at: <http://ceres.ca.gov/ceqa/more/tas/page1.html>

National Park Service Program: State Historic Preservation Officers, which can be accessed at: <http://www.cr.nps.gov/nr/shpolist.htm>

“Pixley Community Plan Update Cultural Resources Assessment Tulare County, California”, prepared by Sierra Valley Cultural Planning Inc. July 2014.

Tulare County 2030 General Plan, August 2012

Tulare County 2030 General Plan Background Report, February 2010

Geology and Soils

Chapter 3.6

SUMMARY OF FINDINGS

The proposed Project will result in *Less Than Significant Impacts* related to Geology and Soils. The impact analyses and determinations in this chapter are based upon information obtained from the References listed at the end of this chapter. A detailed review of potential impacts is provided in the analysis below.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Geology and Soils. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

The environmental setting provides a description of the Geology and Soils in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory

¹ 2013 CEQA Guidelines, Section 15126.2 (a)

policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item:

- Located on a Fault line
- Hazard to people or property
- Project subject to landslides
- Located on a liquefaction zone

ENVIRONMENTAL SETTING

“Seismicity varies greatly between the two major geologic provinces represented in Tulare County. The Central Valley is an area of relatively low tectonic activity bordered by mountain ranges on either side. The Sierra Nevada Mountains, partially located within Tulare County, are the result of movement of tectonic plates which resulted in the creation of the mountain range. The Coast Range on the west side of the Central Valley is also a result of these forces, and the continued uplifting of Pacific and North American tectonic plates continues to elevate these ranges. The remaining seismic hazards in Tulare County generally result from movement along faults associated with the creation of these ranges.”²

“Earthquakes are typically measured in terms of magnitude and intensity. The most commonly known measurement is the Richter Scale, a logarithmic scale which measures the strength of a quake. The Modified Mercalli Intensity Scale measures the intensity of an earthquake as a function of the following factors:

- Magnitude and location of the epicenter;
- Geologic characteristics;
- Groundwater characteristics;
- Duration and characteristic of the ground motion;
- Structural characteristics of a building.”³

“Faults are the indications of past seismic activity. It is assumed that those that have been active most recently are the most likely to be active in the future. Recent seismic activity is measured in geologic terms. Geologically recent is defined as having occurred within the last two million years (the Quaternary Period). All faults believed to have been active during Quaternary time are considered “potentially active.”⁴

² General Plan Background Report, page 8-5

³ Ibid.

⁴ Ibid.

“Settlement can occur in poorly consolidated soils during groundshaking. During settlement, the soil materials are physically rearranged by the shaking and result in reduced stabling alignment of the individual minerals. Settlement of sufficient magnitude to cause significant structural damage is normally associated with rapidly deposited alluvial soils, or improperly founded or poorly compacted fill. These areas are known to undergo extensive settling with the addition of irrigation water, but evidence due to groundshaking is not available. Fluctuating groundwater levels also may have changed the local soil characteristics. Sufficient subsurface data is lacking to conclude that settlement would occur during a large earthquake; however, the data is sufficient to indicate that the potential exists in Tulare County.”⁵

“Liquefaction is a process whereby soil is temporarily transformed to a fluid form during intense and prolonged groundshaking. Areas most prone to liquefaction are those that are water saturated (e.g., where the water table is less than 30 feet below the surface) and consist of relatively uniform sands that are low to medium density. In addition to necessary soil conditions, the ground acceleration and duration of the earthquake must be of sufficient energy to induce liquefaction. Scientific studies have shown that the ground acceleration must approach 0.3g before liquefaction occurs in a sandy soil with relative densities typical of the San Joaquin alluvial deposits. Liquefaction during major earthquakes has caused severe damage to structures on level ground as a result of settling, tilting, or floating. Such damage occurred in San Francisco on bay-filled areas during the 1989 Loma Prieta earthquake, even though the epicenter was several miles away. If liquefaction occurs in or under a sloping soil mass, the entire mass may flow toward a lower elevation, such as that which occurred along the coastline near Seward, Alaska during the 1964 earthquake. Also of particular concern in terms of developed and newly developing areas are fill areas that have been poorly compacted.”⁶

Earthquake Hazards

“Groundshaking is the primary seismic hazard in Tulare County because of the county’s seismic setting and its record of historical activity. Thus, emphasis focuses on the analysis of expected levels of groundshaking, which is directly related to the magnitude of a quake and the distance from a quake’s epicenter. Magnitude is a measure of the amount of energy released in an earthquake, with higher magnitudes causing increased groundshaking over longer periods of time, thereby affecting a larger area. Groundshaking intensity, which is often a more useful measure of earthquake effects than magnitude, is a qualitative measure of the effects felt by population. The valley portion of Tulare County is located on alluvial deposits, which tend to experience greater groundshaking intensities than areas located on hard rock. Therefore, structures located in the valley will tend to suffer greater damage from groundshaking than those located in the foothill and mountain areas. However, existing alluvium valleys and weathered or decomposed zones are scattered throughout the mountainous portions of the county which could also experience stronger intensities than the surrounding solid rock areas. The geologic characteristics of an area can therefore be a greater hazard than its distance to the epicenter of the quake.”⁷

⁵ Ibid. 8-9

⁶ Ibid.

⁷ Ibid.8-7

“There are three faults within the region that have been, and will be, principal sources of potential seismic activity within Tulare County. These faults are described below:

- **San Andreas Fault.** The San Andreas Fault is located approximately 40 miles west of the Tulare County boundary. This fault has a long history of activity, and is thus the primary focus in determining seismic activity within the county. Seismic activity along the fault varies along its span from the Gulf of California to Cape Mendocino. Just west to Tulare County lies the “Central California Active Area,” where many earthquakes have originated.
- **Owens Valley Fault Group.** The Owens Valley Fault Group is a complex system containing both active and potentially active faults, located on the eastern base of the Sierra Nevada Mountains. The Group is located within Tulare and Inyo Counties and has historically been the source of seismic activity within Tulare County.
- **Clovis Fault.** The Clovis Fault is considered to be active within the Quaternary Period (within the past two million years), although there is no historic evidence of its activity, and is therefore classified as “potentially active.” This fault lies approximately six miles south of the Madera County boundary in Fresno County. Activity along this fault could potentially generate more seismic activity in Tulare County than the San Andreas or Owens Valley fault systems. In particular, a strong earthquake on the Fault could affect northern Tulare County. However, because of the lack of historic activity along the Clovis Fault, inadequate evidence exists for assessing maximum earthquake impacts.”⁸

“Older buildings constructed before current building codes were in effect, and even newer buildings constructed before earthquake resistance provisions were included in the current building codes, are most likely to suffer damage in an earthquake. Most of Tulare County’s buildings are no more than one or two stories in height and are of wood frame construction, which is considered the most structurally resistant to earthquake damage. Older masonry buildings (without earthquake-resistance reinforcement) are the most susceptible to structural failure, which causes the greatest loss of life. The State of California has identified unreinforced masonry buildings as a safety issue during earthquakes. In high risk areas (Bay Area) inventories and programs to mitigate this issue are required. Because Tulare County is not a high risk area, state law only recommends that programs to retrofit URMs are adopted by jurisdictions.”⁹

Soils and Liquefaction

“The San Joaquin Valley portion of Tulare County is located on alluvial deposits, which tend to experience greater groundshaking intensities than areas located on hard rock. Therefore, structures located in the valley will tend to suffer greater damage from groundshaking than those located in the foothill and mountain areas. However, existing alluvium valleys and weathered or decomposed zones are scattered throughout the mountainous portions of the county which could also experience stronger intensities than the surrounding solid rock areas. The geologic characteristics of an area can therefore be a greater hazard than its distance to the epicenter of the

⁸ Ibid. 8-6 and 8-7

⁹ Ibid. 8-8

quake.”¹⁰

“No specific countywide assessments to identify liquefaction hazards have been performed in Tulare County. Areas where groundwater is less than 30 feet below the surface occur primarily in the valley. However, soil types in the area are not conducive to liquefaction because they are either too coarse or too high in clay content. Areas subject to 0.3g acceleration or greater are located in a small section of the Sierra Nevada Mountains along the Tulare-Inyo County boundary. However, the depth to groundwater in such areas is greater than in the valley, which would minimize liquefaction potential as well. Detailed geotechnical engineering investigations would be necessary to more accurately evaluate liquefaction potential in specific areas and to identify and map the areal extent of locations subject to liquefaction.”¹¹

Landslides

“Landslides are a primary geologic hazard and are influenced by four factors:

- Strength of rock and resistance to failure, which is a function of rock type (or geologic formation);
- Geologic structure or orientation of a surface along which slippage could occur;
- Water (can add weight to a potentially unstable mass or influence strength of a potential failure surface); and,
- Topography (amount of slope in combination with gravitation forces).”¹²

REGULATORY SETTING

Federal Agencies & Regulations

None that apply to the proposed Project.

State Agencies & Regulations

California Building Code

“The California Building Code is another name for the body of regulations known as the California Code of Regulations (C.C.R.), Title 24, Part 2, which is a portion of the California Building Standards Code. Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards.”¹³

Alquist-Priolo Earthquake Fault Zoning Act

“The Alquist- Priolo Earthquake Fault Zoning Act (formerly the Alquist - Priolo Special Studies Zone Act), signed into law December 1972, requires the delineation of zones along active faults

¹⁰ Ibid. 8-7

¹¹ Ibid. 8-9

¹² Ibid. 8-10

¹³ General Plan Background Report, page 8-3

in California. The purpose of the Alquist-Priolo Act is to regulate development on or near active fault traces to reduce the hazards associated with fault rupture and to prohibit the location of most structures for human occupancy across these traces.”¹⁴

Local Policy & Regulations

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project are listed below.

ERM-7.2 Soil Productivity - The County shall encourage landowners to participate in programs that reduce soil erosion and increase soil productivity. To this end, the County shall promote coordination between the Natural Resources Conservation Service, Resource Conservation Districts, UC Cooperative Extension, and other similar agencies and organizations.

ERM-7.3 Protection of Soils on Slopes - Unless otherwise provided for in this General Plan, building and road construction on slopes of more than 30 percent shall be prohibited, and development proposals on slopes of 15 percent or more shall be accompanied by plans for control or prevention of erosion, alteration of surface water runoff, soil slippage, and wildfire occurrence.

HS-2.4 Structure Siting - The County shall permit development on soils sensitive to seismic activity permitted only after adequate site analysis, including appropriate siting, design of structure, and foundation integrity.

HS-2.7 Subsidence - The County shall confirm that development is not located in any known areas of active subsidence. If urban development may be located in such an area, a special safety study will be prepared and needed safety measures implemented. The County shall also request that developments provide evidence that its long-term use of ground water resources, where applicable, will not result in notable subsidence attributed to the new extraction of groundwater resources for use by the development.

HS-2.8 Alquist-Priolo Act Compliance - The County shall not permit any structure for human occupancy to be placed within designated Earthquake Fault Zones (pursuant to and as determined by the Alquist-Priolo Earthquake Fault Zoning Act; Public Resource code, Chapter 7.5) unless the specific provision of the Act and Title 14 of the California Code of Regulations have been satisfied.

¹⁴ Ibid., page 8-3

Impact Evaluation

Would the project:

- a) **Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**
- i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

Project Impact Analysis: ***Less Than Significant Impact***

No substantial faults are known to traverse Tulare County according to the Alquist-Priolo Earthquake Fault Zoning Maps and the State of California Department of Conservation¹⁵. The nearest major fault line, which lies outside of Tulare County, is the San Andreas fault zones; approximately 56 miles southwest of the proposed Project site. According to the Five County Seismic Safety Element (FCSSE), Tulare County is located in the V-1 zone. This zone includes most of the eastern San Joaquin Valley, and is characterized by a relatively thin section of sedimentary rock overlying a granitic basement. Amplification of shaking that would affect low to medium-rise structures is relatively high, but the distance of the faults that are expected sources of the shaking is sufficiently great that the effects should be minimal. The requirements of Zone II of the Uniform Building Code should be adequate for normal facilities.¹⁶ Therefore, any impacts resulting from the rupture of a known earthquake fault would be ***Less Than Significant***.

ii) **Strong seismic ground shaking?**

Project Impact Analysis: ***Less Than Significant Impact***

Tulare County is characterized as Severity Zone “Nil” and “Low” for groundshaking events.¹⁷ Deaggregation of the hazard was performed by using the USGS Interactive Deaggregation website and it was found that all faults within a 20 mile radius are quaternary faults between the ages of 750,000 and 1.6 million years old.¹⁸ Quaternary faults are defined as those faults that have been recognized at the surface and which have evidence of movement in the past 1.6 million years, which is the duration of the Quaternary Period.¹⁹ Due to the distance and types of faults in the proposed Project vicinity, strong ground shaking is unlikely. Therefore, any impact would be ***Less Than Significant***.

¹⁵ State of California Department of Conservation, Alquist-Priolo Earthquake Fault Zone Maps, <http://www.quake.ca.gov/gmaps/WH/regulatorymaps.htm>. Accessed June, 2014.

¹⁶ Five County Seismic Safety Element, Summary & Policy Recommendations II, 3 and 15.

¹⁷ Tulare County General Plan 2030 Update, *Part I-Goals and Policies Report*, 253.

¹⁸ USGS, *Earthquake Hazards Program: Custom Mapping & Analysis Tools*, <http://geohazards.usgs.gov/qfaults/ca/California.php>. Accessed June, 2014.

¹⁹ USGS, *Earthquake Hazards Program: Glossary*, <http://earthquake.usgs.gov/hazards/qfaults/glossary.php#Q>. Accessed June, 2014.

iii) Seismic-related ground failure, including liquefaction?

Project Impact Analysis: ***No Impact***

The proposed Project area is not located within an area mapped to have a potential for soil liquefaction. Liquefaction in soils and sediments occurs during earthquake events, when soil material is transformed from a solid state to a liquid state, generated by an increase in pressure between pore space and soil particles. Earthquake induced liquefaction typically occurs in low-lying areas with soils or sediments composed of unconsolidated, saturated, clay-free sands and silts, but it can also occur in dry, granular soils or saturated soils with partial clay content. Based on available subsurface data, the proposed Project site is underlain by shallow rock that would not liquefy. As such, there would be ***No Impact*** caused by seismic-related ground failure, including liquefaction.

iv) Landslides?

Landslides are not a significant threat as the topography in the proposed Project area is relatively flat. No geologic landforms exist on or near the site that would result in a landslide event. Therefore, there proposed Project would result in ***No Impact***.

As noted in the Response to 3.6 a), due to the relatively flat nature of the building areas, the potential for lateral spreading is considered ***Less Than Significant***.

Project Impact Analysis: ***Less Than Significant***

The existing Project area is not located within a published Earthquake Fault Zone and the potential for ground rupture is low. As earthquakes are possible throughout the State of California, the Project will be required to comply with the Tulare County General Plan and Zone II of the Uniform Building Code. In addition, the existing Project area is not located within an area mapped to have a potential for soil liquefaction. As the Project area is relatively flat, there is no potential for landslides. ***Less Than Significant Project specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will not increase geotechnical related impacts off-site. No cumulative impacts related to this Checklist Item will occur.

With ***Less Than Significant*** Project-specific impacts, ***Less Than Significant Cumulative Impacts*** will also occur.

Mitigation Measures: ***None Required.***

Conclusion: Less Than Significant Impact

As noted earlier, implementation of the proposed Project will not cause a significant impact to this Checklist Item. *Less Than Significant Cumulative Impacts* are anticipated without mitigation.

b) Result in substantial soil erosion or the loss of topsoil?

Project Impact Analysis: *Less Than Significant Impact*

The proposed Project area is primarily flat and as such, soil erosion is not anticipated. As future development occurs, site construction activities would potentially involve earthmoving activities to shape land, trenching for sewer and potable water distribution systems, pouring concrete for sidewalks, curbs, and gutters, and other typical construction-related activities. These activities could expose soils to erosion processes. The extent of erosion would vary depending on slope steepness/stability, vegetation/cover, concentration of runoff, and weather conditions.

To prevent water and wind erosion during the construction-related activities, a Storm Water Pollution Prevention Plan (SWPPP) will be developed for developments within the Project areas as required for all projects which disturb more than one acre in size. As part of the SWPPP, applicants would be required to provide erosion control measures to protect the topsoil. Any stockpiled soils would be watered and/or covered to prevent loss due to wind erosion as part of the SWPPP during construction. As a result of these efforts, loss of topsoil and substantial soil erosion during the construction period are not anticipated. The impact would be **Less Than Significant**. No mitigation is required.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project area is not located on slope. The proposed Project also does not involve changes that will affect off-site hillsides. Therefore, *Less Than Significant* impacts related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

Implementation of the proposed Project will not cause a significant impact, potential Project-specific impacts related to this Checklist Item will be reduced to a level considered *Less Than Significant* and *No Cumulative Impacts* related to this Checklist Item will occur.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a

result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Project Impact Analysis: ***Less Than Significant Impact***

Substantial grade change would not occur in the topography to the point where the developments within the proposed Project area would expose people or structures to potential substantial adverse effects on, or offsite, such as landslides, lateral spreading, liquefaction or collapse. According to the Five County Seismic Safety Element the V-1 zone the proposed Project site inhabits has a low to moderate risk of subsidence.

There is no evidence to suggest that soils located within the Project area are subject to lateral spreading. Subsidence is due to non-compacted, wind-deposited, soils consolidation under load, to oil or gas production or to severe overdraft existing in the Project area. The impact would be ***Less Than Significant Impact***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As such, ***Less Than Significant Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist item will occur.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

The United States Department of Agriculture Natural Resources Conservation Service indicates that Akers-Akers saline-Sodic complex and Hanford sandy loam underlie the project site. These soils have a moderate shrink-swell potential. However, the proposed project would implement all applicable requirements of the most recent California Building Standards Code. Therefore, the future development of specific developments with the Project area will not expose persons or structures to hazards associated with shrinking and swelling of expansive soils. Impacts will be ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will have *Less Than Significant Project-specific Impacts* related to expansive soils. As such, *Less Than Significant Cumulative Impacts* related to this Checklist item will occur.

Mitigation Measure(s):

See Mitigation Measure 6-1.

Conclusion: *Less Than Significant Impact With Mitigation*

As noted earlier, implementation of Mitigation Measure 6-1 will reduce *Project-specific and Cumulative Impacts to Less Than Significant With Mitigation*.

- e) **Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?**

Project Impact Analysis: *Less Than Significant Impact*

The Pixley Public Utility District (Pixley PUD) owns and operates the existing wastewater disposal system. **Adequate capacity exists for the future growth within the developed portion of Pixley.** As future development occurs, such development will also be required to connect to the wastewater treatment system. This impact would be *Less Than Significant*.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project does not include a septic system and will have no impacts related to soils suitable for septic tanks. In addition, the proposed Project will have no impacts related to the use of septic tanks on other properties. As such, *Less Than Significant Cumulative Impacts* related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

As noted earlier, future development will be required to connect to the wastewater treatment system, therefore the Project-specific or Cumulative Impacts related to this Checklist Item will be *Less Than Significant Impact*.

DEFINITIONS/ACRONYMS

Definitions

Fault - “A fault is a fracture in the Earth’s crust that is accompanied by displacement between the two sides of the fault. An active fault is defined as a fracture that has shifted in the last 10,000 to 12,000 years (Holocene Period). A potentially active fault is one that has been active in the past 1.6 million years (Quaternary Period). A sufficiently active fault is one that shows evidence of Holocene displacement on one or more of its segments or branches (Hart, 1997).”²⁰

Liquefaction - “Liquefaction in soils and sediments occurs during earthquake events, when soil material is transformed from a solid state to a liquid state, generated by an increase in pressure between pore space and soil particles. Earthquake-induced liquefaction typically occurs in low-lying areas with soils or sediments composed of unconsolidated, saturated, clay-free sands and silts, but it can also occur in dry, granular soils or saturated soils with partial clay content.”²¹

Magnitude - “Earthquake magnitude is measured by the Richter scale, indicated as a series of Arabic numbers with no theoretical maximum magnitude. The greater the energy released from the fault rupture, the higher the magnitude of the earthquake. Magnitude increases logarithmically in the Richter scale; thus, an earthquake of magnitude 7.0 is thirty times stronger than one of magnitude 6.0. Earthquake energy is most intense at the point of fault slippage, the epicenter, which occurs because the energy radiates from that point in a circular wave pattern. Like a pebble thrown in a pond, the increasing distance from an earthquake’s epicenter translates to reduced groundshaking.”²²

REFERENCES

Tulare County 2030 General Plan, August 2012

Tulare County 2030 General Plan Background Report, February 2010

CEQA Guidelines

²⁰ General Plan Background Report, page 8-2

²¹ Ibid.

²² Ibid.

Greenhouse Gas Emissions

Chapter 3.7

SUMMARY OF FINDINGS

The proposed Project will result in *No Significant Impacts* related to Greenhouse Gas (GHG) Emissions. A detailed review of potential impacts is provided in the following analysis. A GHG Report was prepared by consultants First Carbon Solutions, which is included in Appendix “D” of this document, is used as the basis for determining this Project will result in *No Significant Impacts*.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

Section 15064.4 Determining the Significance of Impacts from Greenhouse Gas Emissions

- “(a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:
- (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or
 - (2) Rely on a qualitative analysis or performance based standards.
- (b) A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:
- (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
 - (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
 - (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.”¹

¹ CEQA Guidelines, Section 15064.4

ENVIRONMENTAL SETTING

“Gases that trap heat in the atmosphere are called greenhouse gases (GHGs). The major concern is that increases in GHGs are causing global climate change. Global climate change is a change in the average weather on earth that can be measured by wind patterns, storms, precipitation and temperature. The gases believed to be most responsible for global warming are water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆).”²

“In 2007, Tulare County generated approximately 5.2 million tonnes of Carbon Dioxide Equivalent (CO₂e). The largest portion of these emissions (63 percent) is attributed to dairies/feedlots, while the second largest portion (16 percent) is from mobile sources.”³

**Table 3.7-1
Emissions by Sector in 2007⁴**

Sector	CO₂e (tonnes/year)	% of Total
Electricity	542,690	11%
Natural Gas	321,020	6%
Mobile Sources	822,230	16%
Dairy/Feedlots	3,294,870	63%
Solid Waste	227,250	4%
<small>Source: General Plan Background Report</small> Total	5,208,060	100%
Per Capita	36.1	

The Tulare County General Plan contains the following: “Enhancement of the greenhouse effect can occur when concentrations of GHGs exceed the natural concentrations in the atmosphere. Of these gases, CO₂ and methane are emitted in the greatest quantities from human activities. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas methane primarily results from off-gassing associated with agricultural practices and landfills. SF₆ is a GHG commonly used in the utility industry as an insulating gas in transformers and other electronic equipment. There is widespread international scientific agreement that human-caused increases in GHGs has and will continue to contribute to global warming, although there is much uncertainty concerning the magnitude and rate of the warming.

Some of the potential resulting effects in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CARB, 2006). Globally, climate change has the potential to

² General Plan Background Report, page 6-17

³ Ibid. 6-33

⁴ Op. Cit. 6-34

Draft Environmental Impact Report
Pixley Community Plan

impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns. The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects (IPCC, 2001):

- Higher maximum temperatures and more hot days over nearly all land areas;
- Higher minimum temperatures, fewer cold days and frost days over nearly all land areas;
- Reduced diurnal temperature range over most land areas;
- Increase of heat index over land areas; and
- More intense precipitation events.

Also, there are many secondary effects that are projected to result from global warming, including global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. While the possible outcomes and the feedback mechanisms involved are not fully understood, and much research remains to be done, the potential for substantial environmental, social, and economic consequences over the long term may be great.”⁵

Thresholds of Significance

“The San Joaquin Valley Air Pollution Control District proposes the following process... for determining the cumulative significance of project specific GHG emissions on global climate change when issuing permits for stationary source projects.”⁶

- “Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement BPS.”⁷
- “Projects not implementing Best Performance Standards would require quantification of project specific GHG emissions and demonstration that project specific GHG emissions would be reduced or mitigated by at least 29%, compared to BAU, including GHG emission reductions achieved since the 2002-2004 baseline period, consistent with GHG emission reduction targets established in ARB’s AB 32 Scoping Plan. Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.”⁸
- “Projects requiring preparation of an Environmental Impact Report would require quantification of project specific GHG emissions. Projects implementing BPS or achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.”⁹

⁵ Op. Cit. 6-27 to 6-28

⁶ District Policy, Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as Lead Agency, page 8

⁷ Ibid

⁸ Op. Cit. 9

⁹ Op. Cit.

REGULATORY SETTING

Federal Agencies & Regulations

United States Environmental Protection Agency Greenhouse Gas Endangerment Findings

“On December 7, 2009, Administrator Lisa Jackson signed a final action, under Section 202(a) of the Clean Air Act, finding that six key well-mixed greenhouse gases constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to the climate change problem.”¹⁰

“The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases — carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆) — in the atmosphere threaten the public health and welfare of current and future generations.”¹¹

State Agencies & Regulations

California Air Resources Board

“The Air Resources Board (ARB or Board) has established State ambient air quality standards (State standards) to identify outdoor pollutant levels considered safe for the public. After State standards are established, State law requires ARB to designate each area as attainment, nonattainment, or unclassified for each State standard. The area designations, which are based on the most recent available data, indicate the healthfulness of air quality throughout the State.”¹² The Board adopted the 2004 Revision to the California State Implementation Plan for Carbon Monoxide on July 22, 2004. The Revision demonstrates that the San Joaquin Valley Air Basin has maintained attainment of the 8-hour carbon monoxide standards.¹³

San Joaquin Valley Air Pollution Control District (Air District)

“The San Joaquin Valley Air District is a public health agency whose mission is to improve the health and quality of life for all Valley residents through efficient, effective and entrepreneurial air quality-management strategies.”¹⁴ “The San Joaquin Valley Air Pollution Control District is made up of eight counties in California’s Central Valley: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and the San Joaquin Valley Air Basin portion of Kern.”¹⁵

The Air District determined that the quantification of GHG Emissions is expected for all projects that require an Environmental Impact Report.¹⁶

¹⁰ <http://www.epa.gov/climatechange/EPAactivities/regulatory-initiatives.html>

¹¹ <http://www.epa.gov/climatechange/endangerment/index.html>

¹² Cal/EPA Air Resources Board, <http://www.arb.ca.gov/desig/desig.htm>

¹³ Cal/EPA Air Resources Board, http://www.arb.ca.gov/planning/sip/co/final_2004_co_plan_update.pdf

¹⁴ http://www.valleyair.org/General_info/aboutdist.htm#Mission

¹⁵ Ibid.

¹⁶ District Policy, Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as Lead Agency, page 6

California Clean Air Act

“The California CAA of 1988 establishes an air quality management process that generally parallels the federal process. The California CAA, however, focuses on attainment of the State ambient air quality standards,... which, for certain pollutants and averaging periods, are more stringent than the comparable federal standards. Responsibility for meeting California’s standards is addressed by the CARB and local air pollution control districts (such as the eight county AIR DISTRICT, which administers air quality regulations for Tulare County). Compliance strategies are presented in district-level air quality attainment plans.”¹⁷

Executive Order S-3-05

“In 2005, in recognition of California’s vulnerability to the effects of climate change, Governor Schwarzenegger issued Executive Order S-3-05, which sets forth a series of target dates by which statewide emission of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The Executive Order additionally ordered that the Secretary of the California Environmental Protection Agency (Cal EPA) would coordinate oversight of the efforts among state agencies made to meet the targets and report to the Governor and the State Legislature biannually on progress made toward meeting the GHG emission targets. Cal EPA was also directed to report biannually on the impacts to California of global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry, and prepare and report on mitigation and adaptation plans to combat these impacts.

In response to the Executive Order, the Secretary of Cal EPA created the Climate Action Team (CAT), composed of representatives from the Air Resources Board; Business, Transportation, & Housing; Department of Food and Agriculture; Energy Commission; California Integrated Waste Management Board (CIWMB); Resources Agency; and the Public Utilities Commission (PUC). The CAT prepared a recommended list of strategies for the state to pursue to reduce climate change emission in the state (Climate Action Team, 2006).”¹⁸

Assembly Bill 32: California Global Warming Solutions Act of 2006

“In 2006, California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500, et seq.), which requires the CARB to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020.

¹⁷ Tulare County 2030 General Plan RDEIR, pages 3.3-2 to 3.3-3

¹⁸ General Plan Background Report, page 6-19

The bill also requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions. The bill authorizes CARB to adopt market-based compliance mechanisms. The bill additionally requires the state board to monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism adopted by the state board, pursuant to specified provisions of existing law. The bill also authorizes CARB to adopt a schedule of fees to be paid by regulated sources of GHG emissions. Because the bill requires CARB to establish emissions limits and other requirements, the violation of which would be a crime, this bill would create a state-mandated local program.

Under AB 32, by June 30, 2007, CARB was to identify a list of discrete early action GHG reductions that will be legally enforceable by 2010. By January 1, 2008, CARB was also to adopt regulations that will identify and require selected sectors to report their statewide GHG emissions. By January 1, 2011, CARB must adopt rules and regulations to achieve the maximum technologically feasible and cost-effective reductions in GHG reductions. CARB is authorized to enforce compliance with the program that it develops.”¹⁹

Senate Bill 97

“Governor Schwarzenegger signed Senate Bill (SB) 97 (Sutton), a CEQA and GHG emission bill, into law on August 24, 2007. SB 97 requires the Governor’s Office of Planning and Research (OPR) to prepare CEQA guidelines for the mitigation of GHG emissions, including, but not limited to, effects associated with transportation or energy consumption. OPR must prepare these guidelines and transmit them to the Resources Agency by July 1, 2009. On April 13, 2009, OPR submitted to the Secretary for Natural Resources its proposed amendments to the state CEQA Guidelines for greenhouse gas emissions. The Resources Agency must then certify and adopt the guidelines by January 1, 2010. OPR and the Resources Agency are required to periodically review the guidelines to incorporate new information or criteria adopted by CARB pursuant to the Global Warming Solutions Act, scheduled for 2012.

The OPR published a Technical Advisory in June of 2008 that is an “informal guidance regarding the steps lead agencies should take to address climate change in their CEQA documents” to serve in the interim until guidelines are established pursuant to SB 97 (OPR, 2008). This Advisory recommends that CEQA documents include quantification of estimated GHG emissions associated with a proposed project and that a determination of significance be made. With regard to significance the Advisory states that “lead agencies must determine what constitutes a significant impact. In the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a “significant impact”, individual lead agencies may undertake a project-by-project analysis, consistent with the available guidance and current CEQA practice.”²⁰

Climate Change Scoping Plan

“The CARB published a *Climate Change Scoping Plan* in December 2008 (CARB, 2008c) that

¹⁹ Ibid. 6-20

²⁰ Op. Cit. 6-23 to 6-24

outlines reduction measures to lower the state's GHG emissions to meet the 2020 limit. The *Scoping Plan* "proposes a comprehensive set of actions designed to reduce overall carbon emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health". Key elements for reducing California's GHG emissions to 1990 levels by 2020 include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation."²¹

California Attorney General

The Attorney General prepared a variety of mitigation measures to address climate change, one of the most serious environmental effects affecting the State of California. This list that was provided was not intended to be an exhaustive list and not all mitigation measures would apply to all projects. The following mitigation measures would apply to the proposed Project.

- Incorporate green building practice and design elements.
- Meet recognized green building and energy efficiency benchmarks
- Install energy efficient lighting (e.g. light emitting diodes, (LEDs)), heating and cooling systems, appliances, equipment, and control systems.
- Use passive solar design, e.g., orient buildings and incorporate landscaping to maximize passive solar heating during cool seasons, minimize solar heat gain during hot seasons, and enhance natural ventilation. Design buildings to take advantage of sunlight.
- Install light colored "cool" roofs and cool pavements.
- Install efficient lighting, (including LEDs) for traffic, street and other outdoor lighting.
- Meet "reach" goals for building energy efficiency and renewable energy use.
- Install solar, wind, and geothermal power systems and solar hot water heaters.
- Install solar panels on unused roof and ground space and over carports and parking areas.
- Include energy storage where appropriate to optimize renewable energy generation systems and avoid peak energy use.
- Incorporate water-reducing features into building and landscape design.
- Make effective use of graywater. (Graywater is untreated household waste water from bathtubs, showers, bathroom wash basins, and water from clothes washing machines. Graywater to be used for landscape irrigation.)

²¹ Op. Cit. 6-24 to 6-25

Draft Environmental Impact Report
Pixley Community Plan

- Implement low-impact development practices that maintain the existing hydrology of the site to manage storm water and protect the environment.
- Devise a comprehensive water conservation strategy appropriate for the project and location.
- Design buildings to be water-efficient. Install water-efficient fixtures and appliances.
- Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, and concrete, lumber, metal, and cardboard).
- Integrate reuse and recycling into residential industrial, institutional and commercial projects.
- Provide easy and convenient recycling opportunities for residents, the public, and tenant businesses.
- Incorporate public transit into the project's design.
- Include pedestrian and bicycle facilities within projects and ensure that existing non-motorized routes are maintained and enhanced.
- Incorporate bicycle lanes, routes and facilities into street systems, new subdivisions, and large developments.
- Require amenities for non-motorized transportation, such as secure and convenient bicycle parking.
- Meet an identified transportation-related benchmark.
- Adopt a comprehensive parking policy that discourages private vehicle use and encourages the use of alternative transportation.
- Build or fund a major transit stop within or near the development.
- Ensure that the project enhances, and does not disrupt or create barriers to, non-motorized transportation.
- Create a ride sharing program. Promote existing ride sharing programs e.g., by designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading for ride sharing vehicles, and providing a web site or message board for coordinating rides.
- Create or accommodate car sharing programs, e.g., provide parking spaces for car share vehicles at convenient locations accessible by public transportation.
- Provide a vanpool for employees.
- Create local "light vehicle" networks, such as neighborhood electric vehicle systems.
- Enforce and follow limits idling time for commercial vehicles, including delivery and construction vehicles.
- Provide the necessary facilities and infrastructure to encourage the use of low or zero-emission vehicles.

Local Policy & Regulations

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project are listed below.

AQ-1.7 Support Statewide Climate Change Solutions - The County shall monitor and support the efforts of Cal/EPA, CARB, and the SJVAPCD, under AB 32 (Health and Safety Code

§38501 et seq.), to develop a recommended list of emission reduction strategies. As appropriate, the County will evaluate each new project under the updated General Plan to determine its consistency with the emission reduction strategies.

AQ-1.8 Greenhouse Gas Emissions Reduction Plan/Climate Action Plan - The County will develop a Greenhouse Gas Emissions Reduction Plan (Plan) that identifies greenhouse gas emissions within the County as well as ways to reduce those emissions. The Plan will incorporate the requirements adopted by the California Air Resources Board specific to this issue. In addition, the County will work with the Tulare County Association of Governments and other applicable agencies to include the following key items in the regional planning efforts.

1. Inventory all known, or reasonably discoverable, sources of greenhouse gases in the County,
2. Inventory the greenhouse gas emissions in the most current year available, and those projected for year 2020, and
3. Set a target for the reduction of emissions attributable to the County's discretionary land use decisions and its own internal government operations.

AQ-1.9 Support Off-Site Measures to Reduce Greenhouse Gas Emissions - The County will support and encourage the use of off-site measures or the purchase of carbon offsets to reduce greenhouse gas emissions.

AQ-1.10 Alternative Fuel Vehicle Infrastructure - County shall support the development of necessary facilities and infrastructure needed to encourage the use of low or zero-emission vehicles (e.g. electric vehicle charging facilities and conveniently located alternative fueling stations, including CNG filling stations.)

AQ-3.5 Alternative Energy Design - The County shall encourage all new development, including rehabilitation, renovation, and redevelopment, to incorporate energy conservation and green building practices to maximum extent feasible. Such practices include, but are not limited to: building orientation and shading, landscaping, and the use of active and passive solar heating and water systems.

LU-1.1 Smart Growth and Healthy Communities - The County shall promote the principles of smart growth and healthy communities in UDBs and HDBs, including:

1. Creating a strong sense of place,
2. Mixing land uses, and
3. Preserving open space

Tulare County Climate Action Plan

“The Tulare County Climate Action Plan (CAP) serves as a guiding document for County of Tulare (“County”) actions to reduce greenhouse gas emissions and adapt to the potential effects of climate change. The CAP is an implementation measure of the 2030 General Plan Update. The General Plan provides the supporting framework for development in the County to produce fewer greenhouse gas emissions during Plan buildout. The CAP builds on the General Plan’s

framework with more specific actions that will be applied to achieve emission reduction targets consistent with California legislation.”²² Development related mitigation measures applicable to the proposed Project are noted in the analysis below.

“Tulare County Climate Action Plan. The Tulare County adopted a Climate Action Plan (CAP) on August 28, 2012. The CAP is an implementation measure of the 2030 General Plan Update. The CAP follows a four-step process recommended by the Institute for Local Government, including identification of a baseline year and emissions inventory; projected future year inventories; and provision of policies, regulations, and programs that achieve reductions by the target years. The CAP uses 2007 as the baseline year, and contains projections for 2020 and 2030. The policies, regulations, and programs considered in the CAP include those by federal, state, and local governments. The measures were quantified to the extent possible.

Summary of CAP Actions

- Identifies sources of greenhouse gas emissions caused by activities within the unincorporated areas of Tulare County and estimates how these emissions may change over time.
- Establishes a reduction target of reducing Tulare County’s greenhouse gas emissions to demonstrate consistent with AB 32 (2006) and CARB Scoping Plan targets. This requires a reduction of 6 percent on average from new development in excess of those achieved from adopted regulations.
- Provides energy use, transportation, land use, water conservation, and solid waste strategies to bring Tulare County’s greenhouse gas emissions levels to the reduction target. Mitigates the impacts of Tulare County activities on climate change (by reducing greenhouse gas emissions consistent with the direction of the State of California via AB 32, Governor’s Order S-03-05, and the 2009 amendments to the CEQA Guidelines to comply with SB 97 (2008). The CEQA Guidelines encourage the adoption of policies or programs as a means of addressing comprehensively the cumulative impacts of projects. (See CEQA Guidelines, Sections 15064(h)(3), 15130(c).)
- Allows the greenhouse gas emissions inventory and CAP to be updated every five years and to respond to changes in science, effectiveness of emission reduction measures and federal, state, regional, or local policies to further strengthen the County’s response to the challenges of climate change.
- Provides substantial evidence that the emission reductions estimated in the CAP are feasible.
- Serves as the threshold of significance within the County of Tulare for climate change impacts, by which all applicable developments within the County will be reviewed.
- Proposed development projects that are consistent with the emission reduction and adaptation measures included in the CAP and the programs that are developed as a result of the CAP, would be considered to have a less than significant cumulative impact on climate change and emissions consistent with CEQA Guidelines 15064(h)(3) as amended to comply with SB 97.”

²² Tulare County Climate Action Plan, page 1

IMPACT EVALUATION

Would the project:

a) **Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

As indicated in the Greenhouse Gases Report (see Appendix “D”) prepared by consultants First Carbon Solutions;

Section 15064.4(b) of the CEQA Guidelines amendments for greenhouse gas emissions states that a lead agency may take into account the following three considerations in assessing the significance of impacts from greenhouse gas emissions.

- **Consideration #1:** The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
- **Consideration #2:** Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- **Consideration #3:** The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project’s incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

The Air District has established a menu of performance standards, some of which depend on the existence of an adopted climate action plan or the establishment of Best Performance Standards. The County has an adopted Climate Action Plan (CAP), which will be used in this analysis to determine significance for this impact.

Consistency with Climate Action Plan

A CAP was adopted for Tulare County in August 2012 (Tulare 2012). The CAP states the following:

Commercial and industrial development in Tulare County during the 2020 and 2030 planning timeframes will be subject to conditions of approval and mitigation measures that will reduce greenhouse gas emissions beyond State regulations in most projects. For industrial projects, where the SJVAPCD is a Responsible Agency, the project will be expected to implement Best Performance Standards included in the SJVAPCD Guidelines for Addressing Greenhouse Gas Emissions on the processes and stationary equipment that emit greenhouse gases to levels

that meet or exceed State targets To demonstrate consistency with the ARB Scoping Plan 2020 target of 26.2 percent reduction in land use related sectors compared with business as usual, new development in the County subject to discretionary approval would need to provide an overall reduction of 6 percent beyond that provided by State and SJVAPCD regulation. Based on this analysis, implementation of the policies contained in the General Plan 2030 Update and available project specific measures can achieve an overall reduction of 6 percent of development-related greenhouse gas emissions under Tulare County jurisdiction. When reductions from regulations and programs are included, new development would produce approximately 31 percent fewer greenhouse gas emissions compared with the 2020 business as usual scenario.

To determine significance, the analysis quantified project-related construction and operational greenhouse gas emissions under a business-as-usual scenario, and then compared these emissions with those emissions that would occur accounting for all project-related design features and regulatory measures adopted after 2005. Operational emissions were analyzed for the year 2020 to demonstrate consistency with the targets contained in the Tulare County CAP and AB 32. Operational or long-term emissions occur over the life of the project. For assumptions and descriptions for the emission sources, please refer to Section 3 of this report.

Impact Analysis

Construction

Greenhouse gas emissions generated during construction are shown in Table 5 [of the GHG Report and as Table 3.7-2 of this DEIR]. The SJVAPCD does not have a recommendation for assessing the significance of construction related emissions. Most construction-related emissions would occur prior to the year 2020, which is the year the State is required to reduce its greenhouse gas emissions to 1990 levels. Additionally, emissions from construction would be temporary. In order to account for the construction emissions, the emissions were amortized based on the life of the development (residential – 50 years; commercial/industrial – 25 years) and added to the operational emissions. Because the project includes a mixture of residential and commercial/industrial land uses, a 30-year life of the project was assumed in order to provide a conservative estimate.

Table 3.7-2 Construction Greenhouse Gas Emissions

Land Uses	Total MTCO ₂ e per year
Residential	2,613.23
Commercial	322.53
Industrial	354.73
Total	3,290.49
Amortized Emissions (based on 30 year life of project)	109.68
<i>Note:</i> <i>MTCO₂e = metric tons of carbon dioxide equivalents</i> <i>Source: CalEEMod output (Appendix D).</i>	

Operation Emissions in 2020

Operational emissions were analyzed for the year 2020 to demonstrate consistency with the targets contained in the Tulare County CAP and AB 32. Emissions were also assessed for 2030 to reflect the Community Plan horizon year. The “project” in this case is the amount of new development anticipated to occur between the baseline conditions in 2014 and the 2020 target year and between 2014 and the 2030 plan horizon year. The amount of development is based on a 1.3 percent per year growth rate projected through the 2030 plan horizon year. The mix of land uses is based on current development found in Pixley with increases applied equally to all land use categories.

To determine significance, the analysis quantified project-related greenhouse gas emissions under a business-as-usual scenario, and then compared these emissions with those emissions that would occur accounting for all project-related design features and regulatory measures adopted after 2005. As shown in Table 6 [of the GHG Report and as Table 3.7-3 in this DEIR], the reduction from business-as-usual emissions in 2020 is 31.40 percent, which is above the 26.2-percent threshold established by the CAP and the 6-percent threshold for additional reductions from new development. Therefore, the project is consistent with the County achieving the required AB 32 scoping plan reductions. Impacts would be less than significant.

Table 3.7-3 Project Operational Greenhouse Gases in 2020

Source	Emissions (MTCO ₂ e per year)		
	2020 Business as Usual	2020 (with Regulation)	Percent Reduction (%)
Area	54.26	54.22	0.06
Energy	815.65	581.13	28.75
Mobile	3,243.37	2,053.32	36.69
Waste	109.96	109.96	0.00
Water	65.05	55.85	14.15
Amortized Construction Emissions	109.68	109.68	0
Total	4,397.96	2,964.16	32.60%
Significance Threshold			29.0%
Are emissions significant?			No
<i>Note:</i> MTCO ₂ e = metric tons of carbon dioxide equivalents Source of business as usual emissions: CalEEMod output for the year 2005 (Appendix D). Source of 2020 emissions: CalEEMod output for the year 2020 (Appendix D).			

The business-as-usual emissions represent those that would have occurred without regulations enacted pursuant to AB 32. The 2020 emissions with regulations represent emissions with reductions from regulations enacted as part of AB 32, in particular, the following:

Mobile: Pavley and Low Carbon Fuel Standard regulation reductions are calculated by CalEEMod. The estimated reduction is 36.69 percent of the mobile sources GHG emissions (motor vehicle emissions).

Electricity: Renewable Portfolio Standards require a 33-percent renewable portfolio by the year 2020. The estimated reduction from electricity GHG emissions is 28.75 percent.

Water: Compliance with California Green Building Code Standards. The estimated reduction is 14.15 percent.

In addition to comparing the project with the Tulare County CAP, the analysis also considered the recommendations of the District. The District has established a menu of performance standards, some of which depend on the existence of an adopted climate action plan or the establishment of Best Performance Standards. As shown above, the project is

consistent with the CAP adopted by Tulare County. In a situation where a CAP was not adopted, the District considers whether the project will reduce or mitigate greenhouse gas levels by 29 percent from business-as-usual levels. Business as usual is determined by modeling emissions with only regulations in effect in 2005 to be consistent with the baseline used in the Scoping Plan (SJVAPCD 2009). This level of greenhouse gas reduction is based on the target established by ARB's AB 32 Scoping Plan, approved in 2008. As mentioned in the Regulatory Environment section, this reduction level was revised in the Final Supplement to the Functional Equivalent Document, which was included in ARB's 2011 re-approval of the Scoping Plan. This new greenhouse gas reduction level of 21.7 percent from business as usual in 2020 accounts for less growth in emissions related to the recent recession. As shown in Table 6, the project not only meets the CAP reductions but also exceeds the 29-percent threshold established by the District.

Operation Emissions in 2030

No threshold or state target has been set for 2030. Therefore, it is necessary to use different criteria for significance after 2020. The continued buildout of the Community Plan after 2020 results in increases in greenhouse gas emissions; however, the increases are offset by the continued implementation of regulations currently in place on greenhouse gas emissions and by compliance with the adopted General Plan and CAP. The overall growth projected for the Pixley Community Plan is relatively small, as shown in the land use assumptions tables (Table 2 and Table 3). In addition, the State anticipates continued increases in energy efficiency that will ultimately result in "net zero" energy consumption in new development and increases in the number of zero emission vehicles operated in the State under the Advanced Clean Car Program. Compliance with SB 375 reduction targets for light duty vehicles will provide continued reductions in emissions from that source (10 percent) through SB 375's 2035 milestone year. Since the project will continue to comply with existing and future regulations and the General Plan and CAP will continue to be implemented through 2030, the growth projected for 2030 would not result in significant greenhouse gas impacts. Finally, in the event that the State adopts new targets beyond 2020, the County would adopt revisions to the CAP if needed to demonstrate consistency with any new reduction target amounts.

As shown in Table 7 [of the GHG Report and as Table 3.7-4 of this DEIR], the reduction from business-as-usual emissions in 2030 is 35.36 percent, demonstrating continued progress toward reducing greenhouse gas emissions by the 2030 Plan horizon year."²³

²³ Tulare County – Pixley Community Plan Update Greenhouse Gas Analysis Report" prepared by First Carbon Solutions, September 2014, pages 37-42

Table 3.7-4 Project Operational Greenhouse Gases in 2030

Source	Emissions (MTCO ₂ e per year)		
	2030 Business as Usual	2030 (with Regulation and Design Features)	Percent Reduction (%)
Area	116.13	116.06	0.06
Energy	1,993.50	1,416.73	28.93
Mobile	7,341.55	4,364.23	40.55
Waste	276.93	276.93	0.00
Water	165.96	142.64	14.05
Amortized Construction Emissions	109.68	109.68	0
Total	10,003.75	6,426.27	35.76
Significance Threshold			N/A
Are emissions significant?			No
Note: MTCO ₂ e = metric tons of carbon dioxide equivalents Source of business as usual emissions: CalEEMod output for the year 2005 (Appendix D). Source of 2030 emissions: CalEEMod output for the year 2030 (Appendix D).			

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures ***None Required.***

Level of Significance After Mitigation

Less Than Significant Impact.

Cumulative Impact Analysis: ***Less Than Significant***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. This cumulative analysis is based on the information provided in the Greenhouse Gas Report prepared by consultants First Carbon Solutions and is included as Appendix “D” of this DEIR.

As the proposed Project is consistent with aforementioned plans, policies, and rules/regulations, ***No Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): *None Required*

Conclusion: *No Impact*

As the proposed Project is consistent with aforementioned plans, policies, and rules/regulations, *No Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Project Impact Analysis: *No Impact*

As indicated in the Greenhouse Gases Report (see Appendix “D”) prepared by consultants First Carbon Solutions;

“Climate Action Plan Consistency

Tulare County adopted a CAP as part of the Tulare County General Plan Update on August 28, 2012. The CAP requires projects to achieve an average reduction that is 6 percent in excess of the reductions stated in the ARB Scoping Plan and by regional regulations and programs. When combined with reductions anticipated from the ARB Scoping Plan measures and regional regulations and programs, Tulare County emissions would be 26.2 percent below 2020 business-as-usual levels for development related sources, which is the amount needed for the State to reduce emissions to 1990 levels. As shown in Table 6 [of the GHG Report and shown as Table 3.7-4 of this DEIR], the project would exceed the required reduction and would therefore be consistent with the CAP 2020 target.

Since the adoption of the CAP, several additional regulations have been adopted by the State that provide additional reductions beyond those described in the CAP. The largest reductions are from LEV III Light Duty Vehicle Standards and 2013 Title 24 Energy Efficiency Standards as described in

The CAP identifies General Plan policies that would help reduce greenhouse gas emissions; Table 8 [of the GHG Report and shown as Table 3.7-5 of this DEIR] lists the policy titles. For a discussion of the benefits of the policies, refer to the CAP.

Draft Environmental Impact Report
Pixley Community Plan

Table 3.7-5: General Plan Policies Having Greenhouse Gas Emission Reductions
Sustainability and Greenhouse Gas Emissions

PF-1.1	Maintain Urban Edges	ERM-1.1	Protection of Rare and Endangered Species
PF-1.2	Location of Urban Development	ERM-1.2	Development in Environmentally Sensitive Areas
PF-1.3	Land Uses in UDBs/HDBs	ERM-1.3	Encourage Cluster Development
PF-1.4	Available Infrastructure	ERM-1.4	Protect Riparian Management Plans and Mining Reclamation Plans
AG-1.7	Conservation Easements	ERM-1.6	Management of Wetlands
AG-1.8	Agriculture Within Urban Boundaries	ERM-1.7	Planting of Native Vegetation
AG-1.11	Agricultural Buffers	ERM-1.8	Open Space Buffers
AG-1.14	Right to Farm Noticing	ERM-1.14	Mitigation and Conservation Banking Program
AG-2.11	Energy Production	ERM-4.1	Energy Conservation and Efficiency Measures
AG-2.11	Energy Production	ERM-4.2	Streetscape and Parking Area Improvements for Energy Conservation
AG-2.6	Biotechnology and Biofuels	ERM-4.3	Local and State Programs
AQ-1.6	Purchase of Low Emission/Alternative Fuel Vehicles	ERM-4.4	Promote Energy Conservation Awareness
AQ-1.7	Support Statewide Global Warming Solutions	ERM-4.6	Renewable Energy
AQ-1.8	Greenhouse Gas Emissions Reduction Plan	ERM-4.7	Reduce Energy Use in County Facilities
AQ-1.9	Off-Site Measures to Reduce Greenhouse Gas Emissions	ERM-4.8	Energy Efficiency Standards
AQ-1.10	Alternative Fuel Vehicle Infrastructure	ERM-5.1	Parks as Community Focal Points
AQ-2.1	Transportation Demand Management Programs	ERM-5.6	Location and Size Criteria for Parks
AQ-2.3	Transportation and Air Quality	ERM-5.15	Open Space Preservation
AQ-2.4	Transportation Management Associations	HS-1.4	Building and Codes
AQ-2.5	Ridesharing	TC-2.1	Rail Service
AQ-3.1	Location of Support Services	TC-2.4	High Speed Rail (HSR)
AQ-3.2	Infill Near Employment	TC-2.7	Rail Facilities and Existing Development
AQ-3.3	Street Design	TC-4.4	Nodal Land Use Patterns that Support Public Transit
AQ-3.5	Alternative Energy Design	TC-5.1	Bicycle/Pedestrian Trail System
AQ-3.6	Mixed Use Development	TC-5.2	Consider Non-Motorized Modes in Planning and Development
LU-1.1	Smart Growth and Healthy Communities	TC-5.3	Provisions for Bicycle Use
LU-1.2	Innovative Development	TC-5.4	Design Standards for Bicycle Routes
LU-1.3	Prevent Incompatible Uses	TC-5.5	Facilities
LU-1.4	Compact Development	TC-5.6	Regional Bicycle Plan
LU-1.8	Encourage Infill Development	TC-5.7	Designated Bike Paths
LU-2.1	Agricultural Lands	TC-5.8	Multi-Use Trails
LU-3.2	Cluster Development	PFS-1.3	Impact Mitigation
LU-3.3	High-Density Residential Locations	PFS-1.15	Efficient Expansion
LU-4.1	Neighborhood Commercial Uses	PFS-2.	Water Supply
LU-7.1	Distinctive Neighborhoods	PFS-2.2	Adequate Systems
LU-7.2	Integrate Natural Features	PFS-3.3	New Development Requirements
LU-7.3	Friendly Streets	PFS-5.3	Solid Waste Reduction
LU-7.15	Energy Conservation	PFS-5.4	County Usage of Recycled Materials and Products
ED-2.3	New Industries	PFS-5.5	Private Use of Recycled Products
ED-2.8	Jobs/Housing Ratio	PFS-8.3	Location of School Sites
ED-5.9	Bikeways	PFS-8.5	Government Facilities and Services
ED-6.1	Revitalization of Community Centers	WR-1.5	Expand Use of Reclaimed Wastewater
ED-6.2	Comprehensive Redevelopment Plan		
ED-6.3	Entertainment Venues		
ED-6.4	Culturally Diverse Business		
ED-6.5	Intermodal Hubs for Community and		

Draft Environmental Impact Report
Pixley Community Plan

Table 3.7-5: General Plan Policies Having Greenhouse Gas Emission Reductions
Sustainability and Greenhouse Gas Emissions

	Hamlet Core Areas	WR-1.6	Expand Use of Reclaimed Water
ED-6.7	Existing Commercial Centers	WR-3.5	Use of Native and Drought Tolerant
SL-3.1	Community Centers and Neighborhoods		Landscaping

Source: Tulare County General Plan 2030 Update.

Development within the Pixley Community is required to show consistency with the General Plan, the Pixley Community Plan, and the CAP. Since no specific development projects are proposed as part of the Pixley Community Plan Update, growth is expected to occur in areas currently designated for development. Projects consistent with these plans and built according to county and state standards can be assumed to have a less than significant impact on climate change. New projects requiring additional county approvals would be required to show consistency with plans, regulations, and thresholds in place at the time of approval.

Consistency with San Joaquin Valley Air Pollution Control District Plans

The District adopted its own procedures for addressing climate change impacts of projects where the District issues a permit. For these projects, the District is either a Lead Agency or a Responsible Agency for CEQA purposes. The procedures do not apply directly to projects subject to County approval; however, development projects that include stationary source emissions requiring a District permit would need to comply with District procedures.

The District adopted the Climate Change Action Plan (CCAP) in 2008, the mandates of which have been described in Section 3.3, Regulatory Framework. The Carbon Exchange Program is not applicable to this project, and the project would not require Voluntary Greenhouse Gas Mitigation Agreements, as greenhouse gas emissions impacts are less than significant. The project would comply with all applicable greenhouse gas regulations contained in the CCAP. The project also achieves the required reductions from business as usual established by the District.

Consistency with AB 32

The California State Legislature adopted AB 32 in 2006. AB 32 focuses on reducing greenhouse gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) to 1990 levels by the year 2020. Pursuant to the requirements in AB 32, the ARB adopted the Climate Change Scoping Plan (Scoping Plan) in 2008, which outlines actions recommended to obtain that goal. The Scoping Plan calls for an “ambitious but achievable” reduction in California’s greenhouse gas emissions, cutting approximately 29 percent from business-as-usual emission levels projected for 2020, or about 10 percent from 2008 levels. On a per-capita basis, that means reducing annual emissions of 14 tons of carbon dioxide for every man, woman, and child in California down to about 10 tons per person by 2020.

Draft Environmental Impact Report
Pixley Community Plan

The Scoping Plan contains a variety of strategies to reduce the State's emissions. As shown In Table 9 [of the GHG Report and shown as Table 3.7-6 in this DEIR], the strategies are either consistent or not applicable to the project."²⁴

Table 3.7-6 Consistency with Scoping Plan Reduction Measures

Scoping Plan Reduction Measure	Project Consistency
1. California Cap-and-Trade Program Linked to Western Climate Initiative. Implement a broad-based California Cap-and-Trade program to provide a firm limit on emissions. Link the California cap-and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California. Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms.	Not applicable. When this cap-and-trade system begins, products or services (such as electricity) would be covered and the cost of the cap-and-trade system would be transferred to the consumers.
2. California Light-Duty Vehicle Greenhouse Gas Standards. Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	Consistent. This is a statewide measure that cannot be implemented by a project applicant or lead agency. However, vehicles accessing projects in the Community would be subject to the standards.
3. Energy Efficiency. Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	Consistent. This is a measure for the state to increase its energy efficiency standards. However, the project would increase its energy efficiency through existing regulation.
4. Renewable Portfolio Standard. Achieve 33 percent renewable energy mix statewide. Renewable energy sources include (but are not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.	Consistent. This is a statewide measure that cannot be implemented by a project applicant or lead agency. Pacific Gas and Electric obtains 19 percent of its power supply from renewable sources such as geothermal. However, residents and businesses in the community will purchase power with increasing amounts of renewable energy content.
5. Low Carbon Fuel Standard. Develop and adopt the Low Carbon Fuel Standard.	Consistent. This is a statewide measure that cannot be implemented by a project applicant or lead agency. However, the standard is applicable to the fuel used by vehicles that would access the project site.
6. Regional Transportation-Related Greenhouse Gas Targets. Develop regional greenhouse gas emissions reduction targets for passenger vehicles. This measure refers to SB 375.	Consistent. The plan area will be constructed to densities consistent with the 2014 RTP/SCS.

²⁴ Ibid. 42-47

Draft Environmental Impact Report
Pixley Community Plan

Table 3.7-6 Consistency with Scoping Plan Reduction Measures

Scoping Plan Reduction Measure	Project Consistency
7. Vehicle Efficiency Measures. Implement light-duty vehicle efficiency measures.	Consistent. The standards would be applicable to the light-duty vehicles that would access the project site.
8. Goods Movement. Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.	Not applicable. The project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
9. Million Solar Roofs Program. Install 3,000 MW of solar-electric capacity under California's existing solar programs.	Consistent. This measure is to increase solar throughout California, which is being done by various electricity providers and existing solar programs. Projects within the plan area will be able to take advantage of incentives that are in place at the time of construction.
10. Medium/Heavy-Duty Vehicles. Adopt medium and heavy-duty vehicle efficiency measures.	Consistent. This is a statewide measure that cannot be implemented by a project applicant or lead agency. However, the standard is applicable to the fuel used by vehicles that would access the project site.
11. Industrial Emissions. Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.	Consistent. This is a statewide measure that cannot be implemented by a project applicant or lead agency. When this measure is initiated, the standards would be applicable to the vehicles that access the project site.
12. High Speed Rail. Support implementation of a high-speed rail system.	Not applicable. It is not likely that industrial sources subject to this measure will be constructed in the community. However, if such a project were proposed, it would require its own environmental review.
13. Green Building Strategy. Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	Not applicable. This is a statewide measure that cannot be implemented by a project applicant or lead agency.
14. High Global Warming Potential Gases. Adopt measures to reduce high global warming potential gases.	Consistent. The State is to increase the use of green building practices. The project would implement some green building strategies through existing regulation.
15. Recycling and Waste. Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	Consistent. This measure is applicable to the high global warming potential gases that would be used by the project (such as in air conditioning and refrigerators).
16. Sustainable Forests. Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation.	Consistent. The project would not contain a landfill. The State is to help increase waste diversion. The project would reduce waste with implementation of state mandated recycling and reuse mandates.

Draft Environmental Impact Report
Pixley Community Plan

Table 3.7-6 Consistency with Scoping Plan Reduction Measures

Scoping Plan Reduction Measure	Project Consistency
17. Water. Continue efficiency programs and use cleaner energy sources to move and treat water.	Not applicable. The project site is in an urban, built-up condition. No forested lands exist onsite.
18. Agriculture. In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.	Consistent. This is a measure for state and local agencies. However, project will comply with the California Green Building Standards Code, which requires a 20 percent reduction in indoor water use.

Source of ARB Scoping Plan Reduction Measure: California Air Resources Board 2008.

Source of Project Consistency or Applicability: First Carbon Solutions, 2013.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures ***No Required.***

Level of Significance After Mitigation

Less Than Significant Impact.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. This cumulative analysis is based on the information provided in the Greenhouse Gas Analysis Report and Tulare County Climate Action Plan.

As the proposed Project is consistent with aforementioned plans, policies, and rules/regulations, ***No Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As the proposed Project is consistent with aforementioned plans, policies, and rules/regulations, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

DEFINITIONS/ACRONYMS

Definitions

Achieved-in-Practice - Any equipment, technology, practice or operation available in the

United States that has been installed and operated or used at stationary source site for a reasonable period of time sufficient to demonstrate that the equipment, technology, practice or operation is reliable when operated in a manner that is typical for the process. In determining whether equipment, technology, practice or operation is Achieved-in-Practice, the District will consider the extent to which grants, incentives or other financial subsidies influence the economic feasibility of its use.

Approved Alternate Technology - Any District approved, Non-Achieved-in- Practice GHG emissions reduction measure equal to or exceeding the GHG emission reduction percentage for a specific BPS.

Baseline - The three year average (2002-2004) of GHG emissions for a type of equipment or operation within an identified class and category, expressed as annual GHG emissions per unit.

Best Performance Standard - For a specific Class and Category, the most effective, District approved, Achieved-In-Practice means of reducing or limiting GHG emissions from a GHG emissions source, that is also economically feasible per the definition of Achieved-in-Practice. BPS includes equipment type, equipment design, and operational and maintenance practices for the identified service, operation, or emissions unit class and category.

Business-as-Usual - The emissions for a type of equipment or operation within an identified class and category Projected for the year 2020, assuming no change in GHG emissions per unit of activity as established for the baseline period

Category - A District approved subdivision within a “class” as identified by unique operational or technical aspects.

Class - The broadest District approved division of stationary GHG sources based on fundamental type of equipment or industrial classification of the source operation.

Global Warming - Global warming is an increase in the temperature of the Earth's troposphere. Global warming has occurred in the past as a result of natural influences, but the term is most often used to refer to the warming predicted by computer models to occur as a result of increased emissions of greenhouse gases.

Greenhouse Gas - Greenhouse gas (GHG) emissions are the release of any gas that absorbs infrared radiation in the atmosphere. Generally when referenced in terms of global climate they are considered to be harmful. Greenhouse gases include, but are not limited to, water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrochlorofluorocarbons (HCFCs), ozone (O₃), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆).

Operational Boundaries - Operational boundaries are defined as “[t]he boundaries that determine the direct and indirect emissions associated with operations owned or controlled by the reporting company. This assessment allows a company to establish which operations and sources cause direct and indirect emissions, and to decide which indirect emissions to include that are a consequence of its operations” (GHG Protocol, 2008).

Acronyms and Abbreviations

AB	Assembly Bill
ARB	Air Resources Board (Short for CARB)
BAU	Business As Usual
BPS	Best Performance Standards
CAA	Clean Air Act
Cal EPA	California Environmental Protection Agency
CARB	California Air Resources Board
CERF	Compost Reduction Emission Factor
CH ₄	Methane
CO ₂	Carbon Dioxide
GHG	Greenhouse Gases
HFCs	Hydrofluorocarbons
MSW	Municipal Solid Waste
N ₂ O	Nitrous Oxide
OPR	Governor's Office of Planning and Research
PFCs	Perfluorocarbons
SF ₆	Sulfur Hexafluoride
AIR DISTRICT	San Joaquin Valley Air Pollution Control District

REFERENCES

Tulare County 2030 General Plan, August 2012

Tulare County 2030 General Plan Background Report, February 2010

District Policy, Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency, San Joaquin Valley Air Pollution Control District, December 17, 2009, which can be accessed at: <http://www.valleyair.org/Programs/CCAP/12-17-09/2%20CCAP%20-%20FINAL%20District%20Policy%20CEQA%20GHG%20-%20Dec%2017%202009.pdf>

Cal/EPA Air Resources Board, which can be accessed at: <http://www.arb.ca.gov/desig/desig.htm>

Cal/EPA Air Resources Board, which can be accessed at:
http://www.arb.ca.gov/planning/sip/co/final_2004_co_plan_update.pdf

San Joaquin Valley Air Pollution Control District Website at:
http://www.valleyair.org/General_info/aboutdist.htm#Mission

Tulare County 2030 General Plan, Recirculated Draft Environmental Impact Report (RDEIR), February 2010

Tulare County – Pixley Community Plan Update Greenhouse Gas Analysis Report” prepared by First Carbon Solutions, September 2014 [which is included as Appendix “D” of this DEIR]

CEQA Guidelines

Hazards and Hazardous Materials

Chapter 3.8

SUMMARY OF FINDINGS

Impacts of the proposed Project are determined to be *Less Than Significant With Mitigation*. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Hazards and Hazardous Materials. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

The environmental setting provides a description of the Hazards and Hazardous Materials in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents

¹ CEQA Guidelines, Section 15126.2 (a)

Draft Environmental Impact Report
Pixley Community Plan

utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

- Create a significant hazard
- Located within one-quarter mile of an existing or proposed school
- Located on a list of hazardous materials sites
- Located within an airport land use plan
- Located within the vicinity of a private airstrip
- Interfere adopted emergency response plan or emergency evacuation plan
- Wildland Fire Risk

ENVIRONMENTAL SETTING

Pixley is basically square in shape and is bisected in a northwest-southeasterly direction by State Route 99 and again by the Union Pacific Railroad (UPRR), which divides the community into two (2) distinct areas. Pixley is currently a highway-oriented service center and single-family residences surrounded on all sides by lands in agricultural production. The topography of the Project area is moderately sloped, with elevations 272 feet above mean sea level.

The Project area contains a variety of industrial and agricultural uses that involve the handling and storage of potentially hazardous materials that could adversely affect soil and groundwater. In addition, the regional transportation route State Route 99 traverses the Project area. State Route 99, as the primary route through Tulare County presents a risk of upset hazards relating to possible spills of hazardous materials.

Development within the UDB would occur in a series of phases over a 28 year period. The existing Pixley Community Plan contains approximately 2,300 acres within the adopted Urban Development Boundary. The proposed Project will result in a net increase in forecasted land demand phased in over a 28 year period is 533 acres. Changes; however, would be gradual and the Plan update includes policies, which would help to reduce any impacts associated with hazardous material.

“A hazardous material is defined by the California Code of Regulations (CCR) as a substance that, because of physical or chemical properties, quantity, concentration, or other characteristics, may either (1) cause an increase in mortality or an increase in serious, irreversible, or incapacitating, illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of (CCR, Title 22, Division 4.5, Chapter 10, Article 2, Section 66260.10).”²

“Similarly, hazardous wastes are defined as materials that no longer have practical use, such as substances that have been discarded, discharged, spilled, contaminated, or are being stored prior to proper disposal. According to Title 22 of the CCR, hazardous materials and hazardous wastes

² General Plan Background Report, page 8-19

Draft Environmental Impact Report
Pixley Community Plan

are classified according to four properties: toxic, ignitable, corrosive, and reactive (CCR, Title 22, Chapter 11, Article 3).”³

Hazardous Waste Shipments Originating Within Tulare County

“A determination of the routes used to transport hazardous waste within Tulare County was performed by analysis of Hazardous Waste Tracking System (HWTS) data on hazardous shipments. Calendar year 2002 manifest data indicates that a total of 1,606 tons of hazardous waste was transported from all categories of generators in Tulare County.”⁴ The quantities of hazardous waste transported from facilities located within each zip code in Tulare County are shown in the Table 3.8-1.

Table 3.8-1
Transport of Hazardous Waste

Zip Code	Total Tons	Zip Code	Total Tons	Zip Code	Total Tons	Zip Code	Total Tons
93219	0.579	93221	19.100	93223	14.73	93227	6.792
93244	4.270	93247	36.370	93256	14.39	93257	155.000
93262	0.459	93271	4.463	93272	17.78	93274	146.700
93275	14.870	93277	407.80	93279	52.01	93286	7.152
93291	321.700	93292	25.600	93615	2.606	93618	139.100
93631	321.700	93647	65.630	93654	4.255	93673	4.915

Source: General Plan Background Report

Environmental Health Department Futures Assessment

“The Environmental Health Department [EHD], of which the CUPA is a part, anticipates a slight increase in the reported volume of hazardous waste generated within Tulare County in year 2003/04. However, EHD does not expect an increase in the actual volume of hazardous waste generated over the same period.”⁵

Visalia Municipal Airport

The nearest airport providing commercial air transportation services for residents of the Pixley community is Visalia Municipal Airport. Visalia Municipal Airport does not have the service demand to economically accommodate large passenger and cargo aircraft and is thus limited to extensive commuter air service. Visalia provides commuter air service to larger airports such as Los Angeles and San Francisco International Airports and Fresno Air Terminal.

Mefford Field

The nearest public or private airport is Mefford Field (in the City of Tulare), approximately 10 miles northwest of the Project area. According to the 2004 Airport Master Plan Initial

³ Ibid., pages 8-19 to 8-20

⁴ Ibid. 8-31

⁵ General Plan Background Report, page 8-32

Draft Environmental Impact Report
Pixley Community Plan

Study/Mitigated Negative Declaration, there are agricultural, industrial and highway commercial uses to the north; and agricultural uses to the east, south, and west.

Tulare Municipal Airport is located 3 miles southeast of the center of the City of Tulare at an elevation of 265 feet mean sea level. The Airport is adjacent to State Highway 99 and is accessed via Avenue 200. This 206-acre airport is owned and managed by the City of Tulare and serves the west central portion of Tulare County.

The Airport is classified as a General Aviation Airport in the FAA *National Plan of Integrated Airport Systems* (NPIAS). General aviation airports serve those communities that do not receive scheduled commercial service. Annual aircraft operations number approximately 10,800, as established by the Tulare County Airport Land Use Commission (ALUC).

No Mefford Field Safety Zones or an Airport Influence Area are located within the Pixley Urban Development Boundary.

REGULATORY SETTING

Federal Agencies & Regulations

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act of 1975 (HMTA) as amended, is the major transportation-related statute affecting DOE. The objective of the HMTA according to the policy stated by Congress is ". . .to improve the regulatory and enforcement authority of the Secretary of Transportation to protect the Nation adequately against risks to life and property which are inherent in the transportation of hazardous materials in commerce."⁶ The HMTA empowered the Secretary of Transportation to designate as hazardous material any "particular quantity or form" of a material that "may pose an unreasonable risk to health and safety or property."

Regulations apply to “. . .any person who transports, or causes to be transported or shipped, a hazardous material; or who manufactures, fabricates, marks, maintains, reconditions, repairs, or tests a package or container which is represented, marked, certified, or sold by such person for use in the transportation in commerce of certain hazardous materials.”⁷

Superfund

“Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), commonly referred to as “Superfund”, was enacted on December 11, 1980. The purpose of CERCLA was to provide authorities with the ability to respond to uncontrolled releases of hazardous substances from inactive hazardous waste sites that endanger public health and the environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at such sites, and established a trust fund to provide for cleanup when no

⁶ US Department of Energy, The Hazardous Materials Transportation Act of 1975 (HMTA) <http://hss.doe.gov/sesa/environment/policy/hmta.html>

⁷ US Department of Energy, The Office of Health, Safety and Security, <http://www.hss.doe.gov/sesa/environment/policy/hmta.html>

responsible party could be identified. Additionally, CERCLA provided for the revision and republishing of the National Contingency Plan (NCP) that provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also provides for the National Priorities List, a list of national priorities among releases or threatened releases throughout the United States for the purpose of taking remedial action.”⁸

“Superfund Amendments and Reauthorization Act SARA amended CERCLA on October 17, 1986. This amendment increased the size of the Hazardous Response Trust Fund to \$8.5 billion, expanded EPA’s response authority, strengthened enforcement activities at Superfund sites; and broadened the application of the law to include federal facilities. In addition, new provisions were added to the law that dealt with emergency planning and community right to know. SARA also required EPA to revise the Hazard Ranking System to ensure that the system accurately assesses the relative degree of risk to human health and the environment posed by sites and facilities subject to review for listing on the National Priorities List.”⁹

Federal Aviation Regulations

Sec. 77.17 — Form and time of notice

- (a) Each person who is required to notify the Administrator under §77.13(a) shall send one executed form set (four copies) of FAA Form 7460–1, Notice of Proposed Construction or Alteration, to the Manager, Air Traffic Division, FAA Regional Office having jurisdiction over the area within which the construction or alteration will be located. Copies of FAA Form 7460–1 may be obtained from the headquarters of the Federal Aviation Administration and the regional offices.
- (b) The notice required under §77.13(a) (1) through (4) must be submitted at least 30 days before the earlier of the following dates:
 - (1) The date the proposed construction or alteration is to begin.
 - (2) The date an application for a construction permit is to be filed.However, a notice relating to proposed construction or alteration that is subject to the licensing requirements of the Federal Communications Act may be sent to FAA at the same time the application for construction is filed with the Federal Communications Commission, or at any time before that filing.
- (c) A proposed structure or an alteration to an existing structure that exceeds 2,000 feet in height above the ground will be presumed to be a hazard to air navigation and to result in an inefficient utilization of airspace and the applicant has the burden of overcoming that presumption. Each notice submitted under the pertinent provisions of this part 77 proposing a structure in excess of 2,000 feet above ground, or an alteration that will make an existing structure exceed that height, must contain a detailed showing, directed to meeting this burden. Only in exceptional cases, where the FAA concludes that a clear and compelling showing has been made that it would not result in an inefficient utilization of the airspace and would not result in a hazard to air navigation, will a determination of no hazard be issued.

⁸ General Plan Background Report, page 8-20

⁹ Ibid.8-21

- (d) In the case of an emergency involving essential public services, public health, or public safety that requires immediate construction or alteration, the 30-day requirement in paragraph (b) of this section does not apply and the notice may be sent by telephone, telegraph, or other expeditious means, with an executed FAA Form 7460–1 submitted within 5 days thereafter. Outside normal business hours, emergency notices by telephone or telegraph may be submitted to the nearest FAA Flight Service Station.
- (e) Each person who is required to notify the Administrator by paragraph (b) or (c) of §77.13, or both, shall send an executed copy of FAA Form 117–1, Notice of Progress of Construction or Alteration, to the Manager, Air Traffic Division, FAA Regional Office having jurisdiction over the area involved.

State Agencies & Regulations

Hazardous Substance Account Act (1984), California Health and Safety Code Section 25300 et seq. (HSAA)

“This act, known as the California Superfund, has three purposes: 1) to respond to releases of hazardous substances; 2) to compensate for damages caused by such releases; and 3) to pay the states 10 percent share in CERCLA cleanups. Contaminated sites that fail to score above a certain threshold level in the EPA’s ranking system may be placed on the California Superfund list of hazardous wastes requiring cleanup.”¹⁰

California Environmental Protection Agency (Cal/EPA) Department of Toxic Substance Control (DTSC)

“Cal/EPA has regulatory responsibility under Title 22 of the California Code of Regulations (CCR) for administration of the state and federal Superfund programs for the management and cleanup of hazardous materials. The DTSC is responsible for regulating hazardous waste facilities and overseeing the cleanup of hazardous waste sites in California. The Hazardous Waste Management Program (HWMP) regulates hazardous waste through its permitting, enforcement and Unified Program activities. HWMP maintains the EPA authorization to implement the RCRA program in California, and develops regulations, policies, guidance and technical assistance/ training to assure the safe storage, treatment, transportation and disposal of hazardous wastes. The State Regulatory Programs Division of DTSC oversees the technical implementation of the state’s Unified Program, which is a consolidation of six environmental programs at the local level, and conducts triennial reviews of Unified Program agencies to ensure that their programs are consistent statewide and conform to standards.”¹¹

California Occupational Safety and Health Administration (Cal/OSHA)

“Cal/OSHA and the Federal OSHA are the agencies responsible for assuring worker safety in the handling and use of chemicals in the workplace. Pursuant to the Occupational Safety and Health Act of 1970, Federal OSHA has adopted numerous regulations pertaining to worker safety, contained in the Code of Federal Regulations Title 29 (29 CFR). These regulations set standards

¹⁰ Ibid. 8-22

¹¹ General Plan Background Report, pages 8-22 and 8-23

Draft Environmental Impact Report
Pixley Community Plan

for safe workplaces and work practices, including standards relating to hazardous material handling. Cal/OSHA assumes primary responsibility for developing and enforcing state workplace safety regulations. Because California has a federally General Plan Background Report December 2007 approved OSHA program, it is required to adopt regulations that are at least as stringent as those identified in 29 CFR. Cal/OSHA standards are generally more stringent than federal regulations.”¹²

Hazardous Materials Transport Regulations

“California law requires that Hazardous Waste (as defined in California Health and Safety Code Division 20, Chapter 6.5) be transported by a California registered hazardous waste transporter that meets specific registration requirements. The requirements include possession of a valid Hazardous Waste Transporter Registration, proof of public liability insurance, which includes coverage for environmental restoration, and compliance with California Vehicle Code registration regulations required for vehicle and driver licensing.”¹³

Cal/EPA Cortese List

“The provisions in Government Code Section 65962.5 are commonly referred to as the "Cortese List" (after the Legislator who authored the legislation that enacted it). The list, or a site's presence on the list, has bearing on the local permitting process as well as on compliance with the California Environmental Quality Act (CEQA).”¹⁴ The Cortese List identifies the following:

- Hazardous Waster and Substance Sites
- Cease and desist order Sites
- Waste Constituents above Hazardous Waste Levels outside the Waste Management Unit Sites
- Leaking Underground Storage Tank (LUST) Cleanup Sites
- Other Cleanup Sites
- Land Disposal Sites
- Military Sites
- WDR Sites
- Permitted Underground Storage Tank (UST) Facilities Sites
- Monitoring Wells Sites
- DTSC Cleanup Sites
- DTSC Hazardous Waste Permit Sites

¹² Ibid., pages 8-23 and 8-24

¹³ Op. Cit. 8-24

¹⁴ Cal/EPA Cortese List background, <http://www.calepa.ca.gov/sitecleanup/corteselist/Background.htm>

Table 3.8-2
Hazardous Waste and Substances Site List (Cortese List) Pixley, 2014

City	Address	Zip	Site Name
Pixley	1494 S. Airport Drive	93256	Harmon Field

Source: California Department of Toxic Substance Control, 2014

“Harmon Field (Former Pixley Airport Site)

Harmon Field is a former airport owned by Tulare County. This site is located on South Airport Road in Pixley. In 1985, Harmon Field was placed on the State Priority Ranking List, a ranking of hazardous materials sites, by the former Department of Health Services, now the Department of Toxic Substance Control (DTSC).” “The airport was closed in 1994. In December 2010, the Final Remediation Action Plan for the Harmon Field Site... was approved by the DTSC... The Tulare County Board of Supervisors, on October 29, 2013 awarded the Tulare County-Harmon Field Low Temperature Thermal Desorption (LTD) Soil Remediation Project contract to Pacific States Environmental Contractor, Inc. The estimated completion date of the remediation project is the fall of 2014.”¹⁵

Airport Land Use

The purpose of the California State Aeronautics Act (SSA) pursuant to Public Utilities Code (PUC), Section 21001 et seq., “is to protect the public interest in aeronautics and aeronautical progress.” The California Department of Transportation, Division of Aeronautics, administers much of this statute. The purpose of the California Airport Land Use Planning Handbook (*Handbook*) is to provide guidance for conducting airport land use compatibility planning as required by Article 3.5, Airport Land Use Commissions, and PUC Sections 21670 – 21679.5. Article 3.5 outlines the statutory requirements for Airport Land Use Commissions (ALUCs) including the preparation of an Airport Land Use Compatibility Plan (ALUCP). Article 3.5 mandates that the Division of Aeronautics create a *Handbook* that contains the identification of essential elements for the preparation of an Airport Land Use Compatibility Plan (PUC Sections 21674.5 and 21674.7). This *Handbook* is intended to (1) provide information to ALUCs, their staffs, airport proprietors, cities, counties, consultants, and the public, (2) to identify the requirements and procedures for preparing effective compatibility planning documents, and (3) define exemptions where applicable.

California State Aeronautics Act

The California State Aeronautics Act is implemented by Caltrans Division of Aeronautics. The purpose of this Act is to: (1) foster and promote safety in aeronautics; (2) ensure state laws and regulations relating to aeronautics are consistent with federal aeronautics laws and regulations; (3) assure that persons residing in the vicinity of airports are protected against intrusions by unreasonable levels of aircraft noise; and (4) develop informational programs to increase the understanding of current air transportation issues. Caltrans Division of Aeronautics issues permits for and annually inspects hospital heliports and public-use airports, makes

¹⁵ Harmon Field Preliminary Industrial Development Plan, December 2013, page 2

recommendations regarding proposed school sites within 2 miles of an airport runway, and authorizes helicopter landing sites at/near schools.

Local Policy & Regulations

Tulare County Environmental Health Division

“The Tulare County Department of Public Health (TCDPH) protects health, prevents disease, and promotes the health and well-being for all persons in Tulare County. Public Health focuses on the population as a whole, rather than individuals. We conduct our activities through a network of public health professionals throughout the community. Public health nurses make home visits to families with communicable diseases; epidemiologists investigate and analyze data on diseases; our emergency preparedness unit responds to health related emergencies and assists communities in recovery; environmental health specialists ensure safe food, water, and housing; health operations assures the quality and accessibility of health services; and all work with community coalitions to advocate for public policies to protect and improve health.”¹⁶

Comprehensive Airport Land Use Plan (ALUC)

Influence Area Findings

To be consistent with PUC and PRC requirements, the Tulare County ALUC makes the following findings:

- a. The Airport Influence Area shall be an area that is inclusive of all of the various restriction zones created for managing airport land use compatibility. Specifically these include:
 - Airport height restriction zones
 - Airport safety zones
 - Aircraft noise restriction zones
 - Aircraft overflight zones
 - Any proposed public, private or charter school site, or community college site, within two miles of the airport runway at one of the County’s public-use airports.
- b. Airport master plans alone may not be sufficient to meet ALUC responsibilities with respect to aircraft noise. Consequently, the ALUC may have to rely on other documentation, including CEQA documentation associated with the airport master plans or General Plan Noise Elements, to determine noise restriction zones. In the absence of other relevant and qualified sources, the ALUC may need to develop its own interpretation of aircraft noise based on the policies presented in Section 2.5 (specifically see Policy 2.5.3.d).

¹⁶ Tulare County Environmental Health Webpage, <http://www.tularehhsa.org/index.cfm/public-health/about-phd/>

Draft Environmental Impact Report
Pixley Community Plan

Tulare Municipal Airport is located 3 miles southeast of the center of the City of Tulare at an elevation of 265 feet mean sea level. The Airport is adjacent to State Highway 99 and is accessed via Avenue 200. This 206-acre airport is owned and managed by the City of Tulare and serves the west central portion of Tulare County.

The Airport is classified as a General Aviation Airport in the FAA *National Plan of Integrated Airport Systems* (NPIAS). General aviation airports serve those communities that do not receive scheduled commercial service. Annual aircraft operations number approximately 10,800, as established by the Tulare County Airport Land Use Commission (ALUC).

No Mefford Field Safety Zones or an Airport Influence Area are located within the Pixley Urban Development Boundary.

Union Pacific Railroad

The Union Pacific Railroad (UPRR) runs parallel along the East side of SR 99. This is an existing railroad that was built in 1872. Pixley prospered as a major grain shipping point for many years until a series of fires, poor crops, and low prices induced many families to leave. In addition, the water levels declined and groundwater needed to be pumped to the surface.

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed as follows:

HS-3.1 Airport Land Use Compatibility Plan - The County shall require that development around airports is consistent with the safety policies and land use compatibility guidelines contained in the adopted Tulare County Comprehensive Airport Land Use Plan (CALUP).

HS-4.1 Hazardous Materials - The County shall strive to ensure hazardous materials are used, stored, transported, and disposed of in a safe manner, in compliance with local, State, and Federal safety standards, including the Hazardous Waste Management Plan, Emergency Operations Plan, and Area Plan.

HS-4.3 Incompatible Land Uses - The County shall prevent incompatible land uses near properties that produce or store hazardous waste.

HS-4.4 Contamination Prevention - The County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination.

HS-4.6 Pesticide Control - The County shall monitor studies of pesticide use and the effects of pesticide on residents and wildlife and require mitigation of the effects wherever feasible and appropriate.

ERM-3.1 Environmental Contamination - All mining operations in the County shall be required to take precautions to avoid contamination from wastes or incidents related to the storage and disposal of hazardous materials, or general operating activity at the site.

IMPACT EVALUATION

Would the project:

- a) **Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

Project Impact Analysis: *Less Than Significant Impact With Mitigation*

The Community Plan contemplates a wide variety of potential end uses, including industrial, office, hotels, retail, residential, and open space. The Community Plan acknowledges and recognizes that there are a number of existing hazardous materials users within and near the Planning Area, and is intended to promote land use compatibility by locating the most sensitive uses (i.e., residential and schools) as far away as possible from the most intensive uses. Additionally, the Community Plan's land use pattern is designed to locate non-sensitive land uses (e.g., office, retail, and etc.) between the most intensive uses and the most sensitive uses to provide additional buffering. As such, the Community Plan intends to minimize exposure of the public or environment to existing routine hazardous materials usage within and near the plan area.

Moreover, new development or redevelopment in the Project area would typically involve the routine management of some hazardous materials that could pose a significant threat to human health or the environment if not properly managed or if accidentally released. During construction, this would include the use of fuels, lubricants, and other potential hazardous materials typically associated with heavy construction equipment. During operation, it is anticipated that small quantities of cleaning, maintenance, and landscaping chemicals would be used and stored in nearly all buildings developed under the Community Plan, and industrial uses, even under the performance standards contained in the Community Plan, may potentially use additional types of hazardous materials.

The routine storage, use, handling, generation, transport, and disposal of hazardous materials during site construction and operation activities are addressed by federal, state, and local laws, regulations, and programs, including the Resource Conservation and Recovery Act, the Toxic Substances Control Act, DOT regulations in 49 CFR, and hazardous materials regulations in CCR Title 26 at the federal and state levels. Cal/OSHA is responsible for developing and enforcing workplace safety standards, including the handling and use of hazardous materials. At the local level construction and operation-related activities of facilities will comply with the California fire code, local building codes (including requirements for fire suppression systems), and gas pipeline regulations. The Tulare County Fire Department will be responsible for enforcing provisions of the fire code. The California Public Utilities Code regulates the safety of gas transmission pipelines.

Based on this analysis, should future uses within the Project area propose the use of large quantities of hazardous materials, Mitigation Measure 8-1 will require that they be evaluated for compatibility with surrounding area. With implementation of Mitigation Measure 8-1 would reduce potential Project-specific impacts related to this Checklist Item to ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

Cumulative development throughout the Project area and its vicinity, under 28-year build out conditions will cumulatively increase the potential for exposure to existing hazards associated with State Route 99. However, as discussed earlier, the transportation of hazardous materials will continue to be regulated by federal, state, and regional agencies, and all new development will be subject to independent environmental review and all applicable regulations to minimize any potential health risks associated with freeways. Therefore, through appropriate regulations, potential cumulative health impacts associated with the build out of the Project area would be ***Less Than Significant Impact With Mitigation*** related to this Checklist Item.

Mitigation Measure(s):

8-1 Prior to issuance of building permits for any new use within the Project area that proposes to use large quantities of hazardous materials, the County of Tulare shall review the project application for compatibility with existing and planned land uses. The review process shall focus on the location of existing and planned sensitive receptors (e.g., residential uses and schools) and whether the proposed hazardous material usage would expose such uses to unacceptable safety risks. If necessary, the County of Tulare will condition the proposed hazardous materials user to incorporate appropriate protection measures (e.g., containment facilities).

Conclusion: ***Less Than Significant Impact With Mitigation***

Less Than Significant Project-specific and Cumulative Impacts related to this Checklist Item will occur.

- b) **Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?**

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

The proposed Project will not involve any hazards or hazardous materials. All new development will be subject to independent environmental review and all applicable regulations to minimize any potential health risks associated with freeways. Therefore, through appropriate regulations, potential cumulative health impacts associated with the build out of the Project area would be ***Less Than Significant Impact With Mitigation*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

With the implementation of the Mitigation Measure mentioned earlier, potential Project-specific impacts related to this Checklist Item will be ***Less Than Significant***. With Less Than Significant Project-specific impacts, ***No Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s):

See Mitigation Measure 8-1

Conclusion: ***Less than Significant Impact With Mitigation***

With implementation of Mitigation Measure 8-1, potential Project-specific impacts related to this Checklist Item will be reduced to ***Less Than Significant***. ***Less Than Significant Cumulative Impacts*** related to this Checklist Item will occur.

- c) **Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

Project Impact Analysis: ***No Impact***

“The community of Pixley has an Elementary School and a Middle school. High School education is provided by the Tulare Joint Union High School District.”¹⁷ As previously discussed, all hazardous materials will be properly handled in accordance with applicable regulations. Therefore, ***No Impact*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

¹⁷ Pixley Community Plan Update, page 35

Therefore, ***No Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

Project Impact Analysis: ***Less Than Significant Impact***

The proposed Project will not involve any hazards or hazardous materials. Although, Harmon Field is a former airport owned by Tulare County. This site is located on South Airport Road in Pixley. In 1985, Harmon Field was placed on the State Priority Ranking List, a ranking of hazardous materials sites, by the former Department of Health Services, now the Department of Toxic Substance Control (DTSC).” “The airport was closed in 1994. In December 2010, the Final Remediation Action Plan for the Harmon Field Site... was approved by the DTSC... The Tulare County Board of Supervisors, on October 29, 2013 awarded the Tulare County-Harmon Field Low Temperature Thermal Desorption (LTD) Soil Remediation Project contract to Pacific States Environmental Contractor, Inc. The estimated completion date of the remediation project is the fall of 2014.”¹⁸ Therefore, ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will also occur.

Cumulative Impact Analysis: ***Less-Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will not cause other properties to be included in the Cortese List. ***Less Than Significant Cumulative Impacts*** will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less-Than Significant Impact***

As noted earlier, a Work Order has been issued and cleanup to be completed in the fall of 2014, for the one identified site within the Project area. As such, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

- e) For a project located within an airport land use plan or, where such a plan has not been**

¹⁸ Harmon Field Preliminary Industrial Development Plan, December 2013, page 2

adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

Project Impact Analysis: *No Impact*

As noted earlier, the nearest airport (Mefford Field) is located approximately 10 miles north of the Project area. Therefore, the Project would not result in a safety hazard for people residing or working in the Project area.

No developments are proposed as part of this Project and future development will also be outside of any Airport Safety Zones. Therefore, *No Impact Program - specific Impacts* related to this Checklist Item will occur.

Cumulative Impact Analysis: *No Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

No Impacts will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *No Impact*

As noted earlier, *No Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

- f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?**

Project Impact Analysis: *No Impact*

As noted earlier, the nearest airport (Mefford Field) is located approximately 10 miles north of the Project area. Therefore, the Project would not result in a safety hazard for people residing or working in the project area. For this reason, *No Impact* would occur to Project-specific impacts to safety hazard for people residing or working in the Project area

Cumulative Impact Analysis: *No Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

Therefore, *No Cumulative Impacts* related to this Checklist Item will occur.

Mitigation Measure(s): *None Required*

Conclusion: *No Impact*

As noted earlier, *No Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Project Impact Analysis: *Less Than Significant Impact*

“Tulare County has in place an emergency plan to cope with natural disasters that are statewide or happen locally. The County Fire Department and local stationed California Department of Forestry (CDF) are well prepared to fight fires locally as well as statewide. The United States Forest Service (USFS) is in charge of fires that happen in the national parks and Tulare County assists with the fire management process as needed.”¹⁹

“In the event of a disaster, certain facilities are critical to serve as evacuation centers, provide vital services, and provide for emergency response. Existing critical facilities in Tulare County include hospitals, county dispatch facilities, electrical, gas, and telecommunication facilities, water storage and treatment systems, wastewater treatment systems, schools, and other government facilities. This plan also addresses evacuation routes, which include all freeways, highways, and arterials that are located outside of the 100-year flood plain.”²⁰ As such, compliance with these standards would ensure that *Less Than Significant Impacts* related to this Checklist Item will occur.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project does not include alterations to an emergency plan and there is sufficient access for emergency vehicles. Therefore, *Less Than Significant Cumulative Impacts* related to this Checklist Item will occur.

Mitigation Measure(s): *None Required*

Conclusion: *Less Than Significant Impact*

As noted earlier, *Less Than Significant Project-specific and Cumulative Impacts* related to this Checklist Item will occur.

h) Expose people or structures to a significant risk of loss, injury or death involving

¹⁹ TCAG Regional Transportation Plan, Page 1-11

²⁰ General Plan Background Report, page 8-35 to 8-36

wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Project Impact Analysis: *No Impact*

As the proposed Project is located outside of any wildland areas, the proposed Project area will not result in any exposure to people or structures to a significant risk of loss, injury or death from wildland fires. *No Project-specific Impacts* related to this Checklist Item will occur.

Cumulative Impact Analysis: *No Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The Project area is not located in a wildland area and will not impact the status of wildlands. Therefore, *No Cumulative Impacts* related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *No Impact*

As noted earlier, *No Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

DEFINITIONS/ACRONYMS

Definitions

Hazardous Waste Generators - “Hazardous waste generators can be classified in three groups depending on the quantity of waste generated in any month. A Conditionally Exempt Small Quantity Generator (CESQG) is defined in regulation as a generator of less than 100 kilograms of hazardous waste in a calendar month. A Small Quantity Generator (SQG) is a generator of greater than 100 kg and less than 1000 kg of hazardous waste in a calendar month. A Large Quantity Generator (LQG) generates greater than 1000 kg of hazardous waste in a calendar month. Determination of whether a facility is a CESQG, SQG, or LQG is the responsibility of the generator. The designation may change during the year, based on the quantity of hazardous waste produced during a particular month. Specific hazardous waste materials may also be exempt from the monthly total quantity. Therefore, the Certified Unified Program Agencies (CUPA) cannot authoritatively designate the number of generators within each of the above categories.”²¹

Small Quantity Generators - “CUPA has designated 58 active and 30 inactive small quantity generators (SQG’s). The total estimated quantities of hazardous waste generated within Tulare

²¹ General Plan Background Report, page 8-28 to 8-29

Draft Environmental Impact Report
Pixley Community Plan

County by active and inactive SQG's during calendar year 2002 were 121.7 and 56.3 tons, respectively."²²

Large Hazardous Waste Producers - "CUPA has designated 23 active and 3 inactive large quantity generators (LQG's). The total estimated quantities of hazardous waste generated within Tulare County by active and inactive LQG's during calendar year 2002 were 559.7 and 121.6 tons, respectively."²³

Storage Facilities - "According to available information from the agencies (Department of Toxic Substances Control [DTSC] and RWQCB) that oversee treatment, storage and disposal facilities (TSDFs), there are no facilities authorized for the storage of hazardous waste in Tulare County."²⁴

Disposal Facilities - "According to available information from the agencies (DTSC and RWQCB) that oversee treatment, storage and disposal facilities (TSDFs), there are no facilities authorized for the disposal of hazardous waste in Tulare County."²⁵

Planned Treatment, Storage and Disposal Facilities - "According to information available to the CUPA, there are no new treatment, storage and disposal facilities proposed in Tulare County."²⁶

Acronyms

CDF/CalFire	California Department of Forestry and Fire Protection
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
DOE	United States Department of Energy
DTSC	California Environmental Protection Agency, Department of Toxic Substance Control
HMTA	Hazardous Materials Transportation Act of 1975
HWMP	Hazardous Waste Management Program
HWTS	Hazardous Waste Tracking System
LUST	Leaking Underground Tank
NCP	National Contingency Plan
SARA	Superfund Amendments and Reauthorization Act
USFS	United States Forest Service

REFERENCES

²² Ibid.

²³ Op. Cit.

²⁴ Op. Cit.

²⁵ Op. Cit.

²⁶ Op. Cit.

Cal/EPA Cortese List background, which can be accessed at:
<http://www.calepa.ca.gov/sitecleanup/corteselist/Background.htm>. Accessed November, 2014.

Tulare County Association of Government Regional Transportation Plan, Page 1-11

Tulare County General Plan 2030 Update Background Report, page 8-19, 20, 21, 22, 23, 24, 31, 32, 35, 36

United States Department of Energy, The Office of Health, Safety and Security, which can be accessed at: <http://homer.ornl.gov/sesa/environment/policy/hmta.html>. Accessed October, 2014.

Caltrans Division of Aeronautics, which can be accessed at
<http://www.dot.ca.gov/hq/planning/aeronaut>

Federal Aviation Administration, which can be accessed at: <http://www.faa.gov/arp/arphome.html>.

CEQA Guidelines; including Section 15126.2 (a)

Hydrology and Water Quality

Chapter 3.9

SUMMARY OF FINDINGS

The proposed Project will result in *Less Than Significant Impacts with Mitigation* related to Hydrology and Water Quality. The Pixley Water Usage Memorandum, prepared by consultant Provost & Pritchard, is included as Appendix “G” of this document which is used as the basis for determining this Project will result in less than significant impacts.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Hydrology and Water Quality. As required in Section 15126, all phases of the proposed Project will be considered was part of the potential environmental impact.

As noted in 15126.2 (a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area, as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

The environmental setting provides a description of the Hydrology and Water Quality in the County. The regulatory setting provides a description of applicable Federal, State and Local

¹ CEQA Guidelines, Section 15126.2 (a)

Draft Environmental Impact Report
Pixley Community Plan

regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, the Tulare County General Plan Background Report and/or the Tulare County General Plan Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA checklist item questions. The following are potential thresholds for significance.

- Project not in compliance with the regulations outlined by the State Water Resources Control Board.
- Project not in compliance with the regulations by the Regional Water Quality Control Board.
- Design of stormwater facilities will not adequately protect surface water quality.
- Project will cause erosion.
- Project will alter watercourse and increase flooding impacts.
- Project's water usage not assessed in the Tulare County 2030 General Plan (General Plan Amendment, Zone Change, etc.).
- Project that will impact service levels of a Water Services District.
- Project includes or requires an expansion of a Water Service District.
- Project in flood zone.
- Project will create a flood safety hazard.
- Project located immediately downstream of a dam.
- Project violate any water quality standards or waste discharge requirements.
- Project will substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
- Project will substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.
- Project will substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.
- Project will create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- Project will otherwise substantially degrade water quality; place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- Project will place within a 100-year flood hazard area structures which would impede or redirect flood flows.

Draft Environmental Impact Report
Pixley Community Plan

- Project will expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; and/or be subject to inundation by seiche, tsunami, or mudflow.

ENVIRONMENTAL SETTING

“The Tulare Lake Hydrologic Region covers approximately 10.9 million acres (17,050 square miles) and includes all of Kings and Tulare counties and most of Fresno and Kern counties... The southern portion of the San Joaquin Valley is subdivided into two separate basins, the San Joaquin and the Tulare, by a rise in the valley floor resulting from an accumulation of alluvium between the San Joaquin River and the Kings River fan. The valley floor in this region had been a complex series of interconnecting natural sloughs, canals, and marshes.”²

“The Basin is one of the most important agricultural centers of the world. Industries related to agriculture, such as food processing and packaging (including canning, drying, and wine making), are prominent throughout the area. Producing and refining petroleum lead non-agricultural industries in economic importance.”³

The Tulare Lake Hydrologic Region has both watershed areas (surface water) and groundwater sub basin areas. See **Figure 3.9-1** below.

Watershed (Surface Water)

“The Tulare Lake region is divided into several main hydrologic subareas: the alluvial fans from the Sierra foothills and the basin subarea (in the vicinity of the Kings, Kaweah, and Tule rivers and their distributaries); the Tulare Lake bed; and the southwestern uplands. The alluvial fan/basin subarea is characterized by southwest to south flowing rivers, creeks, and irrigation canal systems that convey surface water originating from the Sierra Nevada. The dominant hydrologic features in the alluvial fan/basin subarea are the Kings, Kaweah, Tule, and Kern rivers and their major distributaries.”⁴

“Surface water from the Tulare Lake Basin only drains north into the San Joaquin River in years of extreme rainfall. This essentially closed basin is situated in the topographic horseshoe formed by the Diablo and Temblor Ranges on the west, by the San Emigdio and Tehachapi Mountains on the south, and by the Sierra Nevada Mountains on the east and southeast.”⁵

Surface Water Quality

“Surface water quality in the Basin is generally good, with excellent quality exhibited by most eastside streams. The Regional Water Board intends to maintain this quality.”⁶ Specific objectives outlined in the Water Quality Control Plan are listed below:⁷

² California Water Plan Update 2009, Tulare Lake, page TL-5

³ Water Quality Control Plan for the Tulare Lake Basin, page I-1

⁴ California Water Plan Update 2009, Tulare Lake, page TL-8

⁵ Water Quality Control Plan for the Tulare Lake Basin, page I-1

⁶ Ibid. III-3

⁷ Ibid. III-2 to III-7

Draft Environmental Impact Report
Pixley Community Plan

- **Ammonia:** Waters shall not contain un-ionized ammonia in amounts which adversely affect beneficial uses. In no case shall the discharge of wastes cause concentrations of un-ionized ammonia (NH₃) to exceed 0.025 mg/l (as N) in receiving waters.

Bacteria: In waters designated REC-1, the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400/100 ml.

- **Biostimulatory Substances:** Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
- **Chemical Constituents:** Waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses.
- **Color:** Waters shall be free of discoloration that causes nuisance or adversely affects beneficial uses.
- **Dissolved Oxygen:** Waste discharges shall not cause the monthly median dissolved oxygen concentrations (DO) in the main water mass (at centroid of flow) of streams and above the thermocline in lakes to fall below 85 percent of saturation concentration, and the 95 percentile concentration to fall below 75 percent of saturation concentration.
- **Floating Material:** Waters shall not contain floating material, including but not limited to solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.
- **Oil and Grease:** Waters shall not contain oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.
- **pH:** The pH of water shall not be depressed below 6.5, raised above 8.3, or changed at any time more than 0.3 units from normal ambient pH.
- **Pesticides:** Waters shall not contain pesticides in concentrations that adversely affect beneficial uses.
- **Radioactivity:** Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life or which result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.
- **Salinity:** Waters shall be maintained as close to natural concentrations of dissolved matter as is reasonable considering careful use of the water resources.
- **Sediment:** The suspended sediment load and suspended sediment discharge rate of waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
- **Settleable Material:** Waters shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.
- **Tastes and Odors:** Waters shall not contain taste- or odor-producing substances in concentrations that cause nuisance, adversely affect beneficial uses, or impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin or to domestic or municipal water supplies.

Draft Environmental Impact Report
Pixley Community Plan

- **Temperature:** Natural temperatures of waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses.
- **Toxicity:** All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life...
- **Turbidity:** Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.

Surface Water Supply

“Surface water supplies for the Tulare Lake Basin include developed supplies from the [Central Valley Project] CVP, the [State Water Project] SWP, rivers, and local projects. Surface water also includes the supplies for required environmental flows. Required environmental flows are comprised of undeveloped supplies designated for wild and scenic rivers, supplies used for instream flow requirements, and supplies used for Bay-Delta water quality and outflow requirements. Finally, surface water includes supplies available for reapplication downstream. Urban wastewater discharges and agricultural return flows, if beneficially used downstream, are examples of reapplied surface water.”⁸

“Along the eastern edge of the valley, the Friant-Kern Canal is used to divert San Joaquin River water from Millerton Lake for delivery to agencies extending into Kern County. All of the Tulare Lake region’s streams are diverted for irrigation or other purposes, except in the wettest years. Historically, they drained into Tulare Lake, Kern Lake, or adjacent Buena Vista Lake. The latter ultimately drained to Tulare Lake, which is about 30 feet lower in elevation.”⁹

“The Kings, Kaweah, Tule, and Kern Rivers, which drain the west face of the Sierra Nevada Mountains, are of excellent quality and provide the bulk of the surface water supply native to the Basin. Imported surface supplies, which are also of good quality, enter the Basin through the San Luis Canal/California Aqueduct System, Friant-Kern Canal, and the Delta- Mendota Canal. Adequate control to protect the quality of these resources is essential, as imported surface water supplies contribute nearly half the increase of salts occurring within the Basin.”¹⁰

Ground Water Sub Basin

“The Tulare Lake Hydrologic Region has 12 distinct groundwater basins and seven sub-basins of the San Joaquin Valley Groundwater Basin, which crosses north into the San Joaquin River Hydrologic Region. These basins underlie approximately 5.33 million acres (8,330 square miles) or 49 percent of the entire hydrologic region. Groundwater has historically been important to both urban and agricultural uses, accounting for 41 percent of the region’s total annual supply and 35 percent of all groundwater use in the state. Groundwater use in the region represents about 10 percent of the state’s overall water supply for agricultural and urban uses.”¹¹

“Water agencies in the Tulare Lake region have been practicing conjunctive use for many years

⁸ General Plan Background Report, page 10-7

⁹ California Water Plan Update 2009, Tulare Lake, page TL-5

¹⁰ Water Quality Control Plan for the Tulare Lake Basin, page I-1

¹¹ California Water Plan Update 2009, Tulare Lake, page TL-9 to TL-10

Draft Environmental Impact Report Pixley Community Plan

to manage groundwater and assist dry year supplies. Groundwater recharge is primarily from rivers and natural streambeds, irrigation water percolating below the root zone of irrigated fields, direct recharge from developed ponding basins and water banks, and in-lieu recharge where surface water is made available in-lieu of groundwater pumping. Some water agencies accomplish recharge by directing available water into existing natural streambeds and sloughs, and others encourage application of water, when available, on farmed fields. The Deer Creek and Tule River Authority provides an example of how groundwater management activities can be coordinated with other resources. The authority, in conjunction with the US Bureau of Reclamation, has constructed more than 200 acres of recharge basins as part of its Deer Creek Recharge-Wildlife Enhancement Project. When available, the project takes surplus water during winter months and delivers it to the basins, which serve as winter habitat for migrating waterfowl, creating a significant environmental benefit. Most of the water also recharges into the underlying aquifer, thereby benefiting the local groundwater system.”¹²

Groundwater Quality

Specific objectives outlined in the Water Quality Control Plan are listed below: ¹³

- **Bacteria:** In ground waters designated MUN, the concentration of total coliform organisms over any 7-day period shall be less than 2.2/100 ml.
- **Chemical Constituents:** Ground waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses.
- **Pesticides:** No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses.
- **Radioactivity:** Radionuclides shall not be present in ground waters in concentrations that are deleterious to human, plant, animal, or aquatic life, or that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life.
- **Salinity:** All ground waters shall be maintained as close to natural concentrations of dissolved matter as is reasonable considering careful use and management of water resources.
- **Tastes and Odors:** Ground waters shall not contain taste- or odor producing substances in concentrations that cause nuisance or adversely affect beneficial uses.
- **Toxicity:** Ground waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial use(s).

According to the California Water Plan, the key ground water quality issues include the following.¹⁴

Salinity: Salinity is the primary contaminant affecting water quality and habitat in the Tulare Lake region. Because the groundwater basin in the San Joaquin Valley portion of the region is an internally drained and closed basin, salts, much of which are introduced into the basin with imported water supplies, build up in the soil and groundwater. Salt contained in the imported

¹² Ibid., page TL-10

¹³ Water Quality Control Plan for the Tulare Lake Basin, page III-7 to III-8

¹⁴ California Water Plan Update 2009, Tulare Lake, page TL-22 to TL-24

Draft Environmental Impact Report Pixley Community Plan

water supply is the primary source of salt circulating in the Tulare Lake region. The California Aqueduct, Friant-Kern Canal, and to a less extent Delta Mendota Canal supply most of the higher quality surface irrigation water in the Tulare Lake region. The quality of this supply may be impaired by the recirculation of salts from the San Joaquin River to the Delta Mendota Canal intake pump, leading to a greater net accumulation of salts in the basin. Delivery data from the two major water projects in California indicate there is a substantial amount of salt being transported from the Delta to other basins throughout the state. Annual import of salt into the Tulare Lake region is estimated to be 1,206 thousand tons of salt. In situ dissolution of salts and pumping from the underlying confined aquifer are important secondary sources.

Sedimentation and Erosion: In the Central Valley, erosion is occurring from the headwaters down to the valley floor. Although naturally occurring, erosion can be accelerated by timber harvest activities, land use conversion, rural development, and grazing. Excessive soil erosion and sediment delivery can impact the beneficial uses of water by (1) silting over fish spawning habitats; (2) clogging drinking water intakes; (3) filling in pools creating shallower, wider, and warmer streams and increasing downstream flooding; (4) creating unstable stream channels; and (5) losing riparian habitat. Timber harvesting in the riparian zone can adversely affect stream temperatures by removing stream shading, a concern for spawning and rearing habitat for salmonids. Thousands of miles of streams are potentially impacted, and the lack of resources has prevented a systematic evaluation of these impacts.

Nitrates and Groundwater Contaminates: Groundwater is a primary water supply, but in many places it is impaired or threatened because of elevated levels of nitrates and salts that are derived principally from irrigated agriculture, dairies, discharges of wastewater to land, and from disposal of sewage from both community wastewater systems and septic tanks. As population has grown, many cities have struggled to fund improvements in wastewater systems. High TDS content of west-side water is due to recharge of streamflow originating from marine sediments in the Coast Range.

Naturally occurring arsenic and human-made organic chemicals—pesticides and industrial chemicals—in some instances have contaminated groundwater that is used as domestic water supplies in this region. In some cases, nitrates are from natural sources. Agricultural pesticides and herbicides have been detected throughout the Central Valley, but primarily along the east side where soil permeability is higher and depth to groundwater is shallower. The most notable agricultural contaminant is DBCP, a now-banned soil fumigant and known carcinogen once used extensively on grapes.

Groundwater Supply

“Surface water supplies tributary to or imported for use within the Basin are inadequate to support the present level of agricultural and other development. Therefore, ground water resources within the valley are being mined to provide additional water to supply demands.”¹⁵

“Tulare Lake region’s groundwater use rises and falls contingent on the availability of both local and imported surface supplies. The management of water resources within this region is a

¹⁵ Water Quality Control Plan for the Tulare Lake Basin, page I-1

Draft Environmental Impact Report Pixley Community Plan

complex activity and critical to the region's agricultural operations. Local annual surface supplies are determined by the amount of runoff from the Sierra Nevada watersheds, the flows captured in local reservoirs, and carryover storage over a series of years. Imported surface supply availability is contingent not only on runoff in any year or series of years but also by regulations determining the amount of water that can be pumped month to month from the Sacramento-San Joaquin River Delta due to fishery and other concerns. The recent San Joaquin River settlement will reduce the overall volume of water available for diversion into the Friant-Kern Canal. The new biological opinion on the Operating Criteria and Plan (OCAP) for the SWP and CVP will impact surface water supplies to south-of-Delta water users.”¹⁶

“Groundwater in Tulare County occurs in an unconfined state throughout, and in a confined state beneath its western portion. Extensive alluvial fans associated with the Kings, Kaweah, and Tule Rivers provide highly permeable areas in which groundwater in the unconfined aquifer system is readily replenished. Interfan areas between the streams contain less permeable surface soils and subsurface deposits, impeding groundwater recharge and causing well yields to be relatively low. The mineral quality of groundwater in Tulare County is generally satisfactory for all uses.”¹⁷
“Groundwater recharge is primarily from natural streams, other water added to streambeds, from deep percolation of applied irrigation water, and from impoundment of surface water in developed water bank/percolation ponds.”¹⁸

“The Tulare Lake region has experienced water-short conditions for more than 100 years, which has resulted in a water industry that has consciously developed—through careful planning, management and facility design—the possibility of a shortage occurring in any year. Water demand is more or less controlled by available, reliable long-term water supplies. Over the years, agricultural acreage has risen and dropped largely based on water supplies. The region initially developed with surface water supplies; but local water users learned these supplies could widely vary in volume from year to year and drought conditions could quickly develop. The introduction of deep well turbines resulted in a dramatic rise in groundwater use in the early 1900s, subsequently resulting in dropping groundwater levels and land subsidence. Surface water storage and conveyance systems built to alleviate the overuse of groundwater provided an impounded supply of water that could be used during years with deficient surface water. This resulted in a regional reliance on conjunctive water use in the development of the local water economy. Efforts to address Delta environmental issues and the subsequent loss of surface water to the region is increasing groundwater use and creating concern that additional pumping will increase subsidence.”¹⁹

“Groundwater overdraft is expected to decline statewide by 2020. The reduction in irrigated acreage in drainage problem areas on the west side of the San Joaquin Valley is expected to reduce groundwater demands in the Tulare Lake region by 2020.”²⁰ According to the 2009 California Water Plan Update, it is anticipated that there will be a 550,000 acre-feet reduction in the water demand in the Tulare Lake Hydrologic Area under Current Growth trends. Slow & Strategic Growth may further decrease water demand, while Expansive Growth may increase

¹⁶ California Water Plan Update 2009, Tulare Lake, page TL-15 to TL-17

¹⁷ General Plan Background Report, page 10-11

¹⁸ California Water Plan Update 2009, Tulare Lake, page TL-17

¹⁹ Ibid., page TL-19

²⁰ General Plan Background Report, page 10-11

Draft Environmental Impact Report
Pixley Community Plan

water demand.

The 2009 California Water Plan indicates that water storage has varied between the 1998-2005. According to data contained in the Water Plan, variations in water storage appear to correlate with variations in precipitation levels. See **Table 3.9-1** and **Figure 3.9-1**.

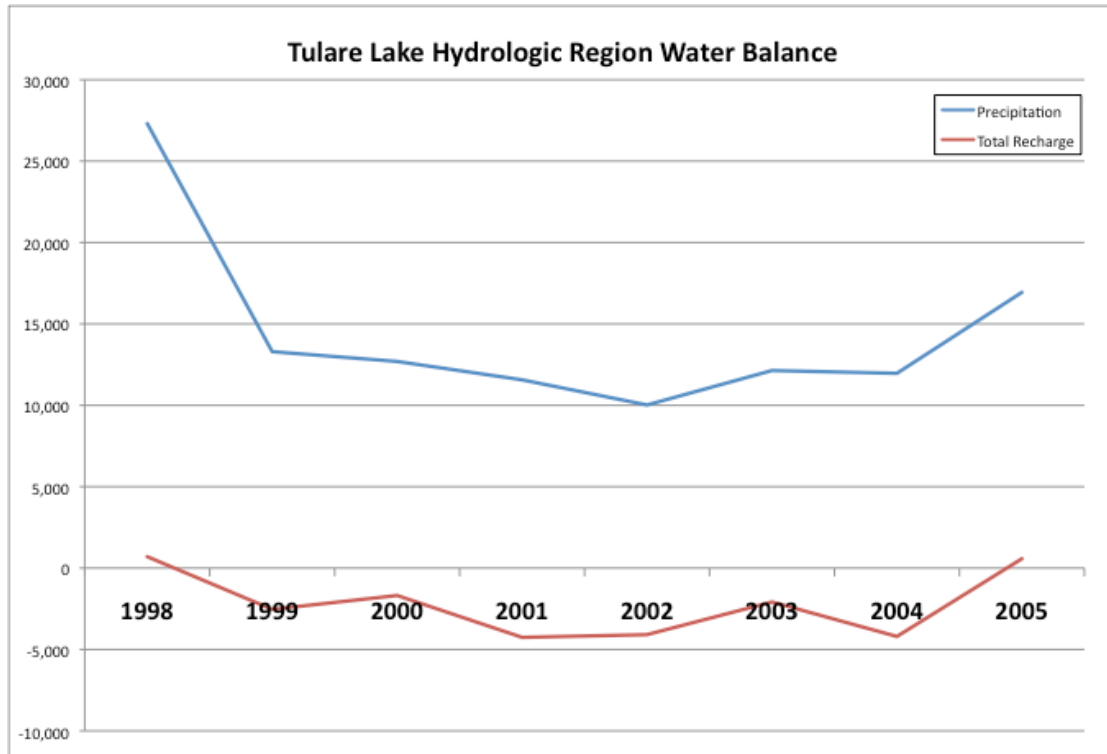
Table 3.9-1
Tulare Lake Hydrologic water balance for 1998-2005 (thousand acre-feet)

Tulare Lake Region	Water Year							
	1998	1999	2000	2001	2002	2003	2004	2005
Water Entering the Region								
Precipitation	27,306	13,298	12,693	11,564	10,021	12,137	11,964	16,939
Inflow from Oregon/Mexico	0	0	0	0	0	0	0	0
Inflow from Colorado River	0	0	0	0	0	0	0	0
Imports from Other Regions	3,716	4,817	5,627	3,696	4,239	5,174	4,816	5,909
Total	31,022	18,115	18,320	15,260	14,260	17,311	16,780	22,848
Water Leaving the Region								
Consumptive Use of Applied Water	5,401	7,486	7,427	7,591	7,938	7,430	8,031	6,655
Outflow to Oregon/Nevado/Mexico	0	0	0	0	0	0	0	0
Exports to Other Regions	1,857	821	1,540	1,093	1,643	1,898	1,961	1,724
Statutory Required Outflow to Salt Sink	0	0	0	0	0	0	0	0
Additional Outflow to Salt Sink	457	456	457	458	305	458	457	300
Evaporation, Evapotranspiration of Native Vegetation, Groundwater Subsurface Outflows, Natural and Incidental Runoff, Ag Effective Precipitation & Other Outflows	22,606	11,885	10,578	10,374	8,462	10,327	10,532	13,596
Total	30,321	20,648	20,002	19,516	18,348	20,113	20,981	22,274
Storage Changes in Region: [+] Water added to storage, [-] Water removed from storage								
Change in Surface Reservoir Storage	438	-595	-57	-141	-161	173	-199	680
Change in Groundwater Storage	263	-1,938	-1,625	-4,115	-3,927	-2,975	-4,002	-106
Total	701	-2,533	-1,682	-4,256	-4,088	-2,802	-4,201	574

Source: California Water Plan Update 2009, Tulare Lake, Department of Water Resources (This table does not include dairy usage)

Draft Environmental Impact Report
Pixley Community Plan

**Figure 3.9-1
Water Balance**



Source: California Water Plan Update 2009, Tulare Lake, Department of Water Resources

“Groundwater overdraft is expected to decline statewide by 2020. The reduction in irrigated acreage in drainage problem areas on the west side of the San Joaquin Valley is expected to reduce groundwater demands in the Tulare Lake region by 2020.”²¹ As indicated in the 2009 California Water Plan Update, it is anticipated that there will be a 550,000 acre-feet reduction in the water demand in the Tulare Lake Hydrologic Area under Current Growth trends. Slow & Strategic Growth may further decrease water demand, while Expansive Growth may increase water demand.

“There are 19 entities in Tulare County with active programs of groundwater management. These management programs include nearly all types of direct recharge of surface water. Groundwater recovery is accomplished primarily through privately owned wells. Among the larger programs of groundwater management are those administered by the Kaweah Delta Water Conservation District, the Kings River Water Conservation District, the Tulare Irrigation District, the Lower Tule Water Users Association, and the Alta Irrigation District, utilizing water from the Friant-Kern Canal and local streams. The Kings River Water Conservation District covers the western county.”²² Table 3.9-2 lists irrigation districts located in Tulare County.

²¹ General Plan Background Report, page 10-11

²² Ibid., page 10-12

Draft Environmental Impact Report
Pixley Community Plan

**Table 3.9-2
Irrigation Districts in Tulare County**

Entity	Surface Water	Imported Water Source	Groundwater Extraction
Alpaugh Irrigation District	NA	Friant-Kern Canal (1,000af average)	19,000 af
Alta Irrigation District	King River	Friant-Kern Canal (surplus)	230,000 af
Delano-Earlimart Irrigation District	NA	Friant-Kern Canal (146,050 af average)	8,000 af
Exeter Irrigation District	NA	Friant-Kern Canal (1,000 af average)	14,000 af
Hills Valley Irrigation District	NA	Cross Valley Canal (2,000 af average)	1,000 af
Ivanhoe Irrigation District	Kaweah River	Friant-Kern Canal (11,650 af average)	15,000 af
Kaweah Delta Water Cons. District	Kaweah River	Friant-Kern Canal (24,000 af average)	130,000 af
Kern-Tulare Water District	Kern River	Cross Valley Canal (41,000 af average)	33,000 af
Lindmore Irrigation District	NA	Friant-Kern Canal (44,000 af average)	28,000 af
Lower Tulare River Irrigation Dist.	Tule River	Friant-Kern Canal (180,200 af average) Cross Valley Canal (31,000 af average)	NA
Lindsay-Strathmore Irrigation District	NA	Friant-Kern Canal (24,150 af average)	NA
Orange Cove Irrigation District	NA	Friant-Kern Canal (39,200 af average)	30,000 af
Pioneer Water Irrigation District	Tule River		3,000 af
Pixley Irrigation District	NA	Friant-Kern Canal (1,700 af average) Cross Valley Canal (31,000 af average)	130,000 af
Porterville Irrigation District	Tule River	Friant-Kern Canal (31,000 af average)	15,000 af
Rag Gulch Water District	Kern River	Friant-Kern Canal (3,700 af average) Cross Valley Canal (13,300 af average)	
Saucelito Irrigation District	Tule River	Friant-Kern Canal (37,600 af average)	15,000 af
Stone Corral Irrigation District	NA	Friant-Kern Canal (10,000 af average)	5,000 af
Teapot Dome Irrigation District	NA	Friant-Kern Canal (5,600 af average)	
Terra Bella Irrigation District	NA	Friant-Kern Canal (29,000 af average)	2,000 af
Tulare Irrigation District	Kaweah River	Friant-Kern Canal (100,500 af average)	65,000 af

Source: Bookman-Edmonston Engineering Inc. Water Resources Management in the Southern San Joaquin Valley, Table A-1.

“The Tulare County Resource Management Agency maintains a list of special districts that provide sewer and/or water service that cannot currently meet the demand of new development projects. The list provided by Tulare County RMA (last updated April 30, 2007) indicates that following water and/or sewer districts are either under a temporary cease and desist order by the Regional Water Control Board prohibiting any new connections, or have other limitations for water and sewer connections:

- Alpaugh Joint Powers Authority Water District;
- Cutler Public Utility District;
- Delft Colony Zone of Benefit (County RMA);
- Earlimart Pubic Utility District;
- El Rancho Zone of Benefit (County RMA);
- Orosi Public Utility District;
- Pixley Public Utility District;
- Pratt Mutual Water Company;
- Richgrove Public Utility District;
- Seville Zone of Benefit (County RMA);

Draft Environmental Impact Report Pixley Community Plan

- Seville Water Company;
- Springville Public Utility District;
- Tooleville Zone of Benefit (County RMA);
- Traver Zone of Benefit (County RMA); and
- Wells Tract Zone of Benefit (County RMA).’’²³

Much of the County’s land is rural in nature and requires the use of private wells. If a project utilizes water from an existing irrigation district, then the affected irrigation district is responsible for determining if the proposed Project could potentially create a significant impact related to water supply. An example of a potential impact could involve a need for a significant increase in the service levels of an irrigation district.

Pixley Public Utilities District (PUD)

The following summarizes discusses the Pixley PUD as contained in the Tulare County Local Agency Formation Commission’s (LAFCO’s) Municipal Service Review Final Report (March 2006):

“The Pixley PUD is responsible for providing domestic water service to customers within its District Boundary. Pixley’s water supply is derived from four deep underground wells. According to District staff, these four wells provide an ample excellent water supply requiring no chlorination or treatment. Based upon discussions with District staff, a well was abandoned some years ago due to a faulty seal and replaced with two other wells near the same area. The four wells in operation have a total maximum production efficiency of approximately 2,700 gallons per minute (GPM), or 3.88 million gallons per day (MGD). The District was unable to provide actual well production (water usage) data.

As indicated by the District’s Engineer, three of the existing four wells exceed the acceptable arsenic level for drinking water that became effective January 2006, and the water supply system will require treatment or replacement of wells to meet current water quality standards. District staff indicated that there are slightly more than 800 hookups to the water system including 25 commercial connections. Approximately 320 of the residential connections are metered. Metered water rates promote water conservation.”²⁴

“Assuming 800 equivalent dwelling units (EDUs), in order to meet Tulare County Improvement Standards, the Pixley PUD water system would need to be capable of delivering a combined flow rate (from all source and storage facilities) of 2,400 GPM (1,500 GPM fire flow, and 900 GPM domestic demand) for a period of two hours while maintaining a minimum pressure of 25 PSI to each lot served. The District’s water system is capable of delivering a source flow of 2,700 GPM, and includes pneumatic pressure tanks for storage.

According to the District Engineer, there is only sufficient water supply to meet existing domestic demands without considering fire flow requirements. The District Engineer indicated that no additional connections could be supported by the water system when considering fire

²³ General Plan Background Report, page 7-33

²⁴ Tulare County Local Agency Formation Commission’s (LAFCO’s) Municipal Service Review Final Report (March 2006). Page 7-10.

Draft Environmental Impact Report Pixley Community Plan

flows and the possibility of the maximum producing well being out of service. For this reason, the District Engineer concluded that additional wells will be required in order to increase capacity, and that fire flows requirements could be met with storage tanks.

The District does not currently have a water system master plan. As indicated by the District Engineer, a water master plan that includes a capital facilities plan needs to be developed to address current and future needs. The District Engineer noted that the existing water system includes many 4-inch and 6-inch diameter lines, which may not be suitable for peak and fire flows. Since land within the District's SOI that is zoned for development (by the Tulare County General Plan) will rely on domestic water service from the Pixley PUD, the master planning boundary should be consistent with the District's SOI. A water master plan will increase the District's preparedness when development within its SOI is proposed.”²⁵

As noted above, the Pixley PUD states that they have slightly more than 800 services (775 as residential hookups); including 25 commercial users. Therefore, of the Pixley services, approximately 98.8% are residential while the remaining 1.2% are commercial users.

2010 U.S Census data indicated Pixley's population was 3,310 person and 875 housing units.²⁶ Applying the Pixley's 3.87 persons per household (pph) rate (based upon 2010 U.S. Census data) and the Tulare County General Plan's annual growth rate of 1.3%; it is estimated that Pixley's population at the planning horizon year (2030) will be approximately 4,286 person occupying 1,107 households. .

Assuming the current 3.87 pph remains constant, and using the 2010 General Plan Background Report population growth rate of 1.3% annually to project to 2030, Pixley's projected population would result in a need for 332 connections above the Year 2010 connections.

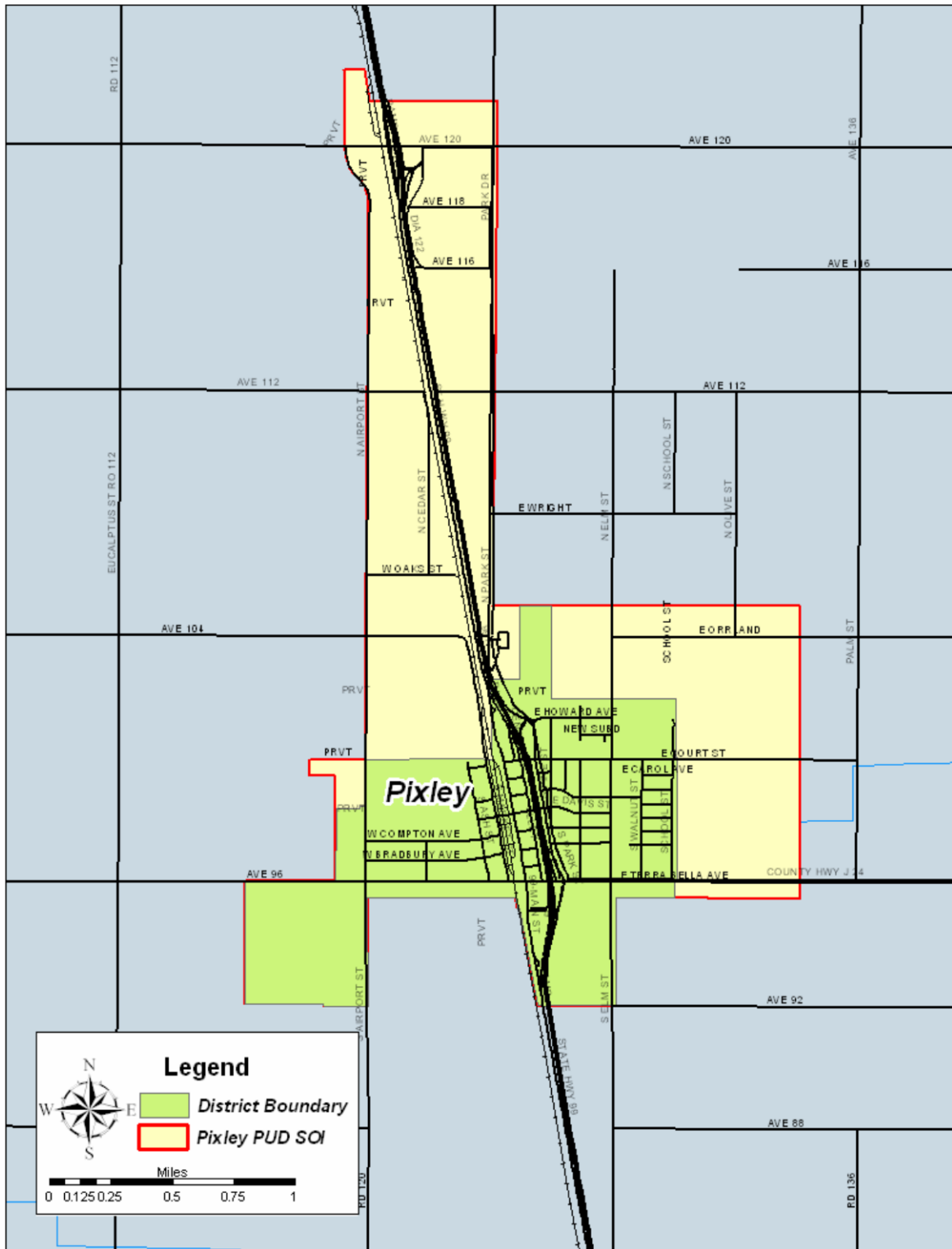
The proposed Pixley Community Plan Update Urban Development Boundary (UDB) is intended to be, to the extent practicable, consistent with the District's SOI. The proposed Pixley UDB (See Proposed Pixley Land Use Map, **Figure 3.9-2**) includes all of the District's boundary and Sphere of Influence (SOI). The proposed Pixley UDB also includes additional parcels east of Road 120 between Avenues 120 and 112; and two parcels north of Avenue 120 that are west and north of (and adjacent to) California Dairies Inc.

²⁵ Ibid. 7-11

²⁶ 2010 U.S. Census Pixley CDP population and housing units.

Draft Environmental Impact Report
Pixley Community Plan

Figure 3.9-2
Pixley Public Utilities District Boundary and Sphere of Influence
[from Tulare County LAFCo - Figure 7-1]



Draft Environmental Impact Report
Pixley Community Plan

Recorded Water Usage

Pixley PUD provided consultant P&P with total water usage data for Pixley for years 2007-2014.:

“Provost and Pritchard (P&P) compiled monthly well production data for four wells operated by the Pixley Public Utilities District (PPUD) for the years 2007 through 2014 (see attached *Pixley Water Well Spreadsheet* for raw data [in Appendix “G” of this DEIR]). A summary of annual water use is shown in the Table 1 [Table 3.9-3 of the DEIR].”²⁷

Table 3.9-3 Recorded Water Usage	
Calendar Year	Pixley’s Water Usage (Million Gallons)
2007	218.65
2008	252.08
2009	248.73
2010	214.97
2011	209.78
2012	209.40
2013	213.92
2014	191.17
<i>Source: Pixley Water Usage Memorandum, page 1, prepared by consultants Provost & Pritchard. February 2015.</i>	

“According to the 2010 US Census, Pixley had a population in that year of 3,310. In addition to serving the local elementary and middle schools, the water system has 814 residential connections, which implies 4.06 persons per household, slightly more than the County-average household formation rate of 3.89. Gross water use per capita is 175 gallons per person per day. Gross water use per equivalent dwelling unit (EDU) is 712 gallons per EDU per day.

However, Pixley Utility District data show that nearly 10 percent of the water produced serves the two schools, with a large but unquantified percentage of that water going to irrigate the Middle School campus. While school populations can be expected to increase with population growth, school irrigation demand will remain constant over time unless the campus is expanded. There are no known plans for such an expansion.

Projected community water use over a 20-year planning horizon was calculated based on the 2010-2013 average water demand of 212.02 MG, or a per-capita use of 175 gallons per capita per day. **Table 4** employs an annual usage growth rate of 1.30%, in accordance with direction from the Tulare County Planning Department. Because water demand at the schools will not grow directly in proportion to the growth in population, using 1.30% as the water demand growth rate is conservative. If this rate holds over the planning horizon, total annual water use in Pixley will be 274.51 million gallons in 2034, or 29.5% more than current use.”

²⁷ Pixley Water Usage Memorandum, page 1, prepared by consultants Provost & Pritchard. March 2015 [see Appendix “G” of the DEIR]

Draft Environmental Impact Report
Pixley Community Plan

Flooding

“Flooding is a natural occurrence in the Central Valley because it is a natural drainage basin for thousands of watershed acres of Sierra Nevada and Coast Range foothills and mountains. Two kinds of flooding can occur in the Central Valley: general rainfall floods occurring in the late fall and winter in the foothills and on the valley floor; and snowmelt floods occurring in the late spring and early summer. Most floods are produced by extended periods of precipitation during the winter months. Floods can also occur when large amounts of water (due to snowmelt) enter storage reservoirs, causing an increase in the amount of water that is released.”²⁸

“Flood events in the Tulare Lake region are caused by rainfall, snowmelt, and the resultant rising of normally dry lakes. Although significant progress has been made to contain floodwaters in the region, improvements to the flood control system are still needed to lessen the flood risk to life and property.”²⁹

“Official floodplain maps are maintained by the Federal Emergency Management Agency (FEMA). FEMA determines areas subject to flood hazards and designates these areas by relative risk of flooding on a map for each community, known as the Flood Insurance Rate Map (FIRM). A 100-year flood is considered for purposes of land use planning and protection of property and human safety. The boundaries of the 100-year floodplain are delineated by FEMA on the basis of hydrology, topography, and modeling of flow during predicted rainstorms.”³⁰

“The flood carrying capacity in rivers and streams has decreased as trees, vegetation, and structures (e.g., bridges, trestles, buildings) have increased along the Kaweah, Kings, and Tule Rivers. Unsecured and uprooted material can be carried down a river, clogging channels and piling up against trestles and bridge abutments that can, in turn, give way or collapse, increasing blockage and flooding potential. Flooding can force waters out of the river channel and above its ordinary floodplain. Confined floodplains can result in significantly higher water elevations and higher flow rates during high runoff and flood events.”³¹

“Dam failure can result from numerous natural or human activities, such as earthquakes, erosion, improper siting, rapidly rising flood waters, and structural and design flaws. Flooding due to dam failure can cause loss of life, damage to property, and other ensuing hazards. Damage to electric-generating facilities and transmission lines associated with hydro-electric dams could also affect life support systems in communities outside the immediate hazard area.”³²

“Pixley receives storm water drainage from the northeast. Surface drainage typically flows southwest and is conveyed to a basin near the airport. The portion of the Specific Plan generally lying south of Avenue 112 and west of Road 124 is subject to flooding from the Deer Creek drainage. The Community Plan observes that “elevation of building pads should eliminate the potential for loss of property should flooding occur.””³³

²⁸ General Plan Background Report, page 7-33

²⁹ California Water Plan Update 2009, Tulare Lake, page TL-28 to TL-29

³⁰ Ibid., page 8-14

³¹ General Plan Background Report, page 8-14

³² Ibid. 8-17

³³ North Pixley Commercial/Industrial Specific Plan, page 2-12

Draft Environmental Impact Report Pixley Community Plan

Storm Drainage

“Existing topography in the Plan Area is virtually flat. Surface sheet flow of storm runoff has been identified in the Community Plan in the southeast quadrant of the Specific Plan area. Each development will be responsible for retaining its storm water runoff, paying its proportional share of facilities to serve street drainage along its frontage. Development of the road system will necessitate evaluation of storm water runoff prior to the construction of the streets.”³⁴

REGULATORY SETTING

Federal Agencies & Regulations

Clean Water Act/NPDES

“The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. “Clean Water Act” became the Act’s common name with amendments in 1972... Under the CWA, EPA has implemented pollution control programs such as setting wastewater standards for industry. We have also set water quality standards for all contaminants in surface waters... The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA’s National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.”³⁵

Safe Drinking Water Act

“The Safe Drinking Water Act (SDWA) is the main federal law that ensures the quality of Americans’ drinking water. Under SDWA, EPA sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards... SDWA was originally passed by Congress in 1974 to protect public health by regulating the nation’s public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and ground water wells. (SDWA does not regulate private wells which serve fewer than 25 individuals.)”³⁶

Environmental Protection Agency

The mission of EPA is to protect human health and the environment.
EPA’s purpose is to ensure that:

³⁴ Ibid. 4-3

³⁵ EPA summary of the Clean Water Act – <http://www.epa.gov/lawsregs/laws/cwa.html>

³⁶ EPA summary of the Safe Drinking Water Act – <http://water.epa.gov/lawsregs/rulesregs/sdwa/index.cfm>

Draft Environmental Impact Report Pixley Community Plan

- all Americans are protected from significant risks to human health and the environment where they live, learn and work;
- national efforts to reduce environmental risk are based on the best available scientific information;
- federal laws protecting human health and the environment are enforced fairly and effectively;
- environmental protection is an integral consideration in U.S. policies concerning natural resources, human health, economic growth, energy, transportation, agriculture, industry, and international trade, and these factors are similarly considered in establishing environmental policy;
- all parts of society -- communities, individuals, businesses, and state, local and tribal governments -- have access to accurate information sufficient to effectively participate in managing human health and environmental risks;
- environmental protection contributes to making our communities and ecosystems diverse, sustainable and economically productive; and
- the United States plays a leadership role in working with other nations to protect the global environment.”³⁷

Army Corps of Engineers

“The Department of the Army Regulatory Program is one of the oldest in the Federal Government. Initially it served a fairly simple, straightforward purpose: to protect and maintain the navigable capacity of the nation's waters. Time, changing public needs, evolving policy, case law, and new statutory mandates have changed the complexion of the program, adding to its breadth, complexity, and authority.

The Regulatory Program is committed to protecting the Nation's aquatic resources, while allowing reasonable development through fair, flexible and balanced permit decisions. The Corps evaluates permit applications for essentially all construction activities that occur in the Nation's waters, including wetlands.”³⁸

National Flood Insurance Program

“In 1968, Congress created the National Flood Insurance Program (NFIP) to help provide a means for property owners to financially protect themselves. The NFIP offers flood insurance to homeowners, renters, and business owners if their community participates in the NFIP. Participating communities agree to adopt and enforce ordinances that meet or exceed FEMA requirements to reduce the risk of flooding.”³⁹

³⁷ EPA Website, <http://www.epa.gov/aboutepa/whatwedo.html>

³⁸ Army Corps of Engineers <http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx>

³⁹ Flood Insurance Program Summary: http://www.floodsmart.gov/floodsmart/pages/about/nfip_overview.jsp

Draft Environmental Impact Report
Pixley Community Plan

Federal Emergency Management Agency (FEMA)

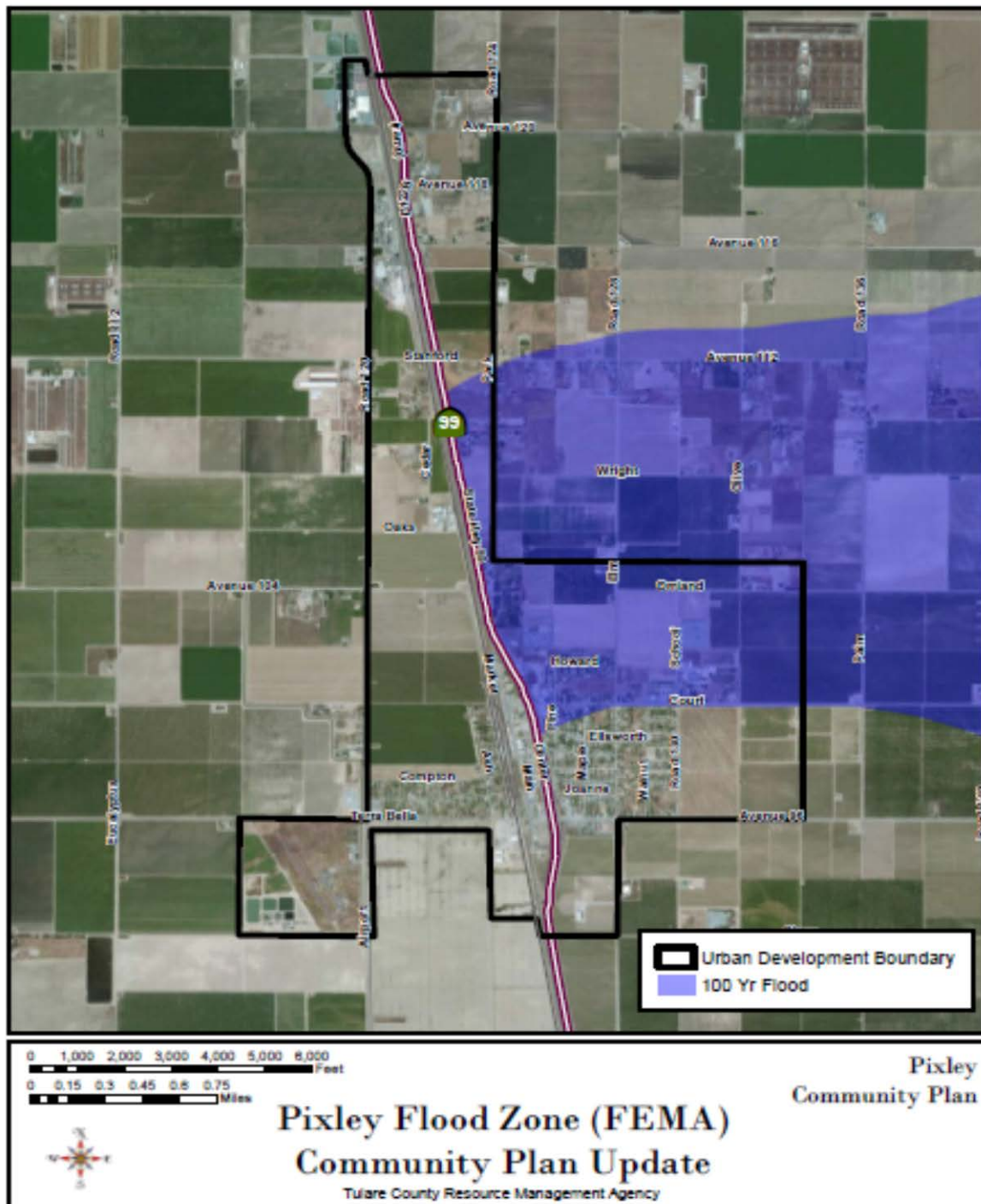
“Official floodplain maps are maintained by the Federal Emergency Management Agency (FEMA). FEMA determines areas subject to flood hazards and designates these areas by relative risk of flooding on a map for each community, known as the Flood Insurance Rate Map (FIRM). A 100-year flood is considered for purposes of land use planning and protection of property and human safety. The boundaries of the 100-year floodplain are delineated by FEMA on the basis of hydrology, topography, and modeling of flow during predicted rainstorms.”⁴⁰

Development within flood prone areas not only threatens property and life, but can also increase the possibility of flooding downstream. Additionally, the County and its property owners risk the loss of federally-sponsored flood insurance programs if the County’s development regulations do not minimize the risks of flooding. The 100-year flood plain is the basic planning criteria to identify areas in which precautions should be taken. A substantial portion of the Pixley planning area is subject to Flood Zone A - 100-year flood hazard as shown in **Figure 3.9-3**.

⁴⁰ General Plan Background Report, page 8-14

Draft Environmental Impact Report
Pixley Community Plan

Figure 3.9- 3
Pixley Flood Zones Map



Draft Environmental Impact Report
Pixley Community Plan

State Agencies & Regulations

The Porter-Cologne Water Quality Control Act

“Under the Porter-Cologne Water Quality Control Act (Porter-Cologne), the State Water Resources Control Board (State Board) has the ultimate authority over State water rights and water quality policy. However, Porter-Cologne also establishes nine Regional Water Quality Control Boards (Regional Boards) to oversee water quality on a day-to-day basis at the local/regional level.”⁴¹

State Water Quality Control Board

“The State Water Resources Control Board (State Water Board) was created by the Legislature in 1967. The joint authority of water allocation and water quality protection enables the State Water Board to provide comprehensive protection for California’s waters. The State Water Board consists of five full-time salaried members, each filling a different specialty position. Board members are appointed to four-year terms by the Governor and confirmed by the Senate.”⁴²

California Department of Water Resources⁴³

This Department’s primary mission is to manage the water resources of California in cooperation with other agencies, to benefit the State’s people, and to protect, restore, and enhance the natural and human environments. Other goals include:

Goal 1 - Develop and assess strategies for managing the State’s water resources, including development of the California Water Plan Update.

Goal 2 - Plan, design, construct, operate, and maintain the State Water Project to achieve maximum flexibility, safety, and reliability.

Goal 3 - Protect and improve the water resources and dependent ecosystems of statewide significance, including the Sacramento-San Joaquin Bay-Delta Estuary.

Goal 4 - Protect lives and infrastructure as they relate to dams, floods, droughts, watersheds impacted by fire and disasters, and assist in other emergencies.

Goal 5 - Provide policy direction and legislative guidance on water and energy issues and educate the public on the importance, hazards, and efficient use of water.

Goal 6 - Support local planning and integrated regional water management through technical and financial assistance.

Goal 7 - Perform efficiently all statutory, legal, and fiduciary responsibilities regarding management of State long-term power contracts and servicing of power revenue bonds.

Goal 8 - Provide professional, cost-effective, and timely services in support of DWR’s programs, consistent with governmental regulatory and policy requirements.

⁴¹ Porter-Cologne Water Quality Control Act Summary, http://ceres.ca.gov/wetlands/permitting/Porter_summary.html

⁴² State Water Board Website, http://www.waterboards.ca.gov/about_us/water_boards_structure/mission.shtml

⁴³ California Department of Water Resources website, <http://www.water.ca.gov/about/mission.cfm>

Draft Environmental Impact Report
Pixley Community Plan

Regional Water Quality Control Board

“There are nine Regional Water Quality Control Boards (Regional Boards). The mission of the Regional Boards is to develop and enforce water quality objectives and implementation plans that will best protect the State's waters, recognizing local differences in climate, topography, geology and hydrology. Each Regional Board has seven part-time members appointed by the Governor and confirmed by the Senate. Regional Boards develop “basin plans” for their hydrologic areas, issue waste discharge requirements, take enforcement action against violators, and monitor water quality.”⁴⁴

“The primary duty of the Regional Board is to protect the quality of the waters within the Region for all beneficial uses. This duty is implemented by formulating and adopting water quality plans for specific ground or surface water basins and by prescribing and enforcing requirements on all agricultural, domestic and industrial waste discharges. Specific responsibilities and procedures of the Regional Boards and the State Water Resources Control Board are contained in the Porter-Cologne Water Quality Control Act.”⁴⁵

Local Policy & Regulations

Lower Tule River & Pixley Irrigation Districts

“As one of the largest irrigation districts in the State of California, the Lower Tule River Irrigation District (LTRID) supplies supplemental water for district-wide crop irrigation to 104,000 acres in the Valley – 30,000 being permanent plantings.

Both districts have been [i]n operation for more than 50 years[.] [These two irrigation districts strive] to provide an affordable and reliable water supply for many more years to come, dedicated to service and excellence in water resource management.”⁴⁶

Tulare County Environmental Health Services

“The Environmental Health Services Division regulates retail food sales and hazardous waste storage and disposal; inspects contaminated sites and monitors public water systems, which protects and reduces the degradation of groundwater. The Division regulates the production and shipping of milk for Tulare and Kings Counties and also serves as staff to the Tulare County Water Commission appointed by the Board of Supervisors. The goal of HHSA's Environmental Health division is to protect Tulare County's residents and visitors by ensuring that our environment is kept clean and healthy.”⁴⁷ This division requires water quality testing of public water systems.

Any project that involves septic tanks and water wells within Tulare County is subject to approval by this agency. All recommendations provided by this division will be added as mitigation measures to ensure reduction of environmental impacts.

⁴⁴ State Water Board Website, http://www.waterboards.ca.gov/about_us/water_boards_structure/mission.shtml

⁴⁵ Central Valley Water Quality Control Board, http://www.swrcb.ca.gov/centralvalley/about_us/

⁴⁶ <http://www.ltrid.org/>

⁴⁷ Tulare County Environmental Health Division, <http://www.tularehhsa.org/index.cfm/public-health/environmental-health/>

Draft Environmental Impact Report
Pixley Community Plan

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed below.

PF-4.14 Compatible Project Design - The County may ensure proposed development within CACUABs is compatible with future sewer and water systems, and circulation networks as shown in city plans.

AG-1.17 Agricultural Water Resources - The County shall seek to protect and enhance surface water and groundwater resources critical to agriculture.

HS-4.4 Contamination Prevention - The County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination.

HS-5.1 Development Compliance with Federal, State, and Local Regulations - The County shall ensure that all development within the designated floodway or floodplain zones conforms to FEMA regulations and the Tulare County Flood Damage Prevention Ordinance.

New development and divisions of land, especially residential subdivisions, shall be developed to minimize flood risk to structures, infrastructure, and ensure safe access and evacuation during flood conditions.

HS-5.2 Development in Floodplain Zones - The County shall regulate development in the 100-year floodplain zones as designated on maps prepared by FEMA in accordance with the following:

1. Critical facilities (those facilities which should be open and accessible during emergencies) shall not be permitted.
2. Passive recreational activities (those requiring non-intensive development, such as hiking, horseback riding, picnicking) are permissible.
3. New development and divisions of land, especially residential subdivisions, shall be developed to minimize flood risk to structures, infrastructure, and ensure safe access and evacuation during flood conditions.

HS-5.4 Multi-Purpose Flood Control Measures - The County shall encourage multipurpose flood control projects that incorporate recreation, resource conservation, preservation of natural riparian habitat, and scenic values of the County's streams, creeks, and lakes. Where appropriate, the County shall also encourage the use of flood and/or stormwater retention facilities for use as groundwater recharge facilities.

HS-5.6 Impacts to Downstream Properties - The County shall ensure that new County flood control projects will not adversely impact downstream properties or contribute to flooding hazards.

Draft Environmental Impact Report
Pixley Community Plan

HS-5.9 Floodplain Development Restrictions - The County shall ensure that riparian areas and drainage areas within 100-year floodplains are free from development that may adversely impact floodway capacity or characteristics of natural/riparian areas or natural groundwater recharge areas.

HS-5.10 Flood Control Design - The County shall evaluate flood control project involving further channeling, straightening, or lining of waterways until alternative multipurpose modes of treatment, such as wider berm and landscaped levees, in combination with recreation amenities, are studied.

HS-5.11 Natural Design - The County shall encourage flood control designs that respect natural curves and vegetation of natural waterways while retaining dynamic flow and functional integrity.

WR-1.1 Groundwater Withdrawal - The County shall cooperate with water agencies and management agencies during land development processes to help promote an adequate, safe, and economically viable groundwater supply for existing and future development within the County. These actions shall be intended to help the County mitigate the potential impact on ground water resources identified during planning and approval processes.

WR-1.5 Expand Use of Reclaimed Wastewater - To augment groundwater supplies and to conserve potable water for domestic purposes, the County shall seek opportunities to expand groundwater recharge efforts.

WR-1.6 Expand Use of Reclaimed Water - The County shall encourage the use of tertiary treated wastewater and household gray water for irrigation of agricultural lands, recreation and open space areas, and large landscaped areas as a means of reducing demand for groundwater resources.

WR-2.1 Protect Water Quality - All major land use and development plans shall be evaluated as to their potential to create surface and groundwater contamination hazards from point and non-point sources. The County shall confer with other appropriate agencies, as necessary, to assure adequate water quality review to prevent soil erosion; direct discharge of potentially harmful substances; ground leaching from storage of raw materials, petroleum products, or wastes; floating debris; and runoff from the site.

WR-2.2 National Pollutant Discharge Elimination System (NPDES) Enforcement - The County shall continue to support the State in monitoring and enforcing provisions to control non-point source water pollution contained in the U.S. EPA NPDES program as implemented by the Water Quality Control Board.

WR-2.3 Best Management Practices (BMPs) - The County shall continue to require the use of feasible BMPs and other mitigation measures designed to protect surface water and groundwater from the adverse effects of construction activities, agricultural operations requiring a County Permit and urban runoff in coordination with the Water Quality Control Board.

Draft Environmental Impact Report
Pixley Community Plan

WR-2.4 Construction Site Sediment Control - The County shall continue to enforce provisions to control erosion and sediment from construction sites.

WR-2.5 Major Drainage Management - The County shall continue to promote protection of each individual drainage basin within the County based on the basins unique hydrologic and use characteristics.

WR-2.6 Degraded Water Resources - The County shall encourage and support the identification of degraded surface water and groundwater resources and promote restoration where appropriate.

WR-2.8 Point Source Control - The County shall work with the Regional Water Quality Control Board to ensure that all point source pollutants are adequately mitigated (as part of the California Environmental Quality Act review and project approval process) and monitored to ensure long-term compliance.

WR-3.3 Adequate Water Availability - The County shall review new development proposals to ensure the intensity and timing of growth will be consistent with the availability of adequate water supplies. Projects must submit a Will-Serve letter as part of the application process, and provide evidence of adequate and sustainable water availability prior to approval of the tentative map or other urban development entitlement.

WR-3.5 Use of Native and Drought Tolerant Landscaping - The County shall encourage the use of low water consuming, drought-tolerant and native landscaping and emphasize the importance of utilizing water conserving techniques, such as night watering, mulching, and drip irrigation.

WR-3.6 Water Use Efficiency - The County shall support educational programs targeted at reducing water consumption and enhancing groundwater recharge.

WR-3.10 Diversion of Surface Water - Diversions of surface water or runoff from precipitation should be prevented where such diversions may cause a reduction in water available for groundwater recharge.

IMPACT EVALUATION

Would the project:

a) Violate any water quality standards or waste discharge requirements?

Project Impact Analysis: *Less Than Significant*

The Project does not include any proposed developments. In addition, future development will be required to comply with all water quality standards or waste discharge requirements. Such compliance will occur with implementation of Project design features on a project-by-

Draft Environmental Impact Report
Pixley Community Plan

project basis. Therefore, Project-specific impacts related this Checklist item will be ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the Tulare Lake Basin. This cumulative analysis is based on information provided in the Water Quality Control Plan for the Tulare Lake Basin and the requirements of Tulare County Environmental Health.

The proposed Project will be required to comply with all the requirements of the California Regional Water Quality Control Board, Central Valley and the Tulare County Environmental Health Division. In addition, Project-specific impacts will be reduced to a ***Less Than Significant Impact*** through implementation of Project design features on a project-by-project basis resulting in ***Less Than Significant Cumulative Impacts*** related to this Checklist item.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

With implementation of implementation of Project design features, impacts to potential Project-specific related to this Checklist item will be reduced to a ***Less Than Significant*** level and ***Less Than Significant Cumulative Impacts***.

- b) **Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?**

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

As indicated by a Memorandum prepared by Mr. David McGlasson and Mr. Jan Bowen of consultants Provost & Pritchard (See Appendix “G”):

“Provost and Pritchard (P&P) totaled monthly well production data for Pixleys’s four wells for the years 2007 to 2014 (see attached *Pixley Water Well Spreadsheet* for raw data). A summary of yearly water usage is shown in the Table 1 [Table 3.9-3 in the DEIR].”⁴⁸

⁴⁸ Pixley Water Usage Memorandum, page 1, prepared by consultants David McGlasson and Jan Bowen, Provost & Pritchard. February 2015

Draft Environmental Impact Report
Pixley Community Plan

Table 3.9-3
Recorded Water Usage Recorded Water Usage

Calendar Year	Pixley's Water Usage (Million Gallons)
2007	218.65
2008	252.08
2009	248.73
2010	214.97
2011	209.78
2012	209.40
2013	213.92
2014	191.17
<i>Source: Pixley Water Usage Memorandum, page 1, prepared by consultants Provost & Pritchard. February 2015.</i>	

“There are several observations to be made regarding these data, which affect how they should be used to project usage into the future. First, record water usage data are missing for the months of January through April, 2007, making the recorded total for the year 2007 inaccurate. Second, we note a significant decrease in water usage between calendar years 2009 and 2010. Annual water use decreased by 13.5% from 248.73 million gallons (MG) in 2009 to 214.97 MG in 2010. We also note the reduced use continues in 2011 through 2014, meaning the drop in 2010 appears to be not an anomaly but a lasting change. We attribute the decrease to the installation of water meters in the system in 2009. As a result of the data problems with 2007 and the change in system use characteristics in 2010, water use data from 2007 through 2009 has not been used to project to the future.

The table above [**Table 1** in the Memo or **Table 3.9-3** of the DEIR] also shows Pixley's annual water use in 2010 through 2013 to be consistent at 212 million gallons, with a variance of less than 2 percent. In 2014, however, use dropped 8% to 194 million gallons. There were no equipment failures in 2014 to explain the drop as being, for example, a result of lack of production capacity.

Analysis of the relationship between average and peak demands for 2010 through 2014 at least sheds some light on how the 2014 total came to be lower than the average of the previous four years, even if there is no definitive reason for the change. Using the average demand for the year and the demand for the highest-production day of the year, peaking factors were calculated for each of the five years. Average peaking factors were calculated for the four years 2010 through 2013, and the five years 2010 through 2014. This calculation is shown in **Table 2** [**Table 3.9-4** of the DEIR].

Draft Environmental Impact Report
Pixley Community Plan

Table 3.9-4
Calculation of Peaking Factors

Calendar Year	(a) Average Water Demand (GPM)	(b) Maximum Day Water Demand (GPM)	Peaking Factor (b/a)
2010	409	808	1.98
2011	399	1,074	2.69
2012	398	962	2.41
2013	407	718	1.76
2014	369	628	1.70
Avg. '10-'13	403	891	2.21
Avg. '10-'14	397	838	2.11
<i>Source: Pixley Water Usage Memorandum, page 2, prepared by consultants Provost & Pritchard. February 2015.</i>			

The peaking factors for 2013 and 2014 were 1.76 and 1.70 respectively, very low compared to previous years and the averages. Because the peaking factors for 2013 and 2014 are both below average, and those two years were both very dry years, we believe they are a result of water use reductions due to the drought and are representative of results that might be achieved in dry years. These results will not be sustained in years of average or above average rainfall. Overall water use, year after year, will tend to normalize at the slightly higher rates observed in 2010 through 2012 and water system planning should be based on those higher values.

Table 3 [Table 3.9-5 in the DEIR] restates the information in Table 1 for only the years 2010 through 2014, and shows the average of annual production for the four years 2010 through 2013, and the five years 2010 through 2014.

Table 3.9-5
Average Annual Water Use

Calendar Year	Annual Water Use (Millions Gallons)
2010	214.97
2011	209.78
2012	209.4
2013	213.92
2014	194.17
Avg. '10-'13	212.02
Avg. '10-'14	208.45
<i>Source: Pixley Water Usage Memorandum, page 3, prepared by consultants Provost & Pritchard. February 2015.</i>	

Draft Environmental Impact Report Pixley Community Plan

There is a difference of less than 2% in the average for the four-year period versus the average for the five-year period. We have used the higher, four-year, value below as the basis for projecting future use, to add a small measure of conservatism to the projection.

Water Use Per Dwelling and Per Person

According to the 2010 US Census, Pixley had a population in that year of 3,310. In addition to serving the local elementary and middle schools, the water system has 814 residential connections, which implies 4.06 persons per household, slightly more than the County-average household formation rate of 3.89. Gross water use per capita is 175 gallons per person per day. Gross water use per equivalent dwelling unit (EDU) is 712 gallons per EDU per day.

However, Pixley Utility District data show that nearly 10 percent of the water produced serves the two schools, with a large but unquantified percentage of that water going to irrigate the Middle School campus. While school populations can be expected to increase with population growth, school irrigation demand will remain constant over time unless the campus is expanded. There are no known plans for such an expansion.

Projected Water Usage

Projected community water use over a 20-year planning horizon was calculated based on the 2010-2013 average water demand of 212.02 MG. **Table 4** [Table 3.9-5 in the DEIR] employs an annual usage growth rate of 1.30%, in accordance with direction from the Tulare County Planning Department. If this rate holds over the planning horizon, total annual water use in Pixley will be 274.51 million gallons in 2034.”⁴⁹

System Production Capacity

“PPUD is in the process of seeking funding for two new wells, to replace two of the four existing wells, with the goal of reducing arsenic contamination (see system water quality section, below). It is anticipated that these new wells will provide production capacity at least equal to current, leaving PPUD with the capacity to deliver current production quantities of water well into the future. Over a 20-year horizon, attention to the two remaining wells and to all of the well pumps will be required as a matter of normal operations and maintenance.”⁵⁰

⁴⁹ Pixley Water Usage Memorandum, pages 1-4, prepared by consultants David McGlasson and Jan Bowen, Provost & Pritchard. March 2015
[see Appendix “G” of the DEIR]

⁵⁰ Ibid. 7-11

Draft Environmental Impact Report
Pixley Community Plan

**Table 3.9-5
Projected Water Usage**

	Year	Growth Rate	Usage Increase (MG)	Total Usage (MG)
	2014	-	-	212.02
1	2015	1.3%	2.76	214.78
2	2016	1.3%	2.79	217.57
3	2017	1.3%	2.83	220.40
4	2018	1.3%	2.87	223.26
5	2019	1.3%	2.90	226.16
6	2020	1.3%	2.94	229.10
7	2021	1.3%	2.98	232.08
8	2022	1.3%	3.02	235.10
9	2023	1.3%	3.06	238.16
10	2024	1.3%	3.10	241.25
11	2025	1.3%	3.14	244.39
12	2026	1.3%	3.18	247.57
13	2027	1.3%	3.22	250.78
14	2028	1.3%	3.26	254.04
15	2029	1.3%	3.30	257.35
16	2030	1.3%	3.35	260.69
17	2031	1.3%	3.39	264.08
18	2032	1.3%	3.43	267.51
19	2033	1.3%	3.48	270.99
20	2034	1.3%	3.52	274.51
Source: Pixley Water Usage Memorandum, page 3, prepared by consultants Provost & Pritchard, February 2015.				

The groundwater resource will not be substantially impacted in the immediate future as there are no proposed developments at this time and the analysis above shows PPUD has the capability to meet future water supply needs. The projected growth rate suggests that the purveyor is able to supply adequate water as PPUD has a capacity to produce up to 3.88 mgd whereas the Consultant's analysis indicates a build-out need of 3.52 mgd. Implementing the Mitigation Measures listed below will reduce Project-specific impacts related to this Checklist Item to ***Less Than Significant Impact With Mitigation***.

Cumulative Impact Analysis: *Less Than Significant Impact With Mitigation*

The geographic area of this cumulative analysis is the Tulare Lake Basin. This cumulative analysis is based on information provided in the Water Quality Control Plan for the Tulare Lake Basin and the requirements of Tulare County Environmental Health.

As noted earlier, the analysis above shows PPUD has the capability to meet future water supply needs. The projected growth rate suggests that the purveyor is able to supply adequate water as PPUD has a capacity to produce up to 3.88 mgd whereas the Consultant's analysis indicates a build-out need of 3.52 mgd. Implementing the Mitigation Measures listed below

Draft Environmental Impact Report
Pixley Community Plan

will reduce Project-specific impacts related to this Checklist Item to ***Less Than Significant Impact With Mitigation***.

Mitigation Measure(s):

According to the Memorandum provided by consulting engineers Provost & Pritchard (see Appendix “G”), the following Mitigation Measures are considered feasible in Pixley. Each of these is currently in use in one or more California communities:

Mitigation Measure 9-1 – Continue to require metering of all domestic and commercial connections. Develop and maintain a progressive, tiered water rate to encourage water conservation.

Mitigation Measure 9-2 – Retrofit homes with water-efficient faucets, showers and toilets.

Mitigation Measure 9-3 - Limit permissible landscape area for each residence to 2,500 square feet or less.

Mitigation Measure 9-4 - Adopt limited outdoor watering days and hours (now in force statewide, as of August 1, 2014, by order of the Department of Water Resources).

Mitigation Measure 9-5 - Mandate use of native and drought-tolerant species for all landscaping.

Mitigation Measure 9-6 - Acquire a new surface water supply that could be shown to benefit the basin and offset the pumping that comes with growth.⁵¹

“The first five measures could reduce per-unit water consumption by 25-30 percent cumulatively, though 8 to 10 percentage points of that decrease have already been realized through implementation of water meters in 2010. Fully realizing all that potential per-capita reduction in consumption has the potential to almost completely offset 20 years of 1.3-percent growth, which would be an increase of 29 percent. The sixth measure would be necessary only if the first five were not fully effective in offsetting the growth that is experienced. If the first five measures are fully realized, their effect would be to reduce groundwater impacts to less than significance.”⁵²

Therefore, Mitigation Measures 9-1 through 9-5 are anticipated to reduce potential impacts to ***Less Than Significant***. If required, Mitigation Measure 9-6 could be implemented if Mitigation Measures 9-1 thru 9-5 are not fully effective in offsetting growth during the planning period (that is, Year 2034).

Conclusion:

Less Than Significant Impact

⁵¹ Pixley Water Usage Memorandum, page 6, prepared by consultants David McGlasson and Jan Bowen, Provost & Pritchard. February 2015

⁵² Ibid.

Draft Environmental Impact Report
Pixley Community Plan

By implementing **Mitigation Measures 9-1** through **9-5**, and if necessary Mitigation Measure **9-6**, the proposed Project will result in ***Less Than Significant Project-specific and Cumulative Impacts With Mitigation*** related to this Checklist Item.

- c) **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?**

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

No streams or rivers are located on or near the Project area. The proposed Project will not add a significant amount of impervious areas that would cause significant impacts related to drainage. The Project does not include any proposed developments. In addition, future development will be required to divert stormwater to on-site detention facilities in the form of basins or swales through implementation of project design features on a project-by-project basis. Future development within the proposed Project area will also be required to comply with or implement a Stormwater Pollution Prevention Plan (SWPPP) as part of their National Pollutant Discharge Elimination System (NPDES) permit. This SWPPP will ensure that potential construction erosion and siltation will not affect offsite drainages. This will inhibit any erosion or siltation from occurring onsite or offsite. As such, Project-specific impacts related to this Checklist item will be ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is Tulare County. Alteration of a stream or river will be subject to the regulations of the U.S. Army Corps of Engineers and the California Department of Fish and Wildlife.

Where applicable, a drainage plan will adequately address potential stormwater impacts from future development through implementation of Project design features on a project-by-project basis. Therefore, ***Less Than Significant Cumulative Impacts With Mitigation*** related to this Checklist Item will occur.

Mitigation Measure(s):

Mitigation Measure.

- 9-7** Where applicable, future developments within the Project area shall obtain a **General Stormwater Industrial Facility Permit** from the Central Valley Water Board, prior to obtaining building permits for construction or expansion. The facility operator(s) shall prepare, retain on site, and implement a SWPPP as part of the General Stormwater Industrial Facility Permit.

Conclusion: ***Less Than Significant Impact With Mitigation***

Draft Environmental Impact Report
Pixley Community Plan

As noted earlier, *Less Than Significant Project-specific and Cumulative Impacts With Mitigation* related to this Checklist Item will occur.

- d) **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?**

Project Impact Analysis: *Less Than Significant Impact*

As noted in the Response to Item 3.9 c), there are no rivers or streams located on or near the Project area. As noted earlier, Tulare County General Policy HS-5.1 indicates that new development and divisions of land, especially residential subdivisions, shall be developed to minimize flood risk to structures, infrastructure, and ensure safe access and evacuation during flood conditions. As such, there will be *Less Than Significant Project-specific Impacts*.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. Alteration of a stream or river will be subject to the regulations of the U.S. Army Corps of Engineers and the California Department of Fish and Wildlife.

The proposed Project will not affect any streams or rivers as none exist on the Project site. Therefore, *No Cumulative Impacts* related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

As noted earlier, *Less Than Significant Project-specific and Less Than Significant Cumulative Impacts* related to this Checklist Item will occur.

- e) **Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?**

Project Impact Analysis: *Less Than Significant Impact With Mitigation*

Future development will be evaluated on a case-by-case basis as development occurs and project design features (such as diverting stormwater into on-site basins or swales) and standards will be implemented within the proposed Project area to accommodate stormwater drainage systems or prevent substantial additional sources of polluted runoff. Therefore, Project-specific impacts related to this Checklist Item would be *Less Than Significant With Mitigation*.

Cumulative Impact Analysis: *Less Than Significant Impact With Mitigation*

Draft Environmental Impact Report
Pixley Community Plan

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the requirements of the Central Valley Regional Water Quality Control Board.

As noted earlier, future development will be evaluated on a case-by-case basis as development occurs and project design features (such as diverting stormwater into on-site basins or swales) and standards will be implemented within the proposed Project area to accommodate stormwater drainage systems or prevent substantial additional sources of polluted runoff. As such, ***Less Than Significant Cumulative Impacts With Mitigation*** related to this Checklist Item will occur.

Mitigation Measure(s): See discussion Item 9 c).

Conclusion: ***Less Than Significant Impact With Mitigation***

As noted earlier, ***Less Than Significant Project-specific*** and ***Less Than Significant Cumulative Impacts*** related to this Checklist Item will occur.

f) Otherwise substantially degrade water quality?

Project Impact Analysis: ***Less Than Significant Impact***

System Water Quality

According to the Memorandum prepared by consultant's Provost & Pritchard, "PPUD provided Provost & Pritchard with Consumer Confidence Reports (CCRs) for the years 2009 through 2013 (see attached *Pixley CCR for 2009-2013* [in Appendix "G" of this DEIR]). In those years, the system has exceeded Maximum Contaminate Levels (MCLs) for Arsenic for the years 2009-2014 and Iron for the years 2011-2013.

Total Coliform Bacteria readings were detected in the years 2011 and 2013, however, further tests in 2013 showed no detection. Turbidity levels are close to but do not exceed MCLs and should be monitored. A summary of these results are shown in the tables below [Table 3.9-5 thru 3.9-9 in the DEIR].

**Table 3.9-5
Arsenic Readings**

Year	Level Detected (ppm)	Range of Detections (ppm)	MCL (ppm)
2009	16.25	3-24	10
2010	14	3-22	10
2011	12.66	5-19	10
2012	20.5	20-21	10
2013	19.1	3-26	10
<i>Source: Pixley Water Usage Memorandum, page 5, prepared by consultants Provost & Pritchard. February 2015.</i>			

Draft Environmental Impact Report
Pixley Community Plan

**Table 3.9-6
Iron Readings**

Year	Level Detected (ppm)	Range of Detections (ppm)	MCL (ppm)
2011	306.66	ND-510	300
2012	306.66	ND-510	300
2013	306.66	ND-510	300
<i>Source: Pixley Water Usage Memorandum, page 5, prepared by consultants Provost & Pritchard. February 2015.</i>			

**Table 3.9-7
Total Coliform Readings**

Year	Highest # of Detection	No. of months in violation	MCL (ppm)
2011	8	2.00	# of Detection per month \leq 1
2013	3	1.00	# of Detection per month \leq 1
<i>Source: Pixley Water Usage Memorandum, page 5, prepared by consultants Provost & Pritchard. February 2015.</i>			

**Table 3.9-8
Turbidity**

Year	Level Detected (ppm)	Range of Detection	MCL (ppm)
2009	4	0.6-69	5
2010	4	0.6-69	5
2011	2.66	0.60-4.40	5
2012	2.66	0.60-4.40	5
2013	2.66	0.60-4.40	5
<i>Source: Pixley Water Usage Memorandum, page 5, prepared by consultants Provost & Pritchard. February 2015.</i>			

“PPUD has applied for and is currently awaiting construction funds to drill two new wells that will avoid arsenic, as indicated by test wells already drilled. Two of the four existing wells will be abandoned, and the District will attempt to modify the productions zones of the other two to block arsenic-producing strata. Construction is contingent on funding through SWRCB-DDW. Arsenic removal increases system operating costs, and this increase must be accounted for in future rate projections for the system.

Iron, as a Secondary MCL, is of concern as an aesthetic issue in the water, but does not pose a health threat and does not require immediate action. Iron removal may be considered at the time arsenic removal is being designed.

Neither Coliform nor turbidity are at actionable levels at this time, though the positive tests bear continued monitoring”⁵³

⁵³ Op. Cit. 5

Draft Environmental Impact Report
Pixley Community Plan

The proposed Project does not include the construction of any proposed development that would result in degradation of water quality. However, as future development within the Community Plan area occurs over time, project design features and compliance with applicable Tulare County Health and Human Services Agency and Regional Water Quality Control Board rules/regulations would reduce Project-specific impacts to ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the requirements of the Central Valley Regional Water Quality Control Board.

As noted earlier, the proposed Project does not include elements that could degrade water quality beyond what is discussed in Item 3.9 a). Therefore, ***Less Than Cumulative Impacts*** related to this Checklist item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less than Significant Impact***

As noted earlier, the proposed Project does not include the construction of any proposed development that would result in degradation of water quality. However, as future development within the Community Plan area occurs over time, project design features and compliance with applicable Tulare County Health and Human Services Agency and Regional Water Quality Control Board rules/regulations would result in ***Less Than Significant Project-specific Impacts*** and ***Less Than Significant Cumulative Impacts*** related to this Checklist Item.

- g) **Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?**

Project Impact Analysis: ***Less Than Significant Impact***

As shown on Panel Nos. 06107C1600E and 06107C1925E of the Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP) Flood Insurance Rate Maps (FIRM), the Project area is located within Flood Zones “A” and “X” (See **Figure 3.9-3**). Areas generally northeast of N. Park Street and E. Court Avenue lie with Flood Zone “A” (which is identified as an area inside the 100-year floodplain); while all other areas lie within Flood Zone “X”. The proposed Project does not include the construction of any housing units. However, as future development within the Community Plan area occurs over time, project design features (such as grading to raise elevations above flood plain levels), on-site stormwater retention/detention basins, or swales can be used to divert stormwater to prevent off-site impacts related to flooding will be required to effectively reduce potential for flooding. ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Draft Environmental Impact Report
Pixley Community Plan

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the proposed Project does not include the construction of any housing units. However, as future development within the Community Plan area occurs over time, project design features (such as grading to raise elevations above flood plain levels), on-site stormwater retention/detention basins, or swales can be used to divert stormwater to prevent off-site impacts related to flooding will be required to effectively reduce potential for flooding. The proposed Project does not include any housing units. Therefore, ***Less Than Significant Impact Cumulative*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant***

As noted earlier, ***Less Than Significant Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Project Impact Analysis: ***Less Than Significant Impact***

As shown on Panel Nos. 06107C1600E and 06107C1925E of the Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP) Flood Insurance Rate Maps (FIRM), the Project area is located within Flood Zones “A” and “X” (See **Figure 3.9-3**). Areas generally northeast of N. Park Street and E. Court Avenue lie with Flood Zone “A” (which is identified as an area inside the 100-year floodplain); while all other areas lie within Flood Zone “X”. As such, project design features (such as grading to raise elevations above flood plain levels) will be required to effectively reduce potential for flooding in Flood Zone “A” areas.

Less Than Significant Project-specific Impacts With Mitigation related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

Draft Environmental Impact Report
Pixley Community Plan

As future development occurs within the proposed Project area, project design features (such as grading to raise elevations above flood plain levels) will be required to effectively reduce potential for flooding in Flood Zone “A” areas. As such, future stormwater would be diverted to prevent off-site impacts related to flooding. ***Less Than Significant Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Project Impact Analysis: ***No Impact***

“Two major dams could cause substantial flooding in Tulare County in the event of a failure: Terminus Dam and Success Dam. In addition, there are many smaller dams throughout the county that would cause localized flooding in the event of their failing.”⁵⁴

The proposed Project is not located near a major levee or dam. In addition, the proposed Project does not involve significant water storage or changing the alignment of an established watercourse. ***No Project-specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the proposed Project is not located near a major levee or dam. The proposed Project would not have any impacts related to this checklist item on other off-site parcels. Therefore, ***No Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

j) Inundation by seiche, tsunami, or mudflow?

⁵⁴ General Plan Background Report, page 8-14

Draft Environmental Impact Report
Pixley Community Plan

Project Impact Analysis: ***No Impact***

The proposed Project is not located near a large body of water, the coast or hillsides. The proposed Project will not have any impacts related to this Checklist item on other off-site parcels. ***No Project-Specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project is not located near a large body of water, the coast or hillsides. As such, the proposed Project will result in ***No Cumulative Impacts*** related to this Checklist Item.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

Draft Environmental Impact Report
Pixley Community Plan

DEFINITIONS/ACRONYMS

Abbreviations

AF	Acre-feet
BMPs	Best Management Practices
CCRs	Consumer Confidence Reports
CVP	Central Valley Project
CWA	Federal Clean Water Act
CWP/SWP	California (or State) Water Plan
DWR	Department of Water Resources
EPA	Federal Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRM	Federal Insurance Rate Map
GPM	Gallons Per Minute
HHSA	Tulare County Health and Human Services Agency
LAFCo	Tulare County Local Agency Formation Commission
LTRID	Lower Tule River Irrigation District
MG	Millions Gallons
MGD	Millions Gallons per Day
NFIP	National Flood Insurance Program
NPDES	National Pollutant Discharge Elimination System
MSR	Municipal Service Review
OCAP	Operating Criteria and Plan
PPUD	Pixley Public Utilities District
SDWA	Federal Safe Drinking Water Act
SWPPP	Stormwater Pollution Prevention Plan
SOI	Sphere of Influence
TDS	Total Dissolved Solids

Draft Environmental Impact Report
Pixley Community Plan

REFERENCES

California Department of Water Resources, <http://www.water.ca.gov/>

California Water Plan Update 2009, Volume 3 Tulare Lake, California Department of Water Resources

EPA summary of the Safe Drinking Water Act:
<http://water.epa.gov/lawsregs/rulesregs/sdwa/index.cfm>

EPA summary of the Clean Water Act: <http://www.epa.gov/lawsregs/laws/cwa.html>

FEMA Flood Zone Designations:
<https://msc.fema.gov/webapp/wcs/stores/servlet/info?storeId=10001&catalogId=10001&langId=-1&content=floodZones&title=FEMA%2520Flood%2520Zone%2520Designations>

Flood Insurance Program Summary:
http://www.floodsmart.gov/floodsmart/pages/about/nfip_overview.jsp

Pixley Water Usage Memorandum prepared for the County of Tulare by consultants Provost & Pritchard, March 23, 2015

Tulare County General Plan Update 2030, Adopted August 28, 2012

Tulare County General Plan 2030 Update: Background Report (February 2010)

Water Quality Control Plan for the Tulare Lake Basin, California Regional Water Quality Control Board Central Valley Region, August 17, 2005

CEQA Guidelines

Draft Environmental Impact Report
Pixley Community Plan

Land Use and Planning

Chapter 3.10

SUMMARY OF FINDINGS

The proposed Project will result in *Less Than Significant* impacts to Land Use and Planning.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Land Use and Planning. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed Project. In assessing the impact of a proposed Project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the Project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the Project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision will have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

The environmental setting provides a description of the Land Use and Planning setting in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, the Tulare County General Plan Background Report and/or the Tulare County General Plan Revised DEIR incorporated by reference and summarized below.

¹ CEQA Guidelines, Section 15126.2 (a)

Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance:

- Divide Community
- Conflict with Applicable land use plan policy, or regulation of an agency with jurisdiction over the Project
- Conflict with applicable habitat conservation plan

ENVIRONMENTAL SETTING

Tulare County is located in a geographically diverse region. The majestic peaks of the Sierra Nevada frame its eastern region, and its western region includes the San Joaquin Valley floor, which is very fertile and extensively cultivated. In addition to its agricultural production, the County's economic base also includes agricultural packing and shipping operations. Small and medium sized manufacturing plants are located in the western part of the county and are increasing in number. Tulare County contains portions of Sequoia National Forest, Sequoia National Monument, Inyo National Forest, and Kings Canyon National Park. Sequoia National Park is entirely located within the county.

The County encompasses approximately 4,840 square miles of classified lands (lands with identified uses) and can be divided into three general topographical zones: valley region; foothill region east of the valley area; and mountain region just east of the foothills. The eastern half of the county is generally comprised of public lands, including the Mountain Home State Forest, Golden Trout Wilderness area, and portions of the Dome Land and south Sierra Wilderness areas. Federal lands, which include wilderness, national forests, monuments and parks, and County parks, account for 52 percent of the County land. Agricultural uses, which include row crops, orchards, dairies, and grazing lands on the Valley floor and foothills account for 43 percent of the County land. Urban uses including incorporated cities, communities, hamlets, unincorporated urban uses, and infrastructure rights-of-way account for the remaining land in the County.

“Land use in Tulare County is predominately agriculture, and the County is committed to retaining the rich agricultural land. The foothill and mountain regions are controlled predominantly by the State and federal governments. However, as population increases, so does the demand for new housing, retail and commercial space. Agricultural land around the cities is being converted into urban uses. Housing, land, employment and economics are balanced to minimize the amount of agricultural land taken by development. Economic principles tend to take precedence over the conservation of land.”²

² 2011 TCAG Regional Transportation Plan, page 1-11

Draft Environmental Impact Report
Pixley Community Plan

“Tulare County has been one of the faster growing counties in the state. Since 1950, its annualized growth rate is 1.8% (2.0% since 1980). Population growth has been primarily in the incorporated cities versus the unincorporated county... As of January 2009, the Department of Finance (DOF) estimates the County population to be 441,481...”³

Pixley is located in the southwest portion of the County between the unincorporated communities of Tipton and Earlimart along State Route (SR) 99. It is approximately 12 miles south of the City of Tulare and about 25 south of Visalia, the County Seat. The community is predominantly a rural, agriculturally related service center. It not only serves as an area where agriculturally oriented businesses are located, it also serves as a bedroom community where many of the area's farm workers reside.

Pixley prospered as hundreds of tons of grain were shipped from its warehouses. Artesian water was available for irrigation, and the future looked assured, then a series of fires, poor crops, and low prices induced many families to leave. In addition, after the San Francisco earthquake in 1906, Pixley's artesian wells slowly became standing wells.

In 1908, the community received a needed economic boost. Two outside corporations bought hundreds of acres and planted groves of eucalyptus trees to be used to make furniture and lumber. Sites for sawmills were located however, the mills were never constructed due to fact that the wrong variety of eucalyptus had been planted. Remnants of the groves are still growing along Highway 99. In 1916, the price of eucalyptus soared and an attempt was made to extract the oil from the tree, however, the oil was too heavy for commercial use, and the idea was abandoned.

Existing Land Uses

“Pixley is square in shape and is bisected in a north-south direction by SR 99, which runs east of and parallel to the Southern Pacific Railroad (S.P.R.R.) tracks. Local roads that provide access across SR 99 include East Court Avenue, Davis Avenue, and Terra Bella Avenue (interchange). Local railroad crossings are located at Davis Avenue and Terra Bella Avenue. Pixley is an agriculturally oriented service community surrounded on all sides by lands in agricultural production, scattered rural residential uses, and vacant land. There is also a public airport southwest of the community. Industrial development is present north and south of the community. Most of the commercial development within Pixley is located between the S.P.R.R. tracks and SR 99.”⁴

Urban Boundaries - The existing Urban Development Boundary contains approximately 2,298 acres.

Residential - Residential land uses are identified to the east of SR 99 and the west of Market Street.

³ Ibid., page 1-4

⁴ Pixley Community Plan Update, page 13

Draft Environmental Impact Report
Pixley Community Plan

Multi-Family Residential - There are two multi-family residential complexes located south of E. Terra Bella Avenue.

Mobile homes - There is a mobile home park on N. Park Drive. This mobile home park is located just south of Pixley Park.

Community, Neighborhood, and General Commercial - There are community, neighborhood and general commercial serving commercial uses primarily located along S. Main Street. Along this street, there are convenience stores, a meat market, a furniture store, a hair salon, a post office, restaurants, and a two auto parts stores. Additional commercial uses are located in selected locations along Center Street, Park Drive, Court Avenue, and Terra Bella Avenue

Highway Commercial - There are two gas stations on W. Terra Bella Street, one gas station on E. Court Avenue and a gas station at the southeast quadrant of SR 99 and Avenue 120.

Industrial - Two distinct areas are set aside for industrial use in Pixley. Most of northern portion of the Pixley UDB is zoned industrial. The parcels along the railroad and west of the railroad, and south of E. Terra Bella Ave is also zoned as Industrial.

Schools and Parks - Pixley Elementary School and Pixley Middle School are located on E. Court Avenue and School Street; Pixley does not have a high school. The high school students attend to the high school(s) in the City of Tulare.”⁵

Pixley Park is located in north Pixley west of N. Park Drive. Pixley Park is a 22 acre community recreation park owned and maintained by the County of Tulare. It is mainly used as a recreational facility for local families and as a rest stop by travelers on nearby SR 99. The park is equipped with restrooms, picnic tables, covered picnic areas, barbecues, a baseball/softball field, and a playground area. Arbors are also available for rental (for groups up to 75 people). The majority of Pixley Park is landscaped with irrigated grass and eucalyptus trees.⁶

“*Agriculture* – Approximately 739 acres of land are classified as agricultural in Pixley. As agriculture continues to be urbanized in the Urban Development Boundary, land currently zoned agriculture will most likely be rezoned residential and industrial as there are agricultural areas currently designated as residential reserve and industrial reserve. According to the Tulare County General Plan Update, agricultural products are one of the County’s most important resources. There is Prime Farmland and Farmland of local Importance located within and adjacent to the Pixley Plan Area. Conversion of prime farmland in the Pixley Urban Development Boundary allows farmland outside the Urban Development Boundary to be preserved.”⁷

“Present-day growth in Pixley has been largely influenced by its proximity to SR 99 and the Union Pacific Railroad, which parallel each other and traverse Pixley in a north-south fashion.

⁵ Pixley Community Plan Update. Pages 37-38

⁶ Ibid.

⁷ Ibid.36

Draft Environmental Impact Report
Pixley Community Plan

Generally, the community's urban growth has been well planned. Growth has remained compact through infilling and contiguous development. Pixley is surrounded by land in agricultural production. Crops grown on these lands include cotton, alfalfa, beans, grain and vineyards. The dairy industry is also prevalent. Unlike many valley communities, there is little rural residential development surrounding the denser urbanized area has been strongly influenced by State Highway 99”⁸

Many parcels adjacent to the Railroad located in the middle of Pixley are vacant and underutilized. There may be potential for mixed uses in this area. Allowing a variety of uses could induce additional development.

“The community of Pixley has had limited development between 1992 and 2012. In this time period, only 145 traditional housing units were built and 190 mobile homes were built.

This community had about 59,394 sq. ft. of commercial development and 196,921 sq. ft. of industrial development during the 1992-2012 time periods.”⁹

“Zoning Map Update

The current Zoning Map for Pixley is very similar to the Land Use Map outlined in the General Plan. There are a couple of zoning changes that need to occur to allow the General Plan and Zoning Ordinance to be in conformity with each other.

Residential Reserve Areas - There are a number of parcels that have been designated as Residential Reserve in the General Plan Land Use map. Much of the area designated for Residential Reserve is currently zoned as AE-40 and many of these parcels are vacant. With a zoning designation of AE-40, there is limited potential for residential subdivisions on large agricultural parcels. By updating the zoning designation from AE-40 to R-1 or R-2, Tulare County would reduce the entitlement restrictions and allow these areas to be developed with a residential use as outlined by the General Plan. In addition, updating the Zoning Map creates consistency between the Zoning Ordinance and the General Plan. This would also allow for future development to move forward with entitlement applications without the need for a zone change. By eliminating the need for a zone change, entitlements can be issued quicker and at a lower cost.

Industrial Reserve Areas - There are two parcels that have been designated as Industrial Reserve in the General Plan. These parcels are currently zoned AE-40. Updating the Zoning Map create consistency between the Zoning Ordinance and the General Plan. This would also allow for future development to move forward with entitlement applications without the need for a zone change. By eliminating the need for a zone change, entitlements can be issued quicker and at a lower cost.

⁸ Pixley Community Plan Update, page.4

⁹ Ibid.57

Draft Environmental Impact Report
Pixley Community Plan

Parcels with M-1 Zoning - Many Industrial Zoned (M-1) parcels along Market Street are vacant. In addition, most of the areas are parcels owned by the Union Pacific Railroad. The parcels with street frontage have a depth of 50 feet. This limits the type of development that can be constructed in this area.

Enterprise Zones - Tulare County has a number of Enterprise Zones. Enterprise zones involve a series of statewide incentives that have recently been eliminated. Although Enterprise Zone area boundaries remain in existence, there are no long term economic benefits of these zones.

Affordable Housing - The community of Pixley has a median income of \$27,532 which is considerably less than 60% of the State median income of \$61,632. Approximately 63% of the households in Pixley spend 30% or more of their income on Rent. Approximately 66% of the households in Pixley spend 30% or more of their income on a mortgage. As such, these indicators demonstrate a need for affordable housing.

As 26.8% of the households include singles parents with children and Pixley's average household size is 4.4, it is very likely that many children in Pixley share bedrooms. There is one bus line along SR 99, which has a single bus stop in Pixley. As such, public transportation is not a viable alternative for most people living in Pixley. Within this context, reduced parking is not a realistic strategy to reduce development costs of affordable housing. Typically, affordable housing will require more land in Pixley than would typically be required in an area where public transit is available.

There are large vacant parcels surrounding the elementary school. These parcels are ideal for affordable housing as it would make it convenient and safe for children to attend elementary school.

Mixed Use - "Any combination of retail/commercial, service, office, residential, hotel, or other use in the same building or on the same site typically configured in one (1) of the following ways:

- **Vertical Mixed Use.** A single structure with the above floors used for residential or office use and a portion of the ground floor for retail/commercial or service uses.
- **Horizontal Mixed Use – Attached.** A single structure which provides retail/commercial or service use in the portion fronting the public or private street with attached residential or office uses behind.
- **Horizontal Mixed Use – Detached.** Two (2) or more structures on one (1) site which provide retail/commercial or service uses in the structure(s) fronting the public or private street, and residential or office uses in separate structure(s) behind or to the side."¹⁰

"Mixed Used allows for a variety of development projects. By allowing the community of Pixley to respond to market forces, more opportunities are created for economic development

¹⁰ Tulare County 2030 General Plan, page 4-2

and job development.”¹¹

“Urban Development Boundary

Although State planning law does not define specific requirements for establishing planning area boundaries, it is generally agreed that the planning boundaries should include the territory within a community's probable ultimate physical boundaries and service area. In 1974, Tulare County added an Urban Boundaries Element to its General Plan. The element required the designation of an urban boundary for every "viable" unincorporated community in the county. The Urban Boundaries Element also established Urban Improvement Areas (20-year planning boundaries) for certain communities. The 1974 Urban Boundaries Element designated both an Urban Area Boundary and an Urban Improvement Area for Pixley.

In 1983, the Urban Boundaries Element was amended to create Urban Development Boundaries (UDB's), which are also function as 20-year planning boundaries) and to Change the function of the Urban Area Boundary to simply a "comment line" around incorporated cities. Under the 1983 amendment, Urban Area Boundaries are no longer established around unincorporated communities - and Urban Improvement Areas are to be phased out over time (replaced with UDBs) as each community's boundaries are updated.

General Plan Amendment 93-02, adopted by the Tulare County Board of Supervisors June 14, 1994, expanded the Pixley Urban Area Boundary (UAB) by approximately 90 acres, but left the Urban Improvement Area intact. This Pixley Community Plan adopted in 1997 eliminated both the UAB and UIA and created an Urban Development Boundary for the community. This UDB established a 20-year planning boundary for Pixley which defined the area within which growth was expected to occur for the time period 1995-2015.

There are many County policies that guide development in Pixley area. However, those which have direct effect on the establishment of the community's urban development boundary include the policies in the Tulare County General Plan Planning Framework Element which indicate that the County shall limit urban development to the area within the designated UDB for each community. For unincorporated communities, the UDB is a County adopted line dividing land to be developed from land to be protected for agricultural, natural, open space, or rural uses. It serves as the official planning area for communities over a 20 year period. Land within an unincorporated UDB is assumed appropriate for development and is not subject to the Rural Valley Lands Plan or Foothill Growth Management Plan [*RVLP Policy I-1*].”¹²

“Harmon Field (Former Pixley Airport Site) Industrial Development Plan - Pixley Projected Land Demand

Harmon Field is a former airport owned by Tulare County. This site is located on South Airport Road in Pixley. In 1985, Harmon Field was placed on the State Priority Ranking List, a ranking

¹¹ Op. Cit.61-62

¹² Ibid, page 63

Draft Environmental Impact Report
Pixley Community Plan

of hazardous materials sites, by the former Department of Health Services, now the Department of Toxic Substance Control (DTSC).” “The airport was closed in 1994. In December 2010, the Final Remediation Action Plan for the Harmon Field Site... was approved by the DTSC... The Tulare County Board of Supervisors, on October 29, 2013 awarded the Tulare County-Harmon Field Low Temperature Thermal Desorption (LTD) Soil Remediation Project contract to Pacific States Environmental Contractor, Inc. The estimated completion date of the remediation project is the fall of 2014.

This 104 Acre site is situated on flat terrain at an elevation of 260 feet above sea level. A 4.5 acre portion of the site is currently being used by Tulare County Resource Management Agency – Public Works Branch for storage of equipment and material. The site is zoned AE-40 (Exclusive Agriculture – 40 Acre minimum parcel size) and is located within the Pixley Urban Development Boundary. The Pixley Public Utilities District (PUD) Wastewater facility is located west of and adjacent to the property and the Southern California Edison Pixley Substation is located nearby on the northeast corner of Terra Bella Avenue and Airport Road.

“Based on current land availability and historic absorption a rate within the Specific Plan area, there appears to be no reasonable justification to significantly increase the inventory of available industrial land by rezoning the Harmon Field site at this time. Furthermore, it would simply increase an already over abundant supply of available land by 22 percent (104 acres) and not provide the needed stimulate to accelerate industrial development in the Pixley area.”¹³

“The airport is adjacent to the site of the Pixley Sewage Treatment Plant. There are 5-10 acres of wastewater treatment ponds being irrigated at the present time. In addition, the County has a maintenance yard located at the northeast corner of the airport site.”¹⁴

The Projected industrial and commercial acreage growth rates for Harmon Field are shown in **Table 3.10-1**.

¹³ Harmon Field Preliminary Industrial Development Plan, December 2013, page 2

¹⁴ Pixley Community Plan Update, page 60

Draft Environmental Impact Report
Pixley Community Plan

Table 3.10-1 Pixley Projected Land Demand			
PIXLEY- Projected Commercial & Industrial Demand			
Year	Total Acres	Commercial Acres	Industrial Acres
2020	265	73	192
2021	273	67	197
2022	281	69	203
2023	288	71	209
2024	296	73	214
2025	304	75	220
2026	312	77	226
2027	319	79	231
2028	327	81	237
2029	335	82	242
2030	343	84	248
<i>Source: Harmon Field Preliminary Industrial Development Plan projects an average 7.75 acres per year of demand combined; page 16. Commercial = 27.5% of demand/yr.; Industrial = 72.4% of demand/yr</i>			

“North Pixley Commercial/Industrial Specific Plan

The North Pixley Commercial/Industrial Specific Plan was adopted on December 21, 1999 as part of the implementation of the Pixley Community Plan. This specific plan was prepared to guide the development of 733 gross acres of Northern Pixley. The development desired in this area was light industrial and commercial uses.

Most of this area was zoned AE-40 and the zoning on most parcels have since changed to PD-M-1, which allows for light industrial and commercial uses.”¹⁵

“Highway 99

Highway 99 is a major route between cities within the Central Valley. Highway 99 is the primary route between the City of Fresno to the North and the City of Bakersfield to the South. Highway 99 traverses Pixley in north/south fashion and in effect, have divided the community geographically. Most of the residential development is located on the East side to the Freeway. Most of the commercial and industrial areas are located in the West side of the Freeway. Access to Highway 99 is accessible from E Terra Bella Avenue. Access to

¹⁵ Ibid.6

Highway 99 is also accessible from E Court Avenue; however, the Northbound on ramp is accessed further North on N Park Street.

The North Pixley Commercial/Industrial Specific Plan area is located on the West Side of Highway 99. There are on and off ramps in both directions accessible from Hesse Avenue.”¹⁶

“Union Pacific Railroad

The Union Pacific Railroad placed a rail line through what is now Pixley, in 1872. “The Union Pacific Railroad (UPRR) runs parallel with and adjacent to the west side of Freeway 99. The nearest departure point for passenger rail service is the Amtrak stop in Corcoran. The UPRR carries freight and runs parallel to Highway 99 with one public stop in Pixley and three private stops north of the community. The public stop is not currently in use.”¹⁷

Many parcels adjacent to the Railroad located in the middle of Pixley are vacant and underutilized. There may be potential for mixed uses in this area. Allowing a variety of uses could induce additional development.”¹⁸

“Industrial Parcel Access

Most of the industrial zoned properties between Center and Main are owned by the Railroad. Most of the street frontage is adjacent to properties owned by others. The street frontage parcels are approximately 50 feet deep while the railroad parcels are approximately 200 feet deep.”¹⁹

“Industrial Clusters

One of the goals of this community plan is to strengthen the current businesses located in Pixley. With the establishment of industrial clusters, existing businesses can attract other type of similar businesses.”

“Revise General Plan Land Use Map

As part of this Implementation Program for the Community Plan for Pixley, there are a variety of changes to existing zoning districts. These changes are described below:

- *Revise Chapter 16 of the Zoning Code to limit the uses that require a Use Permit* - As part the Economic Development Strategy, use permit requirements are streamlined to allow for uses to be developed without discretionary review. That is, proposed uses will not have to undergo an approval process that involves a decision making action by the Tulare County Planning Commission or Board of Supervisors. Project design features

¹⁶ Pixley Community Plan Update, page 63

¹⁷ North Pixley Commercial/Industrial Specific Plan, page 2-12

¹⁸ Pixley Community Plan Update, page 63 Pixley Community Plan Update, page 64

¹⁹ Ibid.

and Administrative approval will serve as the mechanism to allow (regulate) land uses, activities, densities, and other conditions typically applied through the special use permit process.

- *Elimination of SR Combining Zone* - The SR combining zone requires site plan review for most uses in the combining zone. The primary purpose of the SR Combining zone is to ensure that proposed projects are designed to avoid conflicts with the existing right of way, setbacks and easements of public agencies and special districts. This alternative would eliminate the SR combining zone designation in the community of Pixley. The elimination of the SR combining zone would only affect the two commercial zoning districts, C-2 SR and C-3 SR. This zone change would only affect 7 parcels within the community of Pixley and as such, elimination of this combining zone would not have a noticeable effect on Pixley as future projects would subject to the following Mixed Use overlay standard:

SP-3 Structures and site improvements should be located and designed to avoid conflict with adjacent uses including public right of way, setbacks and easements.

- *Mixed Use Overlay District* - The General Plan Land Use Map outlines areas of residential reserve in areas currently zoned as AE-40. There is a parcel, south of Avenue 96 and East of Highway 99, which is outlined as industrial reserve and is currently zoned as AE-40.

Converting the residential and industrial reserve areas to residential and industrial zoning is a task that implements the General Plan.

- *Zoning Map Update* - This alternative involves the creation of a Mixed Use Zoning Overlay Designation for the community of Pixley. The areas which are candidates for a mixed use overlay zone change primarily include commercial and industrial areas adjacent to Highway 99. Market Street and S Main Street are additional prime areas that are candidates for Mixed Use Overlay Zoning.”²⁰

REGULATORY SETTING

Federal Agencies & Regulations

Federal Endangered Species Act

“Through federal action and by encouraging the establishment of state programs, the 1973 Endangered Species Act provided for the conservation of ecosystems upon which threatened and endangered species of fish, wildlife, and plants depend. The Act:

- authorizes the determination and listing of species as endangered and threatened;
- prohibits unauthorized taking, possession, sale, and transport of endangered species;

²⁰ Op.Cit.76

Draft Environmental Impact Report Pixley Community Plan

- provides authority to acquire land for the conservation of listed species, using land and water conservation funds;
- authorizes establishment of cooperative agreements and grants-in-aid to States that establish and maintain active and adequate programs for endangered and threatened wildlife and plants;
- authorizes the assessment of civil and criminal penalties for violating the Act or regulations;
- authorizes the payment of rewards to anyone furnishing information leading to arrest and conviction for any violation of the Act or any regulation issued there under.”²¹

State Agencies & Regulations

California Department of Fish and Game

“The Department of Fish and Game maintains native fish, wildlife, plant species and natural communities for their intrinsic and ecological value and their benefits to people. This includes habitat protection and maintenance in a sufficient amount and quality to ensure the survival of all species and natural communities. The department is also responsible for the diversified use of fish and wildlife including recreational, commercial, scientific and educational uses.”²²

California Endangered Species Act

“The California Endangered Species Act (CESA) states that all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved. The Department will work with all interested persons, agencies and organizations to protect and preserve such sensitive resources and their habitats.”²³

Local Policy & Regulations

Tulare County Association of Governments (TCAG)

“The Tulare County Association of Governments (TCAG) is responsible for overseeing and planning projects with the county and each of its cities, helping to bring tax money back home to fund bus service, road improvements, projects that will improve our air quality, and more.”²⁴ TCAG’s 2009 Regional Blueprint includes a goal of a 25% increase in land use densities facilitated with urban growth and expansion of transportation facilities.

Existing County Land Uses

The proposed Project site is located in the northwestern portion of Tulare County. The Tulare County is located in the San Joaquin Valley portion of the Great Central Valley of California that

²¹ Federal Endangered Species Act, <http://www.fws.gov/laws/lawsdigest/esact.html>

²² California Department of Fish and Game website, <http://www.dfg.ca.gov/about/>

²³ California Endangered Species Act, <http://www.dfg.ca.gov/habcon/cesa/>

²⁴ Tulare County Council of Governments (TCAG) Website, <http://www.tularecog.org/>

lies south of the Sacramento-San Joaquin Delta, and is comprised of 4,863 square miles. The County is bordered by Fresno County to the north, Kings County to the west, Kern County to the south, and Inyo County to the east. The valley portion of land totals approximately 3,930 square miles or approximately 81 percent of Tulare County. Open space, which includes wilderness, national forests, monuments and parks, and county parks, encompass approximately 1,230 square miles, or approximately 25 percent of the County. Agricultural uses total approximately 2,150 square miles or approximately 44 percent of the entire County. Incorporated cities in the Tulare County account for Less Than three percent of the entire County area.

The County's primary regulatory tool for implementing the General Plan is the Zoning Ordinance. Tulare County's first zoning ordinance was adopted in 1947 as Ordinance 352. The current *Tulare County Zoning Ordinance and related State and Local Land Use Regulations* was revised in September 2005 and covers the entire unincorporated county. The Zoning Ordinance has been amended many times since 2005, but has not undergone a comprehensive update. The zoning regulations regulate the extent and type of development that can occur in the unincorporated areas, therefore the outdated ordinance is limiting the County's holding capacity and build out potential. A major difference between the general plan and zoning is that the General Plan provides guidance on the location, type, density, and timing of new growth and development over the long-term, while zoning determines what development can occur on a site specific basis. The land general plan use designations, and the zoning classifications and development standards of the zoning ordinance, determine the County's holding capacity and buildout potential.

The *Zoning Ordinance* establishes three residential zones, four commercial zones, three industrial zones, and seven other zones related to agriculture, timber, and resource-related uses. The purpose of the zones is to translate the broad land use categories established by the *Tulare County General Plan* into detailed land use classifications that are applied to properties with much greater precision than the General Plan. The zoning classifications follow specific property lines and road alignments and correspond to the applicable General Plan categories. Working with the zoning classifications, the text of the *Zoning Ordinance* provides detailed regulations for the development and use of land.

Tulare County General Plan Policies

The General Plan contains the following policies aimed at reducing potential land use conflicts, promoting an efficient urban form, and ensuring consistency with local land use and environmental plans. General Plan policies that relate to the proposed Project are listed below.

ED-2.2 Land Requirements - The County shall ensure there is capacity for new and expanding businesses by: Reserving sufficient locations for industry, recognizing industry's need for greater land requirements; Recognizing the need for a variety of locations to avoid creation of a monopoly of the industrial land market and to reflect varying requirements for transportation facilities and utility services; and Reserving land for exclusive industrial use to encourage development of like industries that complement each other and to prevent encroachment on industrial areas by incompatible uses.

ED-2.11 Industrial Parks - As part of new or updated community plans, the County shall designate sites for industrial development to meet projected demand.

ED-3.1 Diverse Economic Base - The County shall actively promote the development of a diversified economic base by continuing to promote agriculture, recreation services, and commerce, and by expanding its efforts to encourage industrial development including the development of energy resources.

ERM-2.9 Compatibility - The County will encourage the development of mineral deposits in a manner compatible with surrounding land uses.

PF-1.1 Maintain Urban Edges - The County shall strive to maintain distinct urban edges for all unincorporated communities within the valley region or foothill region, while creating a transition between urban uses and agriculture and open space.

PF-1.2 Location of Urban Development -

The County shall ensure that urban development only takes place in the following areas:

1. Within incorporated cities and CACUDBs;
2. Within the UDBs of adjacent cities in other counties, unincorporated communities, planned community areas, and HDBs of hamlets;
3. Within foothill development corridors as determined by procedures set forth in Foothill Growth Management Plan;
4. Within areas set aside for urban use in the Mountain Framework Plan and the mountain sub-area plans; and
5. Within other areas suited for non-agricultural development, as determined by the procedures set forth in the Rural Valley Lands Plan.

PF-1.3 Land Uses in UDBs/HDBs - The County shall encourage those types of urban land uses that benefit from urban services to develop within UDBs and HDBs. Permanent uses which do not benefit from urban services shall be discouraged within these areas. This shall not apply to agricultural or agricultural support uses, including the cultivation of land or other uses accessory to the cultivation of land provided that such accessory uses are time-limited through Special Use Permit procedures.

PF-1.4 Available Infrastructure - The County shall encourage urban development to locate in existing UDBs and HDBs where infrastructure is available or may be established in conjunction with development. The County shall ensure that development does not occur unless adequate infrastructure is available, that sufficient water supplies are available or can be made available and that there are adequate provisions for long term management and maintenance of infrastructure and identified water supplies.

PF-2.1 Urban Development Boundaries – Communities - The County shall limit urban development to the area within the designated UDB for each community. Each community's UDB is defined as shown on Figures 2.2-2 thru 2.2-22.

PF-2.4 Community Plans - The County shall ensure that community plans are prepared, updated, and maintained for each of the communities. These plans shall include the entire area within the community's UDB and shall address the community's short and long term ability to provide necessary urban services.

PF-2.7 Improvement Standards in Communities - The County shall require development within the designated UDBs to meet an urban standard for improvements. Typical improvements shall include curbs, gutters, sidewalks, and community sewer and water systems.

PF-2.8 Inappropriate Land Use - Areas within UDBs are hereby set aside for those types of urban land uses which benefit from urban services. Permanent uses which do not benefit from such urban services shall be discouraged within the UDBs. This is not intended to apply to agricultural or agricultural supported uses, including the cultivation of land or other uses accessory to the cultivation of land, provided that such accessory uses are time-limited through special use permit procedures.

LU-1.2 Innovative Development - The County shall promote flexibility and innovation through the use of planned unit developments, development agreements, specific plans, Mixed Use projects, and other innovative development and planning techniques.

LU-2.3 Open Space Character - The County shall require that all new development requiring a County discretionary approval, including parcel and subdivision maps, be planned and designed to maintain the scenic open space character of open space resources including, but not limited to, agricultural areas, rangeland, riparian areas, etc., within the view corridors of highways. New development shall utilize natural landforms and vegetation in the least visually disruptive way possible and use design, construction and maintenance techniques that minimize the visibility of structures on hilltops, hillsides, ridgelines, steep slopes, and canyons.

LU-3.1 Residential Developments - The County shall encourage new major residential development to locate near existing infrastructure for employment centers, services, and recreation.

LU-3.2 Cluster Development - The County shall encourage proposed residential development to be clustered onto portions of the site that are more suitable to accommodating the development, and shall require access either directly onto a public road or via a privately-maintained road designed to meet County road standards.

LU-3.3 High-Density Residential Locations - The County shall encourage high-density residential development (greater than 14 dwelling units per gross acre) to locate along collector roadways and transit routes, and near public facilities (e.g., schools, parks), shopping, recreation, and entertainment.

LU-5.1 Industrial Developments - The County shall encourage a wide range of industrial development activities in appropriate locations to promote economic development, employment opportunities, and provide a sound tax base.

LU-5.4 Compatibility with Surrounding Land Use - The County shall encourage the infill of existing industrial areas and ensure that proposed industrial uses will not result in significant harmful impacts to adjacent land uses.

LU-5.7 Industrial Uses Allowed on Resource Land - The County shall allow asphalt batch plants and similar processing facilities that are directly associated with the development of a resource to be located at the site of the resource under the following criteria: Any such site shall be developed under the Special Use Permit process, and The Special Use Permit shall not permit any commercial or industrial uses that are not related to the processing of the resource.

LU-6.2 Buffers - The County shall ensure that residential and other non-compatible land uses are separated and buffered from major public facilities such as landfills, airports, and sewage treatment plants.

LU-7.2 Integrate Natural Features - The County shall emphasize each community's natural features as the visual framework for new development and redevelopment.

ED-2.3 New Industries - The County shall encourage new industries to locate within cities, unincorporated communities, hamlets, regional growth corridors, and other unincorporated County areas where appropriately zoned. The County, in cooperation with cities and communities will identify locations for industrial uses in unincorporated areas around cities consistent with the cities' economic development strategies, taking into account opportunities offered by variations in local environmental conditions.

HS-3.1 Airport Land Use Compatibility Plan - The County shall require that development around airports is consistent with the safety policies and land use compatibility guidelines contained in the adopted Tulare County Comprehensive Airport Land Use Plan (CALUP).

IMPACT EVALUATION

Would the project:

a) Physically divide an established community?

Project Impact Analysis: *Less Than Significant Impact*

Pixley is located in the southwest portion of Tulare County between the communities of Tipton and Earlimart along State Route (SR) 99. Pixley is bisected in a north-south direction by SR 99, which runs east of and parallel to the Southern Pacific Railroad (S.P.R.R.) tracks. Local roads that provide access across SR 99 include East Court Avenue, Davis Avenue, and

Terra Bella Avenue (interchange). Local railroad crossings are located at Davis Avenue and Terra Bella Avenue.

The primary purpose of this Plan is to outline community goals regarding physical development and to promote the general welfare of the community. This Plan serves as a general guide for both public and private decisions affecting the community, and provides for the overall direction, density, and type of growth consistent with the needs of the Community.

As part of this process, areas around Harmon Field, north of Terra Bella Avenue are being included to be consistent with the Pixley Utility Districts Sphere of Influence (PUD's SOI) and the areas to the north to include California Dairies Inc. (CDI) and their potential expansion north of Avenue 120.

Therefore, the proposed Project will not disrupt or divide an established Community; rather, it will increase opportunities by expanding the UDB northward and westward along and west of Avenue 120 and would be consistent with the Pixley PUD SOI. This will result in ***Less Than Significant Impacts*** related to this Checklist Item.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR. As such, the cumulative impacts of the above-noted projects would result in ***Less Than Significant Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Impact Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

- b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?**

Project Impact Analysis: ***Less Than Significant Impact***

As a result of the Tulare County 2030 General Plan Update, and changes to land uses and zoning designations throughout the Community over the years, there are several inconsistent and non-compliant land uses within the Community of Pixley. As part of the Community Plan update process, the Community Plan land uses and zoning districts were updated in six

(6) occurrences to conform to the Tulare County General Plan.

As part of this Project, the County is adopting a change to the Zoning Code to allow a Mixed Use Zoning District consistent with the General Plan's new Mixed Use land use designation.

The Urban Development Boundary is proposed for northward expansion to include approximately +/- 280 acres of the 3 R Land's Parcels (6 parcels) and +/- 20 acres of the CDI expansion are. The UDB southerly expansion includes areas south of Terra Bella Avenue, north of Sierra Avenue between Road 128 and Road 120 representing +/- 200 acres. In total, this represents a UDB expansion of 504 acres, or 23% beyond the existing UDB, which as part of the Community Plan process is expected and consistent with the General Plan and the General Plan Policies related to UDB's.

The Community Plan also includes a Complete Streets Program, which has been developed concurrently with this process and has been found to be in consistent with the requirements of the Complete Streets Program.

Finally, the Urban Development Boundary will become consistent with jurisdictional boundaries of the Pixley Public Utilities District and the Pixley Irrigation District.

Because the proposed Project is adjusting its Urban Development Boundary to be consistent with other agencies' jurisdictional boundaries, and the Tulare County General Plan, the Project will not conflict with any of the previously noted land use plans. Therefore, **Less Than Significant Project-specific Impacts** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The proposed Project would result in adjusting the Pixley Community Plan Urban Development Boundary to be consistent compliance with other agencies' jurisdictional boundaries, and the land use and zoning districts consistent with the Tulare County General Plan and Zoning Code, ***Less Than Significant Cumulative Impacts*** related to this Checklist Item will occur.

As such, the cumulative impacts of the above-noted changes would result in ***Less Than Significant Impact*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

Project Impact Analysis: ***Less Than Significant Impact***

The nearest wildlife area (Pixley National Wildlife Refuge) is located approximately 28 miles southwest. As noted in Chapter 3.4 (Biological Resources), there are two habitat conservation plans that apply in Tulare County: 1) Recovery Plan for Upland Species of the San Joaquin Valley, and 2) the Kern Water Bank Habitat Conservation Plan (which only applies to an area in Allensworth located in southwestern Tulare County). As such, there is no conservation or natural community conservation plans applicable to the Pixley area. Therefore, ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The proposed Project would result in adjusting the Pixley Community Plan Urban Development Boundary to be consistent with other agencies' jurisdictional boundaries, and the land use and zoning districts consistent with the Tulare County General Plan and Zoning Code, ***No Cumulative Impacts*** related to this Checklist Item will occur.

There are no impacts related to habitat conservation plans, and therefore ***Less Than Significant Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

REFERENCES

2011 Regional Transportation Plan, Tulare County Association of Governments (TCAG), July 11, 2012

Tulare County Council of Governments (TCAG) Website, which can be accessed at <http://www.tularecog.org/>

Tulare County 2030 General Plan, August 2012

Harmon Field Preliminary Industrial Development Plan; prepared by Tulare County Resource Management Agency-Planning Branch Economic Development Office, December 2013

California Endangered Species Act (Fish and Game Code Section 2050 et seq.)

California Department of Fish and Wildlife (Fish and Game Code Section 2050 et seq.)

Federal Endangered Species Act (1973), (Section 4, 63 FR 24140 et seq.)

CEQA Guidelines

Mineral Resources

Chapter 3.11

SUMMARY OF FINDINGS

The proposed Project will result in *No Significant Impacts* related to Mineral Resources, as the Project area is not located near a known mineral resource area. No mitigation measures will be required. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Mineral Resources. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in 15126.2 (a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

The environmental setting provides a description of the Mineral Resources in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare

¹ Tulare County General Plan Update 2030, Background Report, February 2010, page 10-18.

County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The Tulare County 2030 General Plan identifies known Mineral Resource areas. The threshold of significance for this section will include the following:

- Impact a known Mineral Resource

ENVIRONMENTAL SETTING

“There is estimated to be a total of 932 million tons of aggregate resources in Tulare County. This figure includes 219 million tons of reserves available for mining and 200 million tons that are located in the hard rock quarries southeast of Porterville. Of that total, 19 million tons are located in Northern Tulare County, which is expected to be depleted by the year 2010 unless new resources are permitted for mining. Lemon Cove has been the most highly extracted area for PCC quality aggregate supplies.”²

“Economically, the most important minerals that are extracted in Tulare County are sand, gravel, crushed rock and natural gas. Other minerals that could be mined commercially include tungsten, which has been mined to some extent, and relatively small amounts of chromite, copper, gold, lead, manganese, silver, zinc, barite, feldspar, limestone, and silica. Minerals that are present but do not exist in the quantities desired for commercial mining include antimony, asbestos, graphite, iron, molybdenum, nickel, radioactive minerals, phosphate, construction rock, and sulfur... The majority of these activities appear to occur in the Sierra Foothill Area.”³

“The following MRZ categories are used by the State Geologist in classifying the State’s lands. The geologic and economic data and the arguments upon which each unit MRZ assignment is based are presented in the mineral land classification report transmitted by the State Geologist to the SMGB...

- A. *MRZ-1*—Areas where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. This zone is applied where well developed lines of reasoning, based on economic-geologic principles and adequate data, indicate that the likelihood for occurrence of significant mineral deposits is nil or slight.
- B. *MRZ-2a*—Areas underlain by mineral deposits where geologic data show that significant measured or indicated resources are present. As shown on the diagram

² Tulare County General Plan Update 2030, Background Report, February 2010, page 10-18

³ Ibid. 10-17

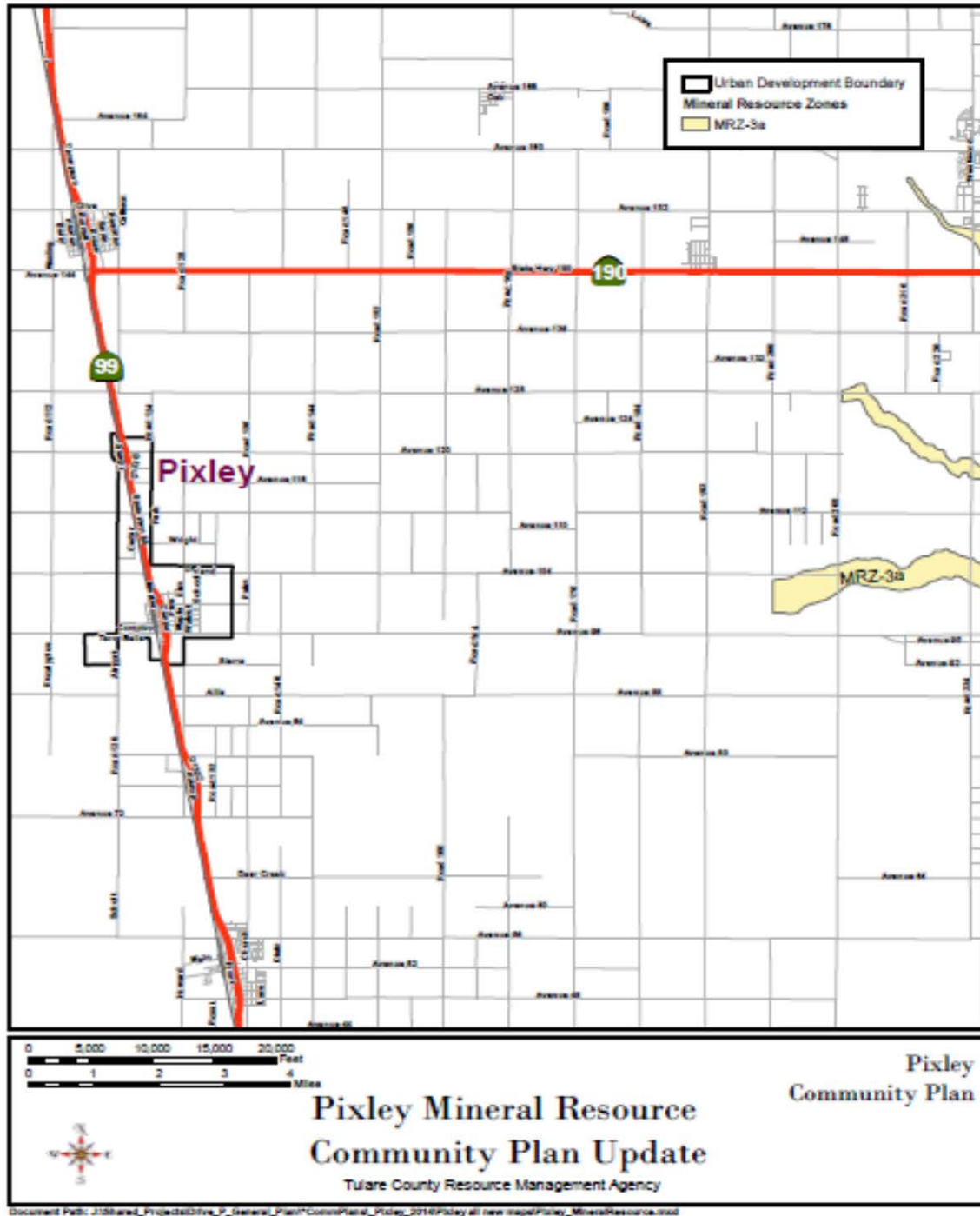
of the California Mineral Land Classification System, MRZ-2 is divided on the basis of both degree of knowledge and economic factors. Areas classified MRZ-2a contain discovered mineral deposits that are either measured or indicated reserves as determined by such evidence as drilling records, sample analysis, surface exposure, and mine information. Land included in the MRZ-2a category is of prime importance because it contains known economic mineral deposits. A typical MRZ-2a area would include an operating mine, or an area where extensive sampling indicates the presence of a significant mineral deposit.

- C. *MRZ-2b*—Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present. Areas classified MRZ-2b contain discovered deposits that are either inferred reserves or deposits that are presently sub-economic as determined by limited sample analysis, exposure, and past mining history. Further exploration work and/or changes in technology or economics could result in upgrading areas classified MRZ-2b to MRZ-2a. A typical MRZ-2b area would include sites where there are good geologic reasons to believe that an extension of an operating mine exists or where there is an exposure of mineralization of economic importance.
- D. *MRZ-3a*—Areas containing known mineral deposits that may qualify as mineral resources. Further exploration work within these areas could result in the reclassification of specific localities into the MRZ-2a or MRZ-2b categories. MRZ-3a areas are considered to have a moderate potential for the discovery of economic mineral deposits. As shown on the diagram of the California Mineral Land Classification System, MRZ-3 is divided on the basis of knowledge of economic characteristics of the resources. An example of a MRZ-3a area would be where there is direct evidence of a surface exposure of a geologic unit, such as a limestone body, known to be or to contain a mineral resource elsewhere but has not been sampled or tested at the current location.
- E. *MRZ-3b*—Areas containing inferred mineral deposits that may qualify as mineral resources. Land classified MRZ-3b represents areas in geologic settings which appear to be favorable environments for the occurrence of specific mineral deposits. Further exploration work could result in the reclassification of all or part of these areas into the MRZ-3a category or specific localities into the MRZ-2a or MRZ-2b categories. MRZ-3b is applied to land where geologic evidence leads to the conclusion that it is plausible that economic mineral deposits are present. An example of a MRZ-3b area would be where there is indirect evidence such as a geophysical or geochemical anomaly along a permissible structure which indicates the possible presence of a mineral deposit or that an ore-forming process was operative.
- F. *MRZ-4*—Areas where geologic information does not rule out either the presence or absence of mineral resources. The distinction between the MRZ-1 and MRZ-4 categories is important for land-use considerations. It must be emphasized that

MRZ-4 classification does not imply that there is little likelihood for the presence of mineral resources, but rather there is a lack of knowledge regarding mineral occurrence. Further exploration work could well result in the reclassification of land in MRZ-4 areas to MRZ-3 or MRZ-2 categories.”⁴

⁴ Guidelines for classification and designation of mineral land, pages 4 to 6

Figure 3.11-1
Mineral Resource Zones



REGULATORY SETTING

Federal Agencies & Regulations

None that apply to the proposed Project.

State Agencies & Regulations

Surface Mining and Reclamation Act of 1975 (SMARA)

“The Surface Mining and Reclamation Act (SMARA), Chapter 9, Division 2 of the Public Resources Code, requires the State Mining and Geology Board to adopt State policy for the reclamation of mined lands and the conservation of mineral resources. These policies are prepared in accordance with the Administrative Procedures Act, (Government Code) and are found in California Code of Regulations, Title 14, Division 2, Chapter 8, Subchapter 1.

The Surface Mining and Reclamation Act of 1975 (SMARA, Public Resources Code, Sections 2710-2796) provides a comprehensive surface mining and reclamation policy with the regulation of surface mining operations to assure that adverse environmental impacts are minimized and mined lands are reclaimed to a usable condition. SMARA also encourages the production, conservation, and protection of the state’s mineral resources. Public Resources Code Section 2207 provides annual reporting requirements for all mines in the state, under which the State Mining and Geology Board is also granted authority and obligations.”⁵

State Mining & Geology Board (SMGB)

“The SMGB serves as a regulatory, policy, and appeals body representing the State's interests in geology, geologic and seismologic hazards, and conservation of mineral resources and reclamation of lands following surface mining activities. The SMGB operates within the Department of Conservation, and is granted certain autonomous responsibilities and obligations under several statutes including the Alquist-Priolo Earthquake Fault Zoning Act, the Seismic Hazards Mapping Act, and the Surface Mining and Reclamation Act.”⁶

The Office of Mine Reclamation (OMR)

The Office of Mine Reclamation was created in 1991 to administer the SMARA requirements. OMR provides assistance to cities, counties, state agencies and mine operators for reclamation planning and promotes cost-effective reclamation. OMR strives to reclaim mined lands to a beneficial end-use through the implementation of SMARA, prevent or minimize the adverse environmental effects of mining by providing assistance to lead agencies and miners in the review of reclamation plans, and minimize residual hazards to public health and safety through the Abandoned Mine Lands program.”⁷

⁵ SMARA Description, <http://www.conservation.ca.gov/smgb/Regulations/Pages/regulations.aspx>

⁶ State Mining & Geology Board (SMGB), <http://www.conservation.ca.gov/smgb/Pages/Index.aspx>

⁷ Office of Mine Regulation, <http://www.conservation.ca.gov/OMR/Pages/Index.aspx>

Local Policy & Regulations

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project are listed below.

ERM-2.1 Conserve Mineral Deposits - The County will encourage the conservation of identified and/or potential mineral deposits, recognizing the need for identifying, permitting, and maintaining a 50 year supply of locally available PCC grade aggregate.

ERM-2.2 Recognize Mineral Deposits - The County will recognize as a part of the General Plan those areas of identified and/or potential mineral deposits.

ERM-2.3 Future Resource Development - The County will provide for the conservation of identified and/or potential mineral deposits within Tulare County as areas for future resource development. Recognize that mineral deposits are significantly limited within Tulare County and that they play an important role in support of the economy of the County.

ERM-2.5 Resources Development - The County will promote the responsible development of identified and/or potential mineral deposits.

ERM-2.7 Minimize Adverse Impacts - The County will minimize the adverse effects on environmental features such as water quality and quantity, air quality, flood plains, geophysical characteristics, biotic, archaeological, and aesthetic factors.

ERM-2.8 Minimize Hazards and Nuisances - The County will minimize the hazards and nuisances to persons and properties in the area during extraction, processing, and reclamation operations.

ERM-2.9 Compatibility - The County will encourage the development of mineral deposits in a manner compatible with surrounding land uses.

ERM-2.10 Incompatible Development - Proposed incompatible land uses in the County shall not be on lands containing or adjacent to identified mineral deposits, or along key access roads, unless adequate mitigation measures are adopted or a statement of overriding considerations stating public benefits and overriding reasons for permitting the proposed use are adopted.

ERM-2.11 Conditions of Approval - The County shall establish procedures to ensure compliance with conditions of approval on all active and idle mines.

ERM-2.12 Approved Limits - Tulare County will establish procedures to ensure that vested interest mining operations remain within their approved area and/or production limits.

ERM-2.13 SMARA Requirements - All surface mines in the County, unless otherwise exempted, shall be subject to reclamation plans that meet SMARA requirements. Reclamation procedures shall restore the site for future beneficial use of the land consistent with the Tulare County General Plan, subsequent to the completion of surface mining activities. Mine reclamation costs shall be borne by the mine operator, and guaranteed by financial assurances set aside for restoration procedures.

ERM-3.1 Environmental Contamination - All mining operations in the County shall be required to take precautions to avoid contamination from wastes or incidents related to the storage and disposal of hazardous materials, or general operating activity at the site.

IMPACT EVALUATION

Would the project:

- a) **Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

Project Impact Analysis: *No Impact*

The proposed Project does not include mining operations. In addition, the Project site is not located on a known mineral resource zone. The existing site is currently being used as a silage material recovery facility and the proposed Project will result in *No Project-specific Impacts* related to this ChecklistItem.

Cumulative Impact Analysis: *No Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the proposed Project does not include mining operations and is not located within a known mineral resource zone. As such, *No Cumulative Impacts* related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *No Impact*

As noted earlier, *No Project-specific or Cumulative Impacts* related to this resource will occur.

- b) **Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?**

Draft Environmental Impact Report
Pixley Community Plan

Project Impact Analysis: ***No Impact***

As noted in the Response to Item 3.11 a), the proposed Project does not include mining operations and the Project site is not located on a known mineral resource zone. The existing site is currently being used currently vacant; therefore, the proposed Project will result in ***No Project-specific Impacts*** related to this resource.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

As noted in the Response to Item 3.11 a), the proposed Project does not include mining operations and is not located within a mineral resource zone. As such, ***No Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

DEFINITIONS/ACRONYMS

Acronyms

MRZ	Mineral Resource Zone
OMR	Office of Mine Reclamation
SMGB	State Mining & Geology Board
SMARA	Surface Mining and Reclamation Act

REFERENCES

California Surface Mining and Reclamation Policies and Procedures. Guidelines for Classification and Designation of Mineral Lands, which can be accessed at:

<http://www.conservation.ca.gov/smgb/Guidelines/Documents/ClassDesig.pdf>

Guidelines for Classification and Designation of Mineral Land, page 4 to 6, which can be accessed at <http://www.conservation.ca.gov/smgb/Guidelines/Documents/ClassDesig.pdf>

Office of Mine Regulation, which can be accessed at:

<http://www.conservation.ca.gov/OMR/Pages/Index.aspx..>

SMARA Description, which can be accessed at:

<http://www.conservation.ca.gov/smgb/Regulations/Pages/regulations.aspx>.

State Mining & Geology Board (SMGB), which can be accessed at:

<http://www.conservation.ca.gov/smgb/Pages/Index.aspx>.

USGS Mineral Resources On-Line Spatial Data, Active mines and mineral plants in the US, which can be accessed at: <http://mrdata.usgs.gov/mineral-resources/active-mines.html>.

Tulare County 2030 General Plan, August 2012

Tulare County 2030 General Plan Background Report, February 2010

CEQA Guidelines

Noise

Chapter 3.12

SUMMARY OF FINDINGS

The proposed Project will result in *Less Than Significant Impacts* related to Noise with mitigation. A Noise Study Report conducted by consultants VRPA Technologies is included as Appendix “E” of this document which is used as the basis for determining this Project will result in less than significant impacts.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts related to Noise. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

The environmental setting provides a description of the Noise Setting in Tulare County. The regulatory setting provides a description of applicable Federal, State, and Local regulatory policies that were developed in part from information contained in the Tulare County 2030

¹ 2013 CEQA Guidelines, Section 15126.2 (a)

Draft Environmental Impact Report
Pixley Community Plan

General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts. Tulare County's Land Use Compatibility for Community Noise Environments is shown in **Table 3.12-1**.

Thresholds of Significance

- Exceed Tulare County Standards for Noise Levels
- Expose people of excessive groundborne vibration
- Expose people to excessive airport/airstrip noise

Table 3.12-1 - Land Use Compatibility for Community Noise Environments

Land Use Category	Community Noise Exposure L_{dn} or CNEL (dB)						
	50	55	60	65	70	75	80
Residential - Low Density Single Family, Duplex, Mobile Homes							
Residential - Multi-Family							
Transient Lodging - Motels, Hotels							
Schools, Libraries, Churches, Hospitals, Nursing Homes							
Auditoriums, Concert Halls, Amphitheaters							
Sports Arenas, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business Commercial and Professional							
Industrial, Manufacturing, Utilities, Agriculture							
Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.						
Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.						
Normally Unacceptable	New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.						
Clearly Unacceptable	New construction or development generally should not be undertaken.						

Source: Tulare County General Plan

The Noise Study Report (NSR or Pixley NSR) prepared by consultants VRPA Technologies (see Appendix “E”) described all the necessary components of noise impacts necessary to provide a CEQA-based evaluation. A description and discussion of the community, the street and highway system, existing circulation and traffic conditions, technical background regarding sound and noise evaluation (such as sound and the human ear, decibels, sound pressure, sound/noise/acoustics, frequency/hertz, etc.), methodology, applicable governmental codes and policies, study methods and procedures (such as site selection and noise level measurement procedures, existing conditions, future year conditions, vibration, standards of significance and CEQA environmental checklist questions have all been addressed in the NSR.

Beginning with the Existing Circulation and Traffic Conditions, the NSR identifies the roadways such as highways, arterials, collectors and local streets within the Project area as:

“Existing Circulation and Traffic Conditions

State Highways: California State Route 99 is In the Pixley area, State Route (SR) 99 is freeway with two travel lanes northbound and southbound. There are interchanges at Avenue 320, Court Avenue and Terra Bella Avenue, affording good access between Pixley and Valley-wide destinations served by the freeway.

Arterials: Avenue 320, also known as Hesse Avenue, is a rural arterial roadway about two miles north of the center of Pixley. As noted above it has an interchange with SR 99. It follows an east-west alignment and provides one traffic lane in each direction throughout the area.

Court Avenue is a major street that is bifurcated into eastern and western segments by SR 99, which it crosses via an overpass bridge. Court Avenue combines the functions of both an arterial and collector street and provides one traffic lane in each direction for its length through central Pixley. Court Avenue serves the Pixley Elementary School, which is just northeast of its intersection with School Street.

Terra Bella Avenue also known as Road J24, is a major east-west arterial street. Like Court Avenue, Terra Bella is bifurcated into east and west segments by SR 99 and crosses SR 99 via an overpass bridge.

Airport Avenue (also known as Road 120) is a two-lane north-south arterial street that traverses mainly agricultural areas west of Pixley.

Main Street is a two-lane north-south street immediately west of SR 99 that provides access to a mix of uses in the community’s center. Like Court Avenue Main Street combines the functions of both an arterial and collector street. Its northernmost segment serves as southbound off-ramp for SR 99 traffic accessing Court Avenue and destinations on the west side of the freeway. South of Terra Bella Avenue Main Street also receives traffic from another southbound SR 99 off-ramp, and the southernmost segment of Main Street functions as a southbound on-ramp to SR 99.

Draft Environmental Impact Report
Pixley Community Plan

Center Street is a two-lane north-south street immediately west of SR 99 that provides access to a mix of uses in the community's center. Like Court Avenue and Main Street it combines the functions of both an arterial and collector street, and like Main Street its northernmost segment serves as southbound off-ramp for SR 99 traffic accessing Court Avenue and other destinations in Pixley.

Park Drive is a two-lane north-south street immediately east of SR 99 that also provides access to a mix of uses in the community's center. It too combines the functions of both an arterial and collector street. Its southernmost segment serves as northbound off-ramp for SR 99 traffic accessing Terra Bella Avenue, Court Street and destinations on the east side of the freeway.

School Street is a north-south street that combines the function of a collector and local street. Its paved portion runs from Terra Bella Avenue at the southerly edge of the planning area across Court Avenue to Pixley Elementary School. It affords access to abutting residential properties to west and currently undeveloped parcels to the east.

Local Streets: All other streets and roads in the community's planning area function essentially as local streets, mainly carrying traffic accessing abutting urban and rural properties."²

ENVIRONMENTAL SETTING

"Noise in the community has often been cited as being a health problem, not in terms of actual damage such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities such as sleep, speech, recreation, and tasks demanding concentration or coordination. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases, and the acceptability of the environment for people decreases. This decrease in acceptability and the threat to public well-being are the bases for land use planning policies preventing exposure to excessive community noise levels."³

"Noise sources are commonly grouped into two major categories: transportation and non-transportation noise sources. Transportation noise sources include surface traffic on public roadways, railroad line operations, and aircraft in flight. Non-transportation (or fixed), noise sources, commonly consist of industrial activities, railroad yard activities, small mechanical devices (lawnmowers, leaf blowers, air conditioners, radios, etc.), and other sources not included in the traffic, railroad and aircraft category."⁴

"Noise level data collected during continuous monitoring included the hourly Leq and Lmax and the statistical distribution of noise levels over each hour of the sample period. The community noise survey results indicate that typical noise levels in noise-sensitive areas of the unincorporated areas of Tulare County are in the range of 29-65 dB Ldn. As would be expected, the quietest areas are those that are removed from major transportation-related noise sources and

² "Pixley Noise Study Report (NSR) prepared by consultants VRPA Technologies, November 2014, pages 4-5 (see Appendix "E" of this DEIR)

³ TCAG 2011 Regional Transportation Plan Draft Subsequent EIR, page 151

⁴ Ibid., page 153

industrial or stationary noise sources.”⁵

A Noise Study Report was prepared by VRPA Technologies (VRPA) to determine if significant noise impacts would be expected to occur as a result of the Project, and to describe mitigation measures for noise if significant impacts are determined to exist as described below.

VRPA used the following study methods and procedures to determine site selection and noise level measurements. For the site selection analysis, VRPA determined indicates; “Developed and undeveloped land uses in the community of Pixley were identified through land use maps, aerial photography, and site inspection. Within each land use category, sensitive receptors were then identified. Land uses in the community of Pixley include agricultural, single-family residences, retail, and industrial uses. The generalized land use data and location of particular sensitive receptors and existing traffic volumes were the basis for the selection of the noise monitoring and analysis sites. Three (3) field receptor locations were measured in the field and represent residential, industrial, and recreational land uses adjacent to local roadways within the community. Pixley is a small community with a population of just 3300 and Court Avenue and Terra Bella Avenue, which are the northern and southern border of the community, provide access to a majority of the local roads. Field receptor locations are shown in Figure 4 and described in Table 2 [Table 3.12-2 of the DEIR]. Figure 4 [Figure 3.12-2 of the DEIR] also shows additional modeled receptor locations that reflect locations of other sensitive receptor locations. Modeled receptors 4 – 10 represent outdoor areas of residential, industrial, office/retail, and school land uses.”⁶

For the noise level measurement procedure, VRPA indicates; “Existing noise levels in the community of Pixley were sampled in the afternoon because traffic counts conducted in the study area show a greater volume of traffic in the PM peak hour than the AM peak hour. All measurements were made using an Extech Type 2 sound level meter datalogger.

The following measurement procedure was utilized:

- ✓ Calibrate sound level meter.
- ✓ Set up sound level meter at a height of 1.5 m (5 ft).
- ✓ Commence noise monitoring.
- ✓ Collect site-specific data such as date, time, direction of traffic, and distance from sound level meter to the center of the roadway.
- ✓ Count passing vehicles for a period of 5 minutes.
- ✓ Stop measurement after 5 minutes.”⁷

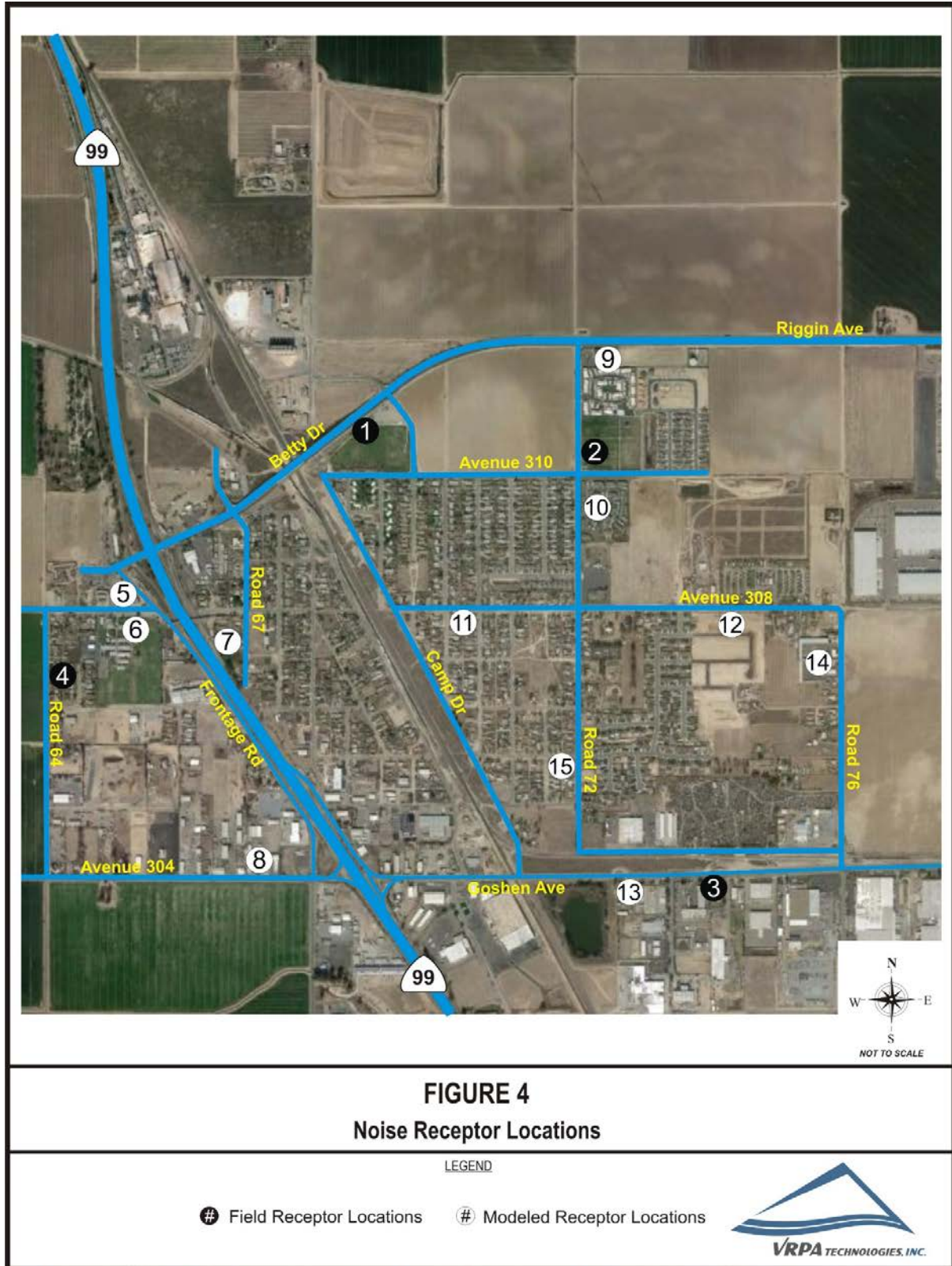
“Existing traffic noise levels are established based on previously collected traffic data and using the Traffic Noise Model (TNM) Version 2.5. TNM 2.5 is an FHWA Traffic Noise Prediction Program. Once existing levels are established, future levels, based on expected traffic growth, are calculated and compared to both the existing noise level and the maximum allowable noise exposure to noise generation sources as described in Tulare County’s General Plan. Referencing

⁵ General Plan Background Report, page 8-77

⁶ Pixley NSR page 13, prepared by VRPA Technologies (and included as Appendix “E” of this DEIR)

⁷ Ibid.

Figure 3.12-2 Noise Receptor Locations



Draft Environmental Impact Report
Pixley Community Plan

Table 1 [Table 3.12-1 of the DEIR], Tulare County's criteria shows that mitigation must be considered when the exterior noise exposure level of 60 Ldn/CNEL for single family residential and exterior noise exposure level of 65 to 75 Ldn/CNEL for multi-family, transient lodging, hospitals, churches, schools, business commercial, industrial, and meeting halls has been exceeded. Levels reported in this section are in terms of A-weighted levels.

Existing traffic noise levels were evaluated using TNM 2.5. Traffic volumes collected from the circulation element completed for the Pixley Community Plan and average vehicle speeds along various roadways within the study area were entered into the model to estimate noise levels at various land uses in the Pixley Community. In order to calibrate the TNM 2.5 model, the existing counts (expanded to one hour), lane geometry, and any other pertinent existing conditions were added to the model. The noise level measurements taken in the Pixley area were then compared to the noise levels computed by the model. The difference between the measured and modeled noise levels, referred to as the "K constant", is then added to the modeled receptors for the Existing calculated noise levels to obtain the estimated noise levels for the 7 additional modeled receptors.

To assess the traffic noise on sensitive receptors in the community of Pixley, the first step is to determine the baseline or the existing noise condition. The second is to then compare the baseline to future level results, based on expected traffic growth, and Tulare County's Land Use Compatibility for Community Noise Environments."⁸ Table 3.12-2 (Table 2 of the Pixley NSR) shows the locations of receptors analyzed in the NSR.

"As shown in Table 3 [Table 3.12-3 of the DEIR], the highest peak hour sound level for the study area is 65.4 Leq (h) dBA at receptor 2. When it comes to noise levels, generally the Ldn is determined to be within +/- 2 dBA of the peak hour Leq under normal traffic conditions based upon Caltrans' Traffic Analysis Noise Protocol. Caltrans' Technical Noise Supplement includes methodology for the purpose of converting peak hour Leq to Ldn (See Appendices). Table 3 also includes the calculated Ldn based on the peak hour Leq measured at noise receptors. Results of the analysis show that none of the receptors will exceed Tulare County's Land Use Compatibility for Community Noise Environments.

Table 4 [Table 3.12-4 of the DEIR] shows the existing traffic noise exposure levels at a setback of 60 feet from the roadway centerline and the approximate distances from the roadway centerline necessary to achieve 60 Ldn dB in the absence of any noise attenuating barriers."⁹

⁸ Op. Cit. 16

⁹ Op. Cit.

Draft Environmental Impact Report
Pixley Community Plan

Table 3.12-2
Receptor Locations

Receptor I.D. No.	Location	Type of Development
1	Approximately 60 feet from Court Street Centerline	Residential
2	Approximately 50 feet from Park Street Centerline	Office/ Commercial
3	Approximately 50 feet from Terra Bella Avenue Centerline	Industrial
4	Approximately 50 feet from Park Street Centerline	Neighborhood Park
5	Approximately 135 feet from Court Street Centerline	Industrial
6	Approximately 100 feet from Court Street Centerline	School
7	Approximately 100 feet from Court Street Centerline	School
8	Approximately 90 feet from Terra Bella Avenue Centerline	Residential
9	Approximately 65 feet from Center Street Centerline	Industrial
10	Approximately 90 feet from Terra Bella Avenue Centerline	Residential

Draft Environmental Impact Report
Pixley Community Plan

**Table 3.12-3
Existing Noise Levels**

Receptor I.D. No.	Location	Type of Development	Existing Noise Level Leq(h) dBA	Existing Noise Level Ldn dB	Tulare County Noise Standard dBA Ldn	Impact
1	Approximately 60 feet from Court Street Centerline	Residential	53.1	53.8	60	None
2	Approximately 50 feet from Park Street Centerline	Office/ Commercial	65.4	66.1	70	None
3	Approximately 50 feet from Terra Bella Avenue Centerline	Industrial	60.9	61.6	75	None
4	Approximately 50 feet from Park Street Centerline	Neighborhood Park	64.4	65.1	70	None
5	Approximately 135 feet from Court Street Centerline	Industrial	64.3	65.0	75	None
6	Approximately 100 feet from Court Street Centerline	School	51.6	52.3	70	None
7	Approximately 100 feet from Court Street Centerline	School	49.2	49.9	70	None
8	Approximately 90 feet from Terra Bella Avenue Centerline	Residential	55.9	56.6	60	None
9	Approximately 65 feet from Center Street Centerline	Industrial	63.8	64.5	75	None
10	Approximately 90 feet from Terra Bella Avenue Centerline	Residential	58.5	59.2	60	None

**Table 3.12-4
Existing Noise Levels for Roadway Segments**

Roadway	Segment	Existing Conditions	
		Noise Level Leq(h) dBA @ 60' Fom Roadway Centerlines	Distance (Feet) to 60 Ldn dB from Roadway Centerline
Court Avenue	Between SR 99 and Palm Street	56.0	41
Terra Bella Avenue	Between SR 99 and Palm Street	62.0	82
Terra Bella Avenue	Between Airport Street and SR 99	59.4	61
Center Street	Between Court Avenue and Terra Bella Avenue	64.5	109
Park Street	Between Court Avenue and Terra Bella Avenue	63.8	101

Draft Environmental Impact Report
Pixley Community Plan

Once the baseline of existing noise levels was established, the consultants estimated future year conditions of the Pixley community as follows:

“The noise impacts to the Pixley community were analyzed considering future traffic conditions in the year 2032. The levels of traffic expected in 2032 relate to the cumulative effect of traffic increases resulting from the implementation of the General Plan of local agencies. Traffic conditions in the Year 2032 were estimated using the Tulare County Association of Governments (TCAG) regional travel model.

Traffic volumes, truck mix, and vehicle speeds were used as inputs to the model for the Future Year 2032 scenario. Traffic volumes and truck mix were determined by the Circulation Element prepared for the Pixley Community Plan. Table 5 [Table 3.12-5 of the DEIR] shows the predicted noise levels at the 10 sensitive receptors evaluated in this noise element. Results of the analysis show that Receptor 10 will exceed Tulare County’s Land Use Compatibility for Community Noise Environments for the Future Year 2032 scenario. Receptor 10 is located adjacent to Terra Bella Avenue and represents a residential land use. As noted in the existing conditions analysis, Receptor 10 currently experiences noise levels that do not exceed Tulare County’s Land Use Compatibility for Community Noise Environments.

As noted previously, an important way of determining a person’s subjective reaction to a new noise is the comparison of it to the existing environment, referred to as the “ambient” environment. Overall traffic volumes in the study area are expected to increase due to growth in population and employment anticipated under the Tulare County General Plan. Table 5 [Table 3.12-5 of the DEIR] provides a comparison of existing noise levels to the estimated future year noise levels. Results show that the greatest increase between existing conditions and future conditions is 1.5 dB’s, which occurs at Receptors 3, 7, and 8. A change in level of at least 5 dB is required before any noticeable change in community response would be expected and a 10 dB change is subjectively heard as approximately a doubling in loudness. Therefore, the increase in traffic volumes as a result of population and employment increase in the Tulare County General Plan would not cause potentially significant impacts at Receptor 10.

Table 6 [Table 3.12-6 of the DEIR] shows the Future Year 2032 traffic noise exposure levels at a setback of 60 feet from the roadway centerline and the distances from the roadway centerline necessary to achieve 60 Ldn dB in the absence of any noise attenuating barriers.”¹⁰

In addition to traffic noise, the consultant also analyzed noise from the nearby Union Pacific Railroad (UPR) that runs through the Pixley community. The analysis is summarized as follows:

“The UPR runs adjacent to SR 99 and the industrial and residential land uses in the community of Pixley. UPR’s current operations at the Terra Bella Avenue and Davis Avenue crossings consist of approximately 19 train movements per day based on the United State Department of Transportation crossing inventory. The typical speed of the trains over the crossing ranges from 5 to 65 mph. Train operators are required to sound the warning horn when approaching within approximately 1,000 feet of a grade crossing. As a result, train noise levels are higher at locations near grade crossings, such as the crossings at Terra Bella Avenue and Davis Avenue. It

¹⁰ Op. Cit. 18

Draft Environmental Impact Report
Pixley Community Plan

is estimated that noise level's from train pass-bys (with warning horn) at approximately 175 feet from the tracks range from 94 – 102 dB's. Table 7 [Table 3.12-7 in the DEIR] shows the Existing and Future Year 2032 noise exposure levels from railroad activity along the UPR. The noise levels were calculated using the Federal Transit Administration (FTA) CREATE Freight Noise and Vibration Model. Results of the Analysis show that noise levels at residences adjacent to the UPR will not exceed Tulare County's noise standards."¹¹

**Table 3.12-5
Traffic Noise Impacts for the Future Year 2032 Scenario**

Receptor I.D. No.	Type of Development	Existing Noise Level Ldn dB	Future Year 2032 Noise Level Ldn dB	Existing vs Future Year Comparison	Tulare County Noise Standard dBA Ldn	Impact
1	Residential	53.8	55.0	1.2	60	None
2	Office/Commercial	66.1	67.1	1.0	70	None
3	Industrial	61.6	63.1	1.5	75	None
4	Neighborhood Park	65.1	66.1	1.0	70	None
5	Industrial	65.0	65.8	0.8	75	None
6	School	52.3	53.7	1.4	70	None
7	School	49.9	51.4	1.5	70	None
8	Residential	56.6	58.1	1.5	60	None
9	Industrial	64.5	65.3	0.8	75	None
10	Residential	59.2	60.5	1.3	60	Yes

¹¹ Op. Cit. 18-19

Table 3.12-6

Roadway Segment Noise Levels for the Future Year 2032 Scenario

Roadway	Segment	Future Year 2032 Conditions	
		Noise Level Leq(h) dBA @ 60' Fom Roadway Centerlines	Distance (Feet) to 60 Ldn dB from Roadway Centerline
Court Avenue	Between SR 99 and Palm Street	57.4	48
Terra Bella Avenue	Between SR 99 and Palm Street	63.3	95
Terra Bella Avenue	Between Airport Street and SR 99	60.9	72
Center Street	Between Court Avenue and Terra Bella Avenue	65.3	120
Park Street	Between Court Avenue and Terra Bella Avenue	64.8	113

Table 3.12-7

Estimated Existing and Future Traffic Noise Levels

Noise Source	Existing Sound Levels Measured (Ldn dB at residences adjacent to rail line)	Future Year 2032 Sound Levels Measured (Ldn dB at residences adjacent to rail line)
Union Pacific Railroad	60	60

In addition to noise, the consultant also analyzed potential vibration sources. Ground-borne vibrations, such as construction-related and UPR sources, were determined to not likely impact nearby receptors. An analysis from these vibration can be found in pages 21-22 of the Pixley NSR (Appendix “E” of the DEIR).

“Construction activities associated with the build-out of the Tulare County General Plan would likely require the use of various tractors, trucks, and jackhammers. Based on the vibration levels provided in Table 9 [Table 3.12-8 in the DEIR], ground vibration generated by common construction equipment would be 75 VdB or less at a distance of 100 feet or more. Given that much of the construction activities would occur on vacant parcels in sparsely to moderately developed areas, the nearest offsite structures to a particular project site would likely be located in excess of 100 feet from construction activities. As a result, predicted vibration levels at the nearest offsite structures would not exceed vibration levels greater than 75 VdB.”¹²

¹² Op. Cit. 22

Table 3.12-8
Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 ft (in/sec)	Approximate L _v * at 25 ft
Large bulldozer	0.089	87
Caisson drilling	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

* RMS velocity in decibels (VdB) re 1 μ inch/second

“Union Pacific Railroad (UPR) activity can also generate ground vibration as a result railroad activities. The U.S. Department of Transportation, Federal Transit Administration Operation provides a vibration screening methodology in the “Transit Noise and Vibration Impact Assessment” document. Based on the vibration screening methodology coupled with the infrequent daily train movements and proximity of sensitive receptors, railroad activity along the UPR will not likely have an impact to nearby sensitive receptors.”¹³

“Vibration levels from various types of construction equipment are shown in Table 9 [Table 3.12-9 in this DEIR]. The primary concern with construction vibration is building damage. Therefore, construction vibration is generally assessed in terms of peak particle velocity (PPV). It should be noted that there is a considerable variation in reported ground vibration levels from construction activities. The data provides a reasonable estimate for a wide range of soil conditions.”¹⁴

TABLE 3.12-9
Vibration Construction Equipment

Equipment	PPV at 25 ft (in/sec)	Approximate L _v * at 25 ft
Large bulldozer	0.089	87
Caisson drilling	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

* RMS velocity in decibels (VdB) re 1 μ inch/second

¹³ Op. Cit. 22

¹⁴ Op. Cit. 21

Regulatory Setting

Federal Agencies & Regulations

Federal Highways Administration (FHWA) Highway Traffic Noise Prediction methodology

“In March 1998, the Federal Highway Administration (FHWA) released the Traffic Noise Model, Version 1.0 (FHWA TNM®). It was developed as a means for aiding compliance with policies and procedures under FHWA regulations. Since its release in March 1998, Version 1.0a was released in March 1999, Version 1.0b in August 1999, Version 1.1 in September 2000, Version 2.0 in June 2002, Version 2.1 in March 2003 and the current version, Version 2.5 in April 2004. The FHWA TNM is an entirely new, state-of-the-art computer program used for predicting noise impacts in the vicinity of highways. It uses advances in personal computer hardware and software to improve upon the accuracy and ease of modeling highway noise, including the design of effective, cost-efficient highway noise barriers.”¹⁵

Federal Aviation Administration (FAA)

“Aircraft operated in the U.S. are subject to certain federal requirements regarding noise emissions levels. These requirements are set forth in Title 14 CFR, Part 36. Part 36 establishes maximum acceptable noise levels for specific aircraft types, taking into account the model year, aircraft weight, and number of engines. Pursuant to the federal Airport Noise and Capacity Act of 1990, the FAA established a schedule for complete transition to Part 36 "Stage 3" standards by year 2000. This transition schedule applies to jet aircraft with a maximum takeoff weight in excess of 75,000 pounds, and thus applies to passenger and cargo airlines, but not to operators of business jets or other general aviation aircraft.”¹⁶

Federal Railway Administration (FRA) and the Federal Transit Administration (FTA)

“The Federal Railway Administration (FRA) and the Federal Transit Administration (FTA) have published guidance relative to vibration impacts. According to the FRA, fragile buildings can be exposed to groundborne vibration levels of 0.5 PPV without experiencing structural damage. The FTA has identified the human annoyance response to vibration levels as 80 VdB.”¹⁷

State Agencies & Regulations

California Noise Insulation Standards

“The California Noise Insulation Standards found in the California Code of Regulations, Title 24, set requirements for new multi-family residential units, hotels, and motels that may be subject to relatively high levels of transportation-related noise. For exterior noise, the noise insulation standard is DNL 45 dB in any habitable room and requires an acoustical analysis

¹⁵ Federal Highway Administration website, Traffic Noise Model, http://www.fhwa.dot.gov/environment/noise/traffic_noise_model/

¹⁶ TCAG 2011 Regional Transportation Plan Draft Subsequent EIR, page 152

¹⁷ Ibid.

demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than DNL 60 dB.”¹⁸

California's Airport Noise Standards

“The State of California has the authority to establish regulations requiring airports to address aircraft noise impacts on land uses in their vicinities. The State of California's Airport Noise Standards, found in Title 21 of the California Code of Regulations, identify a noise exposure level of CNEL 65 dB as the noise impact boundary around airports. Within the noise impact boundary, airport proprietors are required to ensure that all land uses are compatible with the aircraft noise environment or the airport proprietor must secure a variance from the California Department of Transportation.”¹⁹

California Department of Transportation (Caltrans)

“The State of California establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the State passby standard is consistent with the federal limit of 80 dB. The State passby standard for light trucks and passenger cars (less than 4.5 tons gross vehicle rating) is also 80 dB at 15 meters from the centerline.”²⁰

Local Policy & Regulations

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed below.

HS-8.1 Economic Base Protection - The County shall protect its economic base by preventing the encroachment of incompatible land uses on known noise-producing industries, railroads, airports, and other sources.

HS-8.2 Noise Impacted Areas - The County shall designate areas as noise-impacted if exposed to existing or projected noise levels that exceed 60 dB Ldn (or Community Noise Equivalent Level (CNEL)) at the exterior of buildings.

HS-8.3 Noise Sensitive Land Uses - The County shall not approve new noise sensitive uses unless effective mitigation measures are incorporated into the design of such projects to reduce noise levels to 60 dB Ldn (or CNEL) or less within outdoor activity areas and 45 dB Ldn (or CNEL) or less within interior living spaces.

HS-8.4 Airport Noise Contours - The County shall ensure new noise sensitive land uses are located outside the 60 CNEL contour of all public use airports.

¹⁸ Ibid., page 153

¹⁹ Ibid.

²⁰ TCAG 2011 Regional Transportation Plan Draft Subsequent EIR, page 152

HS-8.6 Noise Level Criteria - The County shall ensure noise level criteria applied to land uses other than residential or other noise-sensitive uses are consistent with the recommendations of the California Office of Noise Control (CONC).

HS-8.8 Adjacent Uses - The County shall not permit development of new industrial, commercial, or other noise-generating land uses if resulting noise levels will exceed 60 dB Ldn (or CNEL) at the boundary of areas designated and zoned for residential or other noise-sensitive uses, unless it is determined to be necessary to promote the public health, safety and welfare of the County.

HS-8.10 Automobile Noise Enforcement - The County shall encourage the CHP, Sheriff's office, and local police departments to actively enforce existing sections of the California Vehicle Code relating to adequate vehicle mufflers, modified exhaust systems, and other amplified noise.

HS-8.11 Peak Noise Generators - The County shall limit noise generating activities, such as construction, to hours of normal business operation (7 a.m. to 7 p.m.). No peak noise generating activities shall be allowed to occur outside of normal business hours without County approval.

HS-8.13 Noise Analysis - The County shall require a detailed noise impact analysis in areas where current or future exterior noise levels from transportation or stationary sources have the potential to exceed the adopted noise policies of the Health and Safety Element, where there is development of new noise sensitive land uses or the development of potential noise generating land uses near existing sensitive land uses. The noise analysis shall be the responsibility of the project applicant and be prepared by a qualified acoustical engineer (i.e., a Registered Professional Engineer in the State of California, etc.). The analysis shall include recommendations and evidence to establish mitigation that will reduce noise exposure to acceptable levels (such as those referenced in Table 10-1 of the Health and Safety Element).

HS-8.14 Sound Attenuation Features - The County shall require sound attenuation features such as walls, berming, heavy landscaping, between commercial, industrial, and residential uses to reduce noise and vibration impacts.

HS-8.15 Noise Buffering - The County shall require noise buffering or insulation in new development along major streets, highways, and railroad tracks.

HS-8.16 State Noise Insulation -

The County shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code.

HS-8.18 Construction Noise - The County shall seek to limit the potential noise impacts of construction activities by limiting construction activities to the hours of 7 am to 7pm, Monday through Saturday when construction activities are located near sensitive receptors. No construction shall occur on Sundays or national holidays without a permit from the County to minimize noise impacts associated with development near sensitive receptors.

HS-8.19 Construction Noise Control - The County shall ensure that construction contractors implement best practices guidelines (i.e. berms, screens, etc.) as appropriate and feasible to reduce construction-related noise-impacts on surrounding land uses.

Pixley Community Plan Policies

The intent of the Pixley Community Noise Element is to provide a policy framework for addressing potential noise impacts encountered in the planning process. The goals and policies outline below are consistent with Tulare County policies.

Goal 1: *Protect the citizens of Tulare County from the harmful effects of exposure to excessive noise.*

Policies and Standards:

1. Areas within the Pixley Community shall be designated as noise-impacted if exposed to existing or projected future noise levels at the exterior of buildings which exceed 60 dB Ldn (or CNEL).
2. New development of residential or other noise-sensitive land uses which require discretionary approval under the Tulare County Zoning Ordinance of the Tulare County Subdivision Ordinance (e.g. use permits, zone changes, subdivision maps, parcel maps) will not be permitted in noise-impacted areas unless effective mitigation measures are incorporated into the specific design of such projects to reduce noise levels to 60 dB Ldn (or CNEL) or less within outdoor activity areas and 45 dB Ldn (or CNEL) or less within interior living spaces. Where it is not possible to reduce exterior noise level of up to reduce exterior noise levels within outdoor activity areas to 60 dB Ldn (or CNEL) or less after the practical application of the best available noise reduction technology, an exterior noise level of up to 65 dB Ldn (or CNEL) will be allowed. Under no circumstances will an interior noise level exceeding 45 dB Ldn be allowed with the windows and doors closed. It should be noted that in instances where the windows and doors must remain closed to achieve the required acoustical isolation, mechanical ventilation or air conditioning must be provided.
3. Noise level criteria applied to land uses other than residential or other noise-sensitive uses shall be consistent with the recommendations of the California Office of Noise Control. Tulare County shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code (UBC). Title 24 requires that interior noise levels not exceed 45 dB Ldn (or CNEL) with the windows and doors closed within new developments of multifamily dwellings, condominiums, hotels or motels. UBC Chapter 35 requires that common wall and floor/ceiling assemblies within multi-family dwellings comply with minimum standards concerning the transmission of airborne sound and structure-borne impact noise. Title 24 requires that conformance with the above-described standards be documented by the submission of an acoustical analysis whenever new multi-family dwellings, condominiums, hotels or motels are proposed for areas within the 60 dB Ldn (or CNEL) contour of a major noise source as determined by the local jurisdiction.

4. In conformance with the directives of State planning law, the County shall ensure that the Noise Element is consistent with and does not conflict with other elements of the Pixley Community Plan.
5. Where existing noise-sensitive uses may be exposed to increased noise levels due to roadway improvement projects, the County shall apply the following criteria to determine the significance of the impact:
 - a. Where existing noise levels are less than 60 Ldn dB at outdoor activity areas of noise-sensitive uses, a 5 Ldn dB increase in noise levels will be considered significant;
 - b. Where existing noise levels are between 60 and 65 Ldn dB at outdoor activity areas of noise-sensitive uses, a 3 Ldn dB increase in noise levels will be considered significant; and
 - c. Where existing noise levels are greater than 65 Ldn dB at outdoor activity areas of noise-sensitive uses, a 1.5 Ldn dB increase in noise levels will be considered significant.

Goal 2: *Protect the economic base of Tulare County by preventing the encroachment of incompatible land uses near known noise-producing industries, railroads, airports and other sources.*

Policies and Standards:

1. New development of industrial, commercial or other noise-generating land uses will not be permitted if resulting noise levels will exceed 60 dB Ldn (or CNEL) at the boundary of areas planned and zoned for residential or other noise-sensitive land uses, unless determined to be necessary to promote the public health, safety and welfare of the Pixley Community.

IMPACT EVALUATION

Would the project:

- a) **Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

Project Impact Analysis: *Less Than Significant Impact*

“Table 5 [Table 3.12-5 of the DEIR] shows the predicted noise levels at the 10 sensitive receptors evaluated in this noise element. Results of the analysis show that Receptor 10 will exceed Tulare County’s Land Use Compatibility for Community Noise Environments for the Future Year 2032 scenario. Receptor 10 is located adjacent to Terra Bella Avenue and represents a residential land use. As noted in the existing conditions analysis, Receptor 10 currently experiences noise levels that do not exceed Tulare County’s Land Use Compatibility for Community Noise Environments.

Table 5 also provides a comparison of existing noise levels to the estimated future year noise levels. Results show that the greatest increase between existing conditions and future conditions is 1.5 dB's, which occurs at Receptors 3, 7, and 8. A change in level of at least 5 dB is required before any noticeable change in community response would be expected and a 10 dB change is subjectively heard as approximately a doubling in loudness. Therefore, the increase in traffic volumes as a result of population and employment increase in the Tulare County General Plan would not cause potentially significant impacts at Receptor 10, which is currently experiencing a noise level of 59.2 Ldn dB and is projected to experience a noise level of 60.5 Ldn dB in the future.”²¹

Based upon the Pixley NSR, future increases in traffic volumes as a result of population and employment as contained in the Pixley Community Plan would result in a ***Less Than Significant Impact***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project is located along State Route 99 resulting in a high volume of traffic noise from the freeway. The normal operations of the proposed Project will have a minimal impact on the overall ambient noise levels of the area.

As noted earlier, the information contained in Table 3.12-5 of this DEIR, shows a comparison of existing noise levels to the estimated future year noise levels. Results show that the greatest increase between existing conditions and future conditions is 1.5 dB's, which occurs at Receptors 3, 7, and 8. A change in level of at least 5 dB is required before any noticeable change in community response would be expected and a 10 dB change is subjectively heard as approximately a doubling in loudness.

Therefore, despite the noise increases of 1.5 dB's at Receptors 3, 7, and 8; there will be no-to just-perceivable differences as a result of the Project. As such, ***Less Than Significant Impacts*** would occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, the analysis indicates that a ***Less Than Significant Impacts*** would occur as a result of the Project-specific and Cumulative impacts related to the Noise resource.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

²¹ Pixley NSR page 22, prepared by VRPA Technologies (and included as Appendix “E” of this DEIR)

Project Impact Analysis: ***Less Than Significant Impact***

“Ambient vibration levels in residential areas are typically 50 VdB, which is well below human perception. The operation of heating/air conditioning systems and slamming of doors produce typical indoor vibrations that are noticeable to humans. Construction activity can result in ground vibration, depending upon the types of equipment used. Operation of construction equipment causes ground vibrations which spread through the ground and diminish in strength with distance from the source generating the vibration. Building structures that are founded on the soil in the vicinity of the construction site respond to these vibrations, with varied results. Ground vibrations as a result of construction activities very rarely reach vibration levels that will damage structures, but can cause low rumbling sounds and feelable vibrations for buildings very close to the site. Construction activities that generally create the most severe vibrations are blasting and impact pile driving.

Vibration levels from various types of construction equipment are shown in Table 9 [Table 3.12-8 in this DEIR]. The primary concern with construction vibration is building damage. Therefore, construction vibration is generally assessed in terms of peak particle velocity (PPV). Using the highest vibration level shown in Table 9 [Table 3.12-8 in this DEIR] (Lv 87), the anticipated vibration level at 100 feet, 150 feet, and 200 feet is 75, 71, and 69 VdB, respectively.

Construction activities associated with the build-out of the Tulare County General Plan would likely require the use of various tractors, trucks, and jackhammers. Based on the vibration levels provided in Table 9, ground vibration generated by common construction equipment would be 75 VdB or less at a distance of 100 feet or more. Given that much of the construction activities would occur on vacant parcels in sparsely to moderately developed areas, the nearest offsite structures to a particular project site would likely be located in excess of 100 feet from construction activities. As a result, predicted vibration levels at the nearest offsite structures would not exceed vibration levels greater than 75 VdB.”²²

Therefore, site preparation and construction-related vibration levels are anticipated to be below the 0.01 inch per-second perception threshold at nearby properties, resulting in an a ***Less Than Significant Impact***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

Due to the short-term, temporary nature of construction-related activities, the proposed Project will not generate long-term impacts. No perceptible operational vibration will occur. ***No Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

²² Op. Cit. 24

Conclusion: *Less Than Significant Impact*

The proposed Project will result in *Less Than Significant Project-specific* and *Less Than Significant Cumulative Impacts* related to this Checklist Item.

- c) **A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**

Project Impact Analysis: *Significant Impact*

“Table 5 [Table 3.12-5 of this DEIR] provides a comparison of existing noise levels to the estimated future year noise levels. Results show that the greatest increase between existing conditions and future conditions is 1.5 dB’s, which occurs at Receptors 3, 7, and 8. A change in level of at least 5 dB is required before any noticeable change in community response would be expected and a 10 dB change is subjectively heard as approximately a doubling in loudness. Therefore, the increase in traffic volumes as a result of population and employment increase in the Tulare County General Plan would not cause potentially significant impacts at Receptor 10, which is currently experiencing a noise level of 59.2 Ldn dB and is projected to experience a noise level of 60.5 Ldn dB in the future.”²³

Therefore, consistent with Item a., above, the Project will result in *Less Than Significant Impacts*.

Cumulative Impact Analysis: *Less Than Significant*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

Therefore, consistent with Item a., above, the Project will result in *Less Than Significant Cumulative Impacts*.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

Consistent with Item a., above, the Project will result in *Less Than Significant Impact*.

- d) **A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

Project Impact Analysis: *Less Than Significant Impact With Mitigation*

²³ Op. Cit. 24

Draft Environmental Impact Report
Pixley Community Plan

Future construction-related activities of the proposed Project could generate significant noise, corresponding to the particular phase of construction and the noise-generating equipment used during construction-related activities. “Implementation of the proposed community plan will result in construction activities that could generate temporary noise and groundborne vibration. Table 10 [Table 3.12-10 in this DEIR] depicts typical construction equipment noise. Construction equipment noise is controlled by the Environmental Protection Agency's Noise Control Program (Part 204 of Title 40, Code of Federal Regulations).”²⁴

TABLE 10
Construction Equipment Noise

TYPE	MAXIMUM LEVEL, dB AT 50 FEET
Bulldozers	87
Heavy Trucks	88
Backhoe	85
Pneumatic Tools	85

Source: Environmental Noise Pollution, 1977

“Construction activities associated with new development would be temporary in nature and related noise impacts would be short-term. However, since construction activities could substantially increase ambient noise levels at noise-sensitive locations, construction noise could result in potentially significant impacts to sensitive receptors. Activities involved in construction would generate maximum noise levels, as indicated in Table 10, ranging from 85 to 88dB at a distance of 50 feet. Construction activities will be temporary in nature and are expected to occur during normal daytime working hours. Construction noise impacts could result in annoyance or sleep disruption for nearby residences if nighttime operations occurred, or if unusually noisy equipment was used.”²⁵ As recommended in the NSR for Pixley, in order to reduce potential construction noise impacts to sensitive receptors near the Project area, the proposed Project shall comply with Mitigation Measure 3.12-1:

Mitigation Measure(s):

12-1 The hours of future construction shall be limited to 7:00 a.m. to 7:00 p.m. Monday through Friday or weekends (if allowed by the County) where residential uses are within 200 feet of where the activity is taking place. If residential uses are beyond 300 feet limited work hours are not required.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

²⁴ Op. Cit. 24-25

²⁵ Op. Cit.

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

Future, temporary, short-term construction-related noise will result in a less than significant impact through implementation of Mitigation Measure 12-1. There are no other projects in the vicinity of the Project site that will significantly increase temporary noise levels. Therefore, ***Less Than Significant Cumulative Impacts With Mitigation*** related to this Checklist Item will occur.

Conclusion: ***Less Than Significant Impact With Mitigation***

As noted earlier, ***Less Than Significant Project-specific Impacts With Mitigation*** and ***Less Than Significant Cumulative Impacts With Mitigation*** related to this Checklist Item will also occur.

- e) **For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?**

Project Impact Analysis: ***No Impact***

“The Pixley Airport, also known as Harmon Field, was a county-owned public-use airport located in Tulare County, one mile southwest of the central business district of the Pixley community. The airport opened in 1949 and was closed in the early 1990s due to pesticide contamination from its years as a base for crop dusting. It remained in published Federal Aviation Administration (FAA) records until 2008, when it was noted as “closed indefinitely”. Based on FAA records, for the 12-month period ending July 20, 1993, the airport had 8,400 general aviation aircraft operations, an average of 23 per day.”²⁶

Therefore, as Harmon Field is no longer operating, the Project is located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, nor would the Project expose people residing or working in the Project area to excessive noise levels. As such, the Project will result in ***No Impact*** related to this Checklist Item.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, as Harmon Field is no longer operating, the Project is located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public

²⁶ Op. Cit. 25-26

airport or public use airport, nor would the Project expose people residing or working in the Project area to excessive noise levels. As such, the Project will result in ***No Cumulative Impacts*** related to this Checklist Item.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-Specific or Cumulative Impacts*** related to this Checklist Item will occur.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Project Impact Analysis: ***No Impact***

The proposed Project is not located within 2 miles of a private airstrip. As such, ***No Project-Specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project does not include housing or additional employees and, as noted earlier, is located approximately 10 miles from the nearest public or private airport. ***No Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

As noted earlier, ***No Project-Specific or Cumulative Impacts*** related to this Checklist Item will occur.

DEFINITIONS/ACRONYMS & ABBREVIATIONS

Definitions

“Noise is often described as unwanted sound, and thus is a subjective reaction to characteristics of a physical phenomenon. Researchers have generally agreed that A-weighted sound pressure levels (sound levels) are well correlated with subjective reaction to noise. Variations in sound levels over time are represented by statistical descriptors, and by time-weighted composite noise metrics such as the Day/Night Average Level (Ldn).”²⁷ In addressing noise impacts, the following key terms are outlined and explained below:

Ambient Noise - “The total noise associated with a given environment and usually comprising sounds from many sources, both near and far.”

Attenuation - “Reduction in the level of sound resulting from absorption by the topography, the atmosphere, distance, barriers, and other factors.

A-weighted decibel (dBA) - A unit of measurement for noise based on a frequency weighting system that approximates the frequency response of the human ear.

Community Noise Equivalent Level (CNEL) - Used to characterize average sound levels over a 24-hour period, with weighting factors included for evening and nighttime sound levels. Leq values (equivalent sound levels measured over a 1-hour period - see below) for the evening period (7:00 p.m. to 10:00 p.m.) are increased by 5 dB, while Leq values for the nighttime period (10:00 p.m. to 7:00 a.m.) are increased by 10 dB. For a given set of sound measurements, the CNEL value will usually be about 1 dB higher than the Ldn value (see below). In practice, CNEL and Ldn are often used interchangeably.

Decibel (dBA) - A unit of measurement describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure (which is 20 micronewtons per square meter).

Day-Night Average Sound Level (Ldn) - Average sound exposure over a 24-hour period. Ldn values are calculated from hourly Leq values, with the Leq values for the nighttime period (10:00 p.m. to 7:00 a.m.) increased by 10 dB to reflect the greater disturbance potential from nighttime noises.”

Equivalent Sound Level (Leq). - The level of a steady-state sound that, in a stated time period and at a stated location, has the same sound energy as the time-varying sound (approximately equal to the average sound level). The equivalent sound level measured over a 1-hour period is called the hourly Leq or Leq (h).

Lmax and Lmin - The maximum and minimum sound levels, respectively, recorded during a measurement period. When a sound meter is set to the “slow” response setting, as is typical for most community noise measurements, the Lmax and Lmin values are the maximum and

²⁷ TCAG 2011 Regional Transportation Plan Draft Subsequent EIR, page 150

minimum levels recorded typically for 1-second periods.

Percentile-Exceeded Sound Level (L_x) - The sound level exceeded during a given percentage of a measurement period. Examples include L₁₀, L₅₀, and L₉₀. L₁₀ is the A-weighted sound level that is exceeded 10% of the measurement period, L₅₀ is the level exceeded 50% of the period, and so on. L₅₀ is the median sound level measured during the measurement period. L₉₀, the sound level exceeded 90% of the time, excludes high localized sound levels produced by nearby sources such as single car passages or bird chirps. L₉₀ is often used to represent the background sound level. L₅₀ is also used to provide a less conservative assessment of the background sound level.

Sensitive Receptors - Sensitive receptors are defined to include residential areas, hospitals, convalescent homes and facilities, schools, and other similar land uses.”²⁸

ACRONYMS

CNEL	Community Noise Equivalent Level
dB	Decibel
dBA	A-weighted decibel
Leq	Equivalent Sound Level
Ldn	Day-Night Average Sound Level
Lmax and Lmin	The maximum and minimum sound levels
L _x	Percentile-Exceeded Sound Level

REFERENCES

Tulare County 2030 General Plan, August 2012

Tulare County General Plan Background Report, February 2010

TCAG 2011 Regional Transportation Plan Draft Subsequent Environmental Impact Report, April 30, 2010

Federal Highway Administration website, Traffic Noise Model, which can be accessed at:
http://www.fhwa.dot.gov/environment/noise/traffic_noise_model/

CEQA Guidelines

²⁸ General Plan Background Report, pages 8-46 to 8-47

Population and Housing

Chapter 3.13

SUMMARY OF FINDINGS

The proposed Project will result in *Less Than Significant Impacts* related to Population and Housing. Therefore, no mitigation measures are required. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Population and Housing. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed Project. In assessing the impact of a proposed Project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the Project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the Project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision will have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

The environmental setting provides a description of the Population and Housing in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, the Tulare County General Plan Background Report and/or the Tulare County

¹ CEQA Guidelines, Section 15126.2 (a)

Draft Environmental Impact Report
Pixley Community Plan

General Plan Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

- Induce Substantial Population Growth
- Displace Housing or People

ENVIRONMENTAL SETTING

“Tulare County, California is one of the largest counties in the San Joaquin Valley. Geographically it is situated about midway between San Francisco and Los Angeles; the two principal cities of the Pacific Slope...Within the confines of Tulare County are now 4,863 square miles, or 3,158,400 acres.”²

Historical Perspective

“Pixley, an unincorporated Community in Tulare County, is located in the southwest portion of the County between the communities of Tipton and Earlimart along State Route (SR) 99. Pixley is bisected in a north-south direction by SR 99, which runs east of and parallel to the Southern Pacific Railroad (S.P.R.R.) tracks. Local roads that provide access across SR 99 include East Court Avenue, Davis Avenue, and Terra Bella Avenue (interchange). Local railroad crossings are located at Davis and Terra Bella Avenues. This Community Plan is focused on providing economic opportunities and growth desirable for the Community.”³

“The Southern Pacific Railroad placed a rail line through what is Pixley, in 1872. The first homesteads were established in the area in 1882. The Pixley Townsite Company was incorporated in 1886 by three men from San Francisco: Darwin Allen, William Bradbury and Frank Morrison Pixley. Frank Pixley (1825-1895), for whom the Community was named, had been Attorney General for the State of California under Governor Leland Stanford.

Pixley was also editor of the San Francisco-based Argonaut newspaper and influential in statewide politics. Originally, Pixley only has a loading platform adjacent to the railroad. Frank Pixley persuaded the railroad to construct a full depot and three-story hotel. Pixley became a mandatory rest stop for the rail line and the Naoma Hotel became a social gathering place for the entire area. The hotel was later renamed the Artesia Hotel in honor of the numerous artesian wells in the area.

Pixley prospered as a major grain shipping point for many years until a series of fires, poor

² Tulare County Regional Blueprint, Page 4 to 5

³ Pixley Community Plan Update, Page 3

Draft Environmental Impact Report
Pixley Community Plan

crops, and low prices induced many families to leave. In addition, the water levels declined and groundwater needed to be pumped to the surface.

Present-day growth in Pixley has been largely influenced by its proximity to State Highway 99 and the Union Pacific Railroad which parallel each other and traverse Pixley in a north-south fashion.”⁴

“Generally, the Community's urban growth has been well planned. Growth has remained compact through infilling and contiguous development. Pixley is surrounded by land in agricultural production. Crops grown on these agricultural lands include cotton, alfalfa, beans, grain and vineyards. The dairy industry is also prevalent. Unlike many valley communities, there is little rural residential development surrounding the denser urbanized area has been strongly influenced by the proximity of SR 99 and the Union Pacific Railroad.”⁵

“Historic Population Growth

Historically, Pixley has had periods of extreme population growth followed by periods of declining or static population. While the town's population decreased in the 1980's, it grew almost 40% in the 1970's. Pixley's population was recorded at 2,457 in the 1990 U.S. Census, a decrease of 7% from 1980.”⁶

“Recent Population Growth

Pixley’s population increased from 2,586 in 2000 to 3,310 in 2010.”⁷ (See **Table 3.13-1**)

Table 3.13-1 Population (2000 & 2010)						
	2000			2010		
	Total Population)	Male	Female	Total Population	Male	Female
California	33,871,648	16,874,892	16,996,756	37,253,956	18,517,830	18,736,126
Tulare County	368,021	184,010	184,011	442,179	221,442	220,737
Pixley CDP	2,586	1,375	1,211	3,310	1,713	1,597
Pixley % of Total Population	-	53.17%	46.83%	-	51.75%	48.25%
<i>Source: California Department of Finance</i>						

Projected Population

Projecting population increases over a planning period is useful in estimating future land use need to accommodate housing for a growing population. The Pixley Community Plan Update

⁴ Harmon Field Preliminary Industrial Development Plan, December 2013, page 7

⁵ 1997 Pixley Community Plan. Page 2-2

⁶ Pixley Community Plan Update. Page 35

⁷ Ibid.

Draft Environmental Impact Report
Pixley Community Plan

provides land use designations which, barring a sudden and unanticipated surge in population within or near the community, is anticipated to meet increases in population. As such, the Pixley Community Plan Update includes approximately 561 acres as residential reserve to accommodate residential development (see page 55 of the Plan). As discussed in greater detail in the Regional Housing Needs Assessment (RHNA) section, below, the Tulare County region to the Tulare County Association of Governments (TCAG) prepares a RHNA which allocates anticipated need for housing in Tulare County; unincorporated communities such as Pixley are included as part of Tulare County's overall unincorporated housing allocation.

“The San Joaquin Valley faces major challenges. One concerns how to handle future growth. Population in the Valley is expected to nearly triple by 2050, from 3.6 million to 9.4 million people, the equivalent of adding 11 new towns the size of Fresno to the area. Tulare County is expected to grow to over 1,000,000 residents by 2050, well over doubling its current population.

As noted in the 2010 General Plan Background Report, the unincorporated areas of Tulare County have a 1.3% projected annual growth rate from 2007 to 2030. This 1.3% annual growth rate can be applied to Pixley.”⁸ (See **Table 3.13-2**)

Table 3.13-2		
Projected Annual Growth Rates		
	Historic Growth Rates 1990-2007	Projected Growth Rates 2007-2030
County Total	1.9%	2.4%
Incorporated	2.8%	2.9%
Unincorporated	0.46%	1.3%
<i>Source: DOF, 2007; TCAG, 2008, 2010 General Plan Background Report</i>		

Population Growth Forecast

Table **3.13-3** provides population projections for the Pixley community based on an annual average growth rate of 1.3% consistent with the Tulare County General Plan and is derived from the draft Pixley Community Plan Update, page 40.

**Table 3.13-3 – Pixley Population and Projections
2010-2030**

Annual Growth Rate 1.3%	2010	2020	2030
	3,310	3,766	4,286

⁸Tulare County Regional Blueprint, page 7

Draft Environmental Impact Report
Pixley Community Plan

Based on the data and analysis contained in Table 3.13-3, Table 3.13-4 contains Year 2030 residential unit demand forecast for the Pixley planning area if the current single-family, multi-family, and mobilehome housing trends continue through the planning period.

**Table 3.13-4
Pixley Housing Development Projections**

Housing Type	% of Total	YEAR		
		2007-2011	2020	2030
Single Family Homes	81.7%	646	736	837
Increase from 2007-2011	-	-	90	191
Multi Family Homes	4.1%	32	37	42
Increase from 2007-2011	-	-	5	10
Mobile Homes	14.3%	113	129	147
Increase from 2007-2011	-	-	16	34
<i>Residential percentages from 2007-2011 American Community Survey. Assume 4.18 persons per occupied unit from 2007-2011 American Community Survey; figures are rounded to nearest whole number.</i>				

Regional Housing Needs Assessment (RHNA)

State housing element law assigns the responsibility for preparing the Regional Housing Needs Assessment (RHNA) for the Tulare County region to the Tulare County Association of Governments (TCAG). The RHNA is updated prior to each housing element cycle. The current RHNA, adopted on June 30, 2014, covers a 9.75-year projection period (January 1, 2014 to September 30, 2023). The growth projections applied in the Housing Element Update are based upon growth projections developed by the State of California. “A Regional Housing Needs Assessment Plan” provides a general measure of each local jurisdiction’s responsibility in the provision of housing to meet those needs. The Tulare County Association of Governments (TCAG) was responsible for allocating the State’s projections to each local jurisdiction within Tulare County including the County unincorporated area, which is reflected in this Housing Element.

“The Sustainable Communities and Climate Protection Act of 2008 (SB 375) was passed to support the State’s climate action goals...to reduce greenhouse gas (GHG) emissions through coordinated transportation and land use planning. The bill mandates each of California’s Metropolitan Planning Organizations (MPO) prepare a *sustainable communities strategy* as part of its regional transportation plan (RTP). The SCS contains land use, housing and transportation strategies that, if implemented, would allow the region to meet its GHG reduction targets. In the

Draft Environmental Impact Report
Pixley Community Plan

past, the RHNA was undertaken independently from the RTP. SB 375 requires that the RHNA and RTP/SCS processes be undertaken together to better integrate housing, land use, and transportation planning. In addition to the RHNA requirements, SB 375 requires that TCAG address the region's housing needs in the SCS of the RTP, to include sections on state housing goals (Government Code Section 65080(b)(2)(B)(vi)); identify areas within the region sufficient to house all the population of the region (including all economic segments of the population) over the course of the planning period for the RTP (out to 2040 for the 2040 RTP/SCS); and identify areas within the region sufficient to meet the regional housing needs".⁹

The RHNA housing results are summarized in **Table 3.13-5**. The Tulare County RHNA Plan recommends that the County provide land use and zoning for approximately 7081 units per year in the unincorporated portions of the County. The County administratively agreed to a housing share of 7,081 units (726 units per year over the 9.75-year RHNA planning period). The RTP allocates 30% of population to the County. The RHNA bases the housing needs assessment on this percentage.

Table 3.13-5
Regional Housing Needs Assessment Plan
January 1, 2014 – September 30, 2023

Income Category					
Jurisdiction	Very Low	Low	Moderate	Above Moderate	Total
Dinuba	211	163	121	470	965
Exeter	143	125	85	272	625
Farmersville	74	65	68	259	466
Lindsay	80	80	82	348	590
Porterville	623	576	566	1,431	3,196
Tulare	920	609	613	1,452	3,594
Visalia	2616	1,931	1,802	3,672	10,021
Woodlake	71	41	69	191	372
Unincorporated Area	1,477	1,065	1,169	3,370	7,081
Total Tulare County	6,215	4,655	4,575	11,465	26,910
<i>Source: Table 1: "2014-2023 Final RHNA Allocations by Income Category," Final Regional Housing Needs Plan for Tulare County 2014-2023, page 19 (TCAG, 2014)</i>					

According to the Tulare County Regional Housing Needs Assessment Plan (RHNA), the number of household in Tulare County's was estimated as 110,356 in 2000. In 2010 the number of Tulare County households was estimated as 130,352¹⁰. The 2014 household Projection is estimated as 159,514¹¹. **Table 3.13-6** shows Tulare County's Population estimates from 1980 through 2012.

⁹ TCAG, Final RHNP for Tulare County 2014-2023 (adopted June 30, 2014), page 5

¹⁰ 2010 census data, general population and housing characteristics, which can be accessed at:
<http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>

¹¹ TC Regional Housing Needs Assessment Plan, Table II-1, page II-7, <http://www.tularecog.org/DocumentCenter/View/37>

**Table 3.13-6
Tulare County's Population**

	1980	1990	2000	2010*	2012**
Tulare County's Population	245,738	311,921	368,021	442,179	450,840

*Sources: 1980, 1990, 2000, *2010 U.S. Census, ** State of California, Department of Finance, E-1 Population Estimates.*

“Affordability problems occur when housing costs become so high in relation to income that households have to pay an excessive proportion of their income for housing, or are unable to afford any housing and are homeless. A household is considered to be overpaying (or cost burdened) if it spends more than 30 percent of its gross income on housing. Severe overpayment occurs when a household spends more than 50 percent of income on housing. Housing costs depend upon many variables, including the type, size, value and/or location of the housing units, the intended tenure of the unit (whether it is to be occupied by owners or renters), and the inclusion or exclusion of one or more utilities, services, property taxes, insurance, and maintenance.”¹²

“Housing costs continue to rise significantly. Since 2000, the median rent has increased 40.9 percent from \$516 to \$727. The monthly owner costs for housing units with a mortgage have seen an even larger escalation going from \$943 to \$1,518 which is a 61 percent increase. The monthly owner costs for those housing units without a mortgage increased by 31 percent, going from \$251 to \$330.

The County's median household median income has increased 33 percent from \$33,983 in 2000 to \$45,117 in 2008. This has not kept up with the rise in housing costs. Therefore, households are challenged with a greater housing cost burden. This is shown in the increased percentage of household income families are paying for housing. In 2008, 41.5 percent of renter households and 37.7 percent of owner occupied households pay 35 percent or more of their income for housing (up from 32.7 percent and 20.6 percent in 2000).”¹³

As noted in the Tulare County 2008 RHNA, “[t]he RHNA Plan recommends that the County provide land use and zoning for approximately 938 units per year in the unincorporated portions of the County. This augmented number was due to the high allocation of housing given to the incorporated cities mainly as a result of the amount of annexations carried out by incorporated cities. The County administratively agreed to increase its housing share to 7,035 units (938 units per year over the 7 1/2 year RHNA planning period) to alleviate member jurisdictions concerns over high housing numbers within the incorporated cities.”¹⁴

¹² 2009 Tulare County Housing Element. Page 36

¹³ Ibid. 41-42

¹⁴ Op. Cit. 10

Draft Environmental Impact Report
Pixley Community Plan

“As of January 1, 2012, the California Department of Finance estimates a total of 44,616 existing housing units in the unincorporated area.”¹⁵

Table 3.13-7 Estimated Housing Units Unincorporated Tulare County - 2012	
Single	
Detached	34,596
Attached	822
Multiple	
2-4	1,713
5 plus	1,105
Mobile Homes	6,380
Unincorporated Total	44,616
Housing Units Occupied	39,248
Vacancy Rate	12.03%
<i>Source: State of California Department of Finance, 2012 Table E-5 Estimates</i>	

“Severely Disadvantaged Community

Public Resources Code 75005. (g) states that a “[d]isadvantaged community” means a community with a median household income less than 80% of the statewide average. “Severely disadvantaged community” means a community with a median household income less than 60% of the statewide average.”

Pixley’s median household income was \$27,532 in 2011. The State of California’s median household income in 2011 was \$61,632. Pixley’s median household income was 44.67% of the State of California’s median household income. Pixley is considered a severely disadvantaged community.”¹⁶

Pixley Housing Characteristics

“Housing Units

During the decade between 2000 and 2010, the number of housing units in Pixley increased from 723 to 875, which represents an increase of 21.02%. This increase was higher than the percent increase in Tulare County of 18.4% and the State of California at 12%.” (See **Table 3.13-8**)

¹⁵ CA Dept of Finance Table E-5 for 1/1/2012, http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2011-20/documents/E-5_2012_Internet_Version.xls

¹⁶ Pixley Community Plan Update. Page 37

Table 3.13-8 Housing Units (2000 & 2010)			
	2000	2010	Percent Increase
	Total housing units	Total housing units	
California	12,214,549	13,680,081	12.00%
Tulare County	119,639	141,696	18.44%
Pixley CDP	723	875	21.02%
<i>Source: California Department of Finance</i>			

Housing Types

According to the California Department of Finance, the 2007-2011 American Community Survey indicated that 81.7% of the housing units in Pixley were 1 unit detached. 1.4% were 3 or 4 units, 2.7% were 5-9 units, and 14.3% were mobile homes. In Tulare County 75.4% of the housing units were 1-unit detached. In California 58.2% of housing units were 1-unit detached.”¹⁷ (See **Table 3.13-9**)

Table 3.13-9 2007-2011 American Community Survey: Unit Types					
	Total housing units	1-unit, detached	3 or 4 units	5 to 9 units	Mobile home
California	13,631,129	7,929,196	756,077	832,065	529,502
Tulare County	140,519	105,970	7,254	4,330	9,944
Pixley CDP	791	646	11	21	113
<i>Source: California Department of Finance</i>					

“Tenure [that is, Owner or Renter living in a housing unit]

According to the California Department of Finance, the 2007-2011 American Community Survey indicated that 46.6% of the housing units in Pixley were owner occupied. Similarity, 58.9% of housing units were owner occupied in Tulare County and 56.7% of housing units were owner occupied in the State of California.” (See **Table 3.13-10**)

¹⁷ Ibid. 46

Draft Environmental Impact Report
Pixley Community Plan

Table 3.13-10 2007-2011 American Community Survey: Tenure							
	Occupied Housing Units	Owner- occupied	%	Renter- occupied	%	Average household size of owner- occupied unit	Average household size of renter- occupied unit
California	12,433,172	7,055,642	56.7	5,377,530	43.3	2.97	2.82
Tulare County	128,324	75,640	58.9	52,684	41.1	3.27	3.48
Pixley CDP	717	334	46.6	383	53.4	4.05	4.17
<i>Source: California Department of Finance</i>							

During the decade between 2000 and 2010, the home ownership percentage in California declined by approximately 1%. In Tulare County that percentage declined by approximately 3%. In Pixley the homeownership percentage declined by approximately 9%. (See **Table 3.13-11**).

The average household size increased in the State of California, Tulare County, and Pixley.”¹⁸

Table 3.13-11 Ownership and Household Size (2000 & 2010)						
	2000			2010		
	Percent Ownership	Average household size of owner- occupied units	Average household size of renter- occupied units	Percent Ownership	Average household size of owner- occupied units	Average household size of renter- occupied units
California	57%	2.93	2.79	56%	2.95	2.83
Tulare County	62%	3.18	3.43	59%	3.24	3.52
Pixley CDP	63%	3.84	4.15	54%	3.91	4.44
<i>Source: California Department of Finance</i>						

“Housing Conditions

According to the 2009 Tulare County Housing Element, approximately 45% of the housing units in Pixley were sound. Approximately 28% were deteriorated and 28% were dilapidated. (See **Table 3.13-12**)

¹⁸ Op. Cit. 47

Draft Environmental Impact Report
Pixley Community Plan

Table 3.13-12 2009 Housing Conditions Survey											
Survey Area	Sound		Deteriorated						Dilapidated		Total Units
			Minor		Moderate		Substantial				
	Units	%	Units	%	Units	%	Units	%	Units	%	
Pixley	115	45%	20	8%	23	9%	28	11%	71	28%	257
Source: Tulare County 2009 Housing Condition Survey, Tulare County 2009 Housing Element											

The percentage of substandard housing in Pixley has increased between 1992 and 2009. The percentage was 33% in 1992, 54% in 2003 and 55% in 2009.”¹⁹ (See **Table 3.13-13**)

Table 3.13-13			
Percentages of Substandard Housing Units, Unincorporated Communities in Tulare County 1992-2009			
	1992 Survey Results	2003 Survey Results	2009 Survey Results
Pixley	33%	54%	55%
<i>Source: 1992, 2003, 2009 Tulare County Housing Survey of Unincorporated Communities, 2009 Housing Element</i>			

“Age of Structures

According to the US Census, the 2005-2009 Community Survey noted that 10.7% of the housing structures were built in 1939 or earlier. Approximately 18.7% of the housing structures were built between 1950 and 1959. Approximately 25.5% of housing structures were built between 1970 and 1979. Approximately 13% of housing structures were built between 1980 and 1989. Approximately 11.6% of housing structures were built between 1990 and 1999.”²⁰ (See **Table 3.13-14**)

Table 3.13-14		
2005-2009 American Community Survey: Age of Structures in Pixley		
Age of Structures	Number	Percentage
Built 2005 or later	0	0.0%
Built 2000 to 2004	38	4.8%
Built 1990 to 1999	92	11.6%
Built 1980 to 1989	103	13.0%
Built 1970 to 1979	203	25.5%
Built 1960 to 1969	62	7.8%
Built 1950 to 1959	149	18.7%
Built 1940 to 1949	63	7.9%
Built 1939 or earlier	85	10.7%
Total:	795	-
<i>Source: US Census</i>		

¹⁹ Op. Cit. 48

²⁰ Op. Cit.

Draft Environmental Impact Report
Pixley Community Plan

“Household Size (Overcrowding)

Between 2000 and 2010, the average household size increased from 3.96 to 4.15 persons per household. During this decade, the average household size went up in Tulare County from 3.28 to 3.36. Also, the average household size in the State of California also went up from 2.87 to 2.90. Pixley’s average household size went up and it remained higher than Tulare County’s and the State of California’s average household size.”²¹ (See **Table 3.13-15**)

Table 3.13-15		
Average Household Size (2000 & 2010)		
	2000	2010
	Average Household size	Average Household size
California	2.87	2.90
Tulare County	3.28	3.36
Pixley CDP	3.96	4.15
<i>Source: California Department of Finance</i>		

“Vacancy Rate

In 2000, the vacancy rate in Pixley was 10%, which was higher than Tulare County at 7.7% and the State of California at 5.8%. In 2010, the vacancy rate in Pixley was 8.8%, which was a bit higher than Tulare County at 8% and the State of California at 8.1%.

While the State of California’s rental vacancy rate increased from 3.7% to 6.3%, the rental vacancy rate in Pixley increased from 6.2% to 9.2% between 2000 and 2010. Tulare County’s rental vacancy rate remained at 5.8% during this decade.”²² (See **Table 3.13-16**)

Table 3.13-16 – Vacancy Rate (2000 & 2010)						
	2000			2010		
	Vacancy rate	Homeowner vacancy rate (1)	Rental vacancy rate (1)	Vacancy rate	Homeowner vacancy rate (1)	Rental vacancy rate (1)
California	5.8%	1.4%	3.7%	8.1%	2.1%	6.3%
Tulare County	7.7%	1.8%	5.8%	8.0%	2.4%	5.8%
Pixley CDP	10.0%	3.1%	6.2%	8.8%	1.6%	9.2%
<i>Source: California Department of Finance</i>						

²¹ Op. Cit. 49

²² Op. Cit.

Draft Environmental Impact Report
Pixley Community Plan

“Renter Affordability

According to the California Department of Finance, the 2007-2011 American Community Survey indicated that median rent in Pixley was \$793. The median rent was \$781 in Tulare County and \$1,185 in the State of California. In Pixley, the percentage of households paying 35% or more of income on housing was 48.9%. The percentage of households paying 35% or more of income on housing was 43.7% Tulare County and 46.3% in the State of California.”²³ (See **Table 3.13-17**)

Table 3.13-17 – 2007-2011 American Community Survey: Renter Cost							
		Gross Rent as a % of Household Income					
	Median Rent	Less than 15.0 %	15.0% to 19.9%	20.0% to 24.9%	25.0% to 29.9%	30.0% to 34.9%	35.0% or more
California	\$1,185	9.30%	10.9%	12.2%	11.9%	9.4%	46.3%
Tulare County	\$781	11.5%	11.5%	13.4%	10.4%	9.5%	43.7%
Pixley CDP	\$793	15.6%	0%	19.3%	2.3%	13.9%	48.9%
<i>Source: California Department of Finance</i>							

“Owner Affordability

According to the California Department of Finance, the 2007-2011 American Community Survey indicated that median owner cost (with mortgage) in Pixley was \$916. The median owner cost was \$1,487 in Tulare County and \$2,377 in the State of California. In Pixley, the percentage of households paying 35% or more of income on housing was 55.6%. The percentage of households paying 35% or more of income on housing was 35.5% Tulare County and 41.6% in the State of California.”²⁴ (See **Table 3.13-18**)

Table 3.13-18 2007-2011 American Community Survey: Owner Cost						
		Mortgage as a % of Household Income				
	Median Owner Cost (with mortgage)	Less than 20.0%	20.0% to 24.9%	25.0% to 29.9%	30.0% to 34.9%	35.0% or more
California	\$2,377	22.6%	13.2%	12.3%	10.3%	41.6%
Tulare County	\$1,487	27.4%	13.3%	13.2%	10.6%	35.5%
Pixley CDP	\$916	15.9%	14.8%	2.6%	11.1%	55.6%
<i>Source: California Department of Finance</i>						

²³ Op. Cit.

²⁴Op. Cit. 50

Draft Environmental Impact Report
Pixley Community Plan

The State of California's rental vacancy rate increased from 3.7% to 6.3%, the rental vacancy rate in Pixley increased from 6.2% to 9.2% between 2000 and 2010. Tulare County's rental vacancy rate remained at 5.8% during this decade.

According to the California Department of Finance, the 2007-2011 American Community Survey indicated that median owner cost (with mortgage) in Pixley was \$916. The median owner cost was \$1,487 in Tulare County and \$2,377 in the State of California. In Pixley, the percentage of households paying 35% or more of income on housing was 55.6%. The percentage of households paying 35% or more of income on housing was 35.5% Tulare County and 41.6% in the State of California.

REGULATORY SETTING

Federal Agencies & Regulations

US Department of Housing and Urban Development (HUD)

"HUD's mission is to create strong, sustainable, inclusive communities and quality affordable homes for all. HUD is working to strengthen the housing market to bolster the economy and protect consumers; meet the need for quality affordable rental homes; utilize housing as a platform for improving quality of life; build inclusive and sustainable communities free from discrimination; and transform the way HUD does business."²⁵

State Agencies & Regulations

California Department of Housing and Community Development (HCD)

HCD's mission is to "[p]rovide leadership, policies and programs to preserve and expand safe and affordable housing opportunities and promote strong communities for all Californians."²⁶ "In 1977, the State Department of Housing and Community Development (HCD) adopted regulations under the California Administrative Code, known as the Housing Element Guidelines, which are to be followed by local governments in the preparation of local housing elements. AB 2853, enacted in 1980, further codified housing element requirements. Since that time, new amendments to State Housing Law have been enacted. Each of these amendments has been considered during development of this Housing Element."²⁷

California Relocation Assistance Act

The State of California adopted the California Relocation Assistance Act (*California Government Code* §7260 et seq.) in 1970. This State law, which follows the federal Uniform Relocation Assistance and Real Property Acquisition Act, requires public agencies to provide procedural protections and benefits when they displace businesses, homeowners, and tenants in

²⁵ HUD Website, <http://portal.hud.gov/hudportal/HUD?src=/about/mission>

²⁶ HCD website, <http://www.hcd.ca.gov/mission.html>

²⁷ 2009 Housing Element, page 3 to 4

the process of implementing public programs and Projects. This State law calls for fair, uniform, and equitable treatment of all affected persons through the provision of relocation benefits and assistance to minimize the hardship of displacement on the affected persons.

Local Policy & Regulations

Tulare County 2008 Regional Housing Needs Assessment Plan

“The Tulare County Association of Governments (TCAG) was responsible for allocating the State’s Projections to each local jurisdiction within Tulare County including the County unincorporated area, which is reflected in this Housing Element. Tulare County has no control over the countywide population and housing Projections provided to TCAG when it prepared the Regional Housing Needs Assessment Plan.”²⁸

Tulare County Regional Blueprint 2009

This Blueprint includes the following preferred growth scenario principals:

- Increase densities county-wide by 25% over the status quo densities;
- Establish light rail between cities;
- Extend Highway 65 north to Fresno County;
- Expand transit throughout the county;
- Maintain urban separators around cities; and
- Growth will be directed toward incorporated cities and communities where urban development exists and where comprehensive services and infrastructure are or will be provided.

Tulare County Housing Authority

“The Housing Authority of the County of Tulare (HATC) has been officially designated as the local public housing agency for the County of Tulare by the Board of Supervisors and was created pursuant to federal and state laws. ...HATC is a unique hybrid: a public sector agency with private sector business practices. Their major source of income is the rents from residents. The HATC mission is “to provide affordable, well-maintained rental housing to qualified low- and very low-income families. Priority shall be given to working families, seniors and the disabled. Tenant self sufficiency and responsibility shall be encouraged. Programs shall be self-supporting to the maximum extent feasible.” HATC provides rental assistance to very low and moderate-income families, seniors and the handicapped throughout the county. HATC offers many different programs, including the conventional public housing program, the housing choice voucher program (Section 8), the farm labor program for families with farm labor income, senior housing programs, and other programs. They also own or manage some individual subsidized rental complexes that do not fall under the previous categories, and can provide information about other affordable housing that is available in Tulare County. All programs are handicap

²⁸ Tulare County 2009 Housing Element, page 10

accessible. Almost all of the complexes have 55-year recorded affordability covenants.”²⁹

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project are listed below.

Guiding Principle 4.1 - Support and encourage County ordinances, standards, practices and procedures that promote residential energy conservation.

Housing Policy 1.11 - Encourage the development of a broad range of housing types to provide an opportunity of choice in the local housing market.

Housing Policy 1.14 - Pursue an equitable distribution of future regional housing needs allocations, thereby providing a greater likelihood of assuring a balance between housing development and the location of employment opportunities.

Housing Policy 1.33 - Encourage and support a balance between housing and agricultural needs.

Housing Policy 3.11 - Support and coordinate with local economic development programs to encourage a “jobs to housing balance” throughout the unincorporated area.

Housing Policy 4.11 - Review residential projects for environmental impacts and impose conditions to reduce those impacts.

Housing Policy 4.12 - Facilitate land use policies and programs that meet housing and conservation objectives.

Housing Policy 4.13 - Promote energy efficiency and water conservation.

Housing Policy 4.14 - Enforce the requirements of County Ordinances regarding the disposal of construction and demolition debris.

Housing Policy 4.15 - Enforce energy Efficiency Standards for Residential and Non-Residential properties (Title 24).

IMPACT EVALUATION

Would the project:

- a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

²⁹ 2009 Housing Element, page 112

Project Impact Analysis: ***Less Than Significant Impact***

Implementing the Community Plan Update will have a direct, growth inducing impact on the community of Pixley. The proposed Community Plan Update does not include designating additional land for residential development beyond the existing areas designated as such. At full build-out, the residentially designated land could accommodate the projected population of nearly 4,300 persons using the 1.3% growth rate per the Tulare County General Plan.

The Community Plan Update also allows for highway commercial land uses with a mixed use zoning overlay, it designates some existing industrial uses as heavy industrial, it adds light industrial acreage in the North Pixley area, and it redesignates the former Harmon Airport area as Mixed Use in an effort to stimulate economic development. ***Less Than Significant*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The residential growth from these areas is envisioned by the Tulare County General Plan, and therefore would not result in unexpected population growth in the Project area. The Project itself would also not induce substantial population growth beyond anticipated levels. Therefore, ***Less Than Significant Program-specific and Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): **None Required**

Conclusion: ***Less Than Significant Impact***

As noted earlier, the Project, even combined with other cumulative projects, would not accelerate unplanned population growth in the Pixley area. Therefore, population growth within the unincorporated community of Pixley would be consistent with the Tulare County General Plan. ***Less Than Significant Program-specific and Cumulative Impacts*** related to this Checklist Item will occur.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

Project Impact Analysis: ***Less Than Significant Impact***

No residences are expected to be removed as a result of implementation of the proposed community plan update or due to the construction of the new residences. The proposed community plan update is seeking to expand the housing supply rather than reduce existing

housing stock. Therefore, it is not anticipated that conversion of existing housing stock to non-residential uses would take place.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, no residences are expected to be removed on the Project site and the proposed Project will not displace any housing units. ***Less Than Significant Program-specific and Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): **None Required**

Conclusion: ***Less Than Significant Impact***

As noted previously, there will be no impact related to the displacement of housing or people. Population growth as a result of the proposed Community Plan update will not exceed, and is consistent with, the projected growth rate contained in the Tulare County General Plan. Also, any growth will be accommodated by the policies outlined in the Plan. As such, ***Less Than Significant Program-specific and Cumulative Impacts*** related to this Checklist Item will occur.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Project Impact Analysis: ***Less Than Significant Impact***

As discussed earlier, the Project will not displace or require the demolition of any residences, thereby necessitating the construction of replacement housing elsewhere. Accordingly, the Project will result in a ***Less Than Significant Impact***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project will not convert housing on-site or off-site. As such, ***Less Than Significant Cumulative Impacts*** related to this Checklist item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

There will be a ***Less Than Significant Impact*** related to the displacement of housing or people. Population growth as a result of the proposed Community Plan update will not exceed, and is consistent with, the projected growth rate contained in the Tulare County General Plan. Also, any growth will be accommodated by the policies outlined in the Plan. Therefore, ***Less Than Significant Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

REFERENCES

Tulare County 2030 General Plan, August 2012

Tulare County 2009 Housing Element Update, May 2012

HUD Website, which can be accessed at:

<http://portal.hud.gov/hudportal/HUD?src=/about/mission>

HCD Website, which can be accessed at: <http://www.hcd.ca.gov/mission.html>

Final Tulare County 2008 Regional Housing Needs Assessment Plan, Tulare County Association of Governments, July 2008

CEQA Guidelines

Tulare County Regional Blueprint, TCAG, May 2009

Public Services

Chapter 3.14

SUMMARY OF FINDINGS

The proposed Project will result in *Less Than Significant* impacts related to Public Services without mitigation. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

The environmental setting provides a description of the Public Services in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County General Plan Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist item questions. The following are potential thresholds for significance:

- Impact Fire Services
- Impact Police Services
- Impact Schools
- Impact Parks
- Impact Other Public Facilities

ENVIRONMENTAL SETTING

Fire Protection

“The [former] California Department of Forestry and Fire Protection/Tulare County Fire Department (now CalFire/TCFD) serve 145,128 of Tulare County’s population. As Table 7-6 [of the General Plan Background document] shows, dispatchers reported 14,022 responses in 2002, averaging 38.4 calls a day. Fire occurrence data generated by the department indicate a direct relationship between high use areas of the county and fire occurrence. The population increase in the mountain areas have caused increased wildland urban interface problems as well. Structures are being built throughout wildland areas wherein vegetation fires can spread rapidly. Providing

Draft Environmental Impact Report
Pixley Community Plan

adequate fire protection to those structures has become a major undertaking.”¹

The Tulare County Fire Department’s 2013 Annual Report provides a summary of Incident Reports by major incident type as shown in **Table 3.14-1**²

Table 3.14-1_

MAJOR INCIDENT TYPE	# INCIDENTS	% OF TOTAL
Fires	1484	12.28
Overpressure, Rupture, ...	38	0.31
Rescue & Emergency Medical	7234	59.88
Hazardous Conditions	325	2.69
Service Calls	666	5.51
Good Intent	1892	15.66
False Alarm	358	2.96
Severe Weather	3	0.02
Special Type	84	0.70
Total	12,084	100%

As shown in **Table 3.14-1**, the Tulare County Fire Department responded to 12,084 calls for service in 2012; a majority of the calls were for rescue and medical emergencies (approximately 60 percent) followed by fire calls (12.28 percent) and “good intent” (15.66 percent) as the top three incident types.”

Tulare Fire Station #25 is located at 2082 Foster Drive in Tulare and is approximately four miles from the proposed Project area. The City of Tulare has three Fire Stations located within approximately five miles of the proposed Project area.³

Fire Station 61 is located at 800 S. Blackstone St. in the southeast side of Tulare. Housed at this station is our 2000 E-ONE 75HP Ladder Truck, 1999 Central States HME Engine, and 2003 F550 chassis Patrol. Station one is staffed by 1-Captain, 2-Engineer and 2-Firefighter/Paramedics. Last Year station 61 responded to 82 fire calls, 1,201 medical aids and 513 other service and non-emergent calls for a total o 1,796 in their first response district. This Station is located approximately four miles to the southwest of the proposed Project site.

Fire Station 62 is located at 138 N. “E” St. servicing Tulare’s “Westside”, the city’s busiest District. Housed at this station is our 2005 E-ONE Engine and 1986 Pierce Suburban Reserve Brush Engine. Station 62 is staffed by 1-Captain,1-Engineer, and 1 Firefighter/Paramedic. Last Year station 62 responded to 92 fire calls, 1,353 medical aids and 645 other service calls and non-emergent calls for a total of 2,090 in their first response district. This Station is located approximately five miles to the southwest of the proposed Project site.

¹ Tulare County Fire Department’s 2013 Annual Report, page 9, accessed on January 9, 2014 and available at: <http://tularecounty.ca.gov/fire/index.cfm/departments-information-for-the-field/annual-report-2013/>

² Ibid.,

³ General Plan Background Report, page 7-73

Draft Environmental Impact Report Pixley Community Plan

Fire Station 63 located at 2900 N. “M” St., opened in 2004 servicing Tulare’s northeast side. Housed at this station is our 2003 E-ONE Engine and 1996 Central States HME reserve engine. Station 63 is staffed with 1-Captain, 1-Engineer and 1-Firefighter/Paramedic. This station also houses the on-duty Battalion Chief, responsible for overseeing the safety of the citizens after hours and on weekends. Last year station 63 responded to 30 fire calls, 744 medical aids and 526 other service calls and non-emergent calls. This Station is located approximately four miles to the southwest of the proposed Project site.

“Tulare County contracts with the California Division of Forestry (CDF) to provide fire protection services in unincorporated areas of the County. The substation in Pixley is backed up by stations in Earlimart, Tipton, and Tulare. The Pixley Substation is equipped with one heavy pumper, one light pumper, and one water tender. The station is staffed by at least one full-time firefighter year-round. Additional staffing is provided by fifteen community volunteers.

Ambulance service is provided by the Tulare District Ambulance Service. An ambulance is located at the Pixley substation with two Emergency Medical Technicians on duty at all times.”⁴

Police Protection

“In 2007, the Tulare County Sheriff’s Department currently had 448 sworn officers serving its unincorporated population (145,128), and generates a level of service ratio of 3.2 officers per 1,000 residents. The ratio is above the accepted standard of 2.0 officers per 1,000 residents set by the Federal Bureau of Investigation. The Sheriff’s Department also has 186 non-sworn clerical and support staff amounting to a total Sheriffs Department staff personnel of 633 employees.”⁵

“Law enforcement protection for the unincorporated county is divided into 22 areas with four stations... [T]he Porterville substation serves the largest number of areas with 10 patrols, followed by the headquarters in Visalia with six, and Cutler-Orosi and Pixley, each with three areas.”⁶

“The Tulare County Sheriff’s Department provides law enforcement services to the community of Pixley and its surroundings (Alpaugh, Allensworth, Earlimart, Teviston, and Tipton) from the Pixley substation. The substation runs three-shift operation which includes 14 deputies in the field and one sergeant on the desk at all times.”⁷

Schools

“A total of 48 school districts provide education throughout Tulare County... Of the 48 school districts, seven are unified districts providing educational services for kindergarten through 12th grade. The remaining 41 districts consist of 36 elementary school districts and four high school districts. Many districts only have one school.”⁸

⁴ North Pixley Commercial/Industrial Specific Plan, page 2-15 to 2-16

⁵ General Plan Background Report, pages 7-71 and 7-72

⁶ Ibid.

⁷ North Pixley Commercial/Industrial Specific Plan, page 2-16

⁸ General Plan Background Report, pages 7-75 and 7-76

Draft Environmental Impact Report
Pixley Community Plan

“Total enrolment in Tulare County public schools has increased from about 80,000 to 88,300 students during a nine-year span from 1993 to 2002. On average, the growth rate has remained steady with annual increases approximating two percent.”⁹

Parks

There are a number of Federal, State, and local parks within Tulare County, including 13 park and recreational facilities operated by the County of Tulare. In addition to Pixley Park, a list of these local park facilities is provided in **Table 3.14-2**. Pixley Park, owned and operated by the County of Tulare, is located approximately one mile north of Pixley on Road 124. Although the park does not charge an entry fee, reservations for picnic areas are required.

Table 3.14-2 Recreational Areas in Tulare County				
ID	Recreation Area	Location	Acres	Type of Use/Features
1	Alpaugh Park	Located in Alpaugh on Road 40.	3	Reservations for picnic areas are taken. No entrance fee.
2	Balch Park Campgrounds	20 miles NE of Springville in the Sierras.	160	71 Campsites. No reservations taken; first come first serve basis. Entrance fee for vehicles.
3	Bartlett Park	8 miles east of Porterville on North Drive.	127.5	Reservations for picnic areas are taken. Entrance fee for vehicles.
4	Camp COTYAC	Near Ponderosa in Eastern Tulare County.	8	County of Tulare Youth Adventure Camp (Camp COTYAC). Cabins, lodge with kitchen, restrooms and showers.
5	Cutler Park	5 miles east of Visalia on Highway 216 to Ivanhoe.	50	Reservations for picnic areas are taken. Entrance fee for vehicles.
6	Elk Bayou Park	6 miles SE of Tulare on Avenue 200.	60	Reservations for picnic areas are taken. No fee for day use.
7	Kings River Nature Preserve	2 miles east of Highway 99 on Road 28	85	This park is only for school environmental programs.
8	Ledbetter Park	1 mile northwest of Cutler on Road 124/Hwy 63	11	Reservations for picnic areas are taken. No fee.
9	Mooney Grove Park	2 Miles south of Caldwell Avenue on Mooney Blvd. In South Visalia.	143	Reservations for picnic areas are taken. Paddle boats, playground, baseball diamonds. Home of the End Trail statue. One of the largest oak woodlands in Tulare County. Location of the Agriculture and Farm Labor Museum.
10	Pixley Park	1 mile NE of Pixley on Road 124.	22	Reservations for picnic areas are taken. No fee.
11	Tulare County	In Mooney Grove	8.5	Free admission with park fee. Museum is opened

⁹ Ibid.7-76

Draft Environmental Impact Report
Pixley Community Plan

Table 3.14-2 Recreational Areas in Tulare County				
ID	Recreation Area	Location	Acres	Type of Use/Features
	Museum	Park, South Visalia.		Thursday thru Monday (closed Tuesday and Wednesday).
12	Woodville Park	Located in Avenue 166 in Woodville.	10	Reservations for picnic areas are taken. Day use no entrance fee.
13	West Main Street Park	2 blocks west of County Courthouse on Main Street in Downtown Visalia.	5	Day use no entrance fee.

Source: General Plan Background Report

Additional discussion of recreational facilities is provided in Chapter 3.15 Recreation.

Library

“The Tulare County Public Library System is comprised of interdependent branches, grouped by services, geography and usage patterns to provide efficient and economical services to the residents of the county. At present, there are 14 regional libraries and one main branch.”¹⁰ As shown in **Table 3.14-3**, the Pixley Branch Library is located at 300 North School and currently operates Tuesday thru Saturday.

Table 3.14-3 Tulare County Libraries		
Branch	Address	Service Hours (2014)
Alpaugh	3816 Avenue 54 Alpaugh, CA 93201-0069	Tuesday and Wednesday: 9 am - 1pm, 2 pm - 5 pm
Dinuba	150 South I Street Dinuba, CA 93618-2399	Tuesdays and Thursdays: 11 am - 5 pm, 6 pm - 8 pm Wednesdays and Fridays: 9 a. - 1 pm, 2 pm - 6 pm
Earlimart	780 East Washington Earlimart, CA 93219-2153	Monday-Friday: 9 am - 1 pm, 2 pm - 5 pm
Exeter	230 East Chestnut Exeter, CA 93221-1712	Tuesday and Wednesday: 11 am - 5 pm; 6 pm - 8 pm Thursday and Friday: 9 am - 1 pm; 2 pm - 6 pm
Ivanhoe	15964 Heather Ivanhoe, CA 93235-1253	Tuesdays thru Thursday: 9 a. - 1 pm, 2 pm - 6 pm
Lindsay	165 North Gale Hill Street Lindsay, CA 93247-2507	Tuesday and Thursday: 11 pm - 5 pm; 6 pm - 8 pm Wednesday and Friday: 9 am - 1 pm; 2

¹⁰General Plan Background Report, page 7-96

Draft Environmental Impact Report
Pixley Community Plan

Table 3.14-3 Tulare County Libraries		
Branch	Address	Service Hours (2014)
		pm - 6 pm
Cutler-Orosi	12646 Avenue 416 Orosi, CA 93647-2018	Wednesday, Thursday, and Friday: 9 a.m. - 1 p.m., 2 p.m. - 6 p.m.
Pixley	Pixley Union Elementary School 300 North School Pixley, CA 93256-1011	Monday thru Friday: 9:00 am-11:45 am, 12:30 pm-6:30 pm Saturday: 9:00am-1:45 pm
Springville	35800 Highway 190 Springville, CA 93265-0257	Thursday: 11 am - 5 pm , 6 pm - 8 pm Friday: 9 am - 1 pm , 2 pm - 6 pm Saturday: 9 am - 1 pm, 2 pm - 5 pm
Strathmore	19646 Road 230 Strathmore, CA 93267-0595	Tuesday and Wednesday: 9 am - 1 pm, 2 pm - 6 pm
Terra Bella	23825 Avenue 92 Terra Bella, CA 93270-0442	Monday thru Thursday: 8:30 am – 11:30 am, 12 pm - 2:30 pm
Three Rivers	42052 Eggers Drive 216 Three Rivers, CA 93271-0216	Tuesday and Thursday: 12 pm - 5 pm, 6 pm - 8 pm Wednesday and Friday: 10 am - 1 pm, 2 pm - 6 pm Saturday 10 am – 1 pm, 2 pm – 5 pm
Tipton	301 East Woods Avenue Tipton, CA 93272-0039	Thursday and Friday : 9 am - 1 pm, 2 pm - 5 pm
Visalia	Main Branch 200 West Oak Avenue Visalia, CA 93291-4993	Tuesday, Wednesday, and Thursday: 9 a.m. - 8 p.m. Friday 12 pm - 6 pm, Saturdays: 9 a.m. - 5 p.m.
Woodlake	400 West Whitney Woodlake, CA 93286-1298	Tuesday thru Friday: 9 am - 1 p.m., 2 p.m. - 5 p.m.

Library hours current as of March 2014 Tulare County Library website, accessed on March 19, 2015 at:
<http://www.tularecountylibrary.org/pixleybranch.html>

REGULATORY SETTING

Federal Agencies & Regulations

None that apply to the proposed Project.

State Agencies & Regulations

None that apply to the proposed Project.

Local Policy & Regulations

Tulare County General Plan Policies

Draft Environmental Impact Report
Pixley Community Plan

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the proposed Project are listed below.

ERM-5.2 Park Amenities - The County shall provide a broad range of active and passive recreational opportunities within community parks. When possible, this should include active sports fields and facilities, community center/recreation buildings, children's play areas, multi-use areas and trails, sitting areas, and other specialized uses as appropriate.

ERM-5.3 Park Dedication Requirements - The County shall require the dedication of land and/or payment of fees, in accordance with local authority and State law (for example the Quimby Act), to ensure funding for the acquisition and development of public recreation facilities.

ERM-5.5 Collocated Facilities - The County shall encourage the development of parks near public facilities such as schools, community halls, libraries, museums, prehistoric sites, and open space areas and shall encourage joint-use agreements whenever possible.

ERM-5.12 Meet Changing Recreational Needs - The County shall promote the continued and expanded use of national and State forests, parks, and other recreational areas to meet the recreational needs of County residents.

PFS-7.1 Fire Protection - The County shall strive to expand fire protection service in areas that experience growth in order to maintain adequate levels of service.

PFS-7.2 Fire Protection Standards - The County shall require all new development to be adequately served by water supplies, storage, and conveyance facilities supplying adequate volume, pressure, and capacity for fire protection.

PFS-7.3 Visible Signage for Roads and Buildings - The County shall strive to ensure all roads are properly identified by name or number with clearly visible signs.

PFS-7.5 Fire Staffing and Response Time Standards - The County shall strive to maintain fire department staffing and response time goals consistent with National Fire Protection Association (NFPA) standards.

**Table 3.14-3
Fire Staffing and Responses Time Standards**

	Demographics	Staffing/Response Time	% of Calls
Urban	> 1,000 people/sq. mi.	15 FF/9 min.	90
Suburban	500-100 people/sq. mi.	10 FF/10 min.	80
Rural	< 500 people/sq. mi.	6 FF/14 min.	80
Remote*	Travel Dist. > 8 min.	4 FF/no specific response time	90

**Upon assembling the necessary resources at the emergency scene, the fire department should have the capacity to safely commence an initial attack within 2 minutes, 90% of the time. (FF = Fire Fighters)*

Source: Tulare County 2030 General Plan

PFS-7.6 Provision of Station Facilities and Equipment - The County shall strive to provide sheriff and fire station facilities, equipment (engines and other apparatus), and staffing necessary to maintain the County's service goals. The County shall continue to cooperate with mutual aid providers to provide coverage throughout the County.

PFS-7.8 Law Enforcement Staffing Ratios - The County shall strive to achieve and maintain a staffing ratio of 3 sworn officers per 1,000 residents in unincorporated areas.

PFS-7.9 Sheriff Response Time - The County shall work with the Sheriff's Department to achieve and maintain a response time of:

1. Less than 10 minutes for 90 percent of the calls in the valley region; and
2. 15 minutes for 75 percent of the calls in the foothill and mountain regions.

PFS-7.12 Design Features for Crime Prevention and Reduction - The County shall promote the use of building and site design features as means for crime prevention and reduction.

PFS-8.1 Work with Local School Districts - The County shall work with local school districts to develop solutions for overcrowded schools and financial constraints of constructing new facilities.

PFS-8.4 Library Facilities and Services - The County shall encourage expansion of library facilities and services as necessary to meet the needs (e.g., internet access, meeting rooms, etc.) of future population growth.

IMPACT EVALUATION

- a) **Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:**

Fire protection?

Project Impact Analysis: *Less Than Significant Impact*

The Tulare County Fire Department is available to provide fire suppression, recovery, and fire code enforcement services for the Project site. Station Number 27, the Pixley Station, serves the Project and surrounding Areas and is located at 200 North Park Drive, Pixley, CA 93256. The Fire Department encompasses fire personnel, stations, emergency fire communications, fleet maintenance, and facility maintenance; each of which is described below.

County Fire Department Personnel and Stations

The County of Tulare Fire Department has 28 stations that are located throughout the County within its most densely populated areas and currently maintains minimal staffing to meet the requirements set forth under NFPA 1720-1721 for a rural area. These requirements consist of one full-time person per station per shift with other paid on-call firefighters. Per the Tulare County Fire Department, while this is sufficient to meet the basin needs of the County, this level of staffing often results in an elevated fire loss value during some emergency conditions when compared with other departments with additional staff support.

Field personnel consist of six Shift Battalion Chiefs, one Administration Battalion Chief, 21 Fire Captains, 51 Fire Lieutenants and approximately 400 reserve firefighting personnel. The fire station staffing varies from all reserve staffing to one person staffing supported by reserve firefighters. Fire personnel are responsible for emergency response readiness, pre-fire planning, fire prevention tasks, fire apparatus maintenance, station training, and station maintenance. Fire personnel respond to fires, medical aids, traffic accidents, hazardous material incidents, and rescue calls.

Emergency Fire Communications Center (Fire Com)

Fire Com is staffed with eight full-time employees and a varying number of extra-help dispatchers. Fire Com personnel perform emergency dispatching services for the Tulare County Fire Department (FD), Woodlake Fire Protection District, City of Farmersville FD, City of Exeter FD, City of Lindsay FD, Three Rivers Volunteer Ambulance, Camp Nelson Volunteer Ambulance, and California Hot Springs Ambulance. On an average year, Fire Com dispatches approximately 14,000 incidents. The Fire Com supervisor is also responsible for inventory of radio equipment and repair coordination of mobile radios, handie talkie radios, and mountaintop repeaters.

Fleet Maintenance

The automotive shop is staffed by three dedicated fire mechanics and supported by Resource Management Agency (RMA) shop staff as needed. This staff is responsible for repair and maintenance of 84 vehicles, ranging from large, aerial firefighting apparatus to light-duty utility vehicles. While there are still a couple of in-service fire apparatus that date back to the 1970s, great progress is being made in reducing the average age of the mobile fire fleet.

Facility Maintenance

One Maintenance Worker III (MW III) staffs Facility Maintenance. This individual is responsible for the maintenance and repair of 28 fire stations. The Resource Management Agency also assists with maintenance projects as needed. The MW III performs most of the repair work; however, some of the work is contracted out to private vendors. The fire stations range in age from 55+ years to 8 years old.

The Project does not include any proposed developments. Compliance will occur with implementation of Project design features on a project-by-project basis. Future developments will be required to comply with applicable California fire code, local building codes (including requirements for fire suppression systems) and other applicable rules/regulations through implementation of Project design features on a project-by-project basis. For example, the Tulare County Fire Department will be responsible for enforcing provisions of the fire code. Any calls for service will result in temporary impacts to fire service capabilities and impacts will not result in a noticeable increase in fire risk and service demand for the area. Project-specific impacts related to this Checklist Item will be ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR

As noted earlier, the Project does not include any proposed developments. Compliance will occur with implementation of Project design features on a project-by-project basis. Future developments will be required to comply with applicable California fire code, local building codes (including requirements for fire suppression systems) and other applicable rules/regulations through implementation of Project design features on a project-by-project basis. As the proposed Project will result in ***Less Than Significant Project Impacts*** to the fire department's emergencies services response times, ***Less Than Significant Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

Applicable California fire code, local building codes (including requirements for fire suppression systems) and other applicable rules/regulations through implementation of Project design features on a project-by-project basis will result in ***Less Than Significant Project-specific Impacts*** and ***Less Than Significant Impact Cumulative Impacts*** related to this Checklist Item.

Police protection?

Project Impact Analysis: ***Less Than Significant Impact***

Law enforcement services for the Project area are provided by the Tulare County Sheriff's Department. The Pixley Patrol Substation is located at 161 N. Pine Street, Pixley, California. As discussed in Section 13, Population and Housing, the proposed Project will not induce substantial population growth. As noted earlier, the Project does not include any proposed developments. Impacts on police protection services related to population growth will be less than significant. Future development within the Project area will be designed and operated in

Draft Environmental Impact Report
Pixley Community Plan

accordance with applicable standards required by the Tulare County Sheriff's Department for new development. Therefore, Project-specific impacts related to this Checklist Item will be ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the proposed Project will not impact Police Services. As such, ***Less Than Significant Impact Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Impact Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

Schools?

Project Impact Analysis: ***Less Than Significant Impact***

The Pixley Union School District is located in Pixley, California. "The District is increasing in enrollment and currently has 1,045 students enrolled in two schools. Pixley Elementary School has 712 students. In the fall of 2010 Pixley Middle School opened a new campus adjacent to the elementary school and serves 333 students.

Pixley Schools are seen as the learning, social and recreational hub of the community and recognized by students and families as the "go to" resource for school/community needs. Pixley has an Even Start Literacy Preschool, "Early On" School Readiness Program, ASES Afterschool Learning Program, Migrant Education, Pixley Cadet Corp Program, Character Counts! Program and Healthy Start Service Center. The Tulare County Library, Pixley Branch is located on the school campus with a joint use agreement for students and community¹¹

High School education is provided by the Tulare Joint Union High School District.¹²

The proposed Community Plan Update considers the need to accommodate new or expanded school facilities. As such, ***Less Than Significant Project-specific Impacts*** related to this Checklist item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

¹¹ Pixley Union School District website accessed on March 19, 2014 at <http://pixley.k12.ca.us/District/#>

¹² Ibid.

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the proposed Project will result in ***Less Than Significant Impacts*** to schools. As such, ***Less Than Significant Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

The proposed Community Plan update includes policies to plan for and build additional schools in conjunction with new development. SB 50 limits any further mitigation that may be imposed due to school impacts. Therefore, impact after payment of fees will result in ***Less Than Significant Program-specific and Cumulative Impacts*** related to this Checklist Item.

Parks?

Project Impact Analysis: ***Less Than Significant Impact***

Pixley Community Park is available to serve the recreational needs of the community. It is approximately 22 acres in area and is located approximately one mile northeast of Pixley on Road 124. Implementation of the proposed community plan update is expected to result in an increase in the population of Pixley by approximately 976 residents resulting in a total of more 4,286 persons upon full build-out in the Year 2030. Therefore, the proposed Project will not result in the need for new or expanded park facilities. ***Less Than Significant Impacts Project-specific Impacts*** related to this Checklist Item will occur. In addition, Chapter 3.15 Recreation, provides additional analysis regarding parks which also conclude less than significant impacts to the Recreation resource.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the proposed Project will not substantially impact Recreational Services. As such, ***Less Than Significant Impacts Cumulative Impacts*** related to this Checklist Item will occur. In addition, Chapter 3.15 Recreation, provides additional analysis regarding parks which also conclude less than significant impacts to the Recreation resource.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Impacts Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

Other public facilities?

Project Impact Analysis: ***Less Than Significant Impact***

The proposed Project does not involve any development proposals that could contribute to the need for expanded electrical new development will increase the need for other public services, such as gas, electricity and phone. All future residential and non-residential development within the Project area would be subject to the latest adopted edition of the Title 24 energy efficiency standards, which are among the most stringent in the U.S. As such, implementation of the Community Plan would not result in the unnecessary, wasteful, or inefficient use of energy. The systems can be upgraded as needed for future growth. Therefore, ***Less Than Significant Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the proposed Project ***Less Than Significant Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, proposed population growth on other public services, ***Less Than Significant Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

REFERENCES

North Pixley Commercial/Industrial Specific Plan (PD-M-1&2), (1999)

Pixley Union School District website accessed on March 19, 2014 at
<http://pixley.k12.ca.us/District/#>

Tulare County 2030 General Plan, August 2012

Tulare County 2030 General Plan Background Report, February 2010

Tulare County Library website, accessed on March 1, 2015 at:
<http://www.tularecountylibrary.org/pixleybranch.html>

Tulare County Fire Department's 2013 Annual Report, accessed on January 9, 2014 and
available at: <http://tularecounty.ca.gov/fire/index.cfm/departments-information-for-the-field/annual-report-2013/>

CEQA Guidelines

Recreation

Chapter 3.15

SUMMARY OF FINDINGS

The proposed Project will result in *Less Than Significant Impacts* related to Recreation without mitigation. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Recreation. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

The environmental setting provides a description of the Recreational Resources in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030

¹ CEQA Guidelines, Section 15126.2 (a)

Draft Environmental Impact Report for
Pixley Community Plan

General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions. The following are potential thresholds for significance.

- Increase use of existing recreational facilities
- Include or require additional recreational facilities

ENVIRONMENTAL SETTING

“Tulare County contains several county, state, and federal parks. Aside from parks in the county, there are many open space areas as well. This section will highlight these various parks and open space areas and identify recreational opportunities within them.”² In addition to the 13 parks and recreation facilities that are owned and operated by Tulare County, there are State Parks and Forests, National Parks and National Forests, trails, and recreational areas.

Federal Recreation Areas

Lake Kaweah

“Lake Kaweah was formed after the construction of the Terminus Dam on the Kaweah River in 1962. The lake offers many recreational opportunities including fishing, camping, and boating. Lake Kaweah is located 20 miles east of Visalia on Highway 198 and was constructed by the U.S. Army Corps of Engineers for flood control and water conservation purposes. The lake has a maximum capacity to store 143,000 acre-feet of water. There are a total of 80 campsites at the lake’s Horse Creek Campground, which contains toilets, showers and a playground. Campfire programs are also available. Aside from camping, boat ramps are provided at the Lemon Hill and Kaweah Recreation Areas. Both Kaweah and Horse Creek provide picnic areas, barbecue grills and piped water. Swimming is allowed in designated areas. In addition, there is a one-mile hiking trail between Slick Rock and Cobble Knoll, which is ideal for bird watching.”³

Lake Success

“Lake Success was formed by construction of the Success Dam on the Tule River in 1961. The lake offers many recreational activities including fishing, boating, waterskiing, and picnicking.

² General Plan Background Report, page 4-1

³ Ibid.

Draft Environmental Impact Report for
Pixley Community Plan

The U.S. Army Corps of Engineers (USACOE) constructed this reservoir for both flood control and irrigation purposes. The lake has a capacity of 85,000 acre-feet of water. The lake is located eight miles east of Porterville in the Sierra Nevada foothills area. Recreational opportunities include ranger programs, camping at the Tule campground, which provides 104 sites, boating, fishing, picnic sites, playgrounds and a softball field. Seasonal hunting is also permitted in the 1,400-acre Wildlife Management Area.”⁴

National Parks and National Forests

“Most of the recreational opportunities in the county are located in Sequoia National Forest, Giant Sequoia National Monument, and in Sequoia and Kings Canyon National Parks (SEKI). Although these parks span adjacent counties, they make a significant contribution to the recreational opportunities that Tulare County has to offer.”⁵

Sequoia National Forest

“Sequoia National Forest takes its name from the Giant Sequoia, which is the world’s largest tree. There are more than 30 groves of sequoias in the lower slopes of the park. The park includes over 1,500 miles of maintained roads, 1,000 miles of abandoned roads and 850 miles of trails for hikers, off-highway vehicle users and horseback riders. The Pacific Crest Trail connecting Canada and Mexico crosses a portion of the forest, 78 miles of the total 2,600 miles of the entire trail. It is estimated that 10 to 13 million people visit the forest each year.”⁶

⁴ General Plan Background Report, page 4-7

⁵ Ibid.

⁶ General Plan Background Report, page 4-9

Draft Environmental Impact Report for Pixley Community Plan

**Table 3.15-1
National Park and Forest Facilities**

Recreation Area	Location	Camping Sites
Sequoia National Forest		
Gray's Meadow	5 miles West of Independence on Onion Valley Road.	52 tent/RV sites
Oak Creek	4 ½ miles NW of Independence off Highway 395.	21 tent/RV sites
Onion Valley	14 miles West of Independence on Onion Valley Road.	29 tent/RV sites
Stony Creek	14 miles SE of Grant Grove on Generals Highway.	49 tent/RV sites
Whitney Portal	13 miles West of Lone Pine on Whitney Portal Road.	43 tent/RV sites
Total		194 sites
Kings Canyon and Sequoia National Park		
Atwell Mill	Sequoia, 19 miles from Highway 198 on Mineral King Road.	21 tent sites
Azalea	Kings Canyon, 3 ½ miles from Kings Canyon Park entrance.	110 tent sites
Buckeye Flat	Sequoia, 11 miles South of Giant Forest of Generals Highway.	28 tent sites
Canyon View	Cedar Grove in Kings Canyon	23 tent sites
Cold Springs	Sequoia, Mineral King Area.	25 tent sites
Crystal Springs	Kings Canyon, ½ mile North of Grant Grove.	67 tent/RV sites
Dorst Creek	Sequoia, 9 miles North of Lodgepole off Generals Highway.	210 tent/RV sites
Lodgepole	Sequoia, 4 miles NE of Cedar Grove.	203 tent/RV sites
Moraine	Kings Canyon, 1 mile East of Cedar Grove.	120 tent/RV sites
Potwisha	Sequoia, 4 miles NE of Ash Mountain entrance off Generals Highway.	42 tent/RV sites
Sentinel	In the Cedar Grove area near the Kings River.	82 tent sites
Sheep Creek	Kings Canyon, 1/2-mile West of Cedar Grove.	111 tent/RV sites
South Fork	Sequoia, 13 miles on South Fork from Highway 198.	10 tent sites
Sunset	In the Grant Grove area 3 miles from Kings Canyon park entrance.	157 tent sites
Total		1,209 sites

Source: Tulare County Resource Management Agency, Parks and Recreation Branch, 2008; Automobile Club of Southern California, Tulare County Map.

Giant Sequoia National Monument

“The Giant Sequoia National Monument was created in 2000 by President Clinton in an effort to preserve 34 groves of ancient sequoias located in the Sequoia National Forest. The Monument includes a total of 327,769 acres of federal land, and provides various recreational opportunities, including camping, picnicking, fishing, and whitewater rafting. According to the Giant Sequoia National Monument Management Plan EIS, the Monument includes a total of 21 family campgrounds with 502 campsites and seven group campgrounds. In addition, there are approximately 160 miles of system trails, including 12 miles of the Summit National Recreation Trail.”⁷

Sequoia and Kings Canyon National Parks (SEKI)

“The U.S. Congress created the Kings Canyon National Park in 1940 and Sequoia National Park in 1890. Because they share many miles of common boundaries, they are managed as one park. The extreme large elevation ranges in the parks (from 1,500 to 14,491 feet above sea level), provide for a wide range of vegetative and wildlife habitats. This is witnessed from exploring Mt. Whitney, which rises to an elevation of 14,491 feet, and is the tallest mountain in the contiguous United States. During the summer months, park rangers lead walks through the parks,

⁷ Ibid.

Draft Environmental Impact Report for
Pixley Community Plan

and tours of Crystal and Boyden Caves. During the winter, visitors explore the higher elevations of the parks via cross country skis or snowshoes, or hike the trails in the foothills. The SEKI also contains visitor lodges, the majority of which are open year round. According to the National Parks Conservation Association, a combined total of approximately 1.4 million people visit the two parks on an annual basis.”⁸

State Parks and Forests

Colonel Allensworth State Park

“The only State Park in Tulare County is Colonel Allensworth State Historic Park discussed in Section 9.3. The park contains a museum and a visitor center addressing the town’s history, as well as camping facilities. Allensworth is the only California town to be founded, financed and governed by African Americans. The small farming community was founded in 1908 by Colonel Allen Allensworth and a group of others dedicated to improving the economic and social status of African Americans. Uncontrollable circumstances, including a drop in the area’s water table, resulted in the town’s demise. With continuing restoration and special events, the town is coming back to life as a state historic park. The park’s visitor center features a film about the site. A yearly rededication ceremony reaffirms the vision of its pioneers.”⁹

Mountain Home State Forest

“The Mountain Home State Forest is a State Forest managed by the California Department of Forestry and Fire Protection (CDF). The Forest consists of 4,807 acres of parkland containing a number of Giant Sequoias, and is located just east of Porterville. The Forest is a Demonstration Forest, which is considered timberland that is managed for forestry education, research, and recreation. Fishing ponds, hiking trails, and campsites are some of the amenities that can be found in the Forest.”¹⁰

Other Recreational Facilities

Other recreational resources available in Tulare County include portions of the Pacific Crest Trail, South Sierra Wilderness Area, Dome Land Wilderness Area, Golden Trout Wilderness Area, International Agri-Center, and the Tulare County Fairgrounds.¹¹

In addition, there are several nature preserves open to the public which are owned and operated by non-profit organizations, including the Kaweah Oaks Preserve and Dry Creek- Homer Ranch preserves, both owned and operated by Sequoia Riverlands Trust.

Incorporated cities in the County also have a number of recreational facilities including neighborhood parks, play lots, pocket parks and other recreation facilities.”¹² Pixley has a 22

⁸ Ibid.

⁹ Tulare County 203 General Plan Re-circulated RDEIR, page 4-3

¹⁰ Ibid. Page 4-7

¹¹ Ibid. Page 3.9-32

¹² Ibid. Page 3.9-29

Draft Environmental Impact Report for Pixley Community Plan

acre Community recreation park which is owned and maintained by Tulare County.

**Table 3.15-2
Recreational Areas in Tulare County**

ID	Recreation Area	Location	Acres	Type of Use/Features
County				
1	Alpaugh Park	Located in Alpaugh on Road 40.	3	Reservations for picnic areas are taken. No entrance fee.
2	Balch Park Campgrounds	20 miles NE of Springville in the Sierras.	160	71 Campsites. No reservations taken; first come first serve basis. Entrance fee for vehicles.
3	Bartlett Park	8 miles east of Porterville on North Drive.	127.5	Reservations for picnic areas are taken. Entrance fee for vehicles.
4	Camp COTYAC	Near Ponderosa in Eastern Tulare County.	8	County of Tulare Youth Adventure Camp (Camp COTYAC). Cabins, lodge with kitchen, restrooms and showers.
5	Cutler Park	5 miles east of Visalia on Highway 216 to Ivanhoe.	50	Reservations for picnic areas are taken. Entrance fee for vehicles.
6	Elk Bayou Park	6 miles SE of Tulare on Avenue 200.	60	Reservations for picnic areas are taken. No fee for day use.
7	Kings River Nature Preserve	2 miles east of Highway 99 on Road 28	85	This park is only for school environmental programs.
8	Ledbetter Park	1 mile northwest of Cutler on Road 124/Hwy 63	11	Reservations for picnic areas are taken. No fee.
9	Mooney Grove Park	2 Miles south of Caldwell Avenue on Mooney Blvd. In South Visalia.	143	Reservations for picnic areas are taken. Paddle boats, playground, and baseball diamonds. Home of the End Trail statue. One of the largest oak woodlands in Tulare County. Location of the Agriculture and Farm Labor Museum.
10	Pixley Park	1 mile NE of Pixley on Road 124.	22	Reservations for picnic areas are taken. No fee.
11	Tulare County Museum	In Mooney Grove Park, South Visalia.	8.5	Free admission with park fee. Museum is opened Thursday thru Monday (closed Tuesday and Wednesday).
12	Woodville Park	Located in Avenue 166 in Woodville.	10	Reservations for picnic areas are taken. Day use no entrance fee.
13	West Main Street Park	2 blocks west of County Courthouse on Main Street in Downtown Visalia.	5	Day use no entrance fee.
State				
14	Colonel Allensworth State Historic Park	7 miles west of Earlimart on County Road J22.	na	15 campsites, open year round.
15	Mountain Home State Forest	Located in Sequoia National Forest	na	No reservations taken for campgrounds.
Federal				
16	Lake Kaweah	25 miles east of Visalia on Highway 198.	2,558	Horse Creek Campground, boat ramps, picnic areas, swimming, and hiking.
17	Lake Success	10 miles SE of Porterville on Highway 198.	2,450	Tule Campground, boating, fishing, picnic areas, playgrounds, and softball field. Hunting is permitted in the Wildlife Management Area.
18	Sequoia National Forest	Southeastern portion of Tulare County.	na	Campgrounds include Gray's Meadow, Oak Creek, Onion Valley, Stony Creek, Sunset, and Whitney Portal with over 300 campsites.
19	Giant Sequoia National Monument	Covers areas north and south of Sequoia and Kings Canyon National Parks.	na	
20	Sequoia and Kings Canyon National Parks (SEKI)	Northeastern portion of Tulare County.	na	Campgrounds include Atwell Mill Campground, Buckeye Flat, Cold Springs, Crystal Springs, Dorst Campground, Lodgepole, Moraine, Potwisha, Sheep Creek, and South Fork with over 800 campsites.
Total Acres				5,701

Source: Tulare County Resource Management Agency, Parks and Recreation Branch, 2008; Automobile Club of Southern California, Tulare County Map.

Draft Environmental Impact Report for Pixley Community Plan

Local Recreational Facilities

Schools and Parks

“Pixley Park, a 22 acre Community recreation park located at the north end of Pixley, is owned and maintained by Tulare County. It is mainly used as a recreational facility for families and as a rest stop by travelers on nearby Highway 99. The park is equipped with restrooms, picnic tables, covered picnic areas, barbecues, a baseball/softball field, and a playground area. There are also a number of arbors that are available for rental for groups up to 75 people. The majority of Pixley Park is landscaped with irrigated grass and eucalyptus trees.

The Pixley School is also used as a recreational facility by residents of the Community. The school provides baseball and open playing fields, playground areas, and outdoor basketball.”¹³

REGULATORY SETTING

Federal Agencies & Regulations

United States National Park Service (NPS)

“The National Park Service (NPS) is a bureau of the U.S. Department of the Interior. The NPS manages the 397 units of the National Park System. The NPS also helps administer dozens of affiliated sites, the National Register of Historic Places, National Heritage Areas, National Wild and Scenic Rivers, National Historic Landmarks, and National Trails.”¹⁴

State Agencies & Regulations

California Department of Parks and Recreation

“California Department of Parks and Recreation manages more than 270 park units, which contain the finest and most diverse collection of natural, cultural, and recreational resources to be found within California. These treasures are as diverse as California: From the last stands of primeval redwood forests to vast expanses of fragile desert; from the lofty Sierra Nevada to the broad sandy beaches of our southern coast; and from the opulence of Hearst Castle to the vestiges of colonial Russia. California State Parks contains the largest and most diverse natural and cultural heritage holdings of any state agency in the nation. State park units include underwater preserves, reserves, and parks; redwood, rhododendron, and wildlife reserves; state beaches, recreation areas, wilderness areas, and reservoirs; state historic parks, historic homes, Spanish era adobe buildings, including museums, visitor centers, cultural reserves, and preserves; as well as lighthouses, ghost towns, waterslides, conference centers, and off-highway vehicle parks. These parks protect and preserve an unparalleled collection of culturally and environmentally sensitive structures and habitats, threatened plant and animal species, ancient

¹³ Pixley Community Plan Update, page 25

¹⁴ National Park Service Overview Brochure, Updated May, 2011

Native American sites, historic structures and artifacts . . . the best of California's natural and cultural history.”¹⁵

Local Policy & Regulations

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project are listed below.

ERM-5.2 Park Amenities - The County shall provide a broad range of active and passive recreational opportunities within community parks. When possible, this should include active sports fields and facilities, community center/recreation buildings, children’s play areas, multi-use areas and trails, sitting areas, and other specialized uses as appropriate.

ERM-5.3 Park Dedication Requirements - The County shall require the dedication of land and/or payment of fees, in accordance with local authority and State law (for example the Quimby Act), to ensure funding for the acquisition and development of public recreation facilities.

ERM-5.5 Collocated Facilities - The County shall encourage the development of parks near public facilities such as schools, community halls, libraries, museums, prehistoric sites, and open space areas and shall encourage joint-use agreements whenever possible.

ERM-5.7 Public Water Access - The County shall give a high priority to the acquisition of public access rights to water courses. Acquisition of multi-purpose sites, such as the protection of drainage ways, wildlife habitats, and scenic assets, shall be encouraged. In the lakefront areas of Lake Success and Lake Kaweah, special consideration should be given to matching recreational needs of the community with lake access.

ERM-5.11 Cooperation with Federal and State Agencies - The County shall work with Federal and State agencies that manage land within the County, as appropriate.

ERM-5.12 Meet Changing Recreational Needs - The County shall promote the continued and expanded use of national and State forests, parks, and other recreational areas to meet the recreational needs of County residents.

ERM-5.15 Open Space Preservation - The County shall preserve natural open space resources through the concentration of development in existing communities, use of cluster development techniques, maintaining large lot sizes in agricultural areas, discouraging conversion of lands currently used for agricultural production, limiting development in areas constrained by natural hazards, and encouraging agricultural and ranching interests to maintain natural habitat in open space areas where the terrain or soil is not conducive to agricultural production.

¹⁵ California Dept. of Parks and Recreation, http://www.parks.ca.gov/?page_id=91

IMPACT EVALUATION

- a) **Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

Project Impact Analysis: ***Less Than Significant Impact***

“Pixley Park, a 22 acre Community recreation park located at the north end of Pixley, is owned and maintained by Tulare County. It is mainly used as a recreational facility for families and as a rest stop by travelers on nearby Highway 99. The park is equipped with restrooms, picnic tables, covered picnic areas, barbecues, a baseball/softball field, and a playground area. There are also a number of arbors that are available for rental for groups up to 75 people. The majority of Pixley Park is landscaped with irrigated grass and eucalyptus trees.

The Pixley School is also used as a recreational facility by residents of the Community. The school provides baseball and open playing fields, playground areas, and outdoor basketball.”¹⁶

The proposed Project does not include new recreational facilities or the expansion of recreational facilities nor does it include any development proposal that would result in additional population which would increase the use of existing neighborhood and regional parks or other recreational facilities. Further, implementation of the proposed Community Plan update is expected to result in an annual average increase in the population of Pixley by approximately 1.3% resulting in approximately 976 additional persons upon full build-out. As noted in Tulare County General Plan Policy ERM-5.3 Park Dedication Requirements, the County shall require the dedication of land and/or payment of fees, in accordance with local authority and State law (for example the Quimby Act), to ensure funding for the acquisition and development of public recreation facilities. In addition to the existing park and Pixley School, it is anticipated that the demand for recreational facilities in the area during the planning period can be met. As such, ***No Project-specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As such ***Less Than Significant Impact Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

As noted earlier, *Less Than Significant Project-specific or Cumulative Impacts* related to this Checklist Item will occur.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Project Impact Analysis: *Less Than Significant Impact*

As noted earlier, a 22-acre community park is currently located along North Park Drive in Pixley. The park is equipped with restrooms, picnic tables, covered picnic areas, barbecue, a baseball/softball field, and a playground area. The Pixley Elementary School and Pixley Middle School located on East Court Avenue, in Pixley is also used as a recreational facility by the residents of the Community. Further, implementation of the proposed Community Plan update is expected to result in an annual average increase in the population of Pixley by approximately 1.3% resulting in approximately 976 additional persons upon full build-out. As noted in Tulare County General Plan Policy ERM-5.3 Park Dedication Requirements, the the County shall require the dedication of land and/or payment of fees, in accordance with local authority and State law (for example the Quimby Act), to ensure funding for the acquisition and development of public recreation facilities. As such, *Less Than Significant Project-specific Impacts* related to this Checklist Item will occur.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As such, *Less Than Significant Impact Cumulative Impacts* related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *Less Than Significant Impact*

Compliance with the policies of the Tulare County General Plan and proposed Pixley Community Plan Update will reduce recreational impacts to *Less Than Significant Program-specific and Cumulative Impacts* related to this Checklist Item will occur

REFERENCES

Automobile Club of Southern California, Tulare County Map.

California Dept. of Parks and Recreation, which can be accessed at http://www.parks.ca.gov/?page_id=91. Accessed June 2014.

National Park Service Overview Brochure, Updated May, 2011.

Tulare County General Plan 2030 Update, Background Report, February 2010.

Tulare County General Plan, 2030 Update, Recirculated DEIR, February 2010.

Tulare County Resource Management Agency, Parks and Recreation Branch, 2008 Map.

United States Bureau of Labor Statistics, May 2014, which can be accessed at http://www.calmis.ca.gov/file/lfmonth/lf_geomaps.pdf. Accessed June 2014.

Tulare County 2030 General Plan, August 2012.

Tulare County 2030 General Plan Background Report, February 2010.

CEQA Guidelines

Transportation/Traffic

Chapter 3.16

SUMMARY OF FINDINGS

The proposed Project will result in *Less Than Significant Impacts With Mitigation* related to Transportation and Traffic. A Traffic Impact Study Report prepared by consultant VRPA Technologies is included as Appendix “F” of this document is used as the basis for determining this Project will result in *Less Than Significant Impacts*. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Transportation and Traffic. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

The environmental setting provides a description of the Transportation and Traffic in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory

¹ CEQA Guidelines, Section 15126.2 (a)

policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist item questions. The following are potential thresholds for significance.

- Result in a Level of Service (LOS) less than “D”
- Unsafe roadway/circulation design
- Impact Air Traffic
- Dangerous Site Design
- Inadequate Access
- Need for additional Public Transit
- Need for additional Bike Facilities
- Need for additional Pedestrian Facilities

Traffic Reports

“The following criterion is a starting point in determining when a TIS is needed. When a project:

1. Generates over 100 peak hour trips assigned to a State highway facility.
2. Generates 50 to 100 peak hour trips assigned to a State highway facility – and, affected State highway facilities are experiencing noticeable delay; approaching unstable traffic flow conditions (LOS “C” or “D”).
3. Generates 1 to 49 peak hour trips assigned to a State highway facility – the following are examples that may require a full TIS or some lesser analysis :⁴
 - a. Affected State highway facilities experiencing significant delay; unstable or forced traffic flow conditions (LOS “E” or “F”).
 - b. The potential risk for a traffic incident is significantly increased (i.e., congestion related collisions, non-standard sight distance considerations, increase in traffic conflict points, etc.).
 - c. Change in local circulation networks that impact a State highway facility (i.e., direct access to State highway facility, a non-standard highway geometric design, etc.).”²

ENVIRONMENTAL SETTING

“Tulare County has two major regional highways, State Highway 99 and 198. State Highway 99 connects Tulare County to Fresno and Sacramento to the north and Bakersfield to the south. State Highway 198 connects from U.S. Highway 101 on the west and continues eastward to

² Caltrans Guide for the Preparation of Traffic Impact Studies, page 2

Draft Environmental Impact Report
Pixley Community Plan

Tulare County, passing through the City of Visalia and into Sequoia National Park. The highway system in the County also includes State highways, County-maintained roads, and local streets within each of the eight cities.”³

“Tulare County’s transportation system is composed of several State Routes, including three freeways, multiple highways, as well as numerous county and city routes. The county’s public transit system also includes two common carriers (Greyhound and Orange Belt Stages), the AMTRAK Service Link, other local agency transit and paratransit services, general aviation, limited passenger air service and freight rail service.”⁴

“Some prominent county roadways include, but are not limited to, Alta Avenue (Road 80), Caldwell Avenue/Visalia Road (Avenue 280), Demaree Road/Hillman Street (Road 108), Tulare Avenue (Avenue 232), Olive Avenue (Avenue 152), Spruce Road (Road 204), El Monte Way (Avenue 416), Paige Avenue (Avenue 216), Farmersville Boulevard (Road 164), Road 192, and Road 152. Additionally, the highway system includes numerous county-maintained local roads, as well as local streets and highways within each of the eight cities and several unincorporated communities.”⁵

“Travel within Tulare County is a function of the size and spatial distribution of its population, economic activity, and the relationship to other major activity centers within the Central Valley (such as Fresno and Bakersfield) as well as more distant urban centers such as Los Angeles, Sacramento, and the Bay Area. In addition, there is considerable travel between the northwest portions of Tulare County and southern Fresno County and travel to/from Kings County to the west. Due to the interrelationship between urban and rural activities (employment, housing, services, etc.) and the low average density/ intensity of land uses, the private automobile is the dominant mode of travel for residents in Tulare County.”⁶

“According to the 2005 HCM, LOS is categorized by two parameters, uninterrupted flow and interrupted flow. Uninterrupted flow facilities have no fixed elements, such as traffic signals, that cause interruptions in traffic flow (e.g., freeways, highways, and controlled access). Interrupted flow facilities have fixed elements that cause an interruption in the flow of traffic such as stop signs, signalized intersections, and arterial roads (Transportation Research Board). The difference between uninterrupted flow and interrupted LOS is defined in the following summary.”⁷

³ Tulare County 2030 General Plan, page 13-2

⁴ General Plan Background Report, page 5-4

⁵ Ibid., page 5-7

⁶ Op. Cit. 5-4

⁷ 2011 TCAG Regional Transportation Plan, page 3-17

Table 3.16-1
Uninterrupted Traffic Flow Facilities LOS

LOS A	Represents free flow. Individual vehicles are virtually unaffected by the presence of others in the traffic stream.
LOS B	Is in the range of stable flow, but the presence of other vehicles in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.
LOS C	Is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual vehicles becomes significantly affected by interactions with others vehicles in the traffic stream.
LOS D	Is a crowded segment of roadway with a large number of vehicles restricting mobility and a stable flow. Speed and freedom to maneuver are severely restricted and the driver experiences a generally poor level of comfort and convenience.
LOS E	Represents operating conditions at or near level capacity. All speeds are reduced to a low, but relatively uniform value. Small increases in flow will cause breakdowns in traffic movement.
LOS F	Is used to define forced or breakdown flow (stop and go gridlock). This condition exists wherever the amount of traffic approaches a point where the amount of traffic exceeds the amount that can travel to a destination. Operations within queues are characterized by stop and go waves and they are extremely unstable.

Source: 2011 Regional Transportation Plan, Tulare County Association of Governments

Table 3.16-2
Interrupted Traffic Flow Facilities LOS

LOS A	Describes operations with average intersection stopped delay of ten seconds or less (how long a driver must wait at a signal before the vehicle can begin moving again).
LOS B	Describes operations with average intersection stopped delay in the range of 10.0 to 20.0 seconds per vehicle, and with reasonably unimpeded operations between intersections.
LOS C	Describes operations with higher average stopped delays at intersections (in the range of 20.0 to 35.0 seconds per vehicle). Stable operations between locations may be more restricted due to the ability to maneuver and change lanes at mid-block locations can be more restrictive than LOS B. Further, longer queues and/or adverse signal coordination may contribute to lower average speeds.
LOS D	Describes operations where the influence of delay is more noticeable (35.0 to 55.0 seconds per vehicle). Intersection stopped delay is longer and the range of travel speeds are about 40 percent below free flow speed. This is caused by inappropriate signal timing, high volumes and some combinations of these.
LOS E	Is characterized by significant approach stopped delay (55.0 to 80.0 seconds per vehicle), and average travel speeds of one-third the free flow speed or lower. These conditions are generally considered to represent the capacity of the intersection or arterial.
LOS F	Characterizes arterial flow at extremely low speeds, with high intersection stopped delay (greater than 80.0 seconds per vehicle). Poor progression, long cycle lengths and high traffic demand volumes may be major contributing factors to this condition. Traffic may be characterized by frequent stop-and-go conditions.

Source: 2011 Regional Transportation Plan, Tulare County Association of Governments

Existing Circulation and Traffic Conditions

“California State Route 99 is In the Pixley area, State Route (SR) 99 is freeway with two travel lanes northbound and southbound. There are interchanges at Avenue 320, Court Avenue and Terra Bella Avenue, affording good access between Pixley and Valley-wide destinations served by the freeway.

Avenue 320, also known as Hesse Avenue, is a rural arterial roadway about two miles north of the center of Pixley. As noted above it has an interchange with SR 99. It follows an east-west alignment and provides one traffic lane in each direction throughout the area.

Court Avenue is a major street that is bifurcated into eastern and western segments by SR 99, which it crosses via an overpass bridge. Court Avenue combines the functions of both an arterial

Draft Environmental Impact Report
Pixley Community Plan

and collector street and provides one traffic lane in each direction for its length through central Pixley. Court Avenue serves the Pixley Elementary School, which is just northeast of its intersection with School Street.

Terra Bella Avenue also known as Road J24, is a major east-west arterial street. Like Court Avenue, Terra Bella is bifurcated into east and west segments by SR 99 and crosses SR 99 via an overpass bridge.

Airport Avenue (also known as Road 120) is a two-lane north-south arterial street that traverses mainly agricultural areas west of Pixley.

Main Street is a two-lane north-south street immediately west of SR 99 that provides access to a mix of uses in the community's center. Like Court Avenue Main Street combines the functions of both an arterial and collector street. Its northernmost segment serves as southbound off-ramp for SR 99 traffic accessing Court Avenue and destinations on the west side of the freeway. South of Terra Bella Avenue Main Street also receives traffic from another southbound SR 99 off-ramp, and the southernmost segment of Main Street functions as a southbound on-ramp to SR 99.

Center Street is a two-lane north-south street immediately west of SR 99 that provides access to a mix of uses in the community's center. Like Court Avenue and Main Street it combines the functions of both an arterial and collector street, and like Main Street its northernmost segment serves as southbound offramp for SR 99 traffic accessing Court Avenue and other destinations in Pixley.

Park Drive is a two-lane north-south street immediately east of SR 99 that also provides access to a mix of uses in the community's center. It too combines the functions of both an arterial and collector street. Its southernmost segment serves as northbound off-ramp for SR 99 traffic accessing Terra Bella Avenue, Court Street and destinations on the east side of the freeway.

School Street is a north-south street that combines the function of a collector and local street. Its paved portion runs from Terra Bella Avenue at the southerly edge of the planning area across Court Avenue to Pixley Elementary School. It affords access to abutting residential properties to west and currently undeveloped parcels to the east.

All other streets and roads in the community's planning area function essentially as local streets, mainly carrying traffic accessing abutting urban and rural properties.⁸

⁸ Pixley Community Plan Traffic Impact Study, pages 5-5 and 5-6; prepared by VRPA Technologies, Sept. 2014. (included as Appendix "F" of this DEIR).

Draft Environmental Impact Report
Pixley Community Plan

Existing Transportation/Circulation Conditions

“To identify current traffic conditions, AM and PM peak hour turning movement counts were conducted at thirteen intersections in the Pixley area in early June, 2014, while local schools were still in session. Data on roadway approach lanes at intersection was collected at the same time. Based upon these data and methodologies prescribed by the County, traffic levels of service (LOS) were determined and the adequacy of the community’s road network for serving current and future traffic demand was assessed.

Data was collected at the following 13 intersections and the adjacent roadway segments:

- | | |
|---|--------------------------------------|
| 1. SR 99 SB Ramps at Ave 120 | 8. Court and Park |
| 2. Ave 120/Diagonal 122 | 9. Court and School |
| 3. SR 99 NB Ramps at Diagonal 122 | 10. Airport and Terra Bella |
| 4. SR 99 NB Ramps at Park (North of Pixley) | 11. Main and Terra Bella |
| 5. SR 99 NB Off Ramp at Park | 12. Terra Bella at SR 99 NB On Ramp |
| 6. SR 99 SB Off Ramp at Main and Court | 13. Terra Bella at SR 99 NB Off Ramp |
| 7. SR 99 SB Off Ramp at Court” ⁹ | |

The TIS contains a variety of figures showing the number of lanes at each study intersection (Figure 4, page 5-11 of the TIS in Appendix “F” of the DEIR); existing Average Daily Traffic conditions (Figure 5, page 5-12 of the TIS in Appendix “F” of the DEIR); existing traffic turning movements in the morning (AM) peak (Figure 6, page 5-13 of the TIS in Appendix “F” of the DEIR) and existing traffic turning movements in the afternoon (PM) peak (Figure 7, page 5-14 of the TIS in Appendix “F” of the DEIR).

Intersection Capacity Analysis

“For both 2014 existing and projected 2030 traffic, intersection operating conditions were calculated using the Transportation Research Board’s 2010 Highway Capacity Manual (HCM 2010). Actual calculations were performed using Synchro intersection analysis software. This method results in a level of service (LOS) with a letter grade of from A to F, with LOS A indicating no delay for side street traffic and LOS F indicating severe delay. Table 1 [page 5-15 of the TIS in Appendix “F” of the DEIR] further defines level of service grades. In Tulare County, the goal for peak hour traffic operations is LOS D, per the 2012 County General Plan (p. 13-4.)”¹⁰

Future Transportation/Circulation Conditions

In order to project future traffic roadway conditions, a variety of sources were used. Historic population data indicate that the population of Pixley has was 3,310 at the 2010 census, up from 2,175 in 1990. This reflects an annual growth rate of about two percent. The [Tulare County Association of Governments] TCAG’s current [Regional Transportation Plan] RTP forecast indicates a slower population grown of about 0.4% per year from 2010 to 2032 in the 14 TCAG

⁹ Ibid. 5-9 and 5-10

¹⁰ Op Cit. 5-10

RTP model traffic analysis zones (TAZs) that cover Pixley and vicinity TCAG's jobs forecast show employment in Pixley and vicinity increasing at a somewhat higher annual rate of just over 1% between 2010 and 2032.

Based on these and other data provided by TCAG and County planning staff, an overall rate of traffic growth of 2% per year was determined to be a reasonably conservative forecast assumption. This rate of growth was applied to existing traffic count data to create future year (2032) traffic levels. This annual rate results in an overall growth in peak hour traffic of approximately 43% for the period 2014-2032. For consistency with TCAG and Caltrans forecasts, a lower annual traffic growth rate of 1% was applied to SR 99 volumes.

Figure 8 [page 5-15 of the TIS in Appendix "F" of the DEIR] shows Average Daily traffic conditions for 2032. Figures 9 and 10 show projected 2030 traffic turning movements in the morning (AM) and afternoon (PM) peak hours, as well as delay levels and LOS results at each intersection. Table 2 [page 5-20 of the TIS in Appendix "F" of the DEIR] summarizes delay and LOS results at all intersections in both the AM and PM peak hours and under both current and 2032 conditions.

Examining Table 2 [Table 3.16-3 of the DEIR], it is evident that all intersections meet or exceed the County LOS D standard under all scenarios. In fact, all intersections will perform at LOS B or better."¹¹

¹¹ Op. Cit. 5-15 and 5-19

Draft Environmental Impact Report
Pixley Community Plan

**Table 3.16-3
Pixley Intersection Analysis**

INTERSECTION	Peak Hour	Existing (2014)		Future (2032)	
		Delay	LOS	Delay	LOS
SR99 SB Ramps @ Ave. 120	AM	9.4	A	10.1	B
	PM	10.2	B	11.5	B
Ave 120 @ Diagonal 122	AM	9.5	A	10.1	B
	PM	10.1	B	11.2	B
SR99 NB Ramps @ Diagonal 122	AM	10.3	B	11.5	B
	PM	11.1	B	13.1	B
SR99 NB Ramps @ Park (N/O Pixley)	AM	9.2	A	9.5	A
	PM	9.9	B	10.6	B
SR99 NB Off Ramp @ Park	AM	9.6	B	9.9	A
	PM	10.3	B	11.1	B
Main St @ Court	AM	10.5	B	11.7	B
	PM	11.4	B	13.5	B
SR99 SB Off Ramp @ Court	AM	10.1	B	11.1	B
	PM	10.4	B	11.4	B
School @ Court	AM	10.9	B	12.9	B
	PM	9.5	A	10.1	B
Park @ Court	AM	10.3	B	11.3	B
	PM	10.9	B	12.2	B
Main St @ Terra Bella	AM	7.7	A	8.2	A
	PM	8.9	A	10.6	B
Terra Bella @ SR99 NB On Ramp	AM	2.3	A	2.4	A
	PM	1.5	A	1.7	A
Terra Bella @ SR99 NB Off Ramp	AM	9.3	A	9.8	A
	PM	11.7	B	14.9	B
Terra Bella @ Airport	AM	9.3	A	9.6	A
	PM	9.8	A	10.4	B

Source: Pixley Community Plan Traffic Impact Study, page 5-20, VRPA Technologies, Sept. 2014. (see Appendix "F" of the DEIR).

Public Transportation

“The private automobile is the dominant mode of travel within Tulare County. Census data for Pixley indicate that about two-thirds of commuters drive alone to work, while just over one-quarter carpool or vanpool, and about 10 percent walk, bike or work at home. The Census bureau does not collect data on non-work trips, which represent a greater share of travel than work trips, but tend to be less concentrated in peak traffic periods.

While congestion is not even an emerging issue in Pixley, overreliance on automobiles creates costs for both society and households, and means that many in the community who cannot drive (the young, the old, the disabled, the poor) must rely on those who can drive for their mobility. For this reason, it is important to encourage public transit systems and increased use of active modes of transportation, including bicycles and walking. The public transit system alternatives

Draft Environmental Impact Report
Pixley Community Plan

for Pixley include fixed route public transit systems, common bus carriers (which currently must be accessed in Tulare or Delano) and other local agency transit and paratransit services.

The Tulare County Transit Agency (TCaT) operates fixed-route services that link communities with each other and with Visalia and Tulare's urban transit systems. Pixley is connected via TCaT Route 20 to the City of Tulare and its transit center (see Figure 3 [page 5-7 of the TIS in Appendix "F" in the DEIR]). TCaT Route 20 also connects Pixley Delano (Kern County) in the south. Route 20 has nine northbound and ten southbound buses serving Pixley on weekdays and three buses in each direction on Saturdays and Sundays. In Tulare, transfers can be made to connect to Visalia, and the remainder of the TCaT public transit system. TCaT vehicles are wheelchair accessible and all full size buses include bike racks. TCaT supports a number of specialized transportation programs, including shared-ride car and vanpool services, social service dial-a-ride, and specialized services for seniors and persons with disabilities.

Paratransit services are transportation services such as carpooling, vanpooling, taxi service, and dial-a-ride programs. The County supports reliable and efficient paratransit service by encouraging development of service systems that satisfy the transit needs of the elderly and physically handicapped"¹²

"Pixley has limited transit service and pedestrian and bicycle facilities. Public transit is likely to remain a limited option due to fiscal constraints and the high cost of providing services to a community of less than one thousand residents. The low level of auto congestion in Pixley, now and in the future suggests that driving will continue to be more convenient than transit for those with access to a private car. For those without access to a car, the best approach for improving transit in Pixley will be to enhance rider information systems that give potential transit patrons precise arrival and departure times for transit and paratransit vehicles. Such real time information systems, by reducing the uncertainty and time spent waiting, can both increase demand for transit and paratransit and improve riders' overall experience.

With respect to pedestrian and bicycle modes, the current and projected low levels of vehicular traffic in Pixley, together with short travel distances within the community, means that these modes can be very competitive for trips within Pixley, even with minimal facilities. A reasonably flat, safe surface on the side of a low traffic road can often suffice for pedestrians and bicycles, especially if signs alert drivers to the presence of non-motorized traffic."¹³

Aviation

"A general aviation facility on the west side of the community, Harmon Field, was closed in the 1990s. The nearest operational general aviation is Mefford Field in Tulare, 13 miles north of Pixley.

Fresno Yosemite International Airport (FAT), 64 miles northwest of Pixley, is the principal passenger and airfreight airport in the central San Joaquin Valley. Visalia Municipal Airport, 28

¹² Op. Cit. 5-6 and 5-8

¹³ Op. Cit. 5-8

Draft Environmental Impact Report
Pixley Community Plan

miles north, offers passenger service to Los Angeles. Meadows Field, Bakersfield's principal commercial airport, is 42 miles to the south of Pixley.¹⁴

Bikeways and Pedestrian Facilities

“Investment in bikeways provides an inexpensive environment-friendly transportation opportunity. Bicycling is considered an effective alternative mode of transportation that can help to improve air quality and reduce the number of vehicles traveling along existing highways, especially within the cities and unincorporated communities. While the numbers of cyclists is small in comparison to the amount of auto traffic, the size of the community of Pixley means that most local trips can be as fast by bicycle as by car.

Pedestrian facilities include sidewalks, walkways, crosswalks, signals, lighting, and benches, among other items. Where such facilities exist, people will be much more likely to make shorter trips by walking rather than by vehicle. Pedestrian facilities serving the school and recreational facilities enhance the safety of those who choose to walk to and from these destinations.”¹⁵

Goods Movement

“The ability of Tulare County to compete domestically and internationally on an economic basis requires an efficient and cost-effective method for distributing and receiving products. Pixley is a part of this system with its proximity to both SR 99 and the UP Railroad mainline.

As industrial and economic growth is anticipated in Pixley, industrial-related truck traffic will increase. Statewide, over three-quarters of all freight is shipped by truck. It is anticipated that the region's truck volumes will grow faster than auto traffic through 2040.

Designated truck routes are intended to be used for long-distance truck movement. Truck movements for local deliveries within a community may use the most direct route to the particular delivery location, including local streets.

Air cargo is a growing method of transporting goods in and out of the Central Valley and is expected to continue to increase. As noted above, Fresno Yosemite International Airport is the major cargo-handling airport in the San Joaquin Valley.

The Union Pacific (UP) Railroad provides freight service, connecting Pixley with major markets in northern and southern California. Rail can be the most cost-effective mode for long-haul traffic traveling to or from destinations beyond the Valley. Trucking is still likely to be the predominant mode for freight movements within the County and Valley for the foreseeable future.”¹⁶

Design for Emergency Access

¹⁴ Op. Cit.

¹⁵ Op. Cit. 5-8

¹⁶ Op. Cit. 5-9

Draft Environmental Impact Report
Pixley Community Plan

According to § 21060.3 and § 15359 of the CEQA Guidelines, an “Emergency” means a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services. “Emergency” includes such occurrences as fire, flood, earthquake, or other soil or geologic movements, as well as such occurrences as riot, accident, or sabotage. A Proposed Project could potentially generate impacts through inadequate design for emergency access.

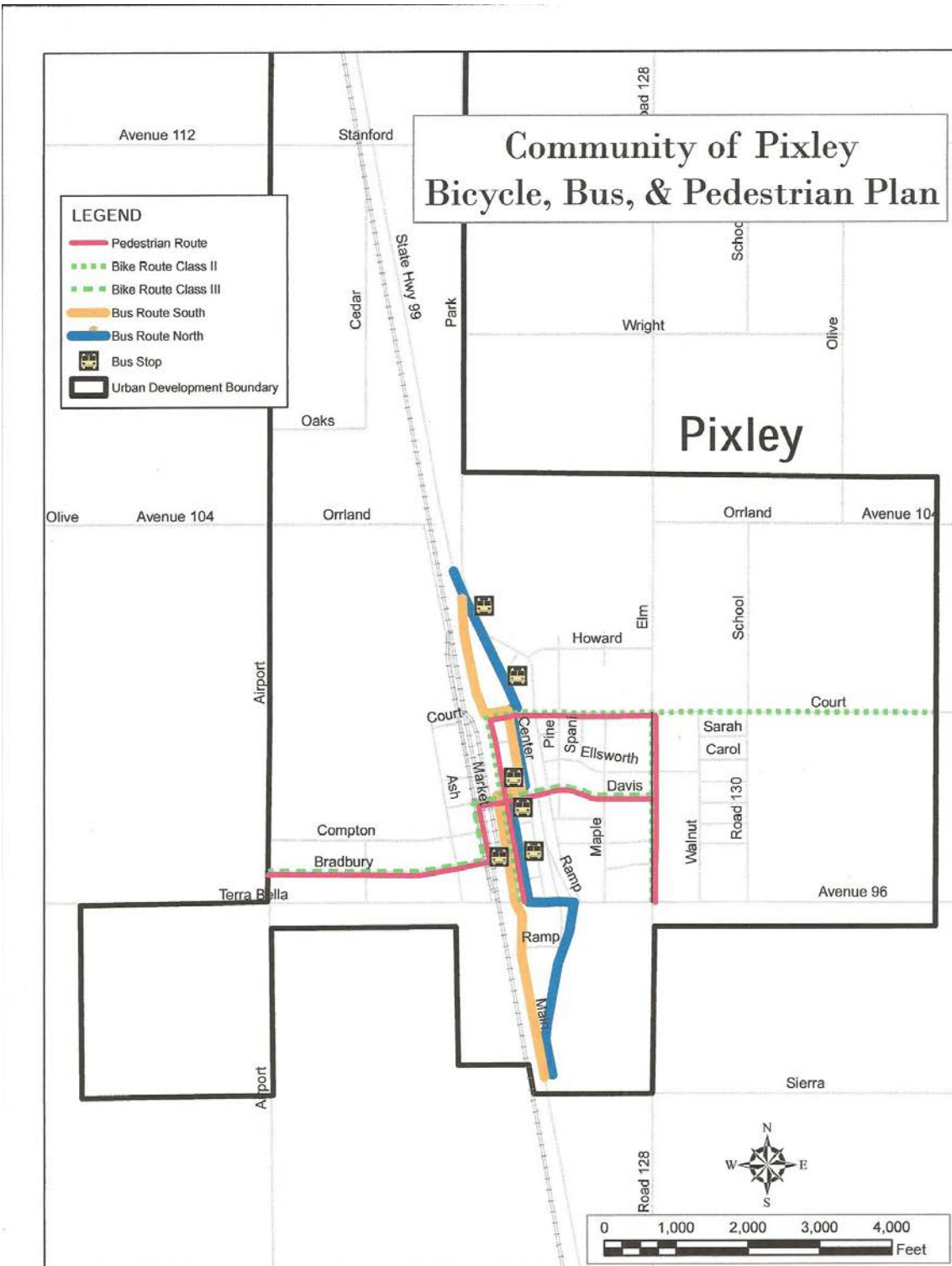
Complete Streets and Alternative Transportation

The Board of Supervisors approved the Complete Streets Program on November 4, 2014 (see Appendix “F” of the Pixley Community Plan). The Complete Streets Programs Policies, Objectives, and Standards are hereby incorporated by reference. Included in the plan were policies and implementation measures as provided in **Figure 3.16-1** – Community of Pixley Complete Streets Bicycle, Bus and Pedestrian Plan.¹⁷

¹⁷ Tulare County Complete Streets – Pixley, Appendix “C”, prepared for Tulare County Resource Management Agency by Omni Means, September 2014.

Draft Environmental Impact Report
Pixley Community Plan

Figure 3.16 – 1
Community of Pixley Complete Streets - Bicycle, Bus & Pedestrian Plan



Transit

“The Tulare County Transit Agency (TCaT) operates fixed-route services that link communities with each other and with Visalia and Tulare’s urban transit systems. Pixley is connected via TCaT Route 20 to the City of Tulare and its transit center (see Figure 3). TCaT Route 20 also connects Pixley Delano (Kern County) in the south. Route 20 has nine northbound and ten southbound buses serving Pixley on weekdays and three buses in each direction on Saturdays and Sundays. In Tulare, transfers can be made to connect to Visalia, and the remainder of the TCaT public transit system. TCaT vehicles are wheelchair accessible and all full size buses include bike racks. TCaT supports a number of specialized transportation programs, including shared-ride car and vanpool services, social service dial-a-ride, and specialized services for seniors and persons with disabilities.

Paratransit services are transportation services such as carpooling, vanpooling, taxi service, and dial-a-ride programs. The County supports reliable and efficient paratransit service by encouraging development of service systems that satisfy the transit needs of the elderly and physically handicapped.

Transportation Demand Management

Transportation demand management (TDM) strategies reduce dependence on the single-occupant vehicle, increase the ability of the existing transportation system to carry more people, and enhance mobility in the increasingly congested Highway 99 corridor. Examples of TDM strategies include telecommuting, flexible work hours, and electronic commerce that enable people to work and shop from home. According to Caltrans, the major vanpool broker in the Valley, vanpools are becoming more prevalent for short-to-medium range commute trips, as well as for traditional long-distance usage: Key vanpool users include agricultural workers, and employees at large firms and government agencies. Park-n-ride facilities and carpooling will also continue to be a significant link between highway and transit modes.”¹⁸

REGULATORY SETTING

Federal Agencies & Regulations

None that are applicable to this Project.

State Agencies & Regulations

Caltrans: Transportation Concept Reports

Caltrans has prepared a number concept reports for State Routes, Interstate Routes, and US Routes for each of its California Districts. Tulare County is located in Caltrans District 06. The concept reports that apply the proposed Project include SR 99. Concept LOS C is designated for SR 99; however, the concept LOS D is anticipated with improvements in 2035.

¹⁸ Op. Cit. 5-6-thru 5-8

Caltrans Guide for the Preparation of Traffic Impact Studies

“The California Department of Transportation (Caltrans) has developed this "Guide for the Preparation of Traffic Impact Studies" in response to a survey of cities and counties in California. The purpose of that survey was to improve the Caltrans local development review process (also known as the Intergovernmental Review/California Environmental Quality Act or IGR/CEQA process). The survey indicated that approximately 30 percent of the respondents were not aware of what Caltrans required in a traffic impact study (TIS).”¹⁹

Local Policy & Regulations

Tulare County Transportation Control Measures (TCM)

“Transportation Control Measures (TCM) are designed to reduce vehicle miles traveled, vehicle idling, and/or traffic congestion in order to reduce vehicle emissions. Currently, Tulare County is a nonattainment region under the Federal Clean Air Act (CAA) and the California Clean Air Act (CCAA). Both of these acts require implementation of TCMs. These TCMs for Tulare County are as follows:

- Rideshare Programs;
- Park and Ride Lots;
- Alternate Work Schedules;
- Bicycle Facilities;
- Public Transit;
- Traffic Flow Improvement; and
- Passenger Rail and Support Facilities.”²⁰

Tulare County Association of Governments (TCAG)

“... [W]ith the passage of Assembly Bill (AB) 69 State law has required the preparation of Regional Transportation Plans (RTPs) to address transportation issues and assist local and state decision makers in shaping California’s transportation infrastructure.”²¹ The Tulare County Association of Government has prepared the 2011 Regional Transportation Plan. Specific policies that apply to the proposed Project are listed as follows:

TRANSPORTATION SYSTEM MANAGEMENT (TSM) Policy 5

Support installation of adequate left and right turning pockets to allow increased storage, as necessary.

TRANSPORTATION SYSTEM MANAGEMENT (TSM) Policy 6

Encourage improvements in design of signalized intersections to improve turning for large

¹⁹ Caltrans Guide for the Preparation of Traffic Studies, page ii

²⁰ Tulare County 2030 General Plan Recirculated Draft Environmental Impact Report, page 3.2-2

²¹ TCAG Transportation Plan, page 1-11

vehicles and circulation flow.

Tulare County Comprehensive Airport Land Use Plan

The Tulare County Comprehensive Airport Land Use Plan (CALUP) has a number of policies that apply to projects within the County. The nearest public or private airport in Pixley's vicinity is Mefford Field in Tulare which is approximately 13 miles north of the Project area. Therefore, CALUP policies would not apply to this Project.

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project are listed below.

LU-7.3 Friendly Streets - The County shall encourage new streets within UDBs to be designed and constructed to not only accommodate traffic, but also serve as comfortable pedestrian and cyclist environments. These should include, but not be limited to:

1. Street tree planting adjacent to curbs and between the street and sidewalk to provide a buffer between pedestrians and automobiles, where appropriate,
2. Minimize curb cuts along streets,
3. Sidewalks on both sides of streets, where feasible,
4. Bike lanes and walking paths, where feasible on collectors and arterials, and
5. Traffic calming devices such as roundabouts, bulb-outs at intersections, traffic tables, and other comparable techniques.

LU-7.4 Streetscape Continuity - The County shall ensure that streetscape elements (e.g., street signs, trees, and furniture) maintain visual continuity and follow a common image for each community.

LU-7.6 Screening - The County shall require landscaping to adequately screen new industrial uses to minimize visual impacts.

TC-1.14 Roadway Facilities - As part of the development review process, new development shall be conditioned to fund, through impact fees, tonnage fees, and/or other mechanism, the construction and maintenance of roadway facilities impacted by the project. As projects or locations warrant, construction or payment of pro-rata fees for planned road facilities may also be required as a condition of approval.

TC-1.15 Traffic Impact Study - The County shall require an analysis of traffic impacts for land development projects that may generate increased traffic on County roads. Typically, applicants of projects generating over 100 peak hour trips per day or where LOS "D" or worse occurs, will be required to prepare and submit this study. The traffic impact study will include impacts from all vehicles, including truck traffic.

TC-1.16 County Level of Service (LOS) Standards - The County shall strive to develop and manage its roadway system (both segments and intersections) to meet a LOS of “D” or better in accordance with the LOS definitions established by the Highway Capacity Manual.

TC-5.3 Provisions for Bicycle Use - The County shall work with TCAG to encourage local government agencies and businesses to consider including bicycle access and provide safe bicycle parking facilities at office buildings, schools, shopping centers, and parks.

TC-5.4 Design Standards for Bicycle Routes - The County shall utilize the design standards adopted by Caltrans and as required by the Streets and Highway Code for the development, maintenance, and improvement of bicycle routes.

HS-1.9 Emergency Access - The County shall require, where feasible, road networks (public and private) to provide for safe and ready access for emergency equipment and provide alternate routes for evacuation.

Complete Streets Policies

Complete Street Goals

The purpose of the RMA Complete Streets Policy is to create a comprehensive and uniform Complete Streets vision and policy for Tulare County. This will allow the implementing entities to incorporate Complete Streets guidelines and standards into both development and redevelopment actions. The County’s goals are:

- Tulare County’s transportation network will be supported through a variety of feasible transportation choices, which allows for sustainable growth.
- The livability of neighborhoods and commercial centers located along the County’s transportation corridors will be enhanced by a safe and inviting pedestrian environment.
- The design of multimodal roadway facilities will not compromise the needs of larger vehicles such as transit vehicles, fire trucks and freight delivery trucks.
- Inclusion of Complete Streets design elements will allow for design flexibility on different street functions and neighborhood contexts.
- Inclusion of Complete Streets design elements will improve the integration of land use and transportation, while encouraging economic revitalization through infrastructure improvements.

Complete Streets Objectives

- To create an integrated and connected transportation network that supports transportation choices and sustainable growth.

- To ensure that all transportation modes are accommodated to the extent possible in all public roadway facilities in the County.
- To develop and use the latest design standards and guidelines in the design of Complete Streets.
- To provide flexibility in the implementation of this policy so that streets chosen for implementation of Complete Streets elements can be developed to fit within the context of their principal purpose and surroundings without compromising the safety of users and needs of larger vehicles.

Complete Streets Policies

Tulare County General Plan Policies

The Tulare County General Plan Update (2030) in complying with AB 1358 calls for 4 Complete Streets related principles including:

Principle 1: County-wide Collaboration - Support countywide transportation plans that provide choices in travel modes.

Principle 2: Connectivity - Emphasize connectivity among cities, communities, and hamlets to ensure County residents have access to jobs and services.

Principle 3: Community Circulation - Anticipate and provide transit, traffic, and roadway connections that support the interconnectivity of all communities.

Principle 4: Pedestrian and Bicycle Facilities - Plan for the development and expansion of pedestrian paths and bicycle facilities that provide residents with alternative modes of travel. These principles are expressed mainly in following policies including:

- TC-1.6 Intermodal Connectivity
- TC-1.7 Intermodal Freight Villages
- TC-5.1 Bicycle/Pedestrian Trail System
- TC-5.2 Non-motorized Modes in Planning and Development

“Complete Street Policy Design Criteria

1. Tulare County promotes the incorporation of Complete Streets concepts and design standards in all appropriate new and retrofit County public streets (except State highways and freeways).
2. Tulare County will seek every opportunity to provide funding for the planning, design, and implementation of Complete Streets.
3. New Class I Multi-use Paths should be a minimum of eight (8) feet wide.
4. New Class II Bike Lanes should be a minimum of five (5) feet wide.

Draft Environmental Impact Report
Pixley Community Plan

5. New sidewalks should be a minimum of five (5) feet wide.
6. Bulb-outs should be considered in areas of higher speed (35 mph or greater) where sufficient turning radii for trucks is available or as determined by the County Engineer.
7. As determined by the County Engineer, installation of posted speed limit vehicle activated traffic calming signs (VATCS) are encouraged in instances of high speed to promote safety.
8. Transit shelters and benches are encouraged at all County transit stops if FTA grants are available.
9. Street lighting and cross walk are encouraged to promote safety if considered feasible by the County Engineer.
10. Design policies should be consistent with the Tulare County Improvement Standards; other references include existing design guides, such as those issued by Caltrans, AASHTO and the ADA Accessibility Guidelines.
11. Public streets excluded from this policy include those where:
 - Complete streets concepts is in conflict with existing laws, codes, or ordinances.
 - Compliance with this policy would conflict with goals or physical conditions related to the unique aspects of the location.
12. Exceptions from Complete Street Policies:
 - Accommodation is not necessary where non-motorized use is prohibited, such as freeways.
 - Cost of accommodation is excessively disproportionate to the need or probable use as determined by the County Engineer.
 - A documented absence of current or future need.

Complete Street Mobility Plan

The California Complete Streets Act (AB 1358) of 2008 was signed into law on September 30, 2008. Beginning January 1, 2011, AB 1358 requires circulation elements to address the transportation system from a multimodal perspective. The bill states that streets, roads, and highways must “meet the needs of all users in a manner suitable to the rural, suburban, or urban context of the general plan.” Essentially, this bill requires a circulation element to plan for multimodal transportation accommodating all modes of transportation where appropriate, including walking, biking, car travel, and transit. The current functional classification system plan is shown in Appendix B.

The Complete Streets Act also requires circulation elements to consider the multiple users of the transportation system, including children, adults, seniors, and the disabled. For further clarity, AB 1358 tasks the Governor’s Office of Planning and Research to release guidelines for compliance with this legislation by January 1, 2014. Implementation of complete streets principles should be tailored to the individual jurisdiction and the individual roadway. The Complete Streets Program for Tulare County focuses on a network-based approach that has been tailored to the needs of the Community of Pixley. Another principle that is being applied is under SB 743, requiring a change to evaluating traffic using Vehicle Miles Traveled verses Level of Service under CEQA analysis, and under AB 32 in reducing Green House Gasses.

Complete Streets: According to the National Complete Streets Coalition, complete streets are a means by which, "... planners and engineers (can) build road networks that are safer, more livable, and welcoming to everyone.... Instituting a complete streets policy ensures that transportation planners and engineers consistently design and operate the entire roadway with all users in mind – including bicyclists, public transportation vehicles and riders, and pedestrians of all ages and abilities."

Network-Based Complete Streets: Combines individual travel mode networks into one multimodal transportation system, integrating infrastructure where appropriate, ultimately ensuring that all users can safely and efficiently access their destination.

Vehicle Miles Traveled (VMT): Vehicle miles traveled is the metric that identifies the total distance traveled in a car per driver. VMT drives roadway needs (the more people who drive, the more capacity and maintenance are needed on the roadway system). Under the Tulare County Climate Action Plan, in reducing VMT green house gas emissions are reduced, and the County has an overall target of reducing 6% of its green house gas emissions through a reduction in VMT.

Community Plans adopt these principles, which are combined into the following mission statement:

The Community Complete Streets Network comprises four types of facilities—vehicular, pedestrian, bicycle, and public transit. This complete streets approach will enable residents to choose which travel mode best suits them. It also will ensure that streets are designed with the users in mind—accommodating for businesses, children, the elderly, bicyclists, and transit users.

Caltrans and Complete Streets

Under Caltrans District Order 64-R1, Caltrans requires that a Complete Streets Implementation Action Plan be developed and implemented for Caltrans owned and maintained Streets. Their Implementation Action plan provides a background by which the Tulare County Completes Street Plan will be implemented.

TCAG, Tulare County Regional Bicycle Transportation Plan, Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS)

TCAG in 2014 updated a Regional Bicycle Plan that does not include any bicycle facilities through the Community of Pixley. TCAG funded the grant for this Complete Streets Policy and in the RTP Action Element describe bicycle circulation patterns and Pedestrian policies focusing on the Americans with Disabilities Planning Strategies and Transportation Demand Management to increase pedestrian activity. In addition, rail and goods movement is part of the Sustainable Communities Strategy in lieu of utilizing diesel powered freight trucks.

Tulare County Climate Action Plan (CAP)

The Tulare County CAP calls for a reduction on a project (over 50 vehicles) by project basis of 6% through a mixture of measures that are spelled out in Appendix J of the CAP. Utilization of alternative means of transportation will reduce GHG emissions and will help projects and the region meet their targets.”²²

“Bicycle Facilities

Bicycle facilities consist of Class I, Class II, and Class III facilities as defined below. In Tulare County, this General Plan and the Bicycle Transportation Plan envision a system of bicycle lanes on roadways that will connect the activity centers of the communities to the residents. County has identified pedestrian corridors on the Community of Pixley Bicycle, Bus and Pedestrian Plan (see Appendix C).

Class I

Bike path providing completely separated right-of-way designated for the exclusive use of bicycles and pedestrians. In Tulare County, Class I facilities will primarily be implemented through TCAG. Future bicycle facilities have also been identified through the *Bicycle Transportation Plan* (TCAG - 2010). There are no existing or proposed Class I bicycle facilities in Pixley.

Class II

Bikeway that provides designated lanes for the use of bicycles through the use of striping on the roadway and signage designations for the facility. For the purposes of Complete Streets, the County is proposing Class II bicycle facilities on Main Street, Court Avenue and Elm Street.

Class III

Bikeway that provides route designation by signage. Roadways are shared between bicyclists and motorists. Class III facilities in Tulare County are envisioned to be implemented along the major circulation segments of roadway that connect the overall County roadway network. Class III facilities are proposed on Bradbury Avenue, Market St, and Davis St. Although not signed on many local roads in Pixley, bicyclists are allowed use the side of the road or share the road on all County roadway facilities excluding freeways.

Pedestrian Facilities

Pedestrian Paths and Sidewalks

Pedestrian paths are primarily developed as part of the roadway and trail systems of a community and reflect the interconnected nature of circulation and transportation systems as a whole. Constructing wide streets increases the distance a pedestrian must travel to cross a street, thereby making it inconvenient for public use and inhibiting pedestrian circulation in the community. Currently, limited continuous sidewalks are provided along major routes in the

²² “Tulare County Complete Streets – Pixley”. Pages 8-10, prepared for Tulare County Resource Management Agency by Omni Means, September 2014.

community. In addition to connecting available pedestrian resources, the communities have prioritized the completion of sidewalks along safe routes to school. Enhanced pedestrian crossings and sidewalks is considered in areas where high pedestrian demand occurs (such as to and around schools).

Multiuse Trails

Multiuse trails are facilities that can be used by bicycles, pedestrians, equestrians, and other recreational users. No multiuse trails exist or are proposed in Pixley.

Transit Facilities

Transit options give users the ability to get to a destination without relying on the automobile. This also provides other community benefits, including reduced vehicle miles traveled (VMT). Reducing VMT will help the County achieve their greenhouse gas reduction target,

Public transportation services and facilities in Tulare County consist of public bus service, paratransit service, and could also consider park-and-ride locations.

Public Bus Service

Public bus service is provided by Tulare County Area Transit (TCaT) in rural areas such as Pixley and by local City transit agencies in transitioning areas, which enables commuters to travel within the communities and adjacent cities with minimal transfers. Existing transit routes and designated bus stops are shown in the following figures [Figure 13.16-4 of the DEIR, or page 12 of “Tulare County Complete Streets – Pixley”, or Figure 3, page 5-7, of the Pixley TIA in Appendix “F” of the DEIR.].

Additionally, Tulare County has provided guidance for including transit within facilities. These guidelines should be applied when considering new development to ensure appropriate connectivity and design features to support bus service.

Paratransit Service

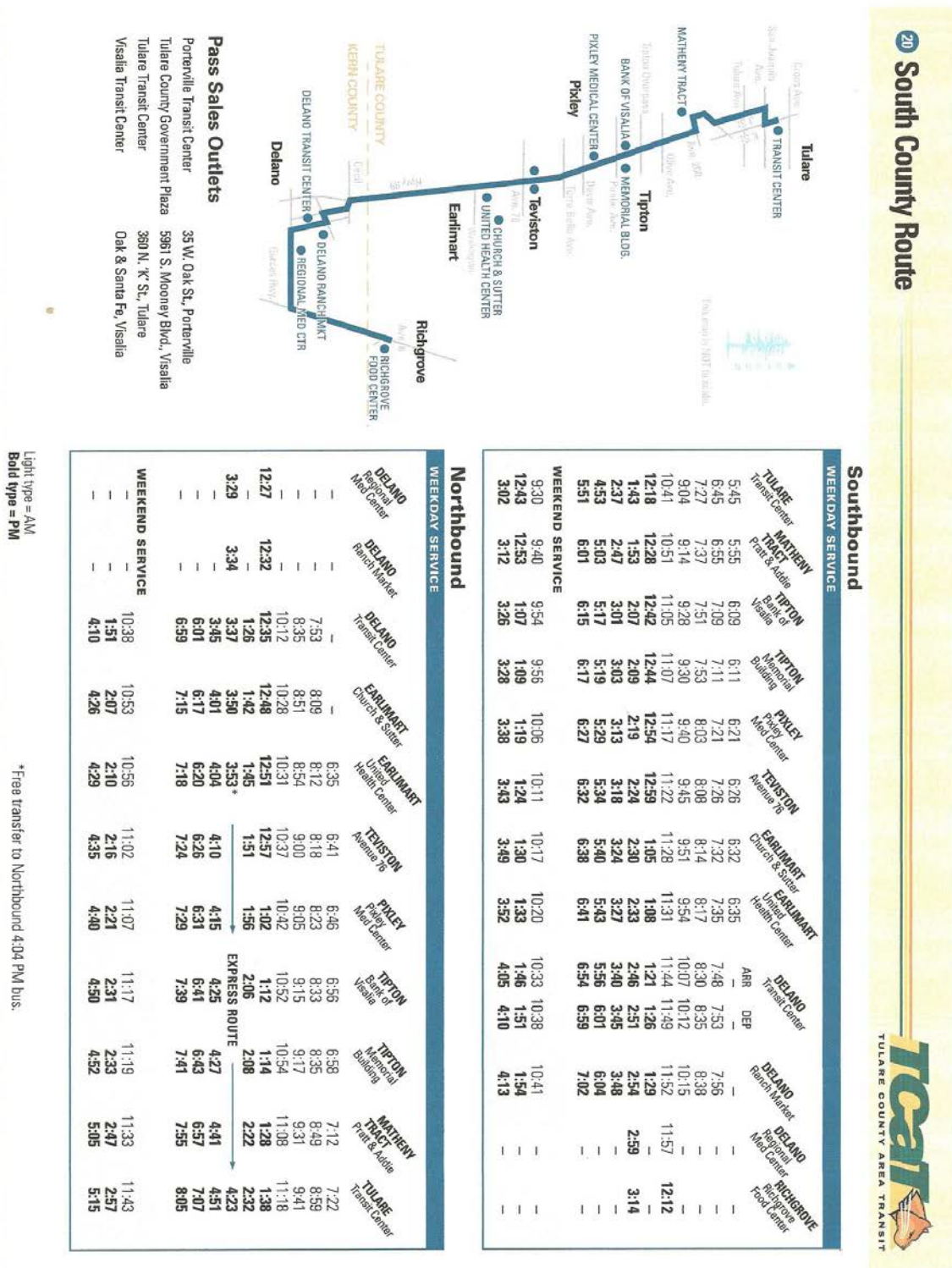
Paratransit is an alternative mode of passenger transportation that does not follow fixed routes or schedules. Typically, vans or minibuses are used to provide paratransit service. Paratransit services vary considerably on the degree of flexibility they provide their customers. The most flexible systems offer on-demand, call-up, door to door service from any origin to any destination in a service area.

Park-and-Ride Lots

Park-and-ride lots provide places for people to meet up and carpool to areas outside of the Community. A Park and Ride facility could also provide a compressed natural gas refueling station. As the community’s population grows and given the large number of commuters, a park-and-ride location would be best sited near the edges of the Community along Highway 99.”²³

²³ Ibid. 11-14

Figure 3.16-2 South County Route²⁴



IMPACT EVALUATION

Would the project:

- a) **Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?**

Project Impact Analysis: *Less Than Significant Impact*

The Pixley Community Plan Traffic Impact Assessment (Pixley TIA) and Circulation Plan was prepared by VRPA Technologies in June 2014 and is included as Appendix “F” of this DEIR. An important component of the Pixley TIA was to assess existing traffic conditions, future traffic conditions, and cumulative traffic impacts as a result of the Project.

“To identify current traffic conditions, AM and PM peak hour turning movement counts were conducted at thirteen [13] intersections in the Pixley area the first week of June 2014, when local schools were still in session. Data on roadway approach lanes at intersection was collected at the same time. Based upon these data and methodologies prescribed by the County, traffic levels of service (LOS) were determined and the adequacy of the community’s road network for serving current and future traffic demand was assessed.

Data was collected at the following 13 intersections and the adjacent roadway segments:

- | | |
|--|--------------------------------------|
| 1. SR 99 SB Ramps at Ave 120 | 8. Court and Park |
| 2. Ave 120/Diagonal 122 | 9. Court and School |
| 3. SR 99 NB Ramps at Diagonal 122 | 10. Airport and Terra Bella |
| 4. SR 99 NB Ramps at Park (North of Pixley) | 11. Main and Terra Bella |
| 5. SR 99 NB Off Ramp at Park | 12. Terra Bella at SR 99 NB On Ramp |
| 6. SR 99 SB Off Ramp at Main and Court | 13. Terra Bella at SR 99 NB Off Ramp |
| 7. SR 99 SB Off Ramp at Court” ²⁵ | |

Intersection Capacity Analysis

“For both 2014 existing and projected 2030 traffic, intersection operating conditions were calculated using the Transportation Research Board’s 2010 Highway Capacity Manual (HCM 2010). Actual calculations were performed using Synchro intersection analysis software. This method results in a level of service (LOS) with a letter grade of from A to F, with LOS A indicating no delay for side street traffic and LOS F indicating severe delay. Table 1 [Table 13.6-4 in the DEIR] further defines level of service grades. In Tulare County,

²⁵ Pixley Community Plan Traffic Impact Assessment and Circulation Plan, page 5-10, prepared by VRPA Technologies, June 2014 [and included as Appendix “F” of this DEIR]

the goal for peak hour traffic operations is LOS D, per the 2012 County General Plan (p. 13-4.)”²⁶

Table 13.6-4
Unsignalized Intersections
Level of Service Definitions
(Source: 2010 Highway Capacity Manual)

LEVEL OF SERVICE	DEFINITION	AVERAGE TOTAL DELAY (sec/veh)
A	Very minor delay for stop-controlled approaches.	0 - 10.0
B	Describes operations with minor delay.	> 10.0 - 15.0
C	Describes operations with moderate delays.	> 15.0 - 25.0
D	Describes operations with some delays.	> 25.0 - 35.0
E	Describes operations with high delays and long queues.	> 35.0 - 50.0
F	Describes operations with extreme congestion, with very high delays and long queues unacceptable to most drivers.	> 50.0

Future Transportation/Circulation Conditions

“In order to project future traffic roadway conditions, a variety of sources were used. Historic population data indicate that the population of Pixley has was 3,310 at the 2010 census, up from 2,175 in 1990. This reflects an annual growth rate of about two percent. TCAG’s current RTP forecast indicates a slower population grown of about 0.4% per year from 2010 to 2032 in the 14 TCAG RTP model traffic analysis zones (TAZs) that cover Pixley and vicinity TCAG’s jobs forecast show employment in Pixley and vicinity increasing at a somewhat higher annual rate of just over 1% between 2010 and 2032.

Based on these and other data provided by TCAG and County planning staff, an overall rate of traffic growth of 2% per year was determined to be a reasonably conservative forecast assumption. This rate of growth was applied to existing traffic count data to create future year (2032) traffic levels. This annual rate results in an overall growth in peak hour traffic of approximately 43% for the period 2014-2032. For consistency with TCAG and Caltrans forecasts, a lower annual traffic growth rate of 1% was applied to SR 99 volumes.

²⁶ Ibid. 5-10

Figure 8 [page 5-16 in the TIS, see Appendix “F” of the DEIR] shows Average Daily traffic conditions for 2032. Figures 9 and 10 [pages 5-17 and 5-17 of the TIS, see Appendix “F” of the DEIR] show projected 2030 traffic turning movements in the morning (AM) and afternoon (PM) peak hours, as well as delay levels and LOS results at each intersection. Table 2 [page 5-20 of the TIS (Table 3.16-3 in the DEIR), see Appendix “F” of the DEIR] summarizes delay and LOS results at all intersections in both the AM and PM peak hours and under both current and 2032 conditions.

Examining Table 2, it is evident that all intersections meet or exceed the County LOS D standard under all scenarios. In fact, all intersections will perform at LOS B or better.

Public transit, bicycles, and pedestrian circulation

As noted above, Pixley has limited transit service and pedestrian and bicycle facilities. Public transit is likely to remain a limited option due to fiscal constraints and the high cost of providing services to a community of less than one thousand residents. The low level of auto congestion in Pixley, now and in the future suggests that driving will continue to be more convenient than transit for those with access to a private car. For those without access to a car, the best approach for improving transit in Pixley will be to enhance rider information systems that give potential transit patrons precise arrival and departure times for transit and paratransit vehicles. Such real time information systems, by reducing the uncertainty and time spent waiting, can both increase demand for transit and paratransit and improve riders’ overall experience.

With respect to pedestrian and bicycle modes, the current and projected low levels of vehicular traffic in Pixley, together with short travel distances within the community, means that these modes can be very competitive for trips within Pixley, even with minimal facilities. A reasonably flat, safe surface on the side of a low traffic road can often suffice for pedestrians and bicycles, especially if signs alert drivers to the presence of non-motorized traffic.”²⁷

“The current street system functions adequately and barring major unforeseen development in Pixley will continue to do so through the year 2032. Nonetheless, there are some areas of concern, such as the poor pavement condition of many local residential streets, and the lack of sidewalks, curbs and gutters throughout the community. The County is currently addressing these issues through a community Complete Streets Program within the limits of available resources. Two other issues include:

1. While almost all existing and future roadways need be no more than two travel lanes to accommodate expected traffic to 2030, wider rights-of-way may be needed at certain junctions to safely handle potential increased truck traffic, or to allow restricted turn movements into developed areas or at intersections.
2. Given Pixley’s favorable location and availability of land and facilities for growth in goods movement activities, truck traffic and potential growth in truck traffic should be

²⁷ Op. Cit. 5-15 thru 5-19

monitored. Streets and driveway plans should be updated to reflect new growth areas and changes in freight traffic patterns.”²⁸

As noted earlier in this DEIR, there are no development proposals as part of this Community Plan Update process. As such, development proposals will be evaluated on a case-by-case basis to determine the need for traffic/transportation improvements. Further, Pixley’s Levels of Service (LOS) and traffic increases will not result in LOS changes below LOS D, which is County’s adopted LOS standard. Further, as noted in the TIS, “The current street system functions adequately and barring major unforeseen development in Pixley will continue to do so through the year 2032.”²⁹

As a result, the Project’s impacts to the Traffic/Transportation resource will be ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, Tulare County 2030 General Plan EIR, and/or the Pixley Biogas Anaerobic Digester EIR. As concluded in the Pixley TIS, and shown in Table 16.3-3, all Pixley intersections will operate at Level of Service B or A throughout the planning period.

As the Project does not include a proposed development nor are there any developments within the vicinity of the Project that would contribute to cumulative traffic impacts, ***Less Than Significant Cumulative Impacts*** will result from the proposed Project.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

Potential Project-specific and cumulative impacts related to this Checklist Item will be ***Less Than Significant***.

- b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?**

Project Impact Analysis: ***No Impact***

²⁸ Op. Cit. 5-19 thru 5-20.

²⁹ Op. Cit.

There are no Congestion Management Programs in Tulare County or through the Tulare County Association of Governments. Therefore, there will be ***No Impacts*** related to this Checklist Item.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, Tulare County 2030 General Plan EIR, and/or the Pixley Biogas Anaerobic Digester EIR. There are no Congestion Management Programs in Tulare County or through the Tulare County Association of Governments. Therefore, there will be ***No Impacts*** related to this Checklist Item.

Mitigation Measure(s): ***None Required.***

Conclusion: ***No Impact***

Therefore, there will be ***No Impacts*** related to this Checklist Item.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?

Project Impact Analysis: ***No Impact***

As noted in the response to Item 3.8 e), the nearest public or private airport is Mefford Field (in the City of Tulare), approximately 10 miles north of the Project area. The applicable CALUP and General Plan policies have been reviewed, and it has been confirmed that the proposed Project does not involve air transit, will not result in a change in air traffic patterns, change in location, or an increase in traffic levels. Therefore, ***No Project-specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

No Cumulative Impacts related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, the Project will not cause any change in air traffic patterns, ***No Project-specific or Cumulative Impacts*** related to this Checklist item will occur.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Project Impact Analysis: ***Less Than Significant Impact***

The existing roadway system has been designed in accordance with County of Tulare roadway standards to avoid roadway hazards and other traffic-related hazardous features. As future development occurs, Tulare County policies such as LU-7.3 Friendly Streets, TC-1.14 Roadway Facilities, and Tulare County General Plan Update (2030) compliance with AB 1358 which calls for four Complete Streets-related Principles including: Principle 1: County-wide Collaboration; Principle 2: Connectivity; Principle 3: Community Circulation ; and Principle 4: Pedestrian and Bicycle Facilities, will be implemented. Also, the “Tulare County Complete Streets – Pixley” plan, which is incorporated herein by reference (see Appendix “_”) provides detailed policies and design guidelines to minimize potential accidents between vehicles and pedestrians/ and bicyclists thereby further reducing the potential of increasing hazards due to design features or incompatible uses.

As such, the Project will result in ***Less Than Significant Project-specific Impacts*** related to this Checklist Item.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, Tulare County 2030 General Plan EIR, and/or the Pixley Biogas Anaerobic Digester EIR.

As noted earlier, no design changes that would cause a hazard are proposed as part of the Project. As such, ***Less Than Significant Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

e) Result in inadequate emergency access?

Project Impact Analysis: ***Less Than Significant Impact***

“Tulare County has in place an emergency plan to cope with natural disasters that are statewide or happen locally. The County Fire Department and local stationed California Department of Forestry (CDF) are well prepared to fight fires locally as well as statewide.

Draft Environmental Impact Report
Pixley Community Plan

The United States Forest Service (USFS) is in charge of fires that happen in the national parks and Tulare County assists with the fire management process as needed.”³⁰

“In the event of a disaster, certain facilities are critical to serve as evacuation centers, provide vital services, and provide for emergency response. Existing critical facilities in Tulare County include hospitals, county dispatch facilities, electrical, gas, and telecommunication facilities, water storage and treatment systems, wastewater treatment systems, schools, and other government facilities. This plan also addresses evacuation routes, which include all freeways, highways, and arterials that are located outside of the 100-year flood plain.”³¹ As such, compliance with these standards would ensure that impacts are *Less Than Significant* related to this Checklist Item.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, Tulare County 2030 General Plan EIR, and/or the Pixley Biogas Anaerobic Digester EIR.

As noted in the response to Item 3.8 g) the proposed Project does not include alterations to an emergency plan and there is sufficient access for emergency vehicles. Therefore, *Less Than Significant Cumulative Impacts* related to this Checklist Item will occur.

Mitigation Measure(s): *None Required*

Conclusion: *Less Than Significant Impact*

As noted earlier, *Less Than Significant Project-specific and Cumulative Impacts* related to this Checklist Item will occur.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

The Pixley TIS (included as Appendix “F” of this DEIR) analyzed public transit, bicycle and pedestrian facilities, rail, aviation, rail, goods movement, and transportation demand systems within the Project area (see pages 3.16-8 thru 3.16-16). As noted TIS, public transit in Pixley is likely to remain limited due to fiscal constraints, high cost of providing services, low auto congestion (now and in the future), and driving will continue to be more convenient than transit for those with access to a private car. For those without access to a car, enhanced rider information systems the best approach for improving transit in Pixley will be to enhance rider information systems that give potential transit patrons precise arrival and departure times for transit and paratransit vehicles.³²

³⁰ TCAG Regional Transportation Plan, Page 1-11

³¹ General Plan Background Report, page 8-35 to 8-36

³² Pixley Community Plan Traffic Impact Assessment and Circulation Plan, page 5-19, prepared by VRPA Technologies, June 2014 [and included as Appendix “F” of this DEIR]

Project Impact Analysis: ***No Impact***

The Project site is located in a rural area that includes public transit system alternative transportation such as fixed route public transit (provided by the City of Visalia (Visalia Transit) and the County of Tulare (Tulare County Area Transit or “TCaT”)) common bus carriers, and other local agency transit and paratransit services. No new facilities are proposed that would increase hazards or create barriers for pedestrians or bicyclists. Because the Project will not adversely affect pedestrian or bicycle facilities, or the result in potential hazards of using such facilities, there will be no impacts associated with pedestrian and bicycle hazards. Therefore, ***No Project-specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, Tulare County 2030 General Plan EIR, and/or the Pixley Biogas Anaerobic Digester EIR.

With No Impacts to alternative transportation facilities, ***No Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s):

None Required

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

REFERENCES

Tulare County 2030 General Plan, August 2012

Tulare County General Plan Background Report, February 2010

“Tulare County Complete Streets – Pixley”, prepared for Tulare County Resource Management Agency by Omni Means, September 2014.

Guide for the Preparation of Traffic Impact Studies, California Department of Transportation (Caltrans), December 2002

2010 Tulare County Regional Bicycle Transportation Plan, Tulare County Association of Governments (TCAG)

2011 Regional Transportation Plan, Tulare County Association of Governments (TCAG), July 11, 2012

2014 Regional Transportation Plan, Tulare County Association of Governments (TCAG), July 2014

Tulare County 2030 General Plan, Recirculated Draft Environmental Impact Report (RDEIR), February 2010

“The Pixley Community Plan Traffic Impact Assessment (Pixley TIA) and Circulation Plan”, prepared by VRPA Technologies, June 2014

Caltrans Concept Report for SR 99

CEQA Guidelines

Utilities and Service Systems

Chapter 3.17

SUMMARY OF FINDINGS

The proposed Project will result in *Less Than Significant* impacts to Utilities and Service Systems with mitigation. The Pixley Water Usage Memorandum, prepared by consultant Provost & Pritchard, is included as Appendix “G” which is used as the basis to determine that impacts to the water supply and wastewater treatment elements of this Resource will be less than significant.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Utilities and Service Systems. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), “[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.”¹

¹ CEQA Guidelines, Section 15126.2 (a)

Draft Environmental Impact Report
Pixley Community Plan

The environmental setting provides a description of the Utilities and Service Systems setting in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

- Increase wastewater beyond existing treatment capacity per the RWQCB;
- Result in the need for waste water infrastructure that would cause impacts;
- Result in the need for waste water infrastructure that would cause impacts;
- Result in the need for water supplies or entitlements;
- Result in the determination by the wastewater provider that it has adequate capacity;
- Served by a landfill with sufficient permitted capacity to Project's needs; or
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

ENVIRONMENTAL SETTING

County of Tulare Solid Waste Services

On August 28, 2012, the Tulare County Board of Supervisors approved the closure of the Earlimart, Balance Rock, Badger, and Kennedy Meadows Waste Transfer Stations. Earlimart has been closed in July of 2013. However, Kennedy Meadows remains open as a Transfer Station. Although it was determined that there is sufficient capacity in the existing landfills, the closure of the uneconomically viable waste transfer stations in Tulare County is in the best interest of Tulare County residents.

“Solid waste disposal is provided privately by the Tule Trash Company. Solid waste collected in Pixley is deposited at the Earlimart transfer station. The recently adopted Integrated Waste Management Plan estimates that Tulare County has up to 35 years of aggregate remaining landfill capacity. No constraints to growth have been identified.”²

Pixley Public Utility District

Pixley Community Planning Area

The following summarizes discusses the Pixley PUD as contained in the Tulare County Local Agency Formation Commission's (LAFCO's) Municipal Service Review Final Report (March 2006):

² North Pixley Commercial/Industrial Specific Plan, page 2-15

Water

“The Pixley PUD is responsible for providing domestic water service to customers within its District Boundary. Pixley’s water supply is derived from four deep underground wells. According to District staff, these four wells provide an ample excellent water supply requiring no chlorination or treatment. Based upon discussions with District staff, a well was abandoned some years ago due to a faulty seal and replaced with two other wells near the same area. The four wells in operation have a total maximum production efficiency of approximately 2,700 gallons per minute (GPM), or 3.88 million gallons per day (MGD). The District was unable to provide actual well production (water usage) data.

As indicated by the District’s Engineer, three of the existing four wells exceed the acceptable arsenic level for drinking water that became effective January 2006, and the water supply system will require treatment or replacement of wells to meet current water quality standards. District staff indicated that there are slightly more than 800 hookups to the water system including 25 commercial connections. Approximately 320 of the residential connections are metered. Metered water rates promote water conservation.”³ Chapter 3.9 Hydrology & Water Quality contains supplemental analysis provided by consultant Provost & Pritchard

“Assuming 800 equivalent dwelling units (EDUs), in order to meet Tulare County Improvement Standards, the Pixley PUD water system would need to be capable of delivering a combined flow rate (from all source and storage facilities) of 2,400 GPM (1,500 GPM fire flow, and 900 GPM domestic demand) for a period of two hours while maintaining a minimum pressure of 25 PSI to each lot served. The District’s water system is capable of delivering a source flow of 2,700 GPM, and includes pneumatic pressure tanks for storage.

According to the District Engineer, there is only sufficient water supply to meet existing domestic demands without considering fire flow requirements. The District Engineer indicated that no additional connections could be supported by the water system when considering fire flows and the possibility of the maximum producing well being out of service. For this reason, the District Engineer concluded that additional wells will be required in order to increase capacity, and that fire flows requirements could be met with storage tanks.

The District does not currently have a water system master plan. As indicated by the District Engineer, a water master plan that includes a capital facilities plan needs to be developed to address current and future needs. The District Engineer noted that the existing water system includes many 4-inch and 6-inch diameter lines, which may not be suitable for peak and fire flows. Since land within the District’s SOI that is zoned for development (by the Tulare County General Plan) will rely on domestic water service from the Pixley PUD, the master planning boundary should be consistent with the District’s SOI. A water master plan will increase the District’s preparedness when development within its SOI is proposed.”⁴

³ Tulare County Local Agency Formation Commission’s (LAFCO’s) Municipal Service Review Final Report (March 2006). Page 7-10.

⁴ Ibid. 7-11

Draft Environmental Impact Report
Pixley Community Plan

As noted above, the Pixley PUD states that they have slightly more than 800 services (775 as residential hookups); including 25 commercial users. Therefore, of the Pixley services, approximately 98.8% are residential while the remaining 1.2% are commercial users.

2010 U.S Census data indicated Pixley's population was 3,310 person and 875 housing units.⁵ Applying the Pixley's 3.87 persons per household (pph) rate (based upon 2010 US Census data) and the Tulare County General Plan's annual growth rate of 1.3%; it is estimated that Pixley's population at the planning horizon year (2030) will be approximately 4,286 person occupying 1,107 households. .

Assuming the current 3.87 pph remains constant, and using the 2010 General Plan Background Report population growth rate of 1.3% annually to project to 2030, Pixley's projected population would result in a need for 332 connections above the Year 2010 connections.

Recorded Water Usage

Pixley PUD provided consultant P&P with total water usage data for Pixley for years 2007-2014.:

"Provost and Pritchard (P&P) compiled monthly well production data for four wells operated by the Pixley Public Utilities District (PPUD) for the years 2007 through 2014 (see attached *Pixley Water Well Spreadsheet* for raw data [in Appendix "G" of this DEIR]). A summary of annual water us is shown in the Table 1 [Table 3.9-3 of the DEIR]."⁶

Table 3.9-3 Recorded Water Usage	
Calendar Year	Pixley's Water Usage (Million Gallons)
2007	218.65
2008	252.08
2009	248.73
2010	214.97
2011	209.78
2012	209.40
2013	213.92
2014	191.17
Source: Pixley Water Usage Memorandum, page 1, prepared by consultants Provost & Pritchard. February 2015.	

Wastewater

"The Pixley PUD is also responsible for providing sanitary sewer collection, treatment, and disposal services to residents within its Boundary. District staff indicated that there are approximately 800 connections to the sewer system which includes 25 commercial connections. Raw sewage is transported to a wastewater treatment facility (WWTF) owned and operated by

⁵ 2010 U.S. Census Pixley CDP population and housing units.

⁶ Pixley Water Usage Memorandum, page 1, prepared by consultants Provost & Pritchard. February 2015 [see Appendix "G" of the DEIR]

the District.”⁷

The District operates a WWTF located southwest of the community, just west of the Pixley airport. The WWTF is operated under the provisions of Order No R5-2007-0123 issued by the Central Valley Regional Water Quality Control Board (RWQCB). The Districts’ WWTF has been upgraded with a new treatment facility (new life station, headworks, STM aeration, clarifiers, digester, sludge beds, new disposal pond). The facilities achieve effluent nitrogen of less than 10mg/l. Treated wastewater is then stored in evaporated/percolation ponds and/or applied on pastureland that is owned and operated by the District and on adjacent property with a wastewater reclamation permit. Non-milking cattle graze on the pastureland. Order No. R5-2007-0123 prescribes that the monthly average daily discharge shall not exceed 0.50 MGD.

The new treatment facilities were completed in November 2009 and a request has been submitted to the RWQCB to lift Cease and Desist Order No. R5-2007-0129. An additional sludge drying bed was constructed in 2012.”⁸

North Pixley Specific Plan Area

As indicated in the North Pixley Specific Plan (Specific Plan), the Pixley Public Utility District has existing water lines lie near Howard Avenue on the east side of SR 99, and as far north as Court Street west of SR 99.⁹

However, “Physical constraints include an undersized water production and distribution system and the freeway’s location in the Specific Plan. The water lines near the Specific Plan are too small to adequately serve the planned industrial and commercial development and would need to be augmented. Depending where the new wells are located and what actual water demand would be required as individual development is proposed, a minimum of three miles of ten- to twelve-inch water mains may be needed to serve the water distribution system needs of the Specific Plan Area and connect it with the PPUD’s existing facilities.”¹⁰

“Commercial and industrial fire flow requirement of 15,000 gpm will be used to generally estimate water requirements. Based on this minimum water demand, the Specific Plan area may require additional production and distribution facilities to provide 2.2 mgd (1550 gpm x 1440 minutes per day).”¹¹

“Improvements for water and sanitary sewer service to the Plan area will be made by each developer as specific projects are undertaken. Such improvements will be delineated and directed by the County at the time of site plan review. In the event that a project cannot be served by the PPUD, it will be responsible for providing its own services, to the standards established by the County of Tulare, the Regional Water Quality Control Board, Department of Health Services, or other regulatory agency.

⁷ Tulare County Local Agency Formation Commission’s (LAFCO’s) Municipal Service Review Final Report (March 2006). Page 7-10.

⁸ Adopted Capital Facilities Improvements Plan Update, Fiscal Year 2012/2013, Pixley Public Utility District, page 7

⁹ North Pixley Commercial/Industrial Specific Plan, page 2-15

¹⁰ Ibid. 2-9

¹¹ Op. Cit. 2-12

Wastewater flows generated by development of the Plan Area as prescribed by the North Pixley Commercial/Industrial Specific Plan will be typical of those associated with commercial and industrial development. Waste discharge will be to the Pixley Public Utility District domestic wastewater collection, treatment and disposal system. Sanitary sewer main extension in Roads 120 and 124 are anticipated.

Domestic water will be supplied by the Pixley Public Utility District. Water main extensions in Roads 120 and 124 anticipated under the Specific Plan and included in the County or Agency capital budgets are anticipated to meet new demand for the domestic water and fire flow needs of the development in accordance with the Specific Plan.”¹²

REGULATORY SETTING

Federal Agencies & Regulations

None that apply to this project.

State Agencies & Regulations

State Water Quality Control Board

“The State Water Resources Control Board (State Water Board) was created by the Legislature in 1967. The joint authority of water allocation and water quality protection enables the State Water Board to provide comprehensive protection for California’s waters. The State Water Board consists of five full-time salaried members, each filling a different specialty position. Board members are appointed to four-year terms by the Governor and confirmed by the Senate.”¹³

Regional Water Quality Control Board (RWQCB)

“There are nine Regional Water Quality Control Boards (Regional Boards). The mission of the Regional Boards is to develop and enforce water quality objectives and implementation plans that will best protect the State's waters, recognizing local differences in climate, topography, geology and hydrology. Each Regional Board has seven part-time members appointed by the Governor and confirmed by the Senate. Regional Boards develop “basin plans” for their hydrologic areas, issue waste discharge requirements, take enforcement action against violators, and monitor water quality.”¹⁴

Local Policy & Regulations

Lower Tule River & Pixley Irrigation Districts

¹² Op. Cit. 4-2

¹³ State Water Board Website, http://www.waterboards.ca.gov/about_us/water_boards_structure/mission.shtml

¹⁴ State Water Board Website, http://www.waterboards.ca.gov/about_us/water_boards_structure/mission.shtml

“As one of the largest irrigation districts in the State of California, the Lower Tule River Irrigation District (LTRID) supplies supplemental water for district-wide crop irrigation to 104,000 acres in the Valley – 30,000 being permanent plantings.

Both districts have been [i]n operation for more than 50 years[.] [These two irrigation districts strive] to provide an affordable and reliable water supply for many more years to come, dedicated to service and excellence in water resource management.”¹⁵

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. General Plan policies that relate to the proposed Project are listed as follows.

PFS-2.1 Water Supply - The County shall work with agencies providing water service to ensure that there is an adequate quantity and quality of water for all uses, including water for fire protection, by, at a minimum, requiring a demonstration by the agency providing water service of sufficient and reliable water supplies and water management measures for proposed urban development.

PFS-2.3 Well Testing - The County shall require new development that includes the use of water wells to be accompanied by evidence that the site can produce the required volume of water without impacting the ability of existing wells to meet their needs.

PFS-2.4 Water Connections - The County shall require all new development in UDBs, UABs, Community Plans, Hamlet Plans, Planned Communities, Corridor Areas, Area Plans, existing water district service areas, or zones of benefit, to connect to the community water system, where such system exists. The County may grant exceptions in extraordinary circumstances, but in these cases, the new development shall be required to connect to the water system when service becomes readily available.

PFS-2.5 New Systems or Individual Wells - Where connection to a community water system is not feasible per PFS-2.4: Water Connections, service by individual wells or new community systems may be allowed if the water source meets standards for quality and quantity.

PFS-3.1 Private Sewage Disposal Standards - The County shall maintain adequate standards for private sewage disposal systems (e.g., septic tanks) to protect water quality and public health.

PFS-3.2 Adequate Capacity - The County shall require development proposals to ensure the intensity and timing of growth is consistent with the availability of adequate wastewater treatment and disposal capacity.

PFS-3.4 Alternative Rural Wastewater Systems - The County shall consider alternative rural wastewater systems for areas outside of community UDBs and HDBs that do not have current systems or system capacity. For individual users, such systems include elevated leach fields, sand filtration systems, evapotranspiration beds, osmosis units, and holding tanks. For larger

¹⁵ <http://www.ltrid.org/>

generators or groups of users, alternative systems, including communal septic tank/leach field systems, package treatment plants, lagoon systems, and land treatment, can be considered.

PFS-4.1 Stormwater Management Plans - The County shall oversee, as per Community Plan Content Table PF-2.1 and Specific Plan Content, Hamlet Plans Policy PF-3.3, and Table LU-4.3, the preparation and adoption of stormwater management plans for communities and hamlets to reduce flood risk, protect soils from erosion, control stormwater, and minimize impacts on existing drainage facilities, and develop funding mechanisms as a part of the Community Plan and Hamlet Plan process.

PFS-4.2 Site Improvements - The County shall ensure that new development in UDBs, UABs, Community Plans, Hamlet Plans, Planned Communities, Corridor Areas, and Area Plans includes adequate stormwater drainage systems. This includes adequate capture, transport, and detention/retention of stormwater.

PFS-4.3 Development Requirements - The County shall encourage project designs that minimize drainage concentrations and impervious coverage, avoid floodplain areas, and where feasible, provide a natural watercourse appearance.

PFS-4.4 Stormwater Retention Facilities - The County shall require on-site detention/retention facilities and velocity reducers when necessary to maintain existing (pre-development) storm flows and velocities in natural drainage systems. The County shall encourage the multi-purpose design of these facilities to aid in active groundwater recharge.

PFS-4.5 Detention/Retention Basins Design - The County shall require that stormwater detention/retention basins be visually unobtrusive and provide a secondary use, such as recreation, when feasible.

PFS-4.7 NPDES Enforcement - The County shall continue to monitor and enforce provisions to control non-point source water pollution contained in the U.S. Environmental Protection Agency National Pollution Discharge Elimination System (NPDES) program.

PFS-5.1 Land Use Compatibility with Solid Waste Facilities - The County shall ensure that solid waste facility sites (for example, landfills) are protected from the encroachment by sensitive and/or incompatible land uses.

PFS-5.3 Solid Waste Reduction - The County shall promote the maximum feasible use of solid waste reduction, recycling, and composting of waste, strive to reduce commercial and industrial waste on an annual basis, and pursue financing mechanisms for solid waste reduction programs.

PFS-5.4 County Usage of Recycled Materials and Products - The County shall encourage all industries and government agencies in the County to use recycled materials and products where economically feasible.

PFS-5.8 Hazardous Waste Disposal Capabilities - The County shall require the proper disposal and recycling of hazardous materials in accordance with the County's Hazardous Waste Management Plan.

PFS-5.9 Agricultural Waste - The County shall investigate waste disposal and reuse needs for agricultural wastes for energy and other beneficial uses and shall change County plans accordingly.

IMPACT EVALUATION

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Project Impact Analysis: *Less Than Significant Impact*

The Pixley Public Utilities District (PPUD) provides wastewater treatment services (that is, sanitary sewer collection, treatment, and disposal services) to residents within its boundary for the Pixley Community Planning Area.

As noted earlier, PPUD's "The Wastewater Treatment Facility Upgrade and Expansion Project – Project Feasibility Report" (Provost & Pritchard, February 2005) outlines a major reconstruction proposal for the District's wastewater treatment facility (WWTF). The improved WWTF would be capable of treating 0.5 MGD. A 0.5 MGD WWTF may provide sufficient capacity for a 20-year planning period with reserve capacity for industrial/commercial growth. As indicated by the District Engineer, a sewer master plan that includes a capital facilities plan needs to be developed to address current and future needs. The District Engineer noted that the adequacy of the existing sewer system to accept additional flows is not known. Since land within the District's SOI that is zoned for development (by the Tulare County General Plan) will rely on sanitary sewer service from the Pixley PUD, the master planning boundary should be consistent with the District's SOI. As such, the Pixley Community Plan Update boundary is intended to be, to the extent practicable, consistent with the District's SOI. The proposed Pixley UDB (See Proposed Pixley Land Use Map, **Figure 2-6**) includes all of the District's boundary and SOI. The proposed Pixley UDB also includes additional parcels east of Road 120 between Avenues 120 and 112; and two parcels north of Avenue 120 that are west and north of (and adjacent to) California Dairies Inc. Further, as future development occurs, development proposals will be evaluated on a case-by-case basis to ensure adequate wastewater treatment capacity, and, if necessary, require proponents of a development proposal to accommodate their wastewater treatment needs where applicable as conditions of approval and/or project design features, or through funding for capacity improvements.

Therefore, *Less Than Significant Project-specific Impacts* related to this Checklist Item will occur.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, Tulare County 2030 General Plan EIR, and/or the Pixley Biogas Anaerobic Digester EIR.

As noted earlier, the PPUD regulates waste water treatment for the Pixley area in fulfillment of the Central Valley Regional Water Quality Control Board's requirements. Therefore, the Project will result in *Less Than Significant Project-specific and Cumulative Impacts* to water quality.

Mitigation Measure(s): *None Required.*

However; as noted earlier, as future development occurs development proposals will be evaluated on a case-by-case basis to ensure adequate wastewater treatment capacity, and, if necessary, require proponents of a development proposal to accommodate their wastewater treatment needs where applicable as conditions of approval and/or project design features, or through funding for capacity improvements.

Conclusion: *Less Than Significant Impact*

As noted earlier, *Less Than Significant Project-specific and Cumulative Impacts* related to this Checklist Item will occur.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Project Impact Analysis: *Less Than Significant Impact*

As the Project does not include any development proposals, the Project will not require the construction of new water or wastewater treatment facilities beyond what was described earlier (that is, consistent with the PPUD's Wastewater Treatment Facility Upgrade and Expansion Project – Project Feasibility Report).

As noted earlier, as future development occurs development proposals will be evaluated on a case-by-case basis to ensure adequate water supply and wastewater treatment capacity, and, if necessary, require proponents of a development proposal to accommodate their water supply and wastewater treatment needs where applicable as conditions of approval and/or project design features, or through funding for capacity improvements.

Therefore, *Less Than Significant Project-specific Impacts* related to this Checklist Item will occur.

Cumulative Impact Analysis: *No Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, Tulare County 2030 General Plan EIR, and/or the Pixley Biogas Anaerobic Digester EIR.

As the Project does not include any development proposals, the Project will not require the construction of new water or wastewater treatment facilities beyond what was described earlier (that is, consistency with the PPUD's Wastewater Treatment Facility Upgrade and Expansion Project – Project Feasibility Report). As no new water or wastewater facilities will be required, *No Cumulative Impacts* related to this Checklist Item will occur.

Mitigation Measure(s): *None Required.*

However; as noted earlier, as future development occurs development proposals will be evaluated on a case-by-case basis to ensure adequate water supply and wastewater treatment capacity, and, if necessary, require proponents of a development proposal to accommodate their water supply and wastewater treatment needs where applicable as conditions of approval and/or project design features, or through funding for capacity improvements.

Conclusion: *Less Than Significant Impact*

As noted earlier, as Less Than Significant Project-specific Impacts related to this Checklist item will occur, *No Cumulative Impacts* will occur.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Project Impact Analysis: *Less Than Significant Impact*

As the Project does not include any development proposals, the Project will not immediately result in increased stormwater runoff. As such, it will not require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. However; as future development occurs development proposals will be evaluated on a case-by-case basis to ensure adequate storm water drainage facilities, and, if necessary, require proponents of a development proposal to accommodate their storm water drainage needs where applicable as conditions of approval and/or project design features, or through funding for capacity improvements.

Therefore, *Less Than Significant Project-specific Impacts* related to this Checklist Item will occur.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan

background Report, Tulare County 2030 General Plan EIR, and/or the Pixley Biogas Anaerobic Digester EIR.

As the Project does not include any development proposals, the Project will not immediately result in increased stormwater runoff. As such, it will not require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. However; as future development occurs development proposals will be evaluated on a case-by-case basis to ensure adequate storm water drainage facilities, and, if necessary, require proponents of a development proposal to accommodate their storm water drainage needs where applicable as conditions of approval and/or project design features, or through funding for capacity improvements. Therefore, ***No Cumulative Impacts*** related to this Checklist Item will occur.

Mitigation Measure(s): ***None Required.***

However; as noted earlier, as future development occurs development proposals will be evaluated on a case-by-case basis to ensure adequate storm water drainage facilities, and, if necessary, require proponents of a development proposal to accommodate their storm water drainage needs where applicable as conditions of approval and/or project design features, or through funding for capacity improvements.

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item will occur.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Project Impact Analysis: ***Less Than Significant Impact***

As the Project does not include any development proposals, the Project will not immediately result in an increased need for water supplies from existing entitlements and resources, or would not require new or expanded entitlements. Also see Chapter 3.9 Hydrology and Water Quality for additional analysis.

As future development occurs, development proposals will be evaluated on a case-by-case basis to ensure adequate water supplies are available, and, if necessary, require proponents of a development proposal to accommodate their water supply needs where applicable as conditions of approval and/or project design features, or through funding for capacity improvements. Therefore, ***Less Than Significant Project-specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, Tulare County 2030 General Plan EIR, and/or the Pixley Biogas Anaerobic Digester EIR.

As proposed Project will result in ***Less Than Significant Project-specific Impacts, Less Than Significant Cumulative Impacts*** to the water supply would also occur.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

The proposed Project will result in ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item.

- e) **Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

Project Impact Analysis: ***No Impact***

See Item 3.17 a), above. The Project does not include any development proposals, as such, the Project will not require a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. Also, as noted earlier, as future development occurs development proposals will be evaluated on a case-by-case basis to ensure adequate wastewater treatment capacity, and, if necessary, require proponents of a development proposal to accommodate their wastewater treatment needs where applicable as conditions of approval and/or project design features, or through funding for capacity improvements. ***No Project-specific Impacts*** related to this Checklist item will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, Tulare County 2030 General Plan EIR, and/or the Pixley Biogas Anaerobic Digester EIR.

No connections to a wastewater treatment provider are proposed or necessary at this time. As noted below future development occurs development proposals will be evaluated on a case-by-case basis to ensure adequate wastewater treatment capacity. ***No Cumulative Impacts*** related to this Checklist item will occur.

Mitigation Measure(s): ***None Required.***

However; as noted earlier, as future development occurs development proposals will be evaluated on a case-by-case basis to ensure adequate wastewater treatment capacity, and, if necessary, require proponents of a development proposal to accommodate their wastewater treatment needs where applicable as conditions of approval and/or project design features, or through funding for capacity improvements.

Conclusion: *No Impact*

As noted earlier, *No Project-specific or Cumulative Impacts* related to this Checklist item will occur.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Project Impact Analysis: *Less Than Significant Impact*

Tulare County operates three active landfills: Visalia and Teapot Dome. Per the Tulare County General Plan, the Visalia landfill has enough capacity to provide at least 140 years (2014- 2154) of disposal capacity. All Material is handled at the Visalia Landfill located at 8614 Avenue 328. This capacity is adequate to accommodate the proposed community plan update. *Less Than Significant Project-specific Impacts* related to this Checklist item will occur.

Cumulative Impact Analysis: *Less Than Significant Impact*

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, Tulare County 2030 General Plan EIR, and/or the Pixley Biogas Anaerobic Digester EIR.

Less Than Significant Impact related to this Checklist item will occur.

Mitigation Measure(s): *None Required.*

Conclusion: *No Impact*

As noted earlier, *No Project-specific or Cumulative Impacts* related to this Checklist item will occur.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Project Impact Analysis: *Less Than Significant Impact*

Solid waste disposal must comply with the requirements of the contracted waste hauler, which follows federal, state, and local statutes and regulations related to the collection of

solid waste. The proposed Project will comply with all state and local waste diversion requirements regarding trash and recycling areas.

Therefore, ***Less Than Significant Project-specific Impacts*** related to this Checklist item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, Tulare County 2030 General Plan EIR, and/or the Pixley Biogas Anaerobic Digester EIR.

The proposed Project will result in ***Less Than Significant Project-specific Impacts*** and thus will result in ***Less Than Significant Cumulative Impacts***.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item will occur.

REFERENCES

Adopted Capital Facilities Improvements Plan Update, Fiscal Year 2012/2013, Pixley Public Utility District

EPA's Summary of the Resource Conservation and Recovery Act
<http://www.epa.gov/epawaste/laws-regs/rcrahistory.htm>

Tulare County Local Agency Formation Commission's (LAFCO's) Municipal Service Review Final Report (March 2006)

Tulare County 2030 General Plan, August 2012

North Pixley Commercial/Industrial Specific Plan

Pixley Biogas Anaerobic Digester Environmental Impact Report, prepared by the Tulare County Resource Management Agency (Environmental Planning Division); certified by the Tulare County Planning Commission February 19, 2014

CEQA Guidelines

Mandatory Findings of Significance

Chapter 3.18

SUMMARY OF FINDINGS

The proposed Project will result in *No Significant Impacts* with mitigation. Cumulative impacts are summarized in Chapter 4. The analyses contained in this environmental document demonstrate that there are no impacts that will substantially degrade the quality of the environment, or impact sensitive species, or have significant cultural impacts, or impact human beings requiring a mandatory finding of significance.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

CEQA Guidelines “Mandatory Findings of Significance” (Section 15065(a)) lists the following potential impacts that need to be addressed by a lead agency:

15065(a): “A lead agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur:

(1) *The project has the potential to: substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare or threatened species; or eliminate important examples of the major periods of California history or prehistory.*

(2) *The project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.*

(3) *The project has possible environmental effects that are individually limited but cumulatively considerable. “Cumulatively considerable” means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.*

(4) *The environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly.”*

Draft Environmental Impact Report
Pixley Community Plan

Under the California Environmental Quality Act (CEQA), an EIR must be prepared when certain specified impacts may result from construction or implementation/operation of a project. An EIR has been prepared for the proposed Project, which fully addresses all of the Mandatory Findings of Significance, as described below.

Under Section 15065(a) of the CEQA Guidelines, a finding of significance is required if a project “has the potential to substantially degrade the quality of the environment.” In practice, this is the same standard as a significant effect on the environment, which is defined in Section 15382 of the CEQA Guidelines as “a substantial or potentially substantial adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance.” This EIR, in its entirety, addresses and discloses potential environmental affects associated with construction- and operations-related activities of the proposed Project, including direct, indirect, and cumulative impacts in the following resource areas:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities and Service Systems

As summarized in Project Requirements/Mitigation Measures Section, this EIR discusses potential environmental resource impacts, the level of significance prior to mitigation, project requirements that are otherwise required by law or are incorporated as part of the project description, feasible mitigation measures, and the level of significance after the incorporation of mitigation measures.

This section of the Draft Environmental Impact Report (DEIR) meets CEQA requirements by making Mandatory Findings of Significance relative to impacts of the proposed Project site, located in the San Joaquin Valley portion of Tulare County. The “Environmental Setting” section summarizes environmental resources in the region, with special emphasis on the proposed Project site and vicinity. The “Regulatory Setting” provides a description of applicable State and local regulatory policies. A description of the potential impacts of the proposed Project is also provided and includes the identification of feasible mitigation to avoid or lessen the impacts.

Long Term Impacts

As described in Section 15065(a)(2), a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals. This document addresses the short-term and irretrievable commitment of natural resources to ensure that the consumption is justified on a long-term basis.

Cumulative Impacts

Under Section 15065(a)(1) of the CEQA Guidelines, a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to (1) substantially reduce the habitat of a fish or wildlife species; (2) cause a fish or wildlife population to drop below self-sustaining levels; or (3) substantially reduce the number or restrict the range of an endangered, rare, or threatened species. Section 4.3 (Biological Resources) of the EIR fully addresses impacts related to the reduction of the fish or wildlife habitat, the reduction of fish or wildlife populations, and the reduction or restriction of the range of special-status species.

Impacts to Species

Section 15065(a)(1) of the CEQA Guidelines states that a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to eliminate important examples of a major period of California history or prehistory. Section 15065(a)(1) amplifies Public Resources Code 21001(c) requiring that major periods of California history are preserved for future generations. It also reflects the provisions of Public Resource Code Section 21084.1 requiring a finding of significance for substantial adverse changes to historical resources.

Impacts to Historical Resources

Section 15064.5 of the CEQA Guidelines establishes standards for determining the significance of impacts to historical resources and archaeological sites that are an historical resource. Section 4.4 (Cultural Resources) of this EIR (which is supported by a Cultural Resources Technical Report) fully addresses impacts related to California history and prehistory, historic resources, archaeological resources, and paleontological resources.

Impacts on Human Beings

Consistent with Section 15065(a)(4) of the CEQA Guidelines, a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to cause substantial adverse effects on human beings, either directly or indirectly. Under this standard, a change to the physical environment that might otherwise be minor must be treated as significant if people will be significantly affected. This factor relates to adverse changes to the environment of human beings generally, and not to effects on particular individuals. While changes to the environment that could indirectly affect human beings will be

represented by all of the designated CEQA issue areas, those that could directly affect human beings include air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, population and housing, public services, transportation/traffic, and utilities, which are addressed in this EIR.

Thresholds of Significance

The geographical area may be countywide, statewide, or nationwide, depending on the nature of the impact. Thresholds of Significance for impacts to biological resources are addressed in detail in Chapter 3.4 of this document. Thresholds of Significance for impacts to cultural resources, including impacts to historic and prehistoric resources, are addressed in Chapter 3.5 of this EIR.

ENVIRONMENTAL SETTING

“Tulare County... is located in a geographically diverse region with the majestic peaks of the Sierra Nevada framing its eastern region, while its western portion includes the San Joaquin valley floor, which is very fertile and extensively cultivated. Tulare County is the second-leading agricultural-producing county in the U.S. Fresno County is currently (2004) the top producer. In addition to its agricultural production, the county’s economic base also includes agricultural packing and shipping operations.”¹

The native vegetation of the Valley is predominately characterized by the purple needlegrass series, valley oak series, vernal pools and wetland communities, and blue oak series. Fauna associated with this section include mule deer (*Odocoileus hemionus*), black-tailed deer (*Odocoileus hemionus columbianus*), coyotes (*Canis latrans*), white-tailed jackrabbits (*Lepus townsendii*), kangaroo rats (*Dipodomys ingens*), kit fox (*Vulpes macrotis*), and muskrats (*Ondatra zibethicus*). Birds include waterfowl, hawks, golden eagles (*Aquila chrysaetos*), owls, white-tailed kites (*Elanus leucurus*), herons, western meadowlark (*Sturnella neglecta*) and California quail (*Callipepla californica*).²

REGULATORY SETTING

Federal Agencies & Regulations

See Chapters 3.4 and 3.5 of this document for federal regulations related to biological and cultural resources.

State Agencies & Regulations

See Chapters 3.4 and 3.5 of this document for state regulations related to biological and cultural resources.

¹ General Plan Background Report, page 1-2

² General Plan Background Report, page 9-10

Local Policy & Regulations

See Chapters 3.4 and 3.5 of this document for local regulations related to biological and cultural resources.

IMPACT EVALUATION

Would the project:

- a) **Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?**

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

As noted in Chapters 3.4 and 3.5, there would be ***Less Than Significant Impacts*** with mitigation. No other impacts related to fish, wildlife, plants and historic resources will occur. ***Less Than Significant Project-specific Impacts*** will occur

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is the San Joaquin Valley, the State of California, and the Western United States. As noted in Chapter 3.4 and Chapter 3.5, there will be ***Less Than Significant Cumulative Impacts*** related to biological resources and cultural resource with applicable mitigation.

Mitigation Measure(s):

See Mitigation Measures outlined in Chapter 3.4 and 3.5.

Conclusion: ***Less Than Significant Impact With Mitigation***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts With Mitigation*** related to this Checklist Item will occur with mitigation.

- b) **Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?**

Project Impact Analysis: ***See Chapter 4***

Project-related impacts are discussed within the analysis of each Checklist Item. In addition, cumulative impacts are summarized in Chapter 4.

Cumulative Impact Analysis: ***See Chapter 4***

Cumulative impacts are discussed within the analysis of each Checklist Item.

Mitigation Measure(s):

See Mitigation Measures contained throughout Chapter 3.

Conclusion: ***See Chapter 4***

Cumulative impacts are discussed within the analysis of each Checklist item. In addition, cumulative impacts are summarized in Chapter 4.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

The proposed Project will not result in substantial adverse effects on human beings, either directly or indirectly, as all potential impacts will result in Less Than Significant Impacts. Mitigation Measures 8-1 (Hazards & Hazardous Material), 9-1 through 9-6 (Hydrology & Water Quality), and 12-1 (Noise) will reduce the proposed Project's potential impacts to a less than significant level.

Conclusion for adverse effects on human beings, either directly or indirectly to Hazards & Hazardous Materials (Chapter 3.8): ***Less Than Significant Impact With Mitigation.***

Conclusion for adverse effects on human beings, either directly or indirectly to Hydrology & Water Quality (Chapter 3.9): The proposed Project will result in ***Less Than Significant Project-specific and Cumulative Impacts With Mitigation Measures*** 9-1 through 9-6 related to this Checklist item.

Conclusion for adverse effects on human beings, either directly or indirectly to Noise (Chapter 3.12): The proposed Project will result in ***Less Than Significant Project-specific and Cumulative Impacts With Mitigation Measure*** 12-1

No Unavoidable Cumulative Impacts

The proposed Project, Pixley Community Plan Update, at complete build-out is not anticipated to have substantial adverse effects on human beings. The proposed Project, as conditioned, will not cause substantial adverse effects on human beings either directly or indirectly.

Cumulative Impact Analysis: ***Significant and Unavoidable Cumulative Impacts***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As indicated in the Noise Study Report prepared by consultants VRPA Technologies “Table 5 [Table 3.12-5 of the DEIR] provides a comparison of existing noise levels to the estimated future year noise levels. Results show that the greatest increase between existing conditions and future conditions is 1.5 dB’s, which occurs at Receptors 3, 7, and 8. A change in level of at least 5 dB is required before any noticeable change in community response would be expected and a 10 dB change is subjectively heard as approximately a doubling in loudness. Therefore, the increase in traffic volumes as a result of population and employment increase in the Tulare County General Plan would not cause potentially significant impacts at Receptor 10.”³

VRPA went on to state Table 5 [Table 3.12-5 of this DEIR] also provides a comparison of existing noise levels to the estimated future year noise levels. Results show that the greatest increase between existing conditions and future conditions is 1.5 dB’s, which occurs at Receptors 3, 7, and 8. A change in level of at least 5 dB is required before any noticeable change in community response would be expected and a 10 dB change is subjectively heard as approximately a doubling in loudness. Therefore, the increase in traffic volumes as a result of population and employment increase in the Tulare County General Plan would not cause potentially significant impacts at Receptor 10, which is currently experiencing a noise level of 59.2 Ldn dB and is projected to experience a noise level of 60.5 Ldn dB in the future”⁴

VRPA also stated that “Future construction-related activities of the proposed Project could generate significant noise, corresponding to the particular phase of construction and the noise-generating equipment used during construction-related activities. “Implementation of the proposed community plan will result in construction activities that could generate temporary noise and groundborne vibration. Table 10 [Table 3.12-10 in this DEIR] depicts typical construction equipment noise. Construction equipment noise is controlled by the Environmental Protection Agency’s Noise Control Program (Part 204 of Title 40, Code of Federal Regulations).”⁵

“Construction activities associated with new development would be temporary in nature and related noise impacts would be short-term. However, since construction activities could substantially increase ambient noise levels at noise-sensitive locations, construction noise could result in potentially significant impacts to sensitive receptors. Activities involved in construction would generate maximum noise levels, as indicated in Table 10, ranging from 85 to 88dB at a distance of 50 feet. Construction activities will be temporary in nature and are expected to occur during normal daytime working hours. Construction noise impacts

³ Pixley NSR page 22, prepared by VRPA Technologies (and included as Appendix “D” of this DEIR)

⁴ Ibid. 24-25

⁵ Op. Cit.

could result in annoyance or sleep disruption for nearby residences if nighttime operations occurred, or if unusually noisy equipment was used.”⁶

Therefore; future, temporary, short-term construction-related noise will result in a less than significant impact through implementation of Mitigation Measure 12-1. There are no other projects in the vicinity of the Project site that will significantly increase temporary noise levels. Therefore, ***Less Than Significant Cumulative Impacts With Mitigation*** related to this Checklist Item will occur.

Mitigation Measure(s):

12-1 The hours of future construction shall be limited to 7:00 a.m. to 7:00 p.m. Monday through Friday or weekends (if allowed by the County) where residential uses are within 200 feet of where the activity is taking place. If residential uses are beyond 300 feet limited work hours are not required.

Conclusion: ***Significant and Unavoidable Cumulative Impacts***

There will be ***Less Than Significant Cumulative Impacts With Mitigation*** from this Project, which will affect human beings either directly or indirectly.

REFERENCES

See Chapters 3.1 through 3.17 and Chapter 4.

⁶ Op. Cit.

Summary of Cumulative Impacts

Chapter 4

CUMULATIVE IMPACTS ANALYSIS UNDER CEQA

Section 15355 Cumulative Impacts

““Cumulative impacts” refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

- (a) The individual effects may be changes resulting from a single project or a number of separate projects.
- (b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.”¹

Section 15130 Discussion of Cumulative Impacts

- “(a) An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in section 15065(a) (3). Where a lead agency is examining a project with an incremental effect that is not “cumulatively considerable,” a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.
- (1) As defined in Section 15355, a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.
 - (2) When the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR. A lead agency shall identify facts and analysis supporting the lead agency's conclusion that the cumulative impact is less than significant.
 - (3) An EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The lead agency shall identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable.

¹ 2013 CEQA Guidelines, Section 15355

Draft Environmental Impact Report
Pixley Community Plan

- (b) The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact. The following elements are necessary to an adequate discussion of significant cumulative impacts:
- (1) Either:
 - (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or
 - (B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.
 - (2) When utilizing a list, as suggested in paragraph (1) of subdivision (b), factors to consider when determining whether to include a related project should include the nature of each environmental resource being examined, the location of the project and its type. Location may be important, for example, when water quality impacts are at issue since projects outside the watershed would probably not contribute to a cumulative effect. Project type may be important, for example, when the impact is specialized, such as a particular air pollutant or mode of traffic.
 - (3) Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.
 - (4) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available, and
 - (5) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.
- (c) With some projects, the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by-project basis.
- (d) Previously approved land use documents, including, but not limited to, general plans, specific plans, regional transportation plans, plans for the reduction of greenhouse gas emissions, and local coastal plans may be used in cumulative impact analysis. A pertinent discussion of cumulative impacts contained in one or more previously certified EIRs may be incorporated by reference pursuant to the provisions for tiering and program EIRs. No further cumulative impacts analysis is required when a project is consistent with a

Draft Environmental Impact Report
Pixley Community Plan

general, specific, master or comparable programmatic plan where the lead agency determines that the regional or area wide cumulative impacts of the proposed project have already been adequately addressed, as defined in section 15152(f), in a certified EIR for that plan.

- (e) If a cumulative impact was adequately addressed in a prior EIR for a community plan, zoning action, or general plan, and the project is consistent with that plan or action, then an EIR for such a project should not further analyze that cumulative impact, as provided in Section 15183(j).”²

Tulare County is the geographic extent for most impact analysis. This geographic area is the appropriate extent because of the following reasons:

1. The proposed Project is physically located in Tulare County and the County of Tulare is the Lead Agency;
2. Tulare County General Plan policies applies to the proposed Project.
3. Pixley is an unincorporated area of the County, and as such planning staff considers all County projects and policies when evaluating projects within the County boundaries.

The basis for other resource specific cumulative impact analysis includes:

- Land Use Impacts are based on the County of Tulare 2030 General Plan, the Pixley Community Plan, (GPA 98-03, July 13, 1999), and the North Pixley Commercial/Industrial Specific Plan (PD-M-1&2, 1999).
- For Air Quality and Green House Gas Emissions, the San Joaquin Valley Air Basin is the geographic extent.
- For Biological Resources, the geographic extent is the San Joaquin Valley floor.
- For Hydrology, the geographic extent is the Tulare Lake Basin, Tule Lake Sub-basin aquifer.

PAST, PRESENT, PROBABLE FUTURE PROJECTS

Tulare County Association of Governments (TCAG) Blueprint Scenario

Under the Tulare County Regional Blueprint Preferred Growth Scenario, TCAG suggested a 25% increase over the status quo scenario to overall density by 2050. The preferred growth scenario principles included directing growth towards incorporated cities and communities where urban development exists and where comprehensive services and infrastructure are/or will be provided. Another relevant preferred scenario is the creation of urban separators around cities. The project location is outside incorporated areas and would be consistent with the goal of separating urban boundaries.³

² Ibid., Section 15130 (e)

³ TGAG Blueprint 2050, Preferred Scenario (2009)

Draft Environmental Impact Report
Pixley Community Plan

Tulare County 2030 General Plan

The Cumulative Analysis outlined in the Tulare County General Plan Update 2030 Recirculated Draft EIR notes regional population growth (which impact was developed by the Tulare County Association of Governments) and a number major projects. Regional population projections are provided in the table below.⁴

Table 4-1 Regional Population Projections and Planning Efforts			
	General Plan Planning Timeframe	General Plan Buildout Population	Significant Environmental Impacts
City of Dinuba	2006-2026	33,750	Farmland conversion; conflicts with agricultural zoning and Williamson Act contracts; conversion of agricultural soils to non-agricultural use; regional air quality impacts; and climate change-greenhouse gases.
City of Woodlake			Unavailable.
City of Visalia	1991-2020	165,000	Air quality; biological resources; land use conflicts; noise; transportation/traffic; mass transit; agricultural resources; water supply; and visual resources.
City of Tulare	2007-2030	134,910	Farmland conversion; aesthetics; water supply; traffic; air quality; global climate change; noise; flooding from levee or dam failure; biological resources; and cultural resources.
City of Farmersville	2002-2025	12,160	Agricultural resources; agricultural land use conflicts; air quality; and traffic circulation.
City of Exeter			Information unavailable at time of analysis.
City of Lindsay	1990-2010	17,500	Air quality and farmland land conversion.
City of Porterville	2006-2030	107,300	Farmland conversion; air quality; noise; and biological resources.
City of Kingsburg	1992-2012	16,740	Farmland conversion and air quality.
City of Delano	2005-2020	62,850	Air quality; noise; farmland conversion; disruption of agricultural production; and conversion of agricultural soils to non-agricultural use.
County of Fresno	2000-2020	1,113,790	Farmland conversion; reduction in agricultural production; cancellation of Williamson Act Contracts; traffic; transit; bicycle facilities; wastewater treatment facilities; storm drainage facilities; flooding; police protection; fire protection; emergency response services; park and recreation facilities; library services; public services; unidentified cultural resources; water supply; groundwater; water quality; biological resources; mineral resources; air quality; hazardous materials; noise; and visual quality.

⁴ Tulare County 2030 General Plan Recirculated Draft EIR, page 5-4 to 5-5

Draft Environmental Impact Report
Pixley Community Plan

<p style="text-align: center;">Table 4-1 Regional Population Projections and Planning Efforts</p>			
	General Plan Planning Timeframe	General Plan Buildout Population	Significant Environmental Impacts
County of Kern	2004-2020	1,142,000	Air quality; biological resources; noise; farmland conversion; and traffic.
County of Kings*	1993-2005	149,100 (low) 228,000 (high)	Biological resources; wildlife movement; and special status species.

* The adopted Kings County General Plan did not identify a projected population for 2005. The General Plan does include population projections for 2010, which is included in this table.

SOURCE: City of Delano, 1999; City of Dinuba, 2008; City of Farmersville, 2003; City of Kingsburg, 1992; City of Lindsay, 1989; City of Porterville, 2007; City of Visalia, 2001, 1991; County of Fresno, 2000; County of Kern, 2004; County of Kings, 2009; DOF, 2007; TCAG, 2008.

In addition to the Regional Growth Projections used for the cumulative impact analysis, the Tulare County General Plan Update 2030 Recirculated Draft EIR noted the following Major Projects

- **Goshen:** Status – GPI allowed to proceed. On March 29, 2006, the Tulare County Resource Management Agency convened a meeting with 30 property owners, land developers, services providers, and their representatives, having a development interest in Goshen. The purpose of the meeting was to “...discuss the potential for joint cooperation amongst the various developers and property owners to achieve a well planned community and to foster the spirit of cooperation” towards completion of the Community Plan update and EIR. The proposed planning study area boundary would add approximately 3,277 acres to the existing Goshen UDB, as opposed to the Draft Goshen Community Plan UDB which adds 422 acres using a needs-based analysis patterned on historical growth trends extrapolated 20 years into the future. The revised boundary incorporates the GPI applicants’ lands, the hamlet of West Goshen, and additional land to be held in reserve for future growth. The applicant’s land excluding Mangano’s “Westfield” totals 661 acres. The area is bounded in the north by Avenues 320 and 312, taking in West Goshen; in the west by Roads 52 and 56; in the south by State Hwy. 198; and in the east by Camp Road and Road 76 at the City of Visalia Sphere of Influence. This ‘study’ area will be the focus of technical analysis that will set a proposed Urban Development Boundary in which build-out will be contemplated for preparation of the new Goshen Community Plan, EIR and Infrastructure Master Plan. Since the study area involves lands not owned or controlled by the developers, the MOU agreement to be negotiated will contain a provision to reimburse the developers for expenses incurred when development authorized by the new plan occurs.

- **Traver Community Plan:** Status – GPA approved. On December 16, 2014 the Tulare County Board of Supervisors (BOS) approved an to update to the Traver Community Plan. The Traver Community Plan Update is consistent with the recent approval of the General Plan 2030 Update, and will include the following primary goals and objectives.

- **Yokohl Ranch:** Status – GPI allowed to proceed in February 2007. On September 13, 2005, the Tulare County Resource Management Agency received a request from the J.G. Boswell Company and the Eastlake Company, to initiate the formal process to amend the Tulare County General Plan, including the Foothill Growth Management Plan (FGMP), to change the land use designation for the 36,000 acre Yokohl Ranch property from ‘Extensive Agriculture’ to ‘Planned Community Area’. According to the applicants, the proposed amendment will result in master planned communities that balance the needs for housing, neighborhood commercial uses, recreation, ranching operations and open space. As such, 40% (14,400 acres) of the ranch is proposed for development with 60% (21,600 acres) of the property to remain as untouched open space and ranchlands. The developed portions of the ranch will include the Village of Yokohl Ranch, an active adult community accessible to Yokohl Drive; and a Ranch Resort Lodge Enclave located in the northern reaches of the site, approximately four miles south of Lake Kaweah.

- **Rancho Sierra:** Status – GPA approved. The project site consists of 114.6 acres. The site was a golf course facility located on both sides of Liberty Avenue (Avenue 264), east of Road 124, south of the city of Visalia. There are 30 existing homes within the golf course area but not a part of this application. The intended use is to subdivide the site into 175 single family residential lots. The project has been approved.

- **Earlimart:** Status – GPI allowed to proceed January 2006. On September 9, 2005, the Tulare County Resource Management Agency received a request from the Earlimart Development Group, a land development partnership comprised of four business owners with interests in 1,491 acres of private property located both within and outside of the existing Earlimart Urban Development Boundary. The Group is seeking authorization to file an amendment to the Tulare County General Plan, specifically the Earlimart Community Plan (1988). In addition to an updated Community Plan, an Infrastructure Master Plan and Program EIR for the update will also be prepared. The applicants proposed that a 7,680 acre planning study area be established. The area is bounded in the north by Avenue 68 (Deer Creek as a natural boundary), in the south by Avenue 36 (White River as a natural boundary), in the east by Road 144, and in the west by Road 120. This ‘study’ area will be the focus of technical analysis that will set the proposed Community Plan boundary for which the new Community Plan, EIR and Infrastructure Master Plan will be prepared. Since the study area involves lands not owned or controlled by the Development Group, the MOU agreement to be negotiated will contain a provision to reimburse the Development Group for expenses when development authorized by the new plan occurs. The Earlimart Development Group has indicated that they have contracts with the consulting firms of Hogle-Ireland, Inc., Provost & Pritchard Engineering Group, Inc. and TPG Consulting or other environmental consulting firm, to prepare the General Plan amendment. However, it is important that preparation of the EIR be managed by the County as Lead Agency for the project.

In addition to the Major Projects outlined in the Tulare County General Plan Update 2030 Recirculated Draft EIR, there are a number of other projects that may produce cumulative impacts. These projects are briefly described below.

- **Peña's:** Status – Approved. Peña's Material Recovery Facility (MRF) and Transfer Station (TS)' which currently sits on 18.01 acres that were rezoned from AE 30 to M1 Light Industrial Zoning, and rezoned 6.7 acres and 11.3 acres from residential and industrial reserve zoning to industrial zoning. The land is currently operated by Peña's Disposal, Inc. and has a previously permitted peak processing capacity of 500 tons per day (TPD). This existing facility serves the unincorporated northern portions of Tulare County and the unincorporated southern portions of Fresno County, and the City of Orange Cove in Fresno County. Within the County of Tulare, the facility serves the cities of Dinuba and Porterville, the communities of Cutler, Orosi, London, Sultana, Traver, Seville and other smaller communities in the area that may need to utilize the facility for the recycling of source-separated recyclables, commingled recyclables, commercial and industrial rubbish, green material and wood wastes, construction and demolition wastes, and inert debris to assist in reaching the diversion goals of the California Integrated Waste Management Act of 1989 (AB 939).
- **Harvest Power:** Status – Approved. The Project is for a Composting Expansion and Anaerobic Digester. The Project allows a maximum total tonnage for the composting to increase from 156,000 tons per year to a potential 216,000 tons per year. An additional 60,000 tons will be allowed at the approved anaerobic digester facility. The facility will produce transportation fuel through a compressed natural gas (CNG) refueling station.
- **South County Correctional Detention Facility in Porterville:** Status – Approved. The approved Project sits on two parcels, one is in the County and the second is within the City of Porterville's jurisdiction. The facility will be constructed within the City of Porterville while the County's parcel will be used for agricultural purposes. The proposed project contains a build-out "footprint" for the proposed facility of approximately 15.0 acres with a new maximum security Type II facility as the primary structure. The proposed Project will consist of 250-cell double occupancy units (500 beds) and 14 special use beds for a total of 514 beds. In addition to the main detention facility, the proposed Project will also include support service components.

As the site is currently under agricultural production, the Project will require new utilities infrastructure (such as electrical, gas, phone, etc.). It will also require streets/roads improvements, potable water systems, wastewater systems, and storm water drainage infrastructure. These will be constructed or expanded to meet facility demands. Where feasible, the Project will be extended to connect with existing potable water, wastewater, and storm water drainage infrastructure provided by City of Porterville. However, possible new construction of the above mentioned infrastructure may be necessary, and as such, will be evaluated.

- **Orosi Rock:** Status – Approved. The Project resulted in an amendment to a Surface Mining Permit and Reclamation Plan to allow for expanded operations at this site. The Applicant received approval to modify their permit conditions to include allowing year-round instead of seasonal operations and allow mining equipment to remain onsite throughout the year. The Project also includes received approval to increase the excavation depth, increase annual maximum shipment, and increase annual truck trips.

Production will be increased by 6.8 million tons of rock. The total production of aggregate will be increased to 14.3 million tons over the existing 25 year period of the existing permit. Annual production will be a maximum of 800,000 tons of aggregate. The Project will result in 10 additional employees.

- **Colony Power Project (City of Tulare):** Status – Approved. The Project is for a co-digester project. The proposed SWFP would allow a new anaerobic co-digester operation in the unincorporated area of Tulare, California near dairy farms and the City of Tulare's waste water treatment plant. The project would utilize a variety of organic feedstocks: pre-consumer and post-consumer food waste, compostable materials, dairy manure, food processing waste, liquids wastes, and FOG (fats, oils, and grease). This process would allow for the production of biogas that may be used for utility pipeline injection and/or converted on-site to electrical and heat-energy in bio-gas fueled engine-generators to provide on-site energy. The property is owned by the City of Tulare and leased to the operator, Colony Energy Partners, an energy company based in Newport Beach, California. Approximately 500 tons of feedstock will be delivered daily to the site by truck from various sources. Digester supernatant will be piped to the City of Tulare's wastewater facility for disposal. Dewatered digestate, approximately 50 tons per day, will be trucked to permitted composting facilities.
- **Pixley Biogas:** Status - Approved. The Project is for development of a biogas facility on a 2.75 acre portion of an 8.0 acre parcel. The digester will extract methane gas via an anaerobic manure digester. The facility will be used to produce 266 MMBTUS per day of biogas via anaerobic digestion of manure feedstock from a nearby dairy. The biogas produced will be used to fuel the Calgren bio-refinery facility, located adjacent to and south of the project site. Providing biogas to the Calgren facility will reduce Calgren's consumption of natural gas.
- **Deer Creek Mine:** Status – Approved. The approved Project amended a Surface Mining Permit and Reclamation Plan to allow expanded operations at this site. The Applicant currently operates a rock and gravel surface mining operation on 98 acres. The Project will result in no increase in the maximum depth of the mine, as expansion will occur laterally within the existing mining footprint. The approval includes an increase in production by 450,000 tons per year (from a maximum of 500,000 tons per year to a maximum of 950,000 tons per year). Increase truck hauling by 176 round trips per day (from a maximum of 200 round trips per day to a maximum of 376 round trips per day). The Project will not result in any change to the estimated total rock production of 15,000,000 tons of rock material during the estimated 50 years of operation nor would it result in any change to the approved reclamation plan.
- **Papich:** - Status – 45-day review. The Applicant is currently operating an asphalt batch plant at the site under a County-issued Temporary Use Permit (PSP 13-005 issued February 19, 2013) and is permitted to produce and distribute up to 3,700 tons/day of asphalt. The Temporary Use Permit restricts the existing operation to supply asphalt materials only for the Road 80 and Highway 99 projects (to be completed by mid-2015)

with no provision for additional retail sales. The Applicant is pursuing a Special Use Permit through Tulare County for the following: 1) Permanent establishment of the asphalt batch plant on the existing site; 2) Expansion of the existing operation from 3,700 tons/day to 8,000 tons/day of asphalt; and 3) To conduct retail/commercial sales of asphalt.

- **Derrel's Mini Storage** – Status- 45-day review. The proposed Project includes a proposed General Plan Amendment (No. GPA 14-007) and proposed Change of Zone (No. PZ 14-001). GPA 14-007 is proposed to amend the Tulare County Land Use Element of the General Plan by changing the land use designation on the 19.33-acre parcel from “Agriculture” to “Commercial or Light Industrial”. PZ 14-001 is a proposed to re-zone the AE-20 (Exclusive Agricultural-20 acre minimum) Zone to C-3 (Service Commercial) Zone on the same 19.33 acres. The proposed zone change would allow, as noted in the Tulare County Zoning Ordinance, Mini-Warehouses – “Storage or warehousing service within a building or buildings primarily for individuals to store personal effects”⁵

The proposal for the site consists of the phased construction of 19.33 acre mini- storage facility. Phase 1 consists of 129,550 square feet; Phase 2 consists of 148,950 square feet, and Phase 3 consists of 96,600 square feet. RV storage will be used on the Phase 2 portion of the site, moving to Phase 3 as the earlier phases are constructed with the eventuality of the entire site constructed as mini storage units if necessary to meet market demands. It is possible that Phase 3 will remain as RV storage. The applicant approximates a ten year full build-out of the entire proposed Project site. It should be noted that the entire Project site perimeter will include a wall around the entire site as part of Phase 1

SUMMARY OF CUMULATIVE IMPACTS

In this summary section, mitigated impacts and immitigable impacts will be discussed. Checklist item criteria that would result in no impacts or less than significant impacts are discussed in the previous chapter and are not reiterated here.

Unavoidable Impacts

There are no significant and unavoidable impacts

Less than Significant Impacts with Mitigation

⁵ Tulare County Zoning Ordinance, page 13

Draft Environmental Impact Report
Pixley Community Plan

Table 4-2
Checklist Items with Less than Significant Impacts with Mitigation

Impact Section	Checklist Item #	Checklist Criteria
Biological	3.4 a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?
Cultural Resources	3.5 a)	Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?
Cultural Resources	3.5 b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?
Cultural Resources	3.5 c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?
Cultural Resources	3.5 d)	Disturb any human remains, including those interred outside of formal cemeteries?
Geology & Soils	3.6 d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?
Hazards	3.8 a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
Hazards	3.8 b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
Hydrology	3.9 b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?
Hydrology	3.9 c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?
Hydrology	3.9 e)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?
Hydrology	3.9 g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?
Noise	3.12 d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?
Mandatory	3.18 a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?
Mandatory	3.18 c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Draft Environmental Impact Report
Pixley Community Plan

There are a number of cumulative impacts which can be effectively mitigated as listed in the Table 4-3.

See Chapter 8 Mitigation Monitoring and Reporting Program for a complete list of Mitigation Measures to be implemented as part of the proposed Project.

Less Than Significant Impacts

**Table 4-3
Checklist Items with Less than Significant Impacts**

Impact Section	Checklist Item #	Checklist Criteria
Agricultural & Forestry	3.2 a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural uses?
Agricultural & Forestry	3.2 b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?
Agricultural & Forestry	3.2 e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of agricultural use or conversion of forest land to non-forest use?
Air Quality	3.3 a)	Conflict with or obstruct implementation of the applicable air quality plan?
Air Quality	3.3 b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?
Air Quality	3.3 c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?
Air Quality	3.4 d)	Expose sensitive receptors to substantial pollutant concentrations?
Air Quality	3.3 e)	Create objectionable odors affecting a substantial number of people?
Geology & Soils	3.8 a i)	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
Geology & Soils	3.6 a ii	Strong seismic ground shaking?
Geology & Soils	3.6 a iv)	Landslides?
Geology & Soils	3.6 b)	Result in substantial soil erosion or the loss of topsoil?
Geology & Soils	3.6 c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?
Geology &	3.6 e)	Have soils incapable of adequately supporting the use of septic tanks or

Draft Environmental Impact Report
Pixley Community Plan

Impact Section	Checklist Item #	Checklist Criteria
Soils		alternative waste water disposal systems where sewers are not available for the disposal of waste water?
Greenhouse Gases	3.7 a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
Hazards	3.8 d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
Hazards	3.8 g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
Hydrology	3.9 a)	Violate any water quality standards or waste discharge requirements?
Hydrology	3.9 d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?
Hydrology	3.9 f)	Otherwise substantially degrade water quality?
Hydrology	3.9 h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?
Land Use & Planning	3.10 a)	Physically divide an established community?
Land Use & Planning	3.10 b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?
Land Use & Planning	3.10 c)	Conflict with any applicable habitat conservation plan or natural community
Noise	3.12 a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
Noise	3.12 b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?
Noise	3.12 c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?
Population & Housing	3.13 a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?
Population & Housing	3.13 b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?
Population & Housing	3.13 c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?
Public Services	3.14 a)	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Draft Environmental Impact Report
Pixley Community Plan

Impact Section	Checklist Item #	Checklist Criteria
Public Services	3.14)	Fire Protection?
Public Services	3.14)	Police?
Public Services	3.14)	Schools?
Public Services	3.14)	Parks?
Public Services	3.14)	Other public facilities?
Recreation	3.15 a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
Recreation	3.15 b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?
Transportation and Traffic	3.16 a)	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?
Transportation and Traffic	3.16 d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
Transportation and Traffic	3.16 e)	Result in inadequate emergency access?
Utilities	3.17 a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
Utilities	3.17 b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
Utilities	3.17 c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
Utilities	3.17 d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?
Utilities	3.17 f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?
Utilities	3.17 g)	Comply with federal, state, and local statutes and regulations related to solid waste?

No Impacts

Table 4-4
Checklist Items with No Impacts

Draft Environmental Impact Report
Pixley Community Plan

Impact Section	Checklist Item #	Checklist Criteria
Aesthetics	3.1 a)	Have a substantial adverse effect on a scenic vista?
Aesthetics	3.1 b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
Aesthetics	3.1 c)	Substantially degrade the existing visual character or quality of the site and its surroundings?
Aesthetics	3.1 d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?
Agricultural & Forestry	3.2 c)	Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code § 12220(q), timberland (as defined by Public Resources Code § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?
Agricultural & Forestry	3.2 d)	Result in the loss of forest land or conversion of forest land to non-forest use?
Biological	3.4 b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?
Biological	3.4 c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
Biological	3.4 d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
Biological	3.4 e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
Biological	3.4 f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?
Geology & Soils	3.6 iii)	Seismic-related ground failure, including liquefaction?
Geology & Soils	3.6 iv)	Landslides?
Greenhouse Gases	3.7 b)	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?
Hazards	3.8 c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
Hazards	3.8 e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?
Hazards	3.8 f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?
Hazards	3.8 h)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
Hydrology	3.9 i)	Expose people or structures to a significant risk of loss, injury or death

Draft Environmental Impact Report
Pixley Community Plan

Impact Section	Checklist Item #	Checklist Criteria
		involving flooding, including flooding as a result of the failure of a levee or dam?
Hydrology	3.9 j)	Inundation by seiche, tsunami, or mudflow?
Mineral Resources	3.11 a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?
Mineral Resources	3.11 b)	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?
Noise	3.12 e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?
Noise	3.12 f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?
Traffic and Transportation	3.16 b)	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?
Traffic	3.16 c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?
Traffic	3.16 f)	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?
Utilities	3.17 e)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

REFERENCES

CEQA Guidelines

ALTERNATIVES

Chapter 5

INTRODUCTION

The purpose of the alternatives analysis in an EIR is to describe a range of reasonable alternatives to the project, or to the location of the project, that could feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and to evaluate the comparative merits of the alternatives (CEQA Guidelines, Section 15126.6[a]). Additionally, Section 15126.6(b) of the CEQA Guidelines requires consideration of alternatives that could reduce to a less-than-significant level or eliminate any significant adverse environmental effects of the proposed project, including alternatives that may be more costly or could otherwise impede to some degree the attainment of the proposed project's objectives.

It is important to understand, however, that the inclusion of an alternative in an EIR does not constitute definitive evidence that the alternative is in fact "feasible." The ultimate decision regarding the feasibility of alternatives lies with the ultimate decision-maker for a project, which in this case is the County of Tulare Board of Supervisors. Such determinations are to be made in statutorily mandated findings addressing potentially feasible means of reducing the severity of significant environmental effects. One finding that is permissible, if supported by substantial evidence, is that "specific economic, legal, social, technological, or other considerations . . . make infeasible the . . . alternatives identified" in the EIR (Pub. Resources Code, § 21081, subd. [a]; see also CEQA Guidelines, § 15901, subd. [a]). CEQA Guidelines section 15364 defines "feasible" to mean "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." In deciding whether an alternative is feasible or infeasible, a decision-making body may consider the stated project objectives in an EIR, and may balance any relevant economic, environmental, social, and technological factors. (See *City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 410, 417; *Sequoyah Hills Homeowners Assn. v. City of Oakland* (1993) 23 Cal.App.4th 704, 715.)

Specific requirements include the following:

- CEQA Guidelines §15126.6(a): Alternatives to the proposed Project. An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.
- CEQA Guidelines §15126.6(b): Purpose. Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to

some degree the attainment of the project objectives, or would be more costly.

- CEQA Guidelines §15126.6(c): Selection of a range of reasonable alternatives. The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects.
- CEQA Guidelines §15126.6(d): Evaluation of alternatives. The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project.
- CEQA Guidelines §15126.6(e): “No project” alternative. The specific alternative of “no project” shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project.
- CEQA Guidelines §15126.6(f): Rule of reason. The range of alternatives required in an EIR is governed by a “rule of reason” that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice.

“15021. Duty to minimize environmental damage and balance competing public objectives

- (a) CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible.
 - (1) In regulating public or private activities, agencies are required to give major consideration to preventing environmental damage.
 - (2) A public agency should not approve a project as proposed if there are feasible alternatives or mitigation measures available that would substantially lessen any significant effects that the project would have on the environment.
- (b) In deciding whether changes in a project are feasible, an agency may consider specific economic, environmental, legal, social, and technological factors.
- (c) The duty to prevent or minimize environmental damage is implemented through the findings required by Section 15091.
- (d) CEQA recognizes that in determining whether and how a project should be approved, a public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social factors and in particular the goal of providing a decent home and satisfying living environment for every Californian. An agency shall prepare a statement of overriding considerations as described in Section 15093 to reflect the ultimate balancing of competing public objectives when the agency decides to approve a project that will cause one or more significant effects on the environment.”¹

EIR Contents: Energy Consumption Analysis

“Potentially significant energy implications of a project shall be considered in an EIR to the extent relevant and applicable to the project... Where items listed below are applicable or relevant to the project, they should be considered in the EIR... Alternatives should be compared in terms of overall energy consumption and in terms of reducing wasteful, inefficient and unnecessary consumption of energy.”²

¹ CEQA Guidelines, Section 15021

² CEQA Guidelines, CEQA Appendix F; Energy Consumption

Factors Considered In Selection of Alternatives

The CEQA Guidelines recommend that an EIR should briefly describe the rationale for selecting the alternatives to be discussed, identify any alternatives that were considered by the lead agency but were rejected as infeasible, and briefly explain the reasons underlying the lead agency's determination [CEQA Guidelines, Section 15126.6(c)]. This section describes the process used in selection of the alternatives. The alternatives addressed in this draft Environmental Impact Report (DEIR) were selected in consideration of one or more of the following factors:

- The extent to which the alternative would accomplish most of the basic goals and objectives of the proposed project;
- The extent to which the alternative would avoid or lessen any of the identified significant environmental effects of the project;
- The potential feasibility of the alternative, taking into account site suitability, economic viability, availability of infrastructure, and consistency with various applicable plans and regulatory limitations;
- The appropriateness of the alternative in contributing to a “reasonable range” of alternatives necessary to permit a reasoned choice; and
- The requirement of the CEQA Guidelines to consider a “no project” alternative and, where the “no project” alternative is the environmentally superior alternative, to identify an “environmentally superior” alternative in addition to the no-project alternative [CEQA guidelines, Section 15126.6(e)].

The significant environmental impacts that the County, in identifying alternatives, seeks to eliminate or reduce are:

- Transportation and circulation impacts resulting from substantial increases in vehicular traffic.
- Air quality impacts resulting from increased development and vehicular traffic.
- Noise and nuisance effects on adjacent sensitive receptor locations.
- Loss of agricultural land.
- Biological resources impacts resulting from a loss of habitat.
- Viewshed impacts resulting from increased development.
- Groundwater impacts and availability of adequate water supply resulting from increased development.

Alternatives Selection Process

The proposed project and the alternatives addressed in this chapter of the EIR are based on several ideas and concepts developed over the last two years. Staff developed the following land plans (see figures 5-) in consultation with the Pixley Community, affected land owners, developers, and agencies (especially Caltrans), and based on in depth CEQA, and infrastructure related analysis from the staff's public outreach process. As part of this process, several alternative land use scenarios were considered including the following:

- **Alternative A. No Project Alternative** – This Alternative would preclude the approval and implementation of the Pixley Community Plan. Under the *No Project Alternative*, the County of Tulare would be required to make planning and capital improvement decisions

based on the Urban Boundaries Element, adopted in 1974, and the Tulare County Area General Plan, adopted in 1966. Both planning documents are outdated as they relate to the Pixley area. They do not provide suitable directions for the public, Planning Commission or Board of Supervisors in regards to where future growth should be directed, the alignment of new roadways, the location of various public buildings and grounds, the design of new development, and the means of financing new growth; particularly regarding the ability to qualify for public funding from agencies such as Caltrans, Community Development Block Grants, Valley Air District, and other agencies which require adopted plans and/or matching funds. In addition, development in the planning area would continue to be regulated by the county's zone plan for the Pixley area. Two agricultural zones, A-1 and AE, and the RA (rural residential) zone district, pose long-term planning difficulties for Pixley in that these districts allow for the creation of small lot, one-half to five acres in area. This kind of development in and around Pixley prevents the effective utilization of land for urban growth and conservation of agricultural land. The *No Project Alternative* will not eliminate the environmental impacts in this EIR. Population growth and urban development will still occur in the Pixley planning area, even without the adoption of the Community Plan.

Without the adoption of the Community Plan, the County of Tulare will be required to accommodate future urban development through numerous general plan amendments, zone changes, and conditional use permits. This approach to managing urban development in a community is disjointed, inefficient, does not comply with the objectives and benefits of the project in creating a sustainable, integrated, and healthy community. For these reasons, the *No Project Alternative* has been rejected by the County of Tulare.

- ***Alternative B. Larger UDB Expansion*** - provides for an increase in the area beyond the existing and proposed UDB (urban development boundary) line. The UDB line would encompass additional land (approximately 486 total acres) in the southwest quadrant of the planning area (approximately 230 acres); an area north of Harmon Field (approximately 103 acres); and an area west and north of the proposed UDB (approximately 153 acres) between Avenue 104 and Terra Bella Avenue (Avenue 96) west of Airport Street (Road 120) and east of the Pixley Irrigation District Canal.

Land within this expanded UDB line would be designated as Light Industrial Reserve for the 230 acre area; Mixed Use for the 103 acre area, and Residential Reserve for the 153 acre area. Industrial development could involve a food processing facility, a manufacturing operation, or some type of facility that could generate energy (for example, biomass or ethanol plant). The location for this potential industrial area is desirable in that rail service is available as well as access to and from State Route 99. A limiting factor could be the capacity of the treatment plant to handle effluent generated by these industrial uses. Water may be another limiting factor, especially if an industrial user requires water from the Pixley Public Utilities District.

This alternative would result in an additional 486 acres being removed from agricultural uses when compared to the proposed Pixley Community Plan. This potential conversion

of agricultural land to industrial uses will have a more substantial impact on the environment than the proposed Community Plan. More substantial environmental impacts associated with converting 486 acres of agricultural uses (mostly in the form of farmland) to industrial uses would also likely result in significant impacts to water supply, wastewater treatment, traffic, and air quality. Lastly, the additional 486 acres far exceeds the projected 343 acres of commercial and industrial land uses need as shown on Table 6.9 in Chapter 6 Economic, Social, & Growth Inducing Effects of this DEIR. As indicated in Chapter 6, the forecasted need is based on growth rates from the Harmon Field Preliminary Industrial Development Plan.

For the reasons stated above, *Alternative B Larger UDB Expansion* has been rejected by the County of Tulare.

- ***Alternative C. Proposed Land Use Plan*** – (UDB Expansion to 2,596 acres) Under this scenario, the proposed plan recommends mixed land overlay zoning and amending the underlying land use to light industrial the former Harmon Field Airport site and at the southwest corner of Avenue 112 and Road 124 for consistency and compatibility with existing infrastructure. This scenario also primarily directs residential growth north and east of existing residential development and, to a lesser extent, west of SR 99. Industrial growth would continue to be directed to the north (primarily west of SR 99) and includes light industrial reserve designations to the south (primarily west of SR 99 and, to a lesser extent, east of SR 99). The Harmon Field area would be designated as mixed use overlay on Industrial designated land. The growth focus is advocated by residents of the community.
- ***Alternative D. No Expansion of UDB*** – Under this scenario, there would be no expansion of the current Pixley UDB which has been in existence since 1999. This alternative would be limited to addressing land use and zoning inconsistencies. This approach is too narrow to meet the economic development objectives contained in the draft Pixley Community Plan and would not accommodate land uses needed to further planned growth. Without expanding the UDB, the Plan fails to meet the objectives or the benefits of the Community Plan. For the reasons stated above, *Alternative D No Expansion of UDB* has been rejected by the County of Tulare.

The alternative selection process was complimented with background information from identification of community issues of concern presented by the residents of the community, in the development of several project objectives. The community outreach process was conducted to incorporate stakeholder input (in the form of workshops and meetings) at numerous public and agency outreach events. Consistent with CEQA requirements (CEQA Guidelines Section 15126.6(a)), the EIR process reviewed these scenarios and developed a range of alternatives designed to feasibly attain most of the project objectives but also avoid or lessen several significant effects associated with the proposed project.

Alternative Project Location. None of the alternatives includes consideration of an alternative location. The CEQA Guidelines (Section 15126.6(3) (f) (2)) recommend considering an alternative location to reduce potential impacts of a project. However, the goals

and policies of the proposed project are specific to the geographic context of the Pixley planning area. Build-out consistent with the goals and policies of the proposed project at another location does not make sense for a community plan that applies only to selected properties under the County's jurisdiction within the Pixley Planning area. Thus, this EIR does not evaluate an Alternative Location alternative.

Alternatives Selected for Further Consideration

The following section provides a general description of the four alternatives considered in this analysis. Using the community workshop input identified above, these four alternatives were developed and have been determined to represent a reasonable range of alternatives which (with the exception of "No Project" and "Existing Plan") have the potential to feasibly attain a number of the basic project objectives.

Section 15126.6(e) of the CEQA Guidelines requires that an EIR evaluate and analyze the environmental impacts of the "No-Project" Alternative. Under this alternative current development patterns are assumed to occur in accordance with the existing General Plan, Zoning Ordinance, and the adopted Pixley Community Plan.

Factors Considered In Analysis of Alternatives

In this Alternatives analysis the following criteria will be used:

Evaluation Criteria 1: Land Use and Environmental Planning

The primary purpose of this objective is to promote development within planning areas next to the Regional State Route 99 Corridor in order to implement the land use and environmental planning goals of the General Plan 2030 Update.

- a) Ensure that the text and mapping of the Community Plan Designations and Zoning Reclassifications address various development matters such as encouraging Agricultural Adaptive Reuse activities, recognizing Non-Conforming Use activities, and facilitating Ministerial Permit approvals;
- b) Encourage infill development within Urban Development Boundaries, thereby discouraging leapfrog development within Tulare County;
- c) Reduce development pressure on agriculturally-designated lands within the Valley Floor, thereby encouraging agricultural production to flourish;
- d) Reduce vehicle miles travelled throughout the County, thereby positively affecting air quality and greenhouse gas reduction; and
- e) Help to improve the circulation, transit and railroad transportation system within this community, including, but not limited to, laying the groundwork for the construction of key projects such as Safe Routes to Schools, Complete Streets, and Bike Lanes/Pedestrian Paths.

Evaluation Criteria 2: Improvements for a "disadvantaged community"

Community planning areas will be improved with quicker project processing, increased housing grant awards, and enhanced infrastructure grant awards.

- a) With quicker project processing resulting from an updated community plan, increased employment opportunities are more likely to be provided by the private sector as proposed project developments can be approved as expeditiously and efficiently as possible;
- b) Increased housing grant awards are more likely to occur based on updated community plans that are consistent with the policies of the recently adopted (August 2012) General Plan Update and Housing Element; and
- c) With updated community plans, enhanced infrastructure grant awards are more likely, thereby providing access to funding to install or upgrade road, water, wastewater, and storm water facilities.

Evaluation Criteria 3: Strengthening Relationship with TCAG

An important benefit of this expedited community plan process will be the opportunity for RMA to strengthen the County's relationship with the Tulare County Association of Governments (TCAG) in that this and other community plans will help to facilitate the funding and implementation of several key transportation programs such as Safe Routes to Schools, Complete Streets, and Bike/Pedestrian Projects.

By pursuing these transportation programs through a heightened collaborative process, the likelihood of getting actual projects in the ground will be realized faster than historically achieved. In doing so, these communities and others can become safer and healthier by providing a more efficient transportation network.

POTENTIAL IMPACTS OF ALTERNATIVES

The **Table 5-1** is a generalized comparative assessment of potential impacts of the alternatives.

Draft Environmental Impact Report
Pixley Community Plan

Table 5-1
Alternatives Potential Impact Analysis

	<i>Alternative A No Project</i>	<i>Alternative B Larger UDB Expansion</i>	<i>Alternative C Proposed UDB</i>	<i>Alternative D No Expansion of UDB</i>
Aesthetics	Similar	More	Similar	More
Agriculture and Forestry Resources	Similar	More	Similar	Similar
Air Quality	Similar	More	Similar	Similar
Biological Resources	Similar	More	Similar	More
Cultural Resources	Similar	More	Similar	Similar
Geology and Soils	Similar	More	Similar	Similar
Greenhouse Gas Emissions	Similar	More	Similar	More
Hazards and Hazardous Materials	Similar	More	Similar	Similar
Hydrology and Water Quality	Similar	More	Similar	Similar
Land Use and Planning	Similar	More	Similar	Similar
Mineral Resources	Similar	More	Similar	Similar
Noise	Similar	Similar	Similar	Similar
Population and Housing	Similar	More	Similar	More
Public Services	Similar	More	Similar	More
Recreation	Similar	More	Similar	More
Transportation and Traffic	Similar	More	Similar	More
Utilities and Service Systems	Similar	More	Similar	More
Mandatory Findings of Significance	Similar	More	Similar	More
Cumulative Impacts	Similar	More	Similar	More
Impact Reduction	Yes	No	Yes	Same

Alternatives A and C have similar impacts, which are less substantial or significant than the UDB expansion as proposed under *Alternative B*. *Alternatives A and C* scenarios, proposed land uses, and circulation plans are comparable. The environmental impacts associated with an expanded UDB as proposed in *Alternative B* are more substantial and significant and are inconsistent with those anticipated or analyzed in this EIR. *Alternative D* would result in many similar impacts as *Alternatives A and C* however; it does not meet the economic development objectives contained in the draft Pixley Community Plan.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

As previously described, **Table 5-1** provides a summary of the anticipated impacts resulting from implementation of the alternatives compared to those identified for the proposed project. As summarized in the table, the environmentally superior alternative for this project would be *Alternative C* (Proposed UDB). Other than the *No Project Alternative*, this is the only alternative that would reduce the significance of most environmental impacts associated with the proposed Project. As described above, build-out of *Alternative D* would convert less open space and prime agricultural farmland than the proposed project. This alternative also has the potential to result in fewer impacts to water and sewer; however, it does not meet the economic development objectives of the draft Pixley Community Plan. As such, the proposed Project is the environmentally superior alternative.

ALTERNATIVES ANALYSIS

The proposed Alternatives were analyzed based on the three evaluation criteria listed earlier. Three of the Alternatives considered would not meet all or some of the objectives of the proposed Project. The evaluation summary of each of the Alternatives is shown in **Table 5-2**.

Table 5-2
Summary of the Alternatives Ability to Meet the Proposed Project Objectives

	<i>Alternative A No Project</i>	<i>Alternative B Larger UDB Expansion</i>	<i>Alternative C Proposed UDB</i>	<i>Alternative D No Expansion of UDB.</i>
1. Land Use and Environmental Planning	No	Yes	Yes	Yes
2. Improvements for a “disadvantaged community	No	No	No	Yes
3. Strengthening Relationship with TCAG	No	No	Yes	Yes

A summary of the Alternative’s ability to meet each of the project objectives is provided in **Table 5-2**. Under these Alternatives, the County would continue with implementation of its existing Pixley Community Plan as adopted, which would remain as the adopted long-range planning policy document for the Pixley Community. Current development patterns would continue to occur in accordance with the existing General Plan, Zoning Ordinance, and the adopted Pixley Community Plan. Consequently, these alternatives would fundamentally fail to meet the Project Objectives described above because failure to update the County’s existing Pixley Community Plan will not result in a comprehensive update to the Pixley Community Plan’s existing goals and policies to help incorporate current planning, environmental, and regulatory trends and objectives. Failure to incorporate these updated goals and policies could make it more difficult to provide the necessary planning framework that would set standards for the protection of habitats, agricultural areas, scenic landscapes and promotion of economic development opportunities. The lack of updated economic development policies or programs may also make it more difficult to promote the desired level of reinvestment within existing communities and hamlets. However, it is assumed that the County would still continue to

coordinate and cooperate with other local agencies and organizations on a variety of relevant land management issues regardless of whether the Pixley Community Plan is updated or not.

A summary of *Alternative C's* ability to meet each of the proposed project objectives is provided in **Table 5-2**. Under *Alternative C*, the County would adopt the Pixley Community Plan Update that would focus growth within the proposed UDB for Pixley. Because this alternative would include adoption of a comprehensive Community Plan Update that includes updated goals and policies to transition into current planning, environmental, and regulatory trends and objectives, *Alternative C* would meet all objectives identified in **Table 5-2**. Additionally, higher levels of anticipated growth and development would help to promote the desired level of investment and reinvestment within the Pixley Community Plan area. *Alternative C* fully meets all of the Project objectives and provides additional opportunities for small unincorporated communities like Pixley to grow, address public health and safety concerns, and improve their quality of life when compared to *Alternative D*. As with all the Alternatives, it is assumed that the County would still continue to coordinate and cooperate with other local agencies and organizations on a variety of relevant land use and other issues regardless of whether the Pixley Community Plan is Update is adopted.

A summary of *Alternative D's* (No Expansion of UDB) ability to meet each of the proposed project objectives is provided in **Table 5-2**. Under *Alternative D*, the County would adopt a comprehensive update of the Pixley Community Plan that includes updated goals and policies to help incorporate current planning, environmental, and regulatory trends and objectives. *Alternative D* however; would not meet the all Project objectives identified in **Table 5-2** as no UDB expansion is proposed. Lower levels of anticipated growth and development associated with this Alternative may make it more difficult to achieve the desired level of investment and reinvestment within the existing Pixley Community Plan area. Consequently, *Alternative D* would not fully meet Project objectives that encourage additional opportunities for small unincorporated communities like Pixley to grow, address public health and safety concerns, and improve their quality of life as compared to *Alternative C*. With the absence of an expanded UDB, more growth would most likely be directed to other unincorporated communities further north or south versus within Pixley. As with all the Alternatives, it is assumed that the County would still continue to coordinate and cooperate with other local agencies and organizations on a variety of relevant land use or other issues regardless of whether the Pixley Community Plan Update is adopted.

After this full, substantial, and deliberate analysis the recommended Project is Alternative D.

Economic & Social Effects And Growth Inducing Chapter 6

INTRODUCTION

This Chapter discusses economic, social and growth inducing effects of the Project. **Table 6-1** provides the CEQA requirements and a summary of the impact analysis.

The Pixley's Community Plan was originally adopted in 1997. Conditions in Pixley have changed and policies and implementation strategies should be updated to address existing conditions. This Community Plan Update will be used to foster economic development by identifying opportunities for development. This Community Plan is also a part of the implementation of the Tulare County 2030 General Plan, Tulare County Housing Element, Harmon Field Preliminary Industrial Development Plan, Tulare County Regional Blueprint, Sustainable Highway 99 Corridor Plan, and the San Joaquin Valley Regional Blueprint.

To comply with CEQA, an Environmental Impact Report (EIR) must discuss the ways in which the proposed project could affect economic or population growth in the vicinity of the project and how the characteristics of the project could result in other activities with adverse impacts to the environment [CEQA Guidelines Section 15126.2(d)].

Specifically, CEQA Guidelines Section 15126.2 (d) states that an EIR must:

“Growth-Inducing Impact of the Proposed Project. Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.”¹

Economic growth refers to the extent to which a proposed project could cause increased activity in the local or regional economy. Economic and population growth can be induced in a number of ways, including through the elimination of obstacles to growth, or through the stimulation of economic activity. Elimination of obstacles to growth refers to the extent to which a proposed project removes infrastructure limitations or removes regulatory constraints that could result in growth. For example, an increase in the capacity of utility or road infrastructure that is installed as part of the proposed project could allow either new or additional development in the

¹ CEQA Guidelines Section 15126.2(d)

Draft Environmental Impact Report
Pixley Community Plan

surrounding areas. Increases in the population may tax existing community service facilities, requiring new facilities, the construction of which could cause potentially significant environmental impacts.

“The San Joaquin Valley faces major challenges. One concerns how to handle future growth. Population in the Valley is expected to nearly triple by 2050, from 3.6 million to 9.4 million people, the equivalent of adding 11 new towns the size of Fresno to the area. Tulare County is expected to grow to over 1,000,000 residents by 2050, well over doubling its current population². This population growth will place increasing pressure on our Tulare County’s unique and fragile environment along with our transportation system.”³

Table 6-1
Summary of Economic, Social and Growth Inducing Impacts

Topic	Summary of Impact	CEQA Requirement
Economic Impact	The proposed Project will not result in negative impacts to the region. It will result in increases in economic benefits to the region over time (i.e., the 2032 planning period). Overall, the proposed Project will result in employment of additional persons.	CEQA does not have specific requirements for evaluating the economic impacts of a proposed project. Section 15131 of CEQA Guidelines states that “Economic or social information may be included in an EIR or may be presented in whatever form the agency desires.”
Social Impact	The proposed Project will not result in a disproportionate effect on minority populations, low income populations, or Native Americans. The proposed Project does not pose any adverse environmental justice issues that would require mitigation.	The social impacts of a Project include environmental justice considerations. California Government Code Section 65040.12 defines Environmental Justice as “the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations and policies.”
Growth Inducing Effect	The proposed Project will not result in significant growth inducing impacts. The intent of the Project is to provide opportunities, such as Mixed-Use and industrial land use designations, to stimulate economic development to meet the needs of existing and future community and nearby residents. Development along the State Route 99 Corridor is anticipated to capture pass through traffic. As such, the Project will not result in new housing. Growth inducing impacts will be Less Than Significant.	CEQA Guidelines § 15126 (d) makes recommendations for analyzing impacts due to growth inducement, including discussing ways in which the project could foster economic or population growth, the construction of additional housing, or other factors which could remove obstacles to population growth or encourage and facilitate other activities which could impact the environment individually or cumulatively.

Therefore, implementation of the proposed Project will result in ***Less Than Significant Environmental Impacts***, either individually or cumulatively, caused by either economic, social, or growth inducing effects.

² Tulare County Regional Blue Print, May 2009, page 7

³ Ibid.

ENVIRONMENTAL SETTING

“Tulare County has one of the highest rates of unemployment in California and the nation, due in large part to the seasonal nature of agricultural employment. Employment figures for Tulare County are released by the California Employment Development Department (EDD) in the monthly Labor Force Report. The most recent unemployment figures available (December 2008) reveal a national unemployment rate of 7.2%, 9.3% for California, and 14.3% for Tulare County.”⁴

“Approximately 25 percent of the County’s population lives under the poverty level. A comparison between poverty levels from 1990 and 2000 (Table 3-K) shows overall the County’s poverty level has remained constant. However, upon closer investigation there appears to be improvement in some specific communities; London has improved from 64 percent to 45 percent and Tipton from 35 percent to 20 percent. Other communities have gotten worse; Pixley has slipped from 30 percent to 43 percent and Woodville has gone from 26 percent to 37 percent. Tulare County’s rural communities continue to have lower incomes and a higher level of poverty.”⁵

Severely Disadvantaged Community

“Public Resources Code 75005. (g) states that a “[d]isadvantaged community” means a community with a median household income less than 80% of the statewide average. “Severely disadvantaged community” means a community with a median household income less than 60% of the statewide average.”

“Mean and Median income in Pixley is very low compared to Tulare County and the State of California. Pixley’s median household income was \$27,532, compared to \$43,550 for Tulare County and \$61,632 for the State of California. Pixley’s mean family income was \$48,836, compared to \$62,360 for Tulare County and \$94,747 for the State of California. Pixley’s per capita income was also low at \$11,976 compared to \$17,986 for Tulare County and \$29,634 for the State of California.”⁶

As indicated in the Draft Pixley Community Plan, “...the California Department of Finance, the 2007-2011 indicated that 34.7% of families in Pixley lives below the poverty line. Approximately 70.6% of female householders with no husband in Pixley lives under the poverty line. Approximately 46.9% of persons under 18 also lives under the poverty line.

Pixley has a higher level of poverty overall at 34.7% compared to Tulare County at 19.5% and the State of California at 10.8%. The highest differential is the poverty rate of female householder with no husband. Pixley’s poverty rate for female householder with no husband is 70.6% compared to 39.4% for Tulare County and 25.5 % for the State of California. Pixley’s

⁴ 2009 Tulare County Housing Element, page 30

⁵ Ibid. 35

⁶ Pixley Community Plan Update. Page 44

Draft Environmental Impact Report
Pixley Community Plan

poverty rate for all people is 42.2% compared to 23.8% for Tulare County and 14.4% for the State of California.”⁷

Pixley’s occupation distribution is shown in **Table 6-2** (figures are rounded to nearest whole number). Agricultural-related occupations make up almost 52%, while Service occupations (15%), Production, transportation, and/material moving occupations (13%), Sales and office occupations (11%), and Management, professional, and related occupations (9%) make up the balance of the civilian employed population 16 years and over.

Table 6-2
Pixley’s Occupation Distribution

Occupation	Pixley CDP, California	
	Number	Percent
Management, professional, and related occupations	94	8.9
Service occupations	161	15.3
Sales and office occupations	115	10.9
Natural resources, construction, and maintenance (includes farming-related)	544	51.7
Production, transportation, and material moving	137	13.0
TOTAL	1051	100
<i>Source: 2010 U.S. Census American FactFinder which can be accessed at: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF</i>		

“The existing Urban Development Boundary contains approximately 2,064 acres.”⁸

“Pixley’s economy is based primarily on the agricultural sector, Most of the people who live in the community are engaged in agricultural labor pursuits and most of the community’s industry is agriculturally oriented. Unfortunately, this sector of the labor force is characterized by low incomes, unstable market conditions and seasonal employment, It is for this reason that the median income of Pixley residents is far below the median income for the rest of the County. The lack of economic opportunities can often have significant land use implications. Low incomes are a major source reason for the depressing housing conditions in the area and a primary cause for the number of second and third dwelling units in the single family residential areas. The lack of economic opportunity is also a reason for the deteriorating conditions of the commercial area, especially in Pixley.

To improve incomes and to provide greater stability in its economic base, nonagricultural industries, or less seasonal agricultural support industries that provide higher wages and year-round employment are needed.”⁹

“Industry considers a number of factors when seeking a site for a plant. Some of these factors include the cost of labor, land and utilities, properly zoned and available sites; good access,

⁷ Ibid. 45

⁸ Ibid.7

⁹ Pixley Community Plan, pages 4-7 and 4-8.

including freeway and rail linkage; adequate infrastructure; and protection from conflicting land uses. With some assistance from the County, appropriate new industry could be persuaded to locate in this area. However, this plan recognizes that will not be an easy task give the competition between communities for new jobs. However, given the economic conditions of the area, the County should make a special effort to target some of its economic development efforts in the Pixley area.”¹⁰

ECONOMIC IMPACTS

Under CEQA Guidelines 15131, “[e]conomic or social information may be included in an EIR or may be presented in whatever form the agency desires.

- (a) Economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes.
- (b) Economic or social effects of a project may be used to determine the significance of physical changes caused by the project. For example, if the construction of a new freeway or rail line divides an existing community, the construction would be the physical change, but the social effect on the community would be the basis for determining that the effect would be significant. As an additional example, if the construction of a road and the resulting increase in noise in an area disturbed existing religious practices in the area, the disturbance of the religious practices could be used to determine that the construction and use of the road and the resulting noise would be significant effects on the environment. The religious practices would need to be analyzed only to the extent to show that the increase in traffic and noise would conflict with the religious practices. Where an EIR uses economic or social effects to determine that a physical change is significant, the EIR shall explain the reason for determining that the effect is significant.
- (c) Economic, social, and particularly housing factors shall be considered by public agencies together with technological and environmental factors in deciding whether changes in a project are feasible to reduce or avoid the significant effects on the environment identified in the EIR. If information on these factors is not contained in the EIR, the information must be added to the record in some other manner to allow the agency to consider the factors in reaching a decision on the project.”¹¹

ECONOMIC BENEFITS OF PROPOSED PROJECT

Employment Projections California

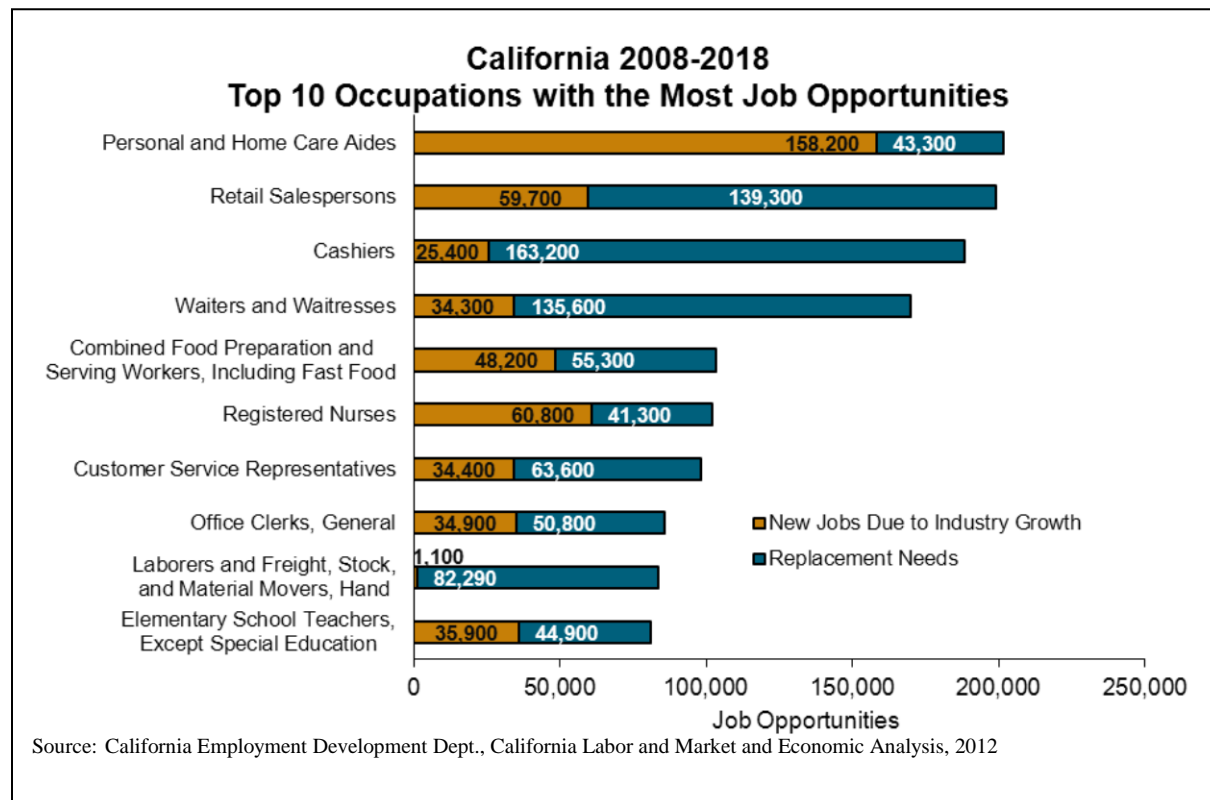
¹⁰ Ibid. Page 4-8.

¹¹ CEQA Guidelines, Section 15131

Draft Environmental Impact Report
Pixley Community Plan

“By the end of the 2008-2018 projection period, total nonfarm employment in California is projected to grow to nearly 16.5 million jobs. This exceeds peak job level of just over 15.2 million jobs reached before the Great Recession by over 1.2 million jobs. From June 2007 to June 2009, 1.1 million jobs were lost (not seasonally adjusted). Over the 2008-to-2018 projections period, nonfarm employment is expected to rebound by 1,511,100 jobs as the economy recovers from these recessionary job losses. More than 50 percent of all projected nonfarm job growth is in education services (private), health care, and social assistance, and professional and business services. The largest number of new jobs is expected in education services, health care, and social assistance, with a gain of more than 421,000 jobs.

Factors fueling the economic recovery in California include the state’s population growth and a rise in foreign imports and exports... The state’s population increased by more than 3.3 million from 2000 to 2010 and the California Department of Finance projects the population will increase by another 4.3 million from 2010 to 2020. A steady increase in foreign imports and exports has strengthened the wholesale, retail, and transportation industry sectors.”¹²



Tulare County’s Local Economy

“Similar to the broader Central Valley area, Tulare County’s economy has been largely based on agriculture, food processing, and manufacturing, while professional services jobs have been

¹² California Labor and Market and Economic Analysis, 2012, page 27

Draft Environmental Impact Report
Pixley Community Plan

limited. Tulare is the second most productive agricultural county in a State that itself is by far the most productive in the nation. Overall, agribusinesses produced \$5 billion in commodities in 2008 with the County considered one of the largest milk producers in the United States.

Tulare County is also a major distribution hub because of its central location in the State, approximately 200 miles north of Los Angeles and 225 miles south of San Francisco. The County's employment base has been significantly impacted by the downturn (2008 to 2011) with unemployment increasing to 18.3 percent in January 2010, significantly above the historic range of between 8.5 and 18.2 since 1990. In 2008, the median household income was approximately \$44,000. [table 8]

The County's major employers are Tulare County government, Porterville Development Center, Kaweah Delta Healthcare, and Ruiz Food Products. The top 20 employers combine for about 19,300 jobs, or 11 percent of the overall county employment. The major distributors include Jo-Ann Fabrics, VF Distribution, Wal-Mart, and Best Buy Electronics that combine for nearly 3.5 million square feet of distribution space. The county's overall industrial market includes about 23 million square feet of building space."¹³

Table 6-3						
Number of Establishments in Pixley by Employment-size class						
Total	Total	1-4 Employees	5-9 Employees	10-19 Employees	20-49 Employees	50-99 Employees
Total for all sectors	38	22	6	7	1	2
Forestry & Agriculture Support	1	0	0	1	0	0
Construction	2	0	1	1	0	0
Manufacturing	5	1	1	1	0	2
Wholesale trade	1	1	0	0	0	0
Retail trade	9	8	0	1	0	0
Transportation and warehousing	12	7	3	1	1	0
Real estate and rental and leasing	1	1	0	0	0	0
Administrative & Support and Waste Management	1	0	0	1	0	0
Health care and social assistance	2	1	0	1	0	0
Accommodation and food services	3	2	1	0	0	0
Other services (except public administration)	1	1	0	0	0	0
<i>Source: 2011 County Business Patterns, US Census</i>						

¹³ Visalia General Plan Update: Existing Conditions Report, page 3-16

Draft Environmental Impact Report
Pixley Community Plan

“Employment in Pixley

According to the 2010 US Census, Pixley had 38 businesses in 2011. The size of these businesses ranged from 1 to 99 employees.

Table 6-4			
2007-2011 American Community Survey: Unemployment			
	Population	Total Civilian labor force	Unemployment Rate Percent
California	28,796,402	18,472,288	10.1
Tulare County	309,977	193,537	13.5
Pixley CDP	1,904	1,153	26.2
<i>Source: California Department of Finance</i>			

SOCIAL EFFECTS

Environmental Justice

On February 11, 1994, President Clinton signed Executive Order (E.O.) 12898, titled “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.” The executive order followed a 1992 report by the U.S. Environmental Protection Agency (U.S. EPA) indicating that “[r]acial minority and low-income populations experience higher than average exposures to selected air pollutants, hazardous waste facilities, and other forms of environmental pollution.” Among other things, E.O. 12898 directed federal agencies to incorporate environmental justice into their missions.”¹⁴ The basis for environmental justice lies in the Equal Protection Clause of the U.S. Constitution, wherein, the Fourteenth Amendment expressly states the following: “No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.”¹⁵

Low-income and Minority Populations

The draft Pixley Community Plan Update contains various demographic information that was considered in order to develop a Plan that addresses all segments of the community. As noted in the Community Plan; “In 2010, 45% of the Pixley’s population was white, 3% was African American, 1% was Native American, 0% was Asian, and 4% was two races or more. Approximately 81% was Hispanic (of any race).”¹⁶ As evident, the Hispanic community represents the largest of any ethnic/racial group in Pixley. Further, “[the] Mean and Median income in Pixley is very low compared to Tulare County and the State of California. Pixley’s median household income was \$27,532, compared to \$43,550 for Tulare County and \$61,632 for the State of California. Pixley’s mean family income was \$ 48,836, compared to \$62,360 for

¹⁴ General Plan Guidelines, page 22

¹⁵ U.S. Constitution, Amendment XIV, §1

¹⁶ Draft Pixley Community Plan Update. Page 41

Draft Environmental Impact Report Pixley Community Plan

Tulare County and \$94,747 for the State of California. Pixley's per capita income was also low at \$11,976 compared to \$17,986 for Tulare County and \$29,634 for the State of California.

The Project site is located within a disadvantaged community (as defined by E.O. 12898). Pixley is located in the southwest portion of the County between the communities of Tipton and Earlimart along State Route (SR) 99. Pixley is bisected in a north-south direction by SR 99, which runs east of and parallel to the Southern Pacific Railroad (S.P.R.R.) tracks. Local roads that provide access across SR 99 include East Court Avenue, Davis Avenue, and Terra Bella Avenue (interchange). Local railroad crossings are located at Davis Avenue and Terra Bella Avenue.. There is also a commercial/industrial area in the North part of the Pixley UDB.¹⁷ There are no known housing for migrant farm workers is located within a mile of the site.

The Pixley Community Plan Update (pages 82-83) contains many policies that are intended to provide opportunities for affordable housing, some of which are noted on pages 6-14 thru 6-15 of this Chapter. The policies would minimize land use conflicts; pursue an equitable distribution of future regional housing needs allocations; encourage the construction of new housing units for "special needs" groups, including senior citizens, large families, single heads of households, households of persons with physical and/or mental disabilities, minorities, farmworkers, and the homeless in close proximity to transit, services, and jobs; preparation of new and/or updated community plans that provide adequate sites for a variety of types of housing within the development boundaries of community; etc. Therefore, updating the Pixley Community Plan will not adversely impact low-income and/or minority populations.

Unemployment in Tulare County

According to the 2030 Update of the Tulare County General Plan, Tulare County's economy has historically been driven by agriculture and has had one of the largest agricultural outputs of any county in the US. Despite this, the Tulare County unemployment rate has remained consistently higher than the State average, which can be largely attributed to the seasonal nature of agricultural production.

According to the California Department of Finance, the 2007-2011 American Community indicated that the unemployment rate in Pixley had an unemployment rate of 26.2% while Tulare County's unemployment rate was 13.5%. The State of California's unemployment rate was 10.1%.

Income

Mean and Median income in Pixley is very low compared to Tulare County and the State of California. Pixley's median household income was \$27,532, compared to \$43,550 for Tulare County and \$61,632 for the State of California. Pixley's mean family income was \$48,836, compared to \$62,360 for Tulare County and \$94,747 for the State of California. Pixley's per capita income was also low at \$11,976 compared to \$17,986 for Tulare County and \$29,634 for the State of California. (See **Table 6-5**)

¹⁷ Ibid. 3

Draft Environmental Impact Report
Pixley Community Plan

Table 6-5 2007-2011 American Community Survey: Income					
	Median household income (dollars)	Mean household income (dollars)	Median family income (dollars)	Mean family income (dollars)	Per capita income (dollars)
California	\$61,632	\$85,148	\$70,231	\$94,747	\$29,634
Tulare County	\$43,550	\$58,931	\$46,881	\$62,360	\$17,986
Pixley CDP	\$27,532	\$47,340	\$28,750	\$48,836	\$11,976
<i>Source: California Department of Finance</i>					

Poverty

The California Department of Finance, in 2007-2011 indicated that 34.7% of families in Pixley lives below the poverty line. Approximately 70.6% of female householders with no husband in Pixley lives under the poverty line. Approximately 46.9% of persons under 18 also live under the poverty line.

Pixley has a higher level of poverty overall at 34.7% compared to Tulare County at 19.5% and the State of California at 10.8%. The highest differential is the poverty rate of female householder with no husband. Pixley's poverty rate for female householder with no husband is 70.6% compared to 39.4% for Tulare County and 25.5 % for the State of California. Pixley's poverty rate for all people is 42.2% compared to 23.8% for Tulare County and 14.4% for the State of California. [Table 6-6]

Table 6-6 2007-2011 American Community Survey: Poverty					
Geography	All families	Married couple families	Families with female householder, no husband present	All people	Persons under 18 years
California	10.80%	6.40%	25.50%	14.40%	19.90%
Tulare County	19.50%	13.30%	39.40%	23.80%	32.80%
Pixley CDP	34.7%	32.2%	70.6%	42.2%	46.9%
<i>Source: California Department of Finance</i>					

Affordable Housing

As County Policies require contiguous development and an orderly extension of services, the recommendation not to amend the location of the existing UDB not only satisfies development suitability requirements, but also provides the requisite area needed to meet forecast land demand in the Pixley Community.

“Affordability problems occur when housing costs become so high in relation to income that households have to pay an excessive proportion of their income for housing, or are unable to

Draft Environmental Impact Report
Pixley Community Plan

afford any housing and are homeless. A household is considered to be overpaying (or cost burdened) if it spends more than 30 percent of its gross income on housing. Severe overpayment occurs when a household spends more than 50 percent of income on housing. Housing costs depend upon many variables, including the type, size, value and/or location of the housing units, the intended tenure of the unit (whether it is to be occupied by owners or renters), and the inclusion or exclusion of one or more utilities, services, property taxes, insurance, and maintenance.

The 2000 Census indicates that overpayment remains a critical problem for low and moderate-income households, who are disproportionately affected by this burden compared to other households. Data for the unincorporated areas of Tulare County for the table below was calculated using 2000 Census figures for renters from Census Table H73 “Household Income in 1999 by Gross Rent as a Percentage of Households” and for homeowners from Census Table H97 “Household Income in 1999 by Selected Monthly Owner Costs as a Percentage of Household Income in 1999”. Household information for the incorporated cities was subtracted from information for the total county to obtain results for the unincorporated area. Households in the unincorporated area of Tulare County that overpay for housing are shown by tenure in Table 3-M.¹⁸

“In general overpayment disproportionately affects lower income households, as shown in Table 3-O. While some higher income households may choose to spend greater portions of their income for housing, the cost burden for lower income households reflect choices limited by a lack of sufficient affordable housing opportunities. These households have a higher percentage of housing problems and a greater cost burden than other households. As noted below, the housing cost burden increases as income decreases - 37% of low income households (with income between 50% and 80% median family income), 60.8% of very low income households (with income between 30% and 50%) and 75% of extremely low income households (with income less than 30% of median family income) spend more than 30% of household income for housing in Tulare County as a whole. Many have never lived in a sound housing unit and securing affordable shelter of any condition is a major task, unless they inherit a dwelling or receive financial assistance. Lower income households who are overpaying for housing frequently have insufficient resources for other critical essentials, such as food and medicine. This is a significant hardship for too many workers, families and seniors, but also impacts local economies, since money that might otherwise be spent in local stores generating sales tax revenues is being spent on housing.”¹⁹

The community of Pixley has a median income of \$27,532 which is considerably less than 60% of the State median income of \$61,632. Approximately 48.9% of the households in Pixley spend 35% or more of their income on housing. As such, there is a demonstrated need for affordable housing.

As noted in the Pixley Community Plan Update, 48.9% of renters spent 35% or more of their income on rent.²⁰ Nearly 71% of the households are made up of families with a female

¹⁸ 2009 Tulare County Housing Element. Pages 36-37

¹⁹ Ibid. 37

²⁰ Pixley Community Plan Update. Page 50

Draft Environmental Impact Report
Pixley Community Plan

householder with no husband present.²¹ Is noted in Table 15 (2007-2011 American Community Survey: Tenure) of the Pixley Community Plan Update, Pixley's average household size varied between renter-occupied units (4.17 persons per household) and owner-occupied units (4.05 persons per household).²²

As shown on in Table 3-QQ of the Tulare County Housing Element (page 68), there is no publicly owned farmworker housing (2008) within the community of Pixley. Further, throughout the County; "The supply of farmworker housing remains inadequate, largely because area growers only offer limited housing facilities and supportive services to employees. Historically, many migrant agricultural workers resided in farm labor camps throughout the County. However, similar to areas throughout the State, many farm operators have shifted away from hiring their own workers, and instead use farm labor contractors to provide needed agricultural labor, particularly for migrant or seasonal labor. The majority of farm operators is therefore not directly involved with employing their workforce, and has also removed themselves from providing housing for the workers. However, it is difficult to quantify this trend because additional housing for up to nine farmworkers is permitted by right in all Tulare County's AE (Exclusive Agriculture) zones and data on these housing units is limited. Farms that are providing housing for ten or more employees are detailed in the Table 3-SS [of the Housing Element]."²³

The Pixley Community Plan update contains many Tulare County policies and policies specific to Pixley (for example, see 82-83, 85, 90-91, 93, 101-102) that are intended to provide opportunities for affordable housing such as:

Tulare County General Plan Housing Policies

LU-1.2 Innovative Development - The County shall promote flexibility and innovation through the use of planned unit developments, development agreements, specific plans, Mixed Use projects, and other innovative development and planning techniques.

LU-1.8 Encourage Infill Development - The County shall encourage and provide incentives for infill development to occur in communities and hamlets within or adjacent to existing development in order to maximize the use of land within existing urban areas, minimize the conversion of existing agricultural land, and minimize environmental concerns associated with new development.

LU-3.3 High-Density Residential Locations - The County shall encourage high-density residential development (greater than 14 dwelling units per gross acre) to locate along collector roadways and transit routes, and near public facilities (e.g., schools, parks), shopping, recreation, and entertainment.

LU-7.16 Water Conservation - The County shall encourage the inclusion of "extra-ordinary" water conservation and demand management measures for residential, commercial, and industrial indoor and outdoor water uses in all new urban development.

²¹ Ibid. 45

²² Op. Cit. 47

²³ 2009 Tulare county Housing element. Page 69

Housing Guiding Principle 1.1 - Endeavor to improve opportunities for affordable housing in a wide range of housing types in the communities throughout the unincorporated area of the County.

Housing Policy 1.11 - Encourage the development of a broad range of housing types to provide an opportunity of choice in the local housing market.

Housing Policy 1.13 - Encourage the utilization of modular units, prefabricated units, and manufactured homes.

Housing Policy 1.14 - Pursue an equitable distribution of future regional housing needs allocations, thereby providing a greater likelihood of assuring a balance between housing development and the location of employment opportunities.

Housing Policy 1.15 - Encourage housing counseling programs for low income homebuyers and homeowners.

Housing Policy 1.16 - Review Community Plans and zoning to ensure they provide for adequate affordable residential development.

Housing Guiding Principle 1.2 - Promote equal housing opportunities for all persons regardless of race, religion, sex, marital status, ancestry, national origin, color, family status, disability, or any other arbitrary basis.

Housing Guiding Principle 1.3 - Strive to meet the housing needs of migrant and non-migrant farmworkers and their families with a suitable, affordable and satisfactory living environment.

Housing Policy 1.31 - Encourage the provision of farmworker housing opportunities in conformance with the Employee Housing Act.

Housing Guiding Principle 1.4 - Enhance and support emergency shelters and transitional and supportive housing programs that assist the homeless and others in need.

Housing Policy 1.51 - Encourage the construction of new housing units for “special needs” groups, including senior citizens, large families, single heads of households, households of persons with physical and/or mental disabilities, minorities, farmworkers, and the homeless in close proximity to transit, services, and jobs.

Housing Policy 1.52 - Support and encourage the development and improvement of senior citizen group housing, convalescent homes and other continuous care facilities.

Housing Policy 1.55 - Encourage development of rental housing for large families, as well as providing for other housing needs and types.

Housing Guiding Principle 1.6 - Assess and amend County ordinances, standards, practices and procedures considered necessary to carry out the County's essential housing goal of the attainment of a suitable, affordable and satisfactory living environment for every present and future resident in unincorporated areas.

Housing Policy 2.14 - Create and maintain a matrix of Infrastructure Development Priorities for Disadvantaged Unincorporated Communities in Tulare County thorough analysis and investigation of public infrastructure needs and deficits, pursuant to Action Program 9.

Housing Guiding Principle 2.2 - Require proposed new housing developments located within the development boundaries of unincorporated communities to have the necessary infrastructure and capacity to support the development.

Housing Policy 2.21 - Require all proposed housing within the development boundaries of unincorporated communities is either (1) served by Community water and sewer, or (2) that physical conditions permit safe treatment of liquid waste by septic tank systems and the use of private wells.

Housing Guiding Principle 3.1 - Encourage "smart growth" designed development that serves the unincorporated communities, the environment, and the economy of Tulare County.

Housing Policy 3.11 - Support and coordinate with local economic development programs to encourage a "jobs to housing balance" throughout the unincorporated area.

Housing Policy 3.12 Support locally initiated programs to provide neighborhood parks and recreational facilities for residential areas within unincorporated communities.

Housing Policy 3.13 Encourage subdivision and housing unit design, which provides for a reasonable level of safety and security.

Housing Policy 3.16 Actively seek federal, state, and private foundation grant funds for park and recreation facilities in unincorporated areas, including dual-use storm drainage ponding basins/recreation parks.

Housing Policy 3.23 - Prepare new and/or updated Community Plans that provide adequate sites for a variety of types of housing within the development boundaries of Community.

Housing Policy 3.24 - When locating agricultural industry in rural areas, a determination should be made that there are transit opportunities and an adequate employment base living within a reasonable distance to the site.

Housing Guiding Principle 4.1 - Support and encourage County ordinances, standards, practices and procedures that promote residential energy conservation.

Housing Policy 4.13 - Promote energy efficiency and water conservation.

Housing Policy 4.21 - Promote energy conservation opportunities in new residential development.

Housing Policy 4.22 Enforce provisions of the Subdivision Map Act regulating energy-efficient subdivision design.

Housing Policy 5.21 Administer and enforce the relevant portions of the Health and Safety Code.

Housing Policy 5.24 - Encourage the development of suitable replacement housing when occupied housing units are demolished due to public action.

HS-1.7 Safe Housing and Structures

The County shall continue to seek grant funding for the rehabilitation of deteriorated and dilapidated structures and provide available information regarding housing programs and other public services.

HS-1.10 Emergency Services Near Assisted Living Housing

In approving new facilities, such as nursing homes, housing for the elderly and other housing for the mentally and physically infirm, to the extent possible, the County shall ensure that such facilities are located within reasonable distance of fire and law enforcement stations.

Pixley Community Plan Housing Policies

- 1.1 The County will strive to ensure that an adequate number of housing units are constructed to meet the housing needs of Pixley.
- 1.2 The County will strive to ensure that housing is affordable to all economic segments of Pixley.
- 1.3 The County will ensure that there are adequate sites and will work with the Pixley PUD and other agencies to ensure that there are adequate public facilities to support future housing needs in Pixley.
- 1.4 The County will work diligently towards the rehabilitation of the housing stock in Pixley.
- 1.5 Mobile home parks and subdivisions, trailer parks and multi-family development shall be encouraged in Pixley in order to provide affordable housing opportunities.
- 1.6 The County will attempt to maintain a balance between owner and renter-occupied housing stock in Pixley.
- 1.7 Sites for multi-family development shall be identified which do not overburden anyone area of the community or neighborhood. Large developments shall be located on collector or arterial streets.

Draft Environmental Impact Report
Pixley Community Plan

- 1.8 Single family development shall be located in areas free of excessive noise and traffic, adequately buffered from incompatible land uses, and serviceable with sewer and water.
- 1.9 The Tulare County Resource Management Agency will actively enforce all planning and zoning laws in order to abate illegal, nonconforming, non-residential uses.

Implementation of Pixley Housing Policies

- 1.11 The County will periodically review zoning in Pixley and will maintain enough residentially zoned land so that the lack of adequately zoned residential sites does not become a constraint to housing production.
- 1.21 The County will work with Self-Help Enterprises, the Tulare County Housing Authority, and other entities interested in constructing or replacing low income housing in Pixley.
- 1.31 The County will investigate or be aware of service needs, police and fire protection, and other services required to support new residential development. In addition it will coordinate with the Pixley PUD and the local school districts when they expand or enlarge their services to support future population growth.
- 1.41 The County will encourage and assist non-profit and for-profit groups who demonstrate the ability and skill to undertake rehabilitation programs, to apply for State and federal funds for rehabilitation programs.

Affordable housing can be accommodated based on the land use designations contained in the Pixley Community Plan. In terms of affordable housing, there are potential residential reserve sites within the Urban Development Boundary that could accommodate all housing types north of developed areas located east of SR 99 and additional land west of SR 99 (south of industrial land use designations; see Proposed Pixley Land Use Map, Figure 2-6).

In terms of siting, medium-to-high density housing should be located along collector and/or arterial streets and should be consistent with Tulare County General Plan, Pixley Community Plan, and Tulare County Housing Element policies.

Inappropriateness of Affordable Housing

The 2014 Regional Housing Needs Assessment Plan (RHNA) allocated a total 7,081 units to unincorporated areas of the County to meet the January 1, 2007 - June 30, 2014 existing and projected housing need. The allocation included 1,477 units for very low income households; 1,065 units for low income; 1,169 units for moderate income, 3,370 units for moderate income. In addition to the RHNA, The Tulare County Housing Element was certified by the State Department of Housing and Community Development (HCD) in June 2012. An updated Housing Element is anticipated to be adopted in September 2015.

Overall, the Project site is suitable for affordable housing as a result of the current and proposed land use patterns which contains adequate residential site locations. Typically, affordable housing projects require high-densities to maintain economic and financial viability. Low-income and high density affordable housing does not result in sufficient income volume to pay for the cost of construction (without subsidies) and farm worker housing would likely require additional subsidies to recapture cost.

The Project site is located adjacent to farmland, industrial uses, major streets/highways, and railroad tracks which, without adequate buffers, could result in land use incompatibility with affordable housing. For example, **AG-1.11 Agricultural Buffers** states that: The County shall examine the feasibility of employing agricultural buffers between agricultural and non-agricultural uses, and along the edges of UDBs and HDBs. Considering factors include the type of operation and chemicals used for spraying, building orientation, planting of trees for screening, location of existing and future rights-of-way (roads, railroads, canals, power lines, etc.), and unique site conditions. Also, Policy **HS-8.8 Adjacent Uses** states that: The County shall not permit development of new industrial, commercial, or other noise-generating land uses if resulting noise levels will exceed 60 dB Ldn (or CNEL) at the boundary of areas designated and zoned for residential or other noise-sensitive uses, unless it is determined to be necessary to promote the public health, safety and welfare of the County; and Policy **HS-8.15 Noise Buffering** states that: The County shall require noise buffering or insulation in new development along major streets, highways, and railroad tracks.

GROWTH INDUCEMENT

As outlined in the CEQA Guidelines § 15126.2 (d), growth-inducing impacts of the proposed Project should “[d]iscuss the ways in which the proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.”²⁴

Growth Impacts

Tulare County recognizes that land use and other policies must continue to maintain and encourage a diverse and entrepreneurial economy to ensure that the community thrives. The Pixley Community Plan is intended to implement Tulare County’s vision for a long-range economic growth, sets forth the policy framework supportive of that vision, and identifies actions that Tulare County leaders will take to achieve these goals. In particular, this Chapter identifies growing economic sectors that the City looks to accommodate and outlines economic development strategies that will match local residents with the job skills required by employers.

²⁴ CEQA Guidelines, Section 15126.2 (d)

Draft Environmental Impact Report
Pixley Community Plan

Population Growth Forecast

As shown in **Table 6-7** (taken from **Table 3.13-3** of this DEIR), Pixley's population is projected to increase by a 976 persons during the planning period. It should be noted that the 2010 population baseline is based on the 2010 U.S. Census and projected to increase 1.3% annually which is consistent with the Tulare County General Plan.

Table 6-7
Pixley Population Projections

Annual Growth Rate 1.3%	2010	2020	2030
	3,310	3,766	4,286

Demand Forecast

Based on the data and analysis contained in **Table 6-7** (taken from **Table 3.13-3** of this DEIR), **Table 6-8** (taken from **Table 3.13-4** of this DEIR) contains Year 2030 residential unit demand forecast for the Pixley planning area if the current single-family, multi-family, and mobilehome housing trends continue through the planning period.

Table 6-8
Pixley Housing Development Projections

		YEAR		
Housing Type	% of Total	2007-2011	2020	2030
Single Family Homes	81.7%	646	736	837
Increase from 2007-2011	-	-	90	191
Multi Family Homes	4.1%	32	37	42
Increase from 2007-2011	-	-	5	10
Mobile Homes	14.3%	113	129	147
Increase from 2007-2011	-	-	16	34
<i>Residential percentages from 2007-2011 American Community Survey. Assume 4.18 persons per occupied unit from 2007-2011 American Community Survey; figures are rounded to nearest whole number.</i>				

Generally, growth inducing impacts are a result of very large businesses or very large housing developments. A large influx of jobs or people would require additional services which could potentially induce growth related impacts. In addition, changes to a General Plan could also

Draft Environmental Impact Report
Pixley Community Plan

induce growth. The General Plan Background Report notes that the Tulare County population will grow from 429,000 in 2007 to 742,970 in 2030. This anticipated growth scenario has already been identified and addressed in the Tulare County 2030 General Plan EIR.

A land demand for service commercial and industrial uses was prepared for the Harmon Field Preliminary Industrial Development Plan which analyzed, "...the demand for service commercial and industrial uses in the area within the 1999-2020 planning period; the relationship between the project area and other major commercial centers in the market area; and the competitive position of the project area in relation to adjacent commercial/industrial nodes in the market area.

The market analysis estimated the twenty-year demand for commercial growth to be approximately 30 acres...and approximately 125 acres for industrial. Total combined demand over the twenty-year period...was estimated to be 155 acres of 488 agricultural and vacant areas in the [North Pixley] Specific Plan. Indicating that on an annual basis there would be a total annual demand of 7.75 acres each year"²⁵

The Harmon Field Preliminary Industrial Development Plan as concluded, "...there is sufficient amount of vacant land available in the [North Pixley] Specific Plan to satisfy commercial and industrial development for many years. The Pixley Community Plan, as policy, has directed future commercial and industrial growth to occur within the [North Pixley] Specific Plan corridor north of Pixley."²⁶

As shown in **Table 6.9**, approximately 343 combined acres of commercial (84 acres) and industrial (248 acres) land use designations would be needed to meet the growth of these land use categories within the Pixley Community Plan area (see proposed Pixley Land Use Map, Figure 2-6). Therefore, the Plan accommodates, rather than induces, commercial and industrial uses.

Table 6.9			
Current and Forecasted Commercial and Industrial Land Use Demand			
Year	Total Acres	Commercial Acres	Industrial Acres
2020	265	73	192
2021	273	67	197
2022	281	69	203
2023	288	71	209
2024	296	73	214
2025	304	75	220
2026	312	77	226
2027	319	79	231
2028	327	81	237
2029	335	82	242
2030	343	84	248
<i>Note: Harmon Field Preliminary Industrial Development Plan projects an average 7.75 acres per year of demand combined; page 16. Commercial = 27.5% of demand/yr.; Industrial = 72.4% of demand/yr.</i>			

²⁵ Harmon Field Preliminary Industrial Development Plan. Page 16.

²⁶ Ibid. 17

The proposed Project does not include any development proposals; development will occur over time and will be evaluated on a case-by-case basis. The intent of the Project is to stimulate economic growth in a planned manner to meet Tulare County's overall population growth and to have land available to meet economic development needs. It is anticipated that increases in employment would occur during the planning period, and correspondingly, will result in an increase in population and associated demand for housing in the area. The Pixley Community Plan Update has accounted for potential economic development by designating appropriate land uses to accommodate economic development and corresponding growth in population.

For these reasons, the Project is anticipated to result in a managed form of growth inducement. Without an increase to the number of employees, the proposed Project will have a minimal effect on employment, public services and facilities, and growth in the overall region. Given Tulare County's housing vacancy rates combined with the limited permanent workforce needed to support the Project, it is anticipated that adequate housing would be available without exceeding the demands of Tulare County's existing housing supply. Therefore, implementation of the proposed Project will result in new, planned growth that is anticipated to result in a corresponding population increase.

All of these issues, to a greater or lesser extent, are subject to analysis in Chapter 3 of this EIR. Some of the effects of growth can be viewed as "good" and others as potentially "adverse". Some of the effects could occur without adoption and implementation of the Pixley Community Plan 2030 Update. However, as a result of the updated Pixley Community Plan, future growth would be managed through implementation adherence of the policies contained in the Plan. Among those policies areas are land use/zoning, circulation (including a Complete Streets Program and Safe Routes to School), housing, conservation, noise, safety, water supply, wastewater treatment, and health.

The CEQA Guidelines state:

*"It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."*²⁷

As indicated in **Table 6-1**, the proposed Project does not have the potential to induce significant growth in Tulare County.

²⁷ CEQA Guidelines section 15126.2(d).

Draft Environmental Impact Report
Pixley Community Plan

Table 6-10
Discussion of Potential Growth Inducing Impacts

Potential Growth Inducing Impacts	Discussion
Foster Economic or Population Growth	The proposed Project will not result in adverse impacts to the region. It will result in increases in economic benefits to the region over time (i.e., the 2032 planning period). As development occurs, the Project will result in temporary construction-related jobs and permanent jobs in retail, highway commercial, services, and light industrial sectors. Overall, the proposed Project will result in employment of additional persons.
Construction of Additional Housing – Either Directly or Indirectly	The proposed Project would not increase the demand for housing beyond the existing housing supply. Therefore, the Project will not result in a need for additional housing.
Other Growth Actions	The proposed Project will would not remove obstacles to population growth and will not induce other growth-related activities.

Conclusion:

The adoption and implementation of the Pixley Community Plan Update will result in some indirect growth inducing impacts on the local environment. Growth will have both beneficial and adverse (harmful) impacts on the physical environment of the Community. The overall benefits derived from having a Plan for the orderly development of the Pixley Community outweighs potential harmful effects that may be indirectly induced from plan adoption and implementation.

REFERENCES

2009 Housing Element, Tulare County

Harmon Field Preliminary Industrial Development Plan; prepared by Tulare County Resource Management Agency-Planning Branch Economic Development Office, December 2013

Tulare County Regional Blueprint May 2009; Tulare County Association of Governments

State of California General Plan Guidelines, Governor's Office of Planning and Research, 2003

Amendments to the Constitution of the United States of America, which can be accessed at <http://www.gpo.gov/fdsys/pkg/GPO-CONAN-1992/pdf/GPO-CONAN-1992-7.pdf>

CEQA Guidelines

Unmitigable Impacts

Chapter 7

NO ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED

Under CEQA Guidelines Section 15126.2 (b), “[w]here there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the Project is being proposed, notwithstanding their effect, should be described.”¹ This analysis should include a description of any significant impacts, including those which can be mitigated but not reduced to a level of insignificance.

This Project will not result in a significant and unavoidable impact. All impacts have been found to be less than significant, or have been mitigated to a level considered less than significant.

NO IRREVERSIBLE IMPACTS

Under CEQA Guidelines Section 15126.2 (c), “[u]ses of nonrenewable resources during the initial and continued phases of the Project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the Project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified. (See Public Resources Code section 21100.1 and Title 14, California Code of Regulations, section 15127 for limitations to applicability of this requirement.)”²

NO STATEMENT OF OVERRIDING CONSIDERATIONS

Based on the analysis contained in this EIR, No Environmental Impacts That Cannot Be Avoided and in the No Irreversible Impact sections of this Chapter, a Statement of Overriding Considerations is not necessary. The Project’s merits and objectives are discussed in the Project Description and are found to be consistent with the intent of Tulare County 2030 General Plan. In addition, the Project’s merits would outweigh any unavoidable and unmitigable impacts to warrant a Statement of Overriding Considerations.

¹ CEQA Guidelines, Section 15126.2 (b)

² CEQA Guidelines, Section 15126.2 (c)

PROJECT BENEFIT STATEMENTS

“On December 21, 1999, The Board of Supervisors adopted a Specific Plan for the Planned Commercial/Industrial area north of Pixley as identified in the adopted Pixley Community Plan (GPA 92-06), and a rezoning plan (PZ 99-013) for those properties affected by the adoption of the Pixley Specific Plan. The Specific Plan includes development standards, and the timing, location, and funding of infrastructure needed to support future development in that area in accordance with California Government Code sections 65450 through 65456. The adopted rezoning plan designates approximately 693 acres for PD-M-1 (Planned Development, Light Manufacturing) and 34 acres for PD-M-2 (Planned Development, Heavy Manufacturing).”³

The project EIR is based on a projected annual population growth rate of 1.3%. Additional growth beyond the 1.3% annual growth rate will require further growth analysis pursuant to CEQA. The Pixley Community Plan Update will become consistent with the General Plan 2030 Update, and will include the following primary goals and objectives.

- 1) Land Use and Environmental Planning - Promote development within planning areas next to the Regional State Route 99 Corridor in order to implement the following General Plan goals:
 - b) Ensure that the text and mapping of the Community Plan Designations and Zoning Reclassifications address various development matters such as encouraging Agricultural Adaptive Reuse activities, recognizing Non-Conforming Use activities, and facilitating Ministerial Permit approvals;
 - c) Encourage infill development within Urban Development Boundaries, thereby discouraging leapfrog development within Tulare County;
 - d) Reduce development pressure on agriculturally-designated lands within the Valley Floor, thereby encouraging agricultural production to flourish;
 - e) Reduce vehicle miles travelled throughout the County, thereby positively affecting air quality and greenhouse gas reduction; and
 - f) Help to improve the circulation, transit and railroad transportation system within this community, including, but not limited to, laying the groundwork for the construction of key projects such as Safe Routes to Schools, Complete Streets, and Bike Lanes/Pedestrian Paths.
- 2) Improvements for a “disadvantaged community” - It is expected that the community planning areas will be improved for the following reasons:
 - a) With faster project processing resulting from an updated community plan, increased employment opportunities are more likely to be provided by the private sector as proposed project developments can be approved as expeditiously as possible;
 - b) Increased housing grant awards are more likely to occur based on updated community plans that are consistent with the policies of the recently adopted (August 2013)

³ Tulare County Planning Commission Memorandum, May 3, 2000.

Draft Environmental Impact Report
Pixley Community Plan

- General Plan Update and Housing Element; and
- c) With updated community plans, enhanced infrastructure grant awards are more likely, thereby providing access to funding to install or upgrade road, water, wastewater, and storm water facilities.

- 3) **Strengthening Relationship with TCAG** - An important benefit of this expedited community plan process will be the opportunity for RMA to strengthen the County's relationship with the Tulare County Association of Governments (TCAG) in that this and other community plans will help to facilitate the funding and implementation of several key transportation programs such as Safe Routes to Schools, Complete Streets, and Bike/Pedestrian Projects.

By pursuing these transportation programs through a heightened collaborative process, the likelihood of getting actual projects in the ground will be realized faster than historically achieved. In doing so, these communities and others can become safer and healthier by providing a more efficient transportation network.

Project Benefit # 1 – Implementation of AB 32

AB 32 has defined plans and programs for Year 2020, with the vision of Year 2050 that sets a goal to have an 80% reduction of greenhouse gas (GHG) emissions compared to the 1990 base year. AB 32 resulted in the adoption of the AB 32 Scoping Plan in 2008 that included a series of measures adopted by the California Air Resources Board (CARB). The key components of AB 32 are a reduction of (GHG) emission to 1997 models by the year 2020 and implements the objectives for the Year 2050 goal.

Project Benefit # 2: Sustainability

a) **Tulare County Climate Action Plan (CAP)** In light of AB 32, the County of Tulare Board of Supervisors adopted its General Plan 2030 Update on August 28, 2012 and included a Climate Action Plan (or CAP). This Climate Action Plan identifies specific General Plan policies that encourage solid waste reduction. The proposed Project was developed to support and implement the efforts made by Tulare County to address climate change through its General Plan and Climate Action Plan.

b) **Tulare County General Plan (Sustainability) Policies** The Tulare County General Plan has a number of policies that apply to projects within County of Tulare. Nine General Plan policies that relate to Sustainability; below is a summary of some of those policies.

PF-3.4	Mixed Use Opportunities
LU-1.1	Smart Growth and Healthy Communities
LU-1.8	Encourage Infill Development
LU-7.15	Energy Conservation
LU-7.16	Water Conservation
LU-7.17	Shared Parking Facilities

Draft Environmental Impact Report
Pixley Community Plan

AQ-3.3	Street Design
AQ-3.5	Alternative Energy Design
AQ-3.6	Mixed Land Uses

c) TCAG Sustainable Communities Strategy (2014 Regional Transportation Plan) AB 32 requires the California Air Resources Board to set greenhouse gas emission targets. Under SB 375 Metropolitan Planning Organizations like TCAG are required to create a Sustainable Communities Strategy consistent with AB 32 to regulate development in relation to vehicle miles traveled. TCAG included this strategy in the 2014 Regional Transportation Plan. A highlight of the implementation strategies include:

- Encourage jurisdictions in Tulare County to consider bicycle lanes, public transit, transit-oriented and mixed-use development, pedestrian networks, rain and other complete streets development during updates of general plan or other local plans.
- Implement a Complete Streets Program whereby agencies will prepare plans to accommodate all transportation users, including pedestrians, bicyclists, transit riders, and motor vehicle operators and riders, and implement those plans as aggressively as feasible.
- Provide for continued coordination and evaluation of the planned circulation system among cities and the county.
- Fund the development of capital improvement programs for complete streets and active transportation-type plans, as funds are available.
- Evaluate intersections, bridges, interchanges, and rail grade crossings for needed safety improvements.
- Develop funding strategies for safety projects in cooperation with Caltrans and member agencies.
- Examine alternative funding sources for streets, roads, state highways, rail systems, transit, bicycle, pedestrian, and other transportation mode improvements.
- Utilize Cap and Trade funds available for transit, if available, for projects in Tulare County.
- Encourage local agencies to support implementation of bicycle support facilities such as bike racks, showers, and other facilities during the project review process.
- Utilize Cap and Trade funds available for bicycle and pedestrian projects, if available, for projects in Tulare County.
- Encourage mixed-use developments in urbanized areas.
- Encourage provision of an adequate supply of housing for the region's workforce and adequate sites to accommodate business expansion to minimize interregional trips and long-distance commuting.
- Support and participate in efforts and coalitions promoting use of Cap and Trade funding for projects that help reduce greenhouse gas emissions in Tulare County.
- Support investment in bicycle and pedestrian systems, giving attention to projects and networks that will allow residents to walk and bicycle to frequented destinations, including schools, parks, healthcare institutions and transit stops.
- Provide environmental justice communities opportunities for input into transportation plans, programs, and projects in a manner consistent with Title VI of the 1964 Civil Rights Act and Executive Order 12898 on Environmental Justice, including the prohibition of intentional discrimination and adverse disparate impact with regard to race, ethnicity or national origin.

These implementation strategies are compatible with the Tulare County General Plan policies.

Project Benefit # 3 Lessen Significant Impacts

Each alternative should be analyzed to assess the potential to reduce significant impacts. (On a cumulative basis, alternative sites generally require the construction of duplicate buildings. The creations of additional buildings require the use of additional resources, which on a cumulative basis would increase impacts to environment in general.)

Project Benefit # 4 Physical Feasibility (Land Size and Configuration Constraints)

Physical feasibility is required because if a site for a particular alternative is too small, or if the components of the proposed Project cannot be configured on the site, then the alternative would not be feasible and should be eliminated from review.

Project Benefit # 5 Project Specific Elements

Overall all elements (including Project's, Rezoning of Properties within the Study Area were studied

- a) The County is proposing over 6 land use and zoning districts. These changes are reflective of updating the designations to be consistent with the land uses within the General Plan and to bring existing non-compliant properties into conformity with the Tulare County Zoning Code. This required site surveillance of existing properties, meetings with the Community, and review of aerial maps and County records to analyze and determine which properties require updating.
- b) Mixed Use Zone. The Pixley Community Plan includes a mixed use zone. This Community Plan Update requires updating the Tulare County Zoning Code to reflect a mixed use zoning district specifically within the Pixley Community in compliance with the mixed use designation in the 2030 General Plan.
- c) Complete Streets. Bicycle, Bus and Pedestrian Plan to fulfill the requirement of AB 1358 that states streets, roads, and highways must "meet the needs of all users in a manner suitable to the rural, suburban, or urban context of the general plan."
- d) Expansion of the Urban Development Boundary (see Figure ES-1) to accommodate future industrial and commercial uses and to include the Pixley Public Utilities District service area boundary and sphere of influence.

Project Benefit # 6: Implementation of Countywide General Plan Policies

Tulare County's General Plan Policies that are in with the Project's purpose and objectives are included in each CEQA Checklist Resource chapter contained in Chapters 3-1 thru 3-17. Two

Draft Environmental Impact Report
Pixley Community Plan

hundred thirty-one (231) General Policies apply to this Project; below is a listing of applicable policies:

I. AESTHETICS – 14 Policies

LU-5.3	Storage Screening
LU-5.6	Industrial Use Buffer
LU-7.6	Screening
LU-7.14	Contextual and Compatible Design
LU-7.19	Minimize Lighting Impacts
SL-1.1	Natural Landscapes
SL-1.2	Working Landscapes
SL-2.1	Designated Scenic Routes and Highways
ERM-1.4	Protect Riparian Areas
ERM-1.5	Riparian Management Plans and Mining Reclamation Plans
ERM-1.6	Management of Wetlands
ERM-1.8	Open Space Buffers
ERM-5.19	Night Sky Protection
ERM-1.15	Minimize Lighting Impacts

II. AGRICULTURAL LANDS & FORESTRY RESOURCES – 12 Policies

AG-1.1	Primary Land Use
AG-1.3	Williamson Act
AG-1.4	Williamson Act in UDBs and HDBs
AG-1.6	Conservation Easements
AG-1.7	Preservation of Agricultural Lands
AG-1.8	Agriculture within Urban Boundaries
AG-1.9	Agricultural Preserves Outside Urban Boundaries
AG-1.10	Extension of Infrastructure into Agricultural Areas
AG-1.11	Agricultural Buffers
AG-1.17	Agricultural Water Resources
LU-2.3	Open Space Character
LU-2.6	Industrial Development

III. AIR QUALITY – 33 Policies

AQ-1.1	Cooperation with Other Agencies
AQ-1.2	Cooperation with Local Jurisdictions
AQ-1.3	Cumulative Air Quality Impacts
AQ-1.4	Air Quality Land Use Compatibility
AQ-1.5	California Environmental Quality Act (CEQA) Compliance
AQ-1.7	Support Statewide Climate Change Solutions
AQ-1.8	Greenhouse Gas Emissions Reduction Plan/Climate Action Plan
AQ-1.9	Support Off-Site Measures to Reduce Greenhouse Gas Emissions

Draft Environmental Impact Report
Pixley Community Plan

AQ-1.10	Alternative Fuel Vehicle Infrastructure
AQ-2.1	Transportation Demand Management Programs
AQ-2.2	Indirect Source Review
AQ-2.3	Transportation and Air Quality
AQ-2.4	Transportation Management Associations
AQ-2.5	Ridesharing
AQ-3.1	Location of Support
AQ-3.2	Infill near Employment
AQ-3.3	Street Design
AQ-3.4	Landscape
AQ-3.5	Alternative Energy Design
AQ-3.6	Mixed Land Uses
AQ-4.1	Air Pollution Control Technology
AQ-4.2	Dust Suppression Measures
AQ-4.3	Paving or Treatment of Roadways for Reduced Air Emissions
AQ-4.4	Wood Burning Devices
AQ-4.5	Public Awareness
AQ-4.6	Asbestos Airborne Toxic Control and Dust Protection
LU-1.1	Smart Growth and Healthy Communities
LU-1.4	Compact Development
LU-1.8	Encourage Infill Development
LU-3.2	Cluster Development
LU-3.3	High-Density Residential Locations
TC-5.1	Bicycle/Pedestrian Trail System
TC-5.2	Consider Non-Motorized Modes in Planning and Development

IV. BIOLOGICAL RESOURCES – 12 Policies

ERM-1.1	Protection of Rare and Endangered Species
ERM-1.2	Development in Environmentally Sensitive Areas
ERM-1.4	Protect Riparian Areas
ERM-1.5	Riparian Management Plans and Mining Reclamation Plans
ERM-1.6	Management of Wetlands
ERM-1.7	Planting of Native Vegetation
ERM-1.12	Management of Oak Woodland Communities
ERM-1.14	Mitigation and Conservation Banking Program
ERM-1.15	Minimize Lighting Impacts
ERM-1.16	Cooperate with Wildlife Agencies
ERM-1.17	Conservation Plan Coordination
ERM-2.7	Minimize Adverse Impacts

V. CULTURAL RESOURCES – 6 Policies

ERM-6.1	Evaluation of Cultural and Archaeological Resources
ERM-6.2	Protection of Resources with Potential State or Federal Designations

Draft Environmental Impact Report
Pixley Community Plan

- ERM-6.3 Alteration of Sites with Identified Cultural Resources
- ERM-6.4 Mitigation
- ERM-6.9 Confidentiality of Archaeological Sites
- ERM-6.10 Grading Cultural Resources Sites

VI GEOLOGY AND SOILS –5 Policies

- ERM-7.2 Soil Productivity
- ERM-7.3 Protection of Soils on Slopes
- HS-2.4 Structure Siting
- HS-2.7 Subsidence
- HS-2.8 Alquist-Priolo Act Compliance

VII. GREENHOUSE GAS EMISSIONS – 6 Policies

- AQ-1.7 Support Statewide Climate Change Solutions
- AQ-1.8 Greenhouse Gas Emissions Reduction Plan/Climate Action Plan
- AQ-1.9 Support Off-Site Measures to Reduce Greenhouse Gas Emissions
- AQ-3.5 Alternative Energy Design
- AQ-1.10 Alternative Fuel Vehicle Infrastructure
- LU-1.1 Smart Growth and Healthy Communities

VIII. HAZARDS AND HAZARDOUS MATERIALS – 6 Policies

- HS-3.1 Airport Land Use Compatibility Plan
- HS-4.1 Hazardous Materials
- HS-4.3 Incompatible Land Uses
- HS-4.4 Contamination Prevention
- HS-4.6 Pesticide Control
- ERM-3.1 Environmental Contamination

IX HYDROLOGY AND WATER QUALITY - 24 Policies

- PF-4.14 Compatible Project Design
- AG-1.17 Agricultural Water Resources
- HS-4.4 Contamination Prevention
- HS-5.1 Development Compliance with Federal, State, and Local Regulations
- HS-5.2 Development in Floodplain Zones
- HS-5.4 Multi-Purpose Flood Control Measures
- HS-5.6 Impacts to Downstream Properties
- HS-5.9 Floodplain Development Restrictions
- HS-5.10 Flood Control Design
- HS-5.11 Natural Design
- WR-1.1 Groundwater Withdrawal
- WR-1.5 Expand Use of Reclaimed Wastewater

Draft Environmental Impact Report
Pixley Community Plan

WR-1.6	Expand Use of Reclaimed Water
WR-2.1	Protect Water Quality
WR-2.2	National Pollutant Discharge Elimination System (NPDES) Enforcement
WR-2.3	Best Management Practices (BMPs)
WR-2.4	Construction Site Sediment Control
WR-2.5	Major Drainage Management
WR-2.6	Degraded Water Resources
WR-2.8	Point Source Control
WR-3.3	Adequate Water Availability
WR-3.5	Use of Native and Drought Tolerant Landscaping
WR-3.6	Water Use Efficiency
WR-3.10	Diversion of Surface Water

X. Land Use and Planning - 24 Policies

ED-2.2	Land Requirements
ED-2.11	Industrial Parks
ED-3.1	Diverse Economic Base
ERM-2.9	Compatibility
PF-1.1	Maintain Urban Edges
PF-1.2	Location of Urban Development
PF-1.3	Land Uses in UDBs/HDBs
PF-1.4	Available Infrastructure
PF-2.1	Urban Development Boundaries – Communities
PF-2.4	Community Plans
PF-2.7	Improvement Standards in Communities
PF-2.8	Inappropriate Land Use
LU-1.2	Innovative Development
LU-2.3	Open Space Character
LU-3.1	Residential Developments
LU-3.2	Cluster Development
LU-3.3	High-Density Residential Locations
LU-5.1	Industrial Developments
LU-5.4	Compatibility with Surrounding Land Use
LU-5.7	Industrial Uses Allowed on Resource Land
LU-6.2	Buffers
LU-7.2	Integrate Natural Features
ED-2.3	New Industries
HS-3.1	Airport Land Use Compatibility Plan

XI MINERAL RESOURCES – 12 Policies

ERM-2.1	Conserve Mineral Deposits
ERM-2.2	Recognize Mineral Deposits
ERM-2.3	Future Resource Development

Draft Environmental Impact Report
Pixley Community Plan

ERM-2.5	Resources Development
ERM-2.7	Minimize Adverse Impacts
ERM-2.8	Minimize Hazards and Nuisances
ERM-2.9	Compatibility
ERM-2.10	Incompatible Development
ERM-2.11	Conditions of Approval
ERM-2.12	Approved Limits
ERM-2.13	SMARA Requirements
ERM-3.1	Environmental Contamination

XII NOISE – 14 Policies

HS-8.1	Economic Base Protection
HS-8.2	Noise Impacted Areas
HS-8.3	Noise Sensitive Land Uses
HS-8.4	Airport Noise
HS-8.6	Noise Level Criteria
HS-8.8	Adjacent Uses
HS-8.10	Automobile Noise Enforcement
HS-8.11	Peak Noise Generators
HS-8.13	Noise Analysis
HS-8.14	Sound Attenuation Features
HS-8.15	Noise Buffering
HS-8.16	State Noise Insulation
HS-8.18	Construction Noise
HS-8.19	Construction Noise Control

XIII. POPULATION AND HOUSING – 10 Policies

Guiding Principle 4.1
Housing Policy 1.11
Housing Policy 1.14
Housing Policy 1.33
Housing Policy 3.11
Housing Policy 4.11
Housing Policy 4.12
Housing Policy 4.13
Housing Policy 4.14
Housing Policy 4.15

XIV PUBLIC SERVICES – 14 Policies

ERM-5.2	Park Amenities
ERM-5.3	Park Dedication Requirements
ERM-5.5	Facilities

Draft Environmental Impact Report
Pixley Community Plan

ERM-5.12	Meet Changing Recreational Needs
PFS-7.1	Fire Protection
PFS-7.2	Fire Protection Standards
PFS-7.3	Visible Signage for Roads and Buildings
PFS-7.5	Fire Staffing and Response Time Standards
PFS-7.6	Provision of Station Facilities and Equipment
PFS-7.8	Law Enforcement Staffing Ratios
PFS-7.9	Sheriff Response Time
PFS-7.12	Design Features for Crime Prevention and Reduction
PFS-8.1	Work with Local School Districts
PFS-8.4	Library Facilities and Services

XV RECREATION – 7 Policies

ERM-5.2	Park Amenities
ERM-5.3	Park Dedication Requirements
ERM-5.5	Collocated Facilities
ERM-5.7	Public Water Access
ERM-5.11	Cooperation with Federal and State Agencies
ERM-5.12	Meet Changing Recreational Needs
ERM-5.15	Open Space Preservation

XVI TRANSPORTATION/TRAFFIC – 14 Policies

LU-5.5	Access
LU-7.3	Friendly Streets
LU-7.4	Streetscape Continuity
LU-7.6	Screening
TC-1.13	Land Dedication for Roadways and Other Travel Modes
TC-1.14	Roadway Facilities
TC-1.15	Traffic Impact Study
TC-1.16	County Level of Service (LOS) Standards
TC-3.3	Airport Enhancement
TC-3.4	Airport Compatibility
TC-3.6	Airport Encroachment
TC-5.3	Provisions for Bicycle Use
TC-5.4	Design Standards for Bicycle Routes
HS-1.9	Emergency Access

XVII. UTILITIES AND SERVICE SYSTEMS - 18 Policies

PFS-2.1	Water Supply
PFS-2.3	Well Testing
PFS-2.4	Water Connections
PFS-2.5	New Systems or Individual Wells

Draft Environmental Impact Report
Pixley Community Plan

PFS-3.1	Private Sewage Disposal Standards
PFS-3.2	Adequate Capacity
PFS-3.4	Alternative Rural Wastewater Systems
PFS-4.1	Stormwater Management Plans
PFS-4.2	Site Improvements
PFS-4.3	Development
PFS-4.4	Stormwater Retention Facilities
PFS-4.5	Detention/Retention Basins Design
PFS-4.7	NPDES Enforcement
PFS-5.1	Land Use Compatibility with Solid Waste Facilities
PFS-5.3	Solid Waste Reduction
PFS-5.4	County Usage of Recycled Materials and Products
PFS-5.8	Hazardous Waste Disposal Capabilities
PFS-5.9	Agricultural Waste

Acronyms

ARB	California Air Resources Board
CAP	Climate Action Plan
GHG	Greenhouse Gas

REFERENCES

2030 Tulare County General Plan

CEQA Guidelines

Mitigation Monitoring and Reporting Program

Chapter 8

The Mitigation Monitoring and Reporting Program (MMRP) has been prepared in compliance with State law and the Environmental Impact Report (EIR) (State Clearinghouse No.) prepared for the project by the County of Tulare.

The California Environmental Quality Act (CEQA) Section 21081.6 requires adoption of a reporting or monitoring program for those measures placed on a project to mitigate or avoid adverse effects on the environment.¹ The law states that the reporting or monitoring program shall be designed to ensure compliance during project implementation. The Mitigation Monitoring and Reporting Program contains the following elements:

- **Action and Procedure.** The mitigation measures are recorded with the action and procedure necessary to ensure compliance. In some instances, one action may be used to verify implementation of several mitigation measures.
- **Compliance and Verification.** A procedure for compliance and verification has been outlined for each action necessary. This procedure designates who will take action, what action will be taken and when, and to whom and when compliance will be reported.
- **Flexibility.** The program has been designed to be flexible. As monitoring progresses, changes to compliance procedures may be necessary based upon recommendations by those responsible for the Mitigation Monitoring and Reporting Program. As changes are made, new monitoring compliance procedures and records will be developed and incorporated into the program.

¹ Public Resource Code §21081.6

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Pixley Community Plan

**Table 8-1
Mitigation Monitoring Reporting Program**

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
Biological							
San Joaquin Kit Fox							
4-1	(Pre-construction Surveys). Pre-construction surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance, construction activities, and/or any project activity likely to impact the San Joaquin kit fox. These surveys will be conducted in accordance with the USFWS Standard Recommendations. The primary objective is to identify kit fox habitat features (e.g. potential dens and refugia) on the project site and evaluate their use by kit foxes through use of remote monitoring techniques such as motion-triggered cameras and tracking medium. If an active kit fox den is detected within or immediately adjacent to the area of work, the USFWS and CDFW shall be contacted immediately.	Prior to a project’s initiation	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			
4-2	(Avoidance). Should an active kit fox den be detected within or immediately	Prior to initiation of	Issuance of building				

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	adjacent to the area of work, a disturbance-free buffer will be established around the den in consultation with the USFWS and CDFW, to be maintained until a qualified biologist has determined that the den is no longer occupied. Known kit fox dens may not be destroyed until they have been vacant for a period of at least three days, as demonstrated by use of motion-triggered cameras or tracking medium, and then only after obtaining take authorization from the USFWS.	construction	permit				
4-3	(<i>Minimization</i>). Construction activities shall be carried out in a manner that minimizes disturbance to kit foxes. Minimization measures include, but are not limited to: restriction of project-related vehicle traffic to established roads, construction areas, and other designated areas; inspection and covering of structures (e.g., pipes), as well as installation of escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of rodenticide and herbicide use; and proper disposal of food items and trash. Construction activities shall be carried	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	out in a manner that minimizes disturbance to kit foxes. Minimization measures include, but are not limited to: restriction of project-related vehicle traffic to established roads, construction areas, and other designated areas; inspection and covering of structures (e.g., pipes), as well as installation of escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of rodenticide and herbicide use; and proper disposal of food items and trash.						
4-4	(Employee Education Program). Prior to the start of construction the applicant will retain a qualified biologist to conduct a tailgate meeting to train all construction staff that will be involved with the project on the San Joaquin kit fox. This training will include a description of the kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of the measures being taken to reduce impacts to the species during project construction and	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	implementation.						
4-5	(<i>Mortality Reporting</i>). The Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified in writing within three working days in case of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and any other pertinent information.	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			
<i>Burrowing Owl</i>							
4-6	(<i>Pre-construction Surveys</i>). A pre-construction survey for burrowing owls will be conducted by a qualified biologist within 30 days of the onset of project-related activities involving ground disturbance or heavy equipment use. The survey area will include all suitable habitat on and within 500 feet of project impact areas, where accessible.	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			
4-7	(<i>Avoidance of Active Nests</i>). If pre-construction surveys and subsequent project activities are undertaken during the breeding season (February 1-August 31) and active nest burrows are located	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	within or near project impact areas, a 250-foot construction setback will be established around active owl nests, or alternate avoidance measures implemented in consultation with CDFW. The buffer areas will be enclosed with temporary fencing to prevent construction equipment and workers from entering the setback area. Buffers will remain in place for the duration of the breeding season, unless otherwise arranged with CDFW. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described below.			Cal Fish and Wildlife Service			
4-8	<i>Passive Relocation of Resident Owls).</i> During the non-breeding season (September 1-January 31), resident owls occupying burrows in project impact areas may be passively relocated to alternative habitat in accordance with a relocation plan prepared by a qualified biologist. Passive relocation may include one or more of the following elements: 1) establishing a minimum 50 foot buffer around all active burrowing owl	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	burrows, 2) removing all suitable burrows outside the 50 foot buffer and up to 160 feet outside of the impact areas as necessary, 3) installing one-way doors on all potential owl burrows within the 50 foot buffer, 4) leaving one-way doors in place for 48 hours to ensure owls have vacated the burrows, and 5) removing the doors and excavating the remaining burrows within the 50 foot buffer.						
American Badger							
4-9	(Preconstruction Surveys). A preconstruction survey for American badgers will be conducted by a qualified biologist within 30 days of the onset of project-related activities involving ground disturbance or heavy equipment use. Preconstruction surveys will be conducted in all suitable denning habitat of the individual project area.	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			
4-10	(Avoidance). Should an active natal den be identified during the preconstruction surveys, a disturbance-free buffer will be established around the den and maintained until a qualified	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	biologist has determined that the cubs have dispersed or the den has been abandoned.			Department and Cal Fish and Wildlife Service			
<i>Nesting Raptors and Migratory Birds (including Swainson’s Hawk, White-tailed Kite, and Loggerhead Shrike)</i>							
4-11	<i>(Avoidance).</i> In order to avoid impacts to nesting raptors and migratory birds, individual projects within the PPSA will be constructed, where possible, outside the nesting season, or between September 1 st and January 31 st .	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			
4-12	<i>(Preconstruction Surveys).</i> If project activities must occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys for active raptor and migratory bird nests within 30 days of the onset of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet. If no nesting pairs are found within the survey area, no further mitigation is required.	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			
4-13	<i>(Establish Buffers).</i> Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged.			Cal Fish and Wildlife Service			
Roosting Bats							
4-14	(Temporal Avoidance). To avoid potential impacts to maternity bat roosts, removal of buildings and trees should occur outside of the period between April 1 and September 30, the time frame within which colony-nesting bats generally assemble, give birth, nurse their young, and ultimately disperse.	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			
4-15	Preconstruction Surveys). If removal of buildings or trees is to occur between April 1 and September 30 (general maternity bat roost season), then within 30 days prior to these activities, a qualified biologist will survey affected buildings and trees for the presence of bats. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for nighttime emergence of bats from roost sites. If no bats are observed to be roosting or breeding, then no further action would be required, and construction could proceed.			County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
4-16	(Minimization). If a non-breeding bat colony is detected during preconstruction surveys, the individuals will be humanely evicted via partial dismantlement of trees or structures prior to full removal under the direction of a qualified biologist to ensure that no harm or “take” of any bats occurs as a result of construction activities.	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			
4-17	(Avoidance of Maternity Roosts). If a maternity colony is detected during preconstruction surveys, a disturbance-free buffer will be established around the colony and remain in place until a qualified biologist deems that the nursery is no longer active. The disturbance-free buffer will range from 50 to 100 feet as determined by the biologist.	Prior to initiation of construction	Issuance of building permit	County of Tulare Economic Development & Planning and Public Works Department and Cal Fish and Wildlife Service			
Cultural Resources							
5-1	In the event that historical, archaeological or paleontological resources are discovered during site excavation, the County shall require that grading and construction work on the Project site be immediately suspended until the significance of the features can be determined by a qualified archaeologist or paleontologist. In this event, the property owner shall retain a qualified archaeologist/paleontologist to provide recommendations for measures necessary to protect any site determined to contain or constitute an historical resource,		Retention of professional paleontologist/ ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Economic Development & Planning and Public Works Department			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	a unique archaeological resource, or a unique paleontological resource or to undertake data recover, excavation analysis, and curation of archaeological or paleontological materials. County staff shall consider such recommendations and implement them where they are feasible in light of Project design as previously approved by the County.						
5-2	The property owner shall avoid and minimize impacts to paleontological resources. If a potentially significant paleontological resource is encountered during ground disturbing activities, all construction within a 100-foot radius of the find shall immediately cease until a qualified paleontologist determines whether the resources requires further study. The owner shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The paleontologist shall notify the Tulare County Resource Management Agency and the Project proponent of the procedures that must be followed before construction is allowed to resume at the location of the find. If the find is determined to be significant and the Tulare County Resource Management Agency determines avoidance is not feasible, the paleontologist shall design and implement a data recovery plan	Prior to issuance of grading permits Ongoing monitoring during subsurface excavation	Retention of professional paleontologist/ ongoing monitoring/ submittal of Report of Findings, if applicable	County of Tulare Economic Development & Planning and Public Works Department			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	consistent with applicable standards. The plan shall be submitted to the Tulare County Resource Management Agency for review and approval. Upon approval, the plan shall be incorporated into the Project.						
5-3	<p>Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:</p> <p>1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:</p> <p>a. The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and</p> <p>b. If the coroner determines the remains to be Native American:</p>	<p>Prior to issuance of grading permits</p> <p>Ongoing monitoring during subsurface excavation</p>	<p>Retention of professional paleontologist/ ongoing monitoring/ submittal of Report of Findings, if applicable</p>	<p>County of Tulare Economic Development & Planning and Public Works Department</p>			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program						
Mitigation Measure	Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
				Initials	Date	Remarks
<ul style="list-style-type: none"> i. The coroner shall contact the Native American Heritage Commission within 24 hours. ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American. iii. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or <p>2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.</p>						

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	<div>a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.</div> <div>b. The descendant fails to make a recommendation; or</div> <div>c. The landowner or his authorized representative rejects the recommendation of the descendent.</div>						
Hazards & Hazardous Material							
8-1	Prior to issuance of building permits for any new use within the Project area that proposes to use large quantities of hazardous materials, the County of Tulare shall review the project application for compatibility with existing and planned land uses. The review process shall focus on the location of existing and planned sensitive receptors (e.g., residential uses and schools) and whether the proposed hazardous material usage would expose such uses to unacceptable safety risks. If necessary, the County of Tulare will condition the proposed hazardous materials user to incorporate appropriate protection measures (e.g., containment facilities)	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
Hydrology & Water Quality							
9-1	Continue to require metering of all domestic and commercial connections. Develop and maintain a progressive, tiered water rate to encourage water conservation.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare Economic Development & Planning and Public Works Department			
9-2	Retrofit homes with water-efficient faucets, showers and toilets.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare Economic Development & Planning and Public Works Department			
9-3	Limit permissible landscape area for each residence to 2,500 square feet or less.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare Economic Development & Planning and Public Works Department			
9-4	Adopt limited outdoor watering days and hours (now in force statewide, as of August 1, 2014, by order of the Department of Water Resources) Adopt limited outdoor watering days and hours (now in force statewide, as of August 1, 2014, by order of the Department of Water Resources)	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare Economic Development & Planning and Public Works Department			
9-5	Mandate use of native and drought-tolerant species for all landscaping.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare Economic Development & Planning and Public Works			

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program						
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance	
					Initials	Date
				Department		
9-6	Acquire a new surface water supply that could be shown to benefit the basin and offset the pumping that comes with growth.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare Economic Development & Planning and Public Works Department		
9-7	Where applicable, future developments within the Project area shall obtain a General Stormwater Industrial Facility Permit from the Central Valley Water Board, prior to obtaining building permits for construction or expansion. The facility operator(s) shall prepare, retain on site, and implement a SWPPP as part of the General Stormwater Industrial Facility Permit.	Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare Economic Development & Planning and Public Works Department		
		Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare Economic Development & Planning and Public Works Department		
		Prior to issuance of grading permits.	Issuance of building permit.	County of Tulare Economic Development & Planning and Public Works Department		

Draft Environmental Impact Report
Pixley Community Plan

Mitigation Monitoring Reporting Program							
Mitigation Measure		Monitoring Timing/ Frequency	Action Indicating Compliance	Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
Noise							
12-1	The hours of future construction shall be limited to 7:00 a.m. to 7:00 p.m. Monday through Friday or weekends (if allowed by the County) where residential uses are within 200 feet of where the activity is taking place. If residential uses are beyond 300 feet limited work hours are not required.	Prior to issuance of grading permits and on-going monitoring. Citizen reports of noise beyond hours of construction allowance.	Issuance of building permit.	County of Tulare Economic Development & Planning and Public Works Department			

Report Preparation

Chapter 9

INTRODUCTION

Key persons from the County of Tulare that contributed to preparation of the Draft Environmental Impact Report (Draft EIR) are identified below:

THE COUNTY OF TULARE

This EIR has been prepared for:

Tulare County Resource Management Agency (RMA)
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- Allen Ishida - District 1
- Pete Vander Poel - District 2
- Phillip Cox - District 3
- Steve Worthley (Chairman) - District 4
- Mike Ennis (Vice-Chairman) - District 5

COUNTY ADMINISTRATIVE OFFICE

- Jean Rousseau, County Administrative Officer

TULARE COUNTY PLANNING COMMISSIONERS:

- John F. Elliott – District 1
- Nancy Pitigliano – District 2 (Vice Chair)
- Bill Whitlatch – District 3
- Melvin K. Gong – District 4 (Chair)
- Wayne O. Millies – District 5
- Ed Dias – At Large
- Charlie Norman – At Large
- Gil Aguilar – District 2 (Alternate)

TULARE COUNTY RESOURCE MANAGEMENT AGENCY

- Michael C. Spata Director/Environmental Assessment Officer
- Michael Washam, Assistant Director-Planning
- Hector Guerra, Chief Planner, Environmental Planning Division
- Aaron Bock, MCRP, J.D., LEED AP, Chief Planner, Planning & Project Processing
- David Bryant, Chief Planner, Special Projects Division

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- Richard Walker, Planner IV, Environmental Planning Division
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FIRST CARBON SOLUTIONS

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Greenhouse Gas Analysis Report

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LIVE OAK ASSOCIATES, INC.

Biological Evaluation

- Rebekah Jensen, Wildlife Biologist
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SIERRA VALLEY CULTURAL PLANNING

Cultural Resources Assessment

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Noise Study Report and Noise Element

Traffic Impact Assessment and Circulation Element

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Pixley Community Plan

General Plan Amendment (GPA 14-002)

Appendices

Appendix A

Air Quality Analysis Report



Air Quality Analysis Report Pixley Community Plan Update

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Table of Contents

Acronyms and Abbreviations	v
Section 1: Executive Summary	1
1.1 - Purpose and Analysis Approach	1
1.2 - Project Summary	1
1.3 - Summary of Analysis Results	1
1.4 - Mitigation Measures Applied to the Project	2
Section 2: Environmental and Regulatory Setting	7
2.1 - Environmental Setting	7
2.1.1 - San Joaquin Valley Air Basin	7
2.2 - Regulatory Setting	8
2.2.1 - Clean Air Act	8
2.2.2 - California Clean Air Act	9
2.2.3 - Toxic Air Contaminants	9
2.2.4 - Air Pollutant Description and Health Effects	9
2.3 - Existing Air Quality Conditions	16
2.3.1 - Attainment Status	19
2.3.2 - Existing Sources of Toxic Emissions	20
2.4 - Air Quality Plans and Regulations	20
2.4.1 - California Regulations	21
2.4.2 - San Joaquin Valley Air Pollution Control District	23
2.4.3 - County of Tulare General Plan	27
Section 3: Air Quality Analysis Approach and Thresholds	29
3.1 - Modeling Guidance	29
3.2 - Modeling Approach	29
3.3 - Regional Air Quality Emissions	30
3.3.1 - Construction	31
3.3.2 - Operation	31
3.4 - Localized Operational Emissions and Impacts	31
3.5 - Significance Thresholds	32
3.5.1 - CEQA Significance Thresholds	32
3.5.2 - District Significance Thresholds	32
Section 4: Air Quality Impact Analysis	37
4.1 - CEQA Guidelines	37
4.2 - Impact Analysis	38
Air Quality Plan	38
Potential to Cause or Contribute to an Air Quality Standard Violation	39
Cumulative Impacts	44
Sensitive Receptors	46
Objectionable Odors	50
Section 5: References	53
Appendix A: Air Quality Modeling Results	

List of Tables

Table 1: Description of Air Pollutants	10
Table 2: Air Quality Monitoring Summary	16
Table 3: Air Quality Index and Health Effects	18
Table 4: San Joaquin Valley Air Basin Attainment Status	20
Table 5: Residential Land Use Assumptions	29
Table 6: Non-Residential Land Use Assumptions	30
Table 7: District Emission Significance Thresholds	33
Table 8: Recommendations on Siting New Sensitive Land Uses	34
Table 9: Screening Levels for Potential Odor Sources	35
Table 10: Construction Air Pollutant Emissions	41
Table 11: Operational Air Pollutant Emissions at Plan Horizon Year	41

List of Figures

Figure 1: Temperature and Precipitation	8
Figure 2: San Joaquin Valley NO _x Emissions Forecast	24

List of Exhibits

Exhibit 1: Regional Location Map	3
Exhibit 2: Proposed Planning Study Area	5

ACRONYMS AND ABBREVIATIONS

$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
AQP	Air Quality Plan
ARB	California Air Resources Board
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CO	carbon monoxide
CO ₂	carbon dioxide
District	San Joaquin Valley Air Pollution Control District
DPM	diesel particulate matter
EPA	United States Environmental Protection Agency
NO _x	nitrogen oxides
PM ₁₀	particulate matter less than 10 microns in diameter
PM _{2.5}	particulate matter less than 2.5 microns in diameter
ppm	parts per million
ppt	parts per trillion
ROG	reactive organic gases
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO _x	sulfur oxides
VOC	volatile organic compounds

SECTION 1: EXECUTIVE SUMMARY

1.1 - Purpose and Analysis Approach

The following air quality analysis was prepared to evaluate the impacts of implementing the updated Pixley Community Plan. The growth projected between the base year 2014 and the milestone year 2030 is the basis of this analysis. The emissions generated from the development anticipated to occur during this period is compared with the thresholds of significance impact. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The analysis is intended to provide sufficient detail regarding potential impacts of anticipated development through the 2030 milestone year and mitigation measures to reduce impacts as needed to reduce potentially significant impacts, if needed.

The methodology follows San Joaquin Valley Air Pollution Control District (District or SJVAPCD) recommendations for quantification of emissions and evaluation of potential impacts to air resources. The District prepared its Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI) in 2002.

1.2 - Project Summary

The Pixley Community Plan Update (Plan) addresses anticipated growth through 2030. No specific projects have been identified for immediate development. The Plan includes assumptions regarding the amount of development anticipated to occur prior to 2030 within existing land use designations. Estimates of future development were prepared to provide a framework for analysis. The development statistics for the Plan are provided in Section 3.2. Maps showing the Pixley Community Plan planning area and the individual growth areas areas are provided in Exhibit 1 and Exhibit 2. The analysis is based on growth at rates predicted for Tulare County in the Tulare County General Plan Update of 1.3 percent. For analysis purposes, the future development mix is assumed to be similar to what is currently present in Pixley.

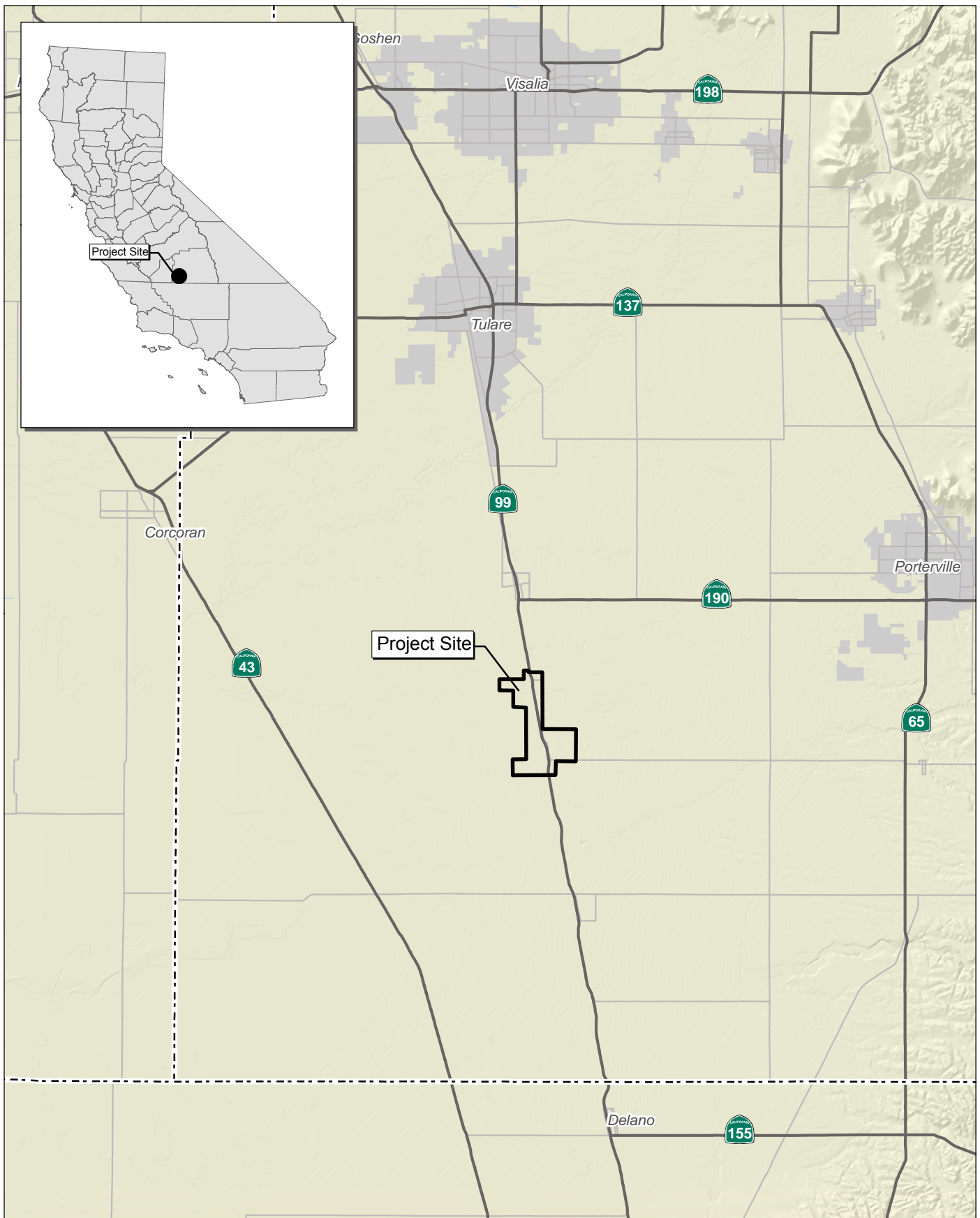
1.3 - Summary of Analysis Results

- Impact AIR-1:** The project would not conflict with or obstruct implementation of the applicable air quality plan. **Less than significant impact**
- Impact AIR-2:** The project would not violate air quality standards or contribute substantially to an existing or projected air quality violation. **Less than significant impact**
- Impact AIR-3:** The project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors). **Less than significant impact**
- Impact AIR-4:** The project would not expose sensitive receptors to substantial pollutant concentrations. **Less than significant impact**

Impact AIR-5: The project would not create objectionable odors affecting a substantial number of people. **Less than significant impact**

1.4 - Mitigation Measures Applied to the Project

No mitigation measures were required.



Source: Census 2000 Data, The CaSIL, Tulare County

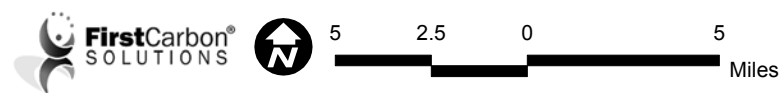
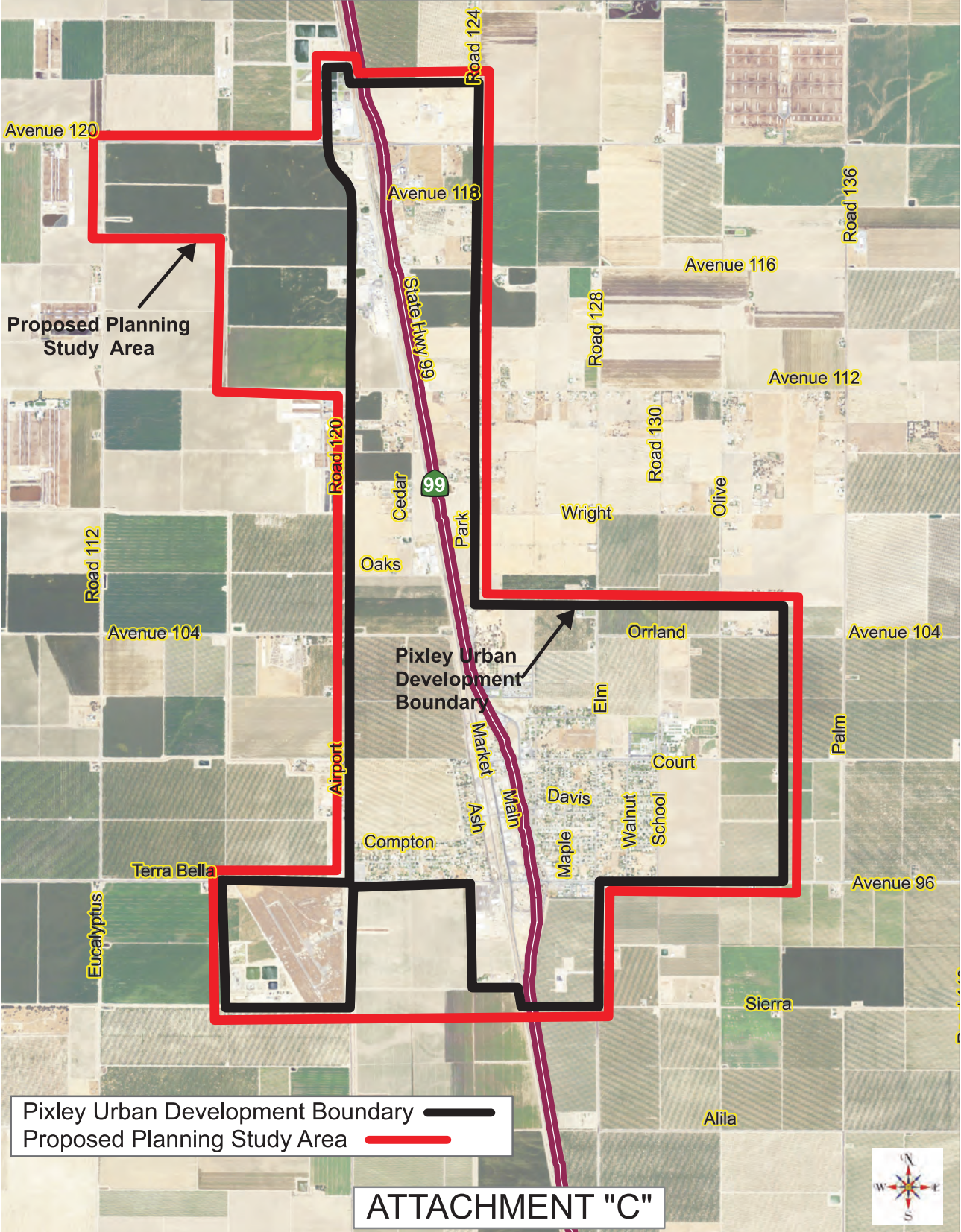


Exhibit 1 Regional Location Map

Pixley Community Plan Update



ATTACHMENT "C"

Source: Tulare County



Exhibit 2 Proposed Planning Study Area

SECTION 2: ENVIRONMENTAL AND REGULATORY SETTING

2.1 - Environmental Setting

The project is located in the San Joaquin Valley Air Basin (Air Basin). Regional and local air quality is impacted by topography, dominant airflows, atmospheric inversions, location, and season. The following section describes these conditions as they pertain to the Air Basin.

2.1.1 - San Joaquin Valley Air Basin

The information in this section is primarily from the District's GAMAQI and the accompanying Technical Document (San Joaquin Valley Air Pollution Control District 2002).

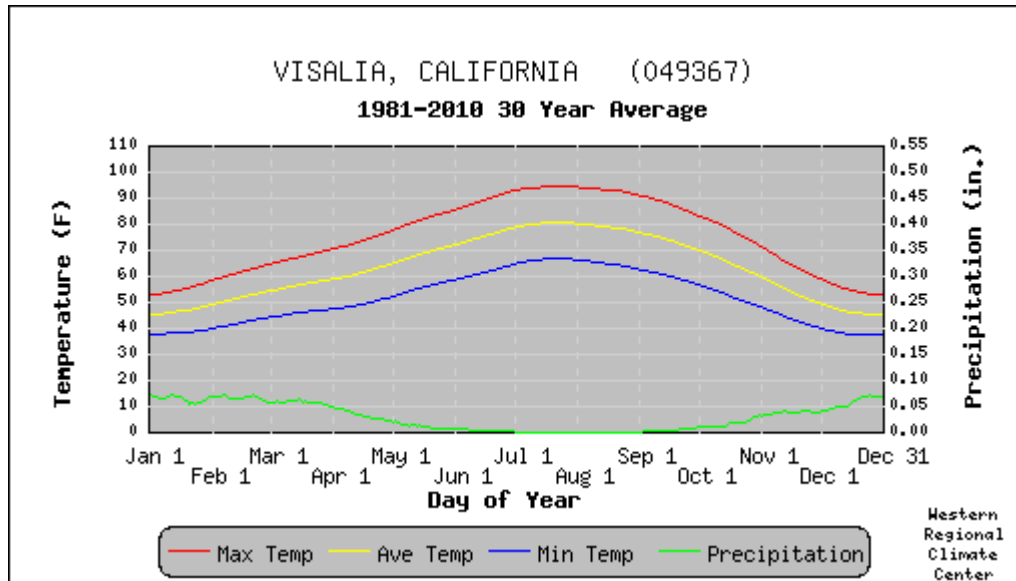
Topography

The topography of a region is important for air quality because mountains can block airflow that would help disperse pollutants and can channel air from upwind areas that transports pollutants to downwind areas. The District covers the entirety of the Air Basin. The Air Basin is generally shaped like a bowl. It is open in the north and is surrounded by mountain ranges on all other sides. The Sierra Nevada mountains are along the eastern boundary (8,000 to 14,000 feet in elevation), the Coast Ranges are along the western boundary (3,000 feet in elevation), and the Tehachapi Mountains are along the southern boundary (6,000 to 8,000 feet in elevation).

Climate

The climate is important for air quality because of differences in the atmosphere's ability to trap pollutants close to the ground creating adverse air quality or to rapidly disperse pollutants over wide area preventing high concentrations from accumulating under different climatic conditions. The Air Basin has an "inland Mediterranean" climate and is characterized by long, hot, dry summers and short, foggy winters. Sunlight can be a catalyst in the formation of some air pollutants (such as ozone); the Air Basin averages over 260 sunny days per year.

As shown in Figure 1, the average temperatures in Visalia, which is the closest station to Pixley located approximately 25.03 miles northeast, typically range from the mid-40s to 90s (Western Regional Climate Center 2011). Further as shown in Figure 1, the majority of the annual rainfall in the area occurs between November and April. The average annual precipitation in Visalia is 10.95 inches.

Figure 1: Temperature and Precipitation

Dominant airflows provide the driving mechanism for transport and dispersion of air pollution. The mountains surrounding the Air Basin form natural horizontal barriers to the dispersion of air contaminants. The wind generally flows south-southeast through the valley, through the Tehachapi Pass and into the Southeast Desert Air Basin portion of Kern County. As the wind moves through the Air Basin, it mixes with the air pollution generated locally, generally transporting air pollutants from the north to the south in the summer and in a reverse flow in the winter.

2.2 - Regulatory Setting

Air pollutants are regulated to protect human health and for secondary effects such as visibility and building soiling. The Clean Air Act of 1970 tasks the United States Environmental Protection Agency (EPA) with setting air quality standards. The State of California also sets air quality standards that are in some cases are more stringent than federal standards and address additional pollutants. The following section describes these federal and state standards and the health effects of the regulated pollutants.

2.2.1 - Clean Air Act

Congress established much of the basic structure of the Clean Air Act (CAA) in 1970, and made major revisions in 1977 and 1990. Six common air pollutants (also known as criteria pollutants) are addressed in the CAA. These are particulate matter, ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead. EPA calls these pollutants criteria air pollutants because it regulates them by developing human health-based and/or environmentally based criteria (science-based guidelines) for setting permissible levels. The set of limits based on human health is called primary standards. Another set of limits intended to prevent environmental and property damage is called secondary standards (EPA 2014). The federal standards are called National Ambient Air

Quality Standards (NAAQS). The air quality standards provide benchmarks for determining whether air quality is healthy at specific locations and whether development activities will cause or contribute to a violation of the standards. The criteria pollutants are:

- Ozone
- Nitrogen dioxide
- Lead
- Particulate matter (PM₁₀ and PM_{2.5})
- Carbon monoxide (CO)
- Sulfur dioxide

The federal standards were set to protect public health, including that of sensitive individuals; thus, EPA is tasked with updating the standards as more medical research is available regarding the health effects of the criteria pollutants. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health (ARB 2012).

2.2.2 - California Clean Air Act

The California Legislature enacted the California Clean Air Act (CCAA) in 1988 to address air quality issues of concern not adequately addressed by the federal CAA at the time. California's air quality problems were and are some of the most severe in the nation and required additional actions beyond the federal mandates. The California Air Resources Board (ARB) administers California Ambient Air Quality Standards (CAAQS) for the 10 air pollutants designated in the CCAA. The 10 state air pollutants are the six federal standards listed above as well visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride. EPA authorized California to adopt its own regulations for motor vehicles and other sources that are more stringent than similar federal regulations implementing the CAA. Generally, the planning requirements of the CCAA are less stringent than federal CAA; therefore, consistency with the CAA will also demonstrate consistency with the CCAA.

2.2.3 - Toxic Air Contaminants

A toxic air contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. There are no ambient air quality standards for TAC emissions. TACs are regulated in terms of health risks to individuals and populations exposed to the pollutants. The 1990 Clean Air Act Amendments, significantly expanded EPA's authority to regulate hazardous air pollutants (HAP). Section 112 of the Clean Air Act lists 187 hazardous air pollutants to be regulated by source category. Authority to regulate these pollutants was delegated to the States. ARB and local air districts regulate TACs and HAPs in California.

2.2.4 - Air Pollutant Description and Health Effects

The federal and state ambient air quality standards, relevant effects, properties, and sources of the pollutants are summarized in Table 1.

Table 1: Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard ^a	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Ozone	1 Hour	0.09 ppm	—	Irritate respiratory system; reduce lung function; breathing pattern changes; reduction of breathing capacity; inflame and damage cells that line the lungs; make lungs more susceptible to infection; aggravate asthma; aggravate other chronic lung diseases; cause permanent lung damage; some immunological changes; increased mortality risk; vegetation and property damage.	Ozone is a photochemical pollutant as it is not emitted directly into the atmosphere, but is formed by a complex series of chemical reactions between volatile organic compounds (VOC), NO _x , and sunlight. Ozone is a regional pollutant that is generated over a large area and is transported and spread by the wind.	Ozone is a secondary pollutant; thus, it is not emitted directly into the lower level of the atmosphere. The primary sources of ozone precursors (VOC and NO _x) are mobile sources (on-road and off-road vehicle exhaust).
	8 Hour	0.070 ppm	0.075 ppm			
Carbon monoxide (CO)	1 Hour	20 ppm	35 ppm	Ranges depending on exposure: slight headaches; nausea; aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; decreased exercise tolerance in persons with peripheral vascular disease and lung disease; impairment of central nervous system functions; possible increased risk to fetuses; death.	CO is a colorless, odorless, toxic gas. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, replaces oxygen as an attachment to hemoglobin, and reduces available oxygen in the blood.	CO is produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources.
	8 Hour	9.0 ppm	9 ppm			
Nitrogen dioxide ^b (NO ₂)	1 Hour	0.18 ppm	0.100 ppm	Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; contribution to atmospheric discoloration; increased visits to hospital for respiratory illnesses.	During combustion of fossil fuels, oxygen reacts with nitrogen to produce nitrogen oxides - NO _x (NO, NO ₂ , NO ₃ , N ₂ O, N ₂ O ₃ , N ₂ O ₄ , and N ₂ O ₅). NO _x is a precursor to ozone, PM ₁₀ , and PM _{2.5} formation. NO _x can react with compounds to form nitric acid and related small particles and result in PM related health effects.	NO _x is produced in motor vehicle internal combustion engines and fossil fuel-fired electric utility and industrial boilers. Nitrogen dioxide (NO ₂) forms quickly from NO _x emissions. NO ₂ concentrations near major roads can be 30 to 100 percent higher than those at monitoring stations.
	Annual	0.030 ppm	0.053 ppm			

Table 1 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard ^a	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Sulfur dioxide ^c (SO ₂)	1 Hour	0.25 ppm	0.075 ppm	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.	Sulfur dioxide is a colorless, pungent gas. At levels greater than 0.5 ppm, the gas has a strong odor, similar to rotten eggs. Sulfur oxides (SO _x) include sulfur dioxide and sulfur trioxide. Sulfuric acid is formed from sulfur dioxide, which can lead to acid deposition and can harm natural resources and materials. Although sulfur dioxide concentrations have been reduced to levels well below state and federal standards, further reductions are desirable because sulfur dioxide is a precursor to sulfate and PM ₁₀ .	Human caused sources include fossil-fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. The gas can also be produced in the air by dimethylsulfide and hydrogen sulfide. Sulfur dioxide is removed from the air by dissolution in water, chemical reactions, and transfer to soils and ice caps. The sulfur dioxide levels in the State are well below the maximum standards.
	3 Hour	—	0.5 ppm			
	24 Hour	0.04 ppm	0.14 (for certain areas)			
	Annual	—	0.030 ppm (for certain areas)			
Particulate matter (PM ₁₀)	24 hour	50 µg/m ³	150 µg/m ³	<ul style="list-style-type: none"> Short-term exposure (hours/days): irritation of the eyes, nose, throat; coughing; phlegm; chest tightness; shortness of breath; aggravate existing lung disease, causing asthma attacks and acute bronchitis; those with heart disease can suffer heart attacks and arrhythmias. Long-term exposure: reduced lung function; chronic bronchitis; changes in lung morphology; death. 	Suspended particulate matter is a mixture of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM ₁₀ refers to particulate matter that is between 2.5 and 10 microns in diameter, (1 micron is one-millionth of a meter). PM _{2.5} refers to particulate matter that is 2.5 microns or less in diameter, about one-thirtieth the size of the average human hair.	Stationary sources include fuel or wood combustion for electrical utilities, residential space heating, and industrial processes; construction and demolition; metals, minerals, and petrochemicals; wood products processing; mills and elevators used in agriculture; erosion from tilled lands; waste disposal, and recycling. Mobile or transportation related sources are from vehicle exhaust and road dust. Secondary particles form from reactions in the atmosphere.
	Mean	20 µg/m ³	—			
Particulate matter (PM _{2.5})	24 Hour	—	35 µg/m ³			
	Annual	12 µg/m ³	12.0 µg/m ³			
Visibility-reducing particles	8 Hour	See note below ^d				
Sulfates	24 Hour	25 µg/m ³	—	(a) Decrease in ventilatory	The sulfate ion is a polyatomic	Sulfates are particulates formed

Table 1 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard ^a	Most Relevant Effects from Pollutant Exposure	Properties	Sources
				function; (b) aggravation of asthmatic symptoms; (c) aggravation of cardio-pulmonary disease; (d) vegetation damage; (e) degradation of visibility; (f) property damage.	anion with the empirical formula SO_4^{2-} . Sulfates occur in combination with metal and/or hydrogen ions. Many sulfates are soluble in water.	through the photochemical oxidation of sulfur dioxide. In California, the main source of sulfur compounds is combustion of gasoline and diesel fuel.
Lead ^e	30-day	1.5 $\mu\text{g}/\text{m}^3$	—	Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction, behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs.	Lead is a solid heavy metal that can exist in air pollution as an aerosol particle component. Lead gasoline was used in motor vehicles until around 1970. Lead concentrations have not exceeded state or federal standards at any monitoring station since 1982.	Lead ore crushing, lead-ore smelting, and battery manufacturing are currently the largest sources of lead in the atmosphere in the United States. Other sources include dust from soils contaminated with lead-based paint, solid waste disposal, and crustal physical weathering.
	Quarter	—	1.5 $\mu\text{g}/\text{m}^3$			
	Rolling 3-month average	—	0.15 $\mu\text{g}/\text{m}^3$			
Vinyl chloride ^e	24 Hour	0.01 ppm	—	Short-term exposure to high levels of vinyl chloride in the air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Epidemiological studies of occupationally exposed workers have linked vinyl chloride exposure to development of a rare cancer, liver angiosarcoma, and have suggested a relationship between exposure and lung and brain cancers.	Vinyl chloride, or chloroethene, is a chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. In 1990, ARB identified vinyl chloride as a toxic air contaminant and estimated a cancer unit risk factor.	Most vinyl chloride is used to make polyvinyl chloride plastic and vinyl products, including pipes, wire and cable coatings, and packaging materials. It can be formed when plastics containing these substances are left to decompose in solid waste landfills. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites.

Table 1 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard ^a	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Hydrogen sulfide	1 Hour	0.03 ppm	—	High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause headache, nausea, vomiting, and cough. Long exposure can cause pulmonary edema.	Hydrogen sulfide (H ₂ S) is a flammable, colorless, poisonous gas that smells like rotten eggs.	Manure, storage tanks, ponds, anaerobic lagoons, and land application sites are the primary sources of hydrogen sulfide. Anthropogenic sources include the combustion of sulfur containing fuels (oil and coal).
Volatile organic compounds (VOC)		There are no State or federal standards for VOCs because they are not classified as criteria pollutants.		Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations because of interference with oxygen uptake. In general, concentrations of VOCs are suspected to cause eye, nose, and throat irritation; headaches; loss of coordination; nausea; and damage to the liver, the kidneys, and the central nervous system. Many VOCs have been classified as toxic air contaminants.	Reactive organic gases (ROG), or VOCs, are defined as any compound of carbon—excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical reactions. Although there are slight differences in the definition of ROG and VOCs, the two terms are often used interchangeably.	Indoor sources of VOCs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of VOCs are from combustion and fuel evaporation. A reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs are transformed into organic aerosols in the atmosphere, which contribute to higher PM ₁₀ and lower visibility.
Diesel particulate matter (DPM)		There are no ambient air quality standards for DPM.		Some short-term (acute) effects of DPM exposure include eye, nose, throat, and lung irritation, coughs, headaches, light-headedness, and nausea. Studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Human	DPM is a source of PM _{2.5} —diesel particles are typically 2.5 microns and smaller. Diesel exhaust is a complex mixture of thousands of particles and gases that is produced when an engine burns diesel fuel. Organic compounds account for 80 percent of the total particulate matter mass, which consists of compounds such as hydrocarbons and their derivatives, and polycyclic	Diesel exhaust is a major source of ambient particulate matter pollution in urban environments. Typically, the main source of DPM is from combustion of diesel fuel in diesel-powered engines. Such engines are in on-road vehicles such as diesel trucks, off-road construction vehicles, diesel electrical generators, and various pieces of stationary construction

Table 1 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard ^a	Most Relevant Effects from Pollutant Exposure	Properties	Sources
				studies on the carcinogenicity of DPM demonstrate an increased risk of lung cancer, although the increased risk cannot be clearly attributed to diesel exhaust exposure.	aromatic hydrocarbons and their derivatives. Fifteen polycyclic aromatic hydrocarbons are confirmed carcinogens, a number of which are found in diesel exhaust.	equipment.
<p>Notes:</p> <p>ppm = parts per million (concentration) $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter Annual = Annual Arithmetic Mean 30-day = 30-day average Quarter = Calendar quarter</p> <p>^a Federal standard refers to the primary national ambient air quality standard, or the levels of air quality necessary, with an adequate margin of safety to protect the public health. All standards listed are primary standards except for 3 Hour SO_2, which is a secondary standard. A secondary standard is the level of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.</p> <p>^b To attain the 1-hour NO_2 national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (0.100 ppm).</p> <p>^c On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.</p> <p>^d Visibility-reducing particles: In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and “extinction of 0.07 per kilometer” for the statewide and Lake Tahoe Air Basin standards, respectively.</p> <p>^e The ARB has identified lead and vinyl chloride as ‘toxic air contaminants’ with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.</p> <p>Source of effects, properties, and sources: South Coast Air Quality Management District 2007; California Environmental Protection Agency 2002; California Air Resources Board 2009a; U.S. Environmental Protection Agency 2003, 2009a, 2009b, 2010, 2011, and 2012a; National Toxicology Program 2011a and 2011b.</p> <p>Source of standards: California Air Resources Board 2013a.</p>						

Several pollutants listed in Table 1 are not addressed in this analysis. Analysis of lead is not included in this report because no new sources of lead emissions are anticipated with the Community Plan Update. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter is addressed. No specific projects are identified in the Community Plan Update that would result vinyl chloride or hydrogen sulfide emissions in any substantial quantity. Projects proposing substantial emissions of these pollutants would require their own environmental review.

Toxic Air Contaminants Health Effects

A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. The California Almanac of Emissions and Air Quality presents the relevant concentration and cancer risk data for the ten TACs that pose the most substantial health risk in California based on available data. The ten TACs are acetaldehyde, benzene, 1,3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (DPM).

Some studies indicate that DPM poses the greatest health risk among the TACs listed above. A 10-year research program (AR 1998) demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. In addition to increasing the risk of lung cancer, exposure to diesel exhaust can have other health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.

DPM differs from other TACs in that it is not a single substance but a complex mixture of hundreds of substances. Although DPM is emitted by diesel-fueled, internal combustion engines, the composition of the emissions varies, depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. Unlike the other TACs, however, no ambient monitoring data are available for DPM because no routine measurement method currently exists. The ARB has made preliminary concentration estimates based on a DPM exposure method. This method uses the ARB emissions inventory's PM₁₀ database, ambient PM₁₀ monitoring data, and the results from several studies to estimate concentrations of DPM.

Limited data on levels and health risks attributable to the top 10 TACs listed above available from the ARB as part of their California Almanac of Emissions and Air Quality - 2009 Edition (ARB 2009b). As shown therein for data collected at the California Avenue air monitoring station in Bakersfield, cancer risks attributable to all of the listed TACs above with the exception of DPM have declined about 70 percent from the mid-1990s to 2007. Unfortunately, risks associated with DPM emissions are only provided for the year 2000 and have not been updated in the Almanac. The cancer risk from DPM alone was reported at 390 in a million in 2000 with a total risk from all TACs of 586 in a million.

Asbestos

Asbestos is the name given to a number of naturally occurring fibrous silicate minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings in the United States. Exposure to asbestos is a health threat; exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease that causes scarring of the lungs).

2.3 - Existing Air Quality Conditions

The existing local air quality can be characterized by reviewing relevant air pollution concentration data near the project area for comparison to the NAAQS and CAAQS. Air samples are collected continuously for some pollutants and periodically for other pollutants, depending on the type of monitoring equipment installed. Monitoring sites are usually chosen to be representative of emissions in a community. The Porterville 1839 Newcomb Street Station is the nearest monitoring station to the project site and is located approximately 16 miles northeast. The station monitors ozone and PM_{2.5}. Nitrogen dioxide and PM₁₀ is monitored from the Visalia-N. Church Street Station located approximately 21.10 miles northeast of the project site. Because the air basin is in attainment for carbon monoxide, it is no longer monitored throughout the Air Basin only in a relatively few areas where traffic congestion may occur. Carbon monoxide emissions were monitored from the Bakersfield-Golden State Highway Station, located approximately 48.09 miles southeast of the project site; however, this monitoring station no longer monitors for carbon monoxide. The next nearest monitoring station to the project site is the Fresno-First station, approximately 56.72 miles northwest of the project site. The measurements made at these station may not be representative of the project area, but they are assumed to provide a conservative estimate because the Pixley area would be expected to have a lower concentration of carbon monoxide emissions. Table 2 summarizes 2011 through 2013 published air monitoring data, which is the most recent 3-year period available. The amount over the standards and the number of days each year that standards were exceeded provide a good indicator of severity of the air quality problems in the local area.

Table 2: Air Quality Monitoring Summary

Air Pollutant, Location	Averaging Time	Item	2011	2012	2013
Ozone	1 Hour	Max 1 Hour (ppm)	0.104	0.102	0.112
		Days > State Standard (0.09 ppm)	15	10	5

Table 2 (cont.): Air Quality Monitoring Summary

Air Pollutant, Location	Averaging Time	Item	2011	2012	2013
Ozone (<i>cont.</i>)	8 Hour	Max 8 Hour (ppm)	0.095	0.092	0.103
		Days > State Standard (0.07 ppm)	82	80	52
		Days > National Standard (0.075 ppm)	47	44	23
Carbon monoxide	8 Hour	Max 8 Hour (ppm)	2.29	2.22	ID
		Days > State Standard (9.0 ppm)	0	0	0
		Days > National Standard (9 ppm)	0	0	0
	1 Hour	Max 1 Hour (ppm)	3.27	3.17	ID
		Days > State Standard (20 ppm)	0	0	0
		Days > National Standard (35 ppm)	0	0	0
Nitrogen dioxide	Annual	Annual Average (ppm)	0.012	0.012	0.012
	1 Hour	Max 1 Hour (ppm)	0.058	0.061	0.062
		Days > State Standard (0.18 ppm)	0	0	0
Inhalable coarse particles (PM ₁₀)	Annual	Annual Average (µg/m ³)	34	38.1	44.5
	24 Hour	24 Hour (µg/m ³)	78.1	75.7	155.0
		Days > State Standard (50 µg/m ³)	11	15	16
		Days > National Standard (150 µg/m ³)	0	0	1
Fine particulate matter (PM _{2.5})	Annual	Annual Average (µg/m ³)	17	17	17
	24 Hour	24 Hour (µg/m ³)	68.7	63.7	116.1
		Days > National Standard (35 µg/m ³)	ID	ID	ID

Notes and Abbreviations:

> = exceed ppm = parts per million µg/m³ = micrograms per cubic meter
ID = insufficient data ND = no data max = maximum

The ARB does not report 1-hour average CO concentrations in its database, only 8-hour CO concentrations. Therefore, the 1-hour CO concentration was derived by dividing the 8-hour concentration by 0.7.

State Standard = California Ambient Air Quality Standard

National Standard = National Ambient Air Quality Standard

Ozone and PM_{2.5} data from Porterville – 1839 Newcomb Street Station.

Nitrogen dioxide and PM₁₀ data from Visalia-N. Church Street Station.

Carbon monoxide data from Fresno-First Station.

Sources: California Air Resources Board 2014.

The health impacts of the various air pollutants of concern can be presented in a number of ways. The clearest in comparison is to the state and federal ozone standards. If concentrations are below the standard, it is safe to say that no health impact would occur to anyone. When concentrations exceed the standard, impacts will vary based on the amount the standard is exceeded. The EPA developed the Air Quality Index (AQI) as an easy to understand measure of health impact compared to concentrations in the air. Table 3 provides a description of the health impacts ozone at different concentrations.

Table 3: Air Quality Index and Health Effects

Air Quality Index/ 8-hour Ozone Concentration	Health Effects Description
AQI – 100 - Moderate Concentration 75 ppb	Sensitive Groups: Children and people with asthma are the groups most at risk. Health Effects Statements: Unusually sensitive individuals may experience respiratory symptoms. Cautionary Statements: Unusually sensitive people should consider limiting prolonged outdoor exertion.
AQI – 150 – Unhealthy for Sensitive Groups Concentration 95 ppb	Sensitive Groups: Children and people with asthma are the groups most at risk. Health Effects Statements: Increasing likelihood of respiratory symptoms and breathing discomfort in active children and adults and people with respiratory disease, such as asthma. Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.
AQI – 200 – Unhealthy Concentration 115 ppb	Sensitive Groups: Children and people with asthma are the groups most at risk Health Effects Statements: Greater likelihood of respiratory symptoms and breathing difficulty in active children and adults and people with respiratory disease, such as asthma; possible respiratory effects in general population Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion
AQI – 210 – Very Unhealthy Concentration 139 ppb	Sensitive Groups: Children and people with asthma are the groups most at risk Health Effects Statements: Increasingly severe symptoms and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma; increasing likelihood of respiratory effects in general population Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else, especially children, should limit outdoor exertion.
Source: EPA 2014.	

Based on the AQI scale for the 8-hour ozone standard, the nearest monitoring station experienced no days in the last 3 years that would be categorized as unhealthy (AQI 200), and as many as 82 days that were unhealthy for sensitive groups (AQI 150) or moderate (AQI 100) as measured at the Porterville monitoring station. The highest reading was 112 ppb in 2012 compared with the 95-ppb cut off point for unhealthy for sensitive groups (AQI 150), but lower than the 115-ppb cut off point for unhealthy (AQI 200).

The other nonattainment pollutant of concern is PM_{2.5}. An AQI of 100 or lower is considered moderate and would be triggered by a 24-hour average concentration of 35.4 µg/m³, which is considered an exceedance of the federal PM_{2.5} standard. Monitoring stations in Tulare County exceeded the standard, but the number of days was not reported due to insufficient data. People with respiratory or heart disease, the elderly and children are the groups most at risk. Unusually sensitive people should consider reducing prolonged or heavy exertion. The AQI of 150 is classified as unhealthy for sensitive groups with a PM_{2.5} concentration of 55.4 µg/m³. At this concentration, there is increasing likelihood of respiratory symptoms in sensitive individuals, aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease, and in the elderly. People with respiratory or heart disease, the elderly, and children should limit prolonged exertion. AQI 151—unhealthy with a concentration of 55.5 µg/m³—was also exceeded on at least three days in the last three years. The highest concentration recorded at the Visalia monitoring station was 116 µg/m³ in 2013. At this concentration, increased aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly and increased respiratory effects in general population would occur. People with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion when the AQI exceeds this level.

2.3.1 - Attainment Status

The EPA and the ARB designate air basins where ambient air quality standards are exceeded as “nonattainment” areas. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered “unclassified.” National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards.

Each standard has a different definition, or “form” of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual PM_{2.5} standard is met if the 3-year average of the annual average PM_{2.5} concentration is less than or equal to the standard.

The current attainment designations for the basin are shown in Table 4. The basin is designated as nonattainment for ozone, PM₁₀, and PM_{2.5}.

Table 4: San Joaquin Valley Air Basin Attainment Status

Pollutant	State Status	National Status
Ozone	Nonattainment	Nonattainment
Carbon monoxide	Attainment	Merced, Madera, and Kings County are unclassified; others in Attainment
Nitrogen dioxide	Attainment	Attainment
Sulfur dioxide	Attainment	Attainment
PM ₁₀	Nonattainment	Attainment
PM _{2.5}	Nonattainment	Nonattainment
Lead	Attainment	Attainment
Source of State status: California Air Resources Board, 2013a. Source of National status: U.S. Environmental Protection Agency, 2012.		

2.3.2 - Existing Sources of Toxic Emissions

The primary sources of impact from toxic air contaminant (TAC) emissions in Pixley are the train that passes through the community parallel to Interstate 99 and the Interstate 99 freeway itself. There are industrial sources of TAC emissions in Pixley; however, no industrial stationary sources were identified by the SJVAPCD that exceed health risk thresholds. Emissions from diesel trucks and automobiles traveling on roads in the Pixley Community Plan area provide a cumulative risk.

2.4 - Air Quality Plans and Regulations

Air pollutants are regulated at the national, state, and air basin or county level; each agency has a different level of regulatory responsibility. The United States Environmental Protection Agency (EPA) regulates at the national level. The ARB regulates at the state level. The District regulates at the air basin level.

The EPA is responsible for national and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans, provides research and guidance for air pollution programs, and sets National Ambient Air Quality Standards, also known as federal standards described earlier.

A State Implementation Plan is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain federal standards. The State Implementation Plan for the State of California is administered by the ARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. California's State Implementation Plan incorporates individual federal attainment plans for regional air districts—air district prepares their federal attainment plan, which is sent to ARB to be approved and incorporated into the California State Implementation Plan. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring),

control measures and strategies, and enforcement mechanisms. The most stringent attainment plan for the SJVAB is the 2007 8-hour Ozone Plan. The 2012 PM_{2.5} Plan approved December 20, 2012 is more recent, but the Ozone Plan requires greater reductions to achieve the ozone standard, so it requires the most stringent control strategy. Both plans rely primarily on NO_x reductions to achieve attainment.

Areas designated non-attainment must develop air quality plans and regulations to achieve standards by specified dates depending on the severity of the exceedances. For much of the country, implementation of federal motor vehicle standards and compliance with federal permitting requirements for industrial sources are adequate to attain air quality standards on schedule. For many areas of California; however, additional state and local regulation is required to achieve the standards. Regulations adopted by California are described below.

2.4.1 - California Regulations

Low-Emission Vehicle Program

The ARB first adopted Low-Emission Vehicle (LEV) program standards in 1990. These first LEV standards ran from 1994 through 2003. LEV II regulations, running from 2004 through 2010, represent continuing progress in emission reductions. As the State's passenger vehicle fleet continues to grow and more sport utility vehicles and pickup trucks are used as passenger cars rather than work vehicles, the more stringent LEV II standards were needed to provide reductions necessary for California to meet federally mandated clean air goals outlined in the 1994 State Implementation Plan (SIP). In 2012, ARB adopted the LEV III amendments to California's Low-Emission Vehicle (LEV) regulations to provide reductions needed to achieve the latest ozone and PM_{2.5} standards. These amendments include more stringent emission standards for both criteria pollutants and greenhouse gases for new passenger vehicles (ARB 2012).

On-Road Heavy-Duty Vehicle Program

The ARB has adopted standards for emissions from various types of new on-road heavy-duty vehicles. Section 1956.8, Title 13, California Code of Regulations contains California's emission standards for on-road heavy-duty engines and vehicles, and test procedures. ARB has also adopted programs to reduce emissions from in-use heavy-duty vehicles including the Heavy-Duty Diesel Vehicle Idling Reduction Program, the Heavy-Duty Diesel In-Use Compliance Program, the Public Bus Fleet Rule and Engine Standards, and the School Bus Program and others (ARB 2013b).

ARB Regulation for In-Use Off-Road Diesel Vehicles

On July 26, 2007, the ARB adopted a regulation to reduce DPM and NO_x emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. The ARB is enforcing that part of the rule with fines up to \$10,000 per day for each vehicle in violation. Performance requirements of the rule are based on a fleet's average NO_x emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by installing exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirements

making the first compliance deadline January 1, 2014 for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501-5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less).

ARB Airborne Toxic Control Measure for Asbestos

In July 2001, the ARB approved an Air Toxic Control Measure for construction, grading, quarrying and surface mining operations to minimize emissions of naturally occurring asbestos. The regulation requires application of best management practices to control fugitive dust in areas known to have naturally occurring asbestos and requires notification to the local air district prior to commencement of ground-disturbing activities. The measure establishes specific testing, notification and engineering controls prior to grading, quarrying or surface mining in construction zones where naturally occurring asbestos is located on projects of any size. There are additional notification and engineering controls at work sites larger than one acre in size. These projects require the submittal of a "Dust Mitigation Plan" and approval by the air district prior to the start of a project.

Construction sometimes requires the demolition of existing buildings where construction occurs. Buildings often include materials containing asbestos, but no demolition is associated with this project. However, asbestos is also found in a natural state, known as naturally occurring asbestos. Exposure and disturbance of rock and soil that naturally contain asbestos can result in the release of fibers into the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (serpentine) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, can be found associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present.

The ARB has an Air Toxics Control Measure for construction, grading, quarrying, and surface mining operations requiring the implementation of mitigation measures to minimize emissions of asbestos-laden dust. The measure applies to road construction and maintenance, construction and grading operations, and quarries and surface mines when the activity occurs in an area where naturally occurring asbestos is likely to be found. Areas are subject to the regulation if they are identified on maps published by the Department of Conservation as ultramafic rock units or if the Air Pollution Control Officer or owner/operator has knowledge of the presence of ultramafic rock, serpentine, or naturally occurring asbestos on the site. The measure also applies if ultramafic rock, serpentine, or asbestos is discovered during any operation or activity. Review of the Department of Conservation maps shows no ultramafic rock has been found near Pixley.

Diesel Risk Reduction Plan

The ARB's Diesel Risk Reduction Plan has led to the adoption of new state regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles to reduce DPM emissions by about 90 percent overall from year 2000 levels as stated on page 1 of the plan. The projected emission benefits associated with the full implementation of this plan, including federal measures, are reductions in DPM emissions and associated cancer risks of 75 percent by 2010 and 85 percent by 2020 (ARB 2000).

2.4.2 - San Joaquin Valley Air Pollution Control District

The District is responsible for controlling emissions primarily from stationary sources. The District, in coordination with the eight countywide transportation agencies, is also responsible for developing, updating, and implementing air quality attainment plans for the Air Basin. The District also has roles under CEQA.

Ozone Plans

The Air Basin is designated nonattainment of state and federal health-based air quality standards for ozone. To meet Clean Air Act requirements for the one-hour ozone standard, the District adopted an Extreme Ozone Attainment Demonstration Plan in 2004, with an attainment date of 2010. Although EPA revoked the federal 1-hour ozone standard effective June 15, 2005 and replaced it with an 8-hour standard, the requirement to submit a plan for that standard remained in effect for the San Joaquin Valley.

The planning requirements for the 1-hour plan remain in effect until replaced by a federal 8-hour ozone attainment plan. The EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan, including revisions to the plan, on March 8, 2010, effective April 7, 2010. However, the Air Basin failed to attain the standard in 2010 and was subject to a \$29-million Clean Air Act penalty. The penalty is being collected through an additional \$12 motor vehicle registration surcharge for each passenger vehicle registered in the Air Basin that will be applied to pollution reduction programs in the region. The District also instituted a more robust ozone episodic program to reduce emissions on days with the potential to exceed the ozone standards.

On May 6, 2014, the District submitted a formal request that the EPA determine that the Valley has attained the federal 1-hour ozone standard and to eliminate the \$29 million Clean Air Act penalty. Per federal requirements, the District's submittal includes a clean data finding (2011-2013) and a finding that attainment is due to permanent and enforceable emissions reductions.

As part of the clean data finding, the District requested EPA concurrence that an exceedance at Fresno-Drummond on August 10, 2012 was due to an exceptional event. Alternatively, the District also provided compelling evidence that the Valley would attain the 1-hour ozone standard but for the influence of international air pollutant transport, allowing nonattainment penalties to be lifted under CAA 179B.

EPA originally classified the Air Basin as serious nonattainment for the 1997 federal 8-hour ozone standard with an attainment date of 2013. On April 30, 2007, the District's Governing Board adopted the 2007 Ozone Plan, which contained analysis showing a 2013 attainment target to be infeasible. The 2007 Ozone Plan details the plan for achieving attainment on schedule with an "extreme nonattainment" deadline of 2024. At its adoption of the 2007 Ozone Plan, the District also requested a reclassification to extreme nonattainment. ARB approved the plan in June 2007, and EPA approved the request for reclassification to extreme nonattainment on April 15, 2010.

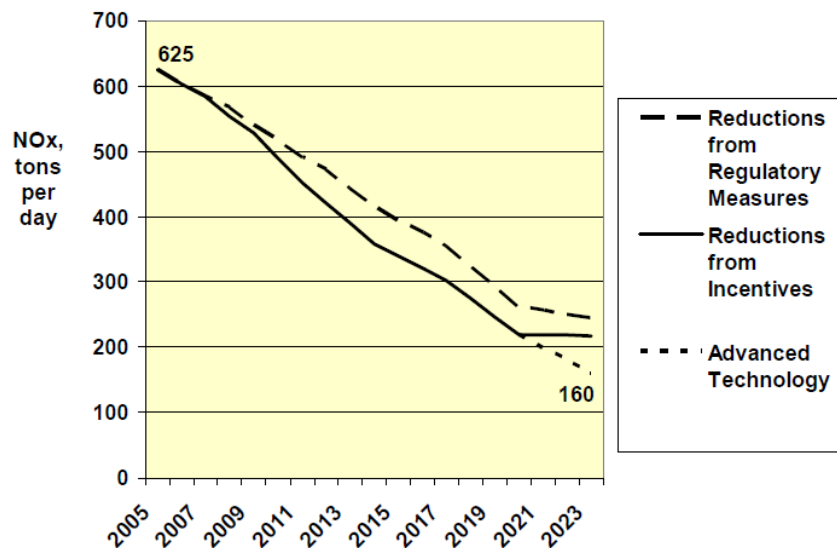
The 2007 Ozone Plan contains measures to reduce ozone and particulate matter precursor emissions to bring the Basin into attainment with the federal 8-hour ozone standard. The 2007 Ozone Plan

calls for a 75-percent reduction of NO_x and a 25-percent reduction of ROG. Figure 2 displays the anticipated NO_x reductions attributed in the 2007 Ozone Plan (SJVPACD 2007). The plan, with innovative measures and a “dual path” strategy, assures expeditious attainment of the federal 8-hour ozone standard for all Basin residents. The District Governing Board adopted the 2007 Ozone Plan on April 30, 2007. The ARB approved the plan on June 14, 2007. The 2007 Ozone Plan requires yet to be determined “Advanced Technology” to achieve additional reductions after 2021 to attain the standard at all monitoring stations in the Basin by 2024 as allowed for areas designated extreme nonattainment by the federal CAA.

The Air Basin is designated as an extreme ozone nonattainment area for the EPA 2008 8-hour ozone standard of 75 parts per billion (ppb). The plan to address this standard is expected to be due to EPA in 2015/2016.

State ozone standards do not have an attainment deadline but require implementation of all feasible measures to achieve attainment at the earliest date possible. This is achieved through compliance with the federal deadlines and control measure requirements.

Figure 2: San Joaquin Valley NO_x Emissions Forecast



Particulate Matter Plans

The Air Basin was designated nonattainment of state and federal health-based air quality standards for PM₁₀. The Air Basin is also designated nonattainment of state and federal standards for PM_{2.5}.

To meet CAA requirements for the PM₁₀ standard, the District adopted a PM₁₀ Attainment Demonstration Plan (Amended 2003 PM₁₀ Plan and 2006 PM₁₀ Plan), which had an attainment date of 2010. The District adopted the 2007 PM₁₀ Maintenance Plan in September 2007 to assure the San Joaquin Valley’s continued attainment of the EPA’s PM₁₀ standard. The EPA designated the valley as an attainment/maintenance area for PM₁₀ on September 25, 2008. Although the San Joaquin Valley

has exceeded the standard since then, those days were considered exceptional events that are not considered a violation of the standard for attainment purposes.

The 2008 PM_{2.5} Plan builds upon the comprehensive strategy adopted in the 2007 Ozone Plan to bring the Basin into attainment of the 1997 national standards for PM_{2.5}. The EPA has identified NO_x and sulfur dioxide as precursors that must be addressed in air quality plans for the 1997 PM_{2.5} standards. The 2008 PM_{2.5} Plan is a continuation of the District's strategy to improve the air quality in the Basin. The EPA issued final approval of the 2008 PM_{2.5} Plan on November 9, 2011 effective January 9, 2012. EPA approved the emissions inventory, the reasonably available control measures/reasonably available control technology demonstration, reasonable further progress demonstration, attainment demonstration and associated air quality modeling, and the transportation conformity motor vehicle emissions budgets. EPA also granted California's request to extend the attainment deadline for the San Joaquin Valley to April 5, 2015 and approved commitments to measures and reductions by the District and the ARB. Finally, it disapproved the SIP's contingency provisions and issued a protective finding for transportation conformity determinations.

In December 2012, the District adopted the 2012 PM_{2.5} Plan to bring the San Joaquin Valley into attainment of the EPA's 2006 24-hour PM_{2.5} standard of 35 µg/m³. The ARB approved the District's 2012 PM_{2.5} Plan for the 2006 standard at a public hearing on January 24, 2013 (SJVAPCD 2012a). This plan seeks to bring the Valley into attainment with the standard by 2019, with the expectation that most areas will achieve attainment before that time.

District Rules and Regulations

The District rules and regulations that may apply to projects that will occur during buildout of the Plan Area include but are not limited to the following:

Rule 2201 – New and Modified Stationary Source Review (applies to any stationary/industrial equipment that emits regulated pollutants in amounts specified by the rule. Rule 2201 requires stationary source projects that exceed certain thresholds to install best available control technology (BACT) and to obtain emission offsets to ensure that growth in stationary sources on a cumulative basis will not result in an increase in emissions.

Rule 4002 – National Emissions Standards for Hazardous Air Pollutants. The purpose of the rule is to incorporate the National Emission Standards for Hazardous Air Pollutants from Part 61, Chapter I, Subchapter C, Title 40, Code of Federal Regulations and the National Emission Standards for Hazardous Air Pollutants for Source Categories from Part 63, Chapter I, Subchapter C, Title 40, Code of Federal Regulations to protect the health and safety of the public from hazardous air pollutants, such as asbestos.

Rule 4102 – Nuisance. The purpose of this rule is to protect the health and safety of the public, and applies to any source operation that emits or may emit air contaminants or other materials.

Rule 4601 – Architectural Coatings. The purpose of this rule is to limit Volatile Organic Compounds (VOC) emissions from architectural coatings. Emissions are reduced by limits on VOC content of the various coatings and by requirements on coatings storage, cleanup, and labeling.

Rule 4641 – Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations. The purpose of this rule is to limit VOC emissions from asphalt paving and maintenance operations. If asphalt paving will be used, then the paving operations will be subject to Rule 4641.

Rule 4692 – Commercial Charbroiling. The purpose of this rule is to limit VOC and PM-10 emissions from commercial charbroiling. New and existing businesses with charbroiling equipment are subject to this rule.

Rule 4901 – Wood Burning Fireplaces and Wood Burning Heaters. The purpose of this rule is to limit emissions of carbon monoxide and particulate matter from wood burning fireplaces, wood burning heaters, and outdoor wood burning devices, and to establish a public education program to reduce wood burning emissions. All development that includes woodburning devices are subject to this rule.

Regulation VIII – Fugitive PM₁₀ Prohibitions. Rule 8011-8081 are designed to reduce PM₁₀ emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and trackout, etc. All development projects that involve soil disturbance are subject to at least one provision of the Regulation VIII series of rules.

Rule 9510 – Indirect Source Review. This rule reduces the impact of NO_x and PM₁₀ emissions from growth on the Air Basin. The rule places application and emission reduction requirements on development projects meeting applicability criteria in order to reduce emissions through on-site mitigation, off-site District-administered projects, or a combination of the two. The project is not subject to Rule 9510 because it would not constitute a final discretionary approval and no specific development is proposed. Future development requiring a discretionary approval within the Community Plan area that meets Rule 9510 criteria, such as 50 or more residential dwelling units, would be subject to the rule.

CEQA

The District has three roles under CEQA:

1. *Lead Agency:* responsible for preparing environmental analyses for its own projects (adoption of rules, regulations, or plans) or permit projects filed with the District where the District has primary approval authority over the project.
2. *Responsible Agency:* The discretionary authority of a Responsible Agency is more limited than a Lead Agency; having responsibility for mitigating or avoiding only the environmental effects of those parts of the project which it decides to approve, carry out, or finance. The District defers to the Lead Agency for preparation of environmental documents for land use projects that also have discretionary air quality permits unless no document is prepared by the Lead Agency and potentially significant impacts related to the permit are possible. The

District comments on documents prepared by Lead Agencies to ensure that District concerns are addressed.

3. *Commenting Agency*: the District reviews and comments on air quality analyses prepared by other public agencies (such as the proposed project).

The District also provides guidance and thresholds for CEQA air quality and greenhouse gas analyses. The result of this guidance as well as state regulations to control air pollution is an overall improvement in the Basin. In particular, the District's draft 2012 GAMAQI states the following:

1. The District's Air Quality Attainment Plans include measures to promote air quality elements in county and city general plans as one of the primary indirect source programs. The general plan is the primary long-range planning document used by cities and counties to direct development. Since air districts have no authority over land use decisions, it is up to cities and counties to ensure that their general plans help achieve air quality goals. Section 65302.1 of the California Government Code requires cities and counties in the San Joaquin Valley to amend appropriate elements of their general plans to include data, analysis, comprehensive goals, policies, and feasible implementation strategies to improve air quality in their next housing element revisions.
2. The Air Quality Guidelines for General Plans (AQGGP), adopted by the District in 1994 and amended in 2005, is a guidance document containing goals and policy examples that cities and counties may want to incorporate into their General Plans to satisfy Section 65302.1. When adopted in a general plan and implemented, the suggestions in the AQGGP can reduce vehicle trips and miles traveled and improve air quality. The specific suggestions in the AQGGP are voluntary. The District strongly encourages cities and counties to use their land use and transportation planning authority to help achieve air quality goals by adopting the suggested policies and programs.

2.4.3 - County of Tulare General Plan

The County of Tulare General Plan was updated in 2012 and contains general provisions for air quality under various General Plan Elements, including the following policies and implementation measures listed below:

Policies

- **AQ-1.3:** Cumulative Air Quality Impacts. The County shall require development to be located, designed, and constructed in a manner that would minimize cumulative air quality impacts. Applicants shall be required to proposed alternatives as part of the State CEQA process that reduce air emissions and enhance, rather than harm, the environment.
- **AQ-1.4:** Air Quality Land Use Compatibility. The County shall evaluate the compatibility of the industrial or other developments which are likely to cause undesirable air pollution with regard to proximity to sensitive land uses, and wind direction and circulation in an effort to alleviate effects upon sensitive receptors.

- **AQ-1.5:** California Environmental Quality Act (CEQA) Compliance. The County shall ensure that air quality impacts identified during the CEQA review process are consistently and reasonably mitigated when feasible.
- **AQ-3.2:** Infill Near Employment. The County shall identify opportunities for infill development projects near employment areas within all unincorporated communities and hamlets to reduce vehicle trips.
- **AQ-3.6:** Mixed Land Uses. The County shall encourage the clustering of land uses that generate high trip volumes, especially when such uses can be mixed with support services and where they can be served by public transportation.
- **AQ-4.4:** Wood Burning Devices. The County shall require the use of natural gas where service is available or the installation of low-emission, EPA-certified fireplace inserts in all open hearth fireplaces in new homes as required under the SJVAPCD Rule 4901 – Woodburning Fireplaces and Woodburning Heaters. The County shall promote the use of natural gas over wood products in space heating devices and fireplaces in all existing and new homes.
- **LU-1.1:** Smart Growth and Healthy Communities. The County shall promote the principles of smart growth and healthy communities in UDBs and HDBs, including: 1) creating walkable neighborhoods; 2) providing a mix of residential densities; 3) creating a strong sense of place; 4) mixing land uses; 5) directing growth toward existing communities; 6) building compactly; 7) discouraging sprawl; 8) encouraging infill; 9) preserving open space; 10) creating a range of housing opportunities and choices; 11) utilizing planned community zoning to provide for the orderly pre-planning and long term development of large tracks of land which may contain a variety of land uses, but are under unified ownership or development control; and 12) encouraging connectivity between new and existing development.
- **LU-1.4:** Compact Development. The County shall actively support the development of compact mixed use projects that reduce travel distances.
- **LU-1.8:** Encourage Infill Development. The County shall encourage and provide incentives for infill development in order to maximize the use of land within existing urban areas, minimize the conversion of existing agricultural land, and minimize environmental concerns associated with new development.
- **LU-3.2:** Cluster Development. The County shall encourage proposed residential development to be clustered onto portions of the site that are more suitable to accommodating the development, and shall require access either directly onto a public road or via a privately-maintained road designed to meet County road standards.
- **LU-3.3:** High-Density Residential Locations. The County shall encourage high-density residential development (greater than 14 dwelling units per gross acre) to locate along collector roadways and transit routes, and near public facilities (e.g., schools, parks), shopping, recreation, and entertainment.
- **TC-5.1:** Bicycle/Pedestrian Trail System. The County shall coordinate with TCAG and other agencies to develop a Countywide integrated multi-purpose trail system that provides a linked network with access to recreational, cultural, and employment facilities, as well as offering a recreational experience apart from that available at neighborhood and community parks.
- **TC-5.2:** Consider Non-Motorized Modes in Planning and Development. The County shall consider incorporating facilities for non-motorized users, such as bike routes, sidewalks, and trails when constructing or improving transportation facilities and when reviewing new development proposals. For developments with 50 or more dwelling units or non-residential projects with an equivalent travel demand, the feasibility of such facilities shall be evaluated.

SECTION 3: AIR QUALITY ANALYSIS APPROACH AND THRESHOLDS

3.1 - Modeling Guidance

The air quality analysis follows the guidance and threshold recommendations provided by the District where applicable. Protocols and procedures recommended by other agencies and organizations such as the California Air Pollution Control Officers Association are used for impacts not specifically addressed by the District's Guide for Assessing Air Quality Impacts (GAMAQI) (SJVAPCD 2002).

3.2 - Modeling Approach

The Pixley Community Plan Update includes no new land use designations that would increase the buildout potential of the Plan area. The Community Plan has adequate land designated for development to accommodate growth through 2030; however, no specific development projects are currently proposed. Therefore, the analysis estimates the increase in emissions based on the growth rate projected for the County in the 2030 Tulare County General Plan of 1.3 percent per year. The growth rate was applied to the actual development existing in the 2014 base year to determine the amount of development that would occur by 2020 and 2030. Although other types of development may be constructed consistent with the existing General Plan and Zoning designations, the land uses selected are representative of common development types found in rural communities and provide a reasonable estimate for determining potential impacts.

Residential development was divided into three land use types: single family, apartments, and mobile homes to match the current development mix and amount of each type in Pixley. The baseline residential units and incremental growth in development for residential land uses are presented in Table 5.

Table 5: Residential Land Use Assumptions

Land Use	2014 Baseline (Units)	2020 Growth (Units)	2030 Growth (Units)
Single Family Residential	753	99	211
Multi-Family Residential	38	5	11
Mobile Homes	132	17	37
Notes: Baseline represents existing development in 2014. Growth is the incremental increase from baseline. Source: Appendix A.			

Non-residential development was divided into fourteen land use types based on the existing development located in Pixley from a business list compiled by Tulare County and review of aerial photographs. Table 6 provides the baseline of existing non-residential development and the

incremental growth expected by 2020 and 2030. The size of existing buildings in square feet was estimated from review of aerial photographs of the existing buildings.

Table 6: Non-Residential Land Use Assumptions

Land Use	2014 Baseline (ksf)	2020 Growth (ksf)	2030 Growth (ksf)
Government Office Building	8.43	0.68	1.94
Medical Office Building	7.24	0.58	1.66
Day-Care Center	9.22	0.74	2.12
Elementary School	133.15	10.73	30.57
Place of Worship	30.67	2.47	7.04
Motel	10.00	0.81	2.30
Quality Restaurant	20.09	1.62	4.61
Automobile Care Center	72.49	5.84	16.64
Convenience Market With Gas Pumps	16.46	1.33	3.78
Strip Mall	51.34	4.14	11.79
Supermarket	17.95	1.45	4.12
General Heavy Industry	384.91	31.02	88.36
General Light Industry	47.73	3.85	10.96
Unrefrigerated Warehouse-No Rail	129.97	10.47	29.84
Notes: Baseline represents existing development in 2014. Growth is the incremental increase from baseline. ksf = thousand square feet Source: Appendix A.			

3.3 - Regional Air Quality Emissions

Air pollutant emissions can be estimated by using emission factors and a level of activity. Emission factors represent the emission rate of a pollutant given the activity over time; for example, grams of NO_x per horsepower per hour or over distance in grams per mile traveled. The ARB has published emission factors for on-road mobile vehicles/trucks in the EMFAC mobile source emissions model and emission factors for off-road equipment and vehicles in the OFFROAD emissions model. An air emissions model (or calculator) combines the emission factors and the various levels of activity and outputs the emissions for the various pieces of equipment.

The emission model applied in this assessment was the California Emissions Estimator Model (CalEEMod) version 2013.2.2. The South Coast Air Quality Management District in cooperation with other air districts throughout the state developed the CalEEMod model. CalEEMod is designed as a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas emissions associated with construction and

operation from a variety of land uses. CalEEMod incorporates emission factors from ARB's EMFAC and OFFROAD emission models.

The models used in this analysis are summarized as follows:

- *Construction emissions:* CalEEMod, version 2013.2.2
- *Operational regional emissions:* CalEEMod, version 2013.2.2

3.3.1 - Construction

Construction emissions were estimated using CalEEMod. The modeling was based on the average amount of development estimated to occur in each year for comparison to the District's annual emissions thresholds for construction activity for criteria pollutants ROG, NO_x, PM₁₀, and PM_{2.5}. Construction emissions result from onsite and offsite activities. On-site emissions principally consist of exhaust emissions from the activity levels of heavy-duty construction equipment, motor vehicle operation (NO_x and PM₁₀), and fugitive dust (mainly PM₁₀) from disturbed soil. Additionally, paving operations and application of architectural coatings would release VOC emissions. Off-site emissions are caused by motor vehicle exhaust from delivery vehicles, worker traffic, and road dust (PM₁₀ and PM_{2.5}). The modeling used CalEEMod default assumptions for the length of construction, the equipment used, the acres of land disturbed, and off-site activities.

3.3.2 - Operation

Operational emissions are those emissions that occur once the project commences operation. Operational emissions are the result of direct and indirect emission related to the projects. The direct emissions include use of natural gas for cooking, water heating, and space heating, use of consumer products, use of architectural coatings for maintenance of structures, and operating gasoline powered landscape equipment. Indirect emissions are from motor vehicles that would travel to and from the project site. Motor vehicle emissions refer to exhaust, tire wear, brake wear, and road dust emissions from the automobiles, trucks, buses, motorcycles, etc. The emissions were estimated using CalEEMod. Modeling runs were done for the base year 2014, an interim year 2020, and the 2030 General Plan year. The modeling assumptions are included with the CalEEMod modeling runs in Appendix A.

3.4 - Localized Operational Emissions and Impacts

Localized air quality impacts occur when a project emits air pollutants that directly impact sensitive receptors near the source of emissions. Localized pollutants of concern include NO₂, PM₁₀, PM_{2.5}, CO, TAC, and odorous compounds. Localized air quality impacts can also occur when projects containing sensitive receptors such residences, schools, day care centers are proposed near existing emission sources such as freeways, industrial sources, wastewater treatment plants.

The actual location of new development within the community plan area will not be known until projects are proposed. Localized impacts on residences and other sensitive receptors cannot be determined until the projects, along with any potential emission sources that will be included in the project, are identified. Therefore, the assessment of the project's localized operational impacts is

based on identifying the types of projects that will require additional review by the County when proposed to ensure that any potentially significant impacts are addressed.

3.5 - Significance Thresholds

A threshold of significance is “an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant” (CEQA Guidelines Section 15064.7(a)). The air quality analysis for the Pixley Community Plan uses the significance thresholds adopted by the District.

3.5.1 - CEQA Significance Thresholds

The analysis is structured to answer the air quality questions contained in Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

The significance thresholds adopted for this analysis are discussed below.

3.5.2 - District Significance Thresholds

The District recommends air pollution thresholds that can be used by Lead Agencies in determining whether a proposed project could result in a significant air quality and health risk impacts in responding to the Appendix G CEQA Guideline thresholds shown above. These thresholds are designed to ensure that an individual new source does not contribute to, cause a violation of an ambient air quality standard, or expose sensitive receptors to substantial levels of air pollution as an individual project or cumulatively with other current and projected projects. The values of the individual significance thresholds have been defined based on scientific research and studies by the ARB and EPA and are protective of public health. If a project has the potential to exceed any adopted significance threshold, then the project should be considered significant.

Criteria Pollutant Significance Thresholds

The specification of criteria pollutant significance thresholds follows two types of thresholds: emission-based and air concentration-based.

The District's GAMAQI identifies the following emission-based significance thresholds that are applicable to both project construction and operation.

Table 7: District Emission Significance Thresholds

Pollutant	Emission Significance Threshold (tons/year)
ROG	10
NO _x	10
PM ₁₀	15
PM _{2.5}	15
Note: The District has proposed these same thresholds in their Draft 2014 Guidance for Assessing and Mitigating Air Quality Impacts. In addition, the District has proposed thresholds for SO _x of 27 tons per year and CO of 100 tons per year. Source: SJVAPCD 2002 for ROG and NO _x .	

Health Risk Significance Thresholds

No new projects are proposed with the Pixley Community Plan Update that would allow for a determination of impacts from TAC emissions. However, when projects are proposed, they will be assessed to determine if they would result in sensitive receptors being exposed to significant health risk. The District has defined project-level health risk thresholds. These thresholds are represented as a cancer risk to the public and a non-cancer hazard from exposures to TACs. Cancer risk represents the probability (in terms of risk per million individuals) that an individual would contract cancer resulting from exposure to TACs continuously over a period of 70 years for sensitive receptors. Thus, an individual located in an area with a cancer risk of one would experience a one chance in one million of contracting cancer over a 70-year period assuming that individual lives in that area continuously for the entire 70-year time period for a sensitive receptor.

TACs can also cause chronic (long-term) related non-cancer illnesses such as reproductive effects, respiratory effects, eye sensitivity, immune effects, kidney effects, blood effects, central nervous system, birth defects, or other adverse environmental effects. Risk characterization for non-cancer health hazards from TACs is expressed as a hazard index (HI). The HI is a ratio of the predicted concentration of the project's emissions to a concentration considered acceptable to public health professionals, termed the Reference Exposure Level (REL). The project-level health risk significance thresholds are defined below.

In accordance with the thresholds contained within the GAMAQI, the following project-level significance health risk thresholds would apply to projects proposed within the Pixley Community Plan:

- A cancer risk level of 10 new cases in a population of one million
- A non-cancer hazard index of 1.0

A project that contributes a cancer risk in excess of 10 new cases in a population of million persons or a non-cancer hazard index of greater than 1.0 would be considered to have a significant project-level impact. The District has proposed these same thresholds in their 2014 Draft Guidance document.

In order to ensure that TAC impacts are appropriately addressed, the following screening criteria from the ARB Air Quality Land Use Handbook are provided to identify conditions that could result in potentially significant impact:

ARB Air Quality Land Use Handbook

Table 8 lists ARB advisory recommendations that address the issue of siting “sensitive land uses” near specific sources of air pollution.

Table 8: Recommendations on Siting New Sensitive Land Uses

Source Category	Advisory Recommendations
Freeways and High-Traffic Roads	Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the ARB on the status of pending analyses of health risks.
Refineries	Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.

Table 8 (cont.): Recommendations on Siting New Sensitive Land Uses

Source Category	Advisory Recommendations
Gasoline Dispensing Facilities	Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.
<p>Note:</p> <p>These recommendations are advisory. Land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.</p>	

The primary existing sources of concern in Pixley are State Route 99 due to its high traffic volume and large percentage of diesel trucks, and gasoline dispensing stations. The existing heavy and light industrial and warehouse uses do not currently generate truck trips in amounts that exceed screening criteria; however, new projects should be reviewed for this criteria when they are proposed to determine if new sources have been constructed or existing sources have expanded their operations. The District has developed screening tools that allow most projects to demonstrate that they will not exceed the health risk thresholds without requiring dispersion modeling and a formal health risk assessment (HRA).

Odor Significance Thresholds

Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, schools, etc., warrant the closest scrutiny, but consideration could also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas.

Two situations create a potential for odor impact. The first occurs when a new odor source is located near an existing sensitive receptor. The second occurs when a new sensitive receptor locates near an existing source of odor. The District has determined the common land use types that are known to produce odors in the Basin. These types are shown in Table 9.

Table 9: Screening Levels for Potential Odor Sources

Odor Generator	Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile

Table 9 (cont.): Screening Levels for Potential Odor Sources

Odor Generator	Distance
Painting/Coating Operations (e.g., auto body shop)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile
Source: San Joaquin Valley Air Pollution Control District, 2002.	

According to the District's 2002 GAMAQI, analysis of potential odor impacts should be conducted for the following two situations:

- Generators - projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate, and
- Receivers - residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

It should be noted that the District has proposed the same thresholds in its 2014 Draft Guidance document.

Projects within the Pixley Community Plan proposing to locate facilities listed in Table 8 would require an odor assessment to determine if the project would result in a potential impact on sensitive receptors. The first step is to determine if the project would result in sensitive receptors being located within the distances recommended in Table 9. If yes, a more detailed analysis including a review of District odor complaint records is warranted. The detailed analysis would involve contacting the District's Compliance Division for information regarding odor complaints for similar facilities and review of the facilities operation statement to identify processes and emissions sources that have the potential to generate odors. Facilities with the potential to generate significant odors would be required to prepare an odor management plan for approval by the County and by CalRecycle for facilities involved in handling solid waste.

For a project locating near an existing source of odors, the project should be identified as having a potentially significant odor impact if it is proposed for a site that is closer to an existing odor source than any location where there have been:

- More than one confirmed complaint per year averaged over a three-year period, or
- Three unconfirmed complaints per year averaged over a three-year period.

Projects meeting these criteria would provide an odor assessment to determine if the odor issues from the facilities have been resolved or if mitigation measures are available to reduce odor impacts to future residents. There are existing dairies and food processing facilities located within the one-mile screening distance listed in Table 8 from Pixley.

SECTION 4: AIR QUALITY IMPACT ANALYSIS

This section identifies the expected criteria pollutant and toxic air contaminant emissions from construction and operation of the project and assesses the significance of project emissions on regional and localized air quality based on the adopted CEQA and District significance thresholds discussed above in Section 3.

4.1 - CEQA Guidelines

The CEQA Guidelines define a significant effect on the environment as “a substantial, or potentially substantial, adverse change in the environment.” To determine if a project would have a significant impact on air quality, the type, level, and impact of emissions generated by the project must be evaluated.

The following air quality significance thresholds are contained in Appendix G of the CEQA Guidelines. A significant impact would occur if the project would:

- a) Conflict with or obstruct implementation of the applicable air quality plan;
- b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable national or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- d) Expose sensitive receptors to substantial pollutant concentrations; or
- e) Create objectionable odors affecting a substantial number of people.

While the final determination of whether a project is significant is within the purview of the Lead Agency pursuant to Section 15064(b) of the CEQA Guidelines, the District recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions. If the Lead Agency finds that the project has the potential to exceed these air pollution thresholds, the project should be considered to have significant air quality impacts. The applicable District thresholds and methodologies are contained under each impact statement below.

4.2 - Impact Analysis

Air Quality Plan

Impact AIR-1: **The project would not conflict with or obstruct implementation of the applicable air quality plan.**

Impact Analysis

The CEQA Guidelines indicate that a significant impact would occur if the proposed project would conflict with or obstruct implementation of the applicable air quality plan. The GAMAQI does not provide specific guidance on analyzing conformity with the Air Quality Plan (AQP). Therefore, this document proposes the following criteria for determining project consistency with the current AQPs:

1. Will the project result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQPs? This measure is determined by comparison to the regional and localized thresholds identified by the District for Regional and Local Air Pollutants.
2. Will the project conform to the assumptions in the AQPs?
3. Will the project comply with applicable control measures in the AQPs?

The use of the criteria listed above is a standard approach for CEQA analysis of projects in the District's jurisdiction, as well as within other air districts, for the following reasons:

- Significant contribution to existing or new exceedances of the air quality standards would be inconsistent with the goal of attaining the air quality standards.
- AQP emissions inventories and attainment modeling are based on growth assumptions for the area within the air district's jurisdiction.
- AQPs rely on a set of air district-initiated control measures as well as implementation of federal and state measures to reduce emissions within their jurisdictions, with the goal of attaining the air quality standards.

AQPs are plans for reaching attainment of air quality standards. The assumptions, inputs, and control measures are analyzed to determine if the Air Basin can reach attainment for the ambient air quality standards. In order to show attainment of the standards, the District analyzes the growth projections in the valley, contributing factors in air pollutant emissions and formations, and existing and future emissions controls. The District then formulates a control strategy to reach attainment.

Contribution to Air Quality Violations

A measure of determining if the project is consistent with the air quality plans is if the project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the air quality plans. Because of the region's nonattainment status

for ozone, PM_{2.5}, and PM₁₀, if project-generated emissions of either of the ozone precursor pollutants (ROG and NO_x), PM₁₀, or PM_{2.5} would exceed the District's significance thresholds and were not included in the plan's growth forecast, then the project may be considered to conflict with the attainment plans. Projects requiring a General Plan Amendment may not be included in the air quality plans growth forecast. However, adding additional vacant land to the inventory may not result in an increase in the actual amount of land developed by the plan's attainment year.

As discussed in Impact AIR-3 below, emissions of ROG, NO_x, PM₁₀, and PM_{2.5} associated with the construction and operation of the project would not exceed the District's significance thresholds. As shown in Impact AIR-2 below, the project would not result in CO hotspots that would violate CO standards. Therefore, the project would not make a significant contribution to air quality violations.

Consistency with Assumptions in AQPs

The primary way of determining consistency with the AQP's assumptions is determining consistency with the applicable General Plan to ensure that the project's population density and land use are consistent with the growth assumptions used in the AQPs for the air basin. The Pixley Community Plan Update does not propose additional land for development beyond that already designated by the Tulare County General Plan. Therefore, the project is consistent with the assumptions of the AQPs and has a less than significant impact for this criterion.

Control Measures

The AQP contains a number of control measures, which are enforceable requirements through the adoption of rules and regulations. A detailed description of rules and regulations that apply to this project is provided in Section 2.2, Regulatory Setting. The project will comply with all of the District's applicable rules and regulations. Therefore, the project complies with this criterion and would not conflict with or obstruct implementation of the applicable air quality attainment plan.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Potential to Cause or Contribute to an Air Quality Standard Violation

Impact AIR-2:	The project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.
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Impact Analysis

Air pollutant emissions have regional effects and localized effects. This analysis assesses the regional effects of the project's criteria pollutant emissions in comparison to District thresholds of significance for short-term construction activities and long-term operation of the project. Localized

emissions from project construction and operation are also assessed using concentration based thresholds compared with ambient air quality standards or significance thresholds.

The primary pollutants of concern during project construction and operation are ROG, NO_x, PM₁₀, and PM_{2.5}. The SJVAPCD current GAMAQI adopted in 2002 contains thresholds for ROG and NO_x; however, pending completion of an update to the GAMAQI, the SJVAPCD recommends using thresholds for PM₁₀, and PM_{2.5} based on Rule 2201 New Source Review offset thresholds. The Draft 2014 GAMAQI is currently out for public review and continues to include the same thresholds of significance for criteria pollutants ROG and NO_x, and add thresholds for PM₁₀, and PM_{2.5}.

Ozone is a secondary pollutant that is formed in the atmosphere sometimes miles away from the source of emissions through reactions of ROG and NO_x emissions in the presence of sunlight. Therefore, ROG and NO_x are termed ozone precursors. The Air Basin often exceeds the state and national ozone standards. Therefore, if the project emits a substantial quantity of ozone precursors, the project may contribute to an exceedance of the ozone standard. The Basin also exceeds air quality standards for PM₁₀, and PM_{2.5}; therefore, substantial project emissions may contribute to an exceedance for these pollutants. The District annual emission significance thresholds used for the project to define substantial contribution from both construction and operational emissions are as follows:

- 10 tons per year ROG
- 10 tons per year NO_x
- 15 tons per year PM₁₀
- 15 tons per year PM_{2.5}

The Draft 2014 GAMAQI contains significance thresholds for CO (100 tons per year) and SO_x (27 tons per year). Sulfur dioxide and CO are not included in the regional analysis because these pollutants are in attainment and the SJVAPCD has not issued final significance thresholds for these pollutants. Additionally, only minor amounts of sulfur dioxide are emitted during construction and operation, as shown in the output files contained in Appendix A. CO emissions also do not exceed 100 tons per year as shown in Appendix A.

Construction Emissions

Construction emissions associated with the project are shown in Table 10. The analysis is based on the annual average amount of construction between 2014 and 2030 modeled with a 2014 modeling assumptions in CalEEMod. The year 2014 represents the highest annual emissions because emissions from construction equipment decline over time as older equipment is retired or retrofitted with new pollution control devices. As shown in Table 10, the emissions are below the significance thresholds and, therefore, are less than significant on a project basis.

Table 10: Construction Air Pollutant Emissions

Source	Emissions (tons per year)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Site Preparation	0.12	1.25	0.22	0.14
Grading	0.40	4.64	0.45	0.30
Building	3.38	23.69	2.20	1.61
Paving	0.08	0.82	0.05	0.04
Coating	5.62	0.10	0.01	0.01
Total	9.59	30.50	2.93	2.11
Averaged Over 16 years	0.60	1.91	0.18	0.13
Significance threshold	10	10	15	15
Exceed threshold – significant impact?	No	No	No	No
Notes: ROG = reactive organic gases NO _x = nitrogen oxides PM ₁₀ and PM _{2.5} = particulate matter Source: Appendix A.				

Operational Emissions

Operational emissions occur over the lifetime of the project and are from two main sources: small, distributed sources known as area sources and motor vehicles, or mobile sources. The operational emissions are based on the incremental development of the Plan area between 2014 and 2030 plan horizon year. Emissions are presented from the unmitigated modeling output from CalEEMod to provide a conservative analysis. For assumptions in estimating the emissions, please refer to Section 3, Modeling Parameters and Assumptions. Operational emissions are shown in Table 11. As shown in the table, the emissions are below the adopted and recommended District significance thresholds and, therefore, would result in a less than significant impact.

Table 11: Operational Air Pollutant Emissions at Plan Horizon Year

Source	Emissions (tons per year)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Area	3.18	0.02	0.02	0.02
Energy	0.07	0.61	0.05	0.05
Mobile	2.90	4.90	4.99	1.39
Total	6.15	5.53	5.05	1.45
Significance threshold	10	10	15	15
Exceed threshold - significant impact?	No	No	No	No
Notes: ROG = reactive organic gases NO _x = nitrogen oxides PM ₁₀ and PM _{2.5} = particulate matter Area source emissions include emissions from natural gas, landscape, and painting. The Plan horizon year is 2030. Source: Appendix A.				

Localized Pollutant Analysis

No specific projects are proposed within the Pixley Community Plan that would allow an analysis to determine localized air pollutant impacts. The County will determine whether a localized pollutant analysis is required on a project by project basis. The SJVAPCD has requested that projects analyze the potential to generate or substantially contribute to a localized exceedance of criteria pollutants. A significant impact would result if the change in the NO_2 , SO_2 ,¹ or CO pollutant impacts from the addition of the project plus the background concentrations of these pollutants contributed by other local and regional emission sources exceeds the most restrictive ambient air quality standards. In locations that already exceed standards for these pollutants, significance is based on a significant impact level (SIL) that represents the amount that is considered a cumulatively considerable contribution to an existing violation of an air quality standard. Although the Air Basin has not violated the national ambient air quality standards or PM_{10} in the past 5 years, it has violated the state standard for PM_{10} during the past several years. The Air Basin also exceeds both the national and state $\text{PM}_{2.5}$ air standards. However, the District has not adopted local significance thresholds specifically for either PM_{10} or $\text{PM}_{2.5}$. For PM_{10} and $\text{PM}_{2.5}$, a significant impact would occur if the net change in PM_{10} or $\text{PM}_{2.5}$ exceeds the respective SILs.

The District has provided guidance for screening localized impacts in its 2014 Draft Guidance document that establishes a screening threshold of 100 pounds per day of any criteria pollutant. If a project exceeds 100 pounds per day of any criteria pollutant then ambient air quality modeling would be necessary. If the project does not exceed 100 pounds per day of any criteria pollutant, then it can be assumed that it would not cause a violation of an ambient air quality standard.

Construction: Localized Concentrations of PM_{10} , $\text{PM}_{2.5}$, CO, and NO_2

Local construction impacts would be short-term in nature lasting only during the duration of individual construction projects. Because of the short duration and limited amount of construction anticipated for the Plan area, application of best management practices to minimize construction emissions, and levels of emissions less than the SJVAPCD's emission significance thresholds, localized construction concentrations are considered less than significant. It should also be noted that the construction emissions would be less than 100 pounds per day for each of the criteria pollutants. Therefore, based on the District's 2014 Draft Guidance document the construction emissions would not cause an ambient air quality standard violation.

Operation: Localized Concentrations of PM_{10} , $\text{PM}_{2.5}$, CO, and NO_2

Since the Pixley Community does not identify specific development projects, the potential for localized impacts cannot be determined. Localized impacts could occur in areas with a single large source of emissions such as a power plant or with multiple sources concentrated in a small area such as a distribution center. The County will review individual projects for potential impacts and confer with the District to determine projects where additional analysis would be required. The County may also rely on the District's 2014 Draft Guidance to determine if criteria pollutant emissions exceed 100 pounds per day.

¹ Note that the project would emit exceedingly small amounts of SO_2 . Therefore, SO_2 impacts from the project were found to be less than significant.

Operation: Carbon Monoxide Hot Spot Analysis

Carbon monoxide (CO) “hot spot” thresholds ensure that emissions of CO associated with traffic impacts from a project in combination with CO emissions from existing and forecasted regional traffic do not exceed state or national ambient air quality standards for CO at any traffic intersection impacted by a project. Project concentrations may be considered significant if a CO hot spot intersection analysis determines that project generated CO concentrations cause a localized violation of the state CO 1-hour standard of 20 ppm, state CO 8-hour standard of 9 ppm, national CO 1-hour standard of 35 ppm, or national CO 8-hour standard of 9 ppm.

A CO hot spot is a localized concentration of CO that is above the state or national 1-hour or 8-hour CO ambient air standards. Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles. The current maximum 8-hour background concentration for CO reported for the nearest monitoring site in Table 2 is 2.22 ppm and the current maximum 1-hour background concentration is 3.17 ppm.

The SJVAPCD’s 2002 GAMAQI states that a CO hot spot analysis should be conducted if (1) a traffic study for a project indicates that the LOS on one or more streets or at one or more intersection in the project vicinity will be reduced to LOS E or F; or (2) a traffic study indicates that a project will substantially worsen an already existing LOS F at one or more intersections. The Pixley Community Plan area does not experience significant traffic congestion or volumes needed to generate a CO hotspot and the growth projected for the community is minimal. The Transportation Impact Analysis prepared by the traffic consultant, VRPA Technologies, Inc., showed that no intersection would exceed LOS D. Therefore, no additional analysis is required to demonstrate that this impact is less than significant.

Hydrogen Sulfide

The development of the Pixley Community Plan area is not expected to generate hydrogen sulfide because the type of development allowed by zoning and regulation does not typically generate it in any substantial quantity. Therefore, the project would not result in an exceedance of the California ambient air quality standard for hydrogen sulfide or cause any related health impact.

Lead

The development of the Pixley Community Plan area is not expected to generate lead because the proposed land use does not typically generate this pollutant in any substantial quantity. Lead is no longer an additive to gasoline. Therefore, the project would not result in an exceedance of the national or state ambient air quality standards for lead or cause any health impact.

Visibility-Reducing Particles

Visibility-reducing particles are suspended particulates that reduce visibility. During construction (grading), fugitive dust (PM₁₀ and PM_{2.5}) is generated. The majority of this fugitive dust will remain localized and will be deposited near the project site. Fugitive dust during grading should not substantially impact local visibility. In addition, compliance with Regulation VIII will reduce fugitive dust impacts during grading. The main source of operational PM₁₀ and PM_{2.5} from the project is from road dust. This road dust emissions are localized and most of it would be deposited near the road and would not cause a substantial impact to visibility.

Vinyl Chloride

The vinyl chloride ambient air quality standard refers to the amount of vinyl chloride in the ambient air. The emissions of vinyl chloride are typically associated with the plants that make products containing polyvinyl chloride (PVC). The project will not generate vinyl chloride gas emissions. Therefore, the project would not result in an exceedance of the California ambient air quality standard for vinyl chloride and would not result in related health impacts.

Sulfur Dioxide

The project will emit a small amount of sulfur dioxide during operation and construction. There is no identified threshold for sulfur dioxide emissions in the District's 2002 Guide. The District's 2014 Draft Guidance document provides a threshold of 27 tons per year. The Air Basin is in attainment for sulfur dioxide. In addition, any project emissions will be very minor. As shown in Appendix A, the project would have significantly fewer sulfur dioxide emissions during construction and operation than the District's draft threshold. Therefore, project emissions of sulfur dioxide are less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Cumulative Impacts

Impact AIR-3:	The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
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Impact Analysis

The cumulative air quality analysis prepared for the project follows guidance from the SJVAPCD. In general, to result in a less than significant impact, the following must be true:

1. *Emissions analysis*: emissions of nonattainment pollutants must be below the SJVAPCD's project level significance thresholds. This is an approach recommended by the SJVAPCD in its 2002 GAMAQI.
2. *Summary of projections*: the project must be consistent with current air quality attainment plans including control measures and regulations. This is an approach consistent with Section 15130(b) of the CEQA guidelines.
3. *Cumulative health impacts*: the project must result in less than significant cumulative health effects from the nonattainment pollutants. This approach correlates the significance of the

regional analysis with health effects, consistent with the court decision, *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1219-20.

Emissions Analysis

Ozone is a secondary pollutant that can be formed miles away from the source of emissions through reactions of ROG and NO_x emissions in the presence of sunlight. Therefore, ROG and NO_x are termed ozone precursors. The Air Basin often exceeds the ozone standards. Therefore, if the project emits a substantial quantity of ozone precursors, the project may contribute to an exceedance of the ozone standard. The District established significance thresholds for ozone precursors, ROG and NO_x, and has published them in its GAMAQI. For typical projects, operation-related emissions that exceed the threshold of 10 tons per year for ROG or NO_x would be considered significant. The July 2014 Draft Guidance document contains thresholds for PM₁₀ and PM_{2.5} of 15 tons per year each, which are used in this impact analysis. Cumulative health impacts of ozone and/or particulate matter would result if these thresholds are exceeded.

The criteria pollutant emissions analysis assessed whether the project would exceed District thresholds of significance. As shown in Table 10 and Table 11, criteria pollutant emissions would not exceed any threshold of significance during project construction or operation. Therefore, the unmitigated project emissions would not cumulatively contribute to a significant impact according to this criterion.

Summary of Projections

Section 15130(b) of the CEQA Guidelines states:

The following elements are necessary to an adequate discussion of significant cumulative impacts: 1) Either: (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or areawide conditions contributing to the cumulative impact.

In accordance with CEQA Guidelines 15130(b), this analysis of cumulative impacts is based on a summary of projections analysis. Under the amended CEQA Guidelines, cumulative impacts may be analyzed using other plans that evaluate relevant cumulative effects. The air quality attainment plans describe and evaluate the future projected emissions sources in the Basin and set forth a strategy to meet both state and federal CAA planning requirements and federal ambient air quality standards. Therefore, the plans are relevant plans for a CEQA cumulative impacts analysis. As discussed in Impact AIR-1, the project is consistent with the air quality attainment plans. Therefore, according to this criterion, this impact is less than significant.

Cumulative Health Impacts from Criteria Pollutants

The Basin is in nonattainment for ozone, PM₁₀, and PM_{2.5}, which means that the background levels of those pollutants are at times higher than the ambient air quality standards. The air quality standards

were set to protect public health, including the health of sensitive individuals (such as the elderly, children, and the sick). Therefore, when the concentration of those pollutants exceeds the standard, it is likely that some sensitive individuals in the population would experience health effects that were described in Table 1. However, the health effects are a factor of the dose-response curve.

Concentration of the pollutant in the air (dose), the length of time exposed, and the response of the individual are factors involved in the severity and nature of health impacts. If a significant health impact results from project emissions, it does not mean that 100 percent of the population would experience health effects.

ROG and NO_x have significance thresholds because they are ozone precursor emissions. The significance thresholds for ROG and NO_x are not designed to be indicators of health effects from ROG and NO_x individually. However, one could conclude that a project would make cumulatively considerable contribution to the existing health impacts of ozone and/or secondary particulate matter if the thresholds are exceeded. The impacts are not considered a project-specific impact because project emissions of ROG and NO_x emissions from a single project would not result in a measurable change in ozone or particulate concentrations; however, the combined effects of many projects dispersed throughout the region could potentially increase concentrations or slow progress toward achieving the air quality standards. The combination of unmitigated project emissions with pollutants from other sources within the Basin could cumulatively contribute to a significant impact.

The emissions analysis shown above indicates that the increase in emissions would not exceed the District's regional significance thresholds. The project would not result in significant cumulative health impacts.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Sensitive Receptors

Impact AIR-4:	The project would not expose sensitive receptors to substantial pollutant concentrations.
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Impact Analysis

Sensitive Receptors

Those individuals who are sensitive to air pollution include children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. The District considers a sensitive receptor to be a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools.

Construction: ROG

During architectural coatings (painting), ROG is emitted. The amount emitted is dependent on the amount of ROG (or VOC) in the paint. ROG emissions are typically an indoor air quality health hazard concern and not an outdoor air quality health hazard concern. Therefore, exposure of ROG during architectural coatings is a less than significant health impact. VOC emissions from architectural coatings are regulated under District Rule 4601- Architectural Coatings, which requires increasingly stringent reductions in VOC the content of the various coatings.

There are three types of asphalt that are typically used in paving: asphalt cements, cutback asphalts, and emulsified asphalts. However, District Rule 4641 prohibits the use of the following types of asphalt: rapid cure cutback asphalt; medium cure cutback asphalt; slow cure asphalt that contains more than one-half (0.5) percent of organic compounds that evaporate at 500 degrees Fahrenheit (°F) or lower; and emulsified asphalt containing organic compounds, in excess of 3 percent by volume, that evaporate at 500°F or lower. An exception to this is medium cure asphalt when the National Weather Service official forecast of the high temperature for the 24-hour period following application is below 50°F.

The acute (short-term) health effects from worker direct exposure to asphalt fumes include irritation of the eyes, nose, and throat. Other effects include respiratory tract symptoms and pulmonary function changes. The studies were based on occupational exposure of fumes. Residents are not in the immediate vicinity of the fumes; therefore, they would not be subjected to concentrations high enough to evoke a negative response. In addition, the restrictions that are placed on asphalt in the San Joaquin Valley reduce ROG emissions from asphalt and exposure. The impact to nearby sensitive receptors from ROG during construction is less than significant.

Operation: ROG

During operation, ROG would be emitted primarily from motor vehicles. Direct exposure to ROG from project motor vehicles would not result in health effects, because the ROG would be distributed across the entire road network over many miles and dispersed in the air. The concentrations would not be great enough to result in direct health effects.

Construction: NO_x, PM₁₀, PM_{2.5}

The District has provided draft guidance indicating that projects that emit less than 100 pound per day of criteria pollutants would not cause an ambient air quality standard violation. As shown in Table 10, the construction emissions would not exceed 100 pounds per day; therefore, they would not cause an air quality standard violation. However, as discussed in Impact AIR-3, the specific location and timing of construction projects is not known. Therefore, localized impacts from construction equipment cannot be determined and would be speculative. Tulare County will consult with the SJVAPCD on individual projects to determine if screening or modeling would be required to identify potentially significant impacts.

Operation: PM₁₀, PM_{2.5}, CO, NO₂

The District has provided draft guidance indicating that projects that emit less than 100 pound per day of criteria pollutants would not cause an ambient air quality standard violation. As shown in Table 11, the construction emissions would not exceed 100 pounds per day; therefore, they would

not cause an air quality standard violation. However, as discussed in Impact AIR-2, localized concentrations of PM₁₀, PM_{2.5}, CO, and NO₂ cannot be determined prior to identifying specific projects and their emissions. Therefore, localized impacts from project operations cannot be determined and would be speculative. Tulare County will consult with the SJVAPCD on individual projects to determine if screening or modeling would be required to identify potentially significant impacts.

Construction: Toxic Air Contaminants

The specific location and timing of construction projects is not known. Therefore, localized impacts from TAC emissions from construction equipment cannot be determined and would be speculative. Tulare County will consult with the SJVAPCD on individual projects to determine if screening or modeling would be required to identify potentially significant impacts.

Operation: Toxic Air Contaminants

No new sources of TAC emissions are specifically proposed in the Pixley Community Plan and the location of projects containing sensitive receptors has not been determined. Therefore, impacts from TAC emissions on sensitive receptors would be speculative. In order to ensure that development of the Pixley Community Plan area does not expose sensitive receptors to significant impacts from TAC emissions, Tulare County will review individual projects proposed within the Plan area to determine if the ARB Air Quality Land Use Handbook screening criteria presented in Table 8 are exceeded. Projects that exceed the screening criteria will undergo analysis using screening models or may require dispersion modeling and a health risk assessment. Tulare County will consult with the SJVAPCD for guidance on the appropriate screening tools and modeling protocols.

Valley Fever

Valley fever, or coccidioidomycosis, is an infection caused by inhalation of the spores of the fungus, *Coccidioides immitis* (*C. immitis*). The spores live in soil and can live for an extended time in harsh environmental conditions. Activities or conditions that increase the amount of fugitive dust contribute to greater exposure, and they include dust storms, grading, and recreational off-road activities.

The San Joaquin Valley is considered an endemic area for valley fever. By geographic region, hospitalizations for valley fever in the San Joaquin Valley increased from 230 (6.9 per 100,000 population) in 2000 to 701 (17.7 per 100,000 population) in 2007. Within the region, Kern County reported the highest hospitalization rates, increasing from 121 (18.2 per 100,000 population) in 2000 to 285 (34.9 per 100,000 population) in 2007, and peaking in 2005 at 353 hospitalizations (45.8 per 100,000 population). The Centers for Disease Control and Prevention indicates that 752 of the 8,657 persons (8.7 percent) hospitalized in California between 2000 and 2007 for valley fever died (CDC 2009).

The distribution of *C. immitis* within endemic areas is not uniform and growth sites are commonly small (a few tens of meters) and widely scattered. Known sites appear to have some ecological factors in common suggesting that certain physical, chemical, and biological conditions are more favorable for *C. immitis* growth. Avoidance, when possible, of sites favorable for the occurrence of *C.*

immitis is a prudent risk management strategy. Listed below are ecologic factors and sites favorable for the occurrence of *C. immitis*:

- 1) Rodent burrows (often a favorable site for *C. immitis*, perhaps because temperatures are more moderate and humidity higher than on the ground surface)
- 2) Old (prehistoric) Indian campsites near fire pits
- 3) Areas with sparse vegetation and alkaline soils
- 4) Areas with high salinity soils
- 5) Areas adjacent to arroyos (where residual moisture may be available)
- 6) Packrat middens
- 7) Upper 30 cm of the soil horizon, especially in virgin undisturbed soils
- 8) Sandy well aerated soil with relatively high water holding capacities

Sites within endemic areas less favorable for the occurrence of *C. immitis* include:

- 1) Cultivated fields
- 2) Heavily vegetated areas (e.g. grassy lawns)
- 3) Higher elevations (above 7,000 feet)
- 4) Areas where commercial fertilizers (e.g. ammonium sulfate) have been applied
- 5) Areas that are continually wet
- 6) Paved (asphalt or concrete) or oiled areas
- 7) Soils containing abundant microorganisms
- 8) Heavily urbanized areas where there is little undisturbed virgin soil (USGS 2000).

The Pixley Community Plan area is in an area with a long history of cultivation where fertilizers have been applied, and soil moisture has been maintained through irrigation. These factors would lead to a low probability of having *C. immitis* growth sites and exposure from disturbed soil.

Construction activities would generate fugitive dust that could contain *C. immitis* spores. The project will minimize the generation of fugitive dust during construction activities by complying with the District's Regulation VIII. Therefore, this regulation would reduce valley fever impacts to less than significant.

During project operations, dust emissions are anticipated to be negligible, because most of the project area would be occupied by buildings, pavement, and landscaped areas. This condition would preclude the possibility of the project from generating fugitive dust that may contribute to valley fever exposure. Impacts would be less than significant.

Naturally Occurring Asbestos

According to a map of areas where naturally occurring asbestos in California are likely to occur (U.S. Geological Survey 2011), there are no such areas in the project area. Therefore, development of the project is not anticipated to expose receptors to naturally occurring asbestos. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

Objectionable Odors

Impact AIR-5:	The project would not create objectionable odors affecting a substantial number of people.
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Impact Analysis

Thresholds of Significance

Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, schools, etc., warrant the closest scrutiny, but consideration could also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas.

Two situations create a potential for odor impact. The first occurs when a new odor source is located near an existing sensitive receptor. The second occurs when a new sensitive receptor locates near an existing source of odor. The District has determined the common land use types that are known to produce odors in the Basin. These types are shown in Table 9 in Section 3.5.2, District Significant Thresholds.

According to the SJVAPCD's 2002 GAMAQI, analysis of potential odor impacts should be conducted for the following two situations:

- **Generators:** projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate, and
- **Receivers:** residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

No specific projects containing sensitive receptors are proposed near potential odor sources and no new projects are proposed that are considered odor generators near existing sensitive receptors. However, as the Pixley Community Plan is built out, the potential exists for odor impacts to occur. To ensure potential impacts are addressed, if proposed projects were to result in sensitive receptors being located closer to an odor generator in the list in Table 9 than the recommended distances, a

more detailed analysis including a review of District odor complaint records is recommended. The detailed analysis would involve contacting the District's Compliance Division for information regarding odor complaints. For a project locating near an existing source of odors, the project should be identified as having a significant odor impact if it is proposed for a site that is closer to an existing odor source than any location where there have been:

- More than one *confirmed* complaint per year averaged over a three-year period, or
- Three *unconfirmed* complaints per year averaged over a three-year period.

Agricultural operations are exempt from the District's nuisance rule. Therefore, odors from dairies and in field composting operations would not be subject to complaint reporting. However, the Tulare County General Plan Recirculated Environmental Impact Report (REIR) indicated that General Plan Policies AQ-3.1 through AQ-3.6, LU-1.1 through LU-1.4, and LU-1.8 would help to minimize this impact by avoiding inappropriate siting of sensitive land uses near other incompatible uses. SJVAPCD regulations on dairy and feedlot operations would also help to reduce this potential impact. The REIR concluded that compliance with policies and regulations would be adequate to reduce this impact to less than significant

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less than significant impact.

SECTION 5: REFERENCES

The following references were used in the preparation of this analysis and are referenced in the text and/or were used to provide the author with background information necessary for the preparation of thresholds and content.

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Appendix A: Air Quality Modeling Results

Pixley Air Quality Construction Emissions Summary (Tons/Year)

Residential

	ROG	NOx	PM10	PM2.5
Site Preparation	0.11	1.15	0.21	0.14
Grading	0.38	4.45	0.41	0.28
Buidling Construction	0.28	1.98	0.19	0.14
Buidling Construction	0.60	4.42	0.42	0.31
Buidling Construction	0.56	4.15	0.40	0.29
Buidling Construction	0.50	3.81	0.38	0.26
Buidling Construction	0.36	2.81	0.28	0.19
Paving	0.04	0.38	0.02	0.02
Paving	0.02	0.23	0.01	0.01
Architectural Coating	4.10	0.07	0.01	0.01
Total	6.94	23.45	2.34	1.63

Commercial

	ROG	NOx	PM10	PM2.5
Site Preparation	0.00	0.05	0.00	0.00
Grading	0.01	0.10	0.03	0.02
Buidling Construction	0.53	3.21	0.25	0.21
Paving	0.01	0.10	0.01	0.01
Architectural Coating	0.62	0.01	0.00	0.00
Total	1.17	3.47	0.29	0.24

Industrial

	ROG	NOx	PM10	PM2.5
Site Preparation	0.00	0.05	0.00	0.00
Grading	0.01	0.10	0.01	0.01
Buidling Construction	0.56	3.31	0.28	0.22
Paving	0.01	0.10	0.01	0.01
Architectural Coating	0.90	0.01	0.00	0.00
Total	1.48	3.57	0.30	0.24

Grand Total for All Development Types

	ROG	NOx	PM10	PM2.5
Site Preparation	0.12	1.25	0.22	0.14
Grading	0.40	4.64	0.45	0.30
Buidling Construction	3.38	23.69	2.20	1.61
Paving	0.08	0.82	0.05	0.04
Architectural Coating	5.62	0.10	0.01	0.01
Total	9.59	30.50	2.93	2.11

Annual Average (16 Years)	0.60	1.91	0.18	0.13
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Source: CalEEMod Modeling Output

Pixley Air Quality Operation Emissions Summary (Tons/Year)

Residential

	ROG	NOx	PM10	PM2.5
Area	2.1769	0.0221	0.0185	0.0184
Energy	0.0398	0.3397	0.0275	0.0275
Mobile	0.6595	1.141	2.3517	0.6397
Total	2.8762	1.5028	2.3977	0.6856

Commercial

	ROG	NOx	PM10	PM2.5
Area	0.4085	0.00001	0	0
Energy	0.0152	0.1381	0.0105	0.0105
Mobile	2.1329	3.4653	2.3376	0.6624
Total	2.5566	3.60341	2.3481	0.6729

Industrial

	ROG	NOx	PM10	PM2.5
Area	0.5943	0.00001	0	0
Energy	0.0147	0.1337	0.0102	0.0102
Mobile	0.1101	0.2923	0.2961	0.0832
Total	0.7191	0.42601	0.3063	0.0934

Grand Total for All Development Types

	ROG	NOx	PM10	PM2.5
Area	3.18	0.02	0.02	0.02
Energy	0.07	0.61	0.05	0.05
Mobile	2.90	4.90	4.99	1.39
Total	6.15	5.53	5.05	1.45

Source: CalEEMod Output

Pixley Community Plan - Residential 2014
Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	11.00	Dwelling Unit	0.69	11,000.00	31
Mobile Home Park	37.00	Dwelling Unit	4.66	44,400.00	106
Single Family Housing	211.00	Dwelling Unit	68.51	379,800.00	603

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Total increase from existing to year 2030. Emissions will then be averaged over 16 years.

Table Name	Column Name	Default Value	New Value
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2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.7700	7.5846	5.5326	6.7600e-003	0.9091	0.4047	1.3138	0.4154	0.3749	0.7904	0.0000	630.6881	630.6881	0.1578	0.0000	634.0012
2015	0.6046	4.4169	3.8407	5.7100e-003	0.1390	0.2848	0.4239	0.0375	0.2676	0.3051	0.0000	502.3395	502.3395	0.0869	0.0000	504.1652
2016	0.5558	4.1526	3.6557	5.7100e-003	0.1390	0.2641	0.4031	0.0375	0.2479	0.2854	0.0000	495.0037	495.0037	0.0847	0.0000	496.7817
2017	0.4965	3.8115	3.4284	5.6800e-003	0.1385	0.2378	0.3763	0.0373	0.2232	0.2605	0.0000	484.1955	484.1955	0.0822	0.0000	485.9225
2018	0.3931	3.1848	3.0259	5.2500e-003	0.1182	0.1876	0.3058	0.0318	0.1758	0.2076	0.0000	443.3298	443.3298	0.0812	0.0000	445.0341
2019	4.1199	0.3039	0.3266	5.5000e-004	8.4200e-003	0.0174	0.0259	2.2400e-003	0.0164	0.0187	0.0000	47.0955	47.0955	0.0109	0.0000	47.3251
Total	6.9398	23.4543	19.8099	0.0297	1.4524	1.3963	2.8487	0.5617	1.3059	1.8677	0.0000	2,602.6520	2,602.6520	0.5037	0.0000	2,613.2298

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.7700	7.5846	5.5326	6.7600e-003	0.3977	0.4047	0.8024	0.1736	0.3749	0.5486	0.0000	630.6875	630.6875	0.1578	0.0000	634.0005
2015	0.6046	4.4169	3.8407	5.7100e-003	0.1390	0.2848	0.4239	0.0375	0.2676	0.3051	0.0000	502.3391	502.3391	0.0869	0.0000	504.1648
2016	0.5558	4.1526	3.6557	5.7100e-003	0.1390	0.2641	0.4031	0.0375	0.2479	0.2854	0.0000	495.0033	495.0033	0.0847	0.0000	496.7814
2017	0.4965	3.8115	3.4284	5.6800e-003	0.1385	0.2378	0.3763	0.0373	0.2232	0.2605	0.0000	484.1951	484.1951	0.0822	0.0000	485.9222
2018	0.3931	3.1848	3.0259	5.2500e-003	0.1182	0.1876	0.3058	0.0318	0.1758	0.2076	0.0000	443.3294	443.3294	0.0812	0.0000	445.0337
2019	4.1199	0.3039	0.3266	5.5000e-004	8.4200e-003	0.0174	0.0259	2.2400e-003	0.0164	0.0187	0.0000	47.0954	47.0954	0.0109	0.0000	47.3251
Total	6.9398	23.4543	19.8099	0.0297	0.9410	1.3963	2.3373	0.3199	1.3059	1.6258	0.0000	2,602.6498	2,602.6498	0.5037	0.0000	2,613.2276

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	35.21	0.00	17.95	43.05	0.00	12.95	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2014	2/25/2014	5	40	
2	Grading	Grading	2/26/2014	7/29/2014	5	110	
3	Building Construction	Building Construction	7/30/2014	10/30/2018	5	1110	
4	Paving	Paving	10/31/2018	2/12/2019	5	75	
5	Architectural Coating	Architectural Coating	2/13/2019	5/28/2019	5	75	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 275

Acres of Paving: 0

Residential Indoor: 881,280; Residential Outdoor: 293,760; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	111.00	28.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	22.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3613	0.0000	0.3613	0.1986	0.0000	0.1986	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1058	1.1524	0.8592	7.8000e-004		0.0628	0.0628		0.0577	0.0577	0.0000	75.4032	75.4032	0.0223	0.0000	75.8712
Total	0.1058	1.1524	0.8592	7.8000e-004	0.3613	0.0628	0.4241	0.1986	0.0577	0.2563	0.0000	75.4032	75.4032	0.0223	0.0000	75.8712

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0400e-003	2.4200e-003	0.0241	3.0000e-005	2.8700e-003	3.0000e-005	2.9000e-003	7.6000e-004	3.0000e-005	7.9000e-004	0.0000	2.7127	2.7127	1.8000e-004	0.0000	2.7164
Total	2.0400e-003	2.4200e-003	0.0241	3.0000e-005	2.8700e-003	3.0000e-005	2.9000e-003	7.6000e-004	3.0000e-005	7.9000e-004	0.0000	2.7127	2.7127	1.8000e-004	0.0000	2.7164

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1409	0.0000	0.1409	0.0775	0.0000	0.0775	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1058	1.1524	0.8592	7.8000e-004		0.0628	0.0628		0.0577	0.0577	0.0000	75.4031	75.4031	0.0223	0.0000	75.8711
Total	0.1058	1.1524	0.8592	7.8000e-004	0.1409	0.0628	0.2037	0.0775	0.0577	0.1352	0.0000	75.4031	75.4031	0.0223	0.0000	75.8711

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0400e-003	2.4200e-003	0.0241	3.0000e-005	2.8700e-003	3.0000e-005	2.9000e-003	7.6000e-004	3.0000e-005	7.9000e-004	0.0000	2.7127	2.7127	1.8000e-004	0.0000	2.7164
Total	2.0400e-003	2.4200e-003	0.0241	3.0000e-005	2.8700e-003	3.0000e-005	2.9000e-003	7.6000e-004	3.0000e-005	7.9000e-004	0.0000	2.7127	2.7127	1.8000e-004	0.0000	2.7164

3.3 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4770	0.0000	0.4770	0.1978	0.0000	0.1978	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3766	4.4397	2.8371	3.4000e-003		0.2134	0.2134		0.1963	0.1963	0.0000	327.0545	327.0545	0.0967	0.0000	329.0841
Total	0.3766	4.4397	2.8371	3.4000e-003	0.4770	0.2134	0.6904	0.1978	0.1963	0.3941	0.0000	327.0545	327.0545	0.0967	0.0000	329.0841

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2400e-003	7.3800e-003	0.0735	1.0000e-004	8.7600e-003	9.0000e-005	8.8500e-003	2.3300e-003	8.0000e-005	2.4100e-003	0.0000	8.2887	8.2887	5.4000e-004	0.0000	8.3002
Total	6.2400e-003	7.3800e-003	0.0735	1.0000e-004	8.7600e-003	9.0000e-005	8.8500e-003	2.3300e-003	8.0000e-005	2.4100e-003	0.0000	8.2887	8.2887	5.4000e-004	0.0000	8.3002

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1860	0.0000	0.1860	0.0771	0.0000	0.0771	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3766	4.4397	2.8371	3.4000e-003		0.2134	0.2134		0.1963	0.1963	0.0000	327.0541	327.0541	0.0967	0.0000	329.0837
Total	0.3766	4.4397	2.8371	3.4000e-003	0.1860	0.2134	0.3994	0.0771	0.1963	0.2734	0.0000	327.0541	327.0541	0.0967	0.0000	329.0837

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2400e-003	7.3800e-003	0.0735	1.0000e-004	8.7600e-003	9.0000e-005	8.8500e-003	2.3300e-003	8.0000e-005	2.4100e-003	0.0000	8.2887	8.2887	5.4000e-004	0.0000	8.3002
Total	6.2400e-003	7.3800e-003	0.0735	1.0000e-004	8.7600e-003	9.0000e-005	8.8500e-003	2.3300e-003	8.0000e-005	2.4100e-003	0.0000	8.2887	8.2887	5.4000e-004	0.0000	8.3002

3.4 Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2147	1.7346	1.0506	1.4900e-003		0.1237	0.1237		0.1164	0.1164	0.0000	136.4047	136.4047	0.0347	0.0000	137.1330
Total	0.2147	1.7346	1.0506	1.4900e-003		0.1237	0.1237		0.1164	0.1164	0.0000	136.4047	136.4047	0.0347	0.0000	137.1330

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0296	0.2068	0.2763	3.7000e-004	0.0101	4.3300e-003	0.0144	2.8800e-003	3.9700e-003	6.8600e-003	0.0000	34.4037	34.4037	3.8000e-004	0.0000	34.4117
Worker	0.0350	0.0413	0.4118	5.8000e-004	0.0491	4.9000e-004	0.0496	0.0131	4.4000e-004	0.0135	0.0000	46.4206	46.4206	3.0500e-003	0.0000	46.4847
Total	0.0646	0.2482	0.6881	9.5000e-004	0.0591	4.8200e-003	0.0640	0.0159	4.4100e-003	0.0204	0.0000	80.8243	80.8243	3.4300e-003	0.0000	80.8963

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2147	1.7346	1.0506	1.4900e-003		0.1237	0.1237		0.1164	0.1164	0.0000	136.4045	136.4045	0.0347	0.0000	137.1329
Total	0.2147	1.7346	1.0506	1.4900e-003		0.1237	0.1237		0.1164	0.1164	0.0000	136.4045	136.4045	0.0347	0.0000	137.1329

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0296	0.2068	0.2763	3.7000e-004	0.0101	4.3300e-003	0.0144	2.8800e-003	3.9700e-003	6.8600e-003	0.0000	34.4037	34.4037	3.8000e-004	0.0000	34.4117
Worker	0.0350	0.0413	0.4118	5.8000e-004	0.0491	4.9000e-004	0.0496	0.0131	4.4000e-004	0.0135	0.0000	46.4206	46.4206	3.0500e-003	0.0000	46.4847
Total	0.0646	0.2482	0.6881	9.5000e-004	0.0591	4.8200e-003	0.0640	0.0159	4.4100e-003	0.0204	0.0000	80.8243	80.8243	3.4300e-003	0.0000	80.8963

3.4 Building Construction - 2015**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4775	3.9189	2.4462	3.5000e-003		0.2762	0.2762		0.2598	0.2598	0.0000	318.4126	318.4126	0.0799	0.0000	320.0903
Total	0.4775	3.9189	2.4462	3.5000e-003		0.2762	0.2762		0.2598	0.2598	0.0000	318.4126	318.4126	0.0799	0.0000	320.0903

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0559	0.4142	0.5628	8.7000e-004	0.0237	7.5700e-003	0.0312	6.7800e-003	6.9500e-003	0.0137	0.0000	79.7129	79.7129	7.6000e-004	0.0000	79.7289
Worker	0.0712	0.0838	0.8317	1.3400e-003	0.1154	1.0400e-003	0.1164	0.0307	9.4000e-004	0.0316	0.0000	104.2139	104.2139	6.2900e-003	0.0000	104.3460
Total	0.1271	0.4980	1.3945	2.2100e-003	0.1390	8.6100e-003	0.1477	0.0375	7.8900e-003	0.0454	0.0000	183.9269	183.9269	7.0500e-003	0.0000	184.0749

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4775	3.9189	2.4462	3.5000e-003		0.2762	0.2762		0.2598	0.2598	0.0000	318.4122	318.4122	0.0799	0.0000	320.0899
Total	0.4775	3.9189	2.4462	3.5000e-003		0.2762	0.2762		0.2598	0.2598	0.0000	318.4122	318.4122	0.0799	0.0000	320.0899

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0559	0.4142	0.5628	8.7000e-004	0.0237	7.5700e-003	0.0312	6.7800e-003	6.9500e-003	0.0137	0.0000	79.7129	79.7129	7.6000e-004	0.0000	79.7289
Worker	0.0712	0.0838	0.8317	1.3400e-003	0.1154	1.0400e-003	0.1164	0.0307	9.4000e-004	0.0316	0.0000	104.2139	104.2139	6.2900e-003	0.0000	104.3460
Total	0.1271	0.4980	1.3945	2.2100e-003	0.1390	8.6100e-003	0.1477	0.0375	7.8900e-003	0.0454	0.0000	183.9269	183.9269	7.0500e-003	0.0000	184.0749

3.4 Building Construction - 2016**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0104	316.0104	0.0784	0.0000	317.6563
Total	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0104	316.0104	0.0784	0.0000	317.6563

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0490	0.3593	0.5172	8.7000e-004	0.0237	6.3500e-003	0.0300	6.7700e-003	5.8300e-003	0.0126	0.0000	78.7227	78.7227	6.9000e-004	0.0000	78.7371
Worker	0.0623	0.0733	0.7234	1.3400e-003	0.1154	9.6000e-004	0.1163	0.0307	8.8000e-004	0.0316	0.0000	100.2706	100.2706	5.6100e-003	0.0000	100.3883
Total	0.1113	0.4326	1.2406	2.2100e-003	0.1390	7.3100e-003	0.1464	0.0375	6.7100e-003	0.0442	0.0000	178.9933	178.9933	6.3000e-003	0.0000	179.1254

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0101	316.0101	0.0784	0.0000	317.6560
Total	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0101	316.0101	0.0784	0.0000	317.6560

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0490	0.3593	0.5172	8.7000e-004	0.0237	6.3500e-003	0.0300	6.7700e-003	5.8300e-003	0.0126	0.0000	78.7227	78.7227	6.9000e-004	0.0000	78.7371
Worker	0.0623	0.0733	0.7234	1.3400e-003	0.1154	9.6000e-004	0.1163	0.0307	8.8000e-004	0.0316	0.0000	100.2706	100.2706	5.6100e-003	0.0000	100.3883
Total	0.1113	0.4326	1.2406	2.2100e-003	0.1390	7.3100e-003	0.1464	0.0375	6.7100e-003	0.0442	0.0000	178.9933	178.9933	6.3000e-003	0.0000	179.1254

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3228	311.3228	0.0766	0.0000	312.9319
Total	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3228	311.3228	0.0766	0.0000	312.9319

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0395	0.3151	0.4499	8.6000e-004	0.0236	5.2900e-003	0.0289	6.7500e-003	4.8700e-003	0.0116	0.0000	77.0231	77.0231	6.3000e-004	0.0000	77.0364
Worker	0.0537	0.0637	0.6218	1.3400e-003	0.1149	9.0000e-004	0.1158	0.0306	8.3000e-004	0.0314	0.0000	95.8495	95.8495	4.9900e-003	0.0000	95.9542
Total	0.0932	0.3787	1.0717	2.2000e-003	0.1385	6.1900e-003	0.1447	0.0373	5.7000e-003	0.0430	0.0000	172.8726	172.8726	5.6200e-003	0.0000	172.9906

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3225	311.3225	0.0766	0.0000	312.9315
Total	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3225	311.3225	0.0766	0.0000	312.9315

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0395	0.3151	0.4499	8.6000e-004	0.0236	5.2900e-003	0.0289	6.7500e-003	4.8700e-003	0.0116	0.0000	77.0231	77.0231	6.3000e-004	0.0000	77.0364
Worker	0.0537	0.0637	0.6218	1.3400e-003	0.1149	9.0000e-004	0.1158	0.0306	8.3000e-004	0.0314	0.0000	95.8495	95.8495	4.9900e-003	0.0000	95.9542
Total	0.0932	0.3787	1.0717	2.2000e-003	0.1385	6.1900e-003	0.1447	0.0373	5.7000e-003	0.0430	0.0000	172.8726	172.8726	5.6200e-003	0.0000	172.9906

3.4 Building Construction - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2896	2.5238	1.9023	2.9100e-003		0.1621	0.1621		0.1524	0.1524	0.0000	256.8951	256.8951	0.0629	0.0000	258.2153
Total	0.2896	2.5238	1.9023	2.9100e-003		0.1621	0.1621		0.1524	0.1524	0.0000	256.8951	256.8951	0.0629	0.0000	258.2153

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0282	0.2358	0.3431	7.2000e-004	0.0197	4.0400e-003	0.0237	5.6300e-003	3.7100e-003	9.3400e-003	0.0000	63.1162	63.1162	5.1000e-004	0.0000	63.1270
Worker	0.0388	0.0463	0.4493	1.1100e-003	0.0959	7.1000e-004	0.0967	0.0255	6.6000e-004	0.0262	0.0000	76.4135	76.4135	3.7200e-003	0.0000	76.4916
Total	0.0670	0.2821	0.7924	1.8300e-003	0.1156	4.7500e-003	0.1204	0.0311	4.3700e-003	0.0355	0.0000	139.5297	139.5297	4.2300e-003	0.0000	139.6186

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2896	2.5238	1.9023	2.9100e-003		0.1621	0.1621		0.1524	0.1524	0.0000	256.8948	256.8948	0.0629	0.0000	258.2150
Total	0.2896	2.5238	1.9023	2.9100e-003		0.1621	0.1621		0.1524	0.1524	0.0000	256.8948	256.8948	0.0629	0.0000	258.2150

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0282	0.2358	0.3431	7.2000e-004	0.0197	4.0400e-003	0.0237	5.6300e-003	3.7100e-003	9.3400e-003	0.0000	63.1162	63.1162	5.1000e-004	0.0000	63.1270
Worker	0.0388	0.0463	0.4493	1.1100e-003	0.0959	7.1000e-004	0.0967	0.0255	6.6000e-004	0.0262	0.0000	76.4135	76.4135	3.7200e-003	0.0000	76.4916
Total	0.0670	0.2821	0.7924	1.8300e-003	0.1156	4.7500e-003	0.1204	0.0311	4.3700e-003	0.0355	0.0000	139.5297	139.5297	4.2300e-003	0.0000	139.6186

3.5 Paving - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0355	0.3776	0.3189	4.9000e-004		0.0207	0.0207		0.0190	0.0190	0.0000	44.8112	44.8112	0.0140	0.0000	45.1042
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0355	0.3776	0.3189	4.9000e-004		0.0207	0.0207		0.0190	0.0190	0.0000	44.8112	44.8112	0.0140	0.0000	45.1042

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0600e-003	1.2700e-003	0.0123	3.0000e-005	2.6300e-003	2.0000e-005	2.6500e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.0938	2.0938	1.0000e-004	0.0000	2.0959
Total	1.0600e-003	1.2700e-003	0.0123	3.0000e-005	2.6300e-003	2.0000e-005	2.6500e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.0938	2.0938	1.0000e-004	0.0000	2.0959

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0355	0.3776	0.3189	4.9000e-004		0.0207	0.0207		0.0190	0.0190	0.0000	44.8112	44.8112	0.0140	0.0000	45.1041
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0355	0.3776	0.3189	4.9000e-004		0.0207	0.0207		0.0190	0.0190	0.0000	44.8112	44.8112	0.0140	0.0000	45.1041

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0600e-003	1.2700e-003	0.0123	3.0000e-005	2.6300e-003	2.0000e-005	2.6500e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.0938	2.0938	1.0000e-004	0.0000	2.0959
Total	1.0600e-003	1.2700e-003	0.0123	3.0000e-005	2.6300e-003	2.0000e-005	2.6500e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.0938	2.0938	1.0000e-004	0.0000	2.0959

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0221	0.2315	0.2227	3.5000e-004		0.0126	0.0126		0.0115	0.0115	0.0000	31.0612	31.0612	9.8300e-003	0.0000	31.2676
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0221	0.2315	0.2227	3.5000e-004		0.0126	0.0126		0.0115	0.0115	0.0000	31.0612	31.0612	9.8300e-003	0.0000	31.2676

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	8.0000e-004	7.6700e-003	2.0000e-005	1.8500e-003	1.0000e-005	1.8700e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.4202	1.4202	7.0000e-005	0.0000	1.4216
Total	6.7000e-004	8.0000e-004	7.6700e-003	2.0000e-005	1.8500e-003	1.0000e-005	1.8700e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.4202	1.4202	7.0000e-005	0.0000	1.4216

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0221	0.2315	0.2227	3.5000e-004		0.0126	0.0126		0.0115	0.0115	0.0000	31.0611	31.0611	9.8300e-003	0.0000	31.2675
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0221	0.2315	0.2227	3.5000e-004		0.0126	0.0126		0.0115	0.0115	0.0000	31.0611	31.0611	9.8300e-003	0.0000	31.2675

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	8.0000e-004	7.6700e-003	2.0000e-005	1.8500e-003	1.0000e-005	1.8700e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.4202	1.4202	7.0000e-005	0.0000	1.4216
Total	6.7000e-004	8.0000e-004	7.6700e-003	2.0000e-005	1.8500e-003	1.0000e-005	1.8700e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.4202	1.4202	7.0000e-005	0.0000	1.4216

3.6 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.0847					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.9900e-003	0.0688	0.0691	1.1000e-004		4.8300e-003	4.8300e-003		4.8300e-003	4.8300e-003	0.0000	9.5747	9.5747	8.1000e-004	0.0000	9.5917
Total	4.0947	0.0688	0.0691	1.1000e-004		4.8300e-003	4.8300e-003		4.8300e-003	4.8300e-003	0.0000	9.5747	9.5747	8.1000e-004	0.0000	9.5917

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3600e-003	2.8200e-003	0.0272	8.0000e-005	6.5700e-003	5.0000e-005	6.6200e-003	1.7500e-003	4.0000e-005	1.7900e-003	0.0000	5.0394	5.0394	2.3000e-004	0.0000	5.0443
Total	2.3600e-003	2.8200e-003	0.0272	8.0000e-005	6.5700e-003	5.0000e-005	6.6200e-003	1.7500e-003	4.0000e-005	1.7900e-003	0.0000	5.0394	5.0394	2.3000e-004	0.0000	5.0443

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.0847					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.9900e-003	0.0688	0.0691	1.1000e-004		4.8300e-003	4.8300e-003		4.8300e-003	4.8300e-003	0.0000	9.5747	9.5747	8.1000e-004	0.0000	9.5917
Total	4.0947	0.0688	0.0691	1.1000e-004		4.8300e-003	4.8300e-003		4.8300e-003	4.8300e-003	0.0000	9.5747	9.5747	8.1000e-004	0.0000	9.5917

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3600e-003	2.8200e-003	0.0272	8.0000e-005	6.5700e-003	5.0000e-005	6.6200e-003	1.7500e-003	4.0000e-005	1.7900e-003	0.0000	5.0394	5.0394	2.3000e-004	0.0000	5.0443
Total	2.3600e-003	2.8200e-003	0.0272	8.0000e-005	6.5700e-003	5.0000e-005	6.6200e-003	1.7500e-003	4.0000e-005	1.7900e-003	0.0000	5.0394	5.0394	2.3000e-004	0.0000	5.0443

Pixley Community Plan - Commercial 2014
Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government Office Building	1.94	1000sqft	0.04	1,940.00	0
Medical Office Building	1.66	1000sqft	0.04	1,660.00	0
Day-Care Center	2.12	1000sqft	0.05	2,120.00	0
Elementary School	30.57	1000sqft	0.70	30,570.00	0
Place of Worship	7.04	1000sqft	0.16	7,040.00	0
Motel	2.30	Room	0.10	4,508.46	0
Automobile Care Center	16.64	1000sqft	0.38	16,640.00	0
Convenience Market With Gas Pumps	3.78	1000sqft	0.09	3,780.00	0
Strip Mall	11.79	1000sqft	0.27	11,790.00	0
Quality Restaurant	4.61	1000sqft	0.11	4,610.00	0
Supermarket	4.12	1000sqft	0.09	4,120.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
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2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	1.1738	3.4702	2.6181	3.6900e-003	0.0629	0.2271	0.2899	0.0214	0.2173	0.2387	0.0000	321.1302	321.1302	0.0668	0.0000	322.5328
Total	1.1738	3.4702	2.6181	3.6900e-003	0.0629	0.2271	0.2899	0.0214	0.2173	0.2387	0.0000	321.1302	321.1302	0.0668	0.0000	322.5328

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	1.1738	3.4702	2.6181	3.6900e-003	0.0629	0.2271	0.2899	0.0214	0.2173	0.2387	0.0000	321.1299	321.1299	0.0668	0.0000	322.5325
Total	1.1738	3.4702	2.6181	3.6900e-003	0.0629	0.2271	0.2899	0.0214	0.2173	0.2387	0.0000	321.1299	321.1299	0.0668	0.0000	322.5325
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2014	1/3/2014	5	3	
2	Grading	Grading	1/4/2014	1/13/2014	5	6	
3	Building Construction	Building Construction	1/14/2014	11/17/2014	5	220	
4	Paving	Paving	11/18/2014	12/1/2014	5	10	
5	Architectural Coating	Architectural Coating	12/2/2014	12/15/2014	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 133,168; Non-Residential Outdoor: 44,389 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	95	0.56
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Site Preparation	Graders	1	8.00	174	0.41
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	1	8.00	130	0.36
Site Preparation	Scrapers	1	8.00	361	0.48
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	33.00	15.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2800e-003	0.0496	0.0285	4.0000e-005		2.4400e-003	2.4400e-003		2.2400e-003	2.2400e-003	0.0000	3.4495	3.4495	1.0200e-003	0.0000	3.4709
Total	4.2800e-003	0.0496	0.0285	4.0000e-005	2.3900e-003	2.4400e-003	4.8300e-003	2.6000e-004	2.2400e-003	2.5000e-003	0.0000	3.4495	3.4495	1.0200e-003	0.0000	3.4709

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0904	0.0904	1.0000e-005	0.0000	0.0906
Total	7.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0904	0.0904	1.0000e-005	0.0000	0.0906

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2800e-003	0.0496	0.0285	4.0000e-005		2.4400e-003	2.4400e-003		2.2400e-003	2.2400e-003	0.0000	3.4495	3.4495	1.0200e-003	0.0000	3.4709
Total	4.2800e-003	0.0496	0.0285	4.0000e-005	2.3900e-003	2.4400e-003	4.8300e-003	2.6000e-004	2.2400e-003	2.5000e-003	0.0000	3.4495	3.4495	1.0200e-003	0.0000	3.4709

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0904	0.0904	1.0000e-005	0.0000	0.0906
Total	7.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0904	0.0904	1.0000e-005	0.0000	0.0906

3.3 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.9500e-003	0.0949	0.0609	6.0000e-005		5.3300e-003	5.3300e-003		4.9000e-003	4.9000e-003	0.0000	5.9531	5.9531	1.7600e-003	0.0000	5.9900
Total	8.9500e-003	0.0949	0.0609	6.0000e-005	0.0197	5.3300e-003	0.0250	0.0101	4.9000e-003	0.0150	0.0000	5.9531	5.9531	1.7600e-003	0.0000	5.9900

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.0000e-004	2.0100e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2261	0.2261	1.0000e-005	0.0000	0.2264
Total	1.7000e-004	2.0000e-004	2.0100e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2261	0.2261	1.0000e-005	0.0000	0.2264

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.9500e-003	0.0949	0.0609	6.0000e-005		5.3300e-003	5.3300e-003		4.9000e-003	4.9000e-003	0.0000	5.9531	5.9531	1.7600e-003	0.0000	5.9900
Total	8.9500e-003	0.0949	0.0609	6.0000e-005	0.0197	5.3300e-003	0.0250	0.0101	4.9000e-003	0.0150	0.0000	5.9531	5.9531	1.7600e-003	0.0000	5.9900

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.0000e-004	2.0100e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2261	0.2261	1.0000e-005	0.0000	0.2264
Total	1.7000e-004	2.0000e-004	2.0100e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2261	0.2261	1.0000e-005	0.0000	0.2264

3.4 Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4783	2.9650	1.9116	2.7400e-003		0.2068	0.2068		0.1985	0.1985	0.0000	237.0711	237.0711	0.0591	0.0000	238.3128
Total	0.4783	2.9650	1.9116	2.7400e-003		0.2068	0.2068		0.1985	0.1985	0.0000	237.0711	237.0711	0.0591	0.0000	238.3128

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0315	0.2196	0.2934	4.0000e-004	0.0107	4.5900e-003	0.0153	3.0600e-003	4.2200e-003	7.2800e-003	0.0000	36.5290	36.5290	4.0000e-004	0.0000	36.5375
Worker	0.0206	0.0244	0.2427	3.4000e-004	0.0289	2.9000e-004	0.0292	7.6900e-003	2.6000e-004	7.9500e-003	0.0000	27.3528	27.3528	1.8000e-003	0.0000	27.3905
Total	0.0521	0.2440	0.5360	7.4000e-004	0.0396	4.8800e-003	0.0445	0.0108	4.4800e-003	0.0152	0.0000	63.8818	63.8818	2.2000e-003	0.0000	63.9280

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4783	2.9650	1.9116	2.7400e-003		0.2068	0.2068		0.1985	0.1985	0.0000	237.0708	237.0708	0.0591	0.0000	238.3126
Total	0.4783	2.9650	1.9116	2.7400e-003		0.2068	0.2068		0.1985	0.1985	0.0000	237.0708	237.0708	0.0591	0.0000	238.3126

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0315	0.2196	0.2934	4.0000e-004	0.0107	4.5900e-003	0.0153	3.0600e-003	4.2200e-003	7.2800e-003	0.0000	36.5290	36.5290	4.0000e-004	0.0000	36.5375
Worker	0.0206	0.0244	0.2427	3.4000e-004	0.0289	2.9000e-004	0.0292	7.6900e-003	2.6000e-004	7.9500e-003	0.0000	27.3528	27.3528	1.8000e-003	0.0000	27.3905
Total	0.0521	0.2440	0.5360	7.4000e-004	0.0396	4.8800e-003	0.0445	0.0108	4.4800e-003	0.0152	0.0000	63.8818	63.8818	2.2000e-003	0.0000	63.9280

3.5 Paving - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.9000e-003	0.1019	0.0613	9.0000e-005		6.3700e-003	6.3700e-003		5.8700e-003	5.8700e-003	0.0000	8.3528	8.3528	2.4200e-003	0.0000	8.4037
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.9000e-003	0.1019	0.0613	9.0000e-005		6.3700e-003	6.3700e-003		5.8700e-003	5.8700e-003	0.0000	8.3528	8.3528	2.4200e-003	0.0000	8.4037

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	5.0000e-004	5.0100e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.0000e-004	1.6000e-004	1.0000e-005	1.6000e-004	0.0000	0.5651	0.5651	4.0000e-005	0.0000	0.5659
Total	4.3000e-004	5.0000e-004	5.0100e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.0000e-004	1.6000e-004	1.0000e-005	1.6000e-004	0.0000	0.5651	0.5651	4.0000e-005	0.0000	0.5659

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.9000e-003	0.1019	0.0613	9.0000e-005		6.3700e-003	6.3700e-003		5.8700e-003	5.8700e-003	0.0000	8.3528	8.3528	2.4200e-003	0.0000	8.4037
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.9000e-003	0.1019	0.0613	9.0000e-005		6.3700e-003	6.3700e-003		5.8700e-003	5.8700e-003	0.0000	8.3528	8.3528	2.4200e-003	0.0000	8.4037

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	5.0000e-004	5.0100e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.0000e-004	1.6000e-004	1.0000e-005	1.6000e-004	0.0000	0.5651	0.5651	4.0000e-005	0.0000	0.5659
Total	4.3000e-004	5.0000e-004	5.0100e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.0000e-004	1.6000e-004	1.0000e-005	1.6000e-004	0.0000	0.5651	0.5651	4.0000e-005	0.0000	0.5659

3.6 Architectural Coating - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6172					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2300e-003	0.0139	9.6100e-003	1.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	1.2766	1.2766	1.8000e-004	0.0000	1.2805
Total	0.6195	0.0139	9.6100e-003	1.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	1.2766	1.2766	1.8000e-004	0.0000	1.2805

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	2.3000e-004	2.3400e-003	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2637	0.2637	2.0000e-005	0.0000	0.2641
Total	2.0000e-004	2.3000e-004	2.3400e-003	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2637	0.2637	2.0000e-005	0.0000	0.2641

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6172					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2300e-003	0.0139	9.6100e-003	1.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	1.2766	1.2766	1.8000e-004	0.0000	1.2805
Total	0.6195	0.0139	9.6100e-003	1.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	1.2766	1.2766	1.8000e-004	0.0000	1.2805

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	2.3000e-004	2.3400e-003	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2637	0.2637	2.0000e-005	0.0000	0.2641
Total	2.0000e-004	2.3000e-004	2.3400e-003	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2637	0.2637	2.0000e-005	0.0000	0.2641

Pixley Community Plan - Industrial 2014

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	88.36	1000sqft	2.03	88,360.00	0
General Light Industry	10.96	1000sqft	0.25	10,960.00	0
Unrefrigerated Warehouse-No Rail	29.84	1000sqft	0.69	29,840.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Total increase from existing to year 2030. Emissions will then be averaged over 16 years.

Construction Off-road Equipment Mitigation - Compliance with Regulation VIII

Table Name	Column Name	Default Value	New Value
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2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	1.4803	3.5737	2.8912	4.0600e-003	0.0857	0.2291	0.3148	0.0276	0.2191	0.2467	0.0000	353.2989	353.2989	0.0681	0.0000	354.7291
Total	1.4803	3.5737	2.8912	4.0600e-003	0.0857	0.2291	0.3148	0.0276	0.2191	0.2467	0.0000	353.2989	353.2989	0.0681	0.0000	354.7291

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	1.4803	3.5737	2.8912	4.0600e-003	0.0723	0.2291	0.3013	0.0213	0.2191	0.2404	0.0000	353.2986	353.2986	0.0681	0.0000	354.7288
Total	1.4803	3.5737	2.8912	4.0600e-003	0.0723	0.2291	0.3013	0.0213	0.2191	0.2404	0.0000	353.2986	353.2986	0.0681	0.0000	354.7288
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	15.69	0.00	4.27	22.91	0.00	2.56	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2014	1/3/2014	5	3	
2	Grading	Grading	1/4/2014	1/13/2014	5	6	
3	Building Construction	Building Construction	1/14/2014	11/17/2014	5	220	
4	Paving	Paving	11/18/2014	12/1/2014	5	10	
5	Architectural Coating	Architectural Coating	12/2/2014	12/15/2014	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 193,740; Non-Residential Outdoor: 64,580 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Scrapers	1	8.00	361	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	54.00	21.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2800e-003	0.0496	0.0285	4.0000e-005		2.4400e-003	2.4400e-003		2.2400e-003	2.2400e-003	0.0000	3.4495	3.4495	1.0200e-003	0.0000	3.4709
Total	4.2800e-003	0.0496	0.0285	4.0000e-005	2.3900e-003	2.4400e-003	4.8300e-003	2.6000e-004	2.2400e-003	2.5000e-003	0.0000	3.4495	3.4495	1.0200e-003	0.0000	3.4709

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0904	0.0904	1.0000e-005	0.0000	0.0906
Total	7.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0904	0.0904	1.0000e-005	0.0000	0.0906

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.3000e-004	0.0000	9.3000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2800e-003	0.0496	0.0285	4.0000e-005		2.4400e-003	2.4400e-003		2.2400e-003	2.2400e-003	0.0000	3.4495	3.4495	1.0200e-003	0.0000	3.4709
Total	4.2800e-003	0.0496	0.0285	4.0000e-005	9.3000e-004	2.4400e-003	3.3700e-003	1.0000e-004	2.2400e-003	2.3400e-003	0.0000	3.4495	3.4495	1.0200e-003	0.0000	3.4709

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0904	0.0904	1.0000e-005	0.0000	0.0906
Total	7.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0904	0.0904	1.0000e-005	0.0000	0.0906

3.3 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.9500e-003	0.0949	0.0609	6.0000e-005		5.3300e-003	5.3300e-003		4.9000e-003	4.9000e-003	0.0000	5.9531	5.9531	1.7600e-003	0.0000	5.9900
Total	8.9500e-003	0.0949	0.0609	6.0000e-005	0.0197	5.3300e-003	0.0250	0.0101	4.9000e-003	0.0150	0.0000	5.9531	5.9531	1.7600e-003	0.0000	5.9900

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.0000e-004	2.0100e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2261	0.2261	1.0000e-005	0.0000	0.2264
Total	1.7000e-004	2.0000e-004	2.0100e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2261	0.2261	1.0000e-005	0.0000	0.2264

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.6700e-003	0.0000	7.6700e-003	3.9400e-003	0.0000	3.9400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.9500e-003	0.0949	0.0609	6.0000e-005		5.3300e-003	5.3300e-003		4.9000e-003	4.9000e-003	0.0000	5.9531	5.9531	1.7600e-003	0.0000	5.9900
Total	8.9500e-003	0.0949	0.0609	6.0000e-005	7.6700e-003	5.3300e-003	0.0130	3.9400e-003	4.9000e-003	8.8400e-003	0.0000	5.9531	5.9531	1.7600e-003	0.0000	5.9900

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.0000e-004	2.0100e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2261	0.2261	1.0000e-005	0.0000	0.2264
Total	1.7000e-004	2.0000e-004	2.0100e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2261	0.2261	1.0000e-005	0.0000	0.2264

3.4 Building Construction - 2014**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4783	2.9650	1.9116	2.7400e-003		0.2068	0.2068		0.1985	0.1985	0.0000	237.0711	237.0711	0.0591	0.0000	238.3128
Total	0.4783	2.9650	1.9116	2.7400e-003		0.2068	0.2068		0.1985	0.1985	0.0000	237.0711	237.0711	0.0591	0.0000	238.3128

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0440	0.3074	0.4107	5.5000e-004	0.0150	6.4300e-003	0.0214	4.2900e-003	5.9100e-003	0.0102	0.0000	51.1406	51.1406	5.6000e-004	0.0000	51.1525
Worker	0.0337	0.0399	0.3971	5.6000e-004	0.0473	4.7000e-004	0.0478	0.0126	4.3000e-004	0.0130	0.0000	44.7591	44.7591	2.9400e-003	0.0000	44.8209
Total	0.0777	0.3473	0.8078	1.1100e-003	0.0623	6.9000e-003	0.0692	0.0169	6.3400e-003	0.0232	0.0000	95.8997	95.8997	3.5000e-003	0.0000	95.9733

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4783	2.9650	1.9116	2.7400e-003		0.2068	0.2068		0.1985	0.1985	0.0000	237.0708	237.0708	0.0591	0.0000	238.3126
Total	0.4783	2.9650	1.9116	2.7400e-003		0.2068	0.2068		0.1985	0.1985	0.0000	237.0708	237.0708	0.0591	0.0000	238.3126

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0440	0.3074	0.4107	5.5000e-004	0.0150	6.4300e-003	0.0214	4.2900e-003	5.9100e-003	0.0102	0.0000	51.1406	51.1406	5.6000e-004	0.0000	51.1525
Worker	0.0337	0.0399	0.3971	5.6000e-004	0.0473	4.7000e-004	0.0478	0.0126	4.3000e-004	0.0130	0.0000	44.7591	44.7591	2.9400e-003	0.0000	44.8209
Total	0.0777	0.3473	0.8078	1.1100e-003	0.0623	6.9000e-003	0.0692	0.0169	6.3400e-003	0.0232	0.0000	95.8997	95.8997	3.5000e-003	0.0000	95.9733

3.5 Paving - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.9000e-003	0.1019	0.0613	9.0000e-005		6.3700e-003	6.3700e-003		5.8700e-003	5.8700e-003	0.0000	8.3528	8.3528	2.4200e-003	0.0000	8.4037
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.9000e-003	0.1019	0.0613	9.0000e-005		6.3700e-003	6.3700e-003		5.8700e-003	5.8700e-003	0.0000	8.3528	8.3528	2.4200e-003	0.0000	8.4037

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	5.0000e-004	5.0100e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.0000e-004	1.6000e-004	1.0000e-005	1.6000e-004	0.0000	0.5651	0.5651	4.0000e-005	0.0000	0.5659
Total	4.3000e-004	5.0000e-004	5.0100e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.0000e-004	1.6000e-004	1.0000e-005	1.6000e-004	0.0000	0.5651	0.5651	4.0000e-005	0.0000	0.5659

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.9000e-003	0.1019	0.0613	9.0000e-005		6.3700e-003	6.3700e-003		5.8700e-003	5.8700e-003	0.0000	8.3528	8.3528	2.4200e-003	0.0000	8.4037
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.9000e-003	0.1019	0.0613	9.0000e-005		6.3700e-003	6.3700e-003		5.8700e-003	5.8700e-003	0.0000	8.3528	8.3528	2.4200e-003	0.0000	8.4037

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	5.0000e-004	5.0100e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.0000e-004	1.6000e-004	1.0000e-005	1.6000e-004	0.0000	0.5651	0.5651	4.0000e-005	0.0000	0.5659
Total	4.3000e-004	5.0000e-004	5.0100e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.0000e-004	1.6000e-004	1.0000e-005	1.6000e-004	0.0000	0.5651	0.5651	4.0000e-005	0.0000	0.5659

3.6 Architectural Coating - 2014**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8980					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2300e-003	0.0139	9.6100e-003	1.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	1.2766	1.2766	1.8000e-004	0.0000	1.2805
Total	0.9002	0.0139	9.6100e-003	1.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	1.2766	1.2766	1.8000e-004	0.0000	1.2805

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	3.7000e-004	3.6800e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4144	0.4144	3.0000e-005	0.0000	0.4150
Total	3.1000e-004	3.7000e-004	3.6800e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4144	0.4144	3.0000e-005	0.0000	0.4150

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8980					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2300e-003	0.0139	9.6100e-003	1.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	1.2766	1.2766	1.8000e-004	0.0000	1.2805
Total	0.9002	0.0139	9.6100e-003	1.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	1.2766	1.2766	1.8000e-004	0.0000	1.2805

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	3.7000e-004	3.6800e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4144	0.4144	3.0000e-005	0.0000	0.4150
Total	3.1000e-004	3.7000e-004	3.6800e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4144	0.4144	3.0000e-005	0.0000	0.4150

Pixley Community Plan - Residential 2020
Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	5.00	Dwelling Unit	0.31	5,000.00	14
Mobile Home Park	17.00	Dwelling Unit	2.14	20,400.00	49
Single Family Housing	99.00	Dwelling Unit	32.14	178,200.00	283

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	491.65	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 2020 emission factors: BAU emissions factors for Energy reflect compliance with the 33% RPS standard.

Vehicle Emission Factors - 2020 SJVAPCD Residential Fleet Mix. LEV III reductions incorporated (3% reduction in LDA, LDT1, and LDT2 EF).

Area Mitigation - California Building Code

Energy Mitigation - Newest Title 24 (2013) is not accounted for in this version of CalEEMod. Title 24 2013 is 25% more efficient than the previous Title 24 2008 standards for residential buildings.

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleEF	HHD	0.06	0.02
tblVehicleEF	LDA	8.0770e-003	7.8350e-003
tblVehicleEF	LDA	5.4660e-003	5.3020e-003
tblVehicleEF	LDA	0.69	0.67
tblVehicleEF	LDA	1.37	1.33
tblVehicleEF	LDA	224.21	217.49
tblVehicleEF	LDA	51.40	49.86
tblVehicleEF	LDA	0.41	0.51
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	8.0000e-003	7.7600e-003
tblVehicleEF	LDA	1.6040e-003	1.5560e-003
tblVehicleEF	LDA	3.6510e-003	3.5410e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	2.0000e-003	1.9400e-003
tblVehicleEF	LDA	1.4870e-003	1.4420e-003
tblVehicleEF	LDA	3.3860e-003	3.2840e-003
tblVehicleEF	LDA	0.05	0.05
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.22	0.21
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	3.3160e-003	3.2170e-003

tblVehicleEF	LDA	7.6100e-004	7.3800e-004
tblVehicleEF	LDA	0.05	0.05
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.22	0.21
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	1.78	1.73
tblVehicleEF	LDT1	3.77	3.65
tblVehicleEF	LDT1	270.15	262.04
tblVehicleEF	LDT1	61.65	59.80
tblVehicleEF	LDT1	0.07	0.21
tblVehicleEF	LDT1	0.20	0.19
tblVehicleEF	LDT1	0.21	0.20
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	8.0000e-003	7.7600e-003
tblVehicleEF	LDT1	2.9850e-003	2.8950e-003
tblVehicleEF	LDT1	5.1140e-003	4.9610e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	2.0000e-003	1.9400e-003
tblVehicleEF	LDT1	2.7670e-003	2.6840e-003
tblVehicleEF	LDT1	4.7420e-003	4.6000e-003
tblVehicleEF	LDT1	0.20	0.19
tblVehicleEF	LDT1	0.29	0.28
tblVehicleEF	LDT1	0.12	0.12
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	1.01	0.98
tblVehicleEF	LDT1	0.28	0.27

tblVehicleEF	LDT1	3.8460e-003	3.7310e-003
tblVehicleEF	LDT1	9.1600e-004	8.8900e-004
tblVehicleEF	LDT1	0.20	0.19
tblVehicleEF	LDT1	0.29	0.28
tblVehicleEF	LDT1	0.12	0.12
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	1.01	0.98
tblVehicleEF	LDT1	0.30	0.29
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	8.8520e-003	8.5860e-003
tblVehicleEF	LDT2	1.00	0.97
tblVehicleEF	LDT2	2.13	2.07
tblVehicleEF	LDT2	334.65	324.61
tblVehicleEF	LDT2	76.10	73.81
tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.12	0.12
tblVehicleEF	LDT2	0.17	0.17
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	8.0000e-003	7.7600e-003
tblVehicleEF	LDT2	1.7200e-003	1.6680e-003
tblVehicleEF	LDT2	3.7870e-003	3.6730e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	1.9400e-003
tblVehicleEF	LDT2	1.5950e-003	1.5470e-003
tblVehicleEF	LDT2	3.5120e-003	3.4070e-003
tblVehicleEF	LDT2	0.09	0.08
tblVehicleEF	LDT2	0.14	0.14
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.46	0.45

tblVehicleEF	LDT2	0.16	0.15
tblVehicleEF	LDT2	4.5130e-003	4.3780e-003
tblVehicleEF	LDT2	1.0430e-003	1.0120e-003
tblVehicleEF	LDT2	0.09	0.08
tblVehicleEF	LDT2	0.14	0.14
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.46	0.45
tblVehicleEF	LDT2	0.17	0.16
tblVehicleEF	LHD1	0.06	2.1000e-003
tblVehicleEF	LHD2	8.2370e-003	1.0000e-003
tblVehicleEF	MCY	6.0550e-003	3.1000e-003
tblVehicleEF	MDV	0.20	0.06
tblVehicleEF	MH	2.2380e-003	2.3000e-003
tblVehicleEF	MHD	0.02	9.6000e-003
tblVehicleEF	OBUS	1.8130e-003	0.00
tblVehicleEF	SBUS	1.1060e-003	1.0000e-003
tblVehicleEF	UBUS	1.4630e-003	3.8000e-003

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.0190	0.0104	0.9017	5.0000e-005		8.6200e-003	8.6200e-003		8.5800e-003	8.5800e-003	0.0000	53.8857	53.8857	2.4400e-003	9.6000e-004	54.2347
Energy	0.0186	0.1590	0.0677	1.0100e-003		0.0129	0.0129		0.0129	0.0129	0.0000	377.1328	377.1328	0.0122	5.3400e-003	379.0433
Mobile	0.5456	0.9829	5.2842	0.0140	1.1102	0.0165	1.1267	0.2964	0.0153	0.3116	0.0000	935.2213	935.2213	0.0362	0.0000	935.9806
Waste						0.0000	0.0000		0.0000	0.0000	22.7350	0.0000	22.7350	1.3436	0.0000	50.9506
Water						0.0000	0.0000		0.0000	0.0000	2.5011	13.3925	15.8936	0.2575	6.2000e-003	23.2235
Total	1.5832	1.1523	6.2536	0.0150	1.1102	0.0380	1.1481	0.2964	0.0367	0.3330	25.2361	1,379.6323	1,404.8684	1.6519	0.0125	1,443.4327

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.0186	0.0104	0.8952	5.0000e-005		8.5800e-003	8.5800e-003		8.5400e-003	8.5400e-003	0.0000	53.8725	53.8725	2.4200e-003	9.6000e-004	54.2211
Energy	0.0148	0.1267	0.0539	8.1000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	333.5365	333.5365	0.0112	4.5900e-003	335.1939
Mobile	0.5456	0.9829	5.2842	0.0140	1.1102	0.0165	1.1267	0.2964	0.0153	0.3116	0.0000	935.2213	935.2213	0.0362	0.0000	935.9806
Waste						0.0000	0.0000		0.0000	0.0000	22.7350	0.0000	22.7350	1.3436	0.0000	50.9506
Water						0.0000	0.0000		0.0000	0.0000	2.5011	13.3925	15.8936	0.2575	6.1900e-003	23.2202
Total	1.5791	1.1199	6.2334	0.0148	1.1102	0.0353	1.1455	0.2964	0.0340	0.3304	25.2361	1,336.0228	1,361.2589	1.6508	0.0117	1,399.5664
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.26	2.81	0.32	1.33	0.00	7.00	0.23	0.00	7.25	0.80	0.00	3.16	3.10	0.06	6.08	3.04

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5456	0.9829	5.2842	0.0140	1.1102	0.0165	1.1267	0.2964	0.0153	0.3116	0.0000	935.2213	935.2213	0.0362	0.0000	935.9806
Unmitigated	0.5456	0.9829	5.2842	0.0140	1.1102	0.0165	1.1267	0.2964	0.0153	0.3116	0.0000	935.2213	935.2213	0.0362	0.0000	935.9806

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	32.95	35.80	30.35	92,978	92,978
Mobile Home Park	84.83	85.00	74.12	234,869	234,869
Single Family Housing	947.43	997.92	868.23	2,658,992	2,658,992
Total	1,065.21	1,118.72	972.70	2,986,839	2,986,839

4.3 Trip Type Information

		Miles			Trip %			Trip Purpose %				
Land Use		H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by		
Apartments Low Rise		10.80	7.30	7.50	38.40	22.60	39.00	86	11	3		
Mobile Home Park		10.80	7.30	7.50	38.40	22.60	39.00	86	11	3		
Single Family Housing		10.80	7.30	7.50	38.40	22.60	39.00	86	11	3		
LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511200	0.213700	0.169200	0.061000	0.002100	0.001000	0.009600	0.022100	0.000000	0.003800	0.003100	0.001000	0.002300

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	186.8316	186.8316	8.3600e-003	1.9000e-003	187.5962
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	192.9811	192.9811	8.6400e-003	1.9600e-003	193.7709
NaturalGas Mitigated	0.0148	0.1267	0.0539	8.1000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	146.7049	146.7049	2.8100e-003	2.6900e-003	147.5977
NaturalGas Unmitigated	0.0186	0.1590	0.0677	1.0100e-003		0.0129	0.0129		0.0129	0.0129	0.0000	184.1517	184.1517	3.5300e-003	3.3800e-003	185.2724

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	3.10251e+006	0.0167	0.1430	0.0608	9.1000e-004		0.0116	0.0116		0.0116	0.0116	0.0000	165.5620	165.5620	3.1700e-003	3.0400e-003	166.5696
Apartments Low Rise	73720.4	4.0000e-004	3.4000e-003	1.4500e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	3.9340	3.9340	8.0000e-005	7.0000e-005	3.9579
Mobile Home Park	274637	1.4800e-003	0.0127	5.3900e-003	8.0000e-005		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003	0.0000	14.6557	14.6557	2.8000e-004	2.7000e-004	14.7449
Total		0.0186	0.1590	0.0677	1.0100e-003		0.0129	0.0129		0.0129	0.0129	0.0000	184.1517	184.1517	3.5300e-003	3.3800e-003	185.2724

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	2.47551e+006	0.0134	0.1141	0.0485	7.3000e-004		9.2200e-003	9.2200e-003		9.2200e-003	9.2200e-003	0.0000	132.1029	132.1029	2.5300e-003	2.4200e-003	132.9068
Apartments Low Rise	58412.8	3.1000e-004	2.6900e-003	1.1500e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	3.1171	3.1171	6.0000e-005	6.0000e-005	3.1361
Mobile Home Park	215218	1.1600e-003	9.9200e-003	4.2200e-003	6.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004	0.0000	11.4849	11.4849	2.2000e-004	2.1000e-004	11.5548
Total		0.0148	0.1267	0.0539	8.1000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	146.7049	146.7049	2.8100e-003	2.6900e-003	147.5977

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	19209.8	4.2839	1.9000e-004	4.0000e-005	4.3015
Mobile Home Park	87435.4	19.4989	8.7000e-004	2.0000e-004	19.5787
Single Family Housing	758707	169.1983	7.5700e-003	1.7200e-003	169.8907
Total		192.9811	8.6300e-003	1.9600e-003	193.7709

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	18708.9	4.1722	1.9000e-004	4.0000e-005	4.1893
Mobile Home Park	84143	18.7646	8.4000e-004	1.9000e-004	18.8414
Single Family Housing	734925	163.8947	7.3300e-003	1.6700e-003	164.5654
Total		186.8316	8.3600e-003	1.9000e-003	187.5962

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.0186	0.0104	0.8952	5.0000e-005		8.5800e-003	8.5800e-003		8.5400e-003	8.5400e-003	0.0000	53.8725	53.8725	2.4200e-003	9.6000e-004	54.2211
Unmitigated	1.0190	0.0104	0.9017	5.0000e-005		8.6200e-003	8.6200e-003		8.5800e-003	8.5800e-003	0.0000	53.8857	53.8857	2.4400e-003	9.6000e-004	54.2347

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1911					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7952					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.3000e-003	0.0000	2.9000e-004	0.0000		3.6600e-003	3.6600e-003		3.6200e-003	3.6200e-003	0.0000	52.4181	52.4181	1.0000e-003	9.6000e-004	52.7371
Landscaping	0.0275	0.0104	0.9014	5.0000e-005		4.9600e-003	4.9600e-003		4.9000e-003	4.9600e-003	0.0000	1.4676	1.4676	1.4300e-003	0.0000	1.4976
Total	1.0190	0.0104	0.9017	5.0000e-005		8.6200e-003	8.6200e-003		8.5800e-003	8.5800e-003	0.0000	53.8857	53.8857	2.4300e-003	9.6000e-004	54.2347

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1911					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7952					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.3000e-003	0.0000	2.9000e-004	0.0000		3.6600e-003	3.6600e-003		3.6200e-003	3.6200e-003	0.0000	52.4181	52.4181	1.0000e-003	9.6000e-004	52.7371
Landscaping	0.0271	0.0104	0.8949	5.0000e-005		4.9200e-003	4.9200e-003		4.9200e-003	4.9200e-003	0.0000	1.4544	1.4544	1.4100e-003	0.0000	1.4840
Total	1.0186	0.0104	0.8952	5.0000e-005		8.5800e-003	8.5800e-003		8.5400e-003	8.5400e-003	0.0000	53.8725	53.8725	2.4100e-003	9.6000e-004	54.2211

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	15.8936	0.2575	6.1900e-003	23.2202
Unmitigated	15.8936	0.2575	6.2000e-003	23.2235

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	0.32577 / 0.205377	0.6568	0.0106	2.6000e-004	0.9597
Mobile Home Park	1.10762 / 0.698281	2.2330	0.0362	8.7000e-004	3.2628
Single Family Housing	6.45025 / 4.06646	13.0039	0.2107	5.0700e-003	19.0010
Total		15.8936	0.2575	6.2000e-003	23.2235

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	0.32577 / 0.205377	0.6568	0.0106	2.6000e-004	0.9595
Mobile Home Park	1.10762 / 0.698281	2.2330	0.0362	8.7000e-004	3.2623
Single Family Housing	6.45025 / 4.06646	13.0039	0.2106	5.0700e-003	18.9984
Total		15.8936	0.2575	6.2000e-003	23.2202

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	22.7350	1.3436	0.0000	50.9506
Unmitigated	22.7350	1.3436	0.0000	50.9506

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	2.3	0.4669	0.0276	0.0000	1.0463
Mobile Home Park	7.82	1.5874	0.0938	0.0000	3.5574
Single Family Housing	101.88	20.6807	1.2222	0.0000	46.3468
Total		22.7350	1.3436	0.0000	50.9506

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	2.3	0.4669	0.0276	0.0000	1.0463
Mobile Home Park	7.82	1.5874	0.0938	0.0000	3.5574
Single Family Housing	101.88	20.6807	1.2222	0.0000	46.3468
Total		22.7350	1.3436	0.0000	50.9506

Pixley Community Plan - Commercial 2020
Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government Office Building	0.68	1000sqft	0.02	680.00	0
Medical Office Building	0.58	1000sqft	0.01	580.00	0
Day-Care Center	0.74	1000sqft	0.02	740.00	0
Elementary School	10.73	1000sqft	0.25	10,730.00	0
Place of Worship	2.47	1000sqft	0.06	2,470.00	0
Motel	0.81	Room	0.04	1,587.76	0
Quality Restaurant	1.62	1000sqft	0.04	1,620.00	0
Automobile Care Center	5.84	1000sqft	0.13	5,840.00	0
Convenience Market With Gas Pumps	1.33	1000sqft	0.03	1,330.00	0
Strip Mall	4.14	1000sqft	0.10	4,140.00	0
Supermarket	1.45	1000sqft	0.03	1,450.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3	Operational Year	2020		
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	491.65	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 2020 emission factors: BAU emissions factors for Energy reflect compliance with the 33% RPS standard.

Land Use - 2020

Vehicle Emission Factors - LEV III reductions incorporated (3% reduction in LDA, LDT1, and LDT2 EF)

Energy Use - 2020

Construction Off-road Equipment Mitigation - Compliance with Regulation VIII

Area Mitigation - California Building Code

Energy Mitigation - Newest Title 24 (2013) is not accounted for in this version of CalEEMod. Title 24 2013 is 30% more efficient than the previous Title 24 2008 standards for non-residential buildings.

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleEF	LDA	8.0770e-003	7.8350e-003
tblVehicleEF	LDA	5.4660e-003	5.3020e-003
tblVehicleEF	LDA	0.69	0.67
tblVehicleEF	LDA	1.37	1.33
tblVehicleEF	LDA	224.21	217.49
tblVehicleEF	LDA	51.40	49.86
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	8.0000e-003	7.7600e-003
tblVehicleEF	LDA	1.6040e-003	1.5560e-003
tblVehicleEF	LDA	3.6510e-003	3.5410e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	2.0000e-003	1.9400e-003
tblVehicleEF	LDA	1.4870e-003	1.4420e-003
tblVehicleEF	LDA	3.3860e-003	3.2840e-003
tblVehicleEF	LDA	0.05	0.05

tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.22	0.21
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	3.3160e-003	3.2170e-003
tblVehicleEF	LDA	7.6100e-004	7.3800e-004
tblVehicleEF	LDA	0.05	0.05
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.22	0.21
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	1.78	1.73
tblVehicleEF	LDT1	3.77	3.65
tblVehicleEF	LDT1	270.15	262.04
tblVehicleEF	LDT1	61.65	59.80
tblVehicleEF	LDT1	0.20	0.19
tblVehicleEF	LDT1	0.21	0.20
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	8.0000e-003	7.7600e-003
tblVehicleEF	LDT1	2.9850e-003	2.8950e-003
tblVehicleEF	LDT1	5.1140e-003	4.9610e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	2.0000e-003	1.9400e-003
tblVehicleEF	LDT1	2.7670e-003	2.6840e-003
tblVehicleEF	LDT1	4.7420e-003	4.6000e-003
tblVehicleEF	LDT1	0.20	0.19

tblVehicleEF	LDT1	0.29	0.28
tblVehicleEF	LDT1	0.12	0.12
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	1.01	0.98
tblVehicleEF	LDT1	0.28	0.27
tblVehicleEF	LDT1	3.8460e-003	3.7310e-003
tblVehicleEF	LDT1	9.1600e-004	8.8900e-004
tblVehicleEF	LDT1	0.20	0.19
tblVehicleEF	LDT1	0.29	0.28
tblVehicleEF	LDT1	0.12	0.12
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	1.01	0.98
tblVehicleEF	LDT1	0.30	0.29
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	8.8520e-003	8.5860e-003
tblVehicleEF	LDT2	1.00	0.97
tblVehicleEF	LDT2	2.13	2.07
tblVehicleEF	LDT2	334.65	324.61
tblVehicleEF	LDT2	76.10	73.81
tblVehicleEF	LDT2	0.12	0.12
tblVehicleEF	LDT2	0.17	0.17
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	8.0000e-003	7.7600e-003
tblVehicleEF	LDT2	1.7200e-003	1.6680e-003
tblVehicleEF	LDT2	3.7870e-003	3.6730e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	1.9400e-003
tblVehicleEF	LDT2	1.5950e-003	1.5470e-003
tblVehicleEF	LDT2	3.5120e-003	3.4070e-003
tblVehicleEF	LDT2	0.09	0.08

tblVehicleEF	LDT2	0.14	0.14
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.46	0.45
tblVehicleEF	LDT2	0.16	0.15
tblVehicleEF	LDT2	4.5130e-003	4.3780e-003
tblVehicleEF	LDT2	1.0430e-003	1.0120e-003
tblVehicleEF	LDT2	0.09	0.08
tblVehicleEF	LDT2	0.14	0.14
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.46	0.45
tblVehicleEF	LDT2	0.17	0.16

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1434	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Energy	5.3300e-003	0.0485	0.0407	2.9000e-004		3.6900e-003	3.6900e-003		3.6900e-003	3.6900e-003	0.0000	130.7078	130.7078	4.5000e-003	1.7600e-003	131.3480
Mobile	1.1316	1.9241	8.9912	0.0139	0.8114	0.0251	0.8365	0.2175	0.0232	0.2406	0.0000	998.2309	998.2309	0.0349	0.0000	998.9629
Waste						0.0000	0.0000		0.0000	0.0000	15.5572	0.0000	15.5572	0.9194	0.0000	34.8648
Water						0.0000	0.0000		0.0000	0.0000	0.7213	4.0889	4.8102	0.0743	1.7900e-003	6.9250
Total	1.2803	1.9726	9.0322	0.0142	0.8114	0.0288	0.8402	0.2175	0.0269	0.2443	16.2786	1,133.0281	1,149.3066	1.0330	3.5500e-003	1,172.1012

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1434	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Energy	4.3500e-003	0.0395	0.0332	2.4000e-004		3.0100e-003	3.0100e-003		3.0100e-003	3.0100e-003	0.0000	114.5283	114.5283	4.0200e-003	1.5200e-003	115.0828
Mobile	1.1316	1.9241	8.9912	0.0139	0.8114	0.0251	0.8365	0.2175	0.0232	0.2406	0.0000	998.2309	998.2309	0.0349	0.0000	998.9629
Waste						0.0000	0.0000		0.0000	0.0000	15.5572	0.0000	15.5572	0.9194	0.0000	34.8648
Water						0.0000	0.0000		0.0000	0.0000	0.7213	4.0889	4.8102	0.0743	1.7900e-003	6.9241
Total	1.2793	1.9636	9.0247	0.0141	0.8114	0.0282	0.8395	0.2175	0.0262	0.2436	16.2786	1,116.8485	1,133.1271	1.0326	3.3100e-003	1,155.8351
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.08	0.45	0.08	0.35	0.00	2.36	0.08	0.00	2.53	0.28	0.00	1.43	1.41	0.05	6.76	1.39

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.1316	1.9241	8.9912	0.0139	0.8114	0.0251	0.8365	0.2175	0.0232	0.2406	0.0000	998.2309	998.2309	0.0349	0.0000	998.9629
Unmitigated	1.1316	1.9241	8.9912	0.0139	0.8114	0.0251	0.8365	0.2175	0.0232	0.2406	0.0000	998.2309	998.2309	0.0349	0.0000	998.9629

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	1,124.65	1,926.28	1572.17	698,987	698,987
Day-Care Center	58.65	4.60	4.31	50,835	50,835
Automobile Care Center	362.08	362.08	362.08	360,699	360,699
Elementary School	165.56	0.00	0.00	260,756	260,756
Place of Worship	22.50	25.61	90.48	61,091	61,091
Government Office Building	46.87	0.00	0.00	57,415	57,415
Medical Office Building	20.96	5.20	0.90	31,001	31,001
Motel	4.56	4.56	4.56	8,654	8,654
Quality Restaurant	145.72	152.86	116.90	169,174	169,174
Strip Mall	183.48	174.05	84.58	258,737	258,737
Supermarket	148.25	257.51	241.34	201,504	201,504
Total	2,283.29	2,912.74	2,477.31	2,158,852	2,158,852

4.3 Trip Type Information

			Miles			Trip %			Trip Purpose %			
Land Use			H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by	
Convenience Market With Gas			9.50	7.30	7.30	0.80	80.20	19.00	14	21	65	
Day-Care Center			9.50	7.30	7.30	12.70	82.30	5.00	28	58	14	
Automobile Care Center			9.50	7.30	7.30	33.00	48.00	19.00	21	51	28	
Elementary School			9.50	7.30	7.30	65.00	30.00	5.00	63	25	12	
Place of Worship			9.50	7.30	7.30	0.00	95.00	5.00	64	25	11	
Government Office Building			9.50	7.30	7.30	33.00	62.00	5.00	50	34	16	
Medical Office Building			9.50	7.30	7.30	29.60	51.40	19.00	60	30	10	
Motel			9.50	7.30	7.30	19.00	62.00	19.00	58	38	4	
Quality Restaurant			9.50	7.30	7.30	12.00	69.00	19.00	38	18	44	
Strip Mall			9.50	7.30	7.30	16.60	64.40	19.00	45	40	15	
Supermarket			9.50	7.30	7.30	6.50	74.50	19.00	34	30	36	
LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.407130	0.071843	0.163335	0.195282	0.057212	0.008237	0.019822	0.064465	0.001813	0.001463	0.006055	0.001106	0.002238

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	71.4813	71.4813	3.2000e-003	7.3000e-004	71.7738
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	77.9117	77.9117	3.4900e-003	7.9000e-004	78.2305
NaturalGas Mitigated	4.3500e-003	0.0395	0.0332	2.4000e-004		3.0100e-003	3.0100e-003		3.0100e-003	3.0100e-003	0.0000	43.0470	43.0470	8.3000e-004	7.9000e-004	43.3090
NaturalGas Unmitigated	5.3300e-003	0.0485	0.0407	2.9000e-004		3.6900e-003	3.6900e-003		3.6900e-003	3.6900e-003	0.0000	52.7962	52.7962	1.0100e-003	9.7000e-004	53.1175

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	127078	6.9000e-004	6.2300e-003	5.2300e-003	4.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	6.7814	6.7814	1.3000e-004	1.2000e-004	6.8227
Convenience Market With Gas	14829.5	8.0000e-005	7.3000e-004	6.1000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.7914	0.7914	2.0000e-005	1.0000e-005	0.7962
Day-Care Center	19484.2	1.1000e-004	9.6000e-004	8.0000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0398	1.0398	2.0000e-005	2.0000e-005	1.0461
Elementary School	282521	1.5200e-003	0.0139	0.0116	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	15.0764	15.0764	2.9000e-004	2.8000e-004	15.1681
Government Office Building	9329.6	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4979	0.4979	1.0000e-005	1.0000e-005	0.5009
Medical Office Building	7957.6	4.0000e-005	3.9000e-004	3.3000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4247	0.4247	1.0000e-005	1.0000e-005	0.4272
Motel	41424.7	2.2000e-004	2.0300e-003	1.7100e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.2106	2.2106	4.0000e-005	4.0000e-005	2.2240
Place of Worship	53747.2	2.9000e-004	2.6300e-003	2.2100e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.8682	2.8682	5.0000e-005	5.0000e-005	2.8856
Quality Restaurant	343910	1.8500e-003	0.0169	0.0142	1.0000e-004		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.0000	18.3523	18.3523	3.5000e-004	3.4000e-004	18.4640
Strip Mall	46161	2.5000e-004	2.2600e-003	1.9000e-003	1.0000e-005		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	2.4633	2.4633	5.0000e-005	5.0000e-005	2.4783
Supermarket	42920	2.3000e-004	2.1000e-003	1.7700e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.2904	2.2904	4.0000e-005	4.0000e-005	2.3043
Total		5.3300e-003	0.0485	0.0407	2.8000e-004		3.6700e-003	3.6700e-003		3.6700e-003	3.6700e-003	0.0000	52.7962	52.7962	1.0100e-003	9.7000e-004	53.1175

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	95682.6	5.2000e-004	4.6900e-003	3.9400e-003	3.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	5.1060	5.1060	1.0000e-004	9.0000e-005	5.1371
Convenience Market With Gas	11210.6	6.0000e-005	5.5000e-004	4.6000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.5982	0.5982	1.0000e-005	1.0000e-005	0.6019
Day-Care Center	14065.2	8.0000e-005	6.9000e-004	5.8000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7506	0.7506	1.0000e-005	1.0000e-005	0.7551
Elementary School	203945	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.8833	10.8833	2.1000e-004	2.0000e-004	10.9495
Government Office Building	6587.84	4.0000e-005	3.2000e-004	2.7000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.3516	0.3516	1.0000e-005	1.0000e-005	0.3537
Medical Office Building	5619.04	3.0000e-005	2.8000e-004	2.3000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2999	0.2999	1.0000e-005	1.0000e-005	0.3017
Motel	32407.8	1.7000e-004	1.5900e-003	1.3300e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.7294	1.7294	3.0000e-005	3.0000e-005	1.7399
Place of Worship	40468.5	2.2000e-004	1.9800e-003	1.6700e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.1596	2.1596	4.0000e-005	4.0000e-005	2.1727
Quality Restaurant	325641	1.7600e-003	0.0160	0.0134	1.0000e-004		1.2100e-003	1.2100e-003		1.2100e-003	1.2100e-003	0.0000	17.3775	17.3775	3.3000e-004	3.2000e-004	17.4832
Strip Mall	34896.1	1.9000e-004	1.7100e-003	1.4400e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.8622	1.8622	4.0000e-005	3.0000e-005	1.8735
Supermarket	36147	1.9000e-004	1.7700e-003	1.4900e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.9289	1.9289	4.0000e-005	4.0000e-005	1.9407
Total		4.3600e-003	0.0395	0.0332	2.3000e-004		2.9900e-003	2.9900e-003		2.9900e-003	2.9900e-003	0.0000	43.0470	43.0470	8.3000e-004	7.9000e-004	43.3090

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	56414.4	12.5809	5.6000e-004	1.3000e-004	12.6324
Convenience Market With Gas Pump	12142.9	2.7080	1.2000e-004	3.0000e-005	2.7191
Day-Care Center	5875.6	1.3103	6.0000e-005	1.0000e-005	1.3157
Elementary School	85196.2	18.9995	8.5000e-004	1.9000e-004	19.0773
Government Office Building	6881.6	1.5347	7.0000e-005	2.0000e-005	1.5409
Medical Office Building	5869.6	1.3090	6.0000e-005	1.0000e-005	1.3143
Motel	14528	3.2399	1.4000e-004	3.0000e-005	3.2531
Place of Worship	23860.2	5.3210	2.4000e-004	5.0000e-005	5.3428
Quality Restaurant	50527.8	11.2681	5.0000e-004	1.1000e-004	11.3143
Strip Mall	37798.2	8.4293	3.8000e-004	9.0000e-005	8.4638
Supermarket	50271.5	11.2110	5.0000e-004	1.1000e-004	11.2569
Total		77.9117	3.4800e-003	7.8000e-004	78.2305

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	52227.1	11.6471	5.2000e-004	1.2000e-004	11.6948
Convenience Market With Gas	11101.5	2.4757	1.1000e-004	3.0000e-005	2.4859
Day-Care Center	5293.96	1.1806	5.0000e-005	1.0000e-005	1.1854
Elementary School	76762.4	17.1187	7.7000e-004	1.7000e-004	17.1887
Government Office Building	6228.8	1.3891	6.0000e-005	1.0000e-005	1.3948
Medical Office Building	5312.8	1.1848	5.0000e-005	1.0000e-005	1.1897
Motel	12122.5	2.7034	1.2000e-004	3.0000e-005	2.7145
Place of Worship	22089.2	4.9261	2.2000e-004	5.0000e-005	4.9462
Quality Restaurant	46639.8	10.4011	4.7000e-004	1.1000e-004	10.4437
Strip Mall	34556.6	7.7064	3.4000e-004	8.0000e-005	7.7380
Supermarket	48196.5	10.7483	4.8000e-004	1.1000e-004	10.7922
Total		71.4813	3.1900e-003	7.3000e-004	71.7738

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1434	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Unmitigated	0.1434	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0217					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1217					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Total	0.1434	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0217					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1217					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Total	0.1434	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.8102	0.0743	1.7900e-003	6.9241
Unmitigated	4.8102	0.0743	1.7900e-003	6.9250

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0.549434 / 0.33675	1.1002	0.0179	4.3000e-004	1.6110
Convenience Market With Gas Pump	0.0985164 / 0.0603844	0.1973	3.2200e-003	8.0000e-005	0.2889
Day-Care Center	0.0317383 / 0.0816127	0.1121	1.0400e-003	3.0000e-005	0.1418
Elementary School	0.311137 / 0.800066	1.0986	0.0102	2.5000e-004	1.3898
Government Office Building	0.135089 / 0.0827962	0.2705	4.4100e-003	1.1000e-004	0.3961
Medical Office Building	0.0727787 / 0.0400626	0.1217	2.3800e-003	6.0000e-005	0.1893
Motel	0.0205471 / 0.0000000	0.0331	6.7000e-004	2.0000e-005	0.0522
Place of Worship	0.0772836 / 0.120879	0.2121	2.5300e-003	6.0000e-005	0.2842
Quality Restaurant	0.491725 / 0.0313867	0.7739	0.0161	3.8000e-004	1.2302
Strip Mall	0.30666 / 0.187953	0.6140	0.0100	2.4000e-004	0.8991
Supermarket	0.178739 / 0.0055280	0.2767	5.8300e-003	1.4000e-004	0.4426
Total		4.8102	0.0743	1.8000e-003	6.9250

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0.549434 / 0.33675	1.1002	0.0179	4.3000e-004	1.6107
Convenience Market With Gas	0.0985164 / 0.0602044	0.1973	3.2200e-003	8.0000e-005	0.2888
Day-Care Center	0.0317383 / 0.0816127	0.1121	1.0400e-003	3.0000e-005	0.1418
Elementary School	0.311137 / 0.800066	1.0986	0.0102	2.5000e-004	1.3897
Government Office Building	0.135089 / 0.0827962	0.2705	4.4100e-003	1.1000e-004	0.3960
Medical Office Building	0.0727787 / 0.0428626	0.1217	2.3800e-003	6.0000e-005	0.1893
Motel	0.0205471 / 0.0032830	0.0331	6.7000e-004	2.0000e-005	0.0522
Place of Worship	0.0772836 / 0.120879	0.2121	2.5300e-003	6.0000e-005	0.2842
Quality Restaurant	0.491725 / 0.0313867	0.7739	0.0161	3.8000e-004	1.2300
Strip Mall	0.30666 / 0.187953	0.6140	0.0100	2.4000e-004	0.8990
Supermarket	0.178739 / 0.0055280	0.2767	5.8300e-003	1.4000e-004	0.4425
Total		4.8102	0.0743	1.8000e-003	6.9241

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	15.5572	0.9194	0.0000	34.8648
Mitigated	15.5572	0.9194	0.0000	34.8648

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	22.31	4.5287	0.2676	0.0000	10.1492
Convenience Market With Gas	4	0.8120	0.0480	0.0000	1.8197
Day-Care Center	0.96	0.1949	0.0115	0.0000	0.4367
Elementary School	13.95	2.8317	0.1674	0.0000	6.3461
Government Office Building	0.63	0.1279	7.5600e-003	0.0000	0.2866
Medical Office Building	6.26	1.2707	0.0751	0.0000	2.8478
Motel	0.44	0.0893	5.2800e-003	0.0000	0.2002
Place of Worship	14.08	2.8581	0.1689	0.0000	6.4052
Quality Restaurant	1.48	0.3004	0.0178	0.0000	0.6733
Strip Mall	4.35	0.8830	0.0522	0.0000	1.9789
Supermarket	8.18	1.6605	0.0981	0.0000	3.7212
Total		15.5572	0.9194	0.0000	34.8647

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	22.31	4.5287	0.2676	0.0000	10.1492
Convenience Market With Gas	4	0.8120	0.0480	0.0000	1.8197
Day-Care Center	0.96	0.1949	0.0115	0.0000	0.4367
Elementary School	13.95	2.8317	0.1674	0.0000	6.3461
Government Office Building	0.63	0.1279	7.5600e-003	0.0000	0.2866
Medical Office Building	6.26	1.2707	0.0751	0.0000	2.8478
Motel	0.44	0.0893	5.2800e-003	0.0000	0.2002
Place of Worship	14.08	2.8581	0.1689	0.0000	6.4052
Quality Restaurant	1.48	0.3004	0.0178	0.0000	0.6733
Strip Mall	4.35	0.8830	0.0522	0.0000	1.9789
Supermarket	8.18	1.6605	0.0981	0.0000	3.7212
Total		15.5572	0.9194	0.0000	34.8647

Pixley Community Plan - Industrial 2020

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	31.02	1000sqft	0.71	31,020.00	0
General Light Industry	3.85	1000sqft	0.09	3,850.00	0
Unrefrigerated Warehouse-No Rail	10.47	1000sqft	0.24	10,470.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	491.65	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 2020 emission factors: BAU emissions factors for Energy reflect compliance with the 33% RPS standard.

Vehicle Emission Factors - LEV III reductions incorporated (3% reduction in LDA, LDT1, and LDT2 EF)

Construction Off-road Equipment Mitigation - Compliance with Regulation VIII

Area Mitigation - California Building Code

Energy Mitigation - Newest Title 24 (2013) is not accounted for in this version of CalEEMod. Title 24 2013 is 30% more efficient than the previous Title 24 2008 standards for non-residential buildings.

Grading - correct number of acres disturbed

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	6/29/2015	6/22/2015
tblConstructionPhase	PhaseEndDate	10/26/2015	6/8/2015
tblConstructionPhase	PhaseEndDate	1/21/2015	1/19/2015
tblConstructionPhase	PhaseEndDate	6/22/2015	6/15/2015
tblConstructionPhase	PhaseEndDate	1/16/2015	1/15/2015
tblGrading	AcresOfGrading	0.00	1.50
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleEF	LDA	8.0770e-003	7.8350e-003
tblVehicleEF	LDA	5.4660e-003	5.3020e-003
tblVehicleEF	LDA	0.69	0.67
tblVehicleEF	LDA	1.37	1.33
tblVehicleEF	LDA	224.21	217.49
tblVehicleEF	LDA	51.40	49.86
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	8.0000e-003	7.7600e-003
tblVehicleEF	LDA	1.6040e-003	1.5560e-003
tblVehicleEF	LDA	3.6510e-003	3.5410e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	2.0000e-003	1.9400e-003
tblVehicleEF	LDA	1.4870e-003	1.4420e-003
tblVehicleEF	LDA	3.3860e-003	3.2840e-003
tblVehicleEF	LDA	0.05	0.05
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.03

tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.22	0.21
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	3.3160e-003	3.2170e-003
tblVehicleEF	LDA	7.6100e-004	7.3800e-004
tblVehicleEF	LDA	0.05	0.05
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.22	0.21
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	1.78	1.73
tblVehicleEF	LDT1	3.77	3.65
tblVehicleEF	LDT1	270.15	262.04
tblVehicleEF	LDT1	61.65	59.80
tblVehicleEF	LDT1	0.20	0.19
tblVehicleEF	LDT1	0.21	0.20
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	8.0000e-003	7.7600e-003
tblVehicleEF	LDT1	2.9850e-003	2.8950e-003
tblVehicleEF	LDT1	5.1140e-003	4.9610e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	2.0000e-003	1.9400e-003
tblVehicleEF	LDT1	2.7670e-003	2.6840e-003
tblVehicleEF	LDT1	4.7420e-003	4.6000e-003
tblVehicleEF	LDT1	0.20	0.19
tblVehicleEF	LDT1	0.29	0.28
tblVehicleEF	LDT1	0.12	0.12

tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	1.01	0.98
tblVehicleEF	LDT1	0.28	0.27
tblVehicleEF	LDT1	3.8460e-003	3.7310e-003
tblVehicleEF	LDT1	9.1600e-004	8.8900e-004
tblVehicleEF	LDT1	0.20	0.19
tblVehicleEF	LDT1	0.29	0.28
tblVehicleEF	LDT1	0.12	0.12
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	1.01	0.98
tblVehicleEF	LDT1	0.30	0.29
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	8.8520e-003	8.5860e-003
tblVehicleEF	LDT2	1.00	0.97
tblVehicleEF	LDT2	2.13	2.07
tblVehicleEF	LDT2	334.65	324.61
tblVehicleEF	LDT2	76.10	73.81
tblVehicleEF	LDT2	0.12	0.12
tblVehicleEF	LDT2	0.17	0.17
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	8.0000e-003	7.7600e-003
tblVehicleEF	LDT2	1.7200e-003	1.6680e-003
tblVehicleEF	LDT2	3.7870e-003	3.6730e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	1.9400e-003
tblVehicleEF	LDT2	1.5950e-003	1.5470e-003
tblVehicleEF	LDT2	3.5120e-003	3.4070e-003
tblVehicleEF	LDT2	0.09	0.08
tblVehicleEF	LDT2	0.14	0.14
tblVehicleEF	LDT2	0.06	0.06

tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.46	0.45
tblVehicleEF	LDT2	0.16	0.15
tblVehicleEF	LDT2	4.5130e-003	4.3780e-003
tblVehicleEF	LDT2	1.0430e-003	1.0120e-003
tblVehicleEF	LDT2	0.09	0.08
tblVehicleEF	LDT2	0.14	0.14
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.46	0.45
tblVehicleEF	LDT2	0.17	0.16

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2086	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.1000e-004	8.1000e-004	0.0000	0.0000	8.6000e-004
Energy	5.1600e-003	0.0469	0.0394	2.8000e-004		3.5700e-003	3.5700e-003		3.5700e-003	3.5700e-003	0.0000	149.7215	149.7215	5.3900e-003	1.9400e-003	150.4360
Mobile	0.0572	0.1757	0.6067	1.6400e-003	0.1031	2.8100e-003	0.1059	0.0276	2.5900e-003	0.0302	0.0000	118.3045	118.3045	3.5600e-003	0.0000	118.3793
Waste						0.0000	0.0000		0.0000	0.0000	10.7727	0.0000	10.7727	0.6367	0.0000	24.1424
Water						0.0000	0.0000		0.0000	0.0000	3.3264	12.6521	15.9785	0.3422	8.2000e-003	25.7057
Total	0.2710	0.2226	0.6465	1.9200e-003	0.1031	6.3800e-003	0.1094	0.0276	6.1600e-003	0.0338	14.0991	280.6789	294.7780	0.9878	0.0101	318.6642

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2086	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-004	8.0000e-004	0.0000	0.0000	8.4000e-004
Energy	3.8500e-003	0.0350	0.0294	2.1000e-004		2.6600e-003	2.6600e-003		2.6600e-003	2.6600e-003	0.0000	130.2489	130.2489	4.8500e-003	1.6400e-003	130.8579
Mobile	0.0572	0.1757	0.6067	1.6400e-003	0.1031	2.8100e-003	0.1059	0.0276	2.5900e-003	0.0302	0.0000	118.3045	118.3045	3.5600e-003	0.0000	118.3793
Waste						0.0000	0.0000		0.0000	0.0000	10.7727	0.0000	10.7727	0.6367	0.0000	24.1424
Water						0.0000	0.0000		0.0000	0.0000	3.3264	12.6521	15.9785	0.3422	8.1900e-003	25.7014
Total	0.2697	0.2107	0.6365	1.8500e-003	0.1031	5.4700e-003	0.1085	0.0276	5.2500e-003	0.0329	14.0991	261.2063	275.3054	0.9872	9.8300e-003	299.0817

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.48	5.37	1.55	3.65	0.00	14.26	0.83	0.00	14.77	2.69	0.00	6.94	6.61	0.06	3.06	6.15

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0572	0.1757	0.6067	1.6400e-003	0.1031	2.8100e-003	0.1059	0.0276	2.5900e-003	0.0302	0.0000	118.3045	118.3045	3.5600e-003	0.0000	118.3793
Unmitigated	0.0572	0.1757	0.6067	1.6400e-003	0.1031	2.8100e-003	0.1059	0.0276	2.5900e-003	0.0302	0.0000	118.3045	118.3045	3.5600e-003	0.0000	118.3793

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	46.53	46.53	46.53	135,845	135,845
General Light Industry	26.83	5.08	2.62	59,171	59,171
Unrefrigerated Warehouse-No Rail	27.12	27.12	27.12	79,169	79,169
Total	100.48	78.73	76.27	274,185	274,185

4.3 Trip Type Information

		Miles			Trip %			Trip Purpose %				
Land Use		H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by		
General Heavy Industry		9.50	7.30	7.30	59.00	28.00	13.00	92	5	3		
General Light Industry		9.50	7.30	7.30	59.00	28.00	13.00	92	5	3		
Unrefrigerated Warehouse-No		9.50	7.30	7.30	59.00	0.00	41.00	92	5	3		
LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.407130	0.071843	0.163335	0.195282	0.057212	0.008237	0.019822	0.064465	0.001813	0.001463	0.006055	0.001106	0.002238

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	92.1664	92.1664	4.1200e-003	9.4000e-004	92.5436
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	98.6316	98.6316	4.4100e-003	1.0000e-003	99.0353
NaturalGas Mitigated	3.8500e-003	0.0350	0.0294	2.1000e-004		2.6600e-003	2.6600e-003		2.6600e-003	2.6600e-003	0.0000	38.0825	38.0825	7.3000e-004	7.0000e-004	38.3143
NaturalGas Unmitigated	5.1600e-003	0.0469	0.0394	2.8000e-004		3.5700e-003	3.5700e-003		3.5700e-003	3.5700e-003	0.0000	51.0898	51.0898	9.8000e-004	9.4000e-004	51.4008

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	674995	3.6400e-003	0.0331	0.0278	2.0000e-004		2.5100e-003	2.5100e-003		2.5100e-003	2.5100e-003	0.0000	36.0203	36.0203	6.9000e-004	6.6000e-004	36.2395
General Light Industry	83776	4.5000e-004	4.1100e-003	3.4500e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	4.4706	4.4706	9.0000e-005	8.0000e-005	4.4978
Unrefrigerated Warehouse-No	198616	1.0700e-003	9.7400e-003	8.1800e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.5989	10.5989	2.0000e-004	1.9000e-004	10.6634
Total		5.1600e-003	0.0469	0.0394	2.8000e-004		3.5600e-003	3.5600e-003		3.5600e-003	3.5600e-003	0.0000	51.0898	51.0898	9.8000e-004	9.3000e-004	51.4007

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	508232	2.7400e-003	0.0249	0.0209	1.5000e-004		1.8900e-003	1.8900e-003		1.8900e-003	1.8900e-003	0.0000	27.1212	27.1212	5.2000e-004	5.0000e-004	27.2862
General Light Industry	63078.4	3.4000e-004	3.0900e-003	2.6000e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.3661	3.3661	6.0000e-005	6.0000e-005	3.3866
Unrefrigerated Warehouse-No Pallet	142329	7.7000e-004	6.9800e-003	5.8600e-003	4.0000e-005		5.3000e-004	5.3000e-004		5.3000e-004	5.3000e-004	0.0000	7.5952	7.5952	1.5000e-004	1.4000e-004	7.6415
Total		3.8500e-003	0.0350	0.0294	2.1000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003	0.0000	38.0825	38.0825	7.3000e-004	7.0000e-004	38.3143

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	299653	66.8253	2.9900e-003	6.8000e-004	67.0987
General Light Industry	37191	8.2939	3.7000e-004	8.0000e-005	8.3279
Unrefrigerated Warehouse-No Pallet	105433	23.5125	1.0500e-003	2.4000e-004	23.6087
Total		98.6316	4.4100e-003	1.0000e-003	99.0353

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	277412	61.8653	2.7700e-003	6.3000e-004	62.1184
General Light Industry	34430.5	7.6783	3.4000e-004	8.0000e-005	7.7097
Unrefrigerated Warehouse-No Pallet	101444	22.6229	1.0100e-003	2.3000e-004	22.7154
Total		92.1664	4.1200e-003	9.4000e-004	92.5436

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2086	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-004	8.0000e-004	0.0000	0.0000	8.4000e-004
Unmitigated	0.2086	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.1000e-004	8.1000e-004	0.0000	0.0000	8.6000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0315					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1771					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.1000e-004	8.1000e-004	0.0000	0.0000	8.6000e-004
Total	0.2086	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.1000e-004	8.1000e-004	0.0000	0.0000	8.6000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0315					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1771					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-004	8.0000e-004	0.0000	0.0000	8.4000e-004
Total	0.2086	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-004	8.0000e-004	0.0000	0.0000	8.4000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	15.9785	0.3422	8.1900e-003	25.7014
Unmitigated	15.9785	0.3422	8.2000e-003	25.7057

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	7.17338 / 0	10.9319	0.2341	5.6100e-003	17.5869
General Light Industry	0.890312 / 0	1.3568	0.0291	7.0000e-004	2.1828
Unrefrigerated Warehouse-No Roof	2.42119 / 0	3.6898	0.0790	1.8900e-003	5.9360
Total		15.9785	0.3422	8.2000e-003	25.7057

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	7.17338 / 0	10.9319	0.2341	5.6000e-003	17.5840
General Light Industry	0.890312 / 0	1.3568	0.0291	7.0000e-004	2.1824
Unrefrigerated Warehouse-No Roof	2.42119 / 0	3.6898	0.0790	1.8900e-003	5.9350
Total		15.9785	0.3422	8.1900e-003	25.7014

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	10.7727	0.6367	0.0000	24.1424
Unmitigated	10.7727	0.6367	0.0000	24.1424

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	38.46	7.8070	0.4614	0.0000	17.4961
General Light Industry	4.77	0.9683	0.0572	0.0000	2.1700
Unrefrigerated Warehouse-No	9.84	1.9974	0.1180	0.0000	4.4764
Total		10.7727	0.6366	0.0000	24.1424

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	38.46	7.8070	0.4614	0.0000	17.4961
General Light Industry	4.77	0.9683	0.0572	0.0000	2.1700
Unrefrigerated Warehouse-No	9.84	1.9974	0.1180	0.0000	4.4764
Total		10.7727	0.6366	0.0000	24.1424

Pixley Community Plan - Residential 2030
Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	11.00	Dwelling Unit	0.69	11,000.00	31
Mobile Home Park	37.00	Dwelling Unit	4.66	44,400.00	106
Single Family Housing	211.00	Dwelling Unit	68.51	379,800.00	603

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	491.65	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 2020 emission factors: BAU emissions factors for Energy reflect compliance with the 33% RPS standard.

Vehicle Emission Factors - 2030 Residential Fleet Mix. LEV III reductions incorporated (19.5% reduction in LDA, LDT1, and LDT2 EF)

Construction Off-road Equipment Mitigation - Compliance with Regulation VIII

Area Mitigation - California Building Code

Energy Mitigation - Newest Title 24 (2013) is not accounted for in this version of CalEEMod. Title 24 2013 is 25% more efficient than the previous Title 24 2008 standards for residential buildings.

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2014	2030
tblVehicleEF	HHD	0.06	0.02
tblVehicleEF	LDA	6.6410e-003	5.3460e-003
tblVehicleEF	LDA	3.2400e-003	2.6080e-003
tblVehicleEF	LDA	0.53	0.42
tblVehicleEF	LDA	0.90	0.72
tblVehicleEF	LDA	198.19	159.54
tblVehicleEF	LDA	44.85	36.10
tblVehicleEF	LDA	0.41	0.50
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	8.0000e-003	6.4400e-003
tblVehicleEF	LDA	1.7960e-003	1.4460e-003
tblVehicleEF	LDA	5.1000e-003	4.1060e-003
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	2.0000e-003	1.6100e-003
tblVehicleEF	LDA	1.6660e-003	1.3410e-003
tblVehicleEF	LDA	4.7320e-003	3.8090e-003
tblVehicleEF	LDA	0.03	0.02
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	8.3490e-003	6.7210e-003
tblVehicleEF	LDA	0.17	0.14
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	3.2920e-003	2.6500e-003

tblVehicleEF	LDA	7.5400e-004	6.0700e-004
tblVehicleEF	LDA	0.03	0.02
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.17	0.14
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDT1	9.4140e-003	7.5780e-003
tblVehicleEF	LDT1	6.0770e-003	4.8920e-003
tblVehicleEF	LDT1	0.81	0.65
tblVehicleEF	LDT1	1.55	1.25
tblVehicleEF	LDT1	239.41	192.73
tblVehicleEF	LDT1	54.48	43.86
tblVehicleEF	LDT1	0.07	0.22
tblVehicleEF	LDT1	0.09	0.07
tblVehicleEF	LDT1	0.09	0.07
tblVehicleEF	LDT1	0.04	0.03
tblVehicleEF	LDT1	8.0000e-003	6.4400e-003
tblVehicleEF	LDT1	2.0110e-003	1.6190e-003
tblVehicleEF	LDT1	5.0140e-003	4.0360e-003
tblVehicleEF	LDT1	0.02	0.01
tblVehicleEF	LDT1	2.0000e-003	1.6100e-003
tblVehicleEF	LDT1	1.8660e-003	1.5020e-003
tblVehicleEF	LDT1	4.6520e-003	3.7450e-003
tblVehicleEF	LDT1	0.09	0.07
tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.01	0.01
tblVehicleEF	LDT1	0.51	0.41
tblVehicleEF	LDT1	0.11	0.09

tblVehicleEF	LDT1	3.8220e-003	3.0770e-003
tblVehicleEF	LDT1	8.8600e-004	7.1300e-004
tblVehicleEF	LDT1	0.09	0.07
tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.51	0.41
tblVehicleEF	LDT1	0.12	0.09
tblVehicleEF	LDT2	8.3280e-003	6.7040e-003
tblVehicleEF	LDT2	4.4330e-003	3.5690e-003
tblVehicleEF	LDT2	0.65	0.53
tblVehicleEF	LDT2	1.16	0.94
tblVehicleEF	LDT2	307.23	247.32
tblVehicleEF	LDT2	69.69	56.10
tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	0.08	0.07
tblVehicleEF	LDT2	0.04	0.03
tblVehicleEF	LDT2	8.0000e-003	6.4400e-003
tblVehicleEF	LDT2	1.7860e-003	1.4380e-003
tblVehicleEF	LDT2	5.0090e-003	4.0320e-003
tblVehicleEF	LDT2	0.02	0.01
tblVehicleEF	LDT2	2.0000e-003	1.6100e-003
tblVehicleEF	LDT2	1.6570e-003	1.3340e-003
tblVehicleEF	LDT2	4.6480e-003	3.7420e-003
tblVehicleEF	LDT2	0.07	0.05
tblVehicleEF	LDT2	0.10	0.08
tblVehicleEF	LDT2	0.05	0.04
tblVehicleEF	LDT2	0.01	8.8240e-003
tblVehicleEF	LDT2	0.36	0.29

tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	4.4730e-003	3.6010e-003
tblVehicleEF	LDT2	1.0290e-003	8.2800e-004
tblVehicleEF	LDT2	0.07	0.05
tblVehicleEF	LDT2	0.10	0.08
tblVehicleEF	LDT2	0.05	0.04
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.36	0.29
tblVehicleEF	LDT2	0.08	0.07
tblVehicleEF	LHD1	0.06	1.0000e-003
tblVehicleEF	LHD2	8.2690e-003	1.0000e-003
tblVehicleEF	MCY	6.3470e-003	3.1000e-003
tblVehicleEF	MDV	0.19	0.06
tblVehicleEF	MH	2.2740e-003	4.3000e-003
tblVehicleEF	MHD	0.02	8.6000e-003
tblVehicleEF	OBUS	1.8050e-003	0.00
tblVehicleEF	SBUS	9.9700e-004	1.0000e-003
tblVehicleEF	UBUS	1.5120e-003	3.9000e-003

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Water						0.0000	0.0000		0.0000	0.0000	5.3536	28.6666	34.0203	0.5512	0.0133	49.7097
Area	2.1769	0.0221	1.9186	1.0000e-004		0.0185	0.0185		0.0184	0.0184	0.0000	115.3421	115.3421	5.1400e-003	2.0600e-003	116.0878
Energy	0.0398	0.3397	0.1446	2.1700e-003		0.0275	0.0275		0.0275	0.0275	0.0000	805.8949	805.8949	0.0260	0.0114	809.9771
Mobile	0.6595	1.1410	6.4191	0.0255	2.3240	0.0276	2.3517	0.6142	0.0255	0.6397	0.0000	1,574.0460	1,574.0460	0.0449	0.0000	1,574.9890
Waste						0.0000	0.0000		0.0000	0.0000	48.5473	0.0000	48.5473	2.8691	0.0000	108.7977
Total	2.8761	1.5028	8.4823	0.0277	2.3240	0.0736	2.3976	0.6142	0.0714	0.6856	53.9009	2,523.9496	2,577.8505	3.4963	0.0268	2,659.5613

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.1761	0.0220	1.9048	1.0000e-004		0.0184	0.0184		0.0183	0.0183	0.0000	115.3138	115.3138	5.1000e-003	2.0600e-003	116.0586
Energy	0.0317	0.2706	0.1152	1.7300e-003		0.0219	0.0219		0.0219	0.0219	0.0000	712.7373	712.7373	0.0239	9.8100e-003	716.2789
Mobile	0.6595	1.1410	6.4191	0.0255	2.3240	0.0276	2.3517	0.6142	0.0255	0.6397	0.0000	1,574.0460	1,574.0460	0.0449	0.0000	1,574.9890
Waste						0.0000	0.0000		0.0000	0.0000	48.5473	0.0000	48.5473	2.8691	0.0000	108.7977
Water						0.0000	0.0000		0.0000	0.0000	5.3536	28.6666	34.0203	0.5511	0.0133	49.7028
Total	2.8672	1.4336	8.4391	0.0273	2.3240	0.0679	2.3920	0.6142	0.0657	0.6799	53.9009	2,430.7637	2,484.6647	3.4940	0.0251	2,565.8269
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.31	4.61	0.51	1.59	0.00	7.70	0.24	0.00	7.96	0.83	0.00	3.69	3.61	0.06	6.06	3.52

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6595	1.1410	6.4191	0.0255	2.3240	0.0276	2.3517	0.6142	0.0255	0.6397	0.0000	1,574.0460	1,574.0460	0.0449	0.0000	1,574.9890
Unmitigated	0.6595	1.1410	6.4191	0.0255	2.3240	0.0276	2.3517	0.6142	0.0255	0.6397	0.0000	1,574.0460	1,574.0460	0.0449	0.0000	1,574.9890

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	72.49	78.76	66.77	204,552	204,552
Mobile Home Park	184.63	185.00	161.32	511,185	511,185
Single Family Housing	2,019.27	2,126.88	1850.47	5,667,145	5,667,145
Total	2,276.39	2,390.64	2,078.56	6,382,882	6,382,882

4.3 Trip Type Information

		Miles			Trip %			Trip Purpose %				
Land Use		H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by		
Apartments Low Rise		10.80	7.30	7.50	38.40	22.60	39.00	86	11	3		
Mobile Home Park		10.80	7.30	7.50	38.40	22.60	39.00	86	11	3		
Single Family Housing		10.80	7.30	7.50	38.40	22.60	39.00	86	11	3		
LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.498100	0.224600	0.172300	0.063800	0.001000	0.001000	0.008600	0.018200	0.000000	0.003900	0.003100	0.001000	0.004300

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	399.3306	399.3306	0.0179	4.0600e-003	400.9648
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	412.4780	412.4780	0.0185	4.1900e-003	414.1660
NaturalGas Mitigated	0.0317	0.2706	0.1152	1.7300e-003		0.0219	0.0219		0.0219	0.0219	0.0000	313.4068	313.4068	6.0100e-003	5.7500e-003	315.3141
NaturalGas Unmitigated	0.0398	0.3397	0.1446	2.1700e-003		0.0275	0.0275		0.0275	0.0275	0.0000	393.4169	393.4169	7.5400e-003	7.2100e-003	395.8112

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Mobile Home Park	597740	3.2200e-003	0.0275	0.0117	1.8000e-004		2.2300e-003	2.2300e-003		2.2300e-003	2.2300e-003	0.0000	31.8977	31.8977	6.1000e-004	5.8000e-004	32.0918
Single Family Housing	6.61243e+006	0.0357	0.3047	0.1297	1.9400e-003		0.0246	0.0246		0.0246	0.0246	0.0000	352.8644	352.8644	6.7600e-003	6.4700e-003	355.0119
Apartments Low Rise	162185	8.7000e-004	7.4700e-003	3.1800e-003	5.0000e-005		6.0000e-004	6.0000e-004		6.0000e-004	6.0000e-004	0.0000	8.6548	8.6548	1.7000e-004	1.6000e-004	8.7075
Total		0.0398	0.3397	0.1446	2.1700e-003		0.0275	0.0275		0.0275	0.0275	0.0000	393.4169	393.4169	7.5400e-003	7.2100e-003	395.8112

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	5.2761e+006	0.0285	0.2431	0.1035	1.5500e-003		0.0197	0.0197		0.0197	0.0197	0.0000	281.5526	281.5526	5.4000e-003	5.1600e-003	283.2661
Apartments Low Rise	128508	6.9000e-004	5.9200e-003	2.5200e-003	4.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	6.8577	6.8577	1.3000e-004	1.3000e-004	6.8994
Mobile Home Park	468416	2.5300e-003	0.0216	9.1800e-003	1.4000e-004		1.7500e-003	1.7500e-003		1.7500e-003	1.7500e-003	0.0000	24.9965	24.9965	4.8000e-004	4.6000e-004	25.1486
Total		0.0317	0.2706	0.1152	1.7300e-003		0.0219	0.0219		0.0219	0.0219	0.0000	313.4068	313.4068	6.0100e-003	5.7500e-003	315.3141

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	42261.5	9.4247	4.2000e-004	1.0000e-004	9.4632
Mobile Home Park	190301	42.4387	1.9000e-003	4.3000e-004	42.6124
Single Family Housing	1.61704e+006	360.6146	0.0161	3.6700e-003	362.0904
Total		412.4780	0.0185	4.2000e-003	414.1660

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	41159.5	9.1789	4.1000e-004	9.0000e-005	9.2165
Mobile Home Park	183135	40.8407	1.8300e-003	4.2000e-004	41.0078
Single Family Housing	1.56636e+006	349.3110	0.0156	3.5500e-003	350.7405
Total		399.3306	0.0179	4.0600e-003	400.9648

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.1761	0.0220	1.9048	1.0000e-004		0.0184	0.0184		0.0183	0.0183	0.0000	115.3138	115.3138	5.1000e-003	2.0600e-003	116.0586
Unmitigated	2.1769	0.0221	1.9186	1.0000e-004		0.0185	0.0185		0.0184	0.0184	0.0000	115.3421	115.3421	5.1400e-003	2.0600e-003	116.0878

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4085					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.6997					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0113	0.0000	6.2000e-004	0.0000		7.8300e-003	7.8300e-003		7.7500e-003	7.7500e-003	0.0000	112.2007	112.2007	2.1500e-003	2.0600e-003	112.8836
Landscaping	0.0574	0.0221	1.9180	1.0000e-004		0.0107	0.0107		0.0107	0.0107	0.0000	3.1414	3.1414	2.9900e-003	0.0000	3.2042
Total	2.1769	0.0221	1.9186	1.0000e-004		0.0185	0.0185		0.0184	0.0184	0.0000	115.3421	115.3421	5.1400e-003	2.0600e-003	116.0878

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4085					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.6997					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0113	0.0000	6.2000e-004	0.0000		7.8300e-003	7.8300e-003		7.7500e-003	7.7500e-003	0.0000	112.2007	112.2007	2.1500e-003	2.0600e-003	112.8836
Landscaping	0.0566	0.0220	1.9042	1.0000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	3.1131	3.1131	2.9500e-003	0.0000	3.1750
Total	2.1760	0.0220	1.9048	1.0000e-004		0.0184	0.0184		0.0183	0.0183	0.0000	115.3138	115.3138	5.1000e-003	2.0600e-003	116.0586

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	34.0203	0.5511	0.0133	49.7028
Unmitigated	34.0203	0.5512	0.0133	49.7097

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	0.716694 / 0.451829	1.4449	0.0234	5.6000e-004	2.1112
Mobile Home Park	2.4107 / 1.51979	4.8600	0.0787	1.9000e-003	7.1014
Single Family Housing	13.7475 / 8.6669	27.7153	0.4490	0.0108	40.4971
Total		34.0203	0.5512	0.0133	49.7097

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	0.716694 / 0.451829	1.4449	0.0234	5.6000e-004	2.1109
Mobile Home Park	2.4107 / 1.51979	4.8600	0.0787	1.8900e-003	7.1004
Single Family Housing	13.7475 / 8.6669	27.7153	0.4490	0.0108	40.4914
Total		34.0203	0.5511	0.0133	49.7028

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	48.5473	2.8691	0.0000	108.7977
Unmitigated	48.5473	2.8691	0.0000	108.7977

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	5.06	1.0271	0.0607	0.0000	2.3019
Mobile Home Park	17.02	3.4549	0.2042	0.0000	7.7427
Single Family Housing	217.08	44.0653	2.6042	0.0000	98.7531
Total		48.5473	2.8691	0.0000	108.7977

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	5.06	1.0271	0.0607	0.0000	2.3019
Mobile Home Park	17.02	3.4549	0.2042	0.0000	7.7427
Single Family Housing	217.08	44.0653	2.6042	0.0000	98.7531
Total		48.5473	2.8691	0.0000	108.7977

Pixley Community Plan - Commercial 2030

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government Office Building	1.94	1000sqft	0.04	1,940.00	0
Medical Office Building	1.66	1000sqft	0.04	1,660.00	0
Day-Care Center	2.12	1000sqft	0.05	2,120.00	0
Elementary School	30.57	1000sqft	0.70	30,570.00	0
Place of Worship	7.04	1000sqft	0.16	7,040.00	0
Motel	2.30	Room	0.10	4,508.46	0
Quality Restaurant	4.61	1000sqft	0.11	4,610.00	0
Automobile Care Center	16.64	1000sqft	0.38	16,640.00	0
Convenience Market With Gas Pumps	3.78	1000sqft	0.09	3,780.00	0
Strip Mall	11.79	1000sqft	0.27	11,790.00	0
Supermarket	4.12	1000sqft	0.09	4,120.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3	Operational Year	2030		
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	491.65	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 2020 emission factors: BAU emissions factors for Energy reflect compliance with the 33% RPS standard.

Vehicle Emission Factors - LEV III reductions incorporated (19.5% reduction in LDA, LDT1, and LDT2 EF)

Construction Off-road Equipment Mitigation - Compliance with Regulation VIII

Area Mitigation - California Building Code

Energy Mitigation - Newest Title 24 (2013) is not accounted for in this version of CalEEMod. Title 24 2013 is 30% more efficient than the previous Title 24 2008 standards for non-residential buildings.

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2014	2030
tblVehicleEF	LDA	6.6410e-003	5.3460e-003
tblVehicleEF	LDA	3.2400e-003	2.6080e-003
tblVehicleEF	LDA	0.53	0.42
tblVehicleEF	LDA	0.90	0.72
tblVehicleEF	LDA	198.19	159.54
tblVehicleEF	LDA	44.85	36.10
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	8.0000e-003	6.4400e-003
tblVehicleEF	LDA	1.7960e-003	1.4460e-003
tblVehicleEF	LDA	5.1000e-003	4.1060e-003
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	2.0000e-003	1.6100e-003
tblVehicleEF	LDA	1.6660e-003	1.3410e-003
tblVehicleEF	LDA	4.7320e-003	3.8090e-003
tblVehicleEF	LDA	0.03	0.02
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	8.3490e-003	6.7210e-003
tblVehicleEF	LDA	0.17	0.14
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	3.2920e-003	2.6500e-003
tblVehicleEF	LDA	7.5400e-004	6.0700e-004
tblVehicleEF	LDA	0.03	0.02

tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.17	0.14
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDT1	9.4140e-003	7.5780e-003
tblVehicleEF	LDT1	6.0770e-003	4.8920e-003
tblVehicleEF	LDT1	0.81	0.65
tblVehicleEF	LDT1	1.55	1.25
tblVehicleEF	LDT1	239.41	192.73
tblVehicleEF	LDT1	54.48	43.86
tblVehicleEF	LDT1	0.09	0.07
tblVehicleEF	LDT1	0.09	0.07
tblVehicleEF	LDT1	0.04	0.03
tblVehicleEF	LDT1	8.0000e-003	6.4400e-003
tblVehicleEF	LDT1	2.0110e-003	1.6190e-003
tblVehicleEF	LDT1	5.0140e-003	4.0360e-003
tblVehicleEF	LDT1	0.02	0.01
tblVehicleEF	LDT1	2.0000e-003	1.6100e-003
tblVehicleEF	LDT1	1.8660e-003	1.5020e-003
tblVehicleEF	LDT1	4.6520e-003	3.7450e-003
tblVehicleEF	LDT1	0.09	0.07
tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.01	0.01
tblVehicleEF	LDT1	0.51	0.41
tblVehicleEF	LDT1	0.11	0.09
tblVehicleEF	LDT1	3.8220e-003	3.0770e-003
tblVehicleEF	LDT1	8.8600e-004	7.1300e-004
tblVehicleEF	LDT1	0.09	0.07

tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.51	0.41
tblVehicleEF	LDT1	0.12	0.09
tblVehicleEF	LDT2	8.3280e-003	6.7040e-003
tblVehicleEF	LDT2	4.4330e-003	3.5690e-003
tblVehicleEF	LDT2	0.65	0.53
tblVehicleEF	LDT2	1.16	0.94
tblVehicleEF	LDT2	307.23	247.32
tblVehicleEF	LDT2	69.69	56.10
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	0.08	0.07
tblVehicleEF	LDT2	0.04	0.03
tblVehicleEF	LDT2	8.0000e-003	6.4400e-003
tblVehicleEF	LDT2	1.7860e-003	1.4380e-003
tblVehicleEF	LDT2	5.0090e-003	4.0320e-003
tblVehicleEF	LDT2	0.02	0.01
tblVehicleEF	LDT2	2.0000e-003	1.6100e-003
tblVehicleEF	LDT2	1.6570e-003	1.3340e-003
tblVehicleEF	LDT2	4.6480e-003	3.7420e-003
tblVehicleEF	LDT2	0.07	0.05
tblVehicleEF	LDT2	0.10	0.08
tblVehicleEF	LDT2	0.05	0.04
tblVehicleEF	LDT2	0.01	8.8240e-003
tblVehicleEF	LDT2	0.36	0.29
tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	4.4730e-003	3.6010e-003
tblVehicleEF	LDT2	1.0290e-003	8.2800e-004
tblVehicleEF	LDT2	0.07	0.05

tblVehicleEF	LDT2	0.10	0.08
tblVehicleEF	LDT2	0.05	0.04
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.36	0.29
tblVehicleEF	LDT2	0.08	0.07

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4085	1.0000e-005	7.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5500e-003	1.5500e-003	0.0000	0.0000	1.6300e-003
Energy	0.0152	0.1381	0.1160	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	372.1813	372.1813	0.0128	5.0100e-003	374.0041
Mobile	2.1329	3.4653	18.4501	0.0362	2.2762	0.0613	2.3376	0.6058	0.0566	0.6624	0.0000	2,492.4747	2,492.4747	0.0607	0.0000	2,493.7484
Waste						0.0000	0.0000		0.0000	0.0000	44.3271	0.0000	44.3271	2.6197	0.0000	99.3400
Water						0.0000	0.0000		0.0000	0.0000	2.0544	11.6478	13.7022	0.2115	5.1000e-003	19.7256
Total	2.5566	3.6034	18.5669	0.0370	2.2762	0.0718	2.3481	0.6058	0.0671	0.6729	46.3816	2,876.3053	2,922.6869	2.9047	0.0101	2,986.8197

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4085	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5300e-003	1.5300e-003	0.0000	0.0000	1.6100e-003
Energy	0.0124	0.1126	0.0946	6.8000e-004		8.5600e-003	8.5600e-003		8.5600e-003	8.5600e-003	0.0000	326.0990	326.0990	0.0115	4.3200e-003	327.6779
Mobile	2.1329	3.4653	18.4501	0.0362	2.2762	0.0613	2.3376	0.6058	0.0566	0.6624	0.0000	2,492.4747	2,492.4747	0.0607	0.0000	2,493.7484
Waste						0.0000	0.0000		0.0000	0.0000	44.3271	0.0000	44.3271	2.6197	0.0000	99.3400
Water						0.0000	0.0000		0.0000	0.0000	2.0544	11.6478	13.7022	0.2115	5.0900e-003	19.7229
Total	2.5538	3.5779	18.5455	0.0368	2.2762	0.0699	2.3461	0.6058	0.0651	0.6709	46.3816	2,830.2230	2,876.6046	2.9033	9.4100e-003	2,940.4908

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.11	0.71	0.12	0.41	0.00	2.70	0.08	0.00	2.89	0.29	0.00	1.60	1.58	0.05	6.92	1.55

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.1329	3.4653	18.4501	0.0362	2.2762	0.0613	2.3376	0.6058	0.0566	0.6624	0.0000	2,492.4747	2,492.4747	0.0607	0.0000	2,493.7484
Unmitigated	2.1329	3.4653	18.4501	0.0362	2.2762	0.0613	2.3376	0.6058	0.0566	0.6624	0.0000	2,492.4747	2,492.4747	0.0607	0.0000	2,493.7484

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	3,196.37	5,474.69	4468.26	1,986,595	1,986,595
Day-Care Center	168.03	13.17	12.36	145,636	145,636
Automobile Care Center	1,031.68	1,031.68	1031.68	1,027,745	1,027,745
Elementary School	471.70	0.00	0.00	742,899	742,899
Place of Worship	64.13	73.00	257.88	174,121	174,121
Government Office Building	133.72	0.00	0.00	163,801	163,801
Medical Office Building	59.98	14.87	2.57	88,726	88,726
Motel	12.95	12.95	12.95	24,574	24,574
Quality Restaurant	414.67	435.00	332.66	481,415	481,415
Strip Mall	522.53	495.65	240.87	736,837	736,837
Supermarket	421.23	731.67	685.73	572,548	572,548
Total	6,496.99	8,282.68	7,044.96	6,144,898	6,144,898

4.3 Trip Type Information

			Miles			Trip %			Trip Purpose %			
Land Use			H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by	
Convenience Market With Gas			9.50	7.30	7.30	0.80	80.20	19.00	14	21	65	
Day-Care Center			9.50	7.30	7.30	12.70	82.30	5.00	28	58	14	
Automobile Care Center			9.50	7.30	7.30	33.00	48.00	19.00	21	51	28	
Elementary School			9.50	7.30	7.30	65.00	30.00	5.00	63	25	12	
Place of Worship			9.50	7.30	7.30	0.00	95.00	5.00	64	25	11	
Government Office Building			9.50	7.30	7.30	33.00	62.00	5.00	50	34	16	
Medical Office Building			9.50	7.30	7.30	29.60	51.40	19.00	60	30	10	
Motel			9.50	7.30	7.30	19.00	62.00	19.00	58	38	4	
Quality Restaurant			9.50	7.30	7.30	12.00	69.00	19.00	38	18	44	
Strip Mall			9.50	7.30	7.30	16.60	64.40	19.00	45	40	15	
Supermarket			9.50	7.30	7.30	6.50	74.50	19.00	34	30	36	
LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409681	0.072697	0.163067	0.193134	0.057567	0.008269	0.019683	0.062967	0.001805	0.001512	0.006347	0.000997	0.002274

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	203.5316	203.5316	9.1100e-003	2.0700e-003	204.3645
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	221.8429	221.8429	9.9300e-003	2.2600e-003	222.7507
NaturalGas Mitigated	0.0124	0.1126	0.0946	6.8000e-004		8.5600e-003	8.5600e-003		8.5600e-003	8.5600e-003	0.0000	122.5675	122.5675	2.3500e-003	2.2500e-003	123.3134
NaturalGas Unmitigated	0.0152	0.1381	0.1160	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	150.3385	150.3385	2.8800e-003	2.7600e-003	151.2534

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	362086	1.9500e-003	0.0178	0.0149	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	19.3223	19.3223	3.7000e-004	3.5000e-004	19.4399
Convenience Market With Gas Pump	42147	2.3000e-004	2.0700e-003	1.7400e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.2491	2.2491	4.0000e-005	4.0000e-005	2.2628
Day-Care Center	55819.6	3.0000e-004	2.7400e-003	2.3000e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	2.9788	2.9788	6.0000e-005	5.0000e-005	2.9969
Elementary School	804908	4.3400e-003	0.0395	0.0331	2.4000e-004		3.0000e-003	3.0000e-003		3.0000e-003	3.0000e-003	0.0000	42.9530	42.9530	8.2000e-004	7.9000e-004	43.2144
Government Office Building	26616.8	1.4000e-004	1.3000e-003	1.1000e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	1.4204	1.4204	3.0000e-005	3.0000e-005	1.4290
Medical Office Building	22775.2	1.2000e-004	1.1200e-003	9.4000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.2154	1.2154	2.0000e-005	2.0000e-005	1.2228
Motel	117626	6.3000e-004	5.7700e-003	4.8400e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.2770	6.2770	1.2000e-004	1.2000e-004	6.3152
Place of Worship	153190	8.3000e-004	7.5100e-003	6.3100e-003	5.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.1748	8.1748	1.6000e-004	1.5000e-004	8.2246
Quality Restaurant	978657	5.2800e-003	0.0480	0.0403	2.9000e-004		3.6500e-003	3.6500e-003		3.6500e-003	3.6500e-003	0.0000	52.2249	52.2249	1.0000e-003	9.6000e-004	52.5427
Strip Mall	131459	7.1000e-004	6.4400e-003	5.4100e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	7.0151	7.0151	1.3000e-004	1.3000e-004	7.0578
Supermarket	121952	6.6000e-004	5.9800e-003	5.0200e-003	4.0000e-005		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	6.5078	6.5078	1.2000e-004	1.2000e-004	6.5474
Total		0.0152	0.1381	0.1160	8.5000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	150.3385	150.3385	2.8700e-003	2.7600e-003	151.2534

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	272630	1.4700e-003	0.0134	0.0112	8.0000e-005		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003	0.0000	14.5486	14.5486	2.8000e-004	2.7000e-004	14.6371
Convenience Market With Gas	31861.6	1.7000e-004	1.5600e-003	1.3100e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.7003	1.7003	3.0000e-005	3.0000e-005	1.7106
Day-Care Center	40294.8	2.2000e-004	1.9800e-003	1.6600e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.1503	2.1503	4.0000e-005	4.0000e-005	2.1634
Elementary School	581044	3.1300e-003	0.0285	0.0239	1.7000e-004		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003	0.0000	31.0067	31.0067	5.9000e-004	5.7000e-004	31.1954
Government Office Building	18794.7	1.0000e-004	9.2000e-004	7.7000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0030	1.0030	2.0000e-005	2.0000e-005	1.0091
Medical Office Building	16082.1	9.0000e-005	7.9000e-004	6.6000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8582	0.8582	2.0000e-005	2.0000e-005	0.8634
Motel	92022.2	5.0000e-004	4.5100e-003	3.7900e-003	3.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	4.9107	4.9107	9.0000e-005	9.0000e-005	4.9405
Place of Worship	115343	6.2000e-004	5.6500e-003	4.7500e-003	3.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	6.1552	6.1552	1.2000e-004	1.1000e-004	6.1926
Quality Restaurant	926670	5.0000e-003	0.0454	0.0382	2.7000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003	0.0000	49.4506	49.4506	9.5000e-004	9.1000e-004	49.7516
Strip Mall	99377.9	5.4000e-004	4.8700e-003	4.0900e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	5.3032	5.3032	1.0000e-004	1.0000e-004	5.3355
Supermarket	102707	5.5000e-004	5.0300e-003	4.2300e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	5.4809	5.4809	1.1000e-004	1.0000e-004	5.5142
Total		0.0124	0.1126	0.0946	6.7000e-004		8.5500e-003	8.5500e-003		8.5500e-003	8.5500e-003	0.0000	122.5675	122.5675	2.3500e-003	2.2600e-003	123.3134

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	160742	35.8470	1.6000e-003	3.6000e-004	35.9937
Convenience Market With Gas Pump	34511.4	7.6963	3.4000e-004	8.0000e-005	7.7278
Day-Care Center	16832.8	3.7539	1.7000e-004	4.0000e-005	3.7692
Elementary School	242726	54.1300	2.4200e-003	5.5000e-004	54.3515
Government Office Building	19632.8	4.3783	2.0000e-004	4.0000e-005	4.3962
Medical Office Building	16799.2	3.7464	1.7000e-004	4.0000e-005	3.7617
Motel	41252.4	9.1997	4.1000e-004	9.0000e-005	9.2373
Place of Worship	68006.4	15.1660	6.8000e-004	1.5000e-004	15.2281
Quality Restaurant	143786	32.0655	1.4300e-003	3.3000e-004	32.1967
Strip Mall	107643	24.0053	1.0700e-003	2.4000e-004	24.1035
Supermarket	142840	31.8547	1.4300e-003	3.2000e-004	31.9850
Total		221.8429	9.9200e-003	2.2400e-003	222.7507

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	148812	33.1863	1.4800e-003	3.4000e-004	33.3221
Convenience Market With Gas	31551.7	7.0363	3.1000e-004	7.0000e-005	7.0651
Day-Care Center	15166.5	3.3823	1.5000e-004	3.0000e-005	3.3961
Elementary School	218698	48.7715	2.1800e-003	5.0000e-004	48.9711
Government Office Building	17770.4	3.9630	1.8000e-004	4.0000e-005	3.9792
Medical Office Building	15205.6	3.3910	1.5000e-004	3.0000e-005	3.4049
Motel	34422.1	7.6764	3.4000e-004	8.0000e-005	7.7078
Place of Worship	62958.7	14.0403	6.3000e-004	1.4000e-004	14.0978
Quality Restaurant	132722	29.5981	1.3200e-003	3.0000e-004	29.7193
Strip Mall	98411.1	21.9465	9.8000e-004	2.2000e-004	22.0364
Supermarket	136945	30.5399	1.3700e-003	3.1000e-004	30.6648
Total		203.5316	9.0900e-003	2.0600e-003	204.3645

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4085	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5300e-003	1.5300e-003	0.0000	0.0000	1.6100e-003
Unmitigated	0.4085	1.0000e-005	7.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5500e-003	1.5500e-003	0.0000	0.0000	1.6300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0617					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3467					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5500e-003	1.5500e-003	0.0000	0.0000	1.6300e-003
Total	0.4085	1.0000e-005	7.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5500e-003	1.5500e-003	0.0000	0.0000	1.6300e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0617					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3467					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5300e-003	1.5300e-003	0.0000	0.0000	1.6100e-003
Total	0.4085	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5300e-003	1.5300e-003	0.0000	0.0000	1.6100e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	13.7022	0.2115	5.0900e-003	19.7229
Unmitigated	13.7022	0.2115	5.1000e-003	19.7256

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	1.56551 / 0.959506	3.1347	0.0511	1.2300e-003	4.5901
Convenience Market With Gas	0.279994 / 0.171609	0.5606	9.1400e-003	2.2000e-004	0.8210
Day-Care Center	0.0909259 / 0.233809	0.3211	2.9800e-003	7.0000e-005	0.4062
Elementary School	0.886436 / 2.27941	3.1300	0.0290	7.1000e-004	3.9597
Government Office Building	0.3854 / 0.236213	0.7717	0.0126	3.0000e-004	1.1300
Medical Office Building	0.208298 / 0.0396758	0.3484	6.8000e-003	1.6000e-004	0.5418
Motel	0.0583436 / 0.0064826	0.0940	1.9000e-003	5.0000e-005	0.1481
Place of Worship	0.220274 / 0.344531	0.6046	7.2000e-003	1.7000e-004	0.8101
Quality Restaurant	1.39929 / 0.0893164	2.2022	0.0457	1.0900e-003	3.5006
Strip Mall	0.873315 / 0.535258	1.7487	0.0285	6.9000e-004	2.5606
Supermarket	0.507865 / 0.0157072	0.7862	0.0166	4.0000e-004	1.2574
Total		13.7022	0.2115	5.0900e-003	19.7256

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	1.56551 / 0.959506	3.1347	0.0511	1.2300e-003	4.5895
Convenience Market With Gas	0.279994 / 0.171609	0.5606	9.1400e-003	2.2000e-004	0.8208
Day-Care Center	0.0909259 / 0.233809	0.3211	2.9800e-003	7.0000e-005	0.4061
Elementary School	0.886436 / 2.27941	3.1300	0.0290	7.1000e-004	3.9593
Government Office Building	0.3854 / 0.236213	0.7717	0.0126	3.0000e-004	1.1299
Medical Office Building	0.208298 / 0.0396758	0.3484	6.8000e-003	1.6000e-004	0.5417
Motel	0.0583436 / 0.0064826	0.0940	1.9000e-003	5.0000e-005	0.1481
Place of Worship	0.220274 / 0.344531	0.6046	7.2000e-003	1.7000e-004	0.8100
Quality Restaurant	1.39929 / 0.0893164	2.2022	0.0457	1.0900e-003	3.5001
Strip Mall	0.873315 / 0.535258	1.7487	0.0285	6.9000e-004	2.5602
Supermarket	0.507865 / 0.0157072	0.7862	0.0166	4.0000e-004	1.2572
Total		13.7022	0.2115	5.0900e-003	19.7229

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	44.3271	2.6197	0.0000	99.3400
Mitigated	44.3271	2.6197	0.0000	99.3400

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	63.56	12.9021	0.7625	0.0000	28.9145
Convenience Market With Gas	11.36	2.3060	0.1363	0.0000	5.1678
Day-Care Center	2.76	0.5603	0.0331	0.0000	1.2556
Elementary School	39.74	8.0669	0.4767	0.0000	18.0784
Government Office Building	1.8	0.3654	0.0216	0.0000	0.8189
Medical Office Building	17.93	3.6396	0.2151	0.0000	8.1566
Motel	1.26	0.2558	0.0151	0.0000	0.5732
Place of Worship	40.13	8.1460	0.4814	0.0000	18.2558
Quality Restaurant	4.21	0.8546	0.0505	0.0000	1.9152
Strip Mall	12.38	2.5130	0.1485	0.0000	5.6319
Supermarket	23.24	4.7175	0.2788	0.0000	10.5722
Total		44.3272	2.6197	0.0000	99.3400

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	63.56	12.9021	0.7625	0.0000	28.9145
Convenience Market With Gas	11.36	2.3060	0.1363	0.0000	5.1678
Day-Care Center	2.76	0.5603	0.0331	0.0000	1.2556
Elementary School	39.74	8.0669	0.4767	0.0000	18.0784
Government Office Building	1.8	0.3654	0.0216	0.0000	0.8189
Medical Office Building	17.93	3.6396	0.2151	0.0000	8.1566
Motel	1.26	0.2558	0.0151	0.0000	0.5732
Place of Worship	40.13	8.1460	0.4814	0.0000	18.2558
Quality Restaurant	4.21	0.8546	0.0505	0.0000	1.9152
Strip Mall	12.38	2.5130	0.1485	0.0000	5.6319
Supermarket	23.24	4.7175	0.2788	0.0000	10.5722
Total		44.3272	2.6197	0.0000	99.3400

Pixley Community Plan - Industrial 2030

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	88.36	1000sqft	2.03	88,360.00	0
General Light Industry	10.96	1000sqft	0.25	10,960.00	0
Unrefrigerated Warehouse-No Rail	29.84	1000sqft	0.69	29,840.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	491.65	CH4 Intensity (lb/MWhr)	0.022	N2O Intensity (lb/MWhr)	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 2020 emission factors: BAU emissions factors for Energy reflect compliance with the 33% RPS standard.

Vehicle Emission Factors - 'LEV III reductions incorporated (19.5% reduction in LDA, LDT1, and LDT2 EF)

Construction Off-road Equipment Mitigation - Compliance with Regulation VIII

Area Mitigation - California Building Code

Energy Mitigation - Newest Title 24 (2013) is not accounted for in this version of CalEEMod. Title 24 2013 is 30% more efficient than the previous Title 24 2008 standards for non-residential buildings.

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2014	2030
tblVehicleEF	LDA	6.6410e-003	5.3460e-003
tblVehicleEF	LDA	3.2400e-003	2.6080e-003
tblVehicleEF	LDA	0.53	0.42
tblVehicleEF	LDA	0.90	0.72
tblVehicleEF	LDA	198.19	159.54
tblVehicleEF	LDA	44.85	36.10
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	8.0000e-003	6.4400e-003
tblVehicleEF	LDA	1.7960e-003	1.4460e-003
tblVehicleEF	LDA	5.1000e-003	4.1060e-003
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	2.0000e-003	1.6100e-003
tblVehicleEF	LDA	1.6660e-003	1.3410e-003
tblVehicleEF	LDA	4.7320e-003	3.8090e-003
tblVehicleEF	LDA	0.03	0.02
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	8.3490e-003	6.7210e-003
tblVehicleEF	LDA	0.17	0.14
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	3.2920e-003	2.6500e-003
tblVehicleEF	LDA	7.5400e-004	6.0700e-004
tblVehicleEF	LDA	0.03	0.02

tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.17	0.14
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDT1	9.4140e-003	7.5780e-003
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tblVehicleEF	LDT1	0.81	0.65
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tblVehicleEF	LDT1	0.09	0.07
tblVehicleEF	LDT1	0.04	0.03
tblVehicleEF	LDT1	8.0000e-003	6.4400e-003
tblVehicleEF	LDT1	2.0110e-003	1.6190e-003
tblVehicleEF	LDT1	5.0140e-003	4.0360e-003
tblVehicleEF	LDT1	0.02	0.01
tblVehicleEF	LDT1	2.0000e-003	1.6100e-003
tblVehicleEF	LDT1	1.8660e-003	1.5020e-003
tblVehicleEF	LDT1	4.6520e-003	3.7450e-003
tblVehicleEF	LDT1	0.09	0.07
tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.01	0.01
tblVehicleEF	LDT1	0.51	0.41
tblVehicleEF	LDT1	0.11	0.09
tblVehicleEF	LDT1	3.8220e-003	3.0770e-003
tblVehicleEF	LDT1	8.8600e-004	7.1300e-004
tblVehicleEF	LDT1	0.09	0.07

tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.51	0.41
tblVehicleEF	LDT1	0.12	0.09
tblVehicleEF	LDT2	8.3280e-003	6.7040e-003
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tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	0.08	0.07
tblVehicleEF	LDT2	0.04	0.03
tblVehicleEF	LDT2	8.0000e-003	6.4400e-003
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tblVehicleEF	LDT2	5.0090e-003	4.0320e-003
tblVehicleEF	LDT2	0.02	0.01
tblVehicleEF	LDT2	2.0000e-003	1.6100e-003
tblVehicleEF	LDT2	1.6570e-003	1.3340e-003
tblVehicleEF	LDT2	4.6480e-003	3.7420e-003
tblVehicleEF	LDT2	0.07	0.05
tblVehicleEF	LDT2	0.10	0.08
tblVehicleEF	LDT2	0.05	0.04
tblVehicleEF	LDT2	0.01	8.8240e-003
tblVehicleEF	LDT2	0.36	0.29
tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	4.4730e-003	3.6010e-003
tblVehicleEF	LDT2	1.0290e-003	8.2800e-004
tblVehicleEF	LDT2	0.07	0.05

tblVehicleEF	LDT2	0.10	0.08
tblVehicleEF	LDT2	0.05	0.04
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.36	0.29
tblVehicleEF	LDT2	0.08	0.07

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5943	1.0000e-005	1.1800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3100e-003	2.3100e-003	1.0000e-005	0.0000	2.4300e-003
Energy	0.0147	0.1337	0.1123	8.0000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	426.5105	426.5105	0.0154	5.5300e-003	428.5461
Mobile	0.1101	0.2923	1.1751	4.2800e-003	0.2893	6.7300e-003	0.2961	0.0770	6.2100e-003	0.0832	0.0000	295.3625	295.3625	6.3400e-003	0.0000	295.4957
Waste						0.0000	0.0000		0.0000	0.0000	30.6943	0.0000	30.6943	1.8140	0.0000	68.7878
Water						0.0000	0.0000		0.0000	0.0000	9.4758	36.0420	45.5178	0.9749	0.0234	73.2278
Total	0.7192	0.4260	1.2886	5.0800e-003	0.2893	0.0169	0.3062	0.0770	0.0164	0.0934	40.1701	757.9174	798.0875	2.8106	0.0289	866.0598

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5943	1.0000e-005	1.1700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2800e-003	2.2800e-003	1.0000e-005	0.0000	2.4000e-003
Energy	0.0110	0.0997	0.0837	6.0000e-004		7.5700e-003	7.5700e-003		7.5700e-003	7.5700e-003	0.0000	371.0402	371.0402	0.0138	4.6600e-003	372.7749
Mobile	0.1101	0.2923	1.1751	4.2800e-003	0.2893	6.7300e-003	0.2961	0.0770	6.2100e-003	0.0832	0.0000	295.3625	295.3625	6.3400e-003	0.0000	295.4957
Waste						0.0000	0.0000		0.0000	0.0000	30.6943	0.0000	30.6943	1.8140	0.0000	68.7878
Water						0.0000	0.0000		0.0000	0.0000	9.4758	36.0420	45.5178	0.9747	0.0233	73.2154
Total	0.7154	0.3919	1.2600	4.8800e-003	0.2893	0.0143	0.3036	0.0770	0.0138	0.0908	40.1701	702.4471	742.6171	2.8089	0.0280	810.2763

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.52	7.99	2.22	3.94	0.00	15.33	0.85	0.00	15.82	2.77	0.00	7.32	6.95	0.06	3.12	6.44

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1101	0.2923	1.1751	4.2800e-003	0.2893	6.7300e-003	0.2961	0.0770	6.2100e-003	0.0832	0.0000	295.3625	295.3625	6.3400e-003	0.0000	295.4957
Unmitigated	0.1101	0.2923	1.1751	4.2800e-003	0.2893	6.7300e-003	0.2961	0.0770	6.2100e-003	0.0832	0.0000	295.3625	295.3625	6.3400e-003	0.0000	295.4957

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	132.54	132.54	132.54	386,952	386,952
General Light Industry	76.39	14.47	7.45	168,446	168,446
Unrefrigerated Warehouse-No Rail	77.29	77.29	77.29	225,636	225,636
Total	286.22	224.29	217.28	781,034	781,034

4.3 Trip Type Information

			Miles			Trip %			Trip Purpose %			
Land Use			H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by	
General Heavy Industry			9.50	7.30	7.30	59.00	28.00	13.00	92	5	3	
General Light Industry			9.50	7.30	7.30	59.00	28.00	13.00	92	5	3	
Unrefrigerated Warehouse-No			9.50	7.30	7.30	59.00	0.00	41.00	92	5	3	
LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409681	0.072697	0.163067	0.193134	0.057567	0.008269	0.019683	0.062967	0.001805	0.001512	0.006347	0.000997	0.002274

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	262.5567	262.5567	0.0118	2.6700e-003	263.6312
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	280.9731	280.9731	0.0126	2.8600e-003	282.1230
NaturalGas Mitigated	0.0110	0.0997	0.0837	6.0000e-004		7.5700e-003	7.5700e-003		7.5700e-003	7.5700e-003	0.0000	108.4835	108.4835	2.0800e-003	1.9900e-003	109.1437
NaturalGas Unmitigated	0.0147	0.1337	0.1123	8.0000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	145.5374	145.5374	2.7900e-003	2.6700e-003	146.4231

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	1.92271e+006	0.0104	0.0943	0.0792	5.7000e-004		7.1600e-003	7.1600e-003		7.1600e-003	7.1600e-003	0.0000	102.6033	102.6033	1.9700e-003	1.8800e-003	103.2278
General Light Industry	238490	1.2900e-003	0.0117	9.8200e-003	7.0000e-005		8.9000e-004	8.9000e-004		8.9000e-004	8.9000e-004	0.0000	12.7267	12.7267	2.4000e-004	2.3000e-004	12.8042
Unrefrigerated Warehouse-No Cool	566065	3.0500e-003	0.0278	0.0233	1.7000e-004		2.1100e-003	2.1100e-003		2.1100e-003	2.1100e-003	0.0000	30.2074	30.2074	5.8000e-004	5.5000e-004	30.3912
Total		0.0147	0.1337	0.1123	8.1000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	145.5374	145.5374	2.7900e-003	2.6600e-003	146.4231

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	179569	9.7000e-004	8.8000e-003	7.3900e-003	5.0000e-005		6.7000e-004	6.7000e-004		6.7000e-004	6.7000e-004	0.0000	9.5825	9.5825	1.8000e-004	1.8000e-004	9.6408
Unrefrigerated Warehouse-No	405645	2.1900e-003	0.0199	0.0167	1.2000e-004		1.5100e-003	1.5100e-003		1.5100e-003	1.5100e-003	0.0000	21.6468	21.6468	4.1000e-004	4.0000e-004	21.7785
General Heavy Industry	1.44769e+006	7.8100e-003	0.0710	0.0596	4.3000e-004		5.3900e-003	5.3900e-003		5.3900e-003	5.3900e-003	0.0000	77.2543	77.2543	1.4800e-003	1.4200e-003	77.7244
Total		0.0110	0.0997	0.0837	6.0000e-004		7.5700e-003	7.5700e-003		7.5700e-003	7.5700e-003	0.0000	108.4835	108.4835	2.0700e-003	2.0000e-003	109.1437

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	853558	190.3508	8.5200e-003	1.9400e-003	191.1297
General Light Industry	105874	23.6107	1.0600e-003	2.4000e-004	23.7074
Unrefrigerated Warehouse-No	300489	67.0116	3.0000e-003	6.8000e-004	67.2859
Total		280.9731	0.0126	2.8600e-003	282.1230

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	790203	176.2222	7.8900e-003	1.7900e-003	176.9434
General Light Industry	98015.3	21.8583	9.8000e-004	2.2000e-004	21.9477
Unrefrigerated Warehouse-No	289120	64.4762	2.8900e-003	6.6000e-004	64.7401
Total		262.5567	0.0118	2.6700e-003	263.6312

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5943	1.0000e-005	1.1700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2800e-003	2.2800e-003	1.0000e-005	0.0000	2.4000e-003
Unmitigated	0.5943	1.0000e-005	1.1800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3100e-003	2.3100e-003	1.0000e-005	0.0000	2.4300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0898					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5044					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1000e-004	1.0000e-005	1.1800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3100e-003	2.3100e-003	1.0000e-005	0.0000	2.4300e-003
Total	0.5943	1.0000e-005	1.1800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3100e-003	2.3100e-003	1.0000e-005	0.0000	2.4300e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0898					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5044					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1000e-004	1.0000e-005	1.1700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2800e-003	2.2800e-003	1.0000e-005	0.0000	2.4000e-003
Total	0.5943	1.0000e-005	1.1700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2800e-003	2.2800e-003	1.0000e-005	0.0000	2.4000e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	45.5178	0.9747	0.0233	73.2154
Unmitigated	45.5178	0.9749	0.0234	73.2278

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	20.4333 / 0	31.1393	0.6669	0.0160	50.0960
General Light Industry	2.5345 / 0	3.8625	0.0827	1.9800e-003	6.2138
Unrefrigerated Warehouse-No	6.9005 / 0	10.5160	0.2252	5.3900e-003	16.9179
Total		45.5178	0.9749	0.0233	73.2278

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	20.4333 / 0	31.1393	0.6668	0.0160	50.0876
General Light Industry	2.5345 / 0	3.8625	0.0827	1.9800e-003	6.2128
Unrefrigerated Warehouse-No	6.9005 / 0	10.5160	0.2252	5.3900e-003	16.9151
Total		45.5178	0.9747	0.0233	73.2154

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	30.6943	1.8140	0.0000	68.7878
Unmitigated	30.6943	1.8140	0.0000	68.7878

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	109.57	22.2417	1.3145	0.0000	49.8451
General Light Industry	13.59	2.7587	0.1630	0.0000	6.1823
Unrefrigerated Warehouse-No	28.05	5.6939	0.3365	0.0000	12.7604
Total		30.6943	1.8140	0.0000	68.7878

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	109.57	22.2417	1.3145	0.0000	49.8451
General Light Industry	13.59	2.7587	0.1630	0.0000	6.1823
Unrefrigerated Warehouse-No	28.05	5.6939	0.3365	0.0000	12.7604
Total		30.6943	1.8140	0.0000	68.7878

Appendix B

Biological Resources Assessment



LIVE OAK ASSOCIATES, INC.

an Ecological Consulting Firm

PIXLEY COMMUNITY PLAN UPDATE BIOLOGICAL EVALUATION TULARE COUNTY, CALIFORNIA

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EXECUTIVE SUMMARY

Live Oak Associates, Inc. (LOA) conducted an investigation of the biological resources of the Pixley Community Plan Proposed Planning Study Area (PPSA) in the community of Pixley in Tulare County, California and evaluated likely impacts to such resources resulting from development of the PPSA. The approximately 640-acre PPSA consists of two separate blocks of land west of State Highway 99. In April of 2014, LOA surveyed the PPSA for biotic habitats, the plants and animals occurring in those habitats, and significant habitat values that may be protected by state and federal law.

Habitats/land uses identified within the PPSA included orchards, agricultural fields, industrial/residential lands, ruderal areas, a livestock facility, three irrigation basins, and an irrigation ditch. A mosaic of agricultural, industrial, and residential/commercial land uses surround the PPSA, within a region dominated by similar land uses. The only potential jurisdictional waters identified within the PPSA was a small section of irrigation ditch that connects with Deer Creek both upstream and downstream.

Impacts associated with future development of PPSA would be less than significant, as defined by the California Environmental Quality Act (CEQA), for special status plant species, wildlife movement corridors, Waters of the U.S., downstream water quality, and sensitive habitats. Loss of habitat for special status animal species would also be considered less than significant under CEQA.

Potentially significant impacts associated with future development of the PPSA include construction mortality of the San Joaquin kit fox, burrowing owl, American badger, nesting raptors and migratory birds including the Swainson's hawk, loggerhead shrike, and tricolored blackbird, and colonially roosting bats. Project avoidance of active nests, dens, and roost sites identified during preconstruction surveys and implementation of minimization measures consistent with the USFWS *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* will ensure that impacts to all special status animal species are reduced to a less than significant level.

TABLE OF CONTENTS

1.0 INTRODUCTION	1
1.1 PROJECT DESCRIPTION	1
1.2 REPORT OBJECTIVES	1
1.3 STUDY METHODOLOGY	4
2.0 EXISTING CONDITIONS	5
2.1 REGIONAL SETTING	5
2.2 PROJECT SITE	6
2.3 BIOTIC HABITATS/LAND USES	6
2.3.1 Agricultural Field.....	9
2.3.2 Orchard	10
2.3.3 Ruderal.....	11
2.3.4 Industrial/Residential.....	12
2.3.5 Livestock Facility	13
2.3.6 Irrigation Basin	14
2.3.7 Irrigation Ditch	15
2.4 SPECIAL STATUS PLANTS AND ANIMALS	15
2.5 ENDANGERED, THREATENED, OR SPECIAL STATUS PLANT AND ANIMAL SPECIES MERITING FURTHER DISCUSSION	24
2.5.1 Swainson's Hawk (<i>Buteo swainsoni</i>). Federal Listing Status: None; State Listing Status: Threatened.....	24
2.5.2 San Joaquin Kit Fox (<i>Vulpes macrotus mutica</i>). Federal Listing Status: Endangered; State Listing Status: Threatened	25
2.5.3 Burrowing Owl (<i>Athene cunicularia</i>). Federal Listing Status: None; State Listing Status: Species of Special Concern.....	26
2.5.4 American Badger (<i>Taxidea taxus</i>). Federal Listing Status: None; State Listing Status: Species of Special Concern.....	27
2.6 JURISDICTIONAL WATERS	28
2.7 DESIGNATED CRITICAL HABITAT	28
2.8 NATURAL COMMUNITIES OF SPECIAL CONCERN	29
2.9 WILDLIFE MOVEMENT CORRIDORS	29
3.0 IMPACTS AND MITIGATIONS	30
3.1 SIGNIFICANCE CRITERIA	30
3.2 RELEVANT GOALS, POLICIES, AND LAWS	31

3.2.1 General Plan Policies of County of Tulare	31
3.2.2 Threatened and Endangered Species	32
3.2.3 Designated Critical Habitat.....	32
3.2.4 Migratory Birds.....	33
3.2.5 Birds of Prey	33
3.2.6 Nesting Birds	34
3.2.7 Wetlands and Other Jurisdictional Waters.....	34
3.3 POTENTIALLY SIGNIFICANT PROJECT IMPACTS/MITIGATION	35
3.3.1 Project-Related Mortality of San Joaquin Kit Fox	35
3.3.2 Project-Related Mortality of Burrowing Owl.....	37
3.3.3 Project-Related Mortality of American Badger.....	39
3.3.4 Project-Related Mortality/Disturbance of Nesting Raptors and Migratory Birds (Including Swainson’s Hawk, White-tailed Kite, and Loggerhead Shrike)	40
3.3.5 Project-Related Mortality of Roosting Bats.....	41
3.4 LESS THAN SIGNIFICANT PROJECT IMPACTS	42
3.4.1 Loss of Habitat for Special Status Plants.....	42
3.4.2 Impacts to Special Status Animals Absent or Unlikely to Occur in the PPSA	43
3.4.3 Loss of Habitat for Special Status Animals that May Occur in the PPSA	43
3.4.4 Impacts to Waters of the United States.....	45
3.4.5 Project Impacts to Wildlife Movement Corridors	46
3.4.6 Disturbance to Riparian Habitat or other Sensitive Habitats	46
3.4.7 Project Impacts to Designated Critical Habitat.....	46
3.4.8 Degradation of Water Quality in Seasonal Drainages, Stock Ponds, and Downstream Waters	46
3.4.9 Local Policies or Habitat Conservation Plans.....	47
4.0 LITERATURE CITED AND CONSULTED	48
APPENDIX A: VASCULAR PLANTS OF THE PPSA	51
APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY OCCUR ON THE PPSA	54
APPENDIX C: SELECTED PHOTOGRAPHS OF THE PPSA	59
APPENDIX D: TULARE COUNTY GENERAL PLAN POLICIES	64
APPENDIX E: U.S. FISH AND WILDLIFE SERVICE STANDARDIZED RECOMMENDATIONS FOR PROTECTION OF THE ENDANGERD SAN JOAQUIN KIT FOX PRIOR TO OR DURING GROUND DISTURBANCE.....	68

1.0 INTRODUCTION

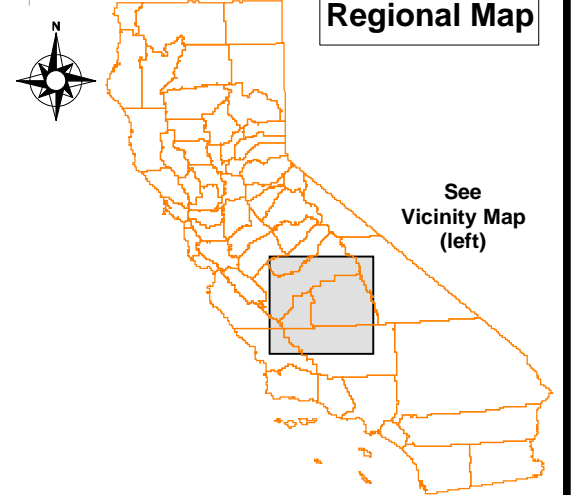
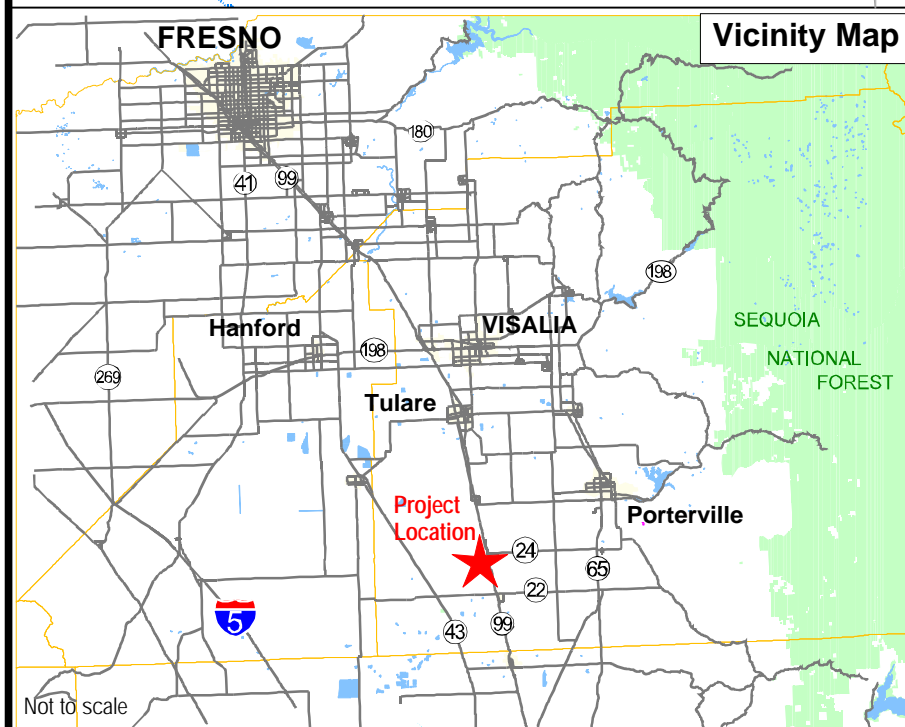
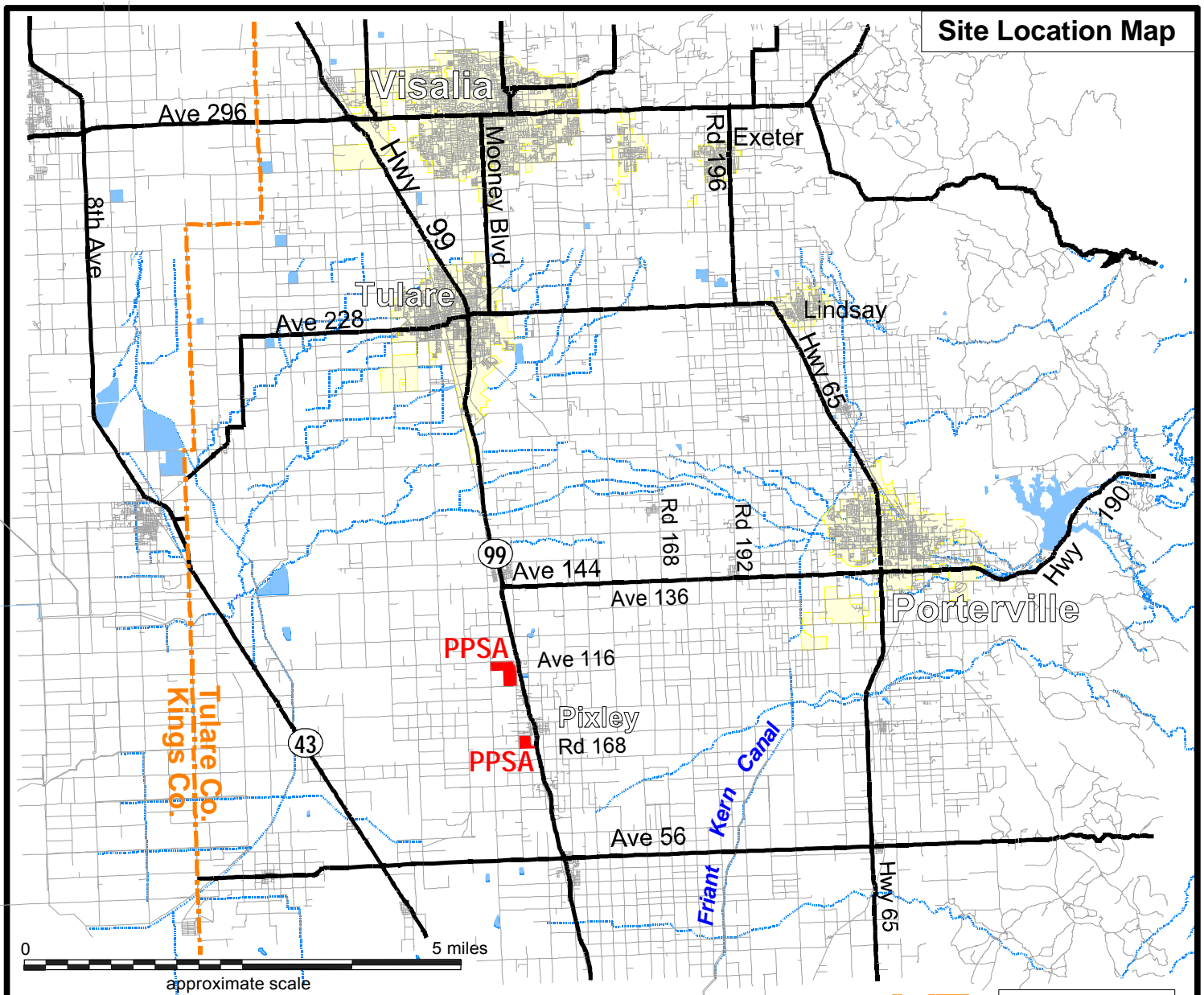
The technical report that follows describes the biotic resources of approximately 640 acres of lands (hereafter referred to as Proposed Planning Study Area or PPSA) proposed for addition to the Pixley Community Plan area. The PPSA consists of two disjunct areas both north and south of the unincorporated community of Pixley in Tulare County, California (Figure 1). The northern area is bounded by Avenue 120 on the north, Road 112 on the west, Avenue 112 on the south, and Road 120 on the east, and comprises approximately 460 acres. The southern area is bounded by Avenue 96 (also known as W. Terra Bella or J24) on the north, S. Ash Street and State Highway 99 on the east, Road 120 on the west, and a fallow field on the south, and comprises approximately 180 acres. The northern area is located within the *Pixley* and *Tipton* U.S. Geological Survey (USGS) 7.5-minute quadrangles within Section 19 of Township 22 South, Range 23 East, Mt. Diablo Base and Meridian. The southern area is located within the *Pixley* USGS quadrangle in the northern half of Section 5 of Township 23 South, Range 25 East, Mt. Diablo Base and Meridian (Figure 2).


1.1 PROJECT DESCRIPTION

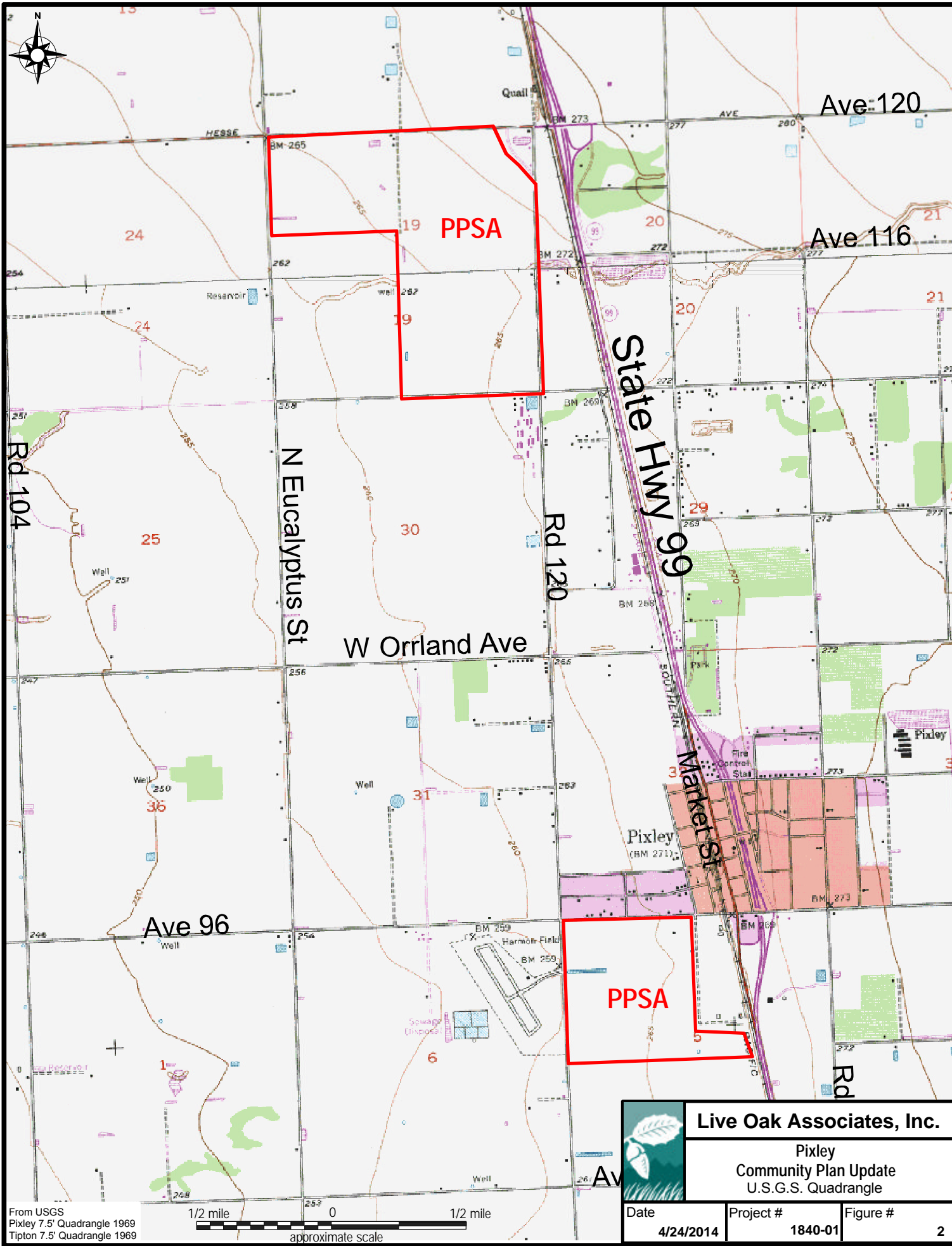
The County of Tulare proposes to update the Pixley Community Plan with the addition of the 640-acre PPSA to the plan area, following which the PPSA may be developed under a number of individual projects.

1.2 REPORT OBJECTIVES

The development of agriculture and other open space parcels may damage or modify biotic habitats used by sensitive plant and wildlife species. In such cases, site development may be regulated by state or federal agencies, subject to provisions of the California Environmental Quality Act (CEQA), and/or covered by policies and ordinances of Tulare County. This report addresses issues related to: 1) sensitive biotic resources occurring within the PPSA; 2) the federal, state, and local laws regulating such resources, and 3) mitigation measures that may be required to reduce the magnitude of anticipated impacts and/or comply with permit requirements of state and federal resource agencies. As such, the objectives of this report are to:




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Pixley Community Plan Update Site / Vicinity Map		
Date	Project #	Figure #
4/24/2014	1840-01	1



From USGS
Pixley 7.5' Quadrangle 1969
Tipton 7.5' Quadrangle 1969

1/2 mile 0 1/2 mile
approximate scale

	Live Oak Associates, Inc.		
	Pixley Community Plan Update U.S.G.S. Quadrangle		
Date	Project #	Figure #	
4/24/2014	1840-01	2	

- Summarize all site-specific information related to existing biological resources;
- Make reasonable inferences about the biological resources that could occur within the PPSA based on habitat suitability and the proximity of the PPSA to a species' known range;
- Identify and discuss project impacts to biological resources likely to occur within the PPSA within the context of CEQA or any state or federal laws; and
- Summarize all state and federal natural resource protection laws that may be relevant to future development of the PPSA;
- Identify avoidance and mitigation measures that would reduce impacts to a less-than-significant level (as identified by CEQA) and are generally consistent with recommendations of the resource agencies for affected biological resources.

1.3 STUDY METHODOLOGY

A reconnaissance-level field survey of the PPSA was conducted on April 16, 2014 by LOA ecologists Rebekah Jensen and Wendy Fisher. The survey consisted of driving and bicycling roads of the PPSA, conducting a meandering walk through accessible lands, and using binoculars to scan those lands for which access was not possible. During the survey the principal land uses/habitats of the PPSA were identified and the constituent plants and animals of each land use/habitat were noted.

LOA conducted an analysis of potential project impacts based on the known and potential biotic resources of the PPSA. Sources of information used in the preparation of this analysis included: (1) the *California Natural Diversity Data Base* (CDFW 2014), (2) the *Online Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2014), and (3) manuals, reports, and references related to plants and animals of the San Joaquin Valley region.

Detailed surveys for sensitive biological resources were not conducted for this study. Field surveys conducted for this study were sufficient to assess the significance of possible biological impacts associated with full development of the PPSA and to assess the need for more detailed studies that could be warranted if sensitive biotic resources were identified in this initial survey.

2.0 EXISTING CONDITIONS

2.1 REGIONAL SETTING

The PPSA is located in the southern San Joaquin Valley both north and south of the community of Pixley. The valley is bordered by the Sierra Nevada to the east, the Tehachapi Mountains to the south, the California coastal ranges to the west, and the Sacramento-San Joaquin Delta to the north.

Like most of California, the southern San Joaquin Valley (and the PPSA) experiences a Mediterranean climate. Warm dry summers are followed by cool moist winters. Summer temperatures commonly exceed 90 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely exceed 70 degrees Fahrenheit, with daytime highs often below 60 degrees Fahrenheit. Annual precipitation in the vicinity of the PPSA is about 9 inches, almost 85% of which falls between the months of October and March. Nearly all precipitation falls in the form of rain.

The principal drainage of the area and the project vicinity is the Tule River, which flows from east to west approximately 6 miles north of the northern block of the PPSA. Deer Creek flows from east to west approximately 3 miles south of the southern block of the PPSA. Both the Tule River and Deer Creek historically contained large areas of riparian, wetland, and aquatic ecosystems that supported large populations of diverse native plants and animals. Presently, both drainages support only a fraction of the riparian habitat it once supported and the aquatic habitat has been greatly degraded from agricultural runoff and irregular flows. In essence, the channels have been reduced to a series of distributary channels supplying water to farmland in the region.

The PPSA is situated within a matrix of agricultural lands, industrial complexes, and residential/commercial development associated with the community of Pixley. The northern block of the PPSA is bordered by orchard and vineyard to the north, industrial lands associated with a dairy to the east and south, and agricultural lands to the west. The southern block of the PPSA is bordered by residential lands to the north, an industrial complex, agricultural lands, and

Highway 99 to the east, fallow field to the south, and ruderal lands of the Harmon Field (airport) to the west.

2.2 PROJECT SITE

The PPSA consists of agricultural fields, orchard land, a small livestock facility, an industrial complex, and two residential properties. The topography of the site is relatively level, with an average elevation of 265 feet National Geodetic Vertical Datum (NGVD).

Three soil mapping units were identified within the PPSA: Tagus loam, 0-2 percent slopes, Akers-Akers saline sodic, 0-2 percent slopes, and Hanford sandy loam, 0-2 percent slopes (NRCS 2014). Depressions within the Akers-Akers complex and drainages within the Hanford sandy loam soil mapping units are considered hydric. Hydric soils are defined as saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions such that under sufficiently wet conditions hydrophytic vegetation is supported. However, due to long-term management, soils of the site exhibited no characteristics of hydric soils.

2.3 BIOTIC HABITATS/LAND USES

Seven land use/habitat types were observed within the PPSA during the April 2014 biological field survey: agricultural field, orchard, ruderal, industrial/residential, livestock facility, irrigation basin, and irrigation ditch (Figures 3a and 3b). A list of the vascular plant species observed within the PPSA and the terrestrial vertebrates using, or potentially using, the PPSA are provided in Appendices A and B, respectively. Selected photographs of the PPSA are presented in Appendix C.









Avenue 120

Road 120

LEGEND

 PPSA Boundaries

Habitat/Land Use Type

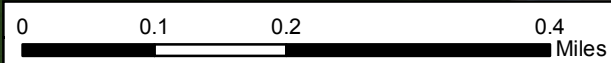
-  Agricultural Field
-  Industrial/Residential
-  Irrigation Basin
-  Livestock Facility
-  Orchard
-  Ruderal



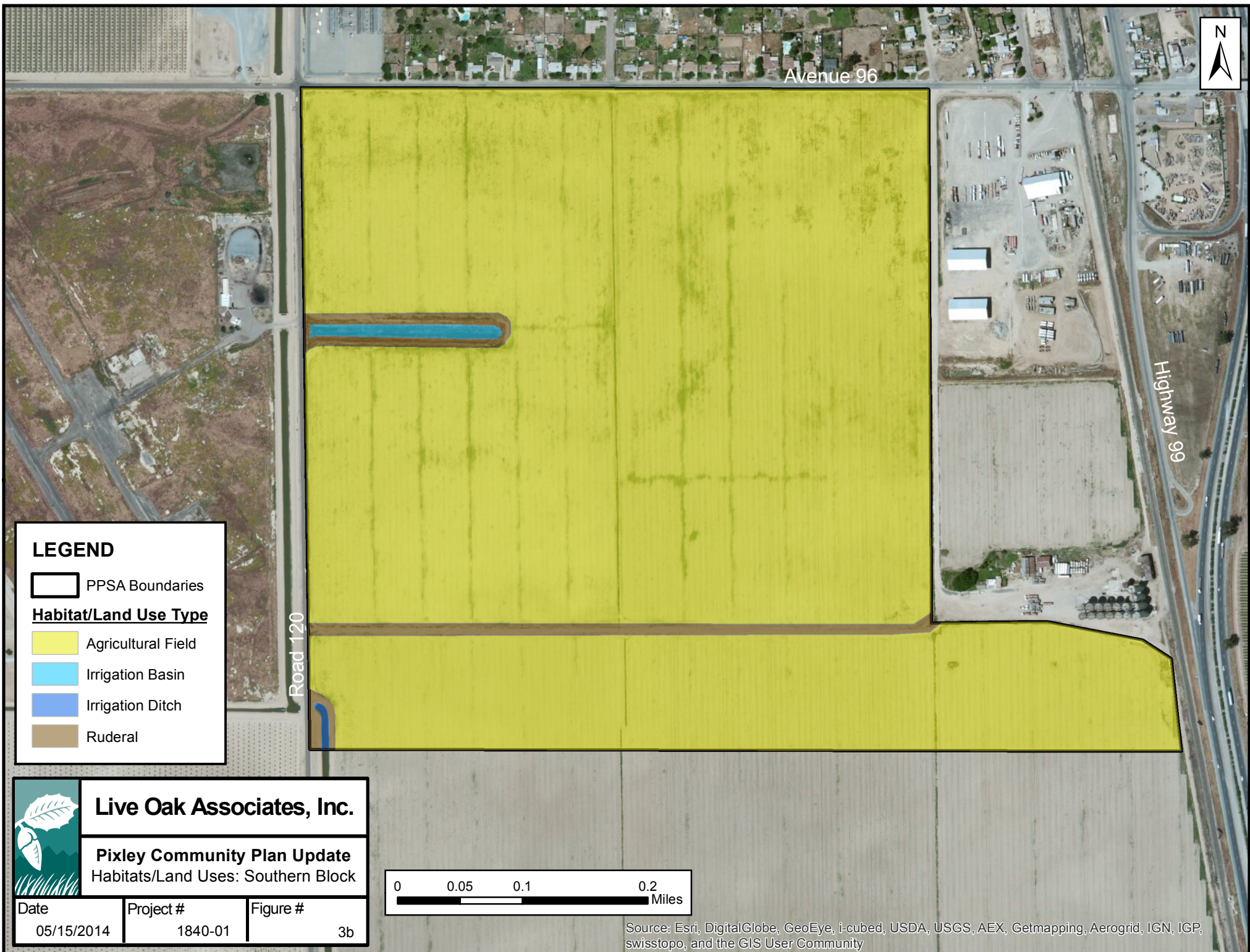
Live Oak Associates, Inc.

Pixley Community Plan Update
Habitats/Land Uses: Northern Block

Date	Project #	Figure #
05/15/2014	1840-01	3a



Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



2.3.1 Agricultural Field

Agricultural field comprised much of both portions of the PPSA. A highly-maintained corn field (*Zea mays* ssp. *mays*) and recently harvested dry-farmed oat field (*Avena barbata*), both approximately 75 acres in size, were observed within the northeastern portion of the northern block of the PPSA, and an 80-acre wheat (*Triticum* sp.) field was observed at the southern extent of this block. A 130-acre corn field and a 40-acre portion of a larger, weedy fallow field comprised almost the entirety of the southern block of the PPSA. With the exception of the fallow field, all agricultural fields were devoid of other vegetation besides the agricultural crop. The fallow field contained remnant corn in addition to barnyard barley (*Hordeum murinum* ssp. *leporinum*), white goosefoot (*Chenopodium album*), mayweed (*Anthemis cotula*), and Bermuda grass (*Cynodon dactylon*).

Intensive agricultural practices on the agricultural fields of the PPSA likely limit their value to wildlife; however, some wildlife species undoubtedly occur in the fields. Amphibians with the potential to use agricultural fields of the PPSA include Pacific chorus frogs (*Pseudacris regilla*) and western toads (*Bufo boreas*), both of which may breed in nearby irrigation ditches and subsequently disperse through the fields. Reptiles that could occur in the fields include the side-blotched lizard (*Uta stansburiana*), western whiptail (*Cnemidophorus tigris*), Pacific gopher snake (*Pituophis catenifer catenifer*), and common kingsnake (*Lampropeltis getulus*).

Agricultural fields also provide foraging habitat for a number of avian species. Common resident species likely to forage in the agricultural fields of the PPSA include mourning doves (*Zenaida macroura*) and American crows (*Corvus brachyrhynchos*), as well as mixed flocks of Brewer's blackbirds (*Euphagus cyanocephalus*), brown-headed cowbirds (*Molothrus ater*), and European starlings (*Sturnus vulgaris*); all but the Brewer's blackbird were observed during the field survey. Summer migrants that would be common on agricultural lands of the PPSA include the western kingbird (*Tyrannus verticalis*), also observed during the survey, while common winter migrants include the savannah sparrow (*Passerella sandwichensis*) and American pipit (*Anthus rubescens*).

Although less common, certain birds may use agricultural fields of the PPSA for nesting. For example, both red-winged blackbirds (*Agelaius phoeniceus*) and tricolored blackbirds (*Agelaius tricolor*) may nest in wheat. During the April 2014 survey, a large number of red-winged blackbirds were observed flying in and out of a wheat field bordering the northern block of the PPSA to the west, and a smaller number appeared to be using the on-site wheat field. Although no nests were observed, any nests that would have been present would have likely been obscured by the wheat crop, which was 2-3 feet high and extremely dense.

A few mammal species may also occur within the agricultural fields of the PPSA. Small mammals such as deer mice (*Peromyscus maniculatus*) and California voles (*Microtus californicus*) would occur in fluctuating numbers depending on the season and yearly agricultural practices. Botta's pocket gophers (*Thomomys bottae*) and California ground squirrels (*Otospermophilus beecheyi*) could burrow around the perimeter of active fields, or within fields during fallow periods. Other small mammals that may occur from time to time within the agricultural fields of the PPSA include black-tailed hares (*Lepus californicus*) and Audubon cottontail rabbits (*Sylvilagus audubonii*). Various species of bat may also forage over the fields of the PPSA for flying insects.

The presence of amphibians, reptiles, birds and small mammals is likely to attract foraging raptors and mammalian predators. Raptors such as red-tailed hawks (*Buteo jamaicensis*), northern harriers (*Circus cyaneus*), and American kestrels (*Falco sparverius*) would likely forage over agricultural fields of the PPSA; all were observed during the field survey. Mammalian predators occurring in agricultural fields of the PPSA would most likely be limited to raccoons (*Procyon lotor*), striped skunks (*Mephitis mephitis*), coyotes (*Canis latrans*) and red foxes (*Vulpes vulpes*), as these species are relatively tolerant of human disturbance.

2.3.2 Orchard

Two orchards were observed within the northern block of the PPSA during the April 2014 field survey. A 70-acre immature almond (*Prunus dulcis*) orchard occurred in the southeastern portion of this block, and an area of approximately 110 acres was being prepared for orchard

planting in the northwestern portion of this block. Being highly maintained, these orchards were mostly barren in the understory.

Due to intensive disturbance and the lack of aquatic habitat, orchards provide marginal habitat for amphibians; however, Pacific chorus frogs and western toads may disperse through orchard lands during the winter and spring. A limited number of reptile species would be expected to forage in orchards of the PPSA due to the lack of sun required by these species for thermal regulation; however, the western fence lizard (*Sceloporus occidentalis*), Pacific gopher snake, common kingsnake, and western rattlesnake (*Crotalus viridis*) may occasionally occur.

Orchards provide foraging and nesting habitat for a number of avian species. Once the orchards of the PPSA become mature, they could be used for nesting by the American robin (*Turdus migratorius*), mourning dove, and western kingbird. The latter two species were observed during the field survey. Winter migrants such as the white-crowned sparrow (*Zonotrichia leucophrys*) and yellow-rumped warbler (*Setophaga coronata*) would also be expected to use orchards of the PPSA for foraging and cover.

A few small mammal species would be expected to occur within the orchards of the PPSA. These include deer mice, California voles, house mice (*Mus musculus*), Botta's pocket gophers, and Audubon cottontail rabbits. Various species of bat may forage over orchard habitat for flying insects, or glean insects from the leaves of trees.

Foraging raptors and mammalian predators may occur in orchards of the PPSA from time to time. Raptors adapted to hunt within the tree canopy such as Cooper's hawks (*Accipiter cooperii*) and sharp-shinned hawks (*Accipiter striatus*) may forage for small birds in orchards. Mammalian predators potentially occurring in orchards of the PPSA would be the same as those described for agricultural fields.

2.3.3 Ruderal

Ruderal (disturbed) areas consisted of the roads and road margins of the PPSA, and the barren or sparsely vegetated strips of land bordering the industrial/residential areas, irrigation basins, and irrigation ditch. Ruderal areas contained a sparse cover of common agricultural weeds, which

included mayweed (*Anthemis cotula*), wild oats (*Avena fatua*), Canada horseweed (*Erigeron canadensis*), common morning glory (*Convolvulus arvensis*), and Bermuda grass. The ruderal margin of Road 116 in the northern block of the PPSA contained several walnut and mulberry trees, and one Washington fan palm (*Washingtonia filifera*).

Although the wildlife habitat value of ruderal lands within the PPSA is relatively low, these lands certainly support some wildlife species. The reptile and amphibian species listed for agricultural fields could potentially use ruderal habitats of the PPSA, as well. Mourning doves and northern mockingbirds could be expected to occur on these ruderal lands, as could the disturbance-tolerant killdeer (*Charadrius vociferous*), which often nests on gravel or bare ground; all three species were observed during the field survey. The walnut and mulberry trees along the ruderal margin of Road 116 could be used for nesting by western kingbirds or Bullock's orioles, and the fan palm could be used by hooded orioles (*Icterus cucullatus*) and European starlings.

Small mammals that would be expected to occur on ruderal lands of the PPSA include California ground squirrels, Botta's pocket gophers, deer mice, California voles, and house mice. Several California ground squirrel burrows were observed under the walnut and mulberry trees along Road 116. Mammalian predators with the potential to occur on ruderal lands of the study area include disturbance-tolerant species such as the raccoon, red fox, and coyote.

2.3.4 Industrial/Residential

Industrial/residential areas comprised a small portion of the PPSA. One residence was located along the northern boundary of the northern block of the PPSA (Avenue 120), and an agricultural industrial complex and associated residence was located along that block's eastern boundary (Road 120). Both residential areas included houses and associated structures, landscaped areas with grass, trees, and shrubs, and paved and gravel surfaces. The agricultural industrial complex had a gravel substrate and was used for storing equipment and pipes. Ornamental vegetation that had been planted in concentrated areas around the industrial/residential lands included walnut (*Juglans* sp.), mulberry (*Morus alba*), Raywood ash (*Fraxinus oxycarpa* 'Raywood'), coast

redwood (*Sequoia sempervirens*), Atlas cedar (*Cedrus atlantica*), iris (*Iris* sp.), California poppy (*Eschscholzia californica*), and cultivated rose (*Rosa* sp.).

A number of wildlife species adapted to human disturbance could be expected to occur in the industrial/residential land of the PPSA. For example, amphibians such as Pacific chorus frogs and western toads might disperse through industrial/residential land during the winter and spring, and reptiles such as the western fence lizard and common garter snake (*Thamnophis sirtalis*) could forage in this land use type. Buildings and other human-made structures located within the industrial/residential land of the PPSA provide potential nesting habitat for a number of avian species such as the house finch (*Haemorhous mexicanus*), house sparrow (*Passer domesticus*), and Eurasian collared dove (*Streptopelia decaocto*); all were observed during the field survey. Trees and shrubs associated with the two residences could be used for nesting by a variety of avian species, including the Bullock's oriole (*Icterus bullockii*), northern mockingbird (*Mimus polyglottos*), and Anna's hummingbird (*Calypte anna*). Mammal species attracted to this land use type may include the house mouse, Norway rat (*Rattus norvegicus*), and Virginia opossum (*Didelphis virginiana*).

Birds of prey may occasionally forage over the industrial/residential areas. The red-tailed hawk and American kestrel are likely visitors; both were observed on or near industrial/residential land of the site during the field survey.

2.3.5 Livestock Facility

A small livestock facility was located near the northern boundary of the northern block of the PPSA. It appeared to consist entirely of a 2-acre feedlot containing dairy cattle. There were no structures in the immediate vicinity of the feedlot, suggesting that the facility functioned only to raise (or contain) cattle, and not to produce milk. The feedlot was barren of vegetation.

Several wildlife species adapted to livestock operations and/or tolerant of human disturbance could be expected to occur in or around the feedlot. Certain avian species feed opportunistically on arthropods kicked up by cattle; among these are brown-headed cowbirds, Brewer's blackbirds, and cattle egret (*Bubulcus ibis*). Reptiles, amphibians, and mammals likely to occur in the feedlot would be the same as those discussed for the industrial/residential land use type.

2.3.6 Irrigation Basin

Three irrigation basins were identified within the PPSA. Two of the basins were found in the northern block of the PPSA and one basin was found in the southern block. The northern basin of the northern block contained a mix of upland and wetland vegetation including, but not limited to, fiddle dock (*Rumex pulcher*), prostrate knotweed (*Polygonum aviculare*), annual bluegrass (*Poa annua*), and barnyard grass (*Leptochloa fusca* ssp. *fascicularis*). The southern basin of the northern block was inundated and unvegetated. The irrigation basin of the southern block of the PPSA was dominated by fiddle dock, tumbling mustard (*Sisymbrium altissimum*), ryegrass (*Lolium multiflorum*) and white goosefoot.

Wildlife use of irrigation basins would vary depending on the timing and degree to which the basins are inundated or saturated. During periods of inundation, amphibians such as the Pacific chorus frog and western toad could opportunistically breed in the basins and subsequently disperse through surrounding lands. During dry periods, reptile and amphibian use of the basins would be similar to that described for agricultural fields of the PPSA.

Birds expected to use the basins during periods of inundation may include the great blue heron (*Ardea herodias*) and great egret (*Ardea alba*), assuming amphibian and/or invertebrate prey is present. Black phoebes (*Sayornis nigricans*) may glean insects from the surface of the water, or extract mud from the banks for nest-building. When the basins are saturated but not inundated, avian use may include those species that feed on mudflats, such as the killdeer. When the basins are dry, avian use would be similar to that described for agricultural fields and ruderal habitats of the study area.

Periodic inundation likely precludes occupation of the basin floors by burrowing rodents; however, Botta's pocket gophers and California ground squirrels could burrow on the banks. Deer mice and western harvest mice could also inhabit the margins of the basins and could forage for insects, seeds, and plant parts in the basins when the basins are dry. Mammalian predator and raptor use of the basins would be similar to that described for other habitats of the PPSA.

2.3.7 Irrigation Ditch

An earthen irrigation ditch approximately 30 feet in width passed through the southwestern corner of the southern block of the PPSA. The ditch entered the PPSA from the south along the western boundary of the fallow field, and traveled north for approximately 150 feet before turning to the west, traveling an additional 50 feet, then exiting the PPSA under Road 120. The ditch was dry during the spring field survey. Even during the peak of spring, all vegetation observed within the ditch was brown and dried, suggesting spraying with herbicide. The vegetation that was observed was dominated by bearded sprangletop (*Leptochloa fusca* ssp. *fascicularis*), with sparse Bermuda grass, tall flatsedge (*Cyperus eragrostis*), and Russian thistle (*Salsola tragus*).

Due to the lack of vegetation in the irrigation ditch, this habitat would be of limited value to native wildlife. However, the introduced bullfrog (*Lithobates catesbeianus*) and mosquitofish (*Gambusia affinis*) may occur in the ditch during periods of inundation; these and other prey species may attract wading birds such as the great blue heron and great egret. The cliff swallow (*Petrochelidon pyrrhonota*) could potentially nest on the Road 120 bridge over the ditch; this species was frequently observed during the April 2014 survey nesting on bridges and other structures adjacent to the PPSA.

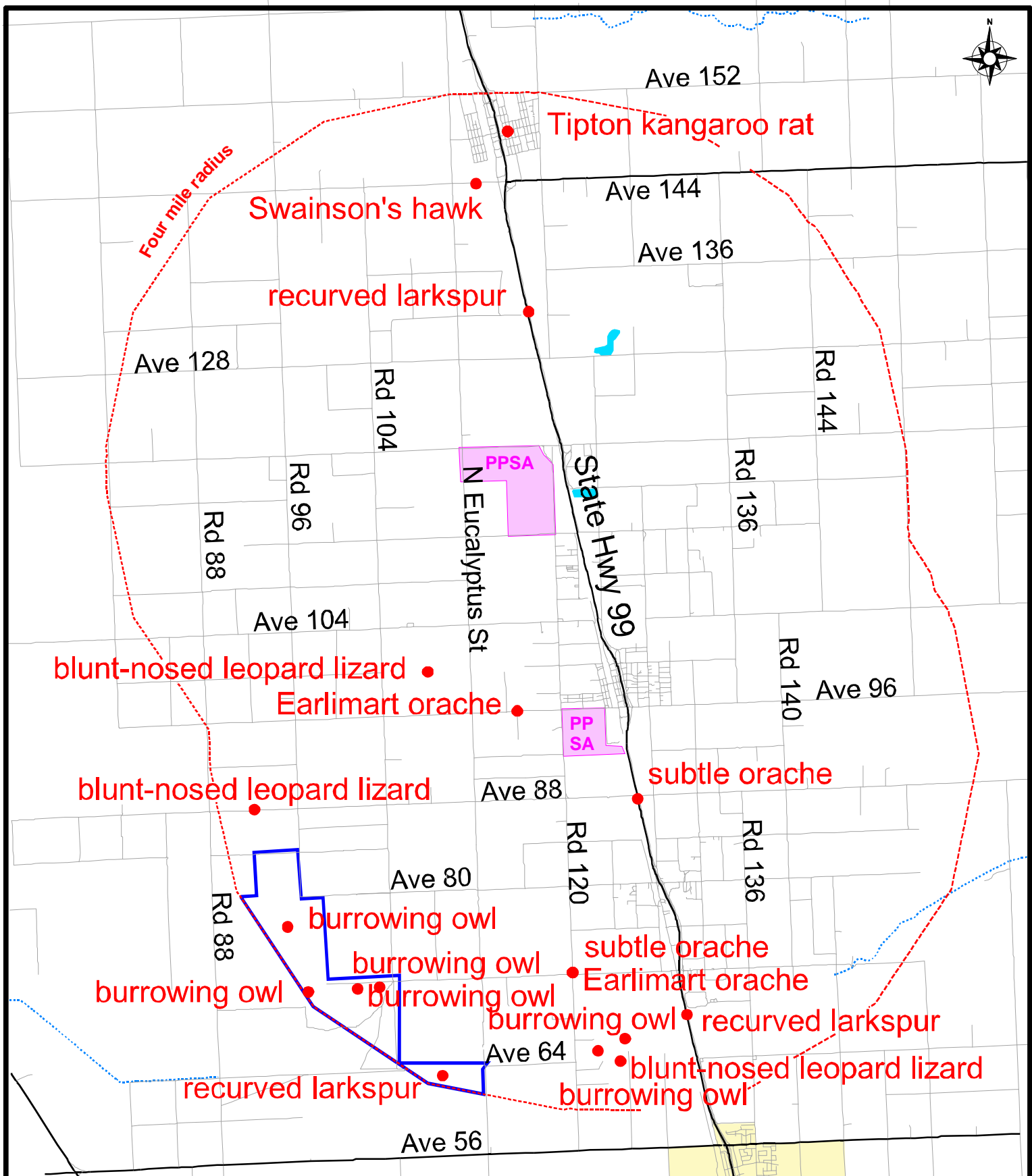
2.4 SPECIAL STATUS PLANTS AND ANIMALS

Several species of plants and animals within the state of California have low populations and/or limited distributions. Such species may be considered “rare” and are vulnerable to extirpation as the state’s human population grows and the habitats these species occupy are converted to agricultural and urban uses. As described more fully in Section 3.2, state and federal laws have provided the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. A sizable number of native plants and animals have been formally designated as “threatened” or “endangered” under state and federal endangered species legislation. Others have been designated as candidates for such listing. Still others have been designated as “species of special concern” by the CDFW. The California Native Plant Society

(CNPS) has developed its own set of lists of native plants considered rare, threatened, or endangered. Collectively, these plants and animals are referred to as “special status species.”

A number of special status plants and animals occur in the vicinity of the PPSA (Figures 4 and 5). These species, and their potential to occur within the PPSA, are listed in Table 1 in the following pages. Sources of information for this table included *California’s Wildlife, Volumes I, II, and III* (Zeiner et. al 1988-1990), *California Natural Diversity Data Base* (CDFW 2014), *Endangered and Threatened Wildlife and Plants* (USFWS 2011), *Annual Report on the Status of California State Listed Threatened and Endangered Animals and Plants* (CDFW 2014), and *The California Native Plant Society’s Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2014). It is important to note that the California Natural Diversity Data Base (CNDDB) is a volunteer database; therefore, it may not contain all known literature records.

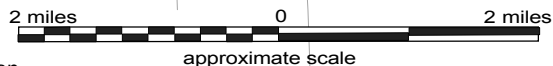
A search of published accounts for all of the relevant special status plant and animal species was conducted for the *Pixley* and *Tipton* USGS 7.5-minute quadrangle in which the PPSA occurs, and for the ten surrounding quadrangles (*Alpaugh, Taylor Weir, Woodville, Sausalito School, Delano East, Delano West, Allensworth, Paige, Tulare* and *Cairns Corner*) using the CNDDB Rarefind 5 (2014) program.




LEGEND

- Special status species observation
- Vernal pool fairy shrimp critical habitat

Sources:
California Dep. of Fish & Wildlife Natural Diversity Database
U.S. Fish & Wildlife Service



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Pixley Community Plan Update Special-status Species		
Date	Project #	Figure #
4/24/2014	1840-01	4

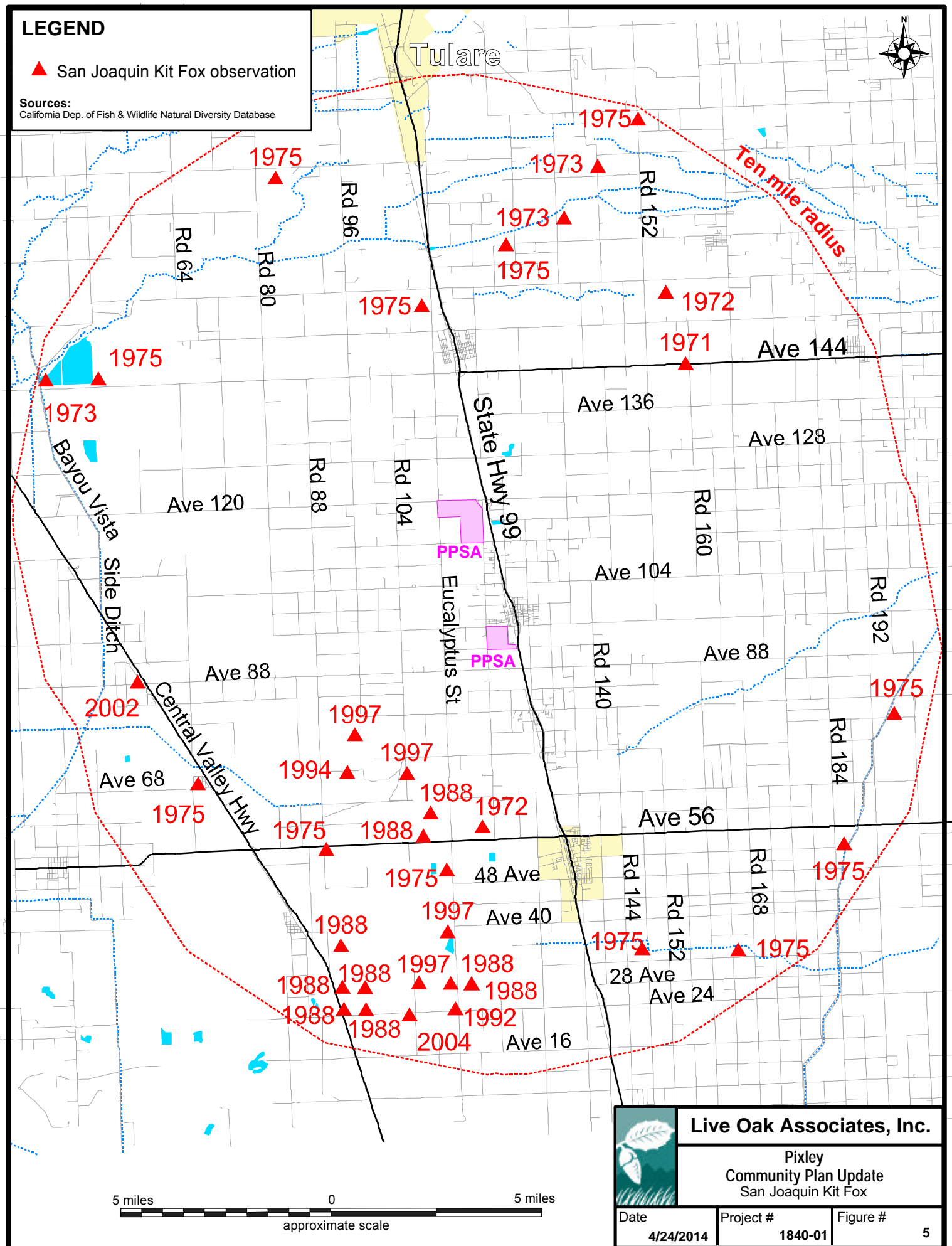
LEGEND

▲ San Joaquin Kit Fox observation

Sources:

California Dep. of Fish & Wildlife Natural Diversity Database

Tulare



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Pixley
Community Plan Update
San Joaquin Kit Fox

Date	Project #	Figure #
4/24/2014	1840-01	5

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE PIXLEY PPSA

PLANTS (adapted from CDFW 2014 and CNPS 2014)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	Occurrence within the PPSA
California Jewelflower (<i>Caulanthus californicus</i>)	FE, CE	Occurs in chenopod scrub, pinyon and juniper woodland, and sandy valley and foothill grassland; blooms February–May; elevation 250-3,300 ft.	Absent. Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
San Joaquin Adobe Sunburst (<i>Pseudobahia peirsonii</i>)	FT, CE CNPS 1B	This annual sunflower occurs in grasslands of the Sierra Nevada foothills in heavy clay soils of the Porterville and Centerville series. Blooms March-April; elevation 300-2,625 ft.	Absent. Suitable heavy clay soils of the Porterville and Centerville series are absent from the PPSA.

CNPS-Listed Plants

Earlimart Orache (<i>Atriplex cordulata</i> var. <i>erecticaulis</i>)	CNPS 1B	Occurs in valley and foothill grassland between 130 and 330 ft. in elevation; blooms August-September.	Absent. Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Lost Hills Crownscale (<i>Atriplex coronata</i> var. <i>vallicola</i>)	CNPS 1B	Found in chenopod scrub and valley and foothill grasslands; alkaline soils; blooms April-August; elevations to 2,080 ft.	Absent. Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Brittlescale (<i>Atriplex depressa</i>)	CNPS 1B	Occurs in relatively barren areas with alkaline clay soils in chenopod scrub, playas, grasslands, and vernal pools of the Central Valley; blooms April-October; elevations below 1,050 ft.	Absent. Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Lesser Saltscale (<i>Atriplex minuscula</i>)	CNPS 1B	Occurs widely scattered locations of California's Central Valley with sandy alkaline soils in chenopod scrub, valley grasslands, and vernal pools; blooms May-October; elevation 50-660 ft.	Absent. Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Vernal Pool Smallscale (<i>Atriplex persistens</i>)	CNPS 1B	Occurs in alkaline vernal pools; blooms July-Oct.; elevations below 400 ft.	Absent. Vernal pool habitat is absent from the PPSA.
Subtle Orache (<i>Atriplex subtilis</i>)	CNPS 1B	Occurs in valley and foothill grassland; blooms August-October; elevation 130-330 ft.	Absent. Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Alkali Mariposa-Lily (<i>Calochortus striatus</i>)	CNPS 1B	Found in chaparral, chenopod scrub, and meadows and seeps; alkaline soils; blooms April-June; elevations to 5,000 ft.	Absent. Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Recurved Larkspur (<i>Delphinium recurvatum</i>)	CNPS 1B	Occurs on alkaline soils in chenopod scrub, cismontane woodland, and grasslands; blooms March-June; elevations below 2,500 ft.	Absent. Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Spiny-Sepaled Button Celery (<i>Eryngium spinoseplum</i>)	CNPS 1B	This annual/perennial occurs in vernal pools and valley and foothill grasslands of the San Joaquin Valley and the Tulare Basin; blooms April-May; elevation 330-840 ft.	Absent. Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE PIXLEY PPSA

PLANTS – cont’d

CNPS-Listed Plants

Species	Status	Habitat	Occurrence within the PPSA
Coulter’s Goldfields (<i>Lasthenia glabrata</i> spp. <i>coulteri</i>)	CNPS 1B	Occurs in alkaline soils of playas and vernal pools; blooms February-June; elevation up to 4000 ft.	Absent. Vernal pools and playas are absent from the PPSA.

ANIMALS (adapted from CDFW 2014)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Vernal Pool Fairy Shrimp (<i>Branchinecta lynchi</i>)	FT	Occurs in vernal pools, clear to tea-colored water in grass or mud-bottomed swales, and basalt depression pools.	Absent. Habitat suitable for this species is absent from the PPSA.
Valley Elderberry Longhorn Beetle (VELB) (<i>Desmocerus californicus dimorphus</i>)	FT	Lives in mature elderberry shrubs of California’s Central Valley and Sierra Foothills, generally along waterways and in floodplains.	Absent. No elderberry shrubs were observed during the April 2014 field survey. The only vegetated portions of the PPSA for which full visual coverage was not possible were the interior of the almond orchard and portions of the two residential areas that were obscured from the road. Elderberry shrubs are presumed absent from the almond orchard due to intensive maintenance practices within. While it is possible that elderberry shrubs occur in the residential areas, VELB are presumed absent because of the isolation of any on-site shrubs from intact elderberry habitat and source populations of VELB. The CNDDB lists no VELB occurrences within a 10-mile radius of the PPSA.
Blunt-Nosed Leopard Lizard (<i>Gambelia sila</i>)	FE, CE, CFP	Occurs in semiarid grasslands, alkali flats, and washes. Avoids densely vegetated areas. Inhabits the San Joaquin Valley and adjacent valleys and foothills north to southern Merced County.	Absent. Any potential blunt-nosed leopard lizard habitat that may have once been present has been eliminated through intensive agricultural uses.
Swainson’s Hawk (<i>Buteo swainsoni</i>)	CT	This breeding-season migrant to California nests in mature trees in riparian areas and oak savannah, and occasionally in lone trees at the margins of agricultural fields. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations.	Possible. The PPSA does not contain likely nesting habitat for Swainson’s hawks, but hawks could forage over the agricultural fields of the site.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE PIXLEY PPSA

ANIMALS – cont’d.

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	Occurrence within the PPSA
Western Snowy Plover (<i>Charadrius alexandrinus nivosus</i>)	FT, CSC	Breeding migrant to the San Joaquin Valley, where it may be found on salt pond levees and shores of large alkali lakes. Requires sandy, gravelly, or friable soils for nesting.	Unlikely. The irrigation basins of the PPSA are not typical of where this species usually nests; moreover, the PPSA is situated several miles outside of the known breeding distribution of the western snowy plover in the San Joaquin Valley. The nearest nesting occurrence of this species is approximately 11 miles to the southwest.
Nelson’s Antelope Squirrel (<i>Ammospermophilus nelson</i>)	CT	Occurs in the San Joaquin Valley in broken terrain with small gullies and washes. Suitable habitats include widely spaced alkali scrub and annual grassland.	Absent. Any potential Nelson’s antelope squirrel habitat that may have once been present has been eliminated through intensive agricultural uses.
Tipton Kangaroo Rat (<i>Dipodomys nitratoideus nitratoideus</i>)	FE, CE	Occupies underground burrows in valley saltbrush scrub and valley sink scrub habitats in the southern San Joaquin Valley.	Absent. Any potential Tipton’s kangaroo rat habitat that may have once been present has been eliminated through intensive agricultural uses.
San Joaquin Kit Fox (SJKF) (<i>Vulpes macrotis mutica</i>)	FE, CT	Frequents desert alkali scrub and annual grasslands and may forage in adjacent agricultural habitats. Utilizes enlarged (6 to 10 inches in diameter) ground squirrel burrows as denning habitat.	Possible. Intensive agricultural practices, highly modified habitats, and ongoing disturbance make kit fox occupation of the PPSA unlikely. However, individual SJKF may pass through or forage on the PPSA from time to time, and the fallow field and ruderal areas could theoretically be used for denning. The CNDDDB lists 35 occurrences of SJKF within 10 miles of PPSA boundaries; all but two sightings are from more than 15 years ago.

State Species of Special Concern or Fully Protected

Kern Brook Lamprey (<i>Entosphenus hubbsi</i>)	CSC	Requires perennial waters. Occurs in the Friant-Kern Canal and the lower Merced, Kaweah, Kings, and San Joaquin Rivers.	Absent. Perennial waters required by this species are absent from the PPSA.
Western Spadefoot (<i>Spea hammondi</i>)	CSC	Mainly occurs in grasslands of San Joaquin Valley. Vernal pools or other temporary wetlands are required for breeding. Aestivates in underground refugia such as rodent burrows, typically within 1,200 ft. of aquatic habitat.	Absent. Vernal pool complexes suitable for breeding by the western spadefoot are absent from the PPSA and surrounding lands within approximately 3 miles. Rodent burrows within the PPSA are located within marginal habitats too remote from potential breeding habitat to be used for aestivation by the spadefoot.
Coast Horned Lizard (<i>Phrynosoma blainvillii</i>)	CSC	Occurs in the lower Sierra foothills and throughout the central and southern California coast in relatively open areas.	Absent. Any potential coast horned lizard habitat that may have once been present has been eliminated through intensive agricultural uses.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE PIXLEY PPSA

ANIMALS – cont’d.

State Species of Special Concern or Fully Protected

Species	Status	Habitat	Occurrence within the PPSA
San Joaquin Coachwhip (<i>Coluber flagellum ruddocki</i>)	CSC	Occurs in open, dry areas including grassland and saltbrush scrub. Takes refuge in rodent burrows and under shaded vegetation.	Absent. Any potential San Joaquin coachwhip habitat that may have once been present has been eliminated through intensive agricultural uses.
Northern Harrier (<i>Circus cyaneus</i>)	CSC	Frequents meadows, grasslands, open rangelands, freshwater emergent wetlands. Nests on ground, generally in wet areas, although grassland, pasture, and cultivated fields may be used.	Present. This species may forage within and adjacent to the PPSA, but breeding habitat is absent. A northern harrier was observed flying over the PPSA’s almond orchard during the April 2014 survey.
Lesser Sandhill Crane (<i>Grus canadensis canadensis</i>)	CSC	Winters in the Central Valley, where it frequents grasslands, moist croplands with rice or corn stubble, and emergent wetlands. Breeds in the Arctic.	Possible. Lesser sandhill cranes could forage in agricultural fields of the PPSA post-harvest. This subspecies winters on the nearby Pixley National Wildlife Refuge, but does not breed in California.
White-tailed Kite (<i>Elanus leucurus</i>)	CFP	Occurs in savannah, open woodlands, marshes, desert grassland, and cultivated fields. Prefer lightly grazed or ungrazed fields for foraging.	Possible. The PPSA does not contain likely nesting habitat for white-tailed kites, but kites could forage over the agricultural fields of the site.
Burrowing Owl (<i>Athene cunicularia</i>)	CSC	Frequents open, dry annual or perennial grasslands, deserts, and scrublands characterized by low growing vegetation. Dependent upon burrowing mammals, most notably the California ground squirrel, for nest burrows.	Possible. Suitably-sized burrows on the PPSA were observed under the walnut and mulberry trees lining Road 116; these burrows represent unlikely roosting/nesting habitat for burrowing owls. However, burrowing owls could roost/nest in the ruderal grasslands of Harmon Field immediately west of the southern block of the PPSA, and forage in on-site agricultural fields.
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	CSC	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low herbaceous cover. In the Central Valley, nests in riparian area, desert scrub, and occasionally agricultural hedgerows.	Possible. Marginal nesting habitat for shrikes is available in trees of the PPSA, and shrikes could forage in on-site agricultural fields.
Tricolored Blackbird (<i>Agelaius tricolor</i>)	CSC	Breeds in colonies near fresh water, primarily emergent wetlands, with tall thickets. Forages in grassland and cropland habitats.	Possible. Suitable foraging habitat for tricolored blackbirds occurs in the agricultural fields of the PPSA, and tricolored blackbirds could conceivably nest in the wheat field of the PPSA’s northern block.
Dulzura Pocket Mouse (<i>Chaetodipus californicus femoralis</i>)	CSC	Occupies a wide variety of habitats including woodland, chaparral, and annual grassland, and particularly in chaparral/grassland edge zones.	Absent. Any potential Dulzura pocket mouse habitat that may have once been present has been eliminated through intensive agricultural uses.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE PIXLEY PPSA

ANIMALS – cont’d.

State Species of Special Concern or Fully Protected

Species	Status	Habitat	Occurrence within the PPSA
Pallid Bat (<i>Antrozous pallidus</i>)	CSC	Found in grasslands, chaparral, and woodlands, where it feeds on ground- and vegetation-dwelling arthropods, and occasionally take insects in flight. Prefers to roost in rock crevices, but may also use tree cavities, caves, bridges, and buildings.	Possible. Individuals of this species could potentially roost in trees or buildings of the PPSA, and forage in or over agricultural fields and orchards.
Western Mastiff Bat (<i>Eumops perotis</i> ssp. <i>californicus</i>)	CSC	Found in open, arid to semi-arid habitats, where it feeds on insects in flight. Roosts most commonly in crevices in cliff faces, but may also use high buildings, trees, and tunnels.	Possible. Individuals of this species could potentially roost in trees or buildings of the PPSA, and forage in flight over agricultural fields.
American Badger (<i>Taxidea taxus</i>)	CSC	Uncommon resident statewide; most abundant in drier open stages of most shrub, forest, and herbaceous habitats.	Possible. Badgers may occasionally pass through the PPSA, foraging in agricultural fields of the site and possibly denning in ruderal areas or the fallow field.

Occurrence Terminology:

Present:	Species observed on the site at time of field surveys or during recent past.
Likely:	Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.
Possible:	Species not observed on the site, but it could occur there from time to time.
Unlikely:	Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient.
Absent:	Species not observed on the site, and precluded from occurring there because habitat requirements not met.

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FPE	Federally Endangered (Proposed)	CR	California Rare
FPT	Federally Threatened (Proposed)	CFP	California Fully Protected
FC	Federal Candidate	CSC	California Species of Special Concern
CNPS	California Native Plant Society Listing		
1A	Plants Presumed Extinct in California	2	Plants Rare, Threatened, or Endangered in California, but more common elsewhere
1B	Plants Rare, Threatened, or Endangered in California and elsewhere		

2.5 ENDANGERED, THREATENED, OR SPECIAL STATUS PLANT AND ANIMAL SPECIES MERITING FURTHER DISCUSSION

2.5.1 Swainson's Hawk (*Buteo swainsoni*). Federal Listing Status: None; State Listing Status: Threatened

Ecology of the species. Swainson's hawks are large, long-winged, broad-tailed hawks with a high degree of mate and territorial fidelity. They are breeding season migrants to California, arriving at their nesting sites in March or April. The young hatch sometime between March and July and fledge 4 to 6 weeks later. By October, most birds have left for wintering grounds in South America. In the Central Valley, Swainson's hawks typically nest in large trees along riparian systems, but may also nest in oak groves, or lone, mature trees in agricultural fields or along roadsides. Nest sites are typically located adjacent to suitable foraging habitat. Swainson's hawks forage in large, open fields with abundant prey, including grasslands or lightly grazed pastures, alfalfa and other hay crops, and certain grain and row crops, primarily during or immediately after harvest (Estep 1989, Estep and Dinsdale 2012). Their designation as a California Threatened species is based on population decline due in part to loss of foraging habitat to urban development (CDFG 1994).

Potential to occur onsite. The few trees in the PPSA are unlikely to be used by nesting Swainson's hawks for several reasons. First, most trees of the PPSA are below the minimum nest tree height of 41.3 feet reported by Estep (1989) for Swainson's hawks in the Central Valley. In fact, the only trees greater than 40 feet tall at the time of the April 2014 survey were a Sitka spruce and coast redwood in the residential area along Avenue 120; neither species is among those typically used by Swainson's hawk (CDFG 1994, Estep 1989, Estep and Dinsdale 2012). Second, all trees in the PPSA are located adjacent to habitats in which prey would only be available to Swainson's hawks during or immediately after harvest (wheat, oats, and corn) or not at all (orchards); more typically, Swainson's hawk nests are located adjacent to habitats with readily available and abundant prey, such as alfalfa (CDFG 1994, Estep 1989).

The agricultural fields of the PPSA are likely to be used by Swainson's hawk for foraging during certain times of the year. The wheat field would be of primary value to Swainson's hawk at

harvest time, as before harvest prey are inaccessible and after harvest rodent populations are relatively low (Estep 1989). Oats are used infrequently by Swainson's hawk (Estep 1989), but the on-site oat field would presumably be suitable for foraging during harvest as is the case with other grains. Corn is of limited value to Swainson's hawks because its vegetation structure precludes foraging for much of the breeding season, prey populations are generally low, and harvest generally occurs after Swainson's hawks have begun fall migration (Estep and Dinsdale 2012). The weedy fallow field in the southern block of the PPSA could be used by Swainson's hawks throughout the breeding season, provided vegetation height and density doesn't increase to the point that prey becomes inaccessible.

2.5.2 San Joaquin Kit Fox (*Vulpes macrotus mutica*). Federal Listing Status: Endangered; State Listing Status: Threatened

Ecology of the species. By the time the San Joaquin kit fox (SJKF) was listed as federally endangered in 1967 and California threatened in 1971, it had been extirpated from much of its historic range. The smallest North American member of the dog family (Canidae), the kit fox historically occupied the dry plains of the San Joaquin Valley, from San Joaquin County to southern Kern County (Grinnell et al. 1937). Local surveys, research projects, and incidental sightings indicate that kit fox currently occupy available habitat on the San Joaquin Valley floor and in the surrounding foothills. Core SJKF populations are located in the natural lands of western Kern County, the Carrizo Plain Natural Area in San Luis Obispo County, and the Ciervo-Panoche Natural Area in western Fresno and eastern San Benito Counties (USFWS 1998).

The SJKF prefers habitats of open or low vegetation with loose soils. In the southern and central portion of the Central Valley, kit fox are found in valley sink scrub, valley saltbrush scrub, upper Sonoran subshrub scrub, and annual grassland (USFWS 1998). Kit fox may also be found in grazed grasslands, urban settings, and in areas adjacent to tilled or fallow fields (USFWS 1998). They require underground dens to raise pups, regulate body temperature, and avoid predators and other adverse environmental conditions (Golightly and Ohmart 1984). In the central portion of their range, they usually occupy burrows excavated by small mammals such as California ground

squirrels. The SJKF is primarily carnivorous, feeding on black-tailed hares, desert cottontails, rodents, insects, reptiles, and some birds.

Potential to occur onsite. The majority of the PPSA comprises orchard, industrial/residential lands, and active agricultural fields unsuitable for kit fox denning, and marginal to unsuitable for foraging due to ongoing human disturbance, limited prey base, and/or incompatible vegetative cover type. Under conditions observed at the time of the April 2014 survey, the 40-acre fallow field offered marginally suitable denning and foraging habitat for kit fox; however, no burrows of any kind were observed in the field during the survey. Kit fox also have the potential to den in ruderal road margins; several burrows of suitable size for kit fox were observed under the walnut and mulberry trees along the side of Road 116.

Kit fox are well-documented in the vicinity of the PPSA. The CNDDDB lists 35 occurrences of SJKF within 10 miles of PPSA boundaries; the closest of these is approximately 3.5 miles southwest of the southern block of the PPSA on the Pixley National Wildlife Refuge (see Figure 5). All but two of the detections are from more than 15 years ago, and most were documented in large expanses of contiguous grassland, in contrast to the agricultural matrix that characterizes the PPSA. Nevertheless, because of the presence of kit fox in the PPSA vicinity and the marginal suitability of portions of the PPSA for kit fox foraging and denning, it is possible that individuals pass through, forage within, and possibly even den within the PPSA from time to time.

2.5.3 Burrowing Owl (*Athene cunicularia*). Federal Listing Status: None; State Listing Status: Species of Special Concern.

Ecology of the species. The burrowing owl is primarily a grassland species, but may also occur in open shrub lands, grazed pastures, and occasionally agricultural lands. The primary indicators of suitable habitat appear to be burrows for roosting and nesting and relatively short vegetation, with only sparse areas of shrubs or taller vegetation. Burrowing owls roost and nest in the burrows of California ground squirrels, and occasionally also badger, coyote, or fox. The burrowing owl diet includes a broad array of arthropods, small rodents, birds, reptiles, and amphibians. In California, burrowing owl survival and reproductive success appears linked to

rodent populations, particularly California vole (*Microtus californicus*) (Gervais et al. 2006). In agricultural areas of the San Joaquin Valley, burrowing owls primarily forage within 600 meters of their nest burrows (Gervais et al. 2003). The burrowing owl was designated a California Species of Special Concern in 1978 following long-term population decline, primarily due to loss of habitat to development and agricultural practices.

Potential to occur onsite. Burrowing owls could theoretically roost or nest in those portions of the PPSA containing burrows of suitable size, and forage in open areas supporting a sufficient prey base. At the time of the April 2014 field survey, burrows of suitable size for burrowing owl were observed only under the walnut and mulberry trees on the side of Road 116. However, a protocol-level burrow survey was not conducted as part of the present analysis, and it is certainly possible that more such burrows exist in ruderal areas of the PPSA or on the 40-acre fallow field. Open areas suitable for foraging consist of the fallow field, and other agricultural fields of the PPSA before crops reach maturity or after harvest.

Burrowing owls are known to occur in the PPSA vicinity. The CNDDDB lists six occurrences of burrowing owl within a four-mile radius of the PPSA (see Figure 4); four were documented on the Pixley National Wildlife Refuge 3-4 miles southwest of the southern block of the PPSA, and the remaining two on a mosaic of agricultural lands and remnant grassland approximately 3 miles south of the southern block.

2.5.4 American Badger (*Taxidea taxus*). Federal Listing Status: None; State Listing Status: Species of Special Concern

Ecology of the species. The American badger is a burrowing member of the mink family that resides in grasslands, savannahs and prairies throughout much of the western United States. Badgers prey primarily on small mammals including ground squirrels, pocket gophers, and mice, which they capture by digging out the animals' burrows. Adult badgers are primarily nocturnal, foraging at night and remaining underground in sleeping dens during the day. Badgers may reuse sleeping dens, or dig a new sleeping den each day. Badgers mate in late summer to early fall, and the young are born in natal dens in March and April. Both sleeping dens and natal dens are dug in dry, friable soils with sparse overstory cover. While badgers rarely remain in a

sleeping den for more than a day, natal dens may be used for a period of 4-8 weeks as the female gives birth to and raises her young.

Potential to occur onsite. Most of the PPSA represents marginal to unsuitable habitat for the American badger due to high levels of ongoing disturbance. However, badgers may occasionally pass through the PPSA, foraging in agricultural fields and possibly denning in the fallow field or ruderal areas. No badger dens or other sign of the species was observed within the PPSA during the April 2014 survey.

2.6 JURISDICTIONAL WATERS

Jurisdictional waters include rivers, creeks, and drainages that have a defined bed and bank and which, at the very least, carry ephemeral flows. Jurisdictional waters also include lakes, ponds, reservoirs, and wetlands. Such waters may be subject to the regulatory authority of the U.S. Army Corps of Engineers (USACE), the CDFW, and the California Regional Water Quality Control Board (RWQCB). See Section 3.2.4 of this report for additional information.

The PPSA contains an irrigation ditch that would likely be considered jurisdictional by the USACE on the basis of its connection with Deer Creek both upstream and downstream of the PPSA. This unnamed irrigation ditch passes through the southern block of the PPSA for a distance of approximately 200 linear feet, covering an area of approximately 0.2 acre. Deer Creek historically flowed into Tulare Lake, which at times used to overflow into the San Joaquin River. Now Deer Creek ends in a series of distributary channels within the Tulare Lake Bed. The USACE has set a precedent of claiming tributaries of the Tulare Lake Basin due to historic connectivity. The USACE considers artificially constructed waterways such as the on-site irrigation ditch jurisdictional if they both receive and deliver water to a water of the U.S. Therefore, the irrigation ditch would likely also be considered a water of the U.S.

2.7 DESIGNATED CRITICAL HABITAT

As will be discussed further in Section 3.2.3, the USFWS often designates areas of “critical habitat” when it lists species as threatened or endangered. Critical habitat is a specific

geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.

Designated critical habitat is absent from the PPSA. However, as shown on Figure 4, critical habitat for the vernal pool fairy shrimp occurs on the Pixley National Wildlife Refuge, approximately 3 miles southwest of the southern block of the PPSA.

2.8 NATURAL COMMUNITIES OF SPECIAL CONCERN

Natural communities of special concern are those that are of limited distribution, distinguished by significant biological diversity, home to special status species, etc. CDFW is responsible for the classification and mapping of all natural communities in California. Natural communities are assigned state and global ranks according to their degree of imperilment. Any natural community with a state rank of 3 or lower (on a 1-5 scale) is considered of special concern. Examples of natural communities of special concern in the vicinity of the PPSA include vernal pools and various types of riparian forest (Sawyer, Keeler-Wolf and Evens 2012).

All of the vegetation associations present within the PPSA are man-made and dominated by non-native species, and therefore would not be considered natural communities of special concern.

2.9 WILDLIFE MOVEMENT CORRIDORS

Wildlife movement corridors are routes that animals regularly and predictably follow during seasonal migration, dispersal from native ranges, daily travel within home ranges, and inter-population movements. Movement corridors in California are typically associated with valleys, ridgelines, and rivers and creeks supporting riparian vegetation. No portion of the PPSA has the potential to function as a wildlife movement corridor. However, the Pacific flyway, one of four major bird migration routes in North America, passes over the PPSA and much of the rest of California.

3.0 IMPACTS AND MITIGATIONS

3.1 SIGNIFICANCE CRITERIA

General plans, area plans, and specific projects are subject to the provisions of CEQA. The purpose of CEQA is to assess the impacts of proposed projects on the environment prior to project implementation. Impacts to biological resources are just one type of environmental impact assessed under CEQA, and vary from project to project in terms of scope and magnitude. Projects requiring removal of vegetation may result in the mortality or displacement of animals associated with this vegetation. Animals adapted to humans, roads, buildings, and pets may replace those species formerly occurring on a site. Plants and animals that are state and/or federally listed as threatened or endangered may be destroyed or displaced. Sensitive habitats such as wetlands and riparian woodlands may be altered or destroyed. Such impacts may be considered either “significant” or “less than significant” under CEQA. According to *California Environmental Quality Act, Statute and Guidelines* (AEP 2012), “significant effect on the environment” means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest. Specific project impacts to biological resources may be considered “significant” if they would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Furthermore, CEQA Guidelines Section 15065(a) states that a project may trigger the requirement to make a “mandatory finding of significance” if the project has the potential to:

“Substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species, or eliminate important examples of the major periods of California history or prehistory.”

3.2 RELEVANT GOALS, POLICIES, AND LAWS

3.2.1 General Plan Policies of County of Tulare

In compliance with CEQA, the lead agency must consider conformance with applicable goals and policies of the General Plan of the County of Tulare. The Tulare County General Plan released an update in 2003 that is valid through 2030. Implementation of goals in the Tulare County General Plan is accomplished via a set of policies specific to each goal. Please refer to Appendix D for a copy of the plan.

Relevant biological resource goals of the Tulare County General Plan include:

- protecting rare and endangered species;
- limiting development in environmentally sensitive areas;
- encouraging cluster development in areas with moderate to high potential for sensitive habitat;
- encouraging the planting of native trees, shrubs, and grasslands preserve;
- requiring open space buffers between development projects and significant watercourse, riparian vegetation, wetlands, and other sensitive habitats and natural communities;

- coordinating with other government land management agencies to preserve and protect biological resources;
- encouraging appropriate access to resource-managed lands;
- providing opportunities for hunting and fishing activities;
- implementing pesticide controls to limit effects on natural resources; and
- supporting the establishment and administration of a mitigation banking program.

3.2.2 Threatened and Endangered Species

Permits may be required from the USFWS and/or CDFW if activities associated with a proposed project have the potential to result in the “take” of a species listed as threatened or endangered under the federal and/or state Endangered Species Acts. “Take” is defined by the state of California as “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill” (California Fish and Game Code, Section 86). “Take” is more broadly defined by the federal Endangered Species Act to include “harm” (16 USC, Section 1532(19), 50 CFR, Section 17.3). The CDFW and the USFWS are responding agencies under CEQA. Both agencies review CEQA documents in order to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

3.2.3 Designated Critical Habitat

The USFWS often designates areas of “critical habitat” when it lists species as threatened or endangered. Critical habitat is defined by section 3(5)(A) of the federal Endangered Species Act as “(i) The specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.” The Act goes on to define “conservation” as “the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which listing under the Act is no longer necessary.”

The designation of a specific area as critical habitat does not directly affect its ownership. Federal actions that result in destruction or adverse modification of critical habitat are, however, prohibited in the absence of prior consultation with the USFWS according to provisions of the act. Furthermore, recent appellate court cases require that federal actions affecting critical habitat promote the recovery of the listed species protected by the critical habitat designation.

The USFWS designates critical habitat for a species by identifying general areas likely to contain the species' "primary constituent elements," or physical or biological features of the landscape that the species needs to survive and reproduce. Although a unit of critical habitat for a particular species may be quite large, only those lands within the unit that contain the species' primary constituent elements are actually considered critical habitat by the USFWS.

3.2.4 Migratory Birds

The Federal Migratory Bird Treaty Act (FMBTA: 16 USC 703-712) prohibits killing, possessing, or trading in any bird species covered in one of four international conventions to which the United States is a party, except in accordance with regulations prescribed by the Secretary of the Interior. The name of the act is misleading, as it actually covers almost all birds native to the United States, even those that are non-migratory. The FMBTA encompasses whole birds, parts of birds, and bird nests and eggs. Additionally, California Fish and Game Code makes it unlawful to take or possess any non-game bird covered by the FMBTA (Section 3513), as well as any other native non-game bird (Section 3800).

3.2.5 Birds of Prey

Birds of prey are protected in California under provisions of the Fish and Game Code (Section 3503.5), which states that it is unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks and eagles) or Strigiformes (owls), as well as their nests and eggs. The bald eagle and golden eagle are afforded additional protection under the federal Bald and Golden Eagle Protection Act (16 USC 668), which makes it unlawful to kill birds or their eggs.

3.2.6 Nesting Birds

In California, protection is afforded to the nests and eggs of all birds. California Fish and Game Code (Section 3503) states that it is “unlawful to take, possess, or needlessly destroy the nest or eggs of any bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” Breeding-season disturbance that causes nest abandonment and/or loss of reproductive effort is considered a form of “take” by the CDFW.

3.2.7 Wetlands and Other Jurisdictional Waters

Natural drainage channels and adjacent wetlands may be considered “waters of the United States” or “jurisdictional waters” subject to the jurisdiction of the USACE. The extent of jurisdiction has been defined in the Code of Federal Regulations but has also been subject to interpretation of the federal courts. Jurisdictional waters generally include:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce;
- All impoundments of waters otherwise defined as waters of the United States under the definition;
- Tributaries of waters identified in paragraphs (a)(1)-(4) (i.e. the bulleted items above).

As determined by the United States Supreme Court in its 2001 *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC) decision, channels and wetlands isolated from other jurisdictional waters cannot be considered jurisdictional on the basis of their use, hypothetical or observed, by migratory birds. Similarly, in its 2006 consolidated *Carabell/Rapanos* decision, the U.S. Supreme Court ruled that a significant nexus between a wetland and other navigable waters must exist for the wetland itself to be considered a navigable and therefore jurisdictional water.

The USACE regulates the filling or grading of jurisdictional waters under the authority of Section 404 of the Clean Water Act. The extent of jurisdiction within drainage channels is defined by “ordinary high water marks” on opposing channel banks. All activities that involve the discharge of fill into jurisdictional waters are subject to the permit requirements of the USACE. Such permits are typically issued on the condition that the applicant agrees to provide mitigation that result in no net loss of wetland functions or values. No permit can be issued until the RWQCB issues a certification (or waiver of such certification) that the proposed activity will meet state water quality standards.

The filling of isolated wetlands, over which the USACE has disclaimed jurisdiction, is regulated by the RWQCB. It is unlawful to fill isolated wetlands without filing a Notice of Intent with the RWQCB. The RWQCB is also responsible for enforcing National Pollution Discharge Elimination System (NPDES) permits, including the General Construction Activity Storm Water Permit. All projects requiring federal money must also comply with Executive Order 11990 (Protection of Wetlands).

CDFW has jurisdiction over the bed and bank of natural drainages and lakes according to provisions of Section 1601 and 1602 of the California Fish and Game Code (2003). Activities that would disturb these waters are regulated by the CDFW via a Streambed Alteration Agreement. Such an agreement typically stipulates that certain measures will be implemented which protect the habitat values of the drainage in question.

3.3 POTENTIALLY SIGNIFICANT PROJECT IMPACTS/MITIGATION

The 640-acre PPSA is proposed for inclusion in the Pixley Community Plan area. The following subsections assume that all habitats of the PPSA will be impacted by future development under a number of individual projects. Potentially significant project impacts to biological resources and mitigations are discussed below.

3.3.1 Project-Related Mortality of San Joaquin Kit Fox

Potential Impacts. As discussed in Section 2.5.3, the San Joaquin kit fox is known from the vicinity of the PPSA, and individuals may occasionally pass through or forage/den within the

PPSA. If a kit fox were present at the time of future construction activities in the PPSA, then it would be at risk of project-related injury or mortality. Kit fox mortality as a result of future development of the PPSA would violate the state and federal Endangered Species Acts, and is considered a potentially significant impact under CEQA.

Mitigation. Prior to the construction of any projects within the PPSA, the following measures adapted from the U.S. Fish and Wildlife Service 2011 *Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance* (Appendix E) will be implemented.

Mitigation Measure 3.3.1a (Pre-construction Surveys). Pre-construction surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance, construction activities, and/or any project activity likely to impact the San Joaquin kit fox. These surveys will be conducted in accordance with the USFWS *Standard Recommendations*. The primary objective is to identify kit fox habitat features (e.g. potential dens and refugia) on the project site and evaluate their use by kit foxes through use of remote monitoring techniques such as motion-triggered cameras and tracking medium. If an active kit fox den is detected within or immediately adjacent to the area of work, the USFWS and CDFW shall be contacted immediately.

Mitigation Measure 3.3.1b (Avoidance). Should an active kit fox den be detected within or immediately adjacent to the area of work, a disturbance-free buffer will be established around the den in consultation with the USFWS and CDFW, to be maintained until a qualified biologist has determined that the den is no longer occupied. Known kit fox dens may not be destroyed until they have been vacant for a period of at least three days, as demonstrated by use of motion-triggered cameras or tracking medium, and then only after obtaining take authorization from the USFWS.

Mitigation Measure 3.3.1c (Minimization). Construction activities shall be carried out in a manner that minimizes disturbance to kit foxes. Minimization measures include, but are not limited to: restriction of project-related vehicle traffic to established roads, construction areas, and other designated areas; inspection and covering of structures (e.g.,

pipes), as well as installation of escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of rodenticide and herbicide use; and proper disposal of food items and trash.

Mitigation Measure 3.3.1d (Employee Education Program). Prior to the start of construction the applicant will retain a qualified biologist to conduct a tailgate meeting to train all construction staff that will be involved with the project on the San Joaquin kit fox. This training will include a description of the kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of the measures being taken to reduce impacts to the species during project construction and implementation.

Mitigation Measure 3.3.1e (Mortality Reporting). The Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified in writing within three working days in case of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and any other pertinent information.

Implementation of these measures will reduce potential impacts to the San Joaquin kit fox to a less than significant level and ensure that future development activities within the PPSA remain in compliance with state and federal laws protecting this species.

3.3.2 Project-Related Mortality of Burrowing Owl

Potential Impacts. As discussed in Section 2.5.4, burrowing owls have the potential to nest or roost in the PPSA's ruderal areas or fallow field. If one or more owls were present in these areas at the time of construction, then construction activities would have the potential to injure or kill these individuals. Mortality of individual burrowing owls would violate California Fish and Game Code and the federal Migratory Bird Treaty Act, and is considered a significant impact of the project under CEQA.

Mitigation. Prior to the initiation of project-related activities involving ground disturbance or heavy equipment use on those portions of the PPSA that contain suitable burrowing owl habitat,

the following measures will be implemented, adapted from the *Staff Report on Burrowing Owl Mitigation* (CDFG 1995 and 2012).

Mitigation Measure 3.3.2a (Pre-construction Surveys). A pre-construction survey for burrowing owls will be conducted by a qualified biologist within 30 days of the onset of project-related activities involving ground disturbance or heavy equipment use. The survey area will include all suitable habitat on and within 500 feet of project impact areas, where accessible.

Mitigation Measure 3.3.2b (Avoidance of Active Nests). If pre-construction surveys and subsequent project activities are undertaken during the breeding season (February 1-August 31) and active nest burrows are located within or near project impact areas, a 250-foot construction setback will be established around active owl nests, or alternate avoidance measures implemented in consultation with CDFW. The buffer areas will be enclosed with temporary fencing to prevent construction equipment and workers from entering the setback area. Buffers will remain in place for the duration of the breeding season, unless otherwise arranged with CDFW. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described below.

Mitigation Measure 3.3.2c (Passive Relocation of Resident Owls). During the non-breeding season (September 1-January 31), resident owls occupying burrows in project impact areas may be passively relocated to alternative habitat in accordance with a relocation plan prepared by a qualified biologist. Passive relocation may include one or more of the following elements: 1) establishing a minimum 50 foot buffer around all active burrowing owl burrows, 2) removing all suitable burrows outside the 50 foot buffer and up to 160 feet outside of the impact areas as necessary, 3) installing one-way doors on all potential owl burrows within the 50 foot buffer, 4) leaving one-way doors in place for 48 hours to ensure owls have vacated the burrows, and 5) removing the doors and excavating the remaining burrows within the 50 foot buffer.

Implementation of the above measures will reduce potential project impacts to the burrowing owl to a less than significant level and ensure that future development activities within the PPSA remain in compliance with state and federal laws protecting this species.

3.3.3 Project-Related Mortality of American Badger

Potential Impacts. Although habitats of the PPSA are primarily marginal to unsuitable for the American badger, badgers may occasionally pass through the PPSA, foraging in agricultural fields and possibly denning in the fallow field or ruderal areas. In the event that one or more badgers were denning in an individual project area at the time of construction, these individuals would be at risk of construction-related injury or mortality. Construction mortality of American badgers is a potentially significant impact of future development of the PPSA.

Mitigation. The following measures will be implemented to avoid and minimize the potential for project-related mortality of American badgers.

Mitigation Measure 3.3.3a: Preconstruction Surveys. A preconstruction survey for American badgers will be conducted by a qualified biologist within 30 days of the onset of project-related activities involving ground disturbance or heavy equipment use. Preconstruction surveys will be conducted in all suitable denning habitat of the project area.

Mitigation Measure 3.3.3b: Avoidance. Should an active natal den be identified during the preconstruction surveys, a disturbance-free buffer will be established around the den and maintained until a qualified biologist has determined that the cubs have dispersed or the den has been abandoned.

Implementation of the above measures will reduce potential project impacts to the American badger to a less than significant level and ensure that future development activities within the PPSA remain in compliance with state laws protecting this species.

3.3.4 Project-Related Mortality/Disturbance of Nesting Raptors and Migratory Birds (Including Swainson's Hawk, White-tailed Kite, and Loggerhead Shrike)

Potential Impacts. The majority of the PPSA consists of habitat that could be used for nesting by one or more avian species protected by the federal Migratory Bird Treaty Act and related state laws. Tree-nesting songbirds and raptors may nest in the PPSA's orchards or residential areas, or in the few trees along the ruderal margin of Road 116. Red-winged or tricolored blackbirds may nest in the PPSA's wheat field. Killdeer may nest on bare ground or gravel surfaces in ruderal or industrial areas of the PPSA, and the house finch may nest in the PPSA's buildings. Cliff swallows could nest on the Road 120 bridge over the PPSA's irrigation ditch. Although the Swainson's hawk, white-tailed kite (*Elanus leucurus*), and loggerhead shrike (*Lanius ludovicianus*) are not likely to nest within the PPSA for reasons discussed elsewhere (see Sections 2.5.1 and 3.4.3), the PPSA contains trees and is within the range of these species, so their nesting on the site is considered a theoretical possibility. Raptors and migratory birds nesting within the PPSA at the time that individual projects are implemented have the potential to be injured or killed by project activities. In addition to direct "take" of nesting birds, project activities could disturb birds nesting within or adjacent to work areas such that they would abandon their nests. Project activities that adversely affect the nesting success of raptors and migratory birds or result in the mortality of individual birds constitute a violation of state and federal laws and are considered a potentially significant impact under CEQA.

Mitigation. The following measures will be implemented prior to the start of project activities within the PPSA.

Mitigation Measure 3.3.4a (Avoidance). In order to avoid impacts to nesting raptors and migratory birds, individual projects within the PPSA will be constructed, where possible, outside the nesting season, or between September 1st and January 31st.

Mitigation Measure 3.3.4b (Preconstruction Surveys). If project activities must occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys for active raptor and migratory bird nests within 30 days of the onset of these activities. The survey will include the proposed work area(s) and

surrounding lands within 500 feet for all nesting raptors and migratory birds save Swainson's hawk; the Swainson's hawk survey will extend to ½ mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.

Mitigation Measure 3.3.4c (Establish Buffers). Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged.

Implementation of the above measures will reduce potential project impacts to nesting raptors and migratory birds to a less than significant level, and will ensure that future development activities within the PPSA remain in compliance with state and federal laws protecting these species.

3.3.5 Project-Related Mortality of Roosting Bats

Potential Impacts. Development of the PPSA may result in the removal of buildings and mature trees that provide potential roosting habitat for bats, including the pallid bat and western mastiff bat, both of which are California species of special concern. If trees or buildings removed by construction activities contain colonial roosts, many individual bats could be killed. Such a mortality event is considered a potentially significant impact of the project under CEQA.

Mitigation. The following measures will be implemented for construction activities involving the removal of buildings or mature trees.

Mitigation Measure 3.3.5a (Temporal Avoidance). To avoid potential impacts to maternity bat roosts, removal of buildings and trees should occur outside of the period between April 1 and September 30, the time frame within which colony-nesting bats generally assemble, give birth, nurse their young, and ultimately disperse.

Mitigation Measure 3.3.5b (Preconstruction Surveys). If removal of buildings or trees is to occur between April 1 and September 30 (general maternity bat roost season), then within 30 days prior to these activities, a qualified biologist will survey affected buildings and trees for the presence of bats. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for nighttime emergence of bats from roost sites. If no bats are observed to be roosting or breeding, then no further action would be required, and construction could proceed.

Mitigation Measure 3.3.5c (Minimization). If a non-breeding bat colony is detected during preconstruction surveys, the individuals will be humanely evicted via partial dismantlement of trees prior to full removal and/or installation of exclusion devices on buildings prior to demolition under the direction of a qualified biologist to ensure that no harm or “take” of any bats occurs as a result of construction activities.

Mitigation Measure 3.3.5d (Avoidance of Maternity Roosts). If a maternity colony is detected during preconstruction surveys, a disturbance-free buffer will be established around the colony and remain in place until a qualified biologist deems that the nursery is no longer active. The disturbance-free buffer will range from 50 to 100 feet as determined by the biologist.

Implementation of the above measure will reduce impacts to roosting bats to a less than significant level under CEQA.

3.4 LESS THAN SIGNIFICANT PROJECT IMPACTS

3.4.1 Loss of Habitat for Special Status Plants

Potential Impacts. Twelve special status vascular plant species are known to occur in the vicinity of the PPSA: California jewelflower (*Caulanthus californicus*), San Joaquin adobe sunburst (*Pseudobahia peirsonii*), Earlimart orache (*Atriplex cordulata* var. *erecticaulis*), Lost Hills crownscale (*Atriplex coronata* var. *vallicola*), brittle scale (*Atriplex depressa*), lesser salt scale (*Atriplex minuscula*), vernal pool small scale (*Atriplex persistens*), subtle orache (*Atriplex subtilis*), alkali Mariposa-lily (*Calochortus striatus*), recurved larkspur (*Delphinium*

recurvatum), spiny sepaled button-celery (*Eryngium spinosepalum*), and Coulter's goldfields (*Lasthenia glabrata* spp. *coulteri*) (see Table 1). Because of many decades of disturbance, habitat for these twelve plant species is absent from the PPSA. Moreover, none of these plants were observed in April 2014, at a time when most of these species are in bloom and their probability of detection is maximized. Future development of the PPSA would not affect regional populations of these species and impacts would be less than significant.

Mitigation. Mitigation measures are not warranted.

3.4.2 Impacts to Special Status Animals Absent or Unlikely to Occur in the PPSA

Potential Impacts. Of the 22 special status animal species potentially occurring in the region, eleven species would be absent or unlikely to occur within the PPSA (see Table 1). These include the vernal pool fairy shrimp (*Branchinecta lynchi*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), blunt-nosed leopard lizard (*Gambelia sila*), western snowy plover (*Charadrius alexandrinus nivosus*), Nelson's antelope squirrel (*Ammospermophilus nelson*), Tipton's kangaroo rat (*Dipodomys nitratooides nitratooides*), western spadefoot (*Spea hammondi*), Kern brook lamprey (*Entosphenus hubbsi*), coast horned lizard (*Phrynosoma blainvillii*), San Joaquin coachwhip (*Coluber flagellum ruddocki*), and Dulzura pocket mouse (*Chaetodipus californicus femoralis*). These species are not at risk of injury or mortality from future development activities within the PPSA because of the extreme unlikelihood of their occurring within the PPSA. Similarly, future development of the PPSA will not result in loss of habitat for these species, because there is little or no likelihood that they utilize habitats of the PPSA.

Mitigation. No mitigation is warranted.

3.4.3 Loss of Habitat for Special Status Animals that May Occur in the PPSA

Potential Impacts. Of the 22 special status animal species potentially occurring in the region, eleven species have the potential to occur within the PPSA in association with breeding, foraging, or both. These species include the Swainson's hawk, San Joaquin kit fox, white-tailed kite, lesser sandhill crane (*Grus canadensis canadensis*), northern harrier (*Circus cyaneus*),

loggerhead shrike, burrowing owl, tricolored blackbird, pallid bat, western mastiff bat, and American badger.

All habitats within the PPSA in which special status animals could theoretically breed or roost are marginal in nature. As discussed, trees of the PPSA are unlikely to be used by nesting Swainson's hawks because they are shorter than typical Swainson's hawk nest trees, located adjacent to habitats within which Swainson's hawks could only forage for a small portion of the breeding season, and/or not of the species usually chosen by Swainson's hawk. White-tailed hawks would be unlikely to nest in the PPSA's trees for the same reason; additionally, this species does not usually nest adjacent to roads (Erichsen 1995). Loggerhead shrikes in the southern San Joaquin Valley generally nest in riparian areas, desert scrub, or agricultural hedgerows; these habitats are absent from the PPSA. Tricolored blackbirds may occasionally nest in wheat fields, but wheat is suboptimal, at best, for this species because it is generally harvested during the breeding season. Cliffs and other rocky substrates preferred by the pallid bat and western mastiff bat for roosting are absent from the PPSA, and most trees of the PPSA are smaller than those typically used by these species. Potential denning habitat for the San Joaquin kit fox and American badger and nesting habitat for the burrowing owl within the PPSA is marginal because it is limited to ruderal road margins and a small portion of a fallow field, within a matrix of lands heavily disturbed by agriculture and other human uses. Nesting habitat for the northern harrier is entirely absent from the PPSA, and lesser sandhill cranes do not breed in California. Regional populations of Swainson's hawk, San Joaquin kit fox, white-tailed kite, loggerhead shrike, burrowing owl, tricolored blackbird, pallid bat, western mastiff bat, and American badger are unlikely to be adversely affected by project-related loss of breeding/roosting habitat because the PPSA offers only marginal breeding/roosting habitat for these species, and considerable breeding/roosting habitat of similar or higher quality exists for these species elsewhere in the region. Future development of the PPSA would not result in the loss of breeding habitat for the northern harrier or lesser sandhill crane.

Foraging habitat in the PPSA for the eleven species considered in this section consists of approximately 400 acres of agricultural fields, approximately 360 acres of which were in active production of wheat, oats, and corn at the time of the April 2014 survey. As discussed, the

foraging suitability of these crops fluctuates throughout the year. Most of the species considered in this section do not use wheat, oats, or corn fields once vegetation becomes too tall and dense because prey capture becomes prohibitively difficult. The 40-acre fallow field represents consistently suitable foraging habitat for most of the species considered in this section; however, it is unlikely to be of regional importance for any of these species. The loss of 40 acres of consistently-available and 360 acres of seasonally-available agricultural foraging habitat is unlikely to adversely affect regional populations of the eleven special status animals considered in this section because the region is dominated by similar agricultural uses.

Mitigation. No mitigation is warranted.

3.4.4 Impacts to Waters of the United States

Potential Impacts. As discussed in Section 2.6, the only hydrologic feature on the PPSA is a 200 linear foot stretch of an unnamed irrigation ditch. The ditch would likely be considered jurisdictional by the USACE; however, the jurisdictional status of water features is determined by the USACE upon review and verification of a wetland delineation prepared for the project area. Future development of the PPSA may result in impacts to the ditch. Because this potentially jurisdictional feature consists of a highly maintained irrigation ditch with minimal wetland function or value and covers an area of only about 0.2 acre, these impacts would be considered less than significant under CEQA. Regardless of the size of impact, impacts to waters of the U.S. are subject to the permit requirements of Section 404 and 401 of the Clean Water Act. If the unnamed irrigation ditch is considered jurisdictional by the USACE, the placement of fill within this ditch would require 1) a Clean Water Act permit from the USACE, and 2) a Water Quality Certification from the RWQCB. These permits cannot be issued without an accepted preliminary jurisdictional determination or a verified approved wetland delineation by the USACE.

Mitigation. No mitigation is warranted.

3.4.5 Project Impacts to Wildlife Movement Corridors

Potential Impacts. The PPSA consists of and is surrounded by developed and/or highly disturbed lands that do not contain important movement corridors for native wildlife. Birds using the Pacific flyway will continue to do so following project development. Future development of the PPSA will result in a less than significant effect on regional wildlife movements.

Mitigation. No mitigation is warranted.

3.4.6 Disturbance to Riparian Habitat or other Sensitive Habitats

Potential Impacts. Riparian habitat is absent from the PPSA. The agricultural and disturbed lands that comprise the PPSA are not considered sensitive habitats, and are not of significant importance to regional wildlife populations. Because riparian and other sensitive habitats are absent, future development of the PPSA will have no impact on these habitats.

Mitigation. Mitigations are not warranted.

3.4.7 Project Impacts to Designated Critical Habitat

Potential Impacts. As discussed, designated critical habitat is absent from the PPSA. The nearest unit of critical habitat is located approximately 3 miles southwest of the southern block of the PPSA on the Pixley National Wildlife Refuge. Future development of the PPSA does not have the potential to impact this unit of critical habitat.

Mitigation. No mitigation is warranted.

3.4.8 Degradation of Water Quality in Seasonal Drainages, Stock Ponds, and Downstream Waters

Potential Impacts. Extensive grading often leaves the soils of construction zones barren of vegetation and, therefore, vulnerable to erosion. Eroded soil is generally carried as sediment in surface runoff to be deposited in natural creek beds, canals, and adjacent wetlands. Furthermore, runoff is often polluted with grease, oil, pesticide and herbicide residues, heavy metals, etc.

However, agricultural and industrial/residential lands in and around the PPSA are nearly level and are subjected to regular soil disturbance that exposes barren soils. The only hydrologic feature found in the immediate vicinity of the PPSA where grading could occur is a highly maintained irrigation ditch. This ditch was dry during the springtime field survey. Only during an extremely large rainfall event could eroded soil conceivably travel downstream to Deer Creek. Therefore, impacts to water quality from project construction are considered less than significant.

It should be noted that projects involving the grading of more than one acre of land must be in compliance with provisions of a General Construction permit (a type of NPDES permit) available from the RWQCB.

Mitigation. No mitigations are warranted.

3.4.9 Local Policies or Habitat Conservation Plans

Potential Impacts. The projects will be implemented in accordance with the goals and policies of the Tulare County General Plan. No known HCPs or NCCPs are in effect for the area. Therefore, the projects are not expected to conflict with local policies or habitat conservation plans.

Mitigation. No mitigation is warranted.

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APPENDIX A: VASCULAR PLANTS OF THE PPSA

APPENDIX A: VASCULAR PLANTS OF THE PPSA

The vascular plant species listed below were observed within the PPSA during a site survey conducted by Live Oak Associates, Inc. on April 16, 2014. The U.S. Fish and Wildlife Service wetland indicator status of each plant has been shown following its common name.

OBL - Obligate
 FACW - Facultative Wetland
 FAC - Facultative
 FACU - Facultative Upland
 UPL - Upland
 NR - No review
 NA - No agreement
 NI - No investigation

AMARANTHACEAE – Amaranth Family

<i>Salsola tragus</i>	Russian Thistle	FACU
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ASTERACEAE – Sunflower Family

<i>Anthemis cotula</i>	Mayweed	FACU
<i>Erigeron canadensis</i>	Canada Horseweed	FACU
<i>Helminthotheca echinoides</i>	Prickly Sow Thistle	FACU

BORAGINACEAE – Borage Family

<i>Amsinckia intermedia</i>	Rancher's Fireweed	UPL
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BRASSICACEAE – Mustard Family

<i>Brassica nigra</i>	Black Mustard	UPL
<i>Capsella bursa-pastoris</i>	Shepherd's Purse	UPL
<i>Sisymbrium altissimum</i>	Tumbling Mustard	FACU

CHENOPODIACEAE – Goosefoot Family

<i>Chenopodium album</i>	Common Lambsquarters	FACU
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CONVOLVULACEAE – Morning Glory Family

<i>Convolvulus arvensis</i>	Common Bindweed	UPL
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FABACEAE – Legume Family

<i>Melilotus indicus</i>	Indian Sweet Clover	FACU
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GERANEACEAE – Geranium Family

<i>Erodium cicutarium</i>	Red-stemmed Filaree	UPL
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IRIDACEAE – Iris Family

<i>Iris</i> sp.	Cultivated Iris	UPL
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JUGLANDACEAE – Walnut Family

<i>Juglans</i> sp.	Walnut	UPL
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MALVACEAE – Mallow Family

<i>Malva nicaeensis</i>	Bull Mallow	UPL
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MORACEAE – Mulberry Family

<i>Morus alba</i>	White Mulberry	FACU
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LYTHRACEAE – Loosestrife Family

<i>Lythrum hyssopifolium</i>	Hyssop's Loosestrife	OBL
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OLEACEAE – Olive Family

<i>Fraxinus oxycarpa</i> ‘Raywood’	Raywood Ash	UPL
PALMAE – Palm Family		
<i>Washingtonia filifera</i>	Washington Fan Palm	FACW
PAPAVERACEAE – Poppy Family		
<i>Eschscholzia californica</i>	California Poppy	UPL
POACEAE – Grass Family		
<i>Avena fatua</i>	Wild Oats	UPL
<i>Cynodon dactylon</i>	Bermuda Grass	FAC
<i>Hordeum murinum</i> ssp. <i>leporinum</i>	Barnyard Barley	FACU
<i>Leptochloa fusca</i> ssp. <i>fascicularis</i>	Bearded Sprangletop	FACW
<i>Lolium multiflorum</i>	Common Wild Rye	FAC
<i>Poa annua</i>	Annual Bluegrass	FACU
<i>Polypogon monspeliensis</i>	Rabbit’s Foot Grass	FACW
<i>Triticum</i> sp.	Cultivated Wheat	UPL
<i>Zea mays</i> ssp. <i>mays</i>	Cultivated Corn	UPL
POLYGONACEAE – Smartweed Family		
<i>Polygonum aviculare</i>	Prostrate Knotweed	FACW
<i>Rumex pulcher</i>	Fiddle Dock	FAC
ROSACEAE – Rose Family		
<i>Prunus dulcis</i>	Cultivated Almond	UPL
<i>Rosa</i> sp.	Cultivated Rose	UPL
ZYGOPHYLLACEAE – Puncture Vine Family		
<i>Tribulus terrestris</i>	Puncture Vine	UPL

**APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY
OCCUR ON THE PPSA**

APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY OCCUR ON THE PPSA

The species listed below are those that may reasonably be expected to use the habitats of the PPSA routinely or from time to time. The list was not intended to include birds that are vagrants or occasional transients. Terrestrial vertebrate species observed in or adjacent to the PPSA on April 16, 2014 have been noted with an asterisk.

CLASS: AMPHIBIA (Amphibians)

ORDER: SALIENTIA (Frogs and Toads)

FAMILY: BUFONIDAE (True Toads)

Western Toad (*Bufo boreas*)

FAMILY: HYLIDAE (Treefrogs and relatives)

Pacific Chorus Frog (*Pseudacris regilla*)

FAMILY: RANIDAE (True Frogs)

Bullfrog (*Lithobates catesbeiana*)

CLASS: REPTILIA (Reptiles)

ORDER: SQUAMATA (Lizards and Snakes)

SUBORDER: SAURIA (Lizards)

FAMILY: PHRYNOSOMATIDAE

Western Fence Lizard (*Sceloporus occidentalis*)

Side-blotched Lizard (*Uta stansburiana*)

FAMILY: TEIIDAE (Whiptails and relatives)

Western Whiptail (*Cnemidophorus tigris*)

SUBORDER: SERPENTES (Snakes)

FAMILY: COLUBRIDAE (Colubrids)

Glossy Snake (*Arizona elegans*)

Gopher Snake (*Pituophis melanoleucus*)

Common Kingsnake (*Lampropeltis getulus*)

Long-nosed Snake (*Rhinocheilus lecontei*)

Common Garter Snake (*Thamnophis sirtalis*)

FAMILY: VIPERIDAE (Vipers)

Western Rattlesnake (*Crotalus viridis*)

CLASS: AVES (Birds)

ORDER: CICONIIFORMES (Herons, Storks, Ibises and Relatives)

FAMILY: ARDEIDAE (Herons and Bitterns)

Great Blue Heron (*Ardea herodias*)

Cattle Egret (*Bubulcus ibis*)

Great Egret (*Ardea alba*)

Snowy Egret (*Egretta thula*)

FAMILY: CATHARTIDAE (American Vultures)

Turkey Vulture (*Cathartes aura*)

ORDER: FALCONIFORMES (Vultures, Hawks, and Falcons)

FAMILY: ACCIPITRIDAE (Hawks, Old World Vultures, and Harriers)

White-tailed Kite (*Elanus leucurus*)

*Northern Harrier (*Circus cyaneus*)

*Red-tailed Hawk (*Buteo jamaicensis*)

Ferruginous Hawk (*Buteo regalis*)

Sharp-Shinned Hawk (*Accipiter striatus*)

Cooper's Hawk (*Accipiter cooperii*)

Swainson's Hawk (*Buteo swainsoni*)

FAMILY: FALCONIDAE (Caracaras and Falcons)

*American Kestrel (*Falco sparverius*)

ORDER: GRUIFORMES (Cranes, Rails and Relatives)

FAMILY: RALLIDAE (Rails, Gallinules, and Coots)

*American Coot (*Fulica Americana*)

ORDER: CHARADRIIFORMES (Shorebirds, Gulls, and relatives)

FAMILY: CHARADRIIDAE (Plovers and relatives)

*Killdeer (*Charadrius vociferus*)

FAMILY: RECURVIROSTRIDAE (Stilts and Avocets)

*Black-necked Stilt (*Himantopus mexicanus*)

ORDER: COLUMBIFORMES (Pigeons and Doves)

FAMILY: COLUMBIDAE (Pigeons and Doves)

*Rock Pigeon (*Columba livia*)

*Mourning Dove (*Zenaida macroura*)

*Eurasian Collared-Dove (*Streptopelia decaocto*)

ORDER: STRIGIFORMES (Owls)

FAMILY: TYTONIDAE (Barn Owls)

Barn Owl (*Tyto alba*)

FAMILY: STRIGIDAE (Typical Owls)

Burrowing Owl (*Athene cunicularia*)

Great Horned Owl (*Bubo virginianus*)

Western Screech Owl (*Otus kennicottii*)

ORDER: APODIFORMES (Swifts and Hummingbirds)

FAMILY: TROCHILIDAE (Hummingbirds)

Black-chinned Hummingbird (*Archilochus alexandri*)

Anna's Hummingbird (*Calypte anna*)

Rufous Hummingbird (*Selasphorus rufus*)

ORDER: PICIFORMES (Woodpeckers and relatives)

FAMILY: PICIDAE (Woodpecker and Wrynecks)

Northern Flicker (*Colaptes chrysoides*)

ORDER: PASSERIFORMES (Perching Birds)

FAMILY: TYRANNIDAE (Tyrant Flycatchers)

*Black Phoebe (*Sayornis nigricans*)

Say's Phoebe (*Sayornis saya*)

*Western Kingbird (*Tyrannus verticalis*)

FAMILY: LANIIDAE (Shrikes)

Loggerhead Shrike (*Lanius ludovicianus*)

FAMILY: CORVIDAE (Jays, Magpies, and Crows)

Western Scrub Jay (*Aphelocoma coerulescens*)
 *American Crow (*Corvus brachyrhynchos*)
 Common Raven (*Corvus corax*)
FAMILY: ALAUDIDAE (Larks)
 *Horned Lark (*Eremophila alpestris*)
FAMILY: HIRUNDINIDAE (Swallows)
 *Cliff Swallow (*Hirundo pyrrhonota*)
 Barn Swallow (*Hirundo rustica*)
FAMILY: TURDIDAE
 American Robin (*Turdus migratorius*)
FAMILY: MIMIDAE (Mockingbirds and Thrashers)
 *Northern Mockingbird (*Mimus polyglottos*)
FAMILY: STURNIDAE (Starlings)
 *European Starling (*Sturnus vulgaris*)
FAMILY: MOTACILLIDAE (Wagtails and Pipits)
 American Pipit (*Anthus rubescens*)
FAMILY: BOMBYCILLIDAE (Waxwings)
 Cedar Waxwing (*Bombycilla cedrorum*)
FAMILY: PARULIDAE (Wood Warblers and Relatives)
 Yellow-rumped Warbler (*Dendroica coronata*)
FAMILY: EMBERIZIDAE (Sparrows and Relatives)
 Savannah Sparrow (*Passerculus sandwichensis*)
 *White-crowned Sparrow (*Zonotrichia leucophrys*)
FAMILY: ICTERIDAE (Blackbirds, Orioles and Allies)
 *Red-winged Blackbird (*Agelaius phoeniceus*)
 Tricolored Black Bird (*Agelaius tricolor*)
 Western Meadowlark (*Sturnella neglecta*)
 Brewer's Blackbird (*Euphagus cyanocephalus*)
 *Brown-headed Cowbird (*Molothrus ater*)
 Bullock's Oriole (*Icterus bullockii*)
 Hooded Oriole (*Icterus cucullatus*)
FAMILY: FRINGILLIDAE (Finches)
 *House Finch (*Carpodacus mexicanus*)
 Lesser Goldfinch (*Carduelis psaltria*)
 *Lawrence's Goldfinch (*Spinus lawrencei*)
FAMILY: PASSERIDAE (Old World Sparrows)
 *House Sparrow (*Passer domesticus*)

CLASS: MAMMALIA (Mammals)

ORDER: DIDELPHIMORPHIA (Marsupials)

FAMILY: DIDELPHIDAE (Opossums)

Virginia Opossum (*Didelphis virginiana*)

ORDER: CHIROPTERA (Bats)

FAMILY: PHYLLOSTOMIDAE (Leaf-nosed Bats)

Southern Long-nosed Bat (*Leptonycteris curasoae*)

FAMILY: VESPERTILIONIDAE (Evening Bats)

Yuma Myotis (*Myotis yumanensis*)
 California Myotis (*Myotis californicus*)
 Pale Big-eared Bat (*Corynorhinus townsendii pallescens*)
 Western Pipistrelle (*Pipistrellus hesperus*)
 Big Brown Bat (*Eptesicus fuscus*)
FAMILY: MOLOSSIDAE (Free-tailed Bat)
 Brazilian Free-tailed Bat (*Tadarida brasiliensis*)
ORDER: LAGOMORPHA (Rabbits, Hares, and Pikas)
FAMILY: LEPORIDAE (Rabbits and Hares)
 Audobon's Cottontail (*Sylvilagus audubonii*)
 Black-tailed (Hare) Jackrabbit (*Lepus californicus*)
ORDER: RODENTIA (Rodents)
FAMILY: SCIURIDAE (Squirrels, Chipmunks, and Marmots)
 *California Ground Squirrel (*Spermophilus beecheyi*)
FAMILY: GEOMYIDAE (Pocket Gophers)
 *Botta's Pocket Gopher (*Thomomys bottae*)
FAMILY: MURIDAE (Old World Rats and Mice)
 Western Harvest Mouse (*Reithrodontomys megalotis*)
 Deer Mouse (*Peromyscus maniculatus*)
 Norway Rat (*Rattus norvegicus*)
 House Mouse (*Mus musculus*)
 California Vole (*Microtus californicus*)
ORDER: CARNIVORA (Carnivores)
FAMILY: CANIDAE (Foxes, Wolves, and relatives)
 Coyote (*Canis latrans*)
 Red Fox (*Vulpes vulpes*)
FAMILY: PROCYONIDAE (Raccoons and relatives)
 Raccoon (*Procyon lotor*)
FAMILY: MEPHITIDAE (Skunks)
 Striped Skunk (*Mephitis mephitis*)
FAMILY: FELIDAE (Cats)
 Bobcat (*Lynx rufus*)
 Feral Cat (*Felis domesticus*)

APPENDIX C: SELECTED PHOTOGRAPHS OF THE PPSA



Photograph #1 (above). Cultivated wheat was one of the agricultural crops being grown within the PPSA during the April 2014 field survey. Photograph #2 (below). Three irrigation basins were identified on the Pixley PPSA. These basins were used solely for agricultural purposes and are not likely to be considered jurisdictional.





Photograph #3 (above). Looking east across the northern block of the PPSA. The industrial complex pictured was adjacent to the site. Almond orchard was to the south and harvested oat hay was to the north. Photograph #4 (below). California ground squirrel burrows on the PPSA were observed under a group of walnut and mulberry trees near the center of the northern block of the PPSA.





Photograph #5 (above). A few mature ornamental trees were observed within residential areas of the PPSA. Photograph #6 (below). This weedy field in the southern portion of the southern block of the PPSA was overgrown and apparently not currently in agricultural production.



APPENDIX D: TULARE COUNTY GENERAL PLAN POLICIES

8. Environmental Resources Management

the assurance of rail transport for commodities such as grain, row crops, and fruit, a number of farming colonies soon appeared throughout the region.

The colonies grew to become cities such as Tulare, Visalia, Porterville, and Hanford. Visalia, the County seat, became the service, processing, and distribution center for the growing number of farms, dairies, and cattle ranches. By 1900, Tulare County boasted a population of about 18,000. New transportation links such as SR 99 (completed during the 1950s), affordable housing, light industry, and agricultural commerce brought steady growth to the valley. The U.S. Census Bureau estimated the 2003 Tulare County population to be 390,791.

8.1 Biological Resources

ERM-1

To preserve and protect sensitive significant habitats, enhance biodiversity, and promote healthy ecosystems throughout the County.
[New Goal]

ERM-1.1 Protection of Rare and Endangered Species

The County shall ensure the protection of environmentally sensitive wildlife and plant life, including those species designated as rare, threatened, and/or endangered by State and/or federal government, through compatible land use development. [New Policy based on ERME IV-C; Biological Resources; Issue 12, and ERME; Pg 32]

ERM-1.2 Development in Environmentally Sensitive Areas

The County shall limit or modify proposed development within areas that contain sensitive habitat for special status species and direct development into less significant habitat areas. Development in natural habitats shall be controlled so as to minimize erosion and maximize beneficial vegetative growth. [New Policy based on EMRE; Water; Issue 3; Recommendation 3, ERME; Pg 28]

ERM-1.3 Encourage Cluster Development

When reviewing development proposals, the County shall encourage cluster development in

areas with moderate to high potential for sensitive habitat. [New Policy]

ERM-1.4 Protect Riparian Areas

The County shall protect riparian areas through habitat preservation, designation as open space or recreational land uses, bank stabilization, and development controls. [New Policy]

ERM-1.5 Riparian Management Plans and Mining Reclamation Plans

The County shall require mining reclamation plans and other management plans include measures to protect, maintain and restore riparian resources and habitats. [New Policy]

ERM-1.6 Management of Wetlands

The County shall support the preservation and management of wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitats. [New Policy]

ERM-1.7 Planting of Native Vegetation

The County shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native vegetation and wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained. [New Policy]

ERM-1.8 Open Space Buffers

The County shall require buffer areas between development projects and significant watercourses, riparian vegetation, wetlands, and other sensitive habitats and natural communities. These buffers should be sufficient to assure the continued existence of the waterways and riparian habitat in their natural state. [New Policy based on EMRE policies]

ERM-1.9 Coordination of Management on Adjacent Lands

The County shall work with other government land management agencies (such as the Bureau of Land Management, US Forest Service, National Park Service) to preserve and protect biological resources while maintaining the ability to utilize and enjoy the natural resources in the County. [New Policy]

ERM-1.10 Appropriate Access for Recreation

The County shall encourage appropriate access to resource-managed lands. *[New Policy]*

ERM-1.11 Hunting and Fishing

The County shall provide opportunities for hunting and fishing activities within the County pursuant to appropriate regulations of the California Fish & Game Code. *[New Policy]*

ERM-1.12 Management of Oak Woodland Communities

The County shall support the conservation and management of oak woodland communities and their habitats. *[New Policy]*

ERM-1.13 Pesticides

The Tulare County Agricultural Commissioner/Sealer will cooperate with State and federal agencies in evaluating the side effects of new materials and techniques in pesticide controls to limit effects on natural resources. *[ERME IV-C; Pesticides; Recommendation 1] [ERME; Pg 131, Modified]*

ERM-1.14, Mitigation and Conservation Banking Program

The County shall support the establishment and administration of a mitigation banking program, including working cooperatively with TCAG, federal, State, not-for-profit and other agencies and groups to evaluate and identify appropriate lands for protection and recovery of threatened and endangered species impacted during the land development process. *[New Policy]*

8.2 Mineral Resources - Surface Mining

ERM-2

To conserve protect and encourage the development of areas containing mineral deposits while considering values relating to water resources, air quality, agriculture, traffic, biotic, recreation, aesthetic enjoyment, and other public interest values. *[New Goal based on MRPAC June 28, 2006]*

ERM-2.1 Conserve Mineral Deposits

Emphasize the conservation of identified and/or potential mineral deposits, recognizing the need for identifying, permitting, and maintaining a 50 year supply of locally available PCC grade aggregate. *[MRPAC June 28, 2006]*

ERM-2.2 Recognize Mineral Deposits

Recognize as a part of the General Plan those areas which have identified and/or potential mineral deposits. *[MRPAC June 28, 2006]*

ERM-2.3 Future Resource Development

Provide for the conservation of identified and/or potential mineral deposits within Tulare County as areas for future resource development. Recognize that mineral deposits are significantly limited within Tulare County and that they play an important role in support of the economy of the County. *[MRPAC June 28, 2006]*

ERM-2.4 Identify New Resources

Encourage exploration, evaluation, identification, and development of previously unrecognized but potentially significant hard rock resources for production of crushed stone aggregate. *[MRPAC June 28, 2006]*

ERM-2.5 Resources Development

The County will promote the responsible development of identified and/or potential mineral deposits. *[MRPAC June 28, 2006]*

ERM-2.6 Streamline Process

Create a streamlined and timely permitting process for the mining industry, which will help encourage long-range planning and the reasonable amortization of investments. *[MRPAC June 28, 2006]*

ERM-2.8 Minimize Adverse Impacts

Minimize the adverse effects on environmental features such as water quality and quantity, air quality, flood plains, geophysical characteristics, biotic, archaeological and aesthetic factors. *[MRPAC June 28, 2006]*

8. Environmental Resources Management

ERM-2.9 Minimize Hazards and Nuisances

Minimize the hazards and nuisances to persons and properties in the area during extraction, processing and reclamation operations. [MRPAC June 28, 2006]

ERM-2.10 Compatibility

Develop mineral deposits in a manner compatible with surrounding land uses. [MRPAC June 28, 2006]

ERM-2.11 Incompatible Development

Proposed incompatible land uses shall not be on lands containing, or adjacent to identified mineral deposits, or along key access roads, unless adequate mitigation measures are adopted or a statement of overriding considerations stating public benefits and overriding reasons for permitting the proposed use are adopted. [MRPAC June 28, 2006]

ERM-2.12 Conditions of Approval

Procedures shall be established to ensure compliance with conditions of approval on all active and idle mines. [MRPAC June 28, 2006]

ERM-2.13 Approved Limits

Procedures shall be established to ensure that vested interest mining operations remain within their approved area and/or production limits. [MRPAC June 28, 2006]

ERM-2.14 SMARA Requirements

All surface mines, unless otherwise exempted, shall be subject to reclamation plans that meet SMARA requirements. Reclamation procedures shall restore the site for future beneficial use of the land. Mine reclamation costs shall be borne by the mine operator, and guaranteed by financial assurances set aside for restoration procedures. [MRPAC June 28, 2006]

8.3 Mineral Resources

ERM-3

To protect the current and future extraction of mineral resources that are important to the County's economy while minimizing impacts of this use on the public and the environment. [ERME IV-B; Land; Issue 8] [ERME; Pg 30, Modified]

ERM-3.1 Environmental Contamination

All mining operations shall be required to take precautions to avoid contamination from wastes or incidents related to the storage and disposal of hazardous materials, or general operating activity at the site. [New Policy]

ERM-3.2 Limited In-City Mining

Within UDBs, new commercial mining operations should be limited due to environmental and compatibility concerns. [New Policy]

ERM-3.3 Small-Scale Oil and Gas Extraction

The County shall permit by special use permit small-scale oil and gas extraction activities and facilities that can be demonstrated to not have a significant adverse effect on surrounding or adjacent land and are within an established oil and gas field outside of a UDB. [New Policy]

ERM-3.4 Oil and Gas Extraction

Facilities related to oil and gas extraction and processing may be allowed in identified oil and gas fields subject to a special use permit. The extraction shall demonstrate that it will be compatible with surrounding land uses and land use designations. [New Policy]

ERM-3.5 Reclamation of Oil and Gas Sites

The County shall require the timely reclamation of oil and gas development sites upon termination of such activities to facilitate the conversion of the land to its primary land use as designated by the General Plan. Reclamation costs shall be born by the mine operator, and guaranteed by financial assurances set aside for restoration procedures. [New Policy, MRPAC Goals, Policies, Implementation Measures, and Development Standards, Goal F and associated policies]

8.4 Energy Resources

ERM-4

To encourage energy conservation in new and existing developments throughout the County. [New Goal]

ERM-4.1 Energy Conservation and Efficiency Measures

The County shall encourage the use of solar energy, solar hot water panels, and other energy conservation and efficiency features in new

**APPENDIX E: U.S. FISH AND WILDLIFE SERVICE STANDARDIZED
RECOMMENDATIONS FOR PROTECTION OF THE ENDANGERED SAN JOAQUIN
KIT FOX PRIOR TO OR DURING GROUND DISTURBANCE**

**U.S. FISH AND WILDLIFE SERVICE
STANDARDIZED RECOMMENDATIONS
FOR PROTECTION OF THE ENDANGERED SAN JOAQUIN KIT FOX
PRIOR TO OR DURING GROUND DISTURBANCE**

Prepared by the Sacramento Fish and Wildlife Office
January 2011

INTRODUCTION

The following document includes many of the San Joaquin kit fox (*Vulpes macrotis mutica*) protection measures typically recommended by the U. S. Fish and Wildlife Service (Service), prior to and during ground disturbance activities. **However, incorporating relevant sections of these guidelines into the proposed project is not the only action required under the Endangered Species Act of 1973, as amended (Act) and does not preclude the need for section 7 consultation or a section 10 incidental take permit for the proposed project.** Project applicants should contact the Service in Sacramento to determine the full range of requirements that apply to your project; the address and telephone number are given at the end of this document. Implementation of the measures presented in this document may be necessary to avoid violating the provisions of the Act, including the prohibition against "take" (defined as killing, harming, or harassing a listed species, including actions that damage or destroy its habitat). These protection measures may also be required under the terms of a biological opinion pursuant to section 7 of the Act resulting in incidental take authorization (authorization), or an incidental take permit (permit) pursuant to section 10 of the Act. The specific measures implemented to protect kit fox for any given project shall be determined by the Service based upon the applicant's consultation with the Service.

The purpose of this document is to make information on kit fox protection strategies readily available and to help standardize the methods and definitions currently employed to achieve kit fox protection. The measures outlined in this document are subject to modification or revision at the discretion of the Service.

IS A PERMIT NECESSARY?

Certain acts need a permit from the Service which includes destruction of any known (occupied or unoccupied) or natal/pupping kit fox dens. Determination of the presence or absence of kit foxes and /or their dens should be made during the environmental review process.

All surveys and monitoring described in this document must be conducted by a qualified biologist and these activities do not require a permit. A qualified biologist (biologist) means any person who has completed at least four years of university training in wildlife biology or a related science and/or has demonstrated field experience in the identification and life history of the San Joaquin kit fox. In addition, the biologist(s) must be able to identify coyote, red fox,

gray fox, and kit fox tracks, and to have seen a kit fox in the wild, at a zoo, or as a museum mount. Resumes of biologists should be submitted to the Service for review and approval prior to any survey or monitoring work occurring.

SMALL PROJECTS

Small projects are considered to be those projects with small foot prints, of approximately one acre or less, such as an individual in-fill oil well, communication tower, or bridge repairs. These projects must stand alone and not be part of, or in any way connected to larger projects (i.e., bridge repair or improvement to serve a future urban development). The Service recommends that on these small projects, the biologist survey the proposed project boundary and a 200-foot area outside of the project footprint to identify habitat features and utilize this information as guidance to situate the project to minimize or avoid impacts. If habitat features cannot be completely avoided, then surveys should be conducted and the Service should be contacted for technical assistance to determine the extent of possible take.

Preconstruction/preactivity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any project activity likely to impact the San Joaquin kit fox. Kit foxes change dens four or five times during the summer months, and change natal dens one or two times per month (Morrell 1972). Surveys should identify kit fox habitat features on the project site and evaluate use by kit fox and, if possible, assess the potential impacts to the kit fox by the proposed activity. The status of all dens should be determined and mapped (see Survey Protocol). Written results of preconstruction/preactivity surveys must be received by the Service within five days after survey completion and prior to the start of ground disturbance and/or construction activities.

If a natal/pupping den is discovered within the project area or within 200-feet of the project boundary, the Service shall be immediately notified and under no circumstances should the den be disturbed or destroyed without prior authorization. If the preconstruction/preactivity survey reveals an active natal pupping or new information, the project applicant should contact the Service immediately to obtain the necessary take authorization/permit.

If the take authorization/permit has already been issued, then the biologist may proceed with den destruction within the project boundary, except natal/pupping den which may not be destroyed while occupied. A take authorization/permit is required to destroy these dens even after they are vacated. Protective exclusion zones can be placed around all known and potential dens which occur outside the project footprint (conversely, the project boundary can be demarcated, see den destruction section).

OTHER PROJECTS

It is likely that all other projects occurring within kit fox habitat will require a take authorization/permit from the Service. This determination would be made by the Service during the early evaluation process (see Survey Protocol). These other projects would include, but are not limited to: Linear projects; projects with large footprints such as urban development; and projects which in themselves may be small but have far reaching impacts (i.e., water storage or conveyance facilities that promote urban growth or agriculture, etc.).

The take authorization/permit issued by the Service may incorporate some or all of the protection measures presented in this document. The take authorization/permit may include measures specific to the needs of the project and those requirements supersede any requirements found in this document.

EXCLUSION ZONES

In order to avoid impacts, construction activities must avoid their dens. The configuration of exclusion zones around the kit fox dens should have a radius measured outward from the entrance or cluster of entrances due to the length of dens underground. The following distances are **minimums**, and if they cannot be followed the Service must be contacted. Adult and pup kit foxes are known to sometimes rest and play near the den entrance in the afternoon, but most above-ground activities begin near sunset and continue sporadically throughout the night. Den definitions are attached as Exhibit A.

Potential den**	50 feet
Atypical den**	50 feet
Known den*	100 feet
Natal/pupping den (occupied <u>and</u> unoccupied)	Service must be contacted

***Known den:** To ensure protection, the exclusion zone should be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by kit foxes. Acceptable fencing includes untreated wood particle-board, silt fencing, orange construction fencing or other fencing as approved by the Service as long as it has openings for kit fox ingress/egress and keeps humans and equipment out. Exclusion zone fencing should be maintained until all construction related or operational disturbances have been terminated. At that time, all fencing shall be removed to avoid attracting subsequent attention to the dens.

****Potential and Atypical dens:** Placement of 4-5 flagged stakes 50 feet from the den entrance(s) will suffice to identify the den location; fencing will not be required, but the exclusion zone must be observed.

Only essential vehicle operation on existing roads and foot traffic should be permitted. Otherwise, all construction, vehicle operation, material storage, or any other type of surface-disturbing activity should be prohibited or greatly restricted within the exclusion zones.

DESTRUCTION OF DENS

Limited destruction of kit fox dens may be allowed, if avoidance is not a reasonable alternative, provided the following procedures are observed. The value to kit foxes of potential, known, and natal/pupping dens differ and therefore, each den type needs a different level of protection.

Destruction of any known or natal/pupping kit fox den requires take authorization/permit from the Service.

Destruction of the den should be accomplished by careful excavation until it is certain that no kit foxes are inside. The den should be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period. If at any point during excavation, a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den as described above should be resumed. Destruction of the den may be completed when in the judgment of the biologist, the animal has escaped, without further disturbance, from the partially destroyed den.

Natal/pupping dens: Natal or pupping dens which are occupied will not be destroyed until the pups and adults have vacated and then only after consultation with the Service. Therefore, project activities at some den sites may have to be postponed.

Known Dens: Known dens occurring within the footprint of the activity must be monitored for three days with tracking medium or an infra-red beam camera to determine the current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use.

If kit fox activity is observed at the den during this period, the den should be monitored for at least five consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged during this period by partially plugging its entrances(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied may the den be excavated under the direction of the biologist. If the animal is still present after five or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of a biologist, it is temporarily vacant, for example during the animal's normal foraging activities.

The Service encourages hand excavation, but realizes that soil conditions may necessitate the use of excavating equipment. However, extreme caution must be exercised.

Potential Dens: If a take authorization/permit has been obtained from the Service, den destruction may proceed without monitoring, unless other restrictions were issued with the take authorization/permit. If no take authorization/permit has been issued, then potential dens should be monitored as if they were known dens. If any den was considered to be a potential den, but is later determined during monitoring or destruction to be currently, or previously used by kit fox (e.g., if kit fox sign is found inside), then all construction activities shall cease and the Service shall be notified immediately.

CONSTRUCTION AND ON-GOING OPERATIONAL REQUIREMENTS

Habitat subject to permanent and temporary construction disturbances and other types of ongoing project-related disturbance activities should be minimized by adhering to the following activities. Project designs should limit or cluster permanent project features to the smallest area possible while still permitting achievement of project goals. To minimize temporary disturbances, all project-related vehicle traffic should be restricted to established roads, construction areas, and other designated areas. These areas should also be included in preconstruction surveys and, to the extent possible, should be established in locations disturbed by previous activities to prevent further impacts.

1. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction should be minimized to the extent possible. However if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.
2. To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the Service and the California Department of Fish and Game (CDFG) shall be contacted as noted under measure 13 referenced below.
3. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is

discovered inside a pipe, that section of pipe should not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.

4. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or project site.
5. No firearms shall be allowed on the project site.
6. No pets, such as dogs or cats, should be permitted on the project site to prevent harassment, mortality of kit foxes, or destruction of dens.
7. Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.
8. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the Service.
9. An employee education program should be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site.
10. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be

re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the Service, California Department of Fish and Game (CDFG), and revegetation experts.

11. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance.
12. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFG immediately in the case of a dead, injured or entrapped kit fox. The CDFG contact for immediate assistance is State Dispatch at (916)445-0045. They will contact the local warden or Mr. Paul Hoffman, the wildlife biologist, at (530)934-9309. The Service should be contacted at the numbers below.
13. The Sacramento Fish and Wildlife Office and CDFG shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Service contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFG contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309.
14. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the Service at the address below.

Any project-related information required by the Service or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at:

Endangered Species Division
2800 Cottage Way, Suite W2605
Sacramento, California 95825-1846
(916) 414-6620 or (916) 414-6600

EXHIBIT “A” - DEFINITIONS

"Take" - Section 9 of the Endangered Species Act of 1973, as amended (Act) prohibits the "take" of any federally listed endangered species by any person (an individual, corporation, partnership, trust, association, etc.) subject to the jurisdiction of the United States. As defined in the Act, take means " . . . to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct". Thus, not only is a listed animal protected from activities such as hunting, but also from actions that damage or destroy its habitat.

"Dens" - San Joaquin kit fox dens may be located in areas of low, moderate, or steep topography. Den characteristics are listed below, however, the specific characteristics of individual dens may vary and occupied dens may lack some or all of these features. Therefore, caution must be exercised in determining the status of any den. Typical dens may include the following: (1) one or more entrances that are approximately 5 to 8 inches in diameter; (2) dirt berms adjacent to the entrances; (3) kit fox tracks, scat, or prey remains in the vicinity of the den; (4) matted vegetation adjacent to the den entrances; and (5) manmade features such as culverts, pipes, and canal banks.

"Known den" - Any existing natural den or manmade structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records, past or current radiotelemetry or spotlighting data, kit fox sign such as tracks, scat, and/or prey remains, or other reasonable proof that a given den is being or has been used by a kit fox. The Service discourages use of the terms "active" and "inactive" when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly.

"Potential Den" - Any subterranean hole within the species' range that has entrances of appropriate dimensions for which available evidence is insufficient to conclude that it is being used or has been used by a kit fox. Potential dens shall include the following: (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for kit fox use.

"Natal or Pupping Den" - Any den used by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two, therefore, for purposes of this definition either term applies.

"Atypical Den" - Any manmade structure which has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.

Appendix C

Cultural Record Searches



**CULTURAL RESOURCES ASSESSMENT, PROPOSED PLANNING
STUDY AREA FOR THE PIXLEY COMMUNITY PLAN UPDATE,
TULARE COUNTY, CALIFORNIA.**

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July 2014

Topographic Quadrangle: Pixley, 7.5' (1969)
Area: ~2800 acres (1133 hectares)

(Keywords: *Tulare, Township 22/23S, Range 25E, Wowol Yokuts, Company, Frank Morrison
Pixley, Harmon Field, Cotton Strike 1933, Artesia/Pixley Hotel*)

INTRODUCTION

The County of Tulare is updating the Pixley Community Plan and has requested that a cultural resources assessment be completed for the proposed planning study area. Provisions and implementing guidelines of the CEQA, as amended March 18, 2010, state that identification and evaluation of historical resources is required for any action that may result in a potential adverse effect on the significance of such resources, which include cultural resources.

This report presents the findings of a records search and windshield survey of the Pixley Planning Area, and identification of potential cultural resources constraints on future development. The study area includes approximately 2800 acres (1133 hectares) and is located in southwest Tulare County along State Route 99, approximately 17 miles south of Tulare and 13 miles north of the Tulare-Kern County line (Maps 1 and 2).

The study was completed by the Sierra Valley Cultural Planning (SVCP) Principal Investigator C. Kristina Roper. Ms. Roper has over 33 years of professional experience in the field of archaeology, historical research, specifically in the investigation and management of cultural resources within the context of local, state and federal regulatory compliance for projects in the Far West. Ms. Roper holds a Master's degree in Cultural Resources Management awarded in 1993 from Sonoma State University, and is certified as a Registered Professional Archaeologist.

REGULATORY FRAMEWORK

CEQA requires consideration of project impacts on archaeological or historical sites deemed to be "historical resources." Under CEQA, a substantial adverse change in the significant qualities of a historical resource is considered a significant effect on the environment. For the purposes of CEQA, a "historical resource" is a resource listed in, or determined to be eligible for listing in, the CR (Title 14 CCR §15064.5(a)(1)-(3)). Historical resources may include, but are not limited to, "any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (PRC §5020.1(j)).

The eligibility criteria for the CR are the definitive criteria for assessing the significance of historical resources for the purposes of CEQA (Office of Historic Preservation n.d.). Generally, a resource is considered "historically significant" if it meets one or more of the following criteria for listing on the CR:

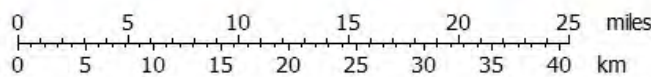
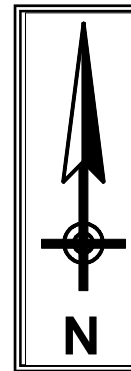
- (1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- (2) Is associated with the lives of persons important in our past.
- (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- (4) Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1(c)).



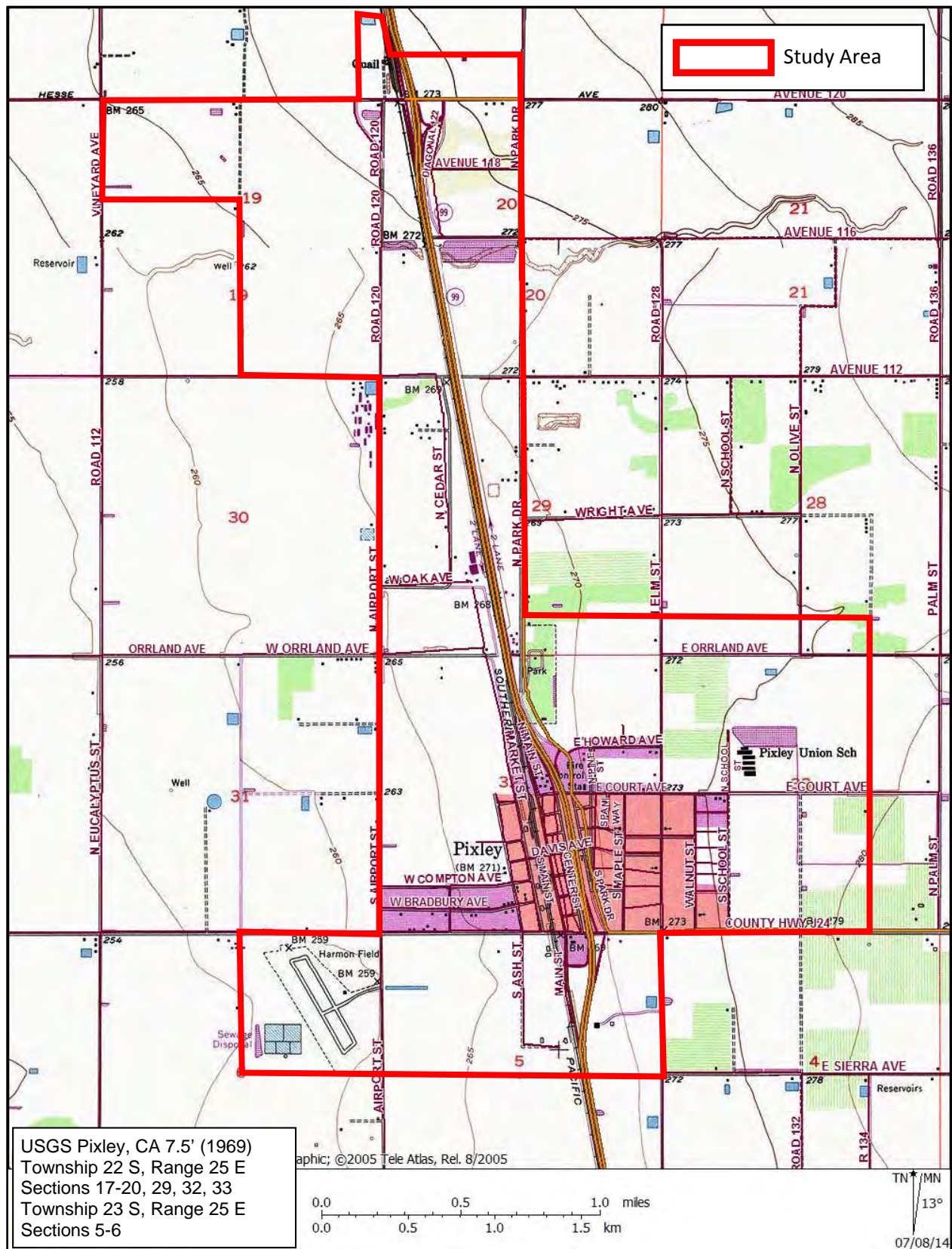
MAP 1. STUDY VICINITY

Pixley Community Plan Update:
Cultural Resources

County of Tulare



TN * MN
13°
07/14/14



Map 2. Pixley Planning Study Area.

BACKGROUND

Prior to EuroAmerican exploration and settlement in the region, the central San Joaquin Valley was extensive grassland covered with spring-flowering herbs. Stands of trees -- sycamore, cottonwoods, box elders and willows -- lined the stream and river courses with groves of valley oaks in well-watered localities with rich soil. Rivers yielded fish, mussels, and pond turtles; migratory waterfowl nested in the dense tules along the river sloughs downstream. When the Spanish first set foot in the area, they found the deer and tule elk trails to be so broad and extensive that they first supposed that the area was occupied by cattle. Grizzly bears occupied the open grassland and riparian corridors on the valley floor and adjacent foothills. Smaller mammals and birds, including jackrabbits, ground squirrels, and quail were abundant. Native Americans occupants of the region describe abundant sedge beds, along with rich areas of deer grass, plants that figure prominently in the construction of Native American basketry items.

Prehistoric Period Summary

The San Joaquin Valley and adjacent Sierran foothills and Coast Range have a long and complex cultural history with distinct regional patterns that extend back more than 11,000 years (McGuire 1995). The first generally agreed-upon evidence for the presence of prehistoric peoples in the region is represented by the distinctive basally-thinned and fluted projectile points, found on the margins of extinct lakes in the San Joaquin Valley. These projectiles, often compared to Clovis points, have been found at three localities in the San Joaquin Valley including along the Pleistocene shorelines of former Tulare Lake. Based on evidence from these sites and other well-dated contexts elsewhere, these Paleo-Indian hunters who used these spear points existed during a narrow time range of 11550 cal B.C. to 8550 cal B.C. (Rosenthal et al. 2007).

As a result of climate change at the end of the Pleistocene, a period of extensive deposition occurred throughout the lowlands of central California, burying many older landforms and providing a distinct break between Pleistocene and subsequent occupations during the Holocene. Another period of deposition, also a product of climate change, had similar results around 7550 cal B.C., burying some of the oldest archaeological deposits discovered in California (Rosenthal and Meyer 2004).

The Lower Archaic (8550-5550 cal B.C.) is characterized by an apparent contrast in economies, although it is possible they may be seasonal expressions of the same economy. Archaeological deposits which date to this period on the valley floor frequently include only large stemmed spear points, suggesting an emphasis on large game such as artiodactyls (Wallace 1991). Recent discoveries in the adjacent Sierra Nevada have yielded distinct milling assemblages which clearly indicate a reliance on plant foods. Investigations at Copperopolis (LaJeunesse and Pryor 1996) argue that nut crops were the primary target of seasonal plant exploitation. Assemblages at these foothill sites include dense accumulations of handstones, millingslabs, and various cobble-core tools, representing "frequently visited camps in a seasonally structured settlement system" (Rosenthal et al. 2007:152). During the Lower Archaic, regional interaction spheres were well established. Marine shell from the central California coast has been found in early Holocene contexts in the Great Basin east of the Sierra Nevada, and eastern Sierra obsidian comprises a large percentage of flaked stone debitage and tools recovered from sites on both sides of the Sierra (Rosenthal et al. 2007:152).

About 8,000 years ago, many California cultures shifted the main focus of their subsistence strategies from hunting to nut and seed gathering, as evidenced by the increase in food-grinding implements found in archeological sites dating to this period. This cultural pattern is best known for southern California, where it has been termed the Milling Stone Horizon (Wallace 1954, 1978a), but recent studies suggest that the horizon may be more widespread than originally described and is found throughout the central region during the Middle Archaic Period. Dates

associated with this period vary between 9,000 and 2,000 cal BP, although most cluster in the 6,800 to 4,500 cal BP range (Basgall and True 1985).

On the valley floor, early Middle Archaic sites are relatively rare; this changes significantly toward the end of the Middle Archaic. In central California late Middle Archaic settlement focused on river courses on the valley floor. "Extended residential settlement at these sites is indicated by refined and specialized tool assemblages and features, a wide range of nonutilitarian artifacts, abundant trade objects, and plant and animal remains indicative of year-round occupation" (Rosenthal et al. 2007:154). Again, climate change apparently influence this shift, with warmer, drier conditions prevailing throughout California. The shorelines of many lakes, including Tulare Lake, contracted substantially, while at the same time rising sea levels favored the expansion of the San Joaquin/Sacramento Delta region, with newly formed wetlands extending eastward from the San Francisco Bay.

In contrast with rare early Middle Archaic sites on the valley floor, early Middle Archaic sites are relatively common in the Sierran foothills, and their recovered, mainly utilitarian assemblages show relatively little change from the preceding period with a continued emphasis on acorns and pine nuts. Few bone or shell artifacts, beads, or ornaments have been recovered from these localities. Projectile points from this period reflect a high degree of regional morphological variability, with an emphasis on local toolstone material supplemented with a small amount of obsidian from eastern sources. In contrast with the more elaborate mortuary assemblages and extended burial mode documented at Valley sites, burials sites documented at some foothill sites such as CA-FRE-61 on Wahtoke Creek are reminiscent of "re-burial" features reported from Milling Stone Horizon sites in southern California. These re-burials are characterized by re-interment of incomplete skeletons often capped with inverted millingstones (McGuire 1995:57).

A return to colder and wetter conditions marked the Upper Archaic in Central California (550 cal B.C. to cal A.D. 1100). Previously desiccated lakes returned to spill levels and increased freshwater flowed in the San Joaquin and Sacramento watershed. Cultural patterns as reflected in the archeological record, particularly specialized subsistence practices, emerged during this period. The archeological record becomes more complex, as specialized adaptations to locally available resources were developed and valley populations expanded into the lower Sierran foothills. New and specialized technologies expanded and distinct shell bead types occurred across the region. The range of subsistence resources utilized and exchange systems expanded significantly from the previous period. In the Central Valley, archaeological evidence of social stratification and craft specialization is indicated by well-made artifacts such as charmstones and beads, often found as mortuary items.

The period between approximately cal A.D. 1000 and Euro-American contact is referred to as the Emergent Period. The Emergent Period is marked by the introduction of bow and arrow technology which replaced the dart and atlatl at about cal A.D. 1000 and 1300. In the San Joaquin region, villages and small residential sites developed along the many stream courses in the lower foothills and along the river channels and sloughs of the valley floor. A local form of pottery was developed in the southern Sierran foothills along the Kaweah River. While many sites with rich archaeological assemblages have been documented in the northern Central Valley, relatively few sites have been documented from this period in the southern Sierran foothills and adjacent valley floor, despite the fact that the ethnographic record suggests dense populations for this region.

Ethnographic Summary

Prior to EuroAmerican settlement, most of the San Joaquin Valley and the bordering foothills of the Sierra Nevada were inhabited by speakers of Yokutsan languages. The present study area falls within the easternmost area of the *Wowol*/Yokuts territory. The *Wowol*/Yokuts

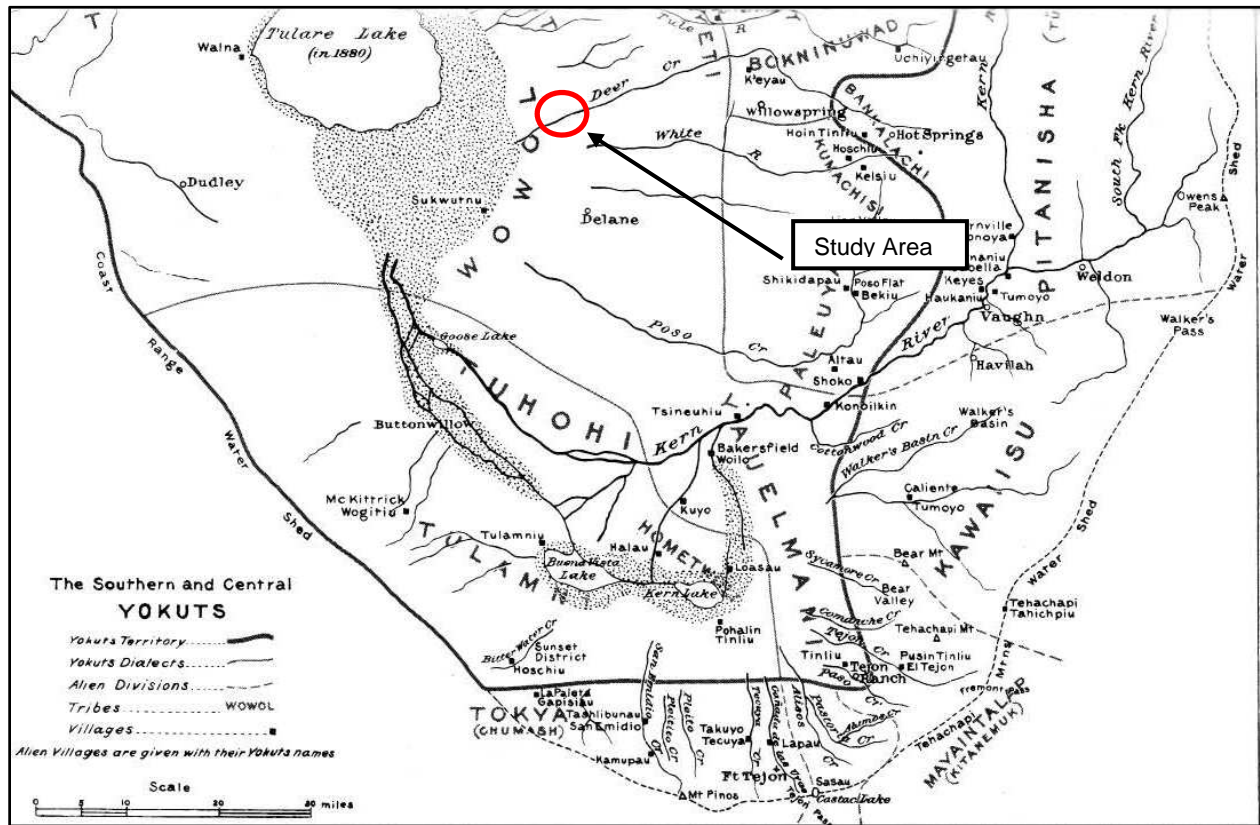


Figure 1. *Wowol* Territory relative to the Study Area (Kroeber 1925:Plate 47).

occupied the southeastern shore of Tule Lake west of the study area. Their principal village, *Sukwutnu*, was located approximately 15 miles west of the town of Delano (Latta 1999:195). Atwell Island was the site of another *Wowol* village called *Chawlowin* (Gayton calls this village Wititsolowin [Gayton 1948:9]). Gayton identified the village *Yiwomni* in an area roughly 10 miles west of Pixley (1948:9).

Due to the abundance and diversity of wildlife habitats and plant communities within the Sierran foothills and nearby San Joaquin Valley and higher elevations of the Sierra Nevada, Native American population densities in the region were quite high (Baumhoff 1963). While the acorn was the dietary staple, the diversity of accessible natural resources provided an omnivorous diet. The reader is referred to Gayton (1948), Kroeber (1925), Latta (1999), and Wallace (1978b) for additional information on pre-contact Yokuts subsistence and culture. Figure 1 depicts the territory of the location of *Wowol* Yokut relative to the study area.

Historic Period Summary

The San Joaquin Valley was visited in the early 1800s by Spanish expeditions exploring the interior in search of potential mission sites. One of the earliest Americans to explore the Tulare area was Jedediah Strong Smith in 1826-27. In 1832-33 Colonel Jose J. Warner, a member of the Ewing-Young trapping expedition, passed through the San Joaquin Valley. Warner described Native villages densely packed along the valley waterways, from the foothills down into the slough area. The next year he revisited the area following a devastating malaria epidemic. Whereas the previous year the region had been densely occupied by Native peoples, during this trip not more than five Indians were observed between the head of the Sacramento Valley and the Kings River (Cook 1955).

EuroAmerican appreciation for the land did not include acceptance of its indigenous human populations, and pressure was exerted upon the US military to remove the Native population from the region, leaving the region open for American settlement and resource development. EuroAmerican settlement of the region began in 1851 with the establishment of Fort Miller on the San Joaquin River. Hostilities between Native inhabitants and American settlers initially prevented widespread settlement of the region; however, by 1860 such threats had been reduced and settlers began taking up large tracts in the region.

In late 1849 or early 1850, a party under the leadership of John Wood settled on the south bank of the Kaweah River, about seven miles east of the present city of Visalia (Hoover et al. 1990:508). In April, 1852, Tulare County was created, with the county seat initially located at Woodsville. In 1853 the county seat was removed to Fort Visalia, located in the area bounded by Oak, Center, Garden and Bridge streets.

Many of the early EuroAmerican settlers in the region were successful gold miners, eager to settle in this new land and reinvest their profits. The earliest economic development of the area focused on cattle. Miller and Lux, the cattle kings, claimed ownership to hundreds of thousands of acres in the San Joaquin Valley. Agriculture, particularly winter wheat cultivation, gained importance following passage of the "No Fence" law of 1874 (Clough 1996:29). Crop production later shifted to orchard and vineyard crops, particularly oranges.

Conflicts between ranchers and farmers over water rights led to the passage of the Wright Act in 1887 (JRP 2000). The Wright Act enabled the creation of irrigation districts within the state. These districts were often controlled by large land owners and provided little relief to small farm owners. Later in the 1930s, state and federal government took on a much larger role in providing reliable water conveyance. In 1933 California voters approved the Central Valley Project, which called for construction of a huge system of canals and dams/reservoirs throughout the state. In 1935 the Federal government released funds for construction of the project, and two years later the U.S. Bureau of Reclamation was given authority to take over the project (JRP 2000:74). The Friant-Kern Canal was authorized for construction by Congress in the Central Valley Project Act of 1937, and the canal was built between 1945 and 1951. The Friant-Kern Canal conveys water from Lake Millerton to Bakersfield, covering a distance of 152 miles.

The following description of the history of Pixley is taken directly from Annie R. Mitchell's *The Way It Was: The Colorful History of Tulare County* (1976:131-132):

Pixley was, in a sense, created by the Southern Pacific Railroad when the line came through the county in 1872. It had the usual land pattern use, first rangeland and then homesteaders who planted grain.

In 1886 the Pixley Townsite Company was incorporated by three men from San Francisco: Darwin Allen, William Bradbury, and Frank Pixley. Pixley, for whom the community was named, had been Attorney General under Governor Leland Stanford. He became a well know newspaperman as editor of the Argonaut. When the company was formed, Pixley had a loading platform by the railroad, but Frank Pixley persuaded the railroad to build a depot and a three-story hotel. Pixley prospered as hundreds of tons of grain were shipped from its warehouses. Artesian water was available for irrigation, and the future looked assured. Then a series of sire, poor crops, and low prices induced many families to leave. Pixley was almost a ghost town.

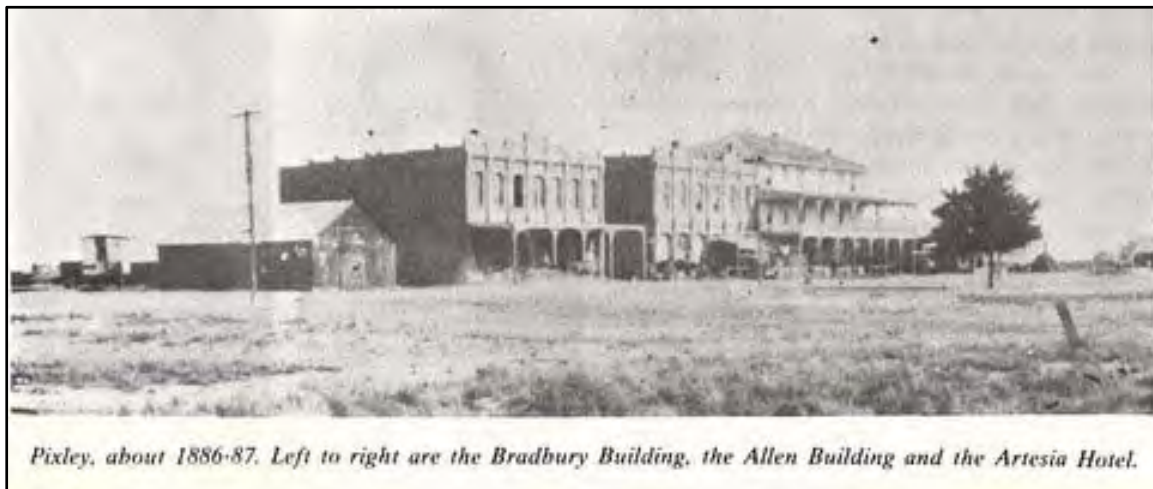


Figure 2. Pixley, about 1886-1887 (from Mitchell 1976:131).



Figure 3. 1890s photo of the Artesia (Pixley) Hotel (Brewer 1999:98).

In 1908 the community received a needed economic boost. The outside corporations brought hundreds of acres and planted groves of eucalyptus trees, to be used to make furniture and lumber. Sites for sawmills were located, and tracts of trees were sold for as much as \$200 an acre. The sawmills were never built because the wrong variety of eucalyptus had been planted. Remains of the groves are still growing along Highway 99.

In 1916 the price of eucalyptus soared and an attempt was made to extract the oil from the trees, but it was too heavy for commercial use, and the idea was abandoned.

The first of a series of five train robberies along the Southern Pacific Railroad line occurred in Pixley in 1889; this was followed by robberies in Goshen, Alilia (Earlimart), Ceres, and Collis (Kerman). The robberies were variously attributed to the Dalton Gang and Evans and Sontag (Menefee 1913:148-154; Mitchell 1976:49-57).

In 1933, Pixley was one of the towns in California involved in the San Joaquin cotton strike, a labor action by agricultural workers seeking higher wages. The California Agricultural Workers Industrial Union was headquartered at the Pixley Hotel. On October 10, 1933, Delfino Davila and Delores Hernandez, two Chicano strikers, were killed in a confrontation between strikers and an armed group of farmers in front of the Pixley Hotel as the strikers were about to enter their headquarters for a meeting; eight others were wounded. Five thousand workers gathered in Tulare for the dead strikers' funerals, one of the largest agricultural demonstrations in California's history. Eight cotton growers were indicted in the violence against the workers, but were later acquitted (Ross 1974).

Pixley Airport was established in February 1949 as a base for crop duster activity (source). The town renamed its airport after resident Roy Harmon, who was posthumously awarded the Medal of Honor for WW2 actions; today it is known as Harmon Field. The airstrip included a 2000 foot paved northwest/southeast runway and a paved parallel taxiway, and a single building on the east side of the field. Harmon Field was closed by the EPA in 1994 due to chemical contamination from 40 years of use (Freeman 2013).



Figure 4. Harmon Field.

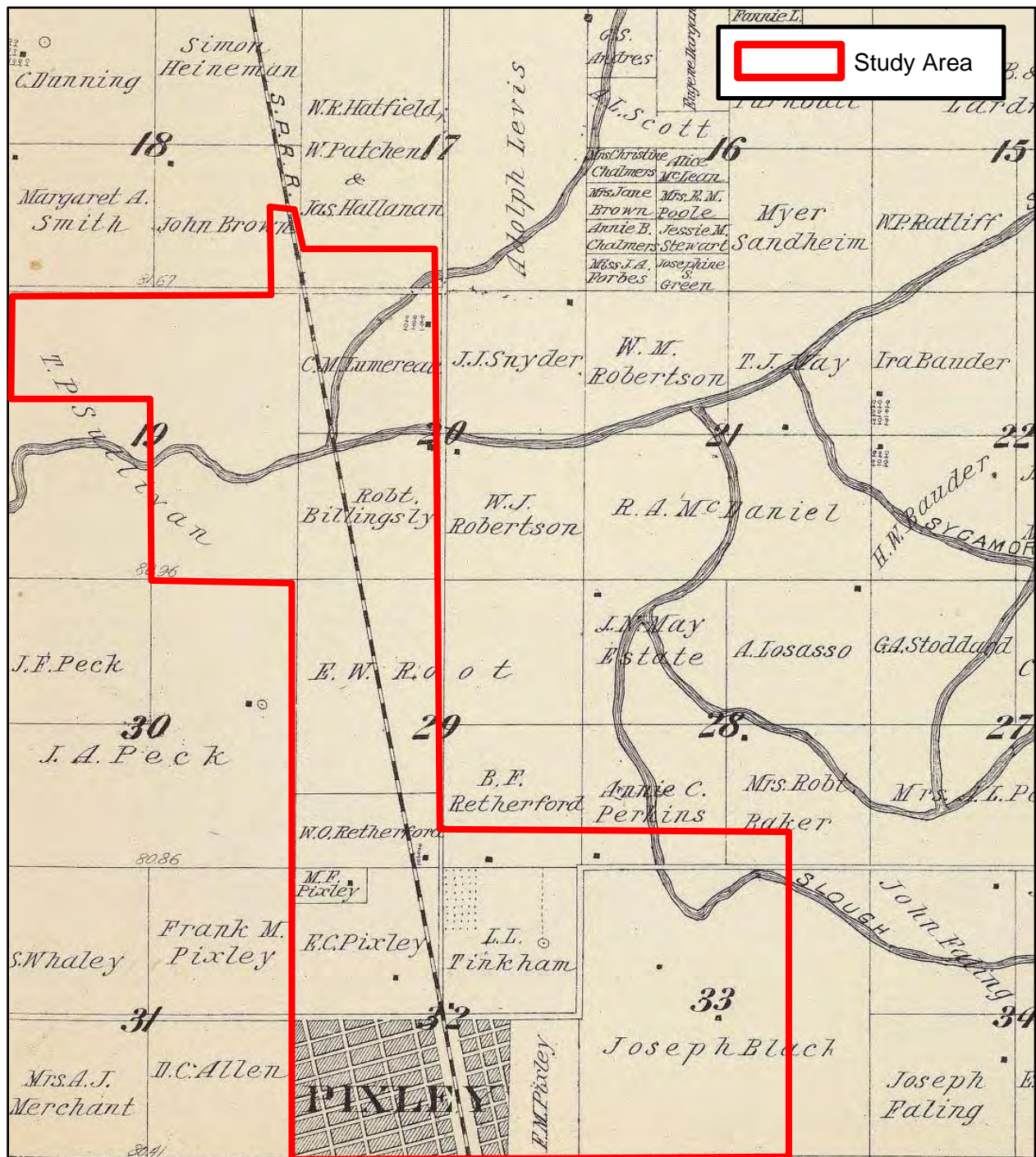


Figure 5. Township 22 South / Range 23 East (Thompson 1892:111)

In 2010 the population of Pixley was noted as 3,310. The majority of residences are single family homes. Numerous buildings date to the early/middle 1900s, although the vast majority of constructions appears to date to post 1950.

Figures 5-7 depict portions of the 1892 Thompson Atlas map of Tulare County. Historic atlas maps are useful to trace development and locations of potential historic-era resources.

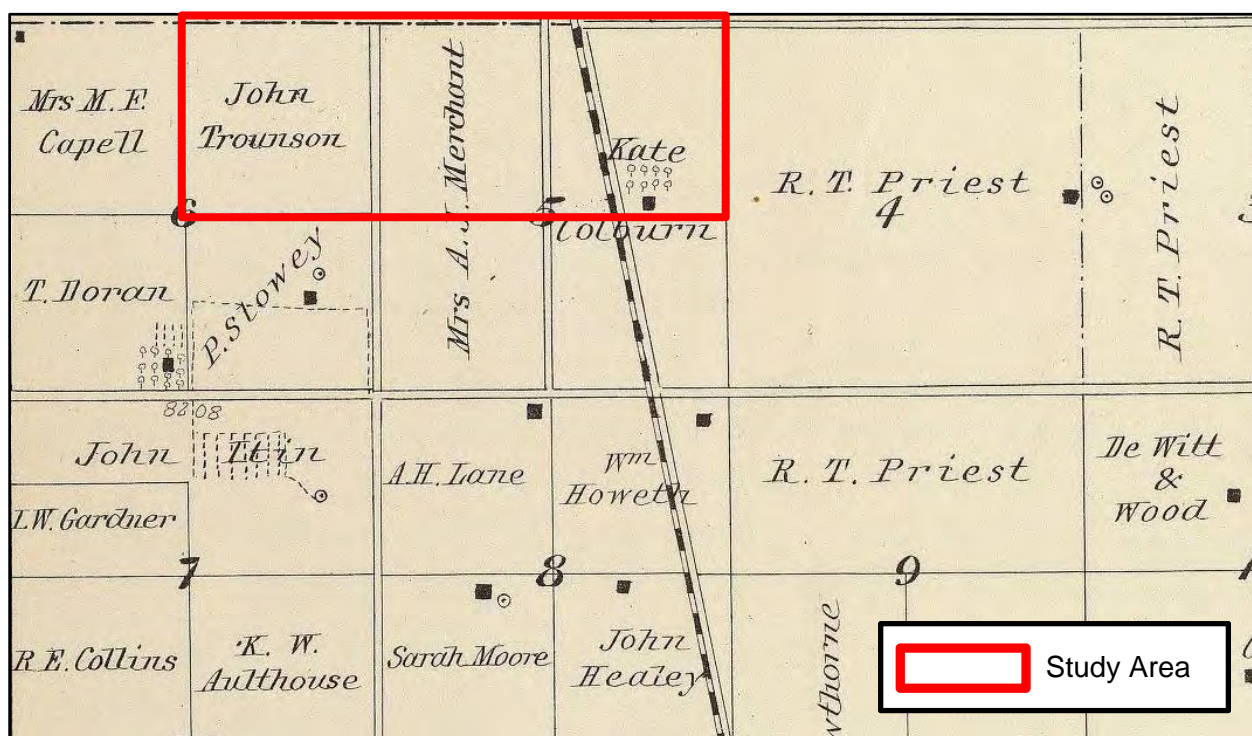


Figure 6. Township 23 South / Range 23 East (Thompson 1892:120)

EXISTING RESOURCES

Records Search Results

Prior to a windshield survey of the study area, a records search was conducted by the author at the Southern San Joaquin Valley Information Center of the California Historical Resources Information System at CSU Bakersfield to identify areas previously surveyed and identify known cultural resources present within or in close proximity to the study area. Three previously identified historic-period sites have been recorded within the study area (Map 3).

There are no other resources within or in the immediate vicinity of the study area that are listed on the National Register of Historic Places, the California Register of Historic Resources, California Points of Historical Interest, State Historic Landmarks, or the California Inventory of Historic Resources.

Eleven cultural resources surveys have been completed within the study area (Map 4). Two studies has been completed within one-half mile radius of the study area. All records search materials are included as Attachment A.

Cultural Resource Identification within the Pixley Planning Study Area

Based on current information, there are three known cultural resource sites within or immediately adjacent to the study area. These include three non-Native American historic-era sites (See Map 3). No Native American resources have been identified within or in close proximity to the study.

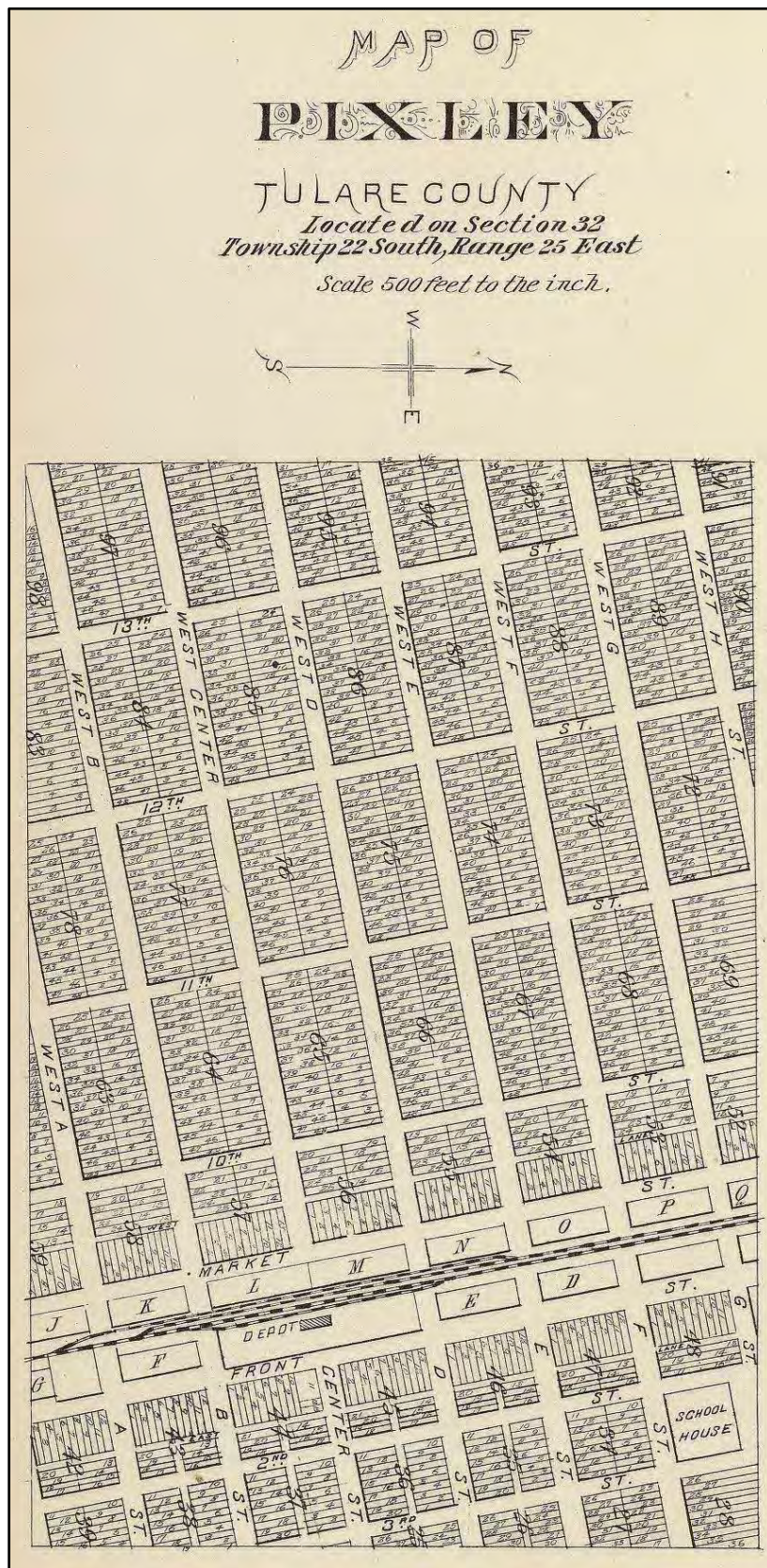
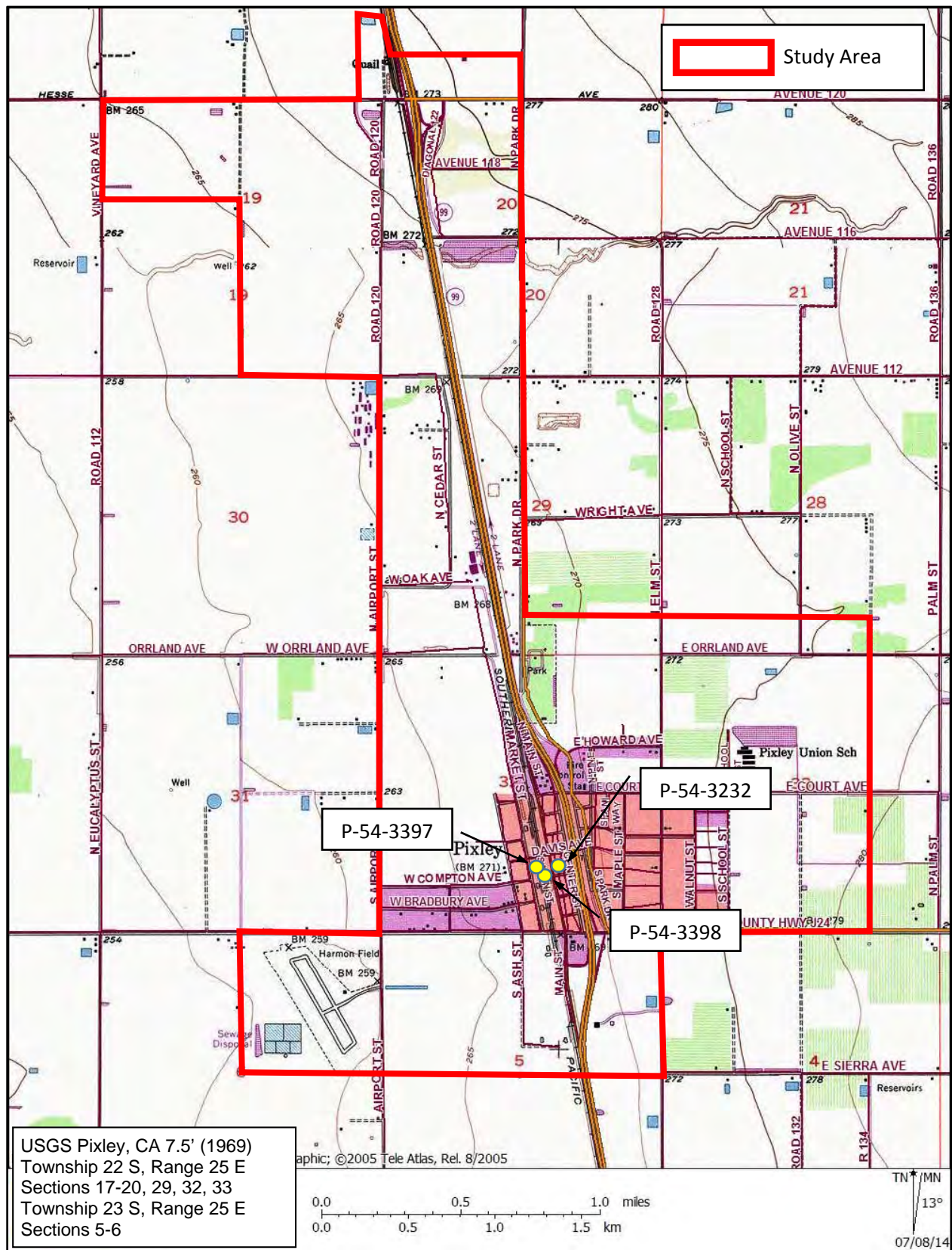


Figure 7. Map of Pixley (Thompson 1892:112)



Map 3. Cultural Resources Identified within the Pixley Planning Study Area Vicinity.

P-54-003232

This resource marks the former location of the Pixley Hotel, originally named the Artesia Hotel, the location of which was on the northeast corner of Compton Avenue and South Main Street. The resource was recorded in 1980 as part of a cultural resource survey of sites prominent in Chicano/ Latino history. At that time the building was described as a deteriorating two-story brick structure, the first floor of which had been altered to accommodate retail shops. By 1994 the structure had been razed. In 1933 Pixley Hotel was the headquarters of the California Agricultural Workers Industrial Union, and was the site of a confrontation between strikers and an armed group of farmers in which two workers were killed and eight others wounded during the San Joaquin Cotton Strike of 1933. At present, the gated lot is used for vehicle storage; a single-wide mobile structure and a garage are present.

P-54-003397

This resource includes the foundation of the former Southern Pacific Railroad Station. The original railroad station was built ca. 1886, and burned down in 1931 (Edwards 2001). A new modern Art Deco station was built in 1937 on this site. The foundation conforms to the footprint of the 1937 station. The station served Pixley until 1960, at which time a private party purchased the building and moved it north of downtown and used it for a number of years (Hudlow 1999). The resource was recorded in 1999 as part of a Tulare County redevelopment project by Hudlow Cultural Resources Associates (Figure 8).



Figure 8. Foundation remains of the 1937 Pixley Depot.

P-54-003398

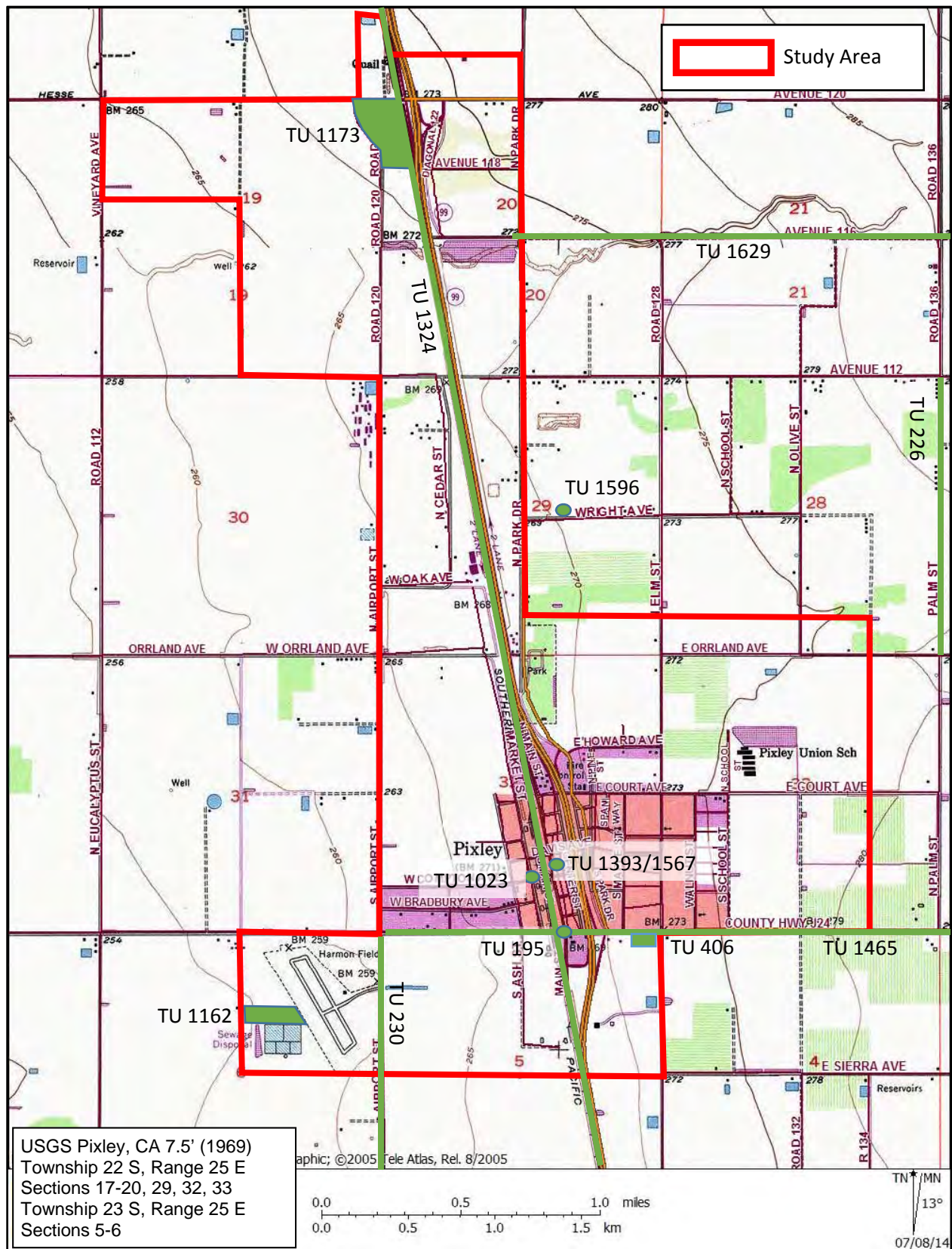
Site P-54-003398 is a former twentieth-century fish pond situated at the eastern edge of Pixley's town park across from Compton Avenue, between the Southern Pacific railroad corridor and Main Street to the east. The fish pond was emptied sometime before ca. 1940, and the structure was subsequently used to house the Pixley community Christmas tree. The tree was removed prior to 1989 and now houses a community commemorative marker placed by the Tulare County Historical Society and the Pixley Women's Club in 1989. The marker commemorates the history of the area's late nineteenth and early twentieth century artesian wells. Pixley was located within a belt of artesian wells. The Pixley well was described as a "monster" well, dug to a depth of 960 feet. It supplied the town's water needs for over half a century. The resource was recorded in 1999 as part of a Tulare County redevelopment project by Hudlow Cultural Resources Associates (Figure 9).

Previous Cultural Resource Investigations within the Study Area

Eleven cultural resource studies have been completed within the study area. Two studies has been completed within one-half mile radius of the study area.



Figure 9. Commemorative marker at P-54-003398.



Map 4. Cultural Resource Studies completed within the Pixley Planning Study Area Vicinity.

In 1977 an archaeological survey was completed of a railroad crossing at Terra Bella Avenue (Avenue 96) 25 yards west of Main Street (Road 125). The study was completed by R. J. Cantwell, consulting archaeologist. No resources were identified (see Map 4, TU 195).

In 1978 Cantwell surveyed a 4-mile length of Road 120 extending north from Avenue 64 to Avenue 96 (see Map 4, TU 230). In the same year Cantwell surveyed a 1-mile segment of Palm Street extending north from East Orland Avenue to Avenue 112, 0.25 mile east of the study area (TU 226). No resources were identified during either survey.

A 2.51-acre parcel was surveyed in 1988 by Peak & Associates, Inc. The parcel is bounded by Terra Bella Avenue on the north, Road 128 (Elm Street) on the east. No resources were identified (see Map 4, TU 406).

Two cultural resources (P-54-003398 and -003398 described above) were recorded during a survey of a 2-acre parcel adjacent on the east to the Southern Pacific right-of-way and the west side of Main Street south of Davis Avenue. The survey was completed in 1999 as part of a Tulare County redevelopment project by Hudlow Cultural Resources Associates (see Map 4, TU 1023).

In June 2003 a cultural resources assessment was completed by Catherine Lewis Pruett of Three Girls and a Shovel of 14 acres at the existing Pixley wastewater treatment facility. No resources were identified (see Map 4, TU 1162).

In October 2003 Jill Gardner of the Center for Archaeological Research at California State University Bakersfield completed a cultural resources assessment of a 30-acre parcel on behalf of Calgren Renewable Fuels for the proposed construction of an ethanol production facility at the junction of State Route 99 and Avenue 120, northwest of Pixley. No resources were identified (see Map 4, TU 1173).

In 2006 SWCA Environmental Consultants completed a linear cultural resources survey parallel to the Southern Pacific Railroad which extends south from Madera County to Kern County. No resources were identified in that portion of the survey area that crosses through the present study area (see Map 4, TU 1324).

In 2007 Rebecca Orfila of the Center for Archaeological Research at California State University Bakersfield completed a cultural resources assessment of a linear corridor extending east along Avenue 96 (County Highway J24) from the Southern Cal Edison Pixley Substation. No resources were identified (see Map 4, TU 1465).

In 2007 survey work was completed at 10 power pole locations in Kings and Tulare counties as part of the Southern California Edison Company's Deteriorated Power Pole Replacement Project. The specific pole location in the Pixley area was approximately 0.1 miles east of the study area on the north side of Wright Avenue east of N. Park Drive. No resources were identified (see Map 4, TU 1596).

Two cultural resources assessments were completed for placement of communications antennas on the existing Pixley Water Tower located at 11247 South Center Street east of South Main Street (Lorna Billat of EarthTouch in 2008 [TU 1393], and Wayne Bonner of Michael Brandman Associates in 2009 [TU 1567]). The water tower was evaluated for listing on the National Register of Historic Places by Dana Supernowicz of Historic Resources Associated in 2008 and recommended as ineligible for listing due to the ubiquitous nature of this type and design of water tower, and the fact that numerous similar water towers remain standing throughout the region. Further, the installation would have no effect on cultural sites previously recorded in close proximity to the water tank (P-54-003398 and -003398 described above).

As part of the proposed Pixley Irrigation Distribution System Expansion, Catherine Lewis Pruett of Three Girls and a Shovel surveyed a linear alignment on the north side of Avenue 116 extending east from North Park Drive (see Map 4, TU 1629). No resources were identified as a result of this study, completed in July 2011.

Native American Consultation

The Native American Heritage Commission (NAHC) was contacted on 1 June 2014 in order to determine whether Native American sacred sites have been identified either within or in close proximity to the study area. The request was resent on June 16, 2014. The NAHC responded in a letter dated June 30, 2014, stating that a records search of the NAHC Sacred Lands Inventory failed to indicate the presence of Native American traditional sites/places within the project study area. The NAHC notes that the absence of surface visible archaeological features does not preclude their presence below surface. The NAHC advised that when specific projects become public, that the County or appropriate jurisdiction inform the Native American contacts provided by the NAHC as to the nature of the proposed project. As part of the consultation process, the NAHC recommends that local government and project developers contact tribal governments and Native American individuals on the list provided in order to determine if the proposed action might impact any cultural places or sacred sites. If a response is not received in two weeks of notification, the NAHC recommends that a follow-up telephone call be made to ensure the project information has been received. NAHC correspondence and the Native American contact list is included in Attachment B.

Windshield Survey of the Study Area

On June 18 the author completed a windshield survey of the study area to field check previously recorded resources and identify any structures and/or other features which may be eligible for listing in the California Register of Historic Resources. Numerous structures appear to date to the period prior to 1950, although many of these have been modified to include additions, aluminum windows, and other more modern features. Several structures appear to date to the early 1900s and appear relatively unmodified. A good example is a Craftsman style residence located at 2289 N. Cedar Street (see Figure 10). Most commercial and industrial structures appear to be modern in construction, although several numerous storefronts, particularly in the historic downtown area, appear to be remnants of older buildings, such as the Las Margaritas Bar on S Main Street north of Compton Avenue which appears to be the first floor remnant of the Allen Building pictured in Figure 2 and constructed in 1886-7 (Figure 11). Also present are remnants of the eucalyptus grove planted in 1908; the grove is now located within a park north of the town center. A dilapidated historic-era residence was noted within the park boundaries and was constructed at about the same time as the grove was planted, either in its present location or elsewhere and subsequently moved to the park. Finally, Harmon Field, although abandoned, retains characteristic elements such as its runway and gate (Figure 4).

OPPORTUNITIES AND CONSTRAINTS WITH RECOMMENDATIONS

Cultural resources consist of significant and potentially significant prehistoric and ethnographic sites, historic and ethnographic resources, cultural material collections, and cultural landscapes. As noted above, based on current information, there are three documented cultural resources sites within the Pixley Planning Study Area. In addition to these a resources, a number of historic-era structures (older than 50 years in age) exist in the study area but have not been formally recorded.



Figure 10. Craftsman House, 2289 N. Cedar Street.



Figure 11. 612 (519?) S. Main Street. Bottom floor of Allens Building, ca. 1886-87.

Very little of the area within the Pixley Planning area has been surveyed, and potentially significant resources may exist. Utilization of the available data is integral to planning for future uses and activities and to determine the best management strategy for such resources at this phase of the planning process. All actions taken pursuant to the Pixley Community Plan shall be planned and implemented in coordination with provisions and implementing guidelines of the California Environmental Quality Act (CEQA), as amended March 18, 2010, which states that identification and evaluation of historical resources is required for any action that may result in a potential adverse effect on the significance of such resources, which includes archaeological resources. Once specific projects are planned, targeted studies can be conducted to avoid or minimize impacts to significant cultural resources.

Recommendations

The following recommendations are offered to ensure that cultural resources are afforded an appropriate level of protection and preservation, while also allowing for future planning and development:

- Incorporate within the Pixley Community Plan the identification and management of potentially sensitive prehistoric and historic-period resources;
- Ensure that the local Native American communities are included in all planning and development activities (see Attachment B);
- Conduct intensive cultural resources field inventories prior to development of specific projects that could disturb or destroy sensitive and significant cultural resources.

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PREPARER'S QUALIFICATIONS

C. Kristina Roper conducted the historical resources inventory and background research, and assisted in the preparation of this Archaeological Survey Report. Ms. Roper has over 30 years of professional experience in the field of archaeology, historical research and architectural evaluation, specifically in the investigation and management of cultural resources within the context of local, state and federal regulatory compliance for projects in the Far West. Ms. Roper holds a Master's degree in Cultural Resources Management awarded in 1993 from Sonoma State University, and is certified as a Registered Professional Archaeologist. She has completed graduate-level coursework in historical architectural evaluation and historic research. Her experience in cultural resources management includes both government and private sector employment and contracting for archaeological field services and historic research, documentation of resource assessments for Initial Studies (IS), Environmental Assessments (EA), Environmental Impact Reports (EIR), and Environmental Impact Statements (EIS). Ms. Roper is a registered archaeologist with the California Historic Resources Information System.

Ms. Roper has participated in planning efforts with numerous governmental entities in the San Joaquin Valley. She has prepared heritage preservation ordinances for the City of Chowchilla, serves as advisory staff to the Chowchilla Heritage Preservation Commission, and has recently completed a multi-year survey and assessment of Chowchilla's built environment. Ms. Roper has prepared a cultural resources records search and sensitivity analysis to be used in the development of a revised General Plan for the City of Coalinga, Fresno County. Ms. Roper has consulted with Native American tribes in the San Joaquin Valley and Sierra foothills under Senate Bill 18 (SB 18), which applies to General Plans, Specific Plans, and amendments proposed on or after March 1, 2005. SB 18 expands CEQA for the protection of California's traditional tribal cultural places by requiring consultation with Native American Groups during these planning efforts to define resources and sacred areas and incorporate protection of these important resources into the planning process.

Ms. Roper has served as a Lecturer in Anthropology at California State University Fresno from 1995 to the present. Among her many courses taught is an upper division course in Cultural Resources Management which provides an overview of state and federal historic preservation law and the identification and evaluation of cultural resources. From 2002 through June of 2009, Ms. Roper served as Project Director for a services contract with the California Department of Transportation, District 6, Cultural Resources Branch, administered by the California State University Foundation. Ms. Roper supervised a team of cultural resources technicians who performed professional and technical services required by Caltrans for cultural resource studies. These included archaeological survey, title search for historic structures and properties, prehistoric and historic background research, excavation of archaeological sites, electronic data entry, and maintenance of confidential archaeological records and files.

ATTACHMENT A:
RECORDS SEARCH

HISTORIC RESOURCES INVENTORY

87
Ser. No. 3256-1
HABS _____ HAER _____ NR 7 SHL _____ Loc _____
UTM: A _____ B _____
C _____ D _____

P 5 4 - 003232

IDENTIFICATION

1. Common name: Unknown
2. Historic name: Pixley Hotel
3. Street or rural address: 630 Main Street
City Pixley Zip _____ County Tulare
4. Parcel number: _____
5. Present Owner: _____ Address: _____
City _____ Zip _____ Ownership is: Public _____ Private _____
6. Present Use: stores Original use: hotel

DESCRIPTION

- 7a. Architectural style: _____
- 7b. Briefly describe the present *physical description* of the site or structure and describe any major alterations from its original condition:

The Pixley Hotel is a deteriorating two-story brick structure whose first floor houses stores. The first floor was altered to accommodate the stores.

Attach Photo(s) Here

8. Construction date: unknown
Estimated _____ Factual _____
9. Architect _____
10. Builder _____
11. Approx. property size (in feet)
Frontage _____ Depth _____
or approx. acreage _____
12. Date(s) of enclosed photograph(s)
Jan. 1980

- Deteriorated
~~XXXXXXXXXX~~ X
13. Condition: Excellent ____ Good ____ Fair ____ ~~XXXXXXXXXX~~ X No longer in existence ____
14. Alterations: altered to accommodate stores.
15. Surroundings: (Check more than one if necessary) Open land ____ Scattered buildings ____ Densely built-up ____
Residential ____ Industrial ____ Commercial X Other: ____
16. Threats to site: None known X Private development ____ Zoning ____ Vandalism ____
Public Works project ____ Other: ____
17. Is the structure: On its original site? yes Moved? ____ Unknown? ____
18. Related features: ____

SIGNIFICANCE

19. Briefly state historical and/or architectural importance (include dates, events, and persons associated with the site.)

20. Main theme of the historic resource: (If more than one is checked, number in order of importance.)

Architecture ____ Arts & Leisure ____
Economic/Industrial ____ Exploration/Settlement ____
Government ____ Military ____
Religion ____ Social/Education X

21. Sources (List books, documents, surveys, personal interviews and their dates). UCAPAWA NEWS, Dec. 1939;

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Ronald B. Taylor, Chavez & the Farmworkers, (Boston) 1975; Interview with Dolores Huerta, 12/30/1979

22. Date form prepared Jan. 1980

By (name) A. Castaneda & J. Pitti

Organization Ch/Latino Cult. Resources Survey

Address: 1587 Woodland Avenue, #B

City Palo Alto, CA Zip 94301

Phone: (415) 326-7038

Locational sketch map (draw and label site and surrounding streets, roads, and prominent landmarks):



19. SIGNIFICANCE: THE PIXLEY HOTEL

In the late 1920s and 1930s California's fertile valleys were convulsed by numerous strikes as Chicano and other farmworkers vigorously renewed the drive against starvation wages and for recognition of their union, the California Agricultural Workers Industrial Union. Pixley, in the heart of a large cotton-growing area, was the center of the massive cotton strikes of 1933 that spread throughout the six counties of the San Joaquin Valley and involved 18,000 workers.

The Pixley Hotel, headquarters of the CAWIA, is symbolic of this major unionization effort and of California's bloody agricultural history. On October 10, 1933, Delfino Davila and Delores Hernandez, two Chicano strikers, were killed in a confrontation between strikers and an armed group of farmers in front of the Pixley Hotel as the strikers were about to enter their headquarters for a meeting.

Although the strikers did not win union recognition, they did achieve a 15-cent-per-100 pound increase in pay. This victory was critically important. The striking cotton workers had proven that they could stand fast against vigilante terror tactics. The cotton strikes of 1933 are an important benchmark in Chicano and in farm labor history. In 1939, four years after all American workers except farm laborers had won the right to organize unions with the passage of the National Labor Relations Act, Chicano farmworkers again struck the cotton fields in the San Joaquin Valley for union recognition. Many of the 1939 strikers had been involved in the strikes six years earlier. Pixley had shown them that union recognition was essential to lasting gains.

P 54 003390
Primary #:

HRI #:

Trinomial: CA-TUL-2303

NRHP Status Code:

Other Listings:

Page 1 of 6

PRIMARY RECORD

Review Code:

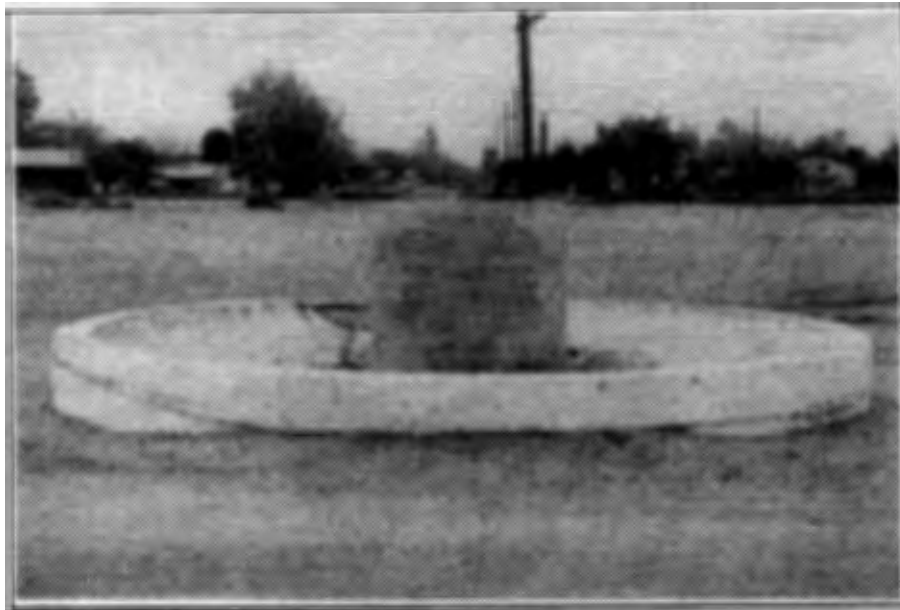
Reviewer:

Date:

Resource Name or #: Goldfish Pond

P1. Other Identifier: P-2

- P2. Location: ☒ Not for Publication ☐ Unrestricted a. County: Tulare
b. USGS 7.5' Quadrangle Pixley Date: 1954, Photorevised 1969, T22S.; R25E.;
SW 1/4 of the SW 1/4 of Sec. 32; MDB.M.
c. Address: City: Zip:
d. UTM, Zone 11, 293280 m Easting, 3982790 m Northing.
e. Other Locational Data: Directly opposite from the intersection of Compton
Street and Main Street.



P5b. Description of Photo: Fish Pond with Modern Plaque commemorating the History of the area's Artesian Wells

- P3a. Description: Site P-2 is a former early twentieth-century fish pond. The fish pond was located on the eastern edge of Pixley's town park, which was located between the Southern Pacific train station and Main Street to the east. The fish pond was filled with goldfish, noted as being exotic goldfish, which probably means the pond was filled with koi. The fish pond is constructed of bricks with a covering of concrete plaster. The bricks are manufactured; the circle measures 19' 3", and is now bound with a metal strap which keeps it from separating. After the pond was emptied of fish; it was used to house the Pixley community Christmas tree. The Christmas tree was mature in 1980, when the photograph was taken, which suggests it had been

RECEIVED MAR 31 2000

Primary #:

HRI #:

Trinomial:

NRHP Status Code:

Other Listings:

Page 2 of 6

planted in the 1930s or early 1940s, since it was growing in 1943 (Anonymous 1943).

The fish pond now houses a community commemorative marker. This marker was placed by the Tulare County Historical Society and the Pixley Women's Club in 1989. The marker honors the history of the area's late nineteenth and early twentieth-century artesian wells. Pixley was located within a belt of artesian wells, which were located throughout the area, particularly toward the west. Pixley's well was noted as a monster well, which was dug to a depth of 960 feet. It supplied the town's water needs for over half a century.

P3b. Resource Attributes: HP39, Other.

P4. Resources Present: ☐ Building ☒ Structure ☐ Object ☐ Site ☐ District
☐ Element of District

P5a. Photograph or Drawing:

P6. Date Constructed/Age and Sources:

☐ Prehistoric ☒ Historic ☐ Both

P7. Owner and Address: Southern Pacific Railroad

P8. Recorded by: **Scott M. Hudlow**, *Hudlow Cultural Resource Associates*, 6312
Castlepoint Street, Bakersfield, California 93313

P9. Date Recorded: **December 9, 1999**

P10. Type of Survey: ☒ Intensive ☐ Reconnaissance ☐ Other

Describe: Phase I Cultural Resource Survey

P11. Report Citation:

Hudlow, Scott M.

1999 A Phase I Cultural Resource Survey For Tulare County Community
Redevelopment, Pixley Place Project, Tulare County, California.

Attachments: ☐ NONE ☒ Map Sheet ☐ Continuation Sheet ☐ Building, Structure,
and Object Record ☐ Linear Resource Record ☒ Archaeological Record ☐ District
Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☒
Photograph Record ☐ Other (List):

Primary #:

HRI #:

Trinomial:

NRHP Status Code:

Other Listings:

Page 3 of 6

ARCHAEOLOGICAL SITE RECORD

Resource Name or #:

A1. Dimensions: 19' 3" round

Method of Measurement: ☐ Paced ☒ Taped ☐ Visual estimate ☐ Other:Method of Determination (Check any that apply.): ☒ Artifacts ☒ Features ☐ Soil☐ Vegetation ☐ Topography ☐ Cut Bank ☐ Animal Burrow ☐ Excavation☐ Property Boundary ☐ Other (Explain):Reliability of Determination: ☒ High ☐ Low Explain:Limitations (Check any that apply): ☐ Restricted access ☐ Paved/built over☐ Disturbances ☐ Site limits incompletely defined ☐ Other (Explain): NoneA2. Depth: _____ ☐ None ☒ Unknown Method of Determination:A3. Human Remains: ☐ Present ☐ Absent ☐ Possible ☒ Unknown (Explain):

A4. Features: (Number, briefly describe, indicate size, list associated cultural constituents, and show location of each feature on sketch map.):

A5. Cultural Constituents: (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features.): Site P-2 is a former early twentieth-century fish pond. The fish pond was located on the eastern edge of Pixley's town park, which was located between the Southern Pacific train station and Main Street to the east. The fish pond was filled with goldfish, noted as being exotic goldfish, which probably means the pond was filled with koi. The fish pond is constructed of bricks with a covering of concrete plaster. The bricks are manufactured; the circle measures 19' 3", and is now bound with a metal strap which keeps it from separating. After the pond was emptied of fish; it was used to house the Pixley community Christmas tree. The Christmas tree was mature in 1980, when the photograph was taken, which suggests it had been planted in the 1930s or early 1940s, since it was growing in 1943 (Anonymous 1943).

The fish pond now houses a community commemorative marker. This marker was placed by the Tulare County Historical Society and the Pixley Women's Club in 1989. The marker honors the history of the area's late nineteenth and early twentieth-century artesian wells. Pixley was located within a belt of artesian wells, which were located throughout the area, particularly toward the west. Pixley's well was noted as a monster well, which was dug to a depth of 960 feet. It supplied the town's water needs for over half a century.

A6. Were Specimens Collected? ☒ No ☐ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)A7. Site Condition: ☒ Good ☐ Fair ☐ Poor (Describe disturbances.):

A8. Nearest Water: (Type, distance, and direction.): Deer Creek, intermittent stream, approximately 3.75 miles to the south

A9. Elevation: 271 Feet amsl

Page 4 of 6

- A10. Environmental Setting: (Describe vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc., as appropriate.): Native vegetation is gone, open urban lot, 0% slope, open exposure.
- A11. Historical Information: (Note sources and provide full citations in Field A16 below.):
- A12. Age: o Prehistoric o Pre-Colonial (1500-1769) o Spanish/Mexican (1769-1848)
o Early American (1848-1880) o Turn of century (1880-1914)
o Early 20th century (1914-1945) o Post WWII (1945+) x Undetermined
Describe position in regional prehistoric chronology or factual historic dates if known:
- A13. Interpretations (Discuss date potential, function(s), ethnic affiliation, and other interpretations):
- A14. Remarks:
- A15. References (Give full citations including the names and addresses of any persons interviewed, if possible.):
Anonymous
1943 "County President of Federated Woman's Club Tells of Pioneer Days in Pixley Community in Talk Over Radio" *Terra Bella News*, March 19, 1943.
- A16. Photographs (List subjects, direction of view, and accession numbers or attach a Photograph Record.):
99-11/7, Fishpond containing Commemorative Plaque,
View toward the West
99-11/8, Fishpond containing Commemorative Plaque,
View toward the West

Original Media/Negatives Kept at: Hudlow Cultural Resource Associates

- A17. Form Prepared by: Scott M. Hudlow Date: December 9, 1999
Affiliation and Address: Hudlow Cultural Resource Associates

6312 Castlepoint Street
Bakersfield, California 93313

Hudlow Cultural Resource Associates

Primary #:
HRI #:
Trinomial:
NRHP Status Code:
Other Listings:

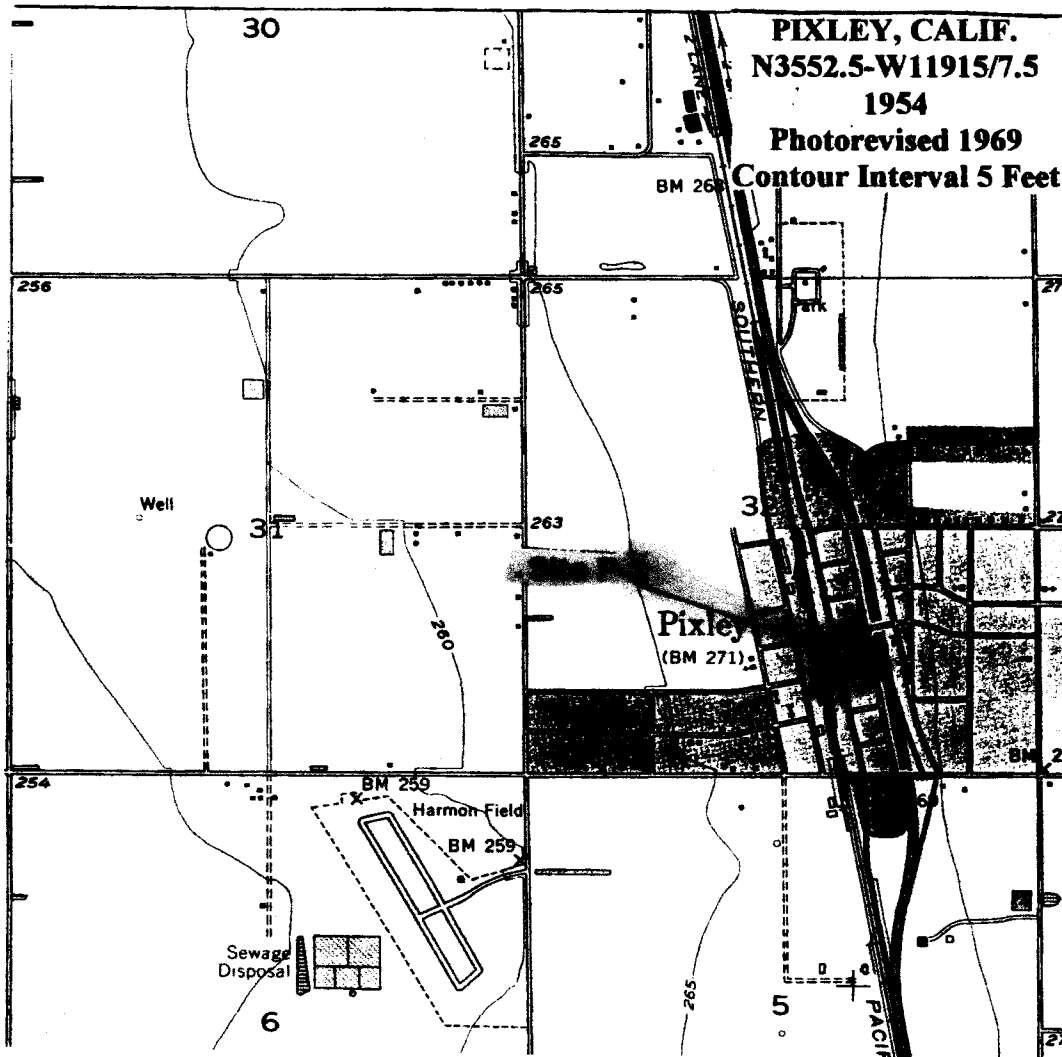
Page 5 of 6

PHOTOGRAPH RECORD



Intersection of Main and Compton;
Fish Pond is in Foreground with town Christmas Tree

SITE LOCATION MAP



Primary #:

HRI #:

Trinomial: CA-TUL-2302

NRHP Status Code:

Other Listings:

Page 1 of 7

PRIMARY RECORD

Review Code:

Reviewer:

Date:

Resource Name or #: **Pixley Railroad Station**P1. Other Identifier: **P-1**P2. Location: ☒ Not for Publication ☐ Unrestricted a. County: **Tulare**b. USGS 7.5' Quadrangle **Pixley** Date: 1954, Photorevised 1969, T22S.; R25E.; SW 1/4 of the SW 1/4 of Sec. 32; MDB.M.

c. Address: City: Zip:

d. UTM, Zone 11, 293240 m Easting, 3982790 m Northing.

e. Other Locational Data: Directly adjacent to the Southern Pacific Railroad line, opposite from the intersection of Compton Street and Main Street.



P5b. Description of Photo Site P-1, Southern Pacific Railroad Station Foundation, North and East Elevations

P3a. Description: Site P-1 is the foundation of the former Southern Pacific railroad station. The Southern Pacific railroad was completed from Oakland to Sumner (east Bakersfield) in 1973, traversing Tulare County, south from the townsite of Tulare toward Sumner through the middle of the Central Valley. Towns were built on the railroad right-of-way, at sidings and other locations throughout the Valley, including Pixley. Pixley was organized in 1886, although settlement began in the area, four years earlier (Anonymous 1943). One of the three organizers was Frank M. Pixley, former California governor Leland Stanford's attorney governor in the 1860s. The town was named for Frank Pixley, who was also well known as the owner and editor of the *Argonaut*. Pixley and his partners persuaded the Southern Pacific to build a

Primary #:
 HRI #:
 Trinomial:
 NRHP Status Code:
 Other Listings:

Page 2 of 7

railroad station and a hotel/restaurant, which was known as the Artesia, which was located on the east side of Main Street across the street from the project area.

The first railroad station was replaced in 1937, with a modern, Art Deco railroad station. Site P-1 conforms to the footprint of the modern railroad. The modern railroad was possibly placed on top of the first train station. The railroad station foundation is a poured-in-place concrete foundation with a walkway on the north, south, and east elevations. The main entrance faces east toward Main Street, rather than the railroad tracks, which lie to the west. The bathrooms were located on the north elevation, and the station manager's office was located on the south elevation, adjacent to the freight office.

The modern Southern Pacific Railroad station was built in 1937. It is a sleek, modern Art Deco station, which served Pixley until approximately 1960 (Polk 1959; 1961). A private party purchased the station and moved it north of downtown Pixley and used it for a number of years. A plywood shed was attached to the station's north elevation. The station is now abandoned.

- P3b. Resource Attributes: HP17, Railroad Depot; AH2, Foundations/Structure Pads
 P4. Resources Present: ☐ Building ☐ Structure ☐ Object ☒ Site ☐ District
☐ Element of District
 P5a. Photograph or Drawing:
 P6. Date Constructed/Age and Sources:
☐ Prehistoric X Historic ☐ Both
 P7. Owner and Address: Southern Pacific Railroad
 P8. Recorded by: **Scott M. Hudlow**, *Hudlow Cultural Resource Associates*, 6312
 Castlepoint Street, Bakersfield, California 93313
 P9. Date Recorded: **December 9, 1999**
 P10. Type of Survey: ☒ Intensive ☐ Reconnaissance ☐ Other
 Describe: Phase I Cultural Resource Survey
 P11. Report Citation:
 Hudlow, Scott M.
 1999 A Phase I Cultural Resource Survey For Tulare County Community
 Redevelopment, Pixley Place Project, Tulare County, California.

Attachments: ☐ NONE X Map Sheet ☐ Continuation Sheet ☐ Building, Structure,
 and Object Record ☐ Linear Resource Record X Archaeological Record ☐ District
 Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record X
 Photograph Record ☐ Other (List):

Primary #:
HRI #:
Trinomial:
NRHP Status Code:
Other Listings:

Page 3 of 7

ARCHAEOLOGICAL SITE RECORD

Resource Name or #: P-1

- A1. Dimensions: a. Length 45 feet (N/S) x b. Width 20 feet (E/W)
Method of Measurement: ☐ Paced ☒ Taped ☐ Visual estimate ☐ Other:
Method of Determination (Check any that apply.): ☒ Artifacts ☒ Features ☐ Soil
☐ Vegetation ☐ Topography ☐ Cut Bank ☐ Animal Burrow ☐ Excavation
☐ Property Boundary ☐ Other (Explain):
Reliability of Determination: ☒ High ☐ Low Explain:
Limitations (Check any that apply.): ☐ Restricted access ☐ Paved/built over
☐ Disturbances ☐ Site limits incompletely defined ☐ Other (Explain): None
- A2. Depth: _____ ☐ None ☒ Unknown Method of Determination:
- A3. Human Remains: ☐ Present ☐ Absent ☐ Possible ☒ Unknown (Explain):
- A4. Features: (Number, briefly describe, indicate size, list associated cultural constituents, and show location of each feature on sketch map.):
- A5. Cultural Constituents: (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features.): Site P-1 is the foundation of the former Southern Pacific railroad station. The Southern Pacific railroad was completed from Oakland to Sumner (east Bakersfield) in 1973, traversing Tulare County, south from the townsite of Tulare toward Sumner through the middle of the Central Valley. Towns were built on the railroad right-of-way, at sidings and other locations throughout the Valley, including Pixley. Pixley was organized in 1886, although settlement began in the area, four years earlier (Anonymous 1943). One of the three organizers was Frank M. Pixley, former California governor Leland Stanford's attorney governor in the 1860s. The town was named for Frank Pixley, who was also well known as the owner and editor of the *Argonaut*. Pixley and his partners persuaded the Southern Pacific to build a railroad station and a hotel/restaurant, which was known as the Artesia, which was located on the east side of Main Street across the street from the project area.

The first railroad station was replaced in 1937, with a modern, Art Deco railroad station. Site P-1 conforms to the footprint of the modern railroad. The modern railroad was possibly placed on top of the first train station. The railroad station foundation is a poured-in-place concrete foundation with a walkway on the north, south, and east elevations. The main entrance faces east toward Main Street, rather than the railroad tracks, which lie to the west. The bathrooms were located on the north elevation, and the station manager's office was located on the south elevation, adjacent to the freight office.

The modern Southern Pacific Railroad station was built in 1937. It is a sleek, modern Art Deco station, which served Pixley until approximately 1960 (Polk 1959;

Primary #:
HRI #:
Trinomial:
NRHP Status Code:
Other Listings:

Page 4 of 7

1961). A private party purchased the station and moved it north of downtown Pixley and used it for a number of years. A plywood shed was attached to the station's north elevation. The station is now abandoned.

- A6. Were Specimens Collected? ☒ No ☐ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)
- A7. Site Condition: ☒ Good ☐ Fair ☐ Poor (Describe disturbances.):
- A8. Nearest Water: (Type, distance, and direction.): Deer Creek, intermittent stream, approximately 3.75 miles to the south
- A9. Elevation: 271 Feet amsl
- A10. Environmental Setting: (Describe vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc., as appropriate.): Native vegetation is gone, open urban lot, 0% slope, open exposure.
- A11. Historical Information: (Note sources and provide full citations in Field A16 below.):
- A12. Age: ☐ Prehistoric ☐ Pre-Colonial (1500-1769) ☐ Spanish/Mexican (1769-1848) ☐ Early American (1848-1880) ☐ Turn of century (1880-1914) ☒ Early 20th century (1914-1945) ☐ Post WWII (1945+) ☐ Undetermined
Describe position in regional prehistoric chronology or factual historic dates if known:
- A13. Interpretations (Discuss date potential, function(s), ethnic affiliation, and other interpretations):
- A14. Remarks:
- A15. References (Give full citations including the names and addresses of any persons interviewed, if possible.):
- Anonymous
- 1943 "County President of Federated Woman's Club Tells of Pioneer Days in Pixley Community in Talk Over Radio" *Terra Bella News*, March 19, 1943.
- Polk, R.L. & Co.
- 1959 *Polk's Tulare City Directory*. R.L. Polk & Co. Los Angeles, California.
- 1961 *Polk's Tulare City Directory*. R.L. Polk & Co. Los Angeles, California.

Hudlow Cultural Resource Associates

Primary #:
HRI #:
Trinomial:
NRHP Status Code:
Other Listings:

Page 5 of 7

- A16. Photographs (List subjects, direction of view, and accession numbers or attach a Photograph Record.):
- 99-11/2, Pixley Railroad Station, 1937, North & East Elevations, SW
 - 99-11/3, Pixley Railroad Station, 1937, North & West Elevations, SE
 - 99-11/4, Pixley Railroad Station, 1937, South & West Elevations, NE
 - 99-11/5, Pixley Railroad Station, 1937, South & East Elevations, NW
 - 99-11/6, Pixley Railroad Station, 1937, North & East Elevations, SW
 - 99-11/9, Pixley Railroad Station Foundation, 1937, North & East Elevations, SW
 - 99-11/10, Pixley Railroad Station Foundation, 1937, North & West Elevations, SE
 - 99-11/11, Pixley Railroad Station Foundation, 1937, South & West Elevations, NE
 - 99-11/12, Pixley Railroad Station Foundation, 1937, South & East Elevations, NW

Original Media/Negatives Kept at: Hudlow Cultural Resource Associates

- A17. Form Prepared by: Scott M. Hudlow Date: December 9, 1999
Affiliation and Address: Hudlow Cultural Resource Associates
6312 Castlepoint Street
Bakersfield, California 93313

Primary #:

HRI #:

Trinomial:

NRHP Status Code:

Other Listings:

Page 6 of 7

PHOTOGRAPH RECORD



Site P-1, Southern Pacific Railroad Station Foundation,
North and West Elevations



Moved 1937, Southern Pacific Railroad Station,
North and East Elevations

Hudlow Cultural Resource Associates

Primary #:

HRI #:

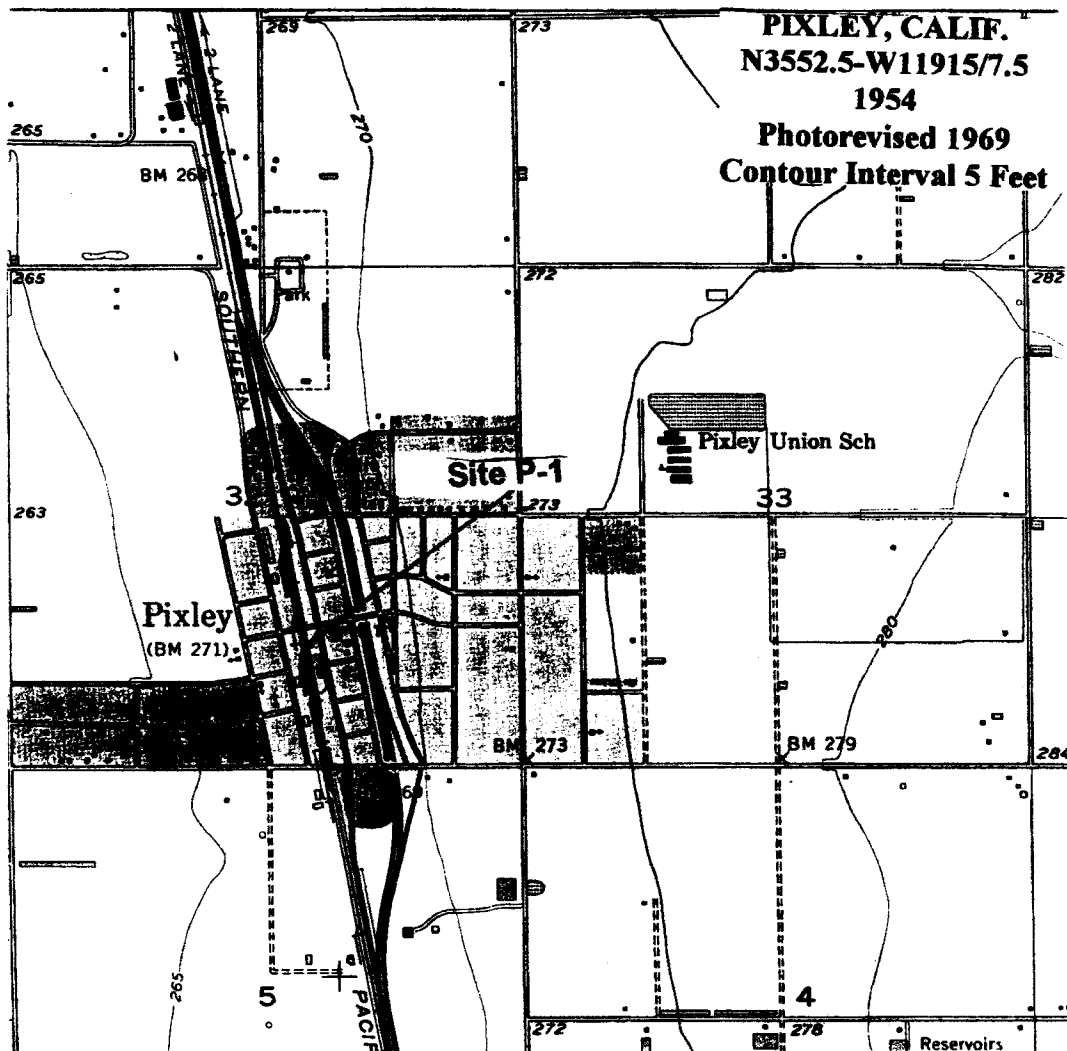
Trinomial: CA-TUL-2302

NRHP Status Code:

Other Listings:

Page 6 of 6

SITE LOCATION MAP



ARCHAEOLOGICAL AND HISTORICAL SURVEY REPORT

ARCHAEOLOGICAL AND HISTORICAL SURVEY REPORT

AVENUE 96 AT ROAD 125

RAILROAD CROSSING

AVENUE 96 AT Road 125

Southern San Joaquin Valley
Archaeological Information Center
9001 Stockdale Highway
Bakersfield, CA 93311-1099

Submitted

September 30, 1977

TU-00195

ARCHEOLOGICAL AND HISTORICAL SURVEY REPORT

ROAD 136

FROM AVENUE 104 TO AVENUE 112

Southern San Joaquin Valley
Archaeological Information Center
9001 Stockdale Highway
Bakersfield, CA 93311-1000

Submitted

October 6, 1978

TU 00226

ARCHAEOLOGICAL AND HISTORICAL SURVEY REPORT

ROAD 227

FROM AVENUE 314 TO AVENUE 315

Southern San Joaquin Valley
Archaeological Information Center
9001 Stockdale Highway
Bakersfield, CA 93311-1099

Submitted

October 23, 1978

TU 00229

ARCHEOLOGICAL AND HISTORICAL SURVEY REPORT

ROAD 120
FROM AVENUE 64 TO AVENUE 96

ROAD 120

Submitted

December 13, 1978

Southern San Joaquin Valley
Archaeological Information Center
9001 Stockdale Highway
Bakersfield, CA 93311-1099

TU 00230

**CULTURAL RESOURCE ASSESSMENT
OF THE PIXLEY APARTMENTS II,
TULARE COUNTY, CALIFORNIA**

Prepared by

Peak & Associates, Inc.
8167-A Belvedere Avenue
Sacramento, CA 95826
(916) 452-4435

Prepared for

The CBM Group, Inc.
1010 Racquet Club Drive, Suite 109
Auburn, CA 95603

October 10, 1988

Southern San Joaquin Valley
Archaeological Information Center
9001 Stockdale Highway
Bakersfield, CA 93311-1099

TU 00406



Gay Weinberger
archaeological consultant

porterville college
dept. of anthropology
900 south main st.
porterville, calif. 93257

office: (209) 781-3130 ext. 59/home: (209) 539-3251

PROJECT REPORT (TITLE): Archaeological
Reconnaissance of Pixley Irrigation District

PREPARED FOR: Pixley Irrigation District

DATE: May 30, 1984

<u>TABLE OF CONTENTS</u>	<u>PAGE NOS.</u>
Introduction	1
Research Methods	1-3
Pre-Field Research	1-2
Field Research	2-3
Findings	3-9
Pre-Field Research	3
Field Research	3-4
Ethnographic Description	4-5
Historical Background	5-7
Previous Archaeological Research	7-8
Review of Prehistory	8-9
References	10-11
Project Location Map	12
Archaeological Records Search	13
Map of Archaeological Reconnaissance	14
Appendix A	i
Appendix B	ii

TU 00551

A
PHASE I CULTURAL RESOURCE SURVEY
FOR TULARE COUNTY COMMUNITY REDEVELOPMENT,
PIXLEY PLACE PROJECT
TULARE COUNTY, CALIFORNIA

Submitted to:
Tulare County Redevelopment Agency
Attn: Juliette De Campos
5961 South Mooney Boulevard
Visalia, California 93277

Keywords:
Pixley 7.5' Quadrangle, Tulare County,
National Historic Preservation Act of 1966
Site P-1

Submitted by:
Hudlow Cultural Resource Associates
6312 Castlepoint Street
Bakersfield, California 93313

Author:
Scott M. Hudlow

December 1999

Southern San Joaquin Valley
Archaeological Information Center
9201 Stockdale Highway

1999

TU 01023

**CULTURAL RESOURCES ASSESSMENT FOR THE PIXLEY WASTEWATER
TREATMENT FACILITY, LOCATED WEST OF PIXLEY,
TULARE COUNTY, CALIFORNIA**

Prepared by:

Catherine Lewis Pruett

*Three Girls and A Shovel, LLC
Catherine Lewis Pruett
Dorothy Fleagle
Peggy Murphy*

2820 Alta Vista
Bakersfield, CA 93305
Telephone: 661-861-8711
Fax: 661-323-1814

Project #: 060316

Prepared for:

Sylvia S. Riordon
Self-Help Enterprises
8445 W. Elowin Ct.
Visalia, CA 93290

Key Words: T. 28S., R. 27E., Pixley 7.5', 14 acres, pedestrian survey, Tulare County, no cultural resources

TU-01162

SOUTHERN SAN JOAQUIN VALLEY
ARCHAEOLOGICAL INFORMATION CENTER
CAL STATE UNIVERSITY, BAKERSFIELD
9001 STOCKDALE HIGHWAY
BAKERSFIELD, CA 93311-1099

June 2003

RECEIVED
JUL 09 2003
BY: AB

**A CULTURAL RESOURCES ASSESSMENT OF 30 ACRES FOR
PROPOSED CONSTRUCTION OF AN ETHANOL PRODUCTION
PLANT NORTHWEST OF THE CITY OF PIXLEY,
TULARE COUNTY, CALIFORNIA**



Prepared by:

Jill K. Gardner, M.A., RPA
Center for Archaeological Research
California State University
9001 Stockdale Highway
Bakersfield, California 93311-1099

Dr. Mark Q. Sutton, Director

CAR Project No. 03-27

RECEIVED

OCT 22 2003

BY: _____

Prepared for:

Quad Knopf
P.O. Box 3699
Visalia, CA 93278

**SOUTHERN SAN JOAQUIN VALLEY
ARCHAEOLOGICAL INFORMATION CENTER
CAL STATE UNIVERSITY, BAKERSFIELD
9001 STOCKDALE HIGHWAY
BAKERSFIELD, CA 93311-1099**

October 2003

RECEIVED

OCT 22 2003

BY: _____

TU-01173

CONFIDENTIAL – NOT FOR PUBLIC DISTRIBUTION*

**CULTURAL RESOURCES FINAL REPORT OF MONITORING
AND FINDINGS FOR THE QWEST NETWORK CONSTRUCTION
PROJECT, STATE OF CALIFORNIA**

TURLOCK
MERCED
MADERA

MERCED

MADERA

GOSHEN

PIXLEY

SELMA

TIPTON

TRAVIS

TULARE

VISALIA

Prepared for

Qwest Communications
1801 California St.
Denver, Colorado 80202
(303) 992-1400

Prepared by

SWCA ENVIRONMENTAL CONSULTANTS
3840 Rosin Court, Suite 130
Sacramento, California 95834
(916) 565-0356
www.swca.com

SWCA Project No. 10715-180

SWCA Cultural Resources Report Database No. 06-507

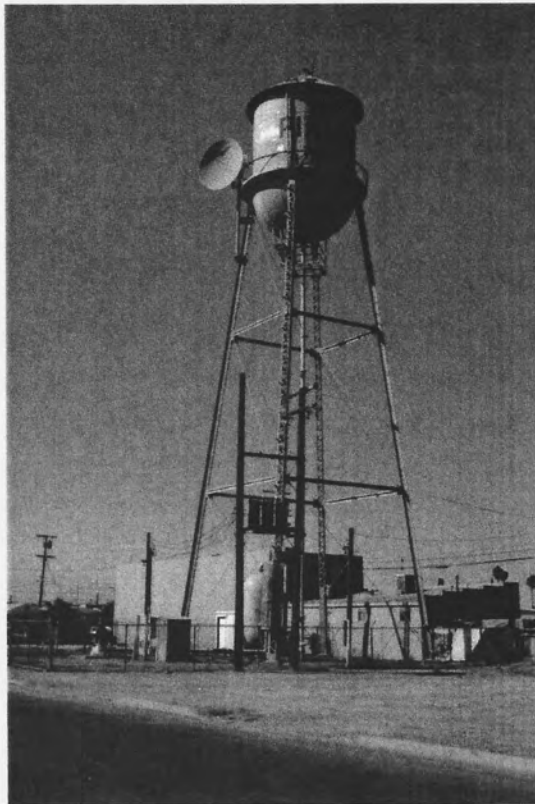
December 2006

***This report contains information on sensitive cultural resources and thus is confidential and not for public distribution. The legal authority to restrict cultural resources is pursuant with California Government Code 6254**

Report in KE3528
Also in FRE. & MA Co's.
FEB 08 2007
TU-1324

Collocation ("CO") Submission Packet
FCC FORM 621

COPY



PROJECT NAME: PIXLEY
PROJECT NUMBER: FRN-031C

21 August 2008

Prepared by:



EarthTouch, Inc.
3135 North Fairfield Road, Suite D
Layton, Utah 84041
Telephone: 801.771.2800
Facsimile: 801.771.2838

TU-1393



Center for Archaeological Research
California State University, Bakersfield
9001 Stockdale Highway, 24 DDH
Bakersfield, CA 93311

661/654-6161 office
661/654-2143 fax



June 11, 2007

Thomas T. Taylor
Manager, Biological & Archaeological Resources
Corporate Environment, Health & Safety
Southern California Edison
2244 Walnut Grove Avenue
Rosemead, CA 91770

RE: GO 131-D Proposed Vestal to Pixley 66kV Line Reconnaissance Report

Dear Mr. Taylor:

This letter serves as the final report on the results of a reconnaissance for the aforementioned project area, conducted by personnel from the Center for Archaeological Research (CAR), California State University, Bakersfield. The following briefly describes the results.

GO-131D assessments are for the purpose of determining if a proposed project that is otherwise exempt under CEQA has what the regulation terms "an environmental override." An environmental override from the perspective of cultural resources is an unavoidable adverse impact on a potentially significant resource. This assessment entails a historical records search, a field reconnaissance, and a very brief letter report.

A records search (RS #07-021- 04; CAR Project #07-04- CWA15) was performed on June 5, 2007, by Andrew Monastero, M.A., at the Southern San Joaquin Valley Historical Information Center located at California State University, Bakersfield. The search was designed to determine if previously recorded prehistoric and historical archaeological sites listed or eligible to the National Register of Historic Places were located within the project area. The *California Register of Historical Resources*, *California Points of Historical Interest*, *California Inventory of Historic Resources*, *California State Historic Landmarks Registry*, and the HRIC files were also examined for pertinent historical and archaeological data. The results of the records search are as follows:

TU- 001465



May 26, 2009

Jessica M. Ochoa
Terracon
16662 Millikan Avenue
Irvine, CA 92606

Subject: **Records Search and Site Visit Results for Cricket Communications Candidate VIS-662B (Metro PCS FRN031C), 11247 South Center Street, Pixley, Tulare County, California**

Dear Ms. Ochoa:

At the request of Terracon, Michael Brandman Associates (MBA) has conducted a records search and site visit for Cricket Communications candidate VIS-662B (Metro PCS FRN031C), located at 11247 South Center Street, Pixley, CA 93256. The candidate lease area lies in Section 32 of T.22S R.25E (Mt. Diablo Base Meridian) as found on the USGS Pixley, CA. 7.5' topographic quadrangle. Cricket Communications plans to place antennas onto an existing municipal water tower that is older than 45 years. Associated equipment will be placed at grade. Trenching will be required for telco and electrical.

The purpose of the records search is to identify all previously recorded cultural resources (prehistoric and historic archaeological sites, historic buildings, structures, objects, or districts) within the area of potential effect, as required by Section 106 of the National Historic Preservation Act (NHPA) of 1966 and its implementing regulations, 36 CFR Part 800. It entails a review of all previously recorded prehistoric and historic archaeological sites situated within a half-mile radius of the candidate, as well as a review of all cultural resource survey/excavation reports. The purpose of the site visit is to determine the area of potential effect (APE) associated with the candidate. The lease area and the locations of planned project-related excavations (if any) were visited and photographed. The APE was established with reference to planned-for candidate construction methods, the existing topography and the current level of local urbanization.

On May 08, 2009, Douglas S. McIntosh, under the supervision of MBA Professional Archaeologist Wayne H. Bonner, M.A. conducted the records search at the Southern San Joaquin Valley Information Center (SSJVIC) which is located at California State University, Bakersfield. To identify any historic properties on or near the candidate, we examined current inventories of the National Register of Historic Places (NR), the California Historical Landmarks (CHL), and the California Points of Historical Interest (CPHI). We also reviewed the California State Historic Resources Inventory (HRI) for Tulare County to determine any local resources that have been previously evaluated for historic significance. The SSJVIC does not have historic archival maps available for inspection.

Bakersfield
661.334.2755

Fresno
559.497.0310

Irvine
714.508.4100

Palm Springs
760.322.8847

Sacramento
916.383.0944

San Bernardino
909.884.2255

San Ramon
925.830.2733

**ARCHAEOLOGICAL SURVEY FOR
THE SOUTHERN CALIFORNIA EDISON COMPANY
REPLACEMENT OF 10 DETERIORATED POWER POLES ON THE
BUDD 12 KV, CAMPBELL 12 KV, CARATAN 12 KV,
ELSTER 12 KV, GRANITE 12 KV,
MONROE 12 KV, AND WINDT 12 KV
DISTRIBUTION CIRCUITS,
KINGS AND TULARE COUNTIES, CALIFORNIA.
(DWO 6051-4800, AI 5-4890, S-4894, T-4804, AND 7-4810)**

Prepared by:

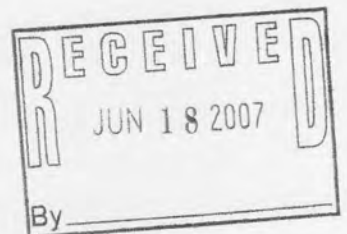
Hubert Switalski
AMEC Earth and Environmental, Inc.
5518 Sierra Caves Avenue
Bakersfield, CA 93313

AMEC CWA 2007-12

Prepared for:

Southern California Edison Company
Biological and Archaeological Resources
2244 Walnut Grove Ave.
Rosemead, CA 91770

June 2007

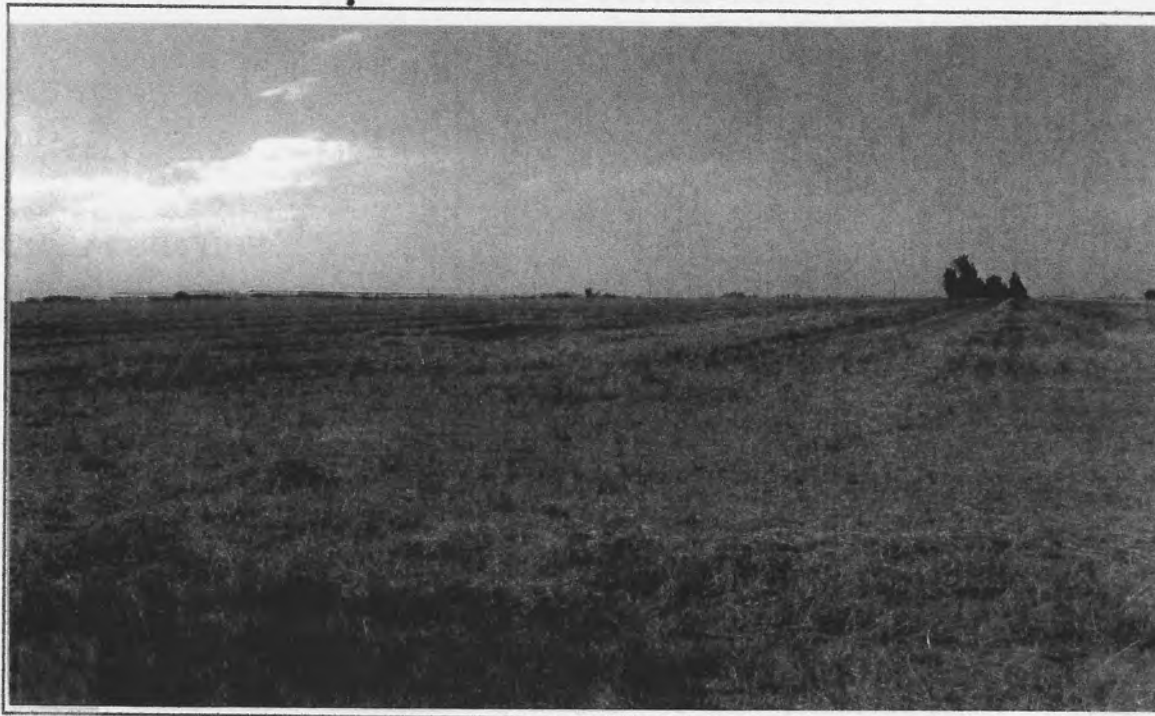


TU-01596

KI-00204

info letter

**A CULTURAL RESOURCES ASSESSMENT FOR THE PIXLEY
IRRIGATION DISTRICT DISTRIBUTION SYSTEM EXPANSION PROJECT,
TULARE COUNTY, CALIFORNIA**



Prepared by: Catherine Lewis Pruett

Three Girls and A Shovel, LLC
Catherine Lewis Pruett
Dorothy Fleagle
Peggy Murphy

2820 Alta Vista
Bakersfield, CA 93305
Telephone: 661-861-8711
Fax: 661-324-9656

Project #: 021102

Prepared for: David De Groot, PE
4Creeks, Inc.
1150 N. Chinowth Street, Suite B
Visalia, CA 93291

Key Words: T. 22S, R. 25E, 26E, and 27E, Tipton, Woodville, Sausalito School, and Porterville 7.5' series, pedestrian survey, Tulare County, linear survey, no prehistoric cultural resources, Casa Blanca Canal

July 2011

TU-01629

ATTACHMENT B:
NATIVE AMERICAN HERITAGE COMMISSION
CORRESPONDENCE

STATE OF CALIFORNIA

Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691
(916) 373-3715
Fax (916) 373-5471
Web Site www.nahc.ca.gov
Eg_nahc@pacbell.net



June 30, 2014

Ms. C. Kristina Roper, RPA
Sierra Valley Cultural Planning
41845 Sierra Drive
Three Rivers, CA 932781

Sent by FAX to: 559-561-6041
No. of Pages: 3

RE: Sacred Lands File Search and Native American Contacts list for the **"Community Plan Updates for the Goshen, Pixley and Traver,"** located in Tulare County, California

Dear Ms. Roper:

A record search of the NAHC Sacred Lands Inventory **failed to indicate** the presence of Native American traditional sites/places of the Project site(s) or 'areas of Potential effect' (APEs), submitted to this office. Note also that the **absence of** archaeological features, Native American cultural resources does not preclude their existence at the subsurface level.

In the 1985 Appellate Court decision (170 Cal App 3rd 604), the Court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources impacted by proposed projects, including archaeological places of religious significance to Native Americans, and to Native American burial sites.

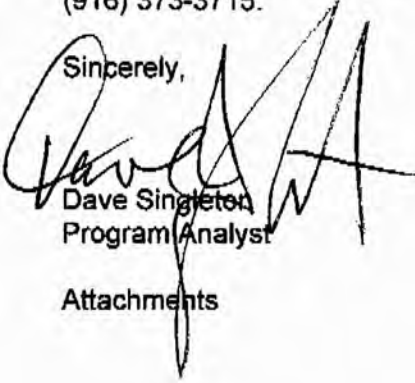
When the project becomes public, please inform the Native American contacts as to the nature of the project (e.g. residential, renewable energy, infrastructure or other appropriate type). Attached is a list of Native American tribes, Native American individuals or organizations that may have knowledge of cultural resources in or near the proposed project area (APE). As part of the consultation process, the NAHC recommends that local government and project developers contact the tribal governments and Native American individuals on the list in order to determine if the proposed action might impact any cultural places or sacred sites. If a response from those listed on the attachment is not received in two weeks of notification, the NAHC recommends that a follow-up telephone call be made to ensure the project information has been received.

California Government Code Sections 65040.12(e) defines 'environmental justice' to provide "fair treatment of people...with respect to the development, adoption,

implementation, and enforcement of environmental laws, regulations and policies." Also, Executive Order B-10-11 requires that state agencies "consult with Native American tribes, their elected officials and other representatives of tribal governments in order to provide meaningful input into...the development of legislation, regulations, rules and policies on matter that may affect tribal communities."

If you have any questions or need additional information, please contact me at (916) 373-3715.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dave Singleton', is written over the typed name and title.

Dave Singleton
Program Analyst

Attachments

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Tulare County California
June 27, 2014**

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Yokuts

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting locative Americans with regard to cultural resources for the proposed Community Plan Updates for the Pixley, Goshen and Travel Communities of Tulare County, California for which a Sacred Lands File search and Native American Contacts list were requested.

Appendix D

Greenhouse Gas Analysis



Air Quality Analysis Report Pixley Community Plan Update

Prepared for:



County of Tulare

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September 12, 2014

Table of Contents

Acronyms and Abbreviations	v
Section 1: Executive Summary	1
1.1 - Purpose and Methods of Analysis	1
1.2 - Project Summary	1
1.3 - Summary of Analysis Results	1
1.4 - Mitigation Measures Applied to the Project	1
Section 2: Climate Change Setting	7
2.1 - Climate Change.....	7
2.2 - Greenhouse Gases.....	8
2.3 - Regulatory Environment.....	13
Section 3: Greenhouse Gas Analysis Approach and Thresholds.....	29
3.1 - Model Guidance	29
3.2 - Modeling Approach	29
3.3 - Greenhouse Gases Assessed	31
3.4 - Construction	31
3.5 - Operation.....	32
Section 4: Greenhouse Gas Impact Analysis	35
4.1 - CEQA Guidelines.....	35
4.2 - Impact Analysis.....	35
Section 5: References	47
 Appendix A: Greenhouse Gas Modeling Results	

List of Tables

Table 1: Description of Greenhouse Gases	9
Table 2: Residential Land Use Assumptions.....	29
Table 3: Non-Residential Land Use Assumptions.....	30
Table 4: Residential Vehicle Fleet	32
Table 5: Construction Greenhouse Gas Emissions	37
Table 6: Project Operational Greenhouse Gases in 2020	38
Table 7: Project Operational Greenhouse Gases in 2030	39
Table 8: General Plan Policies Having Greenhouse Gas Emission Reductions.....	41
Table 9: Consistency with Scoping Plan Reduction Measures	43

List of Figures

Figure 1: Historical Temperature Changes..... 7

Figure 2: Greenhouse Gas Emissions Trends 12

Figure 3: Greenhouse Gas Emission Trends by Sector in California 12

List of Exhibits

Exhibit 1: Regional Location Map 3

Exhibit 2: Proposed Planning Study Area 5

ACRONYMS AND ABBREVIATIONS

$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
AB	Assembly Bill
ARB	California Air Resources Board
CalEEMod	California Emissions Estimator Model
CAP	Climate Action Plan
CEQA	California Environmental Quality Act
CO_2	carbon dioxide
District	San Joaquin Valley Air Pollution Control District
DPM	diesel particulate matter
EPA	Environmental Protection Agency
GHG	Greenhouse Gas
MTCO_2e	metric tons of carbon dioxide equivalent
MMTCO_2e	million metric tons of carbon dioxide equivalent
ppm	parts per million
ppt	parts per trillion
SB	Senate Bill
SJVAPCD	San Joaquin Valley Air Pollution Control District
TCAG	Tulare County Association of Governments

SECTION 1: EXECUTIVE SUMMARY

1.1 - Purpose and Methods of Analysis

The following greenhouse gas analysis was prepared to evaluate whether the estimated greenhouse gas emissions generated from the project would cause significant impacts to air resources in the project area. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The methodology follows San Joaquin Valley Air Pollution Control District (District or SJVAPCD) recommendations for quantification of emissions and evaluation of potential impacts to air resources.

1.2 - Project Summary

The Pixley Community Plan Update (Plan) addresses anticipated growth through 2030. No specific projects have been identified for immediate development. The Plan includes assumptions regarding the amount of development anticipated to occur prior to 2030 within existing land use designations. Estimates of future development were prepared to provide a framework for analysis. The development statistics for the Plan are provided in Section 3.2. Maps showing the Pixley Community Plan planning area and the individual growth areas are provided in Exhibit 1 and Exhibit 2. The analysis is based on growth at rates predicted for Tulare County in the Tulare County General Plan Update of 1.3 percent. For analysis purposes, the future development mix is assumed to be similar to what is currently present in Pixley.

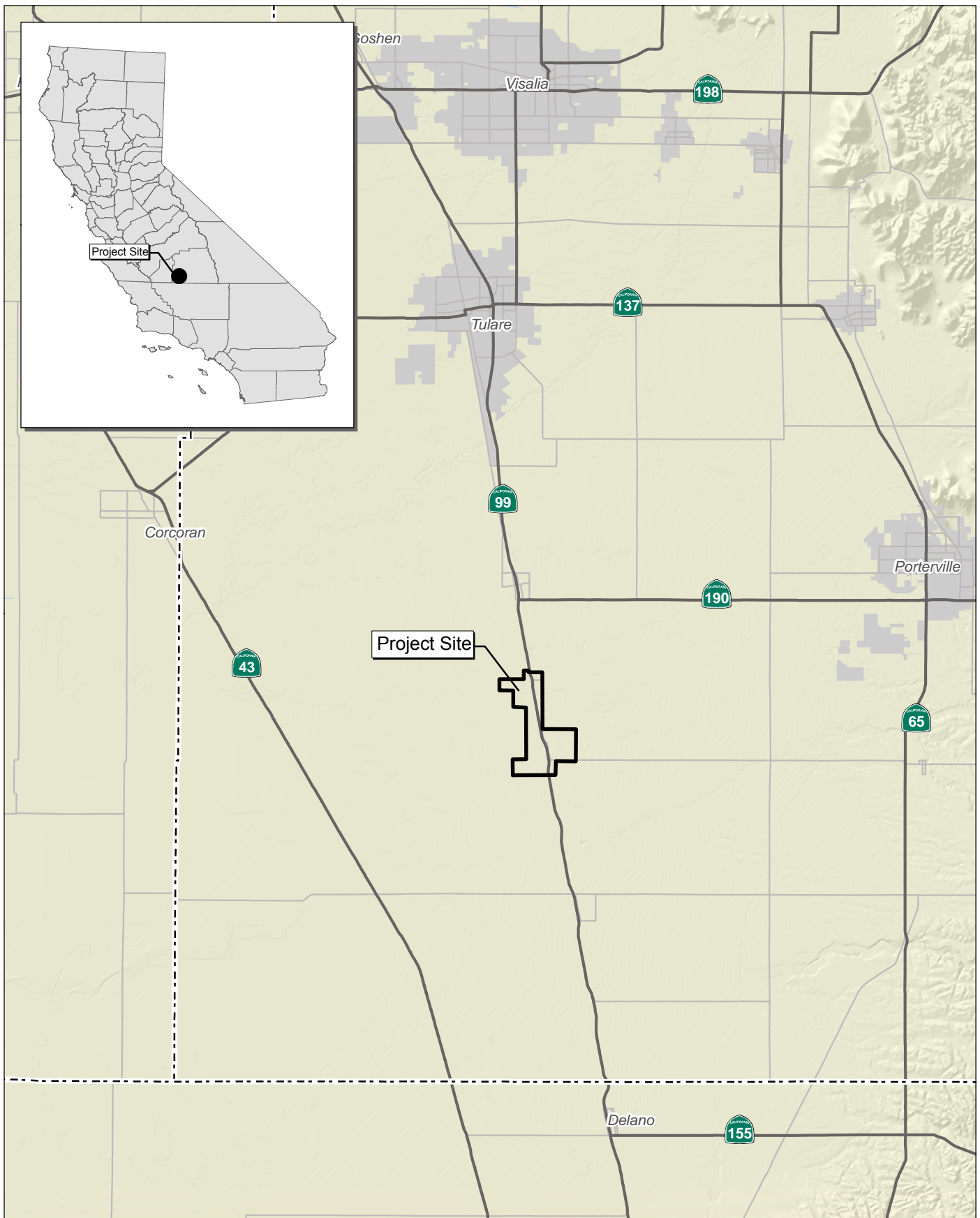
1.3 - Summary of Analysis Results

Impact GHG-1: The project would generate direct and indirect greenhouse gas emissions; however, these emissions would not result in a significant impact on the environment. **Less than significant impact.**

Impact GHG-2: The project would not conflict with any applicable plan, policy or regulation of an agency adopted to reduce the emissions of greenhouse gases. **Less than significant impact.**

1.4 - Mitigation Measures Applied to the Project

No mitigation measures were required.



Source: Census 2000 Data, The CaSIL, Tulare County

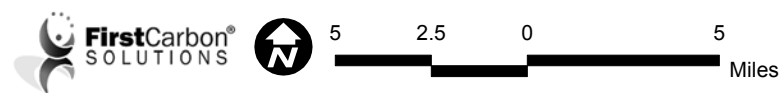
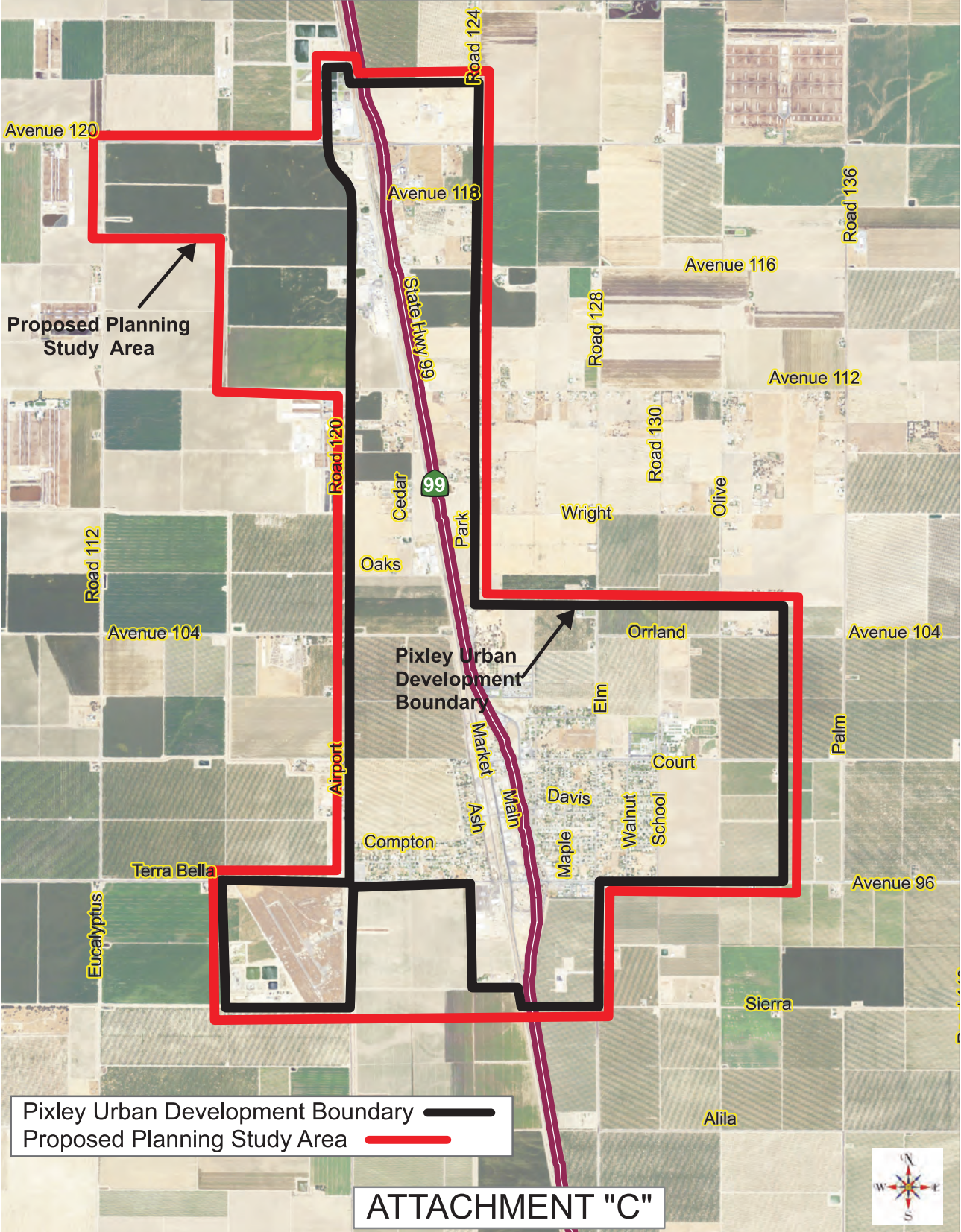


Exhibit 1 Regional Location Map

Pixley Community Plan Update



ATTACHMENT "C"

Source: Tulare County



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TULARE COUNTY RESOURCE MANAGEMENT AGENCY • PIXLEY COMMUNITY PLAN UPDATE
GREENHOUSE GAS ANALYSIS REPORT

Exhibit 2
Proposed Planning Study Area

SECTION 2: CLIMATE CHANGE SETTING

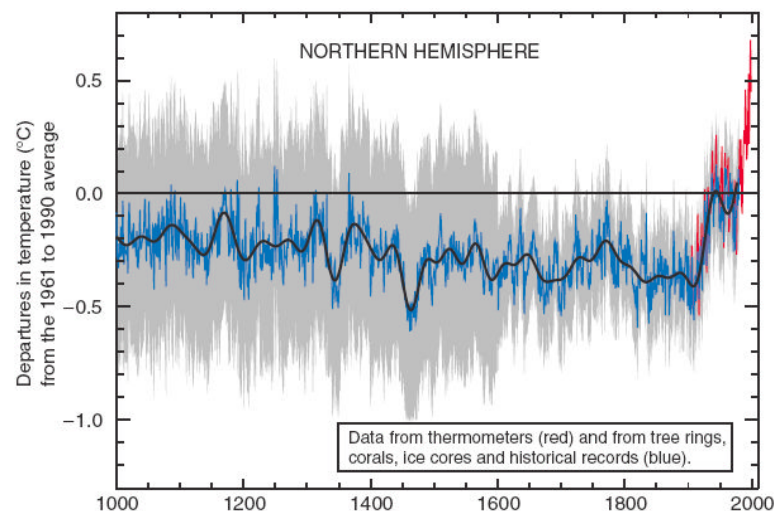
2.1 - Climate Change

Climate change is a change in the average weather of the earth that is measured by alterations in wind patterns, storms, precipitation, and temperature. These changes are assessed using historical records of temperature changes occurring in the past, such as during previous ice ages. Many of the concerns regarding climate change use this data to extrapolate a level of statistical significance specifically focusing on temperature records from the last 150 years (the Industrial Age) that differ from previous climate changes in rate and magnitude.

The United Nations Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of greenhouse gases needed to stabilize global temperatures and climate change impacts. In its Fourth Assessment Report, the IPCC predicted that the global mean temperature change from 1990 to 2100, given six scenarios, could range from 1.1 degrees Celsius (°C) to 6.4°C. Regardless of analytical methodology, global average temperatures and sea levels are expected to rise under all scenarios (IPCC 2007a). The report also concluded that “[w]arming of the climate system is unequivocal,” and that “[m]ost of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations.”

Some question the validity of the temperature graph used by the IPCC in some form in the Third and Fourth Assessment Reports. The graph is shown in Figure 1 (source IPCC 2001). The figure shows that temperatures are relatively stable until 1900, when the temperature increases rapidly. Some scientists have had trouble duplicating the data used for the graph (McIntyre and McKittrick 2003) and indicated when the data is correctly handled “shows the 20th century climate to be unexceptional compared to earlier centuries” (McKittrick 2005). Hans von Storch, a German climate scientist, claimed that the methods used by Mann et al. probably underestimated the temperature fluctuations in the past by a factor of two or more (Von Storch et al. 2004).

Figure 1: Historical Temperature Changes



Consequences of Climate Change in California

In California, climate change may result in consequences such as the following (from CCCC 2006 and Moser et al. 2009).

- **A reduction in the quality and supply of water from the Sierra snowpack.** If heat-trapping emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. This can lead to challenges in securing adequate water supplies. It can also lead to a potential reduction in hydropower.
- **Increased risk of large wildfires.** If rain increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of southern California are estimated to increase by approximately 30 percent toward the end of the 21st century because more winter rain will stimulate the growth of more plant “fuel” available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90 percent more northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.
- **Reductions in the quality and quantity of certain agricultural products.** The crops and products likely to be adversely affected include wine grapes, fruit, nuts, and milk.
- **Exacerbation of air quality problems.** If temperatures rise to the medium warming range, there could be 75 to 85 percent more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today’s conditions. This is more than twice the increase expected if rising temperatures remain in the lower warming range. This increase in air quality problems could result in an increase in asthma and other health-related problems.
- **A rise in sea levels resulting in the displacement of coastal businesses and residences.** During the past century, sea levels along California’s coast have risen about seven inches. If emissions continue unabated and temperatures rise into the higher anticipated warming range, sea level is expected to rise an additional 22 to 35 inches by the end of the century. Elevations of this magnitude would inundate coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.
- **An increase temperature and extreme weather events.** Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in California. More heat waves can exacerbate chronic disease or heat-related illness.
- **A decrease in the health and productivity of California’s forests.** Climate change can cause an increase in wildfires, an enhanced insect population, and establishment of non-native species.

2.2 - Greenhouse Gases

Gases that trap heat in the atmosphere are referred to as greenhouse gases. The effect is analogous to the way a greenhouse retains heat. Common greenhouse gases include water vapor, carbon

dioxide, methane, nitrous oxides, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. Natural processes and human activities emit greenhouse gases. The presence of greenhouse gases in the atmosphere affects the earth's temperature. It is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

Climate change is driven by forcings and feedbacks. Radiative forcing is the difference between the incoming energy and outgoing energy in the climate system. Positive forcing tends to warm the surface while negative forcing tends to cool it. Radiative forcing values are typically expressed in watts per square meter. A feedback is a climate process that can strengthen or weaken a forcing. For example, when ice or snow melts, it reveals darker land underneath which absorbs more radiation and causes more warming. The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere. The global warming potential of a gas is essentially a measurement of the radiative forcing of a greenhouse gas compared with the reference gas, carbon dioxide.

Individual greenhouse gas compounds have varying global warming potential and atmospheric lifetimes. Carbon dioxide, the reference gas for global warming potential, has a global warming potential of one. The global warming potential of a greenhouse gas is a measure of how much a given mass of a greenhouse gas is estimated to contribute to global warming. To describe how much global warming a given type and amount of greenhouse gas may cause, the carbon dioxide equivalent is used. The calculation of the carbon dioxide equivalent is a consistent methodology for comparing greenhouse gas emissions since it normalizes various greenhouse gas emissions to a consistent reference gas, carbon dioxide. For example, methane's warming potential of 21 indicates that methane has 21 times greater warming effect than carbon dioxide on a molecule-per-molecule basis. A carbon dioxide equivalent is the mass emissions of an individual greenhouse gas multiplied by its global warming potential. Greenhouse gases defined by Assembly Bill (AB) 32 (see the Climate Change Regulatory Environment section for a description) include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. They are described in Table 1. A seventh greenhouse gas, nitrogen trifluoride (NF₃) was added to Health and Safety Code section 38505(g)(7) as a greenhouse gas of concern.

Table 1: Description of Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Nitrous oxide	Nitrous oxide (laughing gas) is a colorless greenhouse gas. It has a lifetime of 114 years. Its global warming potential is 310.	Microbial processes in soil and water, fuel combustion, and industrial processes.
Methane	Methane is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years. Its global warming potential is 21.	Methane is extracted from geological deposits (natural gas fields). Other sources are landfills, fermentation of manure, and decay of organic matter.

Table 1 (cont.): Description of Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Carbon dioxide	Carbon dioxide (CO ₂) is an odorless, colorless, natural greenhouse gas. Carbon dioxide's global warming potential is 1. The concentration in 2005 was 379 parts per million (ppm), which is an increase of about 1.4 ppm per year since 1960.	Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood.
Chlorofluorocarbons	These are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). Global warming potentials range from 3,800 to 8,100.	Chlorofluorocarbons were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987.
Hydrofluorocarbons	Hydrofluorocarbons are a group of greenhouse gases containing carbon, chlorine, and at least one hydrogen atom. Global warming potentials range from 140 to 11,700.	Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants.
Perfluorocarbons	Perfluorocarbons have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Global warming potentials range from 6,500 to 9,200.	Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	Sulfur hexafluoride (SF ₆) is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. It has a high global warming potential, 23,900.	This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas.
Nitrogen trifluoride	Nitrogen trifluoride (NF ₃) was added to Health and Safety Code section 38505(g)(7) as a greenhouse gas of concern. It has a high global warming potential of 17,200	This gas is used in electronics manufacture for semiconductors and liquid crystal displays.
Sources: Compiled from a variety of sources, primarily Intergovernmental Panel on Climate Change 2007a and 2007b.		

Other greenhouse gases include water vapor, ozone, and aerosols. Water vapor is an important component of our climate system and is not regulated. Ozone and aerosols are short-lived greenhouse gases; global warming potentials for short-lived greenhouse gases are not defined by the

IPCC. Aerosols can remain suspended in the atmosphere for about a week and can warm the atmosphere by absorbing heat and cool the atmosphere by reflecting light.

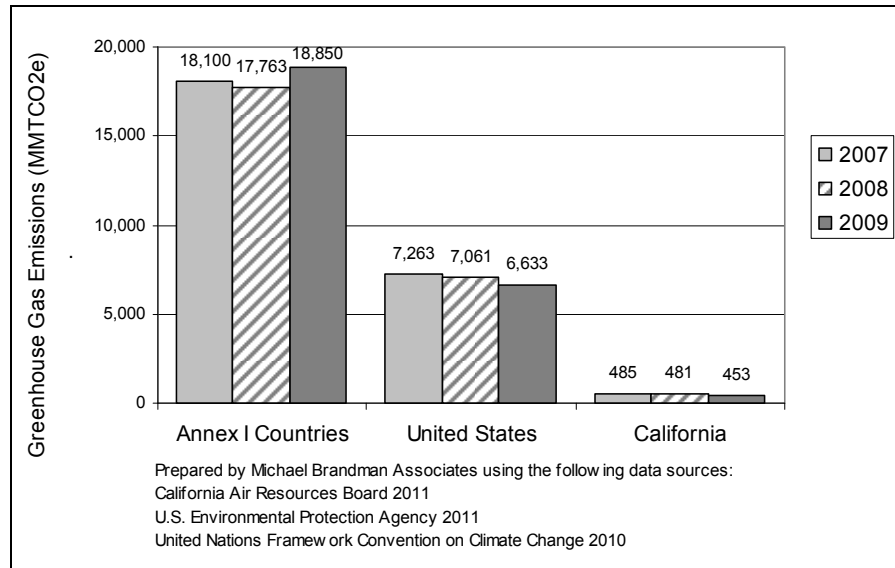
Black carbon is formed by incomplete combustion of fossil fuels, biofuels, and biomass. Sources of black carbon within a jurisdiction may include exhaust from diesel trucks, vehicles, and equipment, as well as smoke from biogenic combustion. Biogenic combustion sources of black carbon include the burning of biofuels used for transportation, the burning of biomass for electricity generation and heating, prescribed burning of agricultural residue, and natural and unnatural wildfires. Black carbon is not a gas but an aerosol—particles or liquid droplets suspended in air. Black carbon only remains in the atmosphere for days to weeks, as opposed to other greenhouse gases that can remain in the atmosphere for years. Black carbon can be deposited on snow, where it absorbs sunlight, reduces sunlight reflectivity, and hastens snowmelt. Direct effects include absorbing incoming and outgoing radiation; indirectly, black carbon can also affect cloud reflectivity, precipitation, and surface dimming (cooling).

The project would emit black carbon through emissions of diesel particulate matter (DPM) during construction and operation. However, procedures to quantify changes due to black carbon emissions have not been widely accepted or thoroughly researched (IPCC 2007; Wilson and Walters 2012). Therefore, impacts to climate change from black carbon are speculative at this time and no further discussion is necessary.

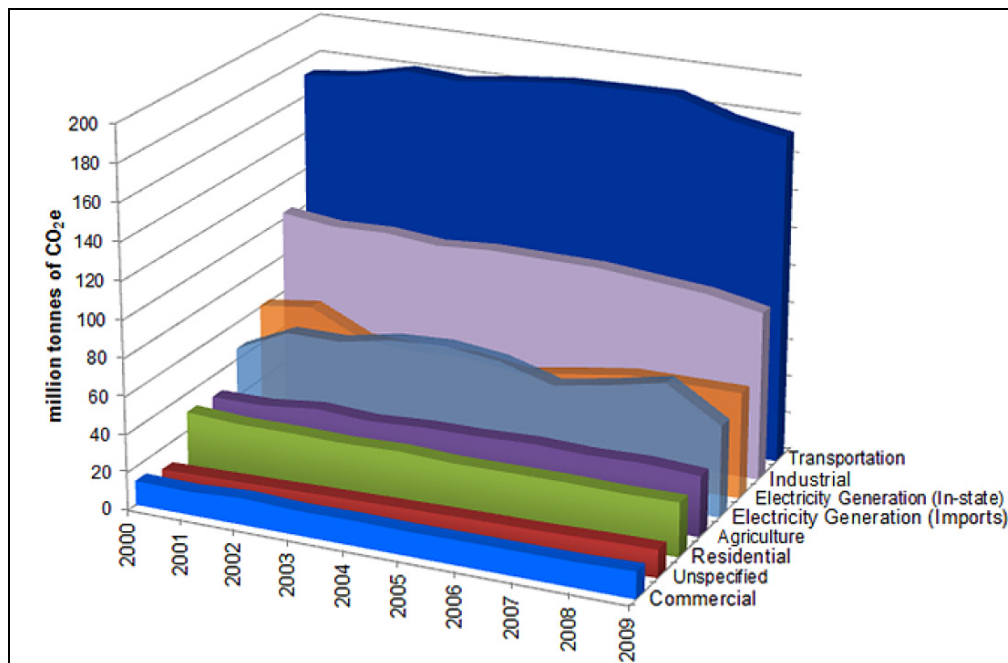
Although there could be health effects resulting from changes in the climate and the consequences that can bring about, inhalation of greenhouse gases at levels currently in the atmosphere would not result in adverse health effects, with the exception of ozone and aerosols (particulate matter). The potential health effects of ozone and particulate matter are discussed in criteria pollutant analyses. At very high indoor concentrations (not at levels existing outside), carbon dioxide, methane, sulfur hexafluoride, and some chlorofluorocarbons can cause suffocation as the gases can displace oxygen (CDC 2010 and OSHA 2003).

2.2.1 - Emissions Inventories

Emissions worldwide were approximately 49,000 million metric tons of carbon dioxide equivalents (MMTCO₂e) in 2004 (IPCC 2007b). Greenhouse gas emissions in 2007, 2008, and 2009 are shown in Figure 2. Annex I parties refer to countries that joined the United Nations Framework Convention on Climate Change.

Figure 2: Greenhouse Gas Emissions Trends

As shown in Figure 3, the main contribution of greenhouse gas emissions in California between years 2000 and 2009 was transportation. The second highest sector was industrial, which includes sources from refineries, general fuel use, oil and gas extraction, cement plants, and cogeneration heat output.

Figure 3: Greenhouse Gas Emission Trends by Sector in California

Source: ARB 2011a.

2.3 - Regulatory Environment

2.3.1 - International

Climate change is a global issue involving greenhouse gas emissions from sources all around the world; therefore, countries such as the ones discussed below have made an effort to reduce greenhouse gases.

Intergovernmental Panel on Climate Change. In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change to assess the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

United Nations Framework Convention on Climate Change (Convention). On March 21, 1994, the United States joined a number of countries around the world in signing the Convention. Under the Convention, governments gather and share information on greenhouse gas emissions, national policies, and best practices; launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

Kyoto Protocol. The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing greenhouse gas emissions at average of five per cent against 1990 levels over the five-year period 2008–2012. The Convention (as discussed above) encouraged industrialized countries to stabilize emissions; however, the Protocol commits them to do so. Developed countries have contributed more emissions over the last 150 years; therefore, the Protocol places a heavier burden on developed nations under the principle of “common but differentiated responsibilities.”

In 2001, President George W. Bush indicated that he would not submit the treaty to the U.S. Senate for ratification, which effectively ended American involvement in the Kyoto Protocol. In December 2009, international leaders met in Copenhagen to address the future of international climate change commitments post-Kyoto. No binding agreement was reached in Copenhagen; however, the Committee identified the long-term goal of limiting the maximum global average temperature increase to no more than 2°C above pre-industrial levels, subject to a review in 2015. The UN Climate Change Committee held additional meetings in Durban, South Africa in November 2011; Doha, Qatar in November 2012; and Warsaw, Poland in November 2013. The meetings are gradually gaining consensus among participants on individual climate change issues.

2.3.2 - National

Prior to the last decade, there have been no concrete federal regulations of greenhouse gases or major planning for climate change adaptation. The following are actions regarding the federal government, greenhouse gases, and fuel efficiency.

Greenhouse Gas Endangerment. *Massachusetts v. EPA* (Supreme Court Case 05-1120) was argued before the United States Supreme Court on November 29, 2006, in which it was petitioned that the United States Environmental Protection Agency (EPA) regulate four greenhouse gases, including carbon dioxide, under Section 202(a)(1) of the Clean Air Act. A decision was made on April 2, 2007, in which the Supreme Court found that greenhouse gases are air pollutants covered by the Clean Air Act. The Court held that the Administrator must determine whether emissions of greenhouse gases from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:

- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases—carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride—in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution, which threatens public health and welfare.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing greenhouse gas emissions standards for vehicles, as discussed in the section “Clean Vehicles” below.

The EPA denied ten petitions for Reconsideration of the Endangerment and Cause or Contribute Findings in 2010. Some of the petitioners included the Ohio Coal Association, Peabody Energy Company, and the State of Texas.

In September 2011, the EPA Office of Inspector General evaluated the EPA’s compliance with established policy and procedures in the development of the endangerment finding, including processes for ensuring information quality. The evaluation concluded that the technical support document should have had more rigorous EPA peer review.

In June 2012, a federal appeals court rejected a lawsuit by thirteen states against the EPA. The suit alleged that the EPA violated the law by relying almost exclusively on data from the United Nations Intergovernmental Panel on Climate Change rather than doing its own research or testing data according to federal standards. The states include Virginia, Texas, Alabama, Florida, Hawaii, Indiana, Kentucky, Louisiana, Mississippi, Nebraska, North Dakota, Oklahoma, South Carolina, South Dakota, and Utah. Virginia intends to petition the Supreme Court to review the case.

Clean Vehicles. Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On May 7, 2010, the EPA and the Department of Transportation’s National Highway Safety Administration announced a joint final rule establishing a

national program that would reduce greenhouse gas emissions and improve fuel economy for new cars and trucks sold in the United States. A petition for writ of certiorari to the United States Court of Appeals for the District of Columbia Circuit Court was denied by the Supreme Court on October 15, 2013.

The first phase of the national program would apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards would cut carbon dioxide emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016). The EPA and the National Highway Safety Administration issued final rules on a second-phase joint rulemaking establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012 (EPA 2012c). The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and medium duty passenger vehicles. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of carbon dioxide (CO₂) in model year 2025, which is equivalent to 54.5 miles per gallon (mpg) if achieved exclusively through fuel economy improvements.

The EPA and the U.S. Department of Transportation issued final rules for the first national standards to reduce greenhouse gas emissions and improve fuel efficiency of *heavy-duty trucks and buses on September 15, 2011, effective November 14, 2011*. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20-percent reduction in carbon dioxide emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10-percent reduction for gasoline vehicles and a 15-percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the agencies are proposing engine and vehicle standards starting in the 2014 model year, which would achieve up to a 10-percent reduction in fuel consumption and carbon dioxide emissions by 2018 model year.

Mandatory Reporting of Greenhouse Gases. The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory greenhouse gas reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule, which became effective January 1, 2010. The rule requires reporting of greenhouse gas emissions from large sources and suppliers in the United States, and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial greenhouse gases, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of greenhouse gas emissions are required to submit annual reports to the EPA.

New Source Review. The EPA issued a final rule on May 13, 2010 that establishes thresholds for greenhouse gases that define when permits under the New Source Review Prevention of Significant

Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule “tailors” the requirements of these Clean Air Act permitting programs to limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the Federal Code of Regulations, EPA states:

This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the Clean Air Act, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to greenhouse gas sources, starting with the largest greenhouse gas emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources, but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for greenhouse gas emissions until at least April 30, 2016.

The EPA estimates that facilities responsible for nearly 70 percent of the national greenhouse gas emissions from stationary sources will be subject to permitting requirements under this rule. This includes the nation’s largest greenhouse gas emitters—power plants, refineries, and cement production facilities.

Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units. As required by a settlement agreement, the EPA proposed new performance standards for emissions of carbon dioxide for new, affected, fossil fuel-fired electric utility generating units on March 27, 2012. New sources greater than 25 megawatt would be required to meet an output based standard of 1,000 pounds of carbon dioxide per megawatt-hour, based on the performance of widely used natural gas combined cycle technology.

Cap and Trade. Cap and trade refers to a policy tool where emissions are limited to a certain amount and can be traded, or provides flexibility on how the emitter can comply. Examples in the United States include the Acid Rain Program and the NO_x Budget Trading Program and Clean Air Interstate Rule in the northeast. The Clean Air Interstate Rule (CAIR) and the Acid Rain Program (ARP) are both cap and trade programs designed to reduce emissions of sulfur dioxide (SO₂) and nitrogen oxides (NO_x) from power plants. The ARP, established under Title IV of the 1990 Clean Air Act (CAA) Amendments, requires power plants to make major emission reductions of SO₂ and NO_x, the primary precursors of acid rain. CAIR addresses regional interstate transport of soot (fine particulate matter) and smog (ozone) pollution. CAIR requires certain eastern states to limit annual emissions of SO₂ and NO_x, which contribute to the formation of fine particulate matter. It also requires certain states to limit ozone season NO_x emissions, which contribute to the formation of ozone during the summer ozone season (May through September). There is no federal greenhouse gas cap-and-trade program currently; however, some states have joined to create initiatives to provide a mechanism for cap and trade.

The Regional Greenhouse Gas Initiative is an effort to reduce greenhouse gases among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. Each state caps carbon dioxide emissions from power plants, auctions carbon dioxide emission allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Initiative began in 2008.

The Western Climate Initiative partner jurisdictions have developed a comprehensive initiative to reduce regional greenhouse gas emissions to 15 percent below 2005 levels by 2020. The partners are California, British Columbia, Manitoba, Ontario, and Quebec. Its cap and trade program is estimated to be fully implemented in 2015.

2.3.3 - California

Legislative Actions to Reduce Greenhouse Gases.

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce greenhouse gases of any state in the nation. Some legislation such as the landmark AB 32 California Global Warming Solutions Act of 2006 was specifically enacted to address greenhouse gas emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water conservation, but also provide greenhouse gas reductions. This section describes the major provisions of the legislation.

AB 32. The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that greenhouse gases emitted in California be reduced to 1990 levels by the year 2020. "Greenhouse gases" as defined under AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of greenhouse gases. The California Air Resources Board (ARB) is the state agency charged with monitoring and regulating sources of greenhouse gases. AB 32 states the following:

Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

The ARB approved the 1990 greenhouse gas emissions level of 427 MMTCO₂e on December 6, 2007 (ARB 2007). Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 MMTCO₂e. Emissions in 2020 in a "business as usual" scenario are estimated to be 596 MMTCO₂e, which do not account for reductions from AB 32 regulations (California Air Resources Board 2008). At that level, a 28 percent reduction was required to achieve the 427 million MTCo₂e 1990 inventory. In October 2010, ARB prepared an updated 2020 forecast to account for the

recession and slower forecasted growth. The forecasted inventory without the benefits of adopted regulation is now estimated at 545 million MTCO₂e. Therefore, under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels (ARB 2010). The ARB also prepared updated emission inventories for 2000 through 2011 to show progress achieved to date (ARB 2014a). Executive Order S-3-05 includes a target for 2010 of reducing GHG emissions to 2000 levels. As shown below, the 2010 emission inventory achieved this target. Also shown are the average reductions needed from all statewide sources (including all existing sources) to reduce GHG emissions back to 1990 levels.

- 1990: 427 million MTCO₂e
- 2000: 463 million MTCO₂e (an average 8-percent reduction needed to achieve 1990 base)
- 2010: 450 million MTCO₂e (an average 5-percent reduction needed to achieve 1990 base)
- 2020: 545 million MTCO₂e BAU (an average 21.7-percent reduction needed to achieve 1990 base)

Under AB 32, the ARB published its Final Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California. Discrete early action measures are currently underway or are enforceable by January 1, 2010. The ARB has 44 early action measures that apply to the transportation, commercial, forestry, agriculture, cement, oil and gas, fire suppression, fuels, education, energy efficiency, electricity, and waste sectors. ARB has completed regulations implementing all Early Action Measures. The ARB estimated that the 44 recommendations are expected to result in reductions of at least 42 MMTCO₂e by 2020, representing approximately 25 percent of the 2020 target.

ARB Scoping Plan. The ARB's Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 to comply with AB 32 (ARB 2008). The Scoping Plan identifies recommended measures for multiple greenhouse gas emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 greenhouse gas target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related greenhouse gas emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and

- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

In addition, the Scoping Plan differentiates between “capped” and “uncapped” strategies. Capped strategies are subject to the proposed cap-and-trade program. The Scoping Plan states that the inclusion of these emissions within the cap-and-trade program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. Uncapped strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional greenhouse gas emission reductions.¹

The ARB approved the First Update to the Scoping Plan (Update) on May 22, 2014. The Update identifies the next steps for California's climate change strategy. The Update shows how California continues on its path to meet the near-term 2020 greenhouse gas limit, but also sets a path toward long-term, deep GHG emission reductions. The report establishes a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050. The Update identifies progress made to meet the near-term objectives of AB 32 and defines California's climate change priorities and activities Climate for the next several years. The Update does not set new targets for the State, but describes a path that would achieve the long term 2050 goal of Executive Order S-05-03 for emissions to decline to 80 percent below 1990 levels by 2050 (ARB 2014b).

The ARB has no legislative mandate to set a target beyond the 2020 target from AB 32 or to adopt additional regulations to achieve a post-2020 target. The Update estimates that reductions averaging 5.2 percent per year would be required after 2020 to achieve the 2050 goal. With no estimate of future reduction commitments from the State, identifying a feasible strategy including plans and measures to be adopted by local agencies is not possible. Implementation of the City's General Plan Update will help support both the short term and long term objectives of the Update. However, there is no way of determining whether the City would need to take additional actions beyond its existing programs and the land use and transportation strategies contained in the General Plan Update until such a time as new state targets and a new Scoping Plan is adopted.

SB 375. Passing the Senate on August 30, 2008, Senate Bill (SB) 375 was signed by the Governor on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of greenhouse gas emissions, which emits over 40 percent of the total greenhouse gas emissions in California. SB 375 states, “Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32.” SB 375 does the following: it (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation

¹ On March 17, 2011, the San Francisco Superior Court issued a final decision in *Association of Irrigated Residents v. California Air Resources Board* (Case No. CPF-09-509562). While the Court upheld the validity of the ARB Scoping Plan for the implementation of AB 32, the Court enjoined ARB from further rulemaking under AB 32 until ARB amends its CEQA environmental review of the Scoping Plan to address the flaws identified by the Court. On May 23, 2011, ARB filed an appeal. On June 24, 2011, the Court of Appeal granted ARB's petition staying the trial court's order pending consideration of the appeal. In the interest of informed decision-making, on June 13, 2011, ARB released the expanded alternatives analysis in a draft Supplement to the AB 32 Scoping Plan Functional Equivalent Document. The ARB Board approved the Scoping Plan and the CEQA document on August 24, 2011.

plans for reducing greenhouse gas emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

Concerning CEQA, SB 375, as codified in Public Resources Code Section 21159.28 states that CEQA findings determinations for certain projects are not required to reference, describe, or discuss (1) growth inducing impacts or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network if the project:

1. Is in an area with an approved sustainable communities strategy or an alternative planning strategy that the ARB accepts as achieving the greenhouse gas emission reduction targets.
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies).
3. Incorporates the mitigation measures required by an applicable prior environmental document.

Tulare County Association of Governments (TCAG) adopted the 2014 Regional Transportation Plan (RTP) and Sustainable Communities Strategy on June 30, 2014. The RTP describes the strategy to achieve the SB 375 targets for Tulare County of 5 percent reduction in emission per capita by 2020 and 10 percent per capita by 2035. The primary tenant of the scenario is to increase the density of new housing development by 25 percent from baseline (2005) densities (TCAG 2014).

AB 1493 Pavley Regulations and Fuel Efficiency Standards. California AB 1493, enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce greenhouse gases emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. On January 21, 2009, the ARB requested that the EPA reconsider its previous waiver denial. On January 26, 2009, President Obama directed that the EPA assess whether the denial of the waiver was appropriate. On June 30, 2009, the EPA granted the waiver request. On September 8, 2009, the U.S. Chamber of Commerce and the National Automobile Dealers Association sued the EPA to challenge its granting of the waiver to California for its standards. California assisted the EPA in defending the waiver decision. The U.S. District Court for the District of Columbia denied the Chamber's petition on April 29, 2011. The EPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011

The standards phase in during the 2009 through 2016 model years. When fully phased in, the near-term (2009–2012) standards will result in about a 22-percent reduction compared with the 2002 fleet, and the mid-term (2013–2016) standards will result in about a 30-percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.

The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and greenhouse gas emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation will reduce greenhouse gases from new cars by 34 percent from 2016 levels by 2025. The new rules will clean up gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles and hydrogen fuel cell cars. The package will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.

SB 1368. In 2006, the State Legislature adopted SB 1368, which was subsequently signed into law by the Governor. SB 1368 directs the California Public Utilities Commission to adopt a performance standard for greenhouse gas emissions for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. Because of the carbon content of its fuel source, a coal-fired plant cannot meet this standard because such plants emit roughly twice as much carbon as natural gas, combined cycle plants. Accordingly, the new law will effectively prevent California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. Thus, SB 1368 will lead to dramatically lower greenhouse gas emissions associated with California's energy demand, as SB 1368 will effectively prohibit California utilities from purchasing power from out-of-state producers that cannot satisfy the performance standard for greenhouse gas emissions required by SB 1368. The California Public Utilities Commission adopted the regulations required by SB 1368 on August 29, 2007.

SB 1078 - Renewable Electricity Standards. On September 12, 2002, Governor Gray Davis signed SB 1078 requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Governor Schwarzenegger also directed the ARB (Executive Order S-21-09) to adopt a regulation by July 31, 2010, requiring the state's load serving entities to meet a 33 percent renewable energy target by 2020. The ARB Board approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23.

Executive Orders Related to Greenhouse Gas Emissions

California's Executive Branch has taken several actions to reduce greenhouse gases through the use of Executive Orders. Although not regulatory, they set the tone for the state and guide the actions of state agencies.

Executive Order S-13-08. Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase

temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy (California Natural Resources Agency 2009) was adopted, which is the "... first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order S-3-05. Former California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for greenhouse gas emissions:

- By 2010, reduce greenhouse gas emissions to 2000 levels.
- By 2020, reduce greenhouse gas emissions to 1990 levels.
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order S-01-07 - Low Carbon Fuel Standard. The Governor signed Executive Order S-01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the executive order established a Low Carbon Fuel Standard and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, the ARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels (State Alternative Fuels Plan adopted by California Energy Commission on December 24, 2007) and was submitted to ARB for consideration as an "early action" item under AB 32. The ARB adopted the Low Carbon Fuel Standard on April 23, 2009. The Low Carbon Fuel Standard was challenged in the United States District Court in Fresno in 2011. The court's ruling issued on December 29, 2011 included a preliminary injunction against ARB's implementation of the rule. The Ninth Circuit Court of Appeals stayed the injunction on April 23, 2012 pending final ruling on appeal, allowing the ARB to continue to implement and enforce the regulation. The Ninth Circuit Court of Appeals' decision filed September 18, 2013, vacated the preliminary injunction. In essence, the court held that Low Carbon Fuel Standards adopted by ARB were not in conflict with federal law. On August 8, 2013, the Fifth District Court of Appeals (California) ruled ARB failed to comply with CEQA and the Administrative Procedure Act when adopting regulations for Low Carbon Fuel Standards. In a partially published opinion, the Court of Appeals reversed the trial court's judgment and directed issuance of a writ of mandate setting aside Resolution 09-31 and two executive orders of ARB approving Low Carbon Fuel Standards (LCFS) regulations promulgated to reduce greenhouse gas (GHG) emissions. However, the court tailored its remedy to protect the public interest by allowing the LCFS regulations to remain operative while ARB complies with the procedural requirements it failed to satisfy.

California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 24. California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions. The newest version of Title 24 was adopted by the California Energy Commission (CEC) on May 31, 2012 and was scheduled to become effective on January 1, 2014. On December 11, 2013, the CEC extended the compliance date to July 1, 2014 to allow more time for the building industry and local building departments to prepare.

Title 20. California Code of Regulations, Title 20: Division 2, Chapter 4, Article 4, Sections 1601-1608: Appliance Efficiency Regulations regulate the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. Twenty-three categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state and those designed and sold exclusively for use in recreational vehicles or other mobile equipment (CEC 2012).

California Green Building Standards Code is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect January 1, 2011. It does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided they provide a minimum 50-percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy. Enforcement is generally through the local building official.

The California Green Building Standards Code (California Code of Regulations Title 24, Part 11 code) requires:

- Short-term bicycle parking. If a commercial project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For buildings with over 10 tenant-occupants, provide secure bicycle parking for 5 percent of tenant-occupied motorized vehicle parking capacity, with a minimum of one space (5.106.4.1.2).

- Designated parking. Provide designated parking in commercial projects for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling. (5.410.1).
- Construction waste. A minimum 50-percent diversion of construction and demolition waste from landfills, increasing voluntarily to 65 and 80 percent for new homes and 80-percent for commercial projects. (5.408.1, A5.408.3.1 [nonresidential], A5.408.3.1 [residential]). All (100 percent) of trees, stumps, rocks and associated vegetation and soils resulting from land clearing shall be reused or recycled. (5.408.3).
- Wastewater reduction. Each building shall reduce the generation of wastewater by one of the following methods:
 1. The installation of water-conserving fixtures or
 2. Using nonpotable water systems (5.303.4).
- Water use savings. 20-percent mandatory reduction in indoor water use with voluntary goal standards for 30, 35 and 40-percent reductions. (5.303.2, A5303.2.3 [nonresidential]).
- Water meters. Separate water meters for buildings in excess of 50,000 square feet or buildings projected to consume more than 1,000 gallons per day. (5.303.1).
- Irrigation efficiency. Moisture-sensing irrigation systems for larger landscaped areas. (5.304.3).
- Materials pollution control. Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring and particleboard. (5.404).
- Building commissioning. Mandatory inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies. (5.410.2).

SB 97 and the CEQA Guidelines Update. Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The code states “(a) On or before July 1, 2009, the Office of Planning and Research shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the Office of Planning and Research pursuant to subdivision (a).” Section 21097 was also added to the Public Resources Code. It provided CEQA protection until January 1, 2010 for transportation projects funded by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 or projects funded by the Disaster Preparedness and Flood Prevention Bond Act of 2006, in stating that the failure to analyze adequately the effects of greenhouse gases would not violate CEQA. The Amendments became effective on March 18, 2010.

The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of greenhouse gas emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing CEQA Guidelines to reference climate change.

A new section, CEQA Guidelines Section 15064.4, was added to assist agencies in determining the significance of greenhouse gas emissions. The new section allows agencies the discretion to determine whether a quantitative or qualitative analysis is best for a particular project. However, little guidance is offered on the crucial next step in this assessment process—how to determine whether the project’s estimated greenhouse gas emissions are significant or cumulatively considerable.

Also amended were CEQA Guidelines Sections 15126.4 and 15130, which address mitigation measures and cumulative impacts respectively. Greenhouse gas mitigation measures are referenced in general terms, but no specific measures are championed. The revision to the cumulative impact discussion requirement (Section 15130) simply directs agencies to analyze greenhouse gas emissions in an EIR when a project’s incremental contribution of emissions may be cumulatively considerable, however it does not answer the question of when emissions are cumulatively considerable.

Section 15183.5 permits programmatic greenhouse gas analysis and later project-specific tiering, as well as the preparation of Greenhouse Gas Reduction Plans. Compliance with such plans can support a determination that a project’s cumulative effect is not cumulatively considerable, according to proposed Section 15183.5(b).

In addition, the amendments revised Appendix F of the CEQA Guidelines, which focuses on Energy Conservation. The sample environmental checklist in Appendix G was amended to include greenhouse gas questions.

2.3.4 - San Joaquin Valley Air Pollution Control District

Climate Change Action Plan

On August 21, 2008, the District Governing Board approved a proposal, called the Climate Change Action Plan, to begin a public process to bring together stakeholders, land use agencies, environmental groups, and business groups, and to conduct public workshops to develop comprehensive policies for CEQA guidelines, a carbon exchange bank, and voluntary greenhouse gas emissions mitigation agreements for the Governing Board’s consideration. The Climate Change Action Plan contained the following goals and actions:

Goals

1. Assist local land-use agencies with California Environmental Quality Act (CEQA) issues relative to projects with greenhouse gas emissions increases.
2. Assist Valley businesses in complying with mandates of AB 32 (Global Warming Solutions Act of 2006).
3. Ensure that climate protection measures do not cause increases in toxic or criteria pollutants that adversely impact public health or environmental justice communities.

Actions

1. Authorize the Air Pollution Control Officer to develop greenhouse gas significance threshold(s) or other mechanisms to address CEQA projects with greenhouse gas emissions increases. Begin the requisite public process, including public workshops, and develop recommendations for Governing Board consideration in the spring of 2009.
2. Authorize the Air Pollution Control Officer to develop necessary regulations and instruments for establishment and administration of the San Joaquin Valley Carbon Exchange Bank for voluntary greenhouse gas reductions created in the Valley. Begin the requisite public process, including public workshops, and develop recommendations for Governing Board consideration in spring 2009.
3. Authorize the Air Pollution Control Officer to enhance the District's existing criteria pollutant emissions inventory reporting system to allow businesses subject to AB 32 emission reporting requirements to submit simultaneous streamlined reports to the District and the state of California with minimal duplication.
4. Authorize the Air Pollution Control Officer to develop and administer voluntary greenhouse gas emission reduction agreements to mitigate proposed greenhouse gas increases from new projects.
5. Direct the Air Pollution Control Officer to support climate protection measures that reduce greenhouse gas emissions as well as toxic and criteria pollutants. Oppose measures that result in a significant increase in toxic or criteria pollutant emissions in already impacted areas.

Air District CEQA Greenhouse Gas Guidance

On December 17, 2009, the District Governing Board adopted "Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA," and the policy "District Policy – Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency." The District concluded that the existing science is inadequate to support quantification of the impacts that project-specific greenhouse gas emissions have on global climatic change. The District found that the effects of project-specific emissions to be cumulative, and without mitigation, their incremental contribution to global climatic change could be considered cumulatively considerable. The District found that this cumulative impact is best addressed by requiring all projects to reduce their greenhouse gas emissions, whether through project design elements or mitigation.

The District's approach is intended to streamline the process of determining if project-specific greenhouse gas emissions would have a significant effect. Projects exempt from the requirements of CEQA, and projects complying with an approved plan or mitigation program would be determined to have a less than significant cumulative impact. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources and have a certified Final CEQA document.

For non-exempt projects, those projects for which there is not applicable approved plan or program, or those projects not complying with an approved plan or program, the lead agency would evaluate

the project against performance-based standards and would require the adoption of design elements, known as a Best Performance Standard, to reduce greenhouse gas emissions. The Best Performance Standards have not yet fully been established, though they must be designed to effect a 29-percent reduction when compared with the business-as-usual projections identified in ARB's AB 32 Scoping Plan. "Business-as-usual" is the emissions occurring in 2020 if the average baseline emissions during the 2002–2004 period were grown to 2020 levels, without control.

The Best Performance Standards thus would carry with them pre-quantified emissions reductions, eliminating the need for project-specific quantification. Therefore, projects incorporating Best Performance Standards would not require specific quantification of greenhouse gas emissions, and automatically would be determined to have a less than significant cumulative impact for greenhouse gas emissions.

For stationary source permitting projects, Best Performance Standards means, "The most stringent of the identified alternatives for control of greenhouse gas emissions, including type of equipment, design of equipment and operational and maintenance practices, which are achieved-in-practice for the identified service, operation, or emissions unit class." The District has identified Best Performance Standards for the following sources: boilers; dryers and dehydrators; oil and gas extraction, storage, transportation, and refining operations; cogeneration; gasoline dispensing facilities; volatile organic compound control technology; and steam generators.

For development projects, Best Performance Standards means "Any combination of identified greenhouse gas emission reduction measures, including project design elements and land use decisions that reduce project-specific greenhouse gas emission reductions by at least 29 percent compared with business as usual."

Projects not incorporating Best Performance Standards would require quantification of greenhouse gas emissions and demonstration that business-as-usual greenhouse gas emissions have been reduced or mitigated by 29 percent. Quantification of greenhouse gas emissions would be required for all projects for which the lead agency has determined that an environmental impact report is required, regardless of whether the project incorporates Best Performance Standards.

San Joaquin Valley Carbon Exchange

The District initiated work on the San Joaquin Valley Carbon Exchange in November 2008. The purpose of the carbon exchange is to quantify, verify, and track voluntary greenhouse gas emissions reductions generated within the San Joaquin Valley. To investigate the various issues concerning the development of a mechanism to register greenhouse gas emission reductions, the SJVAPCD formed a technical workgroup consisting of District staff, land use agency representatives, industry representatives, agricultural representatives, environmental group representatives, and other interested parties. The workgroup met several times in public meetings during late 2008 and early 2009 to discuss several areas of concern regarding a greenhouse gas emission reduction registration program, including:

- The differences between the upcoming AB 32 cap and trade program and a greenhouse gas emission reduction registration program.

- Potential uses of registered greenhouse gas emission reductions. Registered greenhouse gas emission reductions could possibly be used to provide mitigation in the CEQA process, as a means to comply with a greenhouse gas cap and trade program, or other purposes.
- A review of other greenhouse gas emission reduction registration programs currently in existence, including the Chicago Climate Exchange, New York Climate Exchange, Northeast Climate Exchange, Climate Action Reserve, and South Coast Air Quality Management District's SoCal Climate Solutions Exchange.
- Required elements of a District-administered greenhouse gas emission reduction registration program, including the establishment of criteria for greenhouse gas emission reduction registration, the use of ARB protocols, and the requirement to quantify some emission reductions.
- The advantages and disadvantages of development of a greenhouse gas emission reduction registration program.
- Alternatives to the development of a District-administered greenhouse gas emission reduction registration program were discussed, including the District's possible role in California Climate Action Reserve as an emission reduction project verifier and/or providing technical assistance to project proponents quantify and mitigate their projects greenhouse gas emissions as part of the CEQA process.

Rule 2301

While the Climate Change Action Plan indicated that the greenhouse gas emission reduction program would be called the San Joaquin Valley Carbon Exchange, the District incorporated a method to register voluntary greenhouse gas emission reductions into its existing Rule 2301-Emission Reduction Credit Banking through amendments of the rule. Amendments to the rule were adopted on January 19, 2012. The purposes of the amendments to the rule include the following:

- Provide an administrative mechanism for sources to bank voluntary greenhouse gas emission reductions for later use.
- Provide an administrative mechanism for sources to transfer banked greenhouse gas emission reductions to others for any use.
- Define eligibility standards, quantitative procedures, and administrative practices to ensure that banked greenhouse gas emission reductions are real, permanent, quantifiable, surplus, and enforceable.

SECTION 3: GREENHOUSE GAS ANALYSIS APPROACH AND THRESHOLDS

3.1 - Model Guidance

The greenhouse gas analysis follows the guidance and threshold recommendations provided by the District where applicable. Protocols and procedures recommended by other agencies and organizations such as the California Air Pollution Control Officers Association are used for impacts not specifically addressed by the District's Guide for Assessing Air Quality Impacts (GAMAQI) (SJVAPCD 2002).

Greenhouse gas emissions can be estimated by using emission factors and a level of activity. Emission factors are the emission rate of a pollutant given the activity over time, for example, grams of CO₂ per mile. The ARB has published emission factors for on-road mobile vehicles/trucks in the EMFAC mobile source emissions model and emission factors for off-road equipment and vehicles in the OFFROAD emissions model. An air emissions model (or calculator) combines the emission factors and the various levels of activity and outputs the emissions for the various pieces of equipment.

3.2 - Modeling Approach

The Pixley Community Plan Update includes no new land use designations that would increase the buildout potential of the Plan area. The Community Plan has adequate land designated for development to accommodate growth through 2030; however, no specific development projects are currently proposed. Therefore, the analysis estimates the increase in emissions based on the growth rate of 1.3 percent per year projected for the County in the 2030 Tulare County General Plan. The growth rate was applied to the actual development existing in the 2014 base year to determine the amount of development that would occur by 2020 and 2030. Although other types of development may be constructed consistent with the existing General Plan and Zoning designations, the land uses selected are representative of common development types found in rural communities and provide a reasonable estimate for determining potential impacts.

Residential development was divided into three land use types—single family, apartments, and mobile homes—to match the current development mix and amount of each type in Pixley. The baseline residential units and incremental growth in development for residential land uses are presented in Table 2.

Table 2: Residential Land Use Assumptions

Land Use	2014 Baseline (Units)	2020 Growth (Units)	2030 Growth (Units)
Single Family Residential	753	99	211
Multi-Family Residential	38	5	11
Mobile Homes	132	17	37

Table 2 (cont.): Residential Land Use Assumptions

Land Use	2014 Baseline (Units)	2020 Growth (Units)	2030 Growth (Units)
Notes: Baseline represents existing development in 2014. Growth is the incremental increase from baseline. ksf = thousand square feet Source: Appendix A.			

Non-residential development was divided into 14 land use types, based on the existing development located in Pixley from a business list compiled by Tulare County and review of aerial photographs. Table 3 provides the baseline of existing non-residential development and the incremental growth expected by 2020 and 2030. The size of existing buildings in square feet was estimated from review of aerial photographs of the existing buildings and use of an online measurement tool for approximate dimensions.

Table 3: Non-Residential Land Use Assumptions

Land Use	2014 Baseline (ksf)	2020 Growth (ksf)	2030 Growth (ksf)
Government Office Building	8.43	0.68	1.94
Medical Office Building	7.24	0.58	1.66
Day-Care Center	9.22	0.74	2.12
Elementary School	133.15	10.73	30.57
Place of Worship	30.67	2.47	7.04
Motel	10.00	0.81	2.30
Quality Restaurant	20.09	1.62	4.61
Automobile Care Center	72.49	5.84	16.64
Convenience Market With Gas Pumps	16.46	1.33	3.78
Strip Mall	51.34	4.14	11.79
Supermarket	17.95	1.45	4.12
General Heavy Industry	384.91	31.02	88.36
General Light Industry	47.73	3.85	10.96
Unrefrigerated Warehouse-No Rail	129.97	10.47	29.84
Notes: Baseline represents existing development in 2014. Growth is the incremental increase from baseline. ksf = thousand square feet Source: Appendix A.			

3.3 - Greenhouse Gases Assessed

This analysis is restricted to greenhouse gases identified by AB 32, which include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The project would generate a variety of greenhouse gases, including several defined by AB 32 such as carbon dioxide, methane, and nitrous oxide.

The project may emit greenhouse gases that are not defined by AB 32. For example, the project may generate aerosols through emissions of DPM from the vehicles and trucks that would access the project site. Aerosols are short-lived particles, as they remain in the atmosphere for about 1 week. Black carbon is a component of aerosol. Studies have indicated that black carbon has a high global warming potential; however, the Intergovernmental Panel on Climate Change states that it has a low level of scientific certainty (Intergovernmental Panel on Climate Change 2007a).

Water vapor could be emitted from evaporated water used for landscaping, but this is not a significant impact because water vapor concentrations in the upper atmosphere are primarily due to climate feedbacks rather than emissions from project-related activities.

The project would emit nitrogen oxides and volatile organic compounds, which are ozone precursors. Ozone is a greenhouse gas; however, unlike the other greenhouse gases, ozone in the troposphere is relatively short-lived and can be reduced in the troposphere on a daily basis. Stratospheric ozone can be reduced through reactions with other pollutants.

Certain greenhouse gases defined by AB 32 would not be emitted by the project. Perfluorocarbons and sulfur hexafluoride are typically used in industrial applications, none of which would be used by the project. Therefore, perfluorocarbons or sulfur hexafluoride emissions are not anticipated from the project.

The emission model used in this assessment was the California Emissions Estimator Model (CalEEMod) version 2013.2.2. The South Coast Air Quality Management District in cooperation with other air districts throughout the state developed the CalEEMod model. CalEEMod is designed as a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas emissions associated with construction and operation from a variety of land uses.

The models used in this analysis are summarized as follows:

- Construction emissions: CalEEMod, version 2013.2.2
- Operational regional emissions: CalEEMod, version 2013.2.2

3.4 - Construction

CalEEMod includes default modeling assumptions for the type and quantity of equipment used during construction along with estimates of hours of operation and length of construction for each building phase. No specific projects have been proposed. Therefore, the construction emissions are

based on the average annual number of residential dwelling units and square feet of commercial and industrial projects predicted for the community between 2014 and the 2030 horizon year. The default modeling assumptions were used for the analysis, since project-specific information is not available. CalEEMod provides equipment and phase length estimates for site preparation, grading, building construction, paving, and architectural coatings.

3.5 - Operation

Operational emissions are those emissions that occur once the project commences operation. Operational emissions are the result of direct and indirect emission related to the projects. The direct emissions include use of natural gas for cooking, water heating, and space heating, use of consumer products, use of architectural coatings for maintenance of structures, and operating gasoline powered landscape equipment. Indirect emissions are from motor vehicles that would travel to and from the project site and electricity usage. Motor vehicle emissions refer to exhaust and road dust emissions from automobiles, trucks, buses, motorcycles, etc. The emissions were estimated using CalEEMod. The analysis includes modeling runs for the base year 2014, an interim year 2020, and the 2030 General Plan horizon year. The modeling for 2020 and 2030 includes business as usual and with regulation analyses.

Default CalEEMod assumptions were used for most sources of emissions. A few changes to the default settings are described below:

Motor Vehicles

The vehicle fleet mix is defined as the mix of motor vehicle classes active during the operation of the project. Emission factors are assigned to the expected vehicle mix as a function of vehicle class, speed, and fuel use (gasoline and diesel-powered vehicles). The CalEEMod default vehicle fleet mix was used for the commercial and industrial land uses however is not appropriate for the residential land uses because it overstates the number of heavy-duty truck trips. Therefore, the SJVAPCD recommended residential fleet percentages were used in the analysis, as shown in Table 4.

Table 4: Residential Vehicle Fleet

Type of Vehicle	Fleet (%)	
	2020	2030
Light duty automobile (LDA)	0.5112	0.4981
Light duty truck (LDT1)	0.2137	0.2246
Light duty truck (LDT2)	0.1692	0.1723
Medium duty vehicle (MDV)	0.0610	0.0638
Light-heavy duty truck (LHDT1)	0.0021	0.001
Light-heavy duty truck (LHDT2)	0.0010	0.001
Medium-heavy duty truck (MHDT)	0.0096	0.0086

Table 4 (cont.): Residential Vehicle Fleet

Type of Vehicle	Fleet (%)	
	2020	2030
Heavy-heavy duty truck (HHDT)	0.0221	0.0182
Other bus (OBUS)	0.0000	0.0000
Urban bus (UBUS)	0.0038	0.0039
Motorcycle (MCY)	0.0031	0.0031
School bus (SBUS)	0.0010	0.001
Motor home (MH)	0.0023	0.0043
Source of 2020 and 2030: FirstCarbon Solutions.		

Electricity

Electricity Emission Factor

The default CalEEMod emission factors for Pacific Gas & Electric (from the CEC's year 2006 data) are as follows:

- Carbon dioxide: 641.35 pounds per megawatt hour (lbs/MWh)
- Methane: 0.029 lb/MWh
- Nitrous oxide: 0.006 lb/MWh

The project horizon year is 2030; therefore, it is assumed that the Renewable Electricity Standards would have taken effect, which, as noted above in the Regulatory Section, requires that electricity providers include a minimum of 33 percent renewable energy in their portfolios by the year 2020. In 2006, Pacific Gas & Electric had 12.6 percent renewable energy in its portfolio (California Public Utilities Commission 2011). Therefore, without the renewable energy, PG&E's emission factors in 2006 would have been (unadjusted energy intensity):

- Carbon dioxide: 733.81 lbs/MWh
- Methane: 0.033 lb/MWh
- Nitrous oxide: 0.007 lb/MWh

It is assumed that the required 33 percent reduction would be achieved by the year 2020. The emission factors for 2020 and 2030 are therefore estimated by reducing the unadjusted 2006 emission factors by 33 percent and are as follows:

- Carbon dioxide: 491.65 lb/MWh
- Methane: 0.022 lb/MWh
- Nitrous oxide: 0.005 lb/MWh

SECTION 4: GREENHOUSE GAS IMPACT ANALYSIS

4.1 - CEQA Guidelines

CEQA Guidelines define a significant effect on the environment as “a substantial, or potentially substantial, adverse change in the environment.” To determine if a project would have a significant impact on greenhouse gases, the type, level, and impact of emissions generated by the project must be evaluated.

The following greenhouse gas significance thresholds are contained in Appendix G of the CEQA Guidelines, which were amendments adopted into the Guidelines on March 18, 2010, pursuant to SB 97. A significant impact would occur if the project would:

- (a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- (b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

4.2 - Impact Analysis

Greenhouse Gas Inventory

Impact GHG-1: **The project would generate direct and indirect greenhouse gas emissions; however, these emissions would not result in a significant impact on the environment.**

Impact Analysis

Threshold of Significance

Section 15064.4(b) of the CEQA Guidelines amendments for greenhouse gas emissions states that a lead agency may take into account the following three considerations in assessing the significance of impacts from greenhouse gas emissions.

- **Consideration #1:** The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
- **Consideration #2:** Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- **Consideration #3:** The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project’s incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still

cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

The District has established a menu of performance standards, some of which depend on the existence of an adopted climate action plan or the establishment of Best Performance Standards. The County has an adopted Climate Action Plan (CAP), which will be used in this analysis to determine significance for this impact.

Consistency with Climate Action Plan

A CAP was adopted for Tulare County in August 2012 (Tulare 2012). The CAP states the following:

Commercial and industrial development in Tulare County during the 2020 and 2030 planning timeframes will be subject to conditions of approval and mitigation measures that will reduce greenhouse gas emissions beyond State regulations in most projects. For industrial projects, where the SJVAPCD is a Responsible Agency, the project will be expected to implement Best Performance Standards included in the SJVAPCD Guidelines for Addressing Greenhouse Gas Emissions on the processes and stationary equipment that emit greenhouse gases to levels that meet or exceed State targets To demonstrate consistency with the ARB Scoping Plan 2020 target of 26.2 percent reduction in land use related sectors compared with business as usual, new development in the County subject to discretionary approval would need to provide an overall reduction of 6 percent beyond that provided by State and SJVAPCD regulation. Based on this analysis, implementation of the policies contained in the General Plan 2030 Update and available project specific measures can achieve an overall reduction of 6 percent of development-related greenhouse gas emissions under Tulare County jurisdiction. When reductions from regulations and programs are included, new development would produce approximately 31 percent fewer greenhouse gas emissions compared with the 2020 business as usual scenario.

To determine significance, the analysis quantified project-related construction and operational greenhouse gas emissions under a business-as-usual scenario, and then compared these emissions with those emissions that would occur accounting for all project-related design features and regulatory measures adopted after 2005. Operational emissions were analyzed for the year 2020 to demonstrate consistency with the targets contained in the Tulare County CAP and AB 32. Operational or long-term emissions occur over the life of the project. For assumptions and descriptions for the emission sources, please refer to Section 3 of this report.

Impact Analysis

Construction

Greenhouse gas emissions generated during construction are shown in Table 5. The SJVAPCD does not have a recommendation for assessing the significance of construction related emissions. Most construction-related emissions would occur prior to the year 2020, which is the year the State is required to reduce its greenhouse gas emissions to 1990 levels. Additionally, emissions from

construction would be temporary. In order to account for the construction emissions, the emissions were amortized based on the life of the development (residential – 50 years, commercial/industrial – 25 years) and added to the operational emissions. Because the project includes a mixture of residential and commercial/industrial land uses, a 30-year life of the project was assumed in order to provide a conservative estimate.

Table 5: Construction Greenhouse Gas Emissions

Land Uses	Total MTCO ₂ e per year
Residential	2,613.23
Commercial	322.53
Industrial	354.73
Total	3,290.49
Amortized Emissions (Based on 30 year life of project)	109.68
Note: MTCO ₂ e = metric tons of carbon dioxide equivalents Source: CalEEMod output (Appendix A).	

Operation Emissions in 2020

Operational emissions were analyzed for the year 2020 to demonstrate consistency with the targets contained in the Tulare County CAP and AB 32. Emissions were also assessed for 2030 to reflect the Community Plan horizon year. The “project” in this case is the amount of new development anticipated to occur between the baseline conditions in 2014 and the 2020 target year and between 2014 and the 2030 plan horizon year. The amount of development is based on a 1.3 percent per year growth rate projected through the 2030 plan horizon year. The mix of land uses is based on current development found in Pixley with increases applied equally to all land use categories.

To determine significance, the analysis quantified project-related greenhouse gas emissions under a business-as-usual scenario, and then compared these emissions with those emissions that would occur accounting for all project-related design features and regulatory measures adopted after 2005. As shown in the Table 6, the reduction from business-as-usual emissions in 2020 is 32.6 percent, which is above the 26.2-percent threshold established by the CAP and the 6-percent threshold for additional reductions from new development. Therefore, the project is consistent with the County achieving the required AB 32 scoping plan reductions. Impacts would be less than significant.

Table 6: Project Operational Greenhouse Gases in 2020

Source	Emissions (MTCO ₂ e per year)		
	2020 Business as Usual	2020 (with Regulation)	Percent Reduction (%)
Area	54.26	54.22	0.06
Energy	815.65	581.13	28.75
Mobile	3,243.37	2,053.32	36.69
Waste	109.96	109.96	0.00
Water	65.05	55.85	14.15
Amortized Construction Emissions	109.68	109.68	0
Total	4,397.96	2,964.16	32.60%
Significance Threshold			29.0%
Are emissions significant?			No
Note: MTCO ₂ e = metric tons of carbon dioxide equivalents Source of business as usual emissions: CalEEMod output for the year 2005 (Appendix A). Source of 2020 emissions: CalEEMod output for the year 2020 (Appendix A).			

The business-as-usual emissions represent those that would have occurred without regulations enacted pursuant to AB 32. The 2020 emissions with regulations represent emissions with reductions from regulations enacted as part of AB 32, in particular, the following:

- Mobile: Pavley and Low Carbon Fuel Standard regulation reductions are calculated by CalEEMod. The estimated reduction is 36.69 percent of the mobile sources GHG emissions (motor vehicle emissions).
- Electricity: Renewable Portfolio Standards require a 33-percent renewable portfolio by the year 2020. The estimated reduction from electricity GHG emissions is 28.75 percent.
- Water: Compliance with California Green Building Code Standards. The estimated reduction is 14.15 percent.

In addition to comparing the project with the Tulare County CAP, the analysis also considered the recommendations of the District. The District has established a menu of performance standards, some of which depend on the existence of an adopted climate action plan or the establishment of Best Performance Standards. As shown above, the project is consistent with the CAP adopted by Tulare County. In a situation where a CAP was not adopted, the District considers whether the project will reduce or mitigate greenhouse gas levels by 29 percent from business-as-usual levels. Business as usual is determined by modeling emissions with only regulations in effect in 2005 to be consistent with the baseline used in the Scoping Plan (SJVAPCD 2009). This level of greenhouse gas reduction is based on the target established by ARB's AB 32 Scoping Plan, approved in 2008. As mentioned in the Regulatory Environment section, this reduction level was revised in the Final

Supplement to the Functional Equivalent Document, which was included in ARB’s 2011 re-approval of the Scoping Plan. This new greenhouse gas reduction level of 21.7 percent from business as usual in 2020 accounts for less growth in emissions related to the recent recession. As shown in Table 6, the project not only meets the CAP reductions but also exceeds the 29-percent threshold established by the District.

Operation Emissions in 2030

No threshold or state target has been set for 2030. Therefore, it is necessary to use different criteria for significance after 2020. The continued buildout of the Community Plan after 2020 results in increases in greenhouse gas emissions; however, the increases are offset by the continued implementation of regulations currently in place on greenhouse gas emissions and by compliance with the adopted General Plan and CAP. The overall growth projected for the Pixley Community Plan is relatively small, as shown in the land use assumptions tables (Table 2 and Table 3). In addition, the State anticipates continued increases in energy efficiency that will ultimately result in “net zero” energy consumption in new development and increases in the number of zero emission vehicles operated in the State under the Advanced Clean Car Program. Compliance with SB 375 reduction targets for light duty vehicles will provide continued reductions in emissions from that source (10 percent) through SB 375’s 2035 milestone year. Since the project will continue to comply with existing and future regulations and the General Plan and CAP will continue to be implemented through 2030, the growth projected for 2030 would not result in significant greenhouse gas impacts. Finally, in the event that the State adopts new targets beyond 2020, the County would adopt revisions to the CAP if needed to demonstrate consistency with any new reduction target amounts.

As shown in Table 7, the reduction from business-as-usual emissions in 2030 is 35.76 percent, demonstrating continued progress toward reducing greenhouse gas emissions by the 2030 Plan horizon year.

Table 7: Project Operational Greenhouse Gases in 2030

Source	Emissions (MTCO ₂ e per year)		
	2030 Business as Usual	2030 (with Regulation and Design Features)	Percent Reduction (%)
Area	116.13	116.06	0.06
Energy	1,993.50	1,416.73	28.93
Mobile	7,341.55	4,364.23	40.55
Waste	276.93	276.93	0.00
Water	165.96	142.64	14.05
Amortized Construction Emissions	109.68	109.68	0
Total	10,003.75	6,426.27	35.76
Significance Threshold			N/A
Are emissions significant?			No

Table 7 (cont.): Project Operational Greenhouse Gases in 2030

Source	Emissions (MTCO ₂ e per year)		
	2030 Business as Usual	2030 (with Regulation and Design Features)	Percent Reduction (%)
Note: MTCO ₂ e = metric tons of carbon dioxide equivalents Source of business as usual emissions: CalEEMod output for the year 2005 (Appendix A). Source of 2030 emissions: CalEEMod output for the year 2030 (Appendix A).			

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

Greenhouse Gas Reduction Plans

Impact GHG-2	The project would not conflict with any applicable plan, policy or regulation of an agency adopted to reduce the emissions of greenhouse gases.
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Impact Analysis***Climate Action Plan Consistency***

Tulare County adopted a CAP as part of the Tulare County General Plan Update on August 28, 2012. The CAP requires projects to achieve an average reduction that is 6 percent in excess of the reductions stated in the ARB Scoping Plan and by regional regulations and programs. When combined with reductions anticipated from the ARB Scoping Plan measures and regional regulations and programs, Tulare County emissions would be 26.2 percent below 2020 business-as-usual levels for development related sources, which is the amount needed for the State to reduce emissions to 1990 levels. As shown in Table 6, the project would exceed the required reduction and would therefore be consistent with the CAP 2020 target.

Since the adoption of the CAP, several additional regulations have been adopted by the State that provide additional reductions beyond those described in the CAP. The largest reductions are from LEV III Light Duty Vehicle Standards and 2013 Title 24 Energy Efficiency Standards as described in

The CAP identifies General Plan policies that would help reduce greenhouse gas emissions; Table 8 lists the policy titles. For a discussion of the benefits of the policies, refer to the CAP.

Table 8: General Plan Policies Having Greenhouse Gas Emission Reductions

Sustainability and Greenhouse Gas Emissions			
PF-1.1	Maintain Urban Edges	ERM-1.2	Development in Environmentally Sensitive Areas
PF-1.2	Location of Urban Development	ERM-1.3	Encourage Cluster Development
PF-1.3	Land Uses in UDBs/HDBs	ERM-1.4	Protect Riparian Management Plans and Mining Reclamation Plans
PF-1.4	Available Infrastructure	ERM-1.6	Management of Wetlands
AG-1.7	Conservation Easements	ERM-1.7	Planting of Native Vegetation
AG-1.8	Agriculture Within Urban Boundaries	ERM-1.8	Open Space Buffers
AG-1.11	Agricultural Buffers	ERM-1.14	Mitigation and Conservation Banking Program
AG-1.14	Right to Farm Noticing	ERM-4.1	Energy Conservation and Efficiency Measures
AG-2.11	Energy Production	ERM-4.2	Streetscape and Parking Area Improvements for Energy Conservation
AG-2.11	Energy Production	ERM-4.3	Local and State Programs
AG-2.6	Biotechnology and Biofuels	ERM-4.4	Promote Energy Conservation Awareness
AQ-1.6	Purchase of Low Emission/Alternative Fuel Vehicles	ERM-4.6	Renewable Energy
AQ-1.7	Support Statewide Global Warming Solutions	ERM-4.7	Reduce Energy Use in County Facilities
AQ-1.8	Greenhouse Gas Emissions Reduction Plan	ERM-4.8	Energy Efficiency Standards
AQ-1.9	Off-Site Measures to Reduce Greenhouse Gas Emissions	ERM-5.1	Parks as Community Focal Points
AQ-1.10	Alternative Fuel Vehicle Infrastructure	ERM-5.6	Location and Size Criteria for Parks
AQ-2.1	Transportation Demand Management Programs	ERM-5.15	Open Space Preservation
AQ-2.3	Transportation and Air Quality	HS-1.4	Building and Codes
AQ-2.4	Transportation Management Associations	TC-2.1	Rail Service
AQ-2.5	Ridesharing	TC-2.4	High Speed Rail (HSR)
AQ-3.1	Location of Support Services	TC-2.7	Rail Facilities and Existing Development
AQ-3.2	Infill Near Employment	TC-4.4	Nodal Land Use Patterns that Support Public Transit
AQ-3.3	Street Design	TC-5.1	Bicycle/Pedestrian Trail System
AQ-3.5	Alternative Energy Design	TC-5.2	Consider Non-Motorized Modes in Planning and Development
AQ-3.6	Mixed Use Development	TC-5.3	Provisions for Bicycle Use
LU-1.1	Smart Growth and Healthy Communities	TC-5.4	Design Standards for Bicycle Routes
LU-1.2	Innovative Development	TC-5.5	Facilities
LU-1.3	Prevent Incompatible Uses	TC-5.6	Regional Bicycle Plan
LU-1.4	Compact Development	TC-5.7	Designated Bike Paths
LU-1.8	Encourage Infill Development	TC-5.8	Multi-Use Trails
LU-2.1	Agricultural Lands	PFS-1.3	Impact Mitigation
LU-3.2	Cluster Development	PFS-1.15	Efficient Expansion
LU-3.3	High-Density Residential Locations	PFS-2.	Water Supply
LU-4.1	Neighborhood Commercial Uses	PFS-2.2	Adequate Systems
LU-7.1	Distinctive Neighborhoods	PFS-3.3	New Development Requirements
LU-7.2	Integrate Natural Features	PFS-5.3	Solid Waste Reduction
LU-7.3	Friendly Streets	PFS-5.4	County Usage of Recycled Materials and Products
LU-7.15	Energy Conservation	PFS-5.5	Private Use of Recycled Products
ED-2.3	New Industries	PFS-8.3	Location of School Sites
ED-2.8	Jobs/Housing Ratio	PFS-8.5	Government Facilities and Services
ED-5.9	Bikeways		
ED-6.1	Revitalization of Community Centers		
ED-6.2	Comprehensive Redevelopment Plan		

Table 8 (cont.): General Plan Policies Having Greenhouse Gas Emission Reductions

Sustainability and Greenhouse Gas Emissions			
ED-6.3	Entertainment Venues	WR-1.5	Expand Use of Reclaimed Wastewater
ED-6.4	Culturally Diverse Business	WR-1.6	Expand Use of Reclaimed Water
ED-6.5	Intermodal Hubs for Community and Hamlet Core Areas	WR-3.5	Use of Native and Drought Tolerant Landscaping
ED-6.7	Existing Commercial Centers		
SL-3.1	Community Centers and Neighborhoods		
ERM-1.1	Protection of Rare and Endangered Species		
Source: Tulare County General Plan 2030 Update.			

Development within the Pixley Community is required to show consistency with the General Plan, the Pixley Community Plan, and the CAP. Since no specific development projects are proposed as part of the Pixley Community Plan Update, growth is expected to occur in areas currently designated for development. Projects consistent with these plans and built according to county and state standards can be assumed to have a less than significant impact on climate change. New projects requiring additional county approvals would be required to show consistency with plans, regulations, and thresholds in place at the time of approval.

Consistency with San Joaquin Valley Air Pollution Control District Plans

The District adopted its own procedures for addressing climate change impacts of projects where the District issues a permit. For these projects, the District is either a Lead Agency or a Responsible Agency for CEQA purposes. The procedures do not apply directly to projects subject to County approval; however, development projects that include stationary source emissions requiring a District permit would need to comply with District procedures.

The District adopted the Climate Change Action Plan (CCAP) in 2008, the mandates of which have been described in Section 3.3, Regulatory Framework. The Carbon Exchange Program is not applicable to this project, and the project would not require Voluntary Greenhouse Gas Mitigation Agreements, as greenhouse gas emissions impacts are less than significant. The project would comply with all applicable greenhouse gas regulations contained in the CCAP. The project also achieves the required reductions from business as usual established by the District.

Consistency with AB 32

The California State Legislature adopted AB 32 in 2006. AB 32 focuses on reducing greenhouse gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) to 1990 levels by the year 2020. Pursuant to the requirements in AB 32, the ARB adopted the Climate Change Scoping Plan (Scoping Plan) in 2008, which outlines actions recommended to obtain that goal. The Scoping Plan calls for an “ambitious but achievable” reduction in California’s greenhouse gas emissions, cutting approximately 29 percent from business-as-usual emission levels projected for 2020, or about 10 percent from 2008 levels. On a per-capita

basis, that means reducing annual emissions of 14 tons of carbon dioxide for every man, woman, and child in California down to about 10 tons per person by 2020.

The Scoping Plan contains a variety of strategies to reduce the State's emissions. As shown In Table 9, the strategies are either consistent or not applicable to the project.

Table 9: Consistency with Scoping Plan Reduction Measures

Scoping Plan Reduction Measure	Project Consistency
1. California Cap-and-Trade Program Linked to Western Climate Initiative. Implement a broad-based California Cap-and-Trade program to provide a firm limit on emissions. Link the California cap-and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California. Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms.	Not applicable. When this cap-and-trade system begins, products or services (such as electricity) would be covered and the cost of the cap-and-trade system would be transferred to the consumers.
2. California Light-Duty Vehicle Greenhouse Gas Standards. Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	Consistent. This is a statewide measure that cannot be implemented by a project applicant or lead agency. However, vehicles accessing projects in the Community would be subject to the standards.
3. Energy Efficiency. Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	Consistent. This is a measure for the state to increase its energy efficiency standards. However, the project would increase its energy efficiency through existing regulation.
4. Renewable Portfolio Standard. Achieve 33 percent renewable energy mix statewide. Renewable energy sources include (but are not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.	Consistent. This is a statewide measure that cannot be implemented by a project applicant or lead agency. Pacific Gas and Electric obtains 19 percent of its power supply from renewable sources such as geothermal. However, residents and businesses in the community will purchase power with increasing amounts of renewable energy content.
5. Low Carbon Fuel Standard. Develop and adopt the Low Carbon Fuel Standard.	Consistent. This is a statewide measure that cannot be implemented by a project applicant or lead agency. However, the standard is applicable to the fuel used by vehicles that would access the project site.

Table 9 (cont.): Consistency with Scoping Plan Reduction Measures

Scoping Plan Reduction Measure	Project Consistency
6. Regional Transportation-Related Greenhouse Gas Targets. Develop regional greenhouse gas emissions reduction targets for passenger vehicles. This measure refers to SB 375.	Consistent. The plan area will be constructed to densities consistent with the 2014 RTP/SCS.
7. Vehicle Efficiency Measures. Implement light-duty vehicle efficiency measures.	Consistent. The standards would be applicable to the light-duty vehicles that would access the project site.
8. Goods Movement. Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.	Not applicable. The project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
9. Million Solar Roofs Program. Install 3,000 MW of solar-electric capacity under California's existing solar programs.	Consistent. This measure is to increase solar throughout California, which is being done by various electricity providers and existing solar programs. Projects within the plan area will be able to take advantage of incentives that are in place at the time of construction.
10. Medium/Heavy-Duty Vehicles. Adopt medium and heavy-duty vehicle efficiency measures.	Consistent. This is a statewide measure that cannot be implemented by a project applicant or lead agency. When this measure is initiated, the standards would be applicable to the vehicles that access the project site.
11. Industrial Emissions. Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.	Not applicable. It is not likely that industrial sources subject to this measures will be constructed in the community. However, if such a project were proposed, it would require its own environmental review.
12. High Speed Rail. Support implementation of a high-speed rail system.	Not applicable. This is a statewide measure that cannot be implemented by a project applicant or lead agency.
13. Green Building Strategy. Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	Consistent. The State is to increase the use of green building practices. The project would implement some green building strategies through existing regulation.
14. High Global Warming Potential Gases. Adopt measures to reduce high global warming potential gases.	Consistent. This measure is applicable to the high global warming potential gases that would be used by the project (such as in air conditioning and refrigerators).

Table 9 (cont.): Consistency with Scoping Plan Reduction Measures

Scoping Plan Reduction Measure	Project Consistency
15. Recycling and Waste. Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	Consistent. The project would not contain a landfill. The State is to help increase waste diversion. The project would reduce waste with implementation of state mandated recycling and reuse mandates.
16. Sustainable Forests. Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation.	Not applicable. The project site is in an urban, built-up condition. No forested lands exist onsite.
17. Water. Continue efficiency programs and use cleaner energy sources to move and treat water.	Consistent. This is a measure for state and local agencies. However, project will comply with the California Green Building Standards Code, which requires a 20 percent reduction in indoor water use.
18. Agriculture. In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.	Not applicable. The project site is in an urban, built-up condition. No grazing, feedlot, or other agricultural activities that generate manure occur onsite or are proposed to be implemented by the project.
Source of ARB Scoping Plan Reduction Measure: California Air Resources Board 2008. Source of Project Consistency or Applicability: FirstCarbon Solutions, 2013.	

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.

SECTION 5: REFERENCES

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Appendix A: Greenhouse Gas Modeling Results

Pixley Greenhouse Gas Operation Emissions Summary (Tons/Year)

2020

	Residential			Commercial			Industrial		
	BAU	2020		BAU	2020		BAU	2020	
Area	54.25	54.22	0.06%	0.00	0.00	5.00%	0.00	0.00	5.62%
Energy	463.40	335.19	27.67%	163.03	115.08	29.41%	189.22	130.86	30.85%
Mobile	1390.97	935.98	32.71%	1690.34	998.96	40.90%	162.05	118.38	26.95%
Waste	50.95	50.95	0.00%	34.86	34.86	0.00%	24.14	24.14	0.00%
Water	27.31	23.22	14.97%	8.17	6.92	15.28%	29.56	25.70	13.07%
Total	1986.88	1399.57	29.56%	1896.41	1155.84	39.05%	404.99	299.08	26.15%

2030

	Residential			Commercial			Industrial		
	BAU	2030		BAU	2030		BAU	2030	
Area	116.13	116.06	0.06%	0.00	0.00	5.29%	0.00	0.00	5.14%
Energy	990.23	716.28	27.67%	464.23	327.68	29.41%	539.04	372.77	30.84%
Mobile	2938.49	1574.99	46.40%	3933.87	2493.75	36.61%	469.19	295.50	37.02%
Waste	108.80	108.80	0.00%	99.34	99.34	0.00%	68.79	68.79	0.00%
Water	58.46	49.70	14.97%	23.28	19.72	15.28%	84.22	73.22	13.07%
Total	4212.11	2565.83	39.08%	4520.72	2940.49	34.96%	1161.24	810.28	30.22%

Grand Total for All Development Types

	BAU	2020			BAU	2030	
Area	54.26	54.22	0.06%	Area	116.13	116.06	0.06%
Energy	815.65	581.13	28.75%	Energy	1993.50	1416.73	28.93%
Mobile	3243.37	2053.32	36.69%	Mobile	7341.55	4364.23	40.55%
Waste	109.96	109.96	0.00%	Waste	276.93	276.93	0.00%
Water	65.05	55.85	14.15%	Water	165.96	142.64	14.05%
Total	4288.28	2854.48	33.44%	Total	9894.07	6316.59	36.16%

Source: CalEEMod Output

Pixley Community Plan - Residential 2014
Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	11.00	Dwelling Unit	0.69	11,000.00	31
Mobile Home Park	37.00	Dwelling Unit	4.66	44,400.00	106
Single Family Housing	211.00	Dwelling Unit	68.51	379,800.00	603

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Total increase from existing to year 2030. Emissions will then be averaged over 16 years.

Table Name	Column Name	Default Value	New Value
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2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.7700	7.5846	5.5326	6.7600e-003	0.9091	0.4047	1.3138	0.4154	0.3749	0.7904	0.0000	630.6881	630.6881	0.1578	0.0000	634.0012
2015	0.6046	4.4169	3.8407	5.7100e-003	0.1390	0.2848	0.4239	0.0375	0.2676	0.3051	0.0000	502.3395	502.3395	0.0869	0.0000	504.1652
2016	0.5558	4.1526	3.6557	5.7100e-003	0.1390	0.2641	0.4031	0.0375	0.2479	0.2854	0.0000	495.0037	495.0037	0.0847	0.0000	496.7817
2017	0.4965	3.8115	3.4284	5.6800e-003	0.1385	0.2378	0.3763	0.0373	0.2232	0.2605	0.0000	484.1955	484.1955	0.0822	0.0000	485.9225
2018	0.3931	3.1848	3.0259	5.2500e-003	0.1182	0.1876	0.3058	0.0318	0.1758	0.2076	0.0000	443.3298	443.3298	0.0812	0.0000	445.0341
2019	4.1199	0.3039	0.3266	5.5000e-004	8.4200e-003	0.0174	0.0259	2.2400e-003	0.0164	0.0187	0.0000	47.0955	47.0955	0.0109	0.0000	47.3251
Total	6.9398	23.4543	19.8099	0.0297	1.4524	1.3963	2.8487	0.5617	1.3059	1.8677	0.0000	2,602.6520	2,602.6520	0.5037	0.0000	2,613.2298

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	0.7700	7.5846	5.5326	6.7600e-003	0.3977	0.4047	0.8024	0.1736	0.3749	0.5486	0.0000	630.6875	630.6875	0.1578	0.0000	634.0005
2015	0.6046	4.4169	3.8407	5.7100e-003	0.1390	0.2848	0.4239	0.0375	0.2676	0.3051	0.0000	502.3391	502.3391	0.0869	0.0000	504.1648
2016	0.5558	4.1526	3.6557	5.7100e-003	0.1390	0.2641	0.4031	0.0375	0.2479	0.2854	0.0000	495.0033	495.0033	0.0847	0.0000	496.7814
2017	0.4965	3.8115	3.4284	5.6800e-003	0.1385	0.2378	0.3763	0.0373	0.2232	0.2605	0.0000	484.1951	484.1951	0.0822	0.0000	485.9222
2018	0.3931	3.1848	3.0259	5.2500e-003	0.1182	0.1876	0.3058	0.0318	0.1758	0.2076	0.0000	443.3294	443.3294	0.0812	0.0000	445.0337
2019	4.1199	0.3039	0.3266	5.5000e-004	8.4200e-003	0.0174	0.0259	2.2400e-003	0.0164	0.0187	0.0000	47.0954	47.0954	0.0109	0.0000	47.3251
Total	6.9398	23.4543	19.8099	0.0297	0.9410	1.3963	2.3373	0.3199	1.3059	1.6258	0.0000	2,602.6498	2,602.6498	0.5037	0.0000	2,613.2276

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	35.21	0.00	17.95	43.05	0.00	12.95	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2014	2/25/2014	5	40	
2	Grading	Grading	2/26/2014	7/29/2014	5	110	
3	Building Construction	Building Construction	7/30/2014	10/30/2018	5	1110	
4	Paving	Paving	10/31/2018	2/12/2019	5	75	
5	Architectural Coating	Architectural Coating	2/13/2019	5/28/2019	5	75	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 275

Acres of Paving: 0

Residential Indoor: 881,280; Residential Outdoor: 293,760; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	111.00	28.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	22.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3613	0.0000	0.3613	0.1986	0.0000	0.1986	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1058	1.1524	0.8592	7.8000e-004		0.0628	0.0628		0.0577	0.0577	0.0000	75.4032	75.4032	0.0223	0.0000	75.8712
Total	0.1058	1.1524	0.8592	7.8000e-004	0.3613	0.0628	0.4241	0.1986	0.0577	0.2563	0.0000	75.4032	75.4032	0.0223	0.0000	75.8712

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0400e-003	2.4200e-003	0.0241	3.0000e-005	2.8700e-003	3.0000e-005	2.9000e-003	7.6000e-004	3.0000e-005	7.9000e-004	0.0000	2.7127	2.7127	1.8000e-004	0.0000	2.7164
Total	2.0400e-003	2.4200e-003	0.0241	3.0000e-005	2.8700e-003	3.0000e-005	2.9000e-003	7.6000e-004	3.0000e-005	7.9000e-004	0.0000	2.7127	2.7127	1.8000e-004	0.0000	2.7164

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1409	0.0000	0.1409	0.0775	0.0000	0.0775	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1058	1.1524	0.8592	7.8000e-004		0.0628	0.0628		0.0577	0.0577	0.0000	75.4031	75.4031	0.0223	0.0000	75.8711
Total	0.1058	1.1524	0.8592	7.8000e-004	0.1409	0.0628	0.2037	0.0775	0.0577	0.1352	0.0000	75.4031	75.4031	0.0223	0.0000	75.8711

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0400e-003	2.4200e-003	0.0241	3.0000e-005	2.8700e-003	3.0000e-005	2.9000e-003	7.6000e-004	3.0000e-005	7.9000e-004	0.0000	2.7127	2.7127	1.8000e-004	0.0000	2.7164
Total	2.0400e-003	2.4200e-003	0.0241	3.0000e-005	2.8700e-003	3.0000e-005	2.9000e-003	7.6000e-004	3.0000e-005	7.9000e-004	0.0000	2.7127	2.7127	1.8000e-004	0.0000	2.7164

3.3 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4770	0.0000	0.4770	0.1978	0.0000	0.1978	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3766	4.4397	2.8371	3.4000e-003		0.2134	0.2134		0.1963	0.1963	0.0000	327.0545	327.0545	0.0967	0.0000	329.0841
Total	0.3766	4.4397	2.8371	3.4000e-003	0.4770	0.2134	0.6904	0.1978	0.1963	0.3941	0.0000	327.0545	327.0545	0.0967	0.0000	329.0841

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2400e-003	7.3800e-003	0.0735	1.0000e-004	8.7600e-003	9.0000e-005	8.8500e-003	2.3300e-003	8.0000e-005	2.4100e-003	0.0000	8.2887	8.2887	5.4000e-004	0.0000	8.3002
Total	6.2400e-003	7.3800e-003	0.0735	1.0000e-004	8.7600e-003	9.0000e-005	8.8500e-003	2.3300e-003	8.0000e-005	2.4100e-003	0.0000	8.2887	8.2887	5.4000e-004	0.0000	8.3002

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1860	0.0000	0.1860	0.0771	0.0000	0.0771	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3766	4.4397	2.8371	3.4000e-003		0.2134	0.2134		0.1963	0.1963	0.0000	327.0541	327.0541	0.0967	0.0000	329.0837
Total	0.3766	4.4397	2.8371	3.4000e-003	0.1860	0.2134	0.3994	0.0771	0.1963	0.2734	0.0000	327.0541	327.0541	0.0967	0.0000	329.0837

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2400e-003	7.3800e-003	0.0735	1.0000e-004	8.7600e-003	9.0000e-005	8.8500e-003	2.3300e-003	8.0000e-005	2.4100e-003	0.0000	8.2887	8.2887	5.4000e-004	0.0000	8.3002
Total	6.2400e-003	7.3800e-003	0.0735	1.0000e-004	8.7600e-003	9.0000e-005	8.8500e-003	2.3300e-003	8.0000e-005	2.4100e-003	0.0000	8.2887	8.2887	5.4000e-004	0.0000	8.3002

3.4 Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2147	1.7346	1.0506	1.4900e-003		0.1237	0.1237		0.1164	0.1164	0.0000	136.4047	136.4047	0.0347	0.0000	137.1330
Total	0.2147	1.7346	1.0506	1.4900e-003		0.1237	0.1237		0.1164	0.1164	0.0000	136.4047	136.4047	0.0347	0.0000	137.1330

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0296	0.2068	0.2763	3.7000e-004	0.0101	4.3300e-003	0.0144	2.8800e-003	3.9700e-003	6.8600e-003	0.0000	34.4037	34.4037	3.8000e-004	0.0000	34.4117
Worker	0.0350	0.0413	0.4118	5.8000e-004	0.0491	4.9000e-004	0.0496	0.0131	4.4000e-004	0.0135	0.0000	46.4206	46.4206	3.0500e-003	0.0000	46.4847
Total	0.0646	0.2482	0.6881	9.5000e-004	0.0591	4.8200e-003	0.0640	0.0159	4.4100e-003	0.0204	0.0000	80.8243	80.8243	3.4300e-003	0.0000	80.8963

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2147	1.7346	1.0506	1.4900e-003		0.1237	0.1237		0.1164	0.1164	0.0000	136.4045	136.4045	0.0347	0.0000	137.1329
Total	0.2147	1.7346	1.0506	1.4900e-003		0.1237	0.1237		0.1164	0.1164	0.0000	136.4045	136.4045	0.0347	0.0000	137.1329

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0296	0.2068	0.2763	3.7000e-004	0.0101	4.3300e-003	0.0144	2.8800e-003	3.9700e-003	6.8600e-003	0.0000	34.4037	34.4037	3.8000e-004	0.0000	34.4117
Worker	0.0350	0.0413	0.4118	5.8000e-004	0.0491	4.9000e-004	0.0496	0.0131	4.4000e-004	0.0135	0.0000	46.4206	46.4206	3.0500e-003	0.0000	46.4847
Total	0.0646	0.2482	0.6881	9.5000e-004	0.0591	4.8200e-003	0.0640	0.0159	4.4100e-003	0.0204	0.0000	80.8243	80.8243	3.4300e-003	0.0000	80.8963

3.4 Building Construction - 2015**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4775	3.9189	2.4462	3.5000e-003		0.2762	0.2762		0.2598	0.2598	0.0000	318.4126	318.4126	0.0799	0.0000	320.0903
Total	0.4775	3.9189	2.4462	3.5000e-003		0.2762	0.2762		0.2598	0.2598	0.0000	318.4126	318.4126	0.0799	0.0000	320.0903

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0559	0.4142	0.5628	8.7000e-004	0.0237	7.5700e-003	0.0312	6.7800e-003	6.9500e-003	0.0137	0.0000	79.7129	79.7129	7.6000e-004	0.0000	79.7289
Worker	0.0712	0.0838	0.8317	1.3400e-003	0.1154	1.0400e-003	0.1164	0.0307	9.4000e-004	0.0316	0.0000	104.2139	104.2139	6.2900e-003	0.0000	104.3460
Total	0.1271	0.4980	1.3945	2.2100e-003	0.1390	8.6100e-003	0.1477	0.0375	7.8900e-003	0.0454	0.0000	183.9269	183.9269	7.0500e-003	0.0000	184.0749

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4775	3.9189	2.4462	3.5000e-003		0.2762	0.2762		0.2598	0.2598	0.0000	318.4122	318.4122	0.0799	0.0000	320.0899
Total	0.4775	3.9189	2.4462	3.5000e-003		0.2762	0.2762		0.2598	0.2598	0.0000	318.4122	318.4122	0.0799	0.0000	320.0899

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0559	0.4142	0.5628	8.7000e-004	0.0237	7.5700e-003	0.0312	6.7800e-003	6.9500e-003	0.0137	0.0000	79.7129	79.7129	7.6000e-004	0.0000	79.7289
Worker	0.0712	0.0838	0.8317	1.3400e-003	0.1154	1.0400e-003	0.1164	0.0307	9.4000e-004	0.0316	0.0000	104.2139	104.2139	6.2900e-003	0.0000	104.3460
Total	0.1271	0.4980	1.3945	2.2100e-003	0.1390	8.6100e-003	0.1477	0.0375	7.8900e-003	0.0454	0.0000	183.9269	183.9269	7.0500e-003	0.0000	184.0749

3.4 Building Construction - 2016**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0104	316.0104	0.0784	0.0000	317.6563
Total	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0104	316.0104	0.0784	0.0000	317.6563

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0490	0.3593	0.5172	8.7000e-004	0.0237	6.3500e-003	0.0300	6.7700e-003	5.8300e-003	0.0126	0.0000	78.7227	78.7227	6.9000e-004	0.0000	78.7371
Worker	0.0623	0.0733	0.7234	1.3400e-003	0.1154	9.6000e-004	0.1163	0.0307	8.8000e-004	0.0316	0.0000	100.2706	100.2706	5.6100e-003	0.0000	100.3883
Total	0.1113	0.4326	1.2406	2.2100e-003	0.1390	7.3100e-003	0.1464	0.0375	6.7100e-003	0.0442	0.0000	178.9933	178.9933	6.3000e-003	0.0000	179.1254

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0101	316.0101	0.0784	0.0000	317.6560
Total	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0101	316.0101	0.0784	0.0000	317.6560

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0490	0.3593	0.5172	8.7000e-004	0.0237	6.3500e-003	0.0300	6.7700e-003	5.8300e-003	0.0126	0.0000	78.7227	78.7227	6.9000e-004	0.0000	78.7371
Worker	0.0623	0.0733	0.7234	1.3400e-003	0.1154	9.6000e-004	0.1163	0.0307	8.8000e-004	0.0316	0.0000	100.2706	100.2706	5.6100e-003	0.0000	100.3883
Total	0.1113	0.4326	1.2406	2.2100e-003	0.1390	7.3100e-003	0.1464	0.0375	6.7100e-003	0.0442	0.0000	178.9933	178.9933	6.3000e-003	0.0000	179.1254

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3228	311.3228	0.0766	0.0000	312.9319
Total	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3228	311.3228	0.0766	0.0000	312.9319

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0395	0.3151	0.4499	8.6000e-004	0.0236	5.2900e-003	0.0289	6.7500e-003	4.8700e-003	0.0116	0.0000	77.0231	77.0231	6.3000e-004	0.0000	77.0364
Worker	0.0537	0.0637	0.6218	1.3400e-003	0.1149	9.0000e-004	0.1158	0.0306	8.3000e-004	0.0314	0.0000	95.8495	95.8495	4.9900e-003	0.0000	95.9542
Total	0.0932	0.3787	1.0717	2.2000e-003	0.1385	6.1900e-003	0.1447	0.0373	5.7000e-003	0.0430	0.0000	172.8726	172.8726	5.6200e-003	0.0000	172.9906

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3225	311.3225	0.0766	0.0000	312.9315
Total	0.4033	3.4327	2.3568	3.4900e-003		0.2316	0.2316		0.2175	0.2175	0.0000	311.3225	311.3225	0.0766	0.0000	312.9315

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0395	0.3151	0.4499	8.6000e-004	0.0236	5.2900e-003	0.0289	6.7500e-003	4.8700e-003	0.0116	0.0000	77.0231	77.0231	6.3000e-004	0.0000	77.0364
Worker	0.0537	0.0637	0.6218	1.3400e-003	0.1149	9.0000e-004	0.1158	0.0306	8.3000e-004	0.0314	0.0000	95.8495	95.8495	4.9900e-003	0.0000	95.9542
Total	0.0932	0.3787	1.0717	2.2000e-003	0.1385	6.1900e-003	0.1447	0.0373	5.7000e-003	0.0430	0.0000	172.8726	172.8726	5.6200e-003	0.0000	172.9906

3.4 Building Construction - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2896	2.5238	1.9023	2.9100e-003		0.1621	0.1621		0.1524	0.1524	0.0000	256.8951	256.8951	0.0629	0.0000	258.2153
Total	0.2896	2.5238	1.9023	2.9100e-003		0.1621	0.1621		0.1524	0.1524	0.0000	256.8951	256.8951	0.0629	0.0000	258.2153

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0282	0.2358	0.3431	7.2000e-004	0.0197	4.0400e-003	0.0237	5.6300e-003	3.7100e-003	9.3400e-003	0.0000	63.1162	63.1162	5.1000e-004	0.0000	63.1270
Worker	0.0388	0.0463	0.4493	1.1100e-003	0.0959	7.1000e-004	0.0967	0.0255	6.6000e-004	0.0262	0.0000	76.4135	76.4135	3.7200e-003	0.0000	76.4916
Total	0.0670	0.2821	0.7924	1.8300e-003	0.1156	4.7500e-003	0.1204	0.0311	4.3700e-003	0.0355	0.0000	139.5297	139.5297	4.2300e-003	0.0000	139.6186

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2896	2.5238	1.9023	2.9100e-003		0.1621	0.1621		0.1524	0.1524	0.0000	256.8948	256.8948	0.0629	0.0000	258.2150
Total	0.2896	2.5238	1.9023	2.9100e-003		0.1621	0.1621		0.1524	0.1524	0.0000	256.8948	256.8948	0.0629	0.0000	258.2150

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0282	0.2358	0.3431	7.2000e-004	0.0197	4.0400e-003	0.0237	5.6300e-003	3.7100e-003	9.3400e-003	0.0000	63.1162	63.1162	5.1000e-004	0.0000	63.1270
Worker	0.0388	0.0463	0.4493	1.1100e-003	0.0959	7.1000e-004	0.0967	0.0255	6.6000e-004	0.0262	0.0000	76.4135	76.4135	3.7200e-003	0.0000	76.4916
Total	0.0670	0.2821	0.7924	1.8300e-003	0.1156	4.7500e-003	0.1204	0.0311	4.3700e-003	0.0355	0.0000	139.5297	139.5297	4.2300e-003	0.0000	139.6186

3.5 Paving - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0355	0.3776	0.3189	4.9000e-004		0.0207	0.0207		0.0190	0.0190	0.0000	44.8112	44.8112	0.0140	0.0000	45.1042
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0355	0.3776	0.3189	4.9000e-004		0.0207	0.0207		0.0190	0.0190	0.0000	44.8112	44.8112	0.0140	0.0000	45.1042

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0600e-003	1.2700e-003	0.0123	3.0000e-005	2.6300e-003	2.0000e-005	2.6500e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.0938	2.0938	1.0000e-004	0.0000	2.0959
Total	1.0600e-003	1.2700e-003	0.0123	3.0000e-005	2.6300e-003	2.0000e-005	2.6500e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.0938	2.0938	1.0000e-004	0.0000	2.0959

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0355	0.3776	0.3189	4.9000e-004		0.0207	0.0207		0.0190	0.0190	0.0000	44.8112	44.8112	0.0140	0.0000	45.1041
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0355	0.3776	0.3189	4.9000e-004		0.0207	0.0207		0.0190	0.0190	0.0000	44.8112	44.8112	0.0140	0.0000	45.1041

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0600e-003	1.2700e-003	0.0123	3.0000e-005	2.6300e-003	2.0000e-005	2.6500e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.0938	2.0938	1.0000e-004	0.0000	2.0959
Total	1.0600e-003	1.2700e-003	0.0123	3.0000e-005	2.6300e-003	2.0000e-005	2.6500e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.0938	2.0938	1.0000e-004	0.0000	2.0959

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0221	0.2315	0.2227	3.5000e-004		0.0126	0.0126		0.0115	0.0115	0.0000	31.0612	31.0612	9.8300e-003	0.0000	31.2676
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0221	0.2315	0.2227	3.5000e-004		0.0126	0.0126		0.0115	0.0115	0.0000	31.0612	31.0612	9.8300e-003	0.0000	31.2676

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	8.0000e-004	7.6700e-003	2.0000e-005	1.8500e-003	1.0000e-005	1.8700e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.4202	1.4202	7.0000e-005	0.0000	1.4216
Total	6.7000e-004	8.0000e-004	7.6700e-003	2.0000e-005	1.8500e-003	1.0000e-005	1.8700e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.4202	1.4202	7.0000e-005	0.0000	1.4216

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0221	0.2315	0.2227	3.5000e-004		0.0126	0.0126		0.0115	0.0115	0.0000	31.0611	31.0611	9.8300e-003	0.0000	31.2675
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0221	0.2315	0.2227	3.5000e-004		0.0126	0.0126		0.0115	0.0115	0.0000	31.0611	31.0611	9.8300e-003	0.0000	31.2675

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	8.0000e-004	7.6700e-003	2.0000e-005	1.8500e-003	1.0000e-005	1.8700e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.4202	1.4202	7.0000e-005	0.0000	1.4216
Total	6.7000e-004	8.0000e-004	7.6700e-003	2.0000e-005	1.8500e-003	1.0000e-005	1.8700e-003	4.9000e-004	1.0000e-005	5.0000e-004	0.0000	1.4202	1.4202	7.0000e-005	0.0000	1.4216

3.6 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.0847					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.9900e-003	0.0688	0.0691	1.1000e-004		4.8300e-003	4.8300e-003		4.8300e-003	4.8300e-003	0.0000	9.5747	9.5747	8.1000e-004	0.0000	9.5917
Total	4.0947	0.0688	0.0691	1.1000e-004		4.8300e-003	4.8300e-003		4.8300e-003	4.8300e-003	0.0000	9.5747	9.5747	8.1000e-004	0.0000	9.5917

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3600e-003	2.8200e-003	0.0272	8.0000e-005	6.5700e-003	5.0000e-005	6.6200e-003	1.7500e-003	4.0000e-005	1.7900e-003	0.0000	5.0394	5.0394	2.3000e-004	0.0000	5.0443
Total	2.3600e-003	2.8200e-003	0.0272	8.0000e-005	6.5700e-003	5.0000e-005	6.6200e-003	1.7500e-003	4.0000e-005	1.7900e-003	0.0000	5.0394	5.0394	2.3000e-004	0.0000	5.0443

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.0847					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.9900e-003	0.0688	0.0691	1.1000e-004		4.8300e-003	4.8300e-003		4.8300e-003	4.8300e-003	0.0000	9.5747	9.5747	8.1000e-004	0.0000	9.5917
Total	4.0947	0.0688	0.0691	1.1000e-004		4.8300e-003	4.8300e-003		4.8300e-003	4.8300e-003	0.0000	9.5747	9.5747	8.1000e-004	0.0000	9.5917

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3600e-003	2.8200e-003	0.0272	8.0000e-005	6.5700e-003	5.0000e-005	6.6200e-003	1.7500e-003	4.0000e-005	1.7900e-003	0.0000	5.0394	5.0394	2.3000e-004	0.0000	5.0443
Total	2.3600e-003	2.8200e-003	0.0272	8.0000e-005	6.5700e-003	5.0000e-005	6.6200e-003	1.7500e-003	4.0000e-005	1.7900e-003	0.0000	5.0394	5.0394	2.3000e-004	0.0000	5.0443

Pixley Community Plan - Commercial 2014
Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government Office Building	1.94	1000sqft	0.04	1,940.00	0
Medical Office Building	1.66	1000sqft	0.04	1,660.00	0
Day-Care Center	2.12	1000sqft	0.05	2,120.00	0
Elementary School	30.57	1000sqft	0.70	30,570.00	0
Place of Worship	7.04	1000sqft	0.16	7,040.00	0
Motel	2.30	Room	0.10	4,508.46	0
Automobile Care Center	16.64	1000sqft	0.38	16,640.00	0
Convenience Market With Gas Pumps	3.78	1000sqft	0.09	3,780.00	0
Strip Mall	11.79	1000sqft	0.27	11,790.00	0
Quality Restaurant	4.61	1000sqft	0.11	4,610.00	0
Supermarket	4.12	1000sqft	0.09	4,120.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
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2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	1.1738	3.4702	2.6181	3.6900e-003	0.0629	0.2271	0.2899	0.0214	0.2173	0.2387	0.0000	321.1302	321.1302	0.0668	0.0000	322.5328
Total	1.1738	3.4702	2.6181	3.6900e-003	0.0629	0.2271	0.2899	0.0214	0.2173	0.2387	0.0000	321.1302	321.1302	0.0668	0.0000	322.5328

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	1.1738	3.4702	2.6181	3.6900e-003	0.0629	0.2271	0.2899	0.0214	0.2173	0.2387	0.0000	321.1299	321.1299	0.0668	0.0000	322.5325
Total	1.1738	3.4702	2.6181	3.6900e-003	0.0629	0.2271	0.2899	0.0214	0.2173	0.2387	0.0000	321.1299	321.1299	0.0668	0.0000	322.5325
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2014	1/3/2014	5	3	
2	Grading	Grading	1/4/2014	1/13/2014	5	6	
3	Building Construction	Building Construction	1/14/2014	11/17/2014	5	220	
4	Paving	Paving	11/18/2014	12/1/2014	5	10	
5	Architectural Coating	Architectural Coating	12/2/2014	12/15/2014	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 133,168; Non-Residential Outdoor: 44,389 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	95	0.56
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Site Preparation	Graders	1	8.00	174	0.41
Paving	Pavers	1	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Paving	Paving Equipment	1	8.00	130	0.36
Site Preparation	Scrapers	1	8.00	361	0.48
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	33.00	15.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2800e-003	0.0496	0.0285	4.0000e-005		2.4400e-003	2.4400e-003		2.2400e-003	2.2400e-003	0.0000	3.4495	3.4495	1.0200e-003	0.0000	3.4709
Total	4.2800e-003	0.0496	0.0285	4.0000e-005	2.3900e-003	2.4400e-003	4.8300e-003	2.6000e-004	2.2400e-003	2.5000e-003	0.0000	3.4495	3.4495	1.0200e-003	0.0000	3.4709

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0904	0.0904	1.0000e-005	0.0000	0.0906
Total	7.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0904	0.0904	1.0000e-005	0.0000	0.0906

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2800e-003	0.0496	0.0285	4.0000e-005		2.4400e-003	2.4400e-003		2.2400e-003	2.2400e-003	0.0000	3.4495	3.4495	1.0200e-003	0.0000	3.4709
Total	4.2800e-003	0.0496	0.0285	4.0000e-005	2.3900e-003	2.4400e-003	4.8300e-003	2.6000e-004	2.2400e-003	2.5000e-003	0.0000	3.4495	3.4495	1.0200e-003	0.0000	3.4709

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0904	0.0904	1.0000e-005	0.0000	0.0906
Total	7.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0904	0.0904	1.0000e-005	0.0000	0.0906

3.3 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.9500e-003	0.0949	0.0609	6.0000e-005		5.3300e-003	5.3300e-003		4.9000e-003	4.9000e-003	0.0000	5.9531	5.9531	1.7600e-003	0.0000	5.9900
Total	8.9500e-003	0.0949	0.0609	6.0000e-005	0.0197	5.3300e-003	0.0250	0.0101	4.9000e-003	0.0150	0.0000	5.9531	5.9531	1.7600e-003	0.0000	5.9900

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.0000e-004	2.0100e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2261	0.2261	1.0000e-005	0.0000	0.2264
Total	1.7000e-004	2.0000e-004	2.0100e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2261	0.2261	1.0000e-005	0.0000	0.2264

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.9500e-003	0.0949	0.0609	6.0000e-005		5.3300e-003	5.3300e-003		4.9000e-003	4.9000e-003	0.0000	5.9531	5.9531	1.7600e-003	0.0000	5.9900
Total	8.9500e-003	0.0949	0.0609	6.0000e-005	0.0197	5.3300e-003	0.0250	0.0101	4.9000e-003	0.0150	0.0000	5.9531	5.9531	1.7600e-003	0.0000	5.9900

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.0000e-004	2.0100e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2261	0.2261	1.0000e-005	0.0000	0.2264
Total	1.7000e-004	2.0000e-004	2.0100e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2261	0.2261	1.0000e-005	0.0000	0.2264

3.4 Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4783	2.9650	1.9116	2.7400e-003		0.2068	0.2068		0.1985	0.1985	0.0000	237.0711	237.0711	0.0591	0.0000	238.3128
Total	0.4783	2.9650	1.9116	2.7400e-003		0.2068	0.2068		0.1985	0.1985	0.0000	237.0711	237.0711	0.0591	0.0000	238.3128

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0315	0.2196	0.2934	4.0000e-004	0.0107	4.5900e-003	0.0153	3.0600e-003	4.2200e-003	7.2800e-003	0.0000	36.5290	36.5290	4.0000e-004	0.0000	36.5375
Worker	0.0206	0.0244	0.2427	3.4000e-004	0.0289	2.9000e-004	0.0292	7.6900e-003	2.6000e-004	7.9500e-003	0.0000	27.3528	27.3528	1.8000e-003	0.0000	27.3905
Total	0.0521	0.2440	0.5360	7.4000e-004	0.0396	4.8800e-003	0.0445	0.0108	4.4800e-003	0.0152	0.0000	63.8818	63.8818	2.2000e-003	0.0000	63.9280

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4783	2.9650	1.9116	2.7400e-003		0.2068	0.2068		0.1985	0.1985	0.0000	237.0708	237.0708	0.0591	0.0000	238.3126
Total	0.4783	2.9650	1.9116	2.7400e-003		0.2068	0.2068		0.1985	0.1985	0.0000	237.0708	237.0708	0.0591	0.0000	238.3126

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0315	0.2196	0.2934	4.0000e-004	0.0107	4.5900e-003	0.0153	3.0600e-003	4.2200e-003	7.2800e-003	0.0000	36.5290	36.5290	4.0000e-004	0.0000	36.5375
Worker	0.0206	0.0244	0.2427	3.4000e-004	0.0289	2.9000e-004	0.0292	7.6900e-003	2.6000e-004	7.9500e-003	0.0000	27.3528	27.3528	1.8000e-003	0.0000	27.3905
Total	0.0521	0.2440	0.5360	7.4000e-004	0.0396	4.8800e-003	0.0445	0.0108	4.4800e-003	0.0152	0.0000	63.8818	63.8818	2.2000e-003	0.0000	63.9280

3.5 Paving - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.9000e-003	0.1019	0.0613	9.0000e-005		6.3700e-003	6.3700e-003		5.8700e-003	5.8700e-003	0.0000	8.3528	8.3528	2.4200e-003	0.0000	8.4037
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.9000e-003	0.1019	0.0613	9.0000e-005		6.3700e-003	6.3700e-003		5.8700e-003	5.8700e-003	0.0000	8.3528	8.3528	2.4200e-003	0.0000	8.4037

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	5.0000e-004	5.0100e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.0000e-004	1.6000e-004	1.0000e-005	1.6000e-004	0.0000	0.5651	0.5651	4.0000e-005	0.0000	0.5659
Total	4.3000e-004	5.0000e-004	5.0100e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.0000e-004	1.6000e-004	1.0000e-005	1.6000e-004	0.0000	0.5651	0.5651	4.0000e-005	0.0000	0.5659

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.9000e-003	0.1019	0.0613	9.0000e-005		6.3700e-003	6.3700e-003		5.8700e-003	5.8700e-003	0.0000	8.3528	8.3528	2.4200e-003	0.0000	8.4037
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.9000e-003	0.1019	0.0613	9.0000e-005		6.3700e-003	6.3700e-003		5.8700e-003	5.8700e-003	0.0000	8.3528	8.3528	2.4200e-003	0.0000	8.4037

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	5.0000e-004	5.0100e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.0000e-004	1.6000e-004	1.0000e-005	1.6000e-004	0.0000	0.5651	0.5651	4.0000e-005	0.0000	0.5659
Total	4.3000e-004	5.0000e-004	5.0100e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.0000e-004	1.6000e-004	1.0000e-005	1.6000e-004	0.0000	0.5651	0.5651	4.0000e-005	0.0000	0.5659

3.6 Architectural Coating - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6172					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2300e-003	0.0139	9.6100e-003	1.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	1.2766	1.2766	1.8000e-004	0.0000	1.2805
Total	0.6195	0.0139	9.6100e-003	1.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	1.2766	1.2766	1.8000e-004	0.0000	1.2805

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	2.3000e-004	2.3400e-003	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2637	0.2637	2.0000e-005	0.0000	0.2641
Total	2.0000e-004	2.3000e-004	2.3400e-003	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2637	0.2637	2.0000e-005	0.0000	0.2641

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6172					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2300e-003	0.0139	9.6100e-003	1.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	1.2766	1.2766	1.8000e-004	0.0000	1.2805
Total	0.6195	0.0139	9.6100e-003	1.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	1.2766	1.2766	1.8000e-004	0.0000	1.2805

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-004	2.3000e-004	2.3400e-003	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2637	0.2637	2.0000e-005	0.0000	0.2641
Total	2.0000e-004	2.3000e-004	2.3400e-003	0.0000	2.8000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2637	0.2637	2.0000e-005	0.0000	0.2641

Pixley Community Plan - Industrial 2014

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	88.36	1000sqft	2.03	88,360.00	0
General Light Industry	10.96	1000sqft	0.25	10,960.00	0
Unrefrigerated Warehouse-No Rail	29.84	1000sqft	0.69	29,840.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Land Use - Total increase from existing to year 2030. Emissions will then be averaged over 16 years.

Construction Off-road Equipment Mitigation - Compliance with Regulation VIII

Table Name	Column Name	Default Value	New Value
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2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	1.4803	3.5737	2.8912	4.0600e-003	0.0857	0.2291	0.3148	0.0276	0.2191	0.2467	0.0000	353.2989	353.2989	0.0681	0.0000	354.7291
Total	1.4803	3.5737	2.8912	4.0600e-003	0.0857	0.2291	0.3148	0.0276	0.2191	0.2467	0.0000	353.2989	353.2989	0.0681	0.0000	354.7291

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014	1.4803	3.5737	2.8912	4.0600e-003	0.0723	0.2291	0.3013	0.0213	0.2191	0.2404	0.0000	353.2986	353.2986	0.0681	0.0000	354.7288
Total	1.4803	3.5737	2.8912	4.0600e-003	0.0723	0.2291	0.3013	0.0213	0.2191	0.2404	0.0000	353.2986	353.2986	0.0681	0.0000	354.7288
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	15.69	0.00	4.27	22.91	0.00	2.56	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2014	1/3/2014	5	3	
2	Grading	Grading	1/4/2014	1/13/2014	5	6	
3	Building Construction	Building Construction	1/14/2014	11/17/2014	5	220	
4	Paving	Paving	11/18/2014	12/1/2014	5	10	
5	Architectural Coating	Architectural Coating	12/2/2014	12/15/2014	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 3

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 193,740; Non-Residential Outdoor: 64,580 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Scrapers	1	8.00	361	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	54.00	21.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2800e-003	0.0496	0.0285	4.0000e-005		2.4400e-003	2.4400e-003		2.2400e-003	2.2400e-003	0.0000	3.4495	3.4495	1.0200e-003	0.0000	3.4709
Total	4.2800e-003	0.0496	0.0285	4.0000e-005	2.3900e-003	2.4400e-003	4.8300e-003	2.6000e-004	2.2400e-003	2.5000e-003	0.0000	3.4495	3.4495	1.0200e-003	0.0000	3.4709

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0904	0.0904	1.0000e-005	0.0000	0.0906
Total	7.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0904	0.0904	1.0000e-005	0.0000	0.0906

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.3000e-004	0.0000	9.3000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.2800e-003	0.0496	0.0285	4.0000e-005		2.4400e-003	2.4400e-003		2.2400e-003	2.2400e-003	0.0000	3.4495	3.4495	1.0200e-003	0.0000	3.4709
Total	4.2800e-003	0.0496	0.0285	4.0000e-005	9.3000e-004	2.4400e-003	3.3700e-003	1.0000e-004	2.2400e-003	2.3400e-003	0.0000	3.4495	3.4495	1.0200e-003	0.0000	3.4709

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0904	0.0904	1.0000e-005	0.0000	0.0906
Total	7.0000e-005	8.0000e-005	8.0000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0904	0.0904	1.0000e-005	0.0000	0.0906

3.3 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0197	0.0000	0.0197	0.0101	0.0000	0.0101	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.9500e-003	0.0949	0.0609	6.0000e-005		5.3300e-003	5.3300e-003		4.9000e-003	4.9000e-003	0.0000	5.9531	5.9531	1.7600e-003	0.0000	5.9900
Total	8.9500e-003	0.0949	0.0609	6.0000e-005	0.0197	5.3300e-003	0.0250	0.0101	4.9000e-003	0.0150	0.0000	5.9531	5.9531	1.7600e-003	0.0000	5.9900

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.0000e-004	2.0100e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2261	0.2261	1.0000e-005	0.0000	0.2264
Total	1.7000e-004	2.0000e-004	2.0100e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2261	0.2261	1.0000e-005	0.0000	0.2264

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.6700e-003	0.0000	7.6700e-003	3.9400e-003	0.0000	3.9400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.9500e-003	0.0949	0.0609	6.0000e-005		5.3300e-003	5.3300e-003		4.9000e-003	4.9000e-003	0.0000	5.9531	5.9531	1.7600e-003	0.0000	5.9900
Total	8.9500e-003	0.0949	0.0609	6.0000e-005	7.6700e-003	5.3300e-003	0.0130	3.9400e-003	4.9000e-003	8.8400e-003	0.0000	5.9531	5.9531	1.7600e-003	0.0000	5.9900

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	2.0000e-004	2.0100e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2261	0.2261	1.0000e-005	0.0000	0.2264
Total	1.7000e-004	2.0000e-004	2.0100e-003	0.0000	2.4000e-004	0.0000	2.4000e-004	6.0000e-005	0.0000	7.0000e-005	0.0000	0.2261	0.2261	1.0000e-005	0.0000	0.2264

3.4 Building Construction - 2014**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4783	2.9650	1.9116	2.7400e-003		0.2068	0.2068		0.1985	0.1985	0.0000	237.0711	237.0711	0.0591	0.0000	238.3128
Total	0.4783	2.9650	1.9116	2.7400e-003		0.2068	0.2068		0.1985	0.1985	0.0000	237.0711	237.0711	0.0591	0.0000	238.3128

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0440	0.3074	0.4107	5.5000e-004	0.0150	6.4300e-003	0.0214	4.2900e-003	5.9100e-003	0.0102	0.0000	51.1406	51.1406	5.6000e-004	0.0000	51.1525
Worker	0.0337	0.0399	0.3971	5.6000e-004	0.0473	4.7000e-004	0.0478	0.0126	4.3000e-004	0.0130	0.0000	44.7591	44.7591	2.9400e-003	0.0000	44.8209
Total	0.0777	0.3473	0.8078	1.1100e-003	0.0623	6.9000e-003	0.0692	0.0169	6.3400e-003	0.0232	0.0000	95.8997	95.8997	3.5000e-003	0.0000	95.9733

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4783	2.9650	1.9116	2.7400e-003		0.2068	0.2068		0.1985	0.1985	0.0000	237.0708	237.0708	0.0591	0.0000	238.3126
Total	0.4783	2.9650	1.9116	2.7400e-003		0.2068	0.2068		0.1985	0.1985	0.0000	237.0708	237.0708	0.0591	0.0000	238.3126

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0440	0.3074	0.4107	5.5000e-004	0.0150	6.4300e-003	0.0214	4.2900e-003	5.9100e-003	0.0102	0.0000	51.1406	51.1406	5.6000e-004	0.0000	51.1525
Worker	0.0337	0.0399	0.3971	5.6000e-004	0.0473	4.7000e-004	0.0478	0.0126	4.3000e-004	0.0130	0.0000	44.7591	44.7591	2.9400e-003	0.0000	44.8209
Total	0.0777	0.3473	0.8078	1.1100e-003	0.0623	6.9000e-003	0.0692	0.0169	6.3400e-003	0.0232	0.0000	95.8997	95.8997	3.5000e-003	0.0000	95.9733

3.5 Paving - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.9000e-003	0.1019	0.0613	9.0000e-005		6.3700e-003	6.3700e-003		5.8700e-003	5.8700e-003	0.0000	8.3528	8.3528	2.4200e-003	0.0000	8.4037
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.9000e-003	0.1019	0.0613	9.0000e-005		6.3700e-003	6.3700e-003		5.8700e-003	5.8700e-003	0.0000	8.3528	8.3528	2.4200e-003	0.0000	8.4037

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	5.0000e-004	5.0100e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.0000e-004	1.6000e-004	1.0000e-005	1.6000e-004	0.0000	0.5651	0.5651	4.0000e-005	0.0000	0.5659
Total	4.3000e-004	5.0000e-004	5.0100e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.0000e-004	1.6000e-004	1.0000e-005	1.6000e-004	0.0000	0.5651	0.5651	4.0000e-005	0.0000	0.5659

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.9000e-003	0.1019	0.0613	9.0000e-005		6.3700e-003	6.3700e-003		5.8700e-003	5.8700e-003	0.0000	8.3528	8.3528	2.4200e-003	0.0000	8.4037
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.9000e-003	0.1019	0.0613	9.0000e-005		6.3700e-003	6.3700e-003		5.8700e-003	5.8700e-003	0.0000	8.3528	8.3528	2.4200e-003	0.0000	8.4037

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3000e-004	5.0000e-004	5.0100e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.0000e-004	1.6000e-004	1.0000e-005	1.6000e-004	0.0000	0.5651	0.5651	4.0000e-005	0.0000	0.5659
Total	4.3000e-004	5.0000e-004	5.0100e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.0000e-004	1.6000e-004	1.0000e-005	1.6000e-004	0.0000	0.5651	0.5651	4.0000e-005	0.0000	0.5659

3.6 Architectural Coating - 2014**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8980					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2300e-003	0.0139	9.6100e-003	1.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	1.2766	1.2766	1.8000e-004	0.0000	1.2805
Total	0.9002	0.0139	9.6100e-003	1.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	1.2766	1.2766	1.8000e-004	0.0000	1.2805

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	3.7000e-004	3.6800e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4144	0.4144	3.0000e-005	0.0000	0.4150
Total	3.1000e-004	3.7000e-004	3.6800e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4144	0.4144	3.0000e-005	0.0000	0.4150

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8980					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2300e-003	0.0139	9.6100e-003	1.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	1.2766	1.2766	1.8000e-004	0.0000	1.2805
Total	0.9002	0.0139	9.6100e-003	1.0000e-005		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	1.2766	1.2766	1.8000e-004	0.0000	1.2805

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	3.7000e-004	3.6800e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4144	0.4144	3.0000e-005	0.0000	0.4150
Total	3.1000e-004	3.7000e-004	3.6800e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4144	0.4144	3.0000e-005	0.0000	0.4150

Pixley Community Plan - Residential 2020
Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	5.00	Dwelling Unit	0.31	5,000.00	14
Mobile Home Park	17.00	Dwelling Unit	2.14	20,400.00	49
Single Family Housing	99.00	Dwelling Unit	32.14	178,200.00	283

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	491.65	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 2020 emission factors: BAU emissions factors for Energy reflect compliance with the 33% RPS standard.

Vehicle Emission Factors - 2020 SJVAPCD Residential Fleet Mix. LEV III reductions incorporated (3% reduction in LDA, LDT1, and LDT2 EF).

Area Mitigation - California Building Code

Energy Mitigation - Newest Title 24 (2013) is not accounted for in this version of CalEEMod. Title 24 2013 is 25% more efficient than the previous Title 24 2008 standards for residential buildings.

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleEF	HHD	0.06	0.02
tblVehicleEF	LDA	8.0770e-003	7.8350e-003
tblVehicleEF	LDA	5.4660e-003	5.3020e-003
tblVehicleEF	LDA	0.69	0.67
tblVehicleEF	LDA	1.37	1.33
tblVehicleEF	LDA	224.21	217.49
tblVehicleEF	LDA	51.40	49.86
tblVehicleEF	LDA	0.41	0.51
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	8.0000e-003	7.7600e-003
tblVehicleEF	LDA	1.6040e-003	1.5560e-003
tblVehicleEF	LDA	3.6510e-003	3.5410e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	2.0000e-003	1.9400e-003
tblVehicleEF	LDA	1.4870e-003	1.4420e-003
tblVehicleEF	LDA	3.3860e-003	3.2840e-003
tblVehicleEF	LDA	0.05	0.05
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.22	0.21
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	3.3160e-003	3.2170e-003

tblVehicleEF	LDA	7.6100e-004	7.3800e-004
tblVehicleEF	LDA	0.05	0.05
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.22	0.21
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	1.78	1.73
tblVehicleEF	LDT1	3.77	3.65
tblVehicleEF	LDT1	270.15	262.04
tblVehicleEF	LDT1	61.65	59.80
tblVehicleEF	LDT1	0.07	0.21
tblVehicleEF	LDT1	0.20	0.19
tblVehicleEF	LDT1	0.21	0.20
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	8.0000e-003	7.7600e-003
tblVehicleEF	LDT1	2.9850e-003	2.8950e-003
tblVehicleEF	LDT1	5.1140e-003	4.9610e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	2.0000e-003	1.9400e-003
tblVehicleEF	LDT1	2.7670e-003	2.6840e-003
tblVehicleEF	LDT1	4.7420e-003	4.6000e-003
tblVehicleEF	LDT1	0.20	0.19
tblVehicleEF	LDT1	0.29	0.28
tblVehicleEF	LDT1	0.12	0.12
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	1.01	0.98
tblVehicleEF	LDT1	0.28	0.27

tblVehicleEF	LDT1	3.8460e-003	3.7310e-003
tblVehicleEF	LDT1	9.1600e-004	8.8900e-004
tblVehicleEF	LDT1	0.20	0.19
tblVehicleEF	LDT1	0.29	0.28
tblVehicleEF	LDT1	0.12	0.12
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	1.01	0.98
tblVehicleEF	LDT1	0.30	0.29
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	8.8520e-003	8.5860e-003
tblVehicleEF	LDT2	1.00	0.97
tblVehicleEF	LDT2	2.13	2.07
tblVehicleEF	LDT2	334.65	324.61
tblVehicleEF	LDT2	76.10	73.81
tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.12	0.12
tblVehicleEF	LDT2	0.17	0.17
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	8.0000e-003	7.7600e-003
tblVehicleEF	LDT2	1.7200e-003	1.6680e-003
tblVehicleEF	LDT2	3.7870e-003	3.6730e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	1.9400e-003
tblVehicleEF	LDT2	1.5950e-003	1.5470e-003
tblVehicleEF	LDT2	3.5120e-003	3.4070e-003
tblVehicleEF	LDT2	0.09	0.08
tblVehicleEF	LDT2	0.14	0.14
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.46	0.45

tblVehicleEF	LDT2	0.16	0.15
tblVehicleEF	LDT2	4.5130e-003	4.3780e-003
tblVehicleEF	LDT2	1.0430e-003	1.0120e-003
tblVehicleEF	LDT2	0.09	0.08
tblVehicleEF	LDT2	0.14	0.14
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.46	0.45
tblVehicleEF	LDT2	0.17	0.16
tblVehicleEF	LHD1	0.06	2.1000e-003
tblVehicleEF	LHD2	8.2370e-003	1.0000e-003
tblVehicleEF	MCY	6.0550e-003	3.1000e-003
tblVehicleEF	MDV	0.20	0.06
tblVehicleEF	MH	2.2380e-003	2.3000e-003
tblVehicleEF	MHD	0.02	9.6000e-003
tblVehicleEF	OBUS	1.8130e-003	0.00
tblVehicleEF	SBUS	1.1060e-003	1.0000e-003
tblVehicleEF	UBUS	1.4630e-003	3.8000e-003

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.0190	0.0104	0.9017	5.0000e-005		8.6200e-003	8.6200e-003		8.5800e-003	8.5800e-003	0.0000	53.8857	53.8857	2.4400e-003	9.6000e-004	54.2347
Energy	0.0186	0.1590	0.0677	1.0100e-003		0.0129	0.0129		0.0129	0.0129	0.0000	377.1328	377.1328	0.0122	5.3400e-003	379.0433
Mobile	0.5456	0.9829	5.2842	0.0140	1.1102	0.0165	1.1267	0.2964	0.0153	0.3116	0.0000	935.2213	935.2213	0.0362	0.0000	935.9806
Waste						0.0000	0.0000		0.0000	0.0000	22.7350	0.0000	22.7350	1.3436	0.0000	50.9506
Water						0.0000	0.0000		0.0000	0.0000	2.5011	13.3925	15.8936	0.2575	6.2000e-003	23.2235
Total	1.5832	1.1523	6.2536	0.0150	1.1102	0.0380	1.1481	0.2964	0.0367	0.3330	25.2361	1,379.6323	1,404.8684	1.6519	0.0125	1,443.4327

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.0186	0.0104	0.8952	5.0000e-005		8.5800e-003	8.5800e-003		8.5400e-003	8.5400e-003	0.0000	53.8725	53.8725	2.4200e-003	9.6000e-004	54.2211
Energy	0.0148	0.1267	0.0539	8.1000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	333.5365	333.5365	0.0112	4.5900e-003	335.1939
Mobile	0.5456	0.9829	5.2842	0.0140	1.1102	0.0165	1.1267	0.2964	0.0153	0.3116	0.0000	935.2213	935.2213	0.0362	0.0000	935.9806
Waste						0.0000	0.0000		0.0000	0.0000	22.7350	0.0000	22.7350	1.3436	0.0000	50.9506
Water						0.0000	0.0000		0.0000	0.0000	2.5011	13.3925	15.8936	0.2575	6.1900e-003	23.2202
Total	1.5791	1.1199	6.2334	0.0148	1.1102	0.0353	1.1455	0.2964	0.0340	0.3304	25.2361	1,336.0228	1,361.2589	1.6508	0.0117	1,399.5664
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.26	2.81	0.32	1.33	0.00	7.00	0.23	0.00	7.25	0.80	0.00	3.16	3.10	0.06	6.08	3.04

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5456	0.9829	5.2842	0.0140	1.1102	0.0165	1.1267	0.2964	0.0153	0.3116	0.0000	935.2213	935.2213	0.0362	0.0000	935.9806
Unmitigated	0.5456	0.9829	5.2842	0.0140	1.1102	0.0165	1.1267	0.2964	0.0153	0.3116	0.0000	935.2213	935.2213	0.0362	0.0000	935.9806

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	32.95	35.80	30.35	92,978	92,978
Mobile Home Park	84.83	85.00	74.12	234,869	234,869
Single Family Housing	947.43	997.92	868.23	2,658,992	2,658,992
Total	1,065.21	1,118.72	972.70	2,986,839	2,986,839

4.3 Trip Type Information

		Miles			Trip %			Trip Purpose %				
Land Use		H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by		
Apartments Low Rise		10.80	7.30	7.50	38.40	22.60	39.00	86	11	3		
Mobile Home Park		10.80	7.30	7.50	38.40	22.60	39.00	86	11	3		
Single Family Housing		10.80	7.30	7.50	38.40	22.60	39.00	86	11	3		
LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511200	0.213700	0.169200	0.061000	0.002100	0.001000	0.009600	0.022100	0.000000	0.003800	0.003100	0.001000	0.002300

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	186.8316	186.8316	8.3600e-003	1.9000e-003	187.5962
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	192.9811	192.9811	8.6400e-003	1.9600e-003	193.7709
NaturalGas Mitigated	0.0148	0.1267	0.0539	8.1000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	146.7049	146.7049	2.8100e-003	2.6900e-003	147.5977
NaturalGas Unmitigated	0.0186	0.1590	0.0677	1.0100e-003		0.0129	0.0129		0.0129	0.0129	0.0000	184.1517	184.1517	3.5300e-003	3.3800e-003	185.2724

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	3.10251e+006	0.0167	0.1430	0.0608	9.1000e-004		0.0116	0.0116		0.0116	0.0116	0.0000	165.5620	165.5620	3.1700e-003	3.0400e-003	166.5696
Apartments Low Rise	73720.4	4.0000e-004	3.4000e-003	1.4500e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	3.9340	3.9340	8.0000e-005	7.0000e-005	3.9579
Mobile Home Park	274637	1.4800e-003	0.0127	5.3900e-003	8.0000e-005		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003	0.0000	14.6557	14.6557	2.8000e-004	2.7000e-004	14.7449
Total		0.0186	0.1590	0.0677	1.0100e-003		0.0129	0.0129		0.0129	0.0129	0.0000	184.1517	184.1517	3.5300e-003	3.3800e-003	185.2724

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	2.47551e+006	0.0134	0.1141	0.0485	7.3000e-004		9.2200e-003	9.2200e-003		9.2200e-003	9.2200e-003	0.0000	132.1029	132.1029	2.5300e-003	2.4200e-003	132.9068
Apartments Low Rise	58412.8	3.1000e-004	2.6900e-003	1.1500e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004	0.0000	3.1171	3.1171	6.0000e-005	6.0000e-005	3.1361
Mobile Home Park	215218	1.1600e-003	9.9200e-003	4.2200e-003	6.0000e-005		8.0000e-004	8.0000e-004		8.0000e-004	8.0000e-004	0.0000	11.4849	11.4849	2.2000e-004	2.1000e-004	11.5548
Total		0.0148	0.1267	0.0539	8.1000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	146.7049	146.7049	2.8100e-003	2.6900e-003	147.5977

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	19209.8	4.2839	1.9000e-004	4.0000e-005	4.3015
Mobile Home Park	87435.4	19.4989	8.7000e-004	2.0000e-004	19.5787
Single Family Housing	758707	169.1983	7.5700e-003	1.7200e-003	169.8907
Total		192.9811	8.6300e-003	1.9600e-003	193.7709

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	18708.9	4.1722	1.9000e-004	4.0000e-005	4.1893
Mobile Home Park	84143	18.7646	8.4000e-004	1.9000e-004	18.8414
Single Family Housing	734925	163.8947	7.3300e-003	1.6700e-003	164.5654
Total		186.8316	8.3600e-003	1.9000e-003	187.5962

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.0186	0.0104	0.8952	5.0000e-005		8.5800e-003	8.5800e-003		8.5400e-003	8.5400e-003	0.0000	53.8725	53.8725	2.4200e-003	9.6000e-004	54.2211
Unmitigated	1.0190	0.0104	0.9017	5.0000e-005		8.6200e-003	8.6200e-003		8.5800e-003	8.5800e-003	0.0000	53.8857	53.8857	2.4400e-003	9.6000e-004	54.2347

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1911					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7952					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.3000e-003	0.0000	2.9000e-004	0.0000		3.6600e-003	3.6600e-003		3.6200e-003	3.6200e-003	0.0000	52.4181	52.4181	1.0000e-003	9.6000e-004	52.7371
Landscaping	0.0275	0.0104	0.9014	5.0000e-005		4.9600e-003	4.9600e-003		4.9600e-003	4.9600e-003	0.0000	1.4676	1.4676	1.4300e-003	0.0000	1.4976
Total	1.0190	0.0104	0.9017	5.0000e-005		8.6200e-003	8.6200e-003		8.5800e-003	8.5800e-003	0.0000	53.8857	53.8857	2.4300e-003	9.6000e-004	54.2347

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1911					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.7952					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.3000e-003	0.0000	2.9000e-004	0.0000		3.6600e-003	3.6600e-003		3.6200e-003	3.6200e-003	0.0000	52.4181	52.4181	1.0000e-003	9.6000e-004	52.7371
Landscaping	0.0271	0.0104	0.8949	5.0000e-005		4.9200e-003	4.9200e-003		4.9200e-003	4.9200e-003	0.0000	1.4544	1.4544	1.4100e-003	0.0000	1.4840
Total	1.0186	0.0104	0.8952	5.0000e-005		8.5800e-003	8.5800e-003		8.5400e-003	8.5400e-003	0.0000	53.8725	53.8725	2.4100e-003	9.6000e-004	54.2211

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	15.8936	0.2575	6.1900e-003	23.2202
Unmitigated	15.8936	0.2575	6.2000e-003	23.2235

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	0.32577 / 0.205377	0.6568	0.0106	2.6000e-004	0.9597
Mobile Home Park	1.10762 / 0.698281	2.2330	0.0362	8.7000e-004	3.2628
Single Family Housing	6.45025 / 4.06646	13.0039	0.2107	5.0700e-003	19.0010
Total		15.8936	0.2575	6.2000e-003	23.2235

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	0.32577 / 0.205377	0.6568	0.0106	2.6000e-004	0.9595
Mobile Home Park	1.10762 / 0.698281	2.2330	0.0362	8.7000e-004	3.2623
Single Family Housing	6.45025 / 4.06646	13.0039	0.2106	5.0700e-003	18.9984
Total		15.8936	0.2575	6.2000e-003	23.2202

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	22.7350	1.3436	0.0000	50.9506
Unmitigated	22.7350	1.3436	0.0000	50.9506

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	2.3	0.4669	0.0276	0.0000	1.0463
Mobile Home Park	7.82	1.5874	0.0938	0.0000	3.5574
Single Family Housing	101.88	20.6807	1.2222	0.0000	46.3468
Total		22.7350	1.3436	0.0000	50.9506

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	2.3	0.4669	0.0276	0.0000	1.0463
Mobile Home Park	7.82	1.5874	0.0938	0.0000	3.5574
Single Family Housing	101.88	20.6807	1.2222	0.0000	46.3468
Total		22.7350	1.3436	0.0000	50.9506

Pixley Community Plan - Commercial 2020
Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government Office Building	0.68	1000sqft	0.02	680.00	0
Medical Office Building	0.58	1000sqft	0.01	580.00	0
Day-Care Center	0.74	1000sqft	0.02	740.00	0
Elementary School	10.73	1000sqft	0.25	10,730.00	0
Place of Worship	2.47	1000sqft	0.06	2,470.00	0
Motel	0.81	Room	0.04	1,587.76	0
Quality Restaurant	1.62	1000sqft	0.04	1,620.00	0
Automobile Care Center	5.84	1000sqft	0.13	5,840.00	0
Convenience Market With Gas Pumps	1.33	1000sqft	0.03	1,330.00	0
Strip Mall	4.14	1000sqft	0.10	4,140.00	0
Supermarket	1.45	1000sqft	0.03	1,450.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3	Operational Year	2020		
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	491.65	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 2020 emission factors: BAU emissions factors for Energy reflect compliance with the 33% RPS standard.

Land Use - 2020

Vehicle Emission Factors - LEV III reductions incorporated (3% reduction in LDA, LDT1, and LDT2 EF)

Energy Use - 2020

Construction Off-road Equipment Mitigation - Compliance with Regulation VIII

Area Mitigation - California Building Code

Energy Mitigation - Newest Title 24 (2013) is not accounted for in this version of CalEEMod. Title 24 2013 is 30% more efficient than the previous Title 24 2008 standards for non-residential buildings.

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleEF	LDA	8.0770e-003	7.8350e-003
tblVehicleEF	LDA	5.4660e-003	5.3020e-003
tblVehicleEF	LDA	0.69	0.67
tblVehicleEF	LDA	1.37	1.33
tblVehicleEF	LDA	224.21	217.49
tblVehicleEF	LDA	51.40	49.86
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	8.0000e-003	7.7600e-003
tblVehicleEF	LDA	1.6040e-003	1.5560e-003
tblVehicleEF	LDA	3.6510e-003	3.5410e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	2.0000e-003	1.9400e-003
tblVehicleEF	LDA	1.4870e-003	1.4420e-003
tblVehicleEF	LDA	3.3860e-003	3.2840e-003
tblVehicleEF	LDA	0.05	0.05

tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.22	0.21
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	3.3160e-003	3.2170e-003
tblVehicleEF	LDA	7.6100e-004	7.3800e-004
tblVehicleEF	LDA	0.05	0.05
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.22	0.21
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	1.78	1.73
tblVehicleEF	LDT1	3.77	3.65
tblVehicleEF	LDT1	270.15	262.04
tblVehicleEF	LDT1	61.65	59.80
tblVehicleEF	LDT1	0.20	0.19
tblVehicleEF	LDT1	0.21	0.20
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	8.0000e-003	7.7600e-003
tblVehicleEF	LDT1	2.9850e-003	2.8950e-003
tblVehicleEF	LDT1	5.1140e-003	4.9610e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	2.0000e-003	1.9400e-003
tblVehicleEF	LDT1	2.7670e-003	2.6840e-003
tblVehicleEF	LDT1	4.7420e-003	4.6000e-003
tblVehicleEF	LDT1	0.20	0.19

tblVehicleEF	LDT1	0.29	0.28
tblVehicleEF	LDT1	0.12	0.12
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	1.01	0.98
tblVehicleEF	LDT1	0.28	0.27
tblVehicleEF	LDT1	3.8460e-003	3.7310e-003
tblVehicleEF	LDT1	9.1600e-004	8.8900e-004
tblVehicleEF	LDT1	0.20	0.19
tblVehicleEF	LDT1	0.29	0.28
tblVehicleEF	LDT1	0.12	0.12
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	1.01	0.98
tblVehicleEF	LDT1	0.30	0.29
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	8.8520e-003	8.5860e-003
tblVehicleEF	LDT2	1.00	0.97
tblVehicleEF	LDT2	2.13	2.07
tblVehicleEF	LDT2	334.65	324.61
tblVehicleEF	LDT2	76.10	73.81
tblVehicleEF	LDT2	0.12	0.12
tblVehicleEF	LDT2	0.17	0.17
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	8.0000e-003	7.7600e-003
tblVehicleEF	LDT2	1.7200e-003	1.6680e-003
tblVehicleEF	LDT2	3.7870e-003	3.6730e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	1.9400e-003
tblVehicleEF	LDT2	1.5950e-003	1.5470e-003
tblVehicleEF	LDT2	3.5120e-003	3.4070e-003
tblVehicleEF	LDT2	0.09	0.08

tblVehicleEF	LDT2	0.14	0.14
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.46	0.45
tblVehicleEF	LDT2	0.16	0.15
tblVehicleEF	LDT2	4.5130e-003	4.3780e-003
tblVehicleEF	LDT2	1.0430e-003	1.0120e-003
tblVehicleEF	LDT2	0.09	0.08
tblVehicleEF	LDT2	0.14	0.14
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.46	0.45
tblVehicleEF	LDT2	0.17	0.16

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1434	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Energy	5.3300e-003	0.0485	0.0407	2.9000e-004		3.6900e-003	3.6900e-003		3.6900e-003	3.6900e-003	0.0000	130.7078	130.7078	4.5000e-003	1.7600e-003	131.3480
Mobile	1.1316	1.9241	8.9912	0.0139	0.8114	0.0251	0.8365	0.2175	0.0232	0.2406	0.0000	998.2309	998.2309	0.0349	0.0000	998.9629
Waste						0.0000	0.0000		0.0000	0.0000	15.5572	0.0000	15.5572	0.9194	0.0000	34.8648
Water						0.0000	0.0000		0.0000	0.0000	0.7213	4.0889	4.8102	0.0743	1.7900e-003	6.9250
Total	1.2803	1.9726	9.0322	0.0142	0.8114	0.0288	0.8402	0.2175	0.0269	0.2443	16.2786	1,133.0281	1,149.3066	1.0330	3.5500e-003	1,172.1012

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1434	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Energy	4.3500e-003	0.0395	0.0332	2.4000e-004		3.0100e-003	3.0100e-003		3.0100e-003	3.0100e-003	0.0000	114.5283	114.5283	4.0200e-003	1.5200e-003	115.0828
Mobile	1.1316	1.9241	8.9912	0.0139	0.8114	0.0251	0.8365	0.2175	0.0232	0.2406	0.0000	998.2309	998.2309	0.0349	0.0000	998.9629
Waste						0.0000	0.0000		0.0000	0.0000	15.5572	0.0000	15.5572	0.9194	0.0000	34.8648
Water						0.0000	0.0000		0.0000	0.0000	0.7213	4.0889	4.8102	0.0743	1.7900e-003	6.9241
Total	1.2793	1.9636	9.0247	0.0141	0.8114	0.0282	0.8395	0.2175	0.0262	0.2436	16.2786	1,116.8485	1,133.1271	1.0326	3.3100e-003	1,155.8351
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.08	0.45	0.08	0.35	0.00	2.36	0.08	0.00	2.53	0.28	0.00	1.43	1.41	0.05	6.76	1.39

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.1316	1.9241	8.9912	0.0139	0.8114	0.0251	0.8365	0.2175	0.0232	0.2406	0.0000	998.2309	998.2309	0.0349	0.0000	998.9629
Unmitigated	1.1316	1.9241	8.9912	0.0139	0.8114	0.0251	0.8365	0.2175	0.0232	0.2406	0.0000	998.2309	998.2309	0.0349	0.0000	998.9629

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	1,124.65	1,926.28	1572.17	698,987	698,987
Day-Care Center	58.65	4.60	4.31	50,835	50,835
Automobile Care Center	362.08	362.08	362.08	360,699	360,699
Elementary School	165.56	0.00	0.00	260,756	260,756
Place of Worship	22.50	25.61	90.48	61,091	61,091
Government Office Building	46.87	0.00	0.00	57,415	57,415
Medical Office Building	20.96	5.20	0.90	31,001	31,001
Motel	4.56	4.56	4.56	8,654	8,654
Quality Restaurant	145.72	152.86	116.90	169,174	169,174
Strip Mall	183.48	174.05	84.58	258,737	258,737
Supermarket	148.25	257.51	241.34	201,504	201,504
Total	2,283.29	2,912.74	2,477.31	2,158,852	2,158,852

4.3 Trip Type Information

			Miles			Trip %			Trip Purpose %			
Land Use			H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by	
Convenience Market With Gas			9.50	7.30	7.30	0.80	80.20	19.00	14	21	65	
Day-Care Center			9.50	7.30	7.30	12.70	82.30	5.00	28	58	14	
Automobile Care Center			9.50	7.30	7.30	33.00	48.00	19.00	21	51	28	
Elementary School			9.50	7.30	7.30	65.00	30.00	5.00	63	25	12	
Place of Worship			9.50	7.30	7.30	0.00	95.00	5.00	64	25	11	
Government Office Building			9.50	7.30	7.30	33.00	62.00	5.00	50	34	16	
Medical Office Building			9.50	7.30	7.30	29.60	51.40	19.00	60	30	10	
Motel			9.50	7.30	7.30	19.00	62.00	19.00	58	38	4	
Quality Restaurant			9.50	7.30	7.30	12.00	69.00	19.00	38	18	44	
Strip Mall			9.50	7.30	7.30	16.60	64.40	19.00	45	40	15	
Supermarket			9.50	7.30	7.30	6.50	74.50	19.00	34	30	36	
LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.407130	0.071843	0.163335	0.195282	0.057212	0.008237	0.019822	0.064465	0.001813	0.001463	0.006055	0.001106	0.002238

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	71.4813	71.4813	3.2000e-003	7.3000e-004	71.7738
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	77.9117	77.9117	3.4900e-003	7.9000e-004	78.2305
NaturalGas Mitigated	4.3500e-003	0.0395	0.0332	2.4000e-004		3.0100e-003	3.0100e-003		3.0100e-003	3.0100e-003	0.0000	43.0470	43.0470	8.3000e-004	7.9000e-004	43.3090
NaturalGas Unmitigated	5.3300e-003	0.0485	0.0407	2.9000e-004		3.6900e-003	3.6900e-003		3.6900e-003	3.6900e-003	0.0000	52.7962	52.7962	1.0100e-003	9.7000e-004	53.1175

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	127078	6.9000e-004	6.2300e-003	5.2300e-003	4.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	6.7814	6.7814	1.3000e-004	1.2000e-004	6.8227
Convenience Market With Gas	14829.5	8.0000e-005	7.3000e-004	6.1000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.7914	0.7914	2.0000e-005	1.0000e-005	0.7962
Day-Care Center	19484.2	1.1000e-004	9.6000e-004	8.0000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0398	1.0398	2.0000e-005	2.0000e-005	1.0461
Elementary School	282521	1.5200e-003	0.0139	0.0116	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	15.0764	15.0764	2.9000e-004	2.8000e-004	15.1681
Government Office Building	9329.6	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4979	0.4979	1.0000e-005	1.0000e-005	0.5009
Medical Office Building	7957.6	4.0000e-005	3.9000e-004	3.3000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4247	0.4247	1.0000e-005	1.0000e-005	0.4272
Motel	41424.7	2.2000e-004	2.0300e-003	1.7100e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.2106	2.2106	4.0000e-005	4.0000e-005	2.2240
Place of Worship	53747.2	2.9000e-004	2.6300e-003	2.2100e-003	2.0000e-005		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	2.8682	2.8682	5.0000e-005	5.0000e-005	2.8856
Quality Restaurant	343910	1.8500e-003	0.0169	0.0142	1.0000e-004		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.0000	18.3523	18.3523	3.5000e-004	3.4000e-004	18.4640
Strip Mall	46161	2.5000e-004	2.2600e-003	1.9000e-003	1.0000e-005		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004	0.0000	2.4633	2.4633	5.0000e-005	5.0000e-005	2.4783
Supermarket	42920	2.3000e-004	2.1000e-003	1.7700e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.2904	2.2904	4.0000e-005	4.0000e-005	2.3043
Total		5.3300e-003	0.0485	0.0407	2.8000e-004		3.6700e-003	3.6700e-003		3.6700e-003	3.6700e-003	0.0000	52.7962	52.7962	1.0100e-003	9.7000e-004	53.1175

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	95682.6	5.2000e-004	4.6900e-003	3.9400e-003	3.0000e-005		3.6000e-004	3.6000e-004		3.6000e-004	3.6000e-004	0.0000	5.1060	5.1060	1.0000e-004	9.0000e-005	5.1371
Convenience Market With Gas	11210.6	6.0000e-005	5.5000e-004	4.6000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.5982	0.5982	1.0000e-005	1.0000e-005	0.6019
Day-Care Center	14065.2	8.0000e-005	6.9000e-004	5.8000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7506	0.7506	1.0000e-005	1.0000e-005	0.7551
Elementary School	203945	1.1000e-003	0.0100	8.4000e-003	6.0000e-005		7.6000e-004	7.6000e-004		7.6000e-004	7.6000e-004	0.0000	10.8833	10.8833	2.1000e-004	2.0000e-004	10.9495
Government Office Building	6587.84	4.0000e-005	3.2000e-004	2.7000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.3516	0.3516	1.0000e-005	1.0000e-005	0.3537
Medical Office Building	5619.04	3.0000e-005	2.8000e-004	2.3000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2999	0.2999	1.0000e-005	1.0000e-005	0.3017
Motel	32407.8	1.7000e-004	1.5900e-003	1.3300e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.7294	1.7294	3.0000e-005	3.0000e-005	1.7399
Place of Worship	40468.5	2.2000e-004	1.9800e-003	1.6700e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.1596	2.1596	4.0000e-005	4.0000e-005	2.1727
Quality Restaurant	325641	1.7600e-003	0.0160	0.0134	1.0000e-004		1.2100e-003	1.2100e-003		1.2100e-003	1.2100e-003	0.0000	17.3775	17.3775	3.3000e-004	3.2000e-004	17.4832
Strip Mall	34896.1	1.9000e-004	1.7100e-003	1.4400e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.8622	1.8622	4.0000e-005	3.0000e-005	1.8735
Supermarket	36147	1.9000e-004	1.7700e-003	1.4900e-003	1.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	1.9289	1.9289	4.0000e-005	4.0000e-005	1.9407
Total		4.3600e-003	0.0395	0.0332	2.3000e-004		2.9900e-003	2.9900e-003		2.9900e-003	2.9900e-003	0.0000	43.0470	43.0470	8.3000e-004	7.9000e-004	43.3090

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	56414.4	12.5809	5.6000e-004	1.3000e-004	12.6324
Convenience Market With Gas Pump	12142.9	2.7080	1.2000e-004	3.0000e-005	2.7191
Day-Care Center	5875.6	1.3103	6.0000e-005	1.0000e-005	1.3157
Elementary School	85196.2	18.9995	8.5000e-004	1.9000e-004	19.0773
Government Office Building	6881.6	1.5347	7.0000e-005	2.0000e-005	1.5409
Medical Office Building	5869.6	1.3090	6.0000e-005	1.0000e-005	1.3143
Motel	14528	3.2399	1.4000e-004	3.0000e-005	3.2531
Place of Worship	23860.2	5.3210	2.4000e-004	5.0000e-005	5.3428
Quality Restaurant	50527.8	11.2681	5.0000e-004	1.1000e-004	11.3143
Strip Mall	37798.2	8.4293	3.8000e-004	9.0000e-005	8.4638
Supermarket	50271.5	11.2110	5.0000e-004	1.1000e-004	11.2569
Total		77.9117	3.4800e-003	7.8000e-004	78.2305

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	52227.1	11.6471	5.2000e-004	1.2000e-004	11.6948
Convenience Market With Gas	11101.5	2.4757	1.1000e-004	3.0000e-005	2.4859
Day-Care Center	5293.96	1.1806	5.0000e-005	1.0000e-005	1.1854
Elementary School	76762.4	17.1187	7.7000e-004	1.7000e-004	17.1887
Government Office Building	6228.8	1.3891	6.0000e-005	1.0000e-005	1.3948
Medical Office Building	5312.8	1.1848	5.0000e-005	1.0000e-005	1.1897
Motel	12122.5	2.7034	1.2000e-004	3.0000e-005	2.7145
Place of Worship	22089.2	4.9261	2.2000e-004	5.0000e-005	4.9462
Quality Restaurant	46639.8	10.4011	4.7000e-004	1.1000e-004	10.4437
Strip Mall	34556.6	7.7064	3.4000e-004	8.0000e-005	7.7380
Supermarket	48196.5	10.7483	4.8000e-004	1.1000e-004	10.7922
Total		71.4813	3.1900e-003	7.3000e-004	71.7738

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1434	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Unmitigated	0.1434	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0217					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1217					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Total	0.1434	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0217					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1217					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Total	0.1434	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.8102	0.0743	1.7900e-003	6.9241
Unmitigated	4.8102	0.0743	1.7900e-003	6.9250

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0.549434 / 0.33675	1.1002	0.0179	4.3000e-004	1.6110
Convenience Market With Gas Pump	0.0985164 / 0.0603844	0.1973	3.2200e-003	8.0000e-005	0.2889
Day-Care Center	0.0317383 / 0.0816127	0.1121	1.0400e-003	3.0000e-005	0.1418
Elementary School	0.311137 / 0.800066	1.0986	0.0102	2.5000e-004	1.3898
Government Office Building	0.135089 / 0.0827962	0.2705	4.4100e-003	1.1000e-004	0.3961
Medical Office Building	0.0727787 / 0.0400626	0.1217	2.3800e-003	6.0000e-005	0.1893
Motel	0.0205471 / 0.0000000	0.0331	6.7000e-004	2.0000e-005	0.0522
Place of Worship	0.0772836 / 0.120879	0.2121	2.5300e-003	6.0000e-005	0.2842
Quality Restaurant	0.491725 / 0.0313867	0.7739	0.0161	3.8000e-004	1.2302
Strip Mall	0.30666 / 0.187953	0.6140	0.0100	2.4000e-004	0.8991
Supermarket	0.178739 / 0.0055280	0.2767	5.8300e-003	1.4000e-004	0.4426
Total		4.8102	0.0743	1.8000e-003	6.9250

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0.549434 / 0.33675	1.1002	0.0179	4.3000e-004	1.6107
Convenience Market With Gas	0.0985164 / 0.0602044	0.1973	3.2200e-003	8.0000e-005	0.2888
Day-Care Center	0.0317383 / 0.0816127	0.1121	1.0400e-003	3.0000e-005	0.1418
Elementary School	0.311137 / 0.800066	1.0986	0.0102	2.5000e-004	1.3897
Government Office Building	0.135089 / 0.0827962	0.2705	4.4100e-003	1.1000e-004	0.3960
Medical Office Building	0.0727787 / 0.0428626	0.1217	2.3800e-003	6.0000e-005	0.1893
Motel	0.0205471 / 0.0032830	0.0331	6.7000e-004	2.0000e-005	0.0522
Place of Worship	0.0772836 / 0.120879	0.2121	2.5300e-003	6.0000e-005	0.2842
Quality Restaurant	0.491725 / 0.0313867	0.7739	0.0161	3.8000e-004	1.2300
Strip Mall	0.30666 / 0.187953	0.6140	0.0100	2.4000e-004	0.8990
Supermarket	0.178739 / 0.0055280	0.2767	5.8300e-003	1.4000e-004	0.4425
Total		4.8102	0.0743	1.8000e-003	6.9241

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	15.5572	0.9194	0.0000	34.8648
Mitigated	15.5572	0.9194	0.0000	34.8648

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	22.31	4.5287	0.2676	0.0000	10.1492
Convenience Market With Gas	4	0.8120	0.0480	0.0000	1.8197
Day-Care Center	0.96	0.1949	0.0115	0.0000	0.4367
Elementary School	13.95	2.8317	0.1674	0.0000	6.3461
Government Office Building	0.63	0.1279	7.5600e-003	0.0000	0.2866
Medical Office Building	6.26	1.2707	0.0751	0.0000	2.8478
Motel	0.44	0.0893	5.2800e-003	0.0000	0.2002
Place of Worship	14.08	2.8581	0.1689	0.0000	6.4052
Quality Restaurant	1.48	0.3004	0.0178	0.0000	0.6733
Strip Mall	4.35	0.8830	0.0522	0.0000	1.9789
Supermarket	8.18	1.6605	0.0981	0.0000	3.7212
Total		15.5572	0.9194	0.0000	34.8647

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	22.31	4.5287	0.2676	0.0000	10.1492
Convenience Market With Gas	4	0.8120	0.0480	0.0000	1.8197
Day-Care Center	0.96	0.1949	0.0115	0.0000	0.4367
Elementary School	13.95	2.8317	0.1674	0.0000	6.3461
Government Office Building	0.63	0.1279	7.5600e-003	0.0000	0.2866
Medical Office Building	6.26	1.2707	0.0751	0.0000	2.8478
Motel	0.44	0.0893	5.2800e-003	0.0000	0.2002
Place of Worship	14.08	2.8581	0.1689	0.0000	6.4052
Quality Restaurant	1.48	0.3004	0.0178	0.0000	0.6733
Strip Mall	4.35	0.8830	0.0522	0.0000	1.9789
Supermarket	8.18	1.6605	0.0981	0.0000	3.7212
Total		15.5572	0.9194	0.0000	34.8647

Pixley Community Plan - Industrial 2020

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	31.02	1000sqft	0.71	31,020.00	0
General Light Industry	3.85	1000sqft	0.09	3,850.00	0
Unrefrigerated Warehouse-No Rail	10.47	1000sqft	0.24	10,470.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	491.65	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 2020 emission factors: BAU emissions factors for Energy reflect compliance with the 33% RPS standard.

Vehicle Emission Factors - LEV III reductions incorporated (3% reduction in LDA, LDT1, and LDT2 EF)

Construction Off-road Equipment Mitigation - Compliance with Regulation VIII

Area Mitigation - California Building Code

Energy Mitigation - Newest Title 24 (2013) is not accounted for in this version of CalEEMod. Title 24 2013 is 30% more efficient than the previous Title 24 2008 standards for non-residential buildings.

Grading - correct number of acres disturbed

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	6/29/2015	6/22/2015
tblConstructionPhase	PhaseEndDate	10/26/2015	6/8/2015
tblConstructionPhase	PhaseEndDate	1/21/2015	1/19/2015
tblConstructionPhase	PhaseEndDate	6/22/2015	6/15/2015
tblConstructionPhase	PhaseEndDate	1/16/2015	1/15/2015
tblGrading	AcresOfGrading	0.00	1.50
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleEF	LDA	8.0770e-003	7.8350e-003
tblVehicleEF	LDA	5.4660e-003	5.3020e-003
tblVehicleEF	LDA	0.69	0.67
tblVehicleEF	LDA	1.37	1.33
tblVehicleEF	LDA	224.21	217.49
tblVehicleEF	LDA	51.40	49.86
tblVehicleEF	LDA	0.07	0.07
tblVehicleEF	LDA	0.08	0.08
tblVehicleEF	LDA	0.04	0.04
tblVehicleEF	LDA	8.0000e-003	7.7600e-003
tblVehicleEF	LDA	1.6040e-003	1.5560e-003
tblVehicleEF	LDA	3.6510e-003	3.5410e-003
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	2.0000e-003	1.9400e-003
tblVehicleEF	LDA	1.4870e-003	1.4420e-003
tblVehicleEF	LDA	3.3860e-003	3.2840e-003
tblVehicleEF	LDA	0.05	0.05
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.03

tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.22	0.21
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	3.3160e-003	3.2170e-003
tblVehicleEF	LDA	7.6100e-004	7.3800e-004
tblVehicleEF	LDA	0.05	0.05
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.03
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.22	0.21
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	1.78	1.73
tblVehicleEF	LDT1	3.77	3.65
tblVehicleEF	LDT1	270.15	262.04
tblVehicleEF	LDT1	61.65	59.80
tblVehicleEF	LDT1	0.20	0.19
tblVehicleEF	LDT1	0.21	0.20
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	8.0000e-003	7.7600e-003
tblVehicleEF	LDT1	2.9850e-003	2.8950e-003
tblVehicleEF	LDT1	5.1140e-003	4.9610e-003
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	2.0000e-003	1.9400e-003
tblVehicleEF	LDT1	2.7670e-003	2.6840e-003
tblVehicleEF	LDT1	4.7420e-003	4.6000e-003
tblVehicleEF	LDT1	0.20	0.19
tblVehicleEF	LDT1	0.29	0.28
tblVehicleEF	LDT1	0.12	0.12

tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	1.01	0.98
tblVehicleEF	LDT1	0.28	0.27
tblVehicleEF	LDT1	3.8460e-003	3.7310e-003
tblVehicleEF	LDT1	9.1600e-004	8.8900e-004
tblVehicleEF	LDT1	0.20	0.19
tblVehicleEF	LDT1	0.29	0.28
tblVehicleEF	LDT1	0.12	0.12
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	1.01	0.98
tblVehicleEF	LDT1	0.30	0.29
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	8.8520e-003	8.5860e-003
tblVehicleEF	LDT2	1.00	0.97
tblVehicleEF	LDT2	2.13	2.07
tblVehicleEF	LDT2	334.65	324.61
tblVehicleEF	LDT2	76.10	73.81
tblVehicleEF	LDT2	0.12	0.12
tblVehicleEF	LDT2	0.17	0.17
tblVehicleEF	LDT2	0.04	0.04
tblVehicleEF	LDT2	8.0000e-003	7.7600e-003
tblVehicleEF	LDT2	1.7200e-003	1.6680e-003
tblVehicleEF	LDT2	3.7870e-003	3.6730e-003
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	2.0000e-003	1.9400e-003
tblVehicleEF	LDT2	1.5950e-003	1.5470e-003
tblVehicleEF	LDT2	3.5120e-003	3.4070e-003
tblVehicleEF	LDT2	0.09	0.08
tblVehicleEF	LDT2	0.14	0.14
tblVehicleEF	LDT2	0.06	0.06

tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.46	0.45
tblVehicleEF	LDT2	0.16	0.15
tblVehicleEF	LDT2	4.5130e-003	4.3780e-003
tblVehicleEF	LDT2	1.0430e-003	1.0120e-003
tblVehicleEF	LDT2	0.09	0.08
tblVehicleEF	LDT2	0.14	0.14
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.03	0.03
tblVehicleEF	LDT2	0.46	0.45
tblVehicleEF	LDT2	0.17	0.16

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2086	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.1000e-004	8.1000e-004	0.0000	0.0000	8.6000e-004
Energy	5.1600e-003	0.0469	0.0394	2.8000e-004		3.5700e-003	3.5700e-003		3.5700e-003	3.5700e-003	0.0000	149.7215	149.7215	5.3900e-003	1.9400e-003	150.4360
Mobile	0.0572	0.1757	0.6067	1.6400e-003	0.1031	2.8100e-003	0.1059	0.0276	2.5900e-003	0.0302	0.0000	118.3045	118.3045	3.5600e-003	0.0000	118.3793
Waste						0.0000	0.0000		0.0000	0.0000	10.7727	0.0000	10.7727	0.6367	0.0000	24.1424
Water						0.0000	0.0000		0.0000	0.0000	3.3264	12.6521	15.9785	0.3422	8.2000e-003	25.7057
Total	0.2710	0.2226	0.6465	1.9200e-003	0.1031	6.3800e-003	0.1094	0.0276	6.1600e-003	0.0338	14.0991	280.6789	294.7780	0.9878	0.0101	318.6642

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2086	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-004	8.0000e-004	0.0000	0.0000	8.4000e-004
Energy	3.8500e-003	0.0350	0.0294	2.1000e-004		2.6600e-003	2.6600e-003		2.6600e-003	2.6600e-003	0.0000	130.2489	130.2489	4.8500e-003	1.6400e-003	130.8579
Mobile	0.0572	0.1757	0.6067	1.6400e-003	0.1031	2.8100e-003	0.1059	0.0276	2.5900e-003	0.0302	0.0000	118.3045	118.3045	3.5600e-003	0.0000	118.3793
Waste						0.0000	0.0000		0.0000	0.0000	10.7727	0.0000	10.7727	0.6367	0.0000	24.1424
Water						0.0000	0.0000		0.0000	0.0000	3.3264	12.6521	15.9785	0.3422	8.1900e-003	25.7014
Total	0.2697	0.2107	0.6365	1.8500e-003	0.1031	5.4700e-003	0.1085	0.0276	5.2500e-003	0.0329	14.0991	261.2063	275.3054	0.9872	9.8300e-003	299.0817

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.48	5.37	1.55	3.65	0.00	14.26	0.83	0.00	14.77	2.69	0.00	6.94	6.61	0.06	3.06	6.15

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0572	0.1757	0.6067	1.6400e-003	0.1031	2.8100e-003	0.1059	0.0276	2.5900e-003	0.0302	0.0000	118.3045	118.3045	3.5600e-003	0.0000	118.3793
Unmitigated	0.0572	0.1757	0.6067	1.6400e-003	0.1031	2.8100e-003	0.1059	0.0276	2.5900e-003	0.0302	0.0000	118.3045	118.3045	3.5600e-003	0.0000	118.3793

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	46.53	46.53	46.53	135,845	135,845
General Light Industry	26.83	5.08	2.62	59,171	59,171
Unrefrigerated Warehouse-No Rail	27.12	27.12	27.12	79,169	79,169
Total	100.48	78.73	76.27	274,185	274,185

4.3 Trip Type Information

		Miles			Trip %			Trip Purpose %				
Land Use		H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by		
General Heavy Industry		9.50	7.30	7.30	59.00	28.00	13.00	92	5	3		
General Light Industry		9.50	7.30	7.30	59.00	28.00	13.00	92	5	3		
Unrefrigerated Warehouse-No		9.50	7.30	7.30	59.00	0.00	41.00	92	5	3		
LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.407130	0.071843	0.163335	0.195282	0.057212	0.008237	0.019822	0.064465	0.001813	0.001463	0.006055	0.001106	0.002238

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	92.1664	92.1664	4.1200e-003	9.4000e-004	92.5436
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	98.6316	98.6316	4.4100e-003	1.0000e-003	99.0353
NaturalGas Mitigated	3.8500e-003	0.0350	0.0294	2.1000e-004		2.6600e-003	2.6600e-003		2.6600e-003	2.6600e-003	0.0000	38.0825	38.0825	7.3000e-004	7.0000e-004	38.3143
NaturalGas Unmitigated	5.1600e-003	0.0469	0.0394	2.8000e-004		3.5700e-003	3.5700e-003		3.5700e-003	3.5700e-003	0.0000	51.0898	51.0898	9.8000e-004	9.4000e-004	51.4008

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	674995	3.6400e-003	0.0331	0.0278	2.0000e-004		2.5100e-003	2.5100e-003		2.5100e-003	2.5100e-003	0.0000	36.0203	36.0203	6.9000e-004	6.6000e-004	36.2395
General Light Industry	83776	4.5000e-004	4.1100e-003	3.4500e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	4.4706	4.4706	9.0000e-005	8.0000e-005	4.4978
Unrefrigerated Warehouse-No	198616	1.0700e-003	9.7400e-003	8.1800e-003	6.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	10.5989	10.5989	2.0000e-004	1.9000e-004	10.6634
Total		5.1600e-003	0.0469	0.0394	2.8000e-004		3.5600e-003	3.5600e-003		3.5600e-003	3.5600e-003	0.0000	51.0898	51.0898	9.8000e-004	9.3000e-004	51.4007

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	508232	2.7400e-003	0.0249	0.0209	1.5000e-004		1.8900e-003	1.8900e-003		1.8900e-003	1.8900e-003	0.0000	27.1212	27.1212	5.2000e-004	5.0000e-004	27.2862
General Light Industry	63078.4	3.4000e-004	3.0900e-003	2.6000e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.3661	3.3661	6.0000e-005	6.0000e-005	3.3866
Unrefrigerated Warehouse-No Pallet	142329	7.7000e-004	6.9800e-003	5.8600e-003	4.0000e-005		5.3000e-004	5.3000e-004		5.3000e-004	5.3000e-004	0.0000	7.5952	7.5952	1.5000e-004	1.4000e-004	7.6415
Total		3.8500e-003	0.0350	0.0294	2.1000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003	0.0000	38.0825	38.0825	7.3000e-004	7.0000e-004	38.3143

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	299653	66.8253	2.9900e-003	6.8000e-004	67.0987
General Light Industry	37191	8.2939	3.7000e-004	8.0000e-005	8.3279
Unrefrigerated Warehouse-No Pallet	105433	23.5125	1.0500e-003	2.4000e-004	23.6087
Total		98.6316	4.4100e-003	1.0000e-003	99.0353

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	277412	61.8653	2.7700e-003	6.3000e-004	62.1184
General Light Industry	34430.5	7.6783	3.4000e-004	8.0000e-005	7.7097
Unrefrigerated Warehouse-No Pallet	101444	22.6229	1.0100e-003	2.3000e-004	22.7154
Total		92.1664	4.1200e-003	9.4000e-004	92.5436

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2086	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-004	8.0000e-004	0.0000	0.0000	8.4000e-004
Unmitigated	0.2086	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.1000e-004	8.1000e-004	0.0000	0.0000	8.6000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0315					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1771					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.1000e-004	8.1000e-004	0.0000	0.0000	8.6000e-004
Total	0.2086	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.1000e-004	8.1000e-004	0.0000	0.0000	8.6000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0315					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1771					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-004	8.0000e-004	0.0000	0.0000	8.4000e-004
Total	0.2086	0.0000	4.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.0000e-004	8.0000e-004	0.0000	0.0000	8.4000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	15.9785	0.3422	8.1900e-003	25.7014
Unmitigated	15.9785	0.3422	8.2000e-003	25.7057

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	7.17338 / 0	10.9319	0.2341	5.6100e-003	17.5869
General Light Industry	0.890312 / 0	1.3568	0.0291	7.0000e-004	2.1828
Unrefrigerated Warehouse-No Roof	2.42119 / 0	3.6898	0.0790	1.8900e-003	5.9360
Total		15.9785	0.3422	8.2000e-003	25.7057

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	7.17338 / 0	10.9319	0.2341	5.6000e-003	17.5840
General Light Industry	0.890312 / 0	1.3568	0.0291	7.0000e-004	2.1824
Unrefrigerated Warehouse-No Roof	2.42119 / 0	3.6898	0.0790	1.8900e-003	5.9350
Total		15.9785	0.3422	8.1900e-003	25.7014

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	10.7727	0.6367	0.0000	24.1424
Unmitigated	10.7727	0.6367	0.0000	24.1424

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	38.46	7.8070	0.4614	0.0000	17.4961
General Light Industry	4.77	0.9683	0.0572	0.0000	2.1700
Unrefrigerated Warehouse-No	9.84	1.9974	0.1180	0.0000	4.4764
Total		10.7727	0.6366	0.0000	24.1424

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	38.46	7.8070	0.4614	0.0000	17.4961
General Light Industry	4.77	0.9683	0.0572	0.0000	2.1700
Unrefrigerated Warehouse-No	9.84	1.9974	0.1180	0.0000	4.4764
Total		10.7727	0.6366	0.0000	24.1424

Pixley Community Plan - Residential 2030
Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	11.00	Dwelling Unit	0.69	11,000.00	31
Mobile Home Park	37.00	Dwelling Unit	4.66	44,400.00	106
Single Family Housing	211.00	Dwelling Unit	68.51	379,800.00	603

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	491.65	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 2020 emission factors: BAU emissions factors for Energy reflect compliance with the 33% RPS standard.

Vehicle Emission Factors - 2030 Residential Fleet Mix. LEV III reductions incorporated (19.5% reduction in LDA, LDT1, and LDT2 EF)

Construction Off-road Equipment Mitigation - Compliance with Regulation VIII

Area Mitigation - California Building Code

Energy Mitigation - Newest Title 24 (2013) is not accounted for in this version of CalEEMod. Title 24 2013 is 25% more efficient than the previous Title 24 2008 standards for residential buildings.

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2014	2030
tblVehicleEF	HHD	0.06	0.02
tblVehicleEF	LDA	6.6410e-003	5.3460e-003
tblVehicleEF	LDA	3.2400e-003	2.6080e-003
tblVehicleEF	LDA	0.53	0.42
tblVehicleEF	LDA	0.90	0.72
tblVehicleEF	LDA	198.19	159.54
tblVehicleEF	LDA	44.85	36.10
tblVehicleEF	LDA	0.41	0.50
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	8.0000e-003	6.4400e-003
tblVehicleEF	LDA	1.7960e-003	1.4460e-003
tblVehicleEF	LDA	5.1000e-003	4.1060e-003
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	2.0000e-003	1.6100e-003
tblVehicleEF	LDA	1.6660e-003	1.3410e-003
tblVehicleEF	LDA	4.7320e-003	3.8090e-003
tblVehicleEF	LDA	0.03	0.02
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	8.3490e-003	6.7210e-003
tblVehicleEF	LDA	0.17	0.14
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	3.2920e-003	2.6500e-003

tblVehicleEF	LDA	7.5400e-004	6.0700e-004
tblVehicleEF	LDA	0.03	0.02
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.17	0.14
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDT1	9.4140e-003	7.5780e-003
tblVehicleEF	LDT1	6.0770e-003	4.8920e-003
tblVehicleEF	LDT1	0.81	0.65
tblVehicleEF	LDT1	1.55	1.25
tblVehicleEF	LDT1	239.41	192.73
tblVehicleEF	LDT1	54.48	43.86
tblVehicleEF	LDT1	0.07	0.22
tblVehicleEF	LDT1	0.09	0.07
tblVehicleEF	LDT1	0.09	0.07
tblVehicleEF	LDT1	0.04	0.03
tblVehicleEF	LDT1	8.0000e-003	6.4400e-003
tblVehicleEF	LDT1	2.0110e-003	1.6190e-003
tblVehicleEF	LDT1	5.0140e-003	4.0360e-003
tblVehicleEF	LDT1	0.02	0.01
tblVehicleEF	LDT1	2.0000e-003	1.6100e-003
tblVehicleEF	LDT1	1.8660e-003	1.5020e-003
tblVehicleEF	LDT1	4.6520e-003	3.7450e-003
tblVehicleEF	LDT1	0.09	0.07
tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.01	0.01
tblVehicleEF	LDT1	0.51	0.41
tblVehicleEF	LDT1	0.11	0.09

tblVehicleEF	LDT1	3.8220e-003	3.0770e-003
tblVehicleEF	LDT1	8.8600e-004	7.1300e-004
tblVehicleEF	LDT1	0.09	0.07
tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.51	0.41
tblVehicleEF	LDT1	0.12	0.09
tblVehicleEF	LDT2	8.3280e-003	6.7040e-003
tblVehicleEF	LDT2	4.4330e-003	3.5690e-003
tblVehicleEF	LDT2	0.65	0.53
tblVehicleEF	LDT2	1.16	0.94
tblVehicleEF	LDT2	307.23	247.32
tblVehicleEF	LDT2	69.69	56.10
tblVehicleEF	LDT2	0.16	0.17
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	0.08	0.07
tblVehicleEF	LDT2	0.04	0.03
tblVehicleEF	LDT2	8.0000e-003	6.4400e-003
tblVehicleEF	LDT2	1.7860e-003	1.4380e-003
tblVehicleEF	LDT2	5.0090e-003	4.0320e-003
tblVehicleEF	LDT2	0.02	0.01
tblVehicleEF	LDT2	2.0000e-003	1.6100e-003
tblVehicleEF	LDT2	1.6570e-003	1.3340e-003
tblVehicleEF	LDT2	4.6480e-003	3.7420e-003
tblVehicleEF	LDT2	0.07	0.05
tblVehicleEF	LDT2	0.10	0.08
tblVehicleEF	LDT2	0.05	0.04
tblVehicleEF	LDT2	0.01	8.8240e-003
tblVehicleEF	LDT2	0.36	0.29

tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	4.4730e-003	3.6010e-003
tblVehicleEF	LDT2	1.0290e-003	8.2800e-004
tblVehicleEF	LDT2	0.07	0.05
tblVehicleEF	LDT2	0.10	0.08
tblVehicleEF	LDT2	0.05	0.04
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.36	0.29
tblVehicleEF	LDT2	0.08	0.07
tblVehicleEF	LHD1	0.06	1.0000e-003
tblVehicleEF	LHD2	8.2690e-003	1.0000e-003
tblVehicleEF	MCY	6.3470e-003	3.1000e-003
tblVehicleEF	MDV	0.19	0.06
tblVehicleEF	MH	2.2740e-003	4.3000e-003
tblVehicleEF	MHD	0.02	8.6000e-003
tblVehicleEF	OBUS	1.8050e-003	0.00
tblVehicleEF	SBUS	9.9700e-004	1.0000e-003
tblVehicleEF	UBUS	1.5120e-003	3.9000e-003

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Water						0.0000	0.0000		0.0000	0.0000	5.3536	28.6666	34.0203	0.5512	0.0133	49.7097
Area	2.1769	0.0221	1.9186	1.0000e-004		0.0185	0.0185		0.0184	0.0184	0.0000	115.3421	115.3421	5.1400e-003	2.0600e-003	116.0878
Energy	0.0398	0.3397	0.1446	2.1700e-003		0.0275	0.0275		0.0275	0.0275	0.0000	805.8949	805.8949	0.0260	0.0114	809.9771
Mobile	0.6595	1.1410	6.4191	0.0255	2.3240	0.0276	2.3517	0.6142	0.0255	0.6397	0.0000	1,574.0460	1,574.0460	0.0449	0.0000	1,574.9890
Waste						0.0000	0.0000		0.0000	0.0000	48.5473	0.0000	48.5473	2.8691	0.0000	108.7977
Total	2.8761	1.5028	8.4823	0.0277	2.3240	0.0736	2.3976	0.6142	0.0714	0.6856	53.9009	2,523.9496	2,577.8505	3.4963	0.0268	2,659.5613

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.1761	0.0220	1.9048	1.0000e-004		0.0184	0.0184		0.0183	0.0183	0.0000	115.3138	115.3138	5.1000e-003	2.0600e-003	116.0586
Energy	0.0317	0.2706	0.1152	1.7300e-003		0.0219	0.0219		0.0219	0.0219	0.0000	712.7373	712.7373	0.0239	9.8100e-003	716.2789
Mobile	0.6595	1.1410	6.4191	0.0255	2.3240	0.0276	2.3517	0.6142	0.0255	0.6397	0.0000	1,574.0460	1,574.0460	0.0449	0.0000	1,574.9890
Waste						0.0000	0.0000		0.0000	0.0000	48.5473	0.0000	48.5473	2.8691	0.0000	108.7977
Water						0.0000	0.0000		0.0000	0.0000	5.3536	28.6666	34.0203	0.5511	0.0133	49.7028
Total	2.8672	1.4336	8.4391	0.0273	2.3240	0.0679	2.3920	0.6142	0.0657	0.6799	53.9009	2,430.7637	2,484.6647	3.4940	0.0251	2,565.8269
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.31	4.61	0.51	1.59	0.00	7.70	0.24	0.00	7.96	0.83	0.00	3.69	3.61	0.06	6.06	3.52

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6595	1.1410	6.4191	0.0255	2.3240	0.0276	2.3517	0.6142	0.0255	0.6397	0.0000	1,574.0460	1,574.0460	0.0449	0.0000	1,574.9890
Unmitigated	0.6595	1.1410	6.4191	0.0255	2.3240	0.0276	2.3517	0.6142	0.0255	0.6397	0.0000	1,574.0460	1,574.0460	0.0449	0.0000	1,574.9890

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	72.49	78.76	66.77	204,552	204,552
Mobile Home Park	184.63	185.00	161.32	511,185	511,185
Single Family Housing	2,019.27	2,126.88	1850.47	5,667,145	5,667,145
Total	2,276.39	2,390.64	2,078.56	6,382,882	6,382,882

4.3 Trip Type Information

		Miles			Trip %			Trip Purpose %				
Land Use		H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by		
Apartments Low Rise		10.80	7.30	7.50	38.40	22.60	39.00	86	11	3		
Mobile Home Park		10.80	7.30	7.50	38.40	22.60	39.00	86	11	3		
Single Family Housing		10.80	7.30	7.50	38.40	22.60	39.00	86	11	3		
LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.498100	0.224600	0.172300	0.063800	0.001000	0.001000	0.008600	0.018200	0.000000	0.003900	0.003100	0.001000	0.004300

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	399.3306	399.3306	0.0179	4.0600e-003	400.9648
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	412.4780	412.4780	0.0185	4.1900e-003	414.1660
NaturalGas Mitigated	0.0317	0.2706	0.1152	1.7300e-003		0.0219	0.0219		0.0219	0.0219	0.0000	313.4068	313.4068	6.0100e-003	5.7500e-003	315.3141
NaturalGas Unmitigated	0.0398	0.3397	0.1446	2.1700e-003		0.0275	0.0275		0.0275	0.0275	0.0000	393.4169	393.4169	7.5400e-003	7.2100e-003	395.8112

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Mobile Home Park	597740	3.2200e-003	0.0275	0.0117	1.8000e-004		2.2300e-003	2.2300e-003		2.2300e-003	2.2300e-003	0.0000	31.8977	31.8977	6.1000e-004	5.8000e-004	32.0918
Single Family Housing	6.61243e+006	0.0357	0.3047	0.1297	1.9400e-003		0.0246	0.0246		0.0246	0.0246	0.0000	352.8644	352.8644	6.7600e-003	6.4700e-003	355.0119
Apartments Low Rise	162185	8.7000e-004	7.4700e-003	3.1800e-003	5.0000e-005		6.0000e-004	6.0000e-004		6.0000e-004	6.0000e-004	0.0000	8.6548	8.6548	1.7000e-004	1.6000e-004	8.7075
Total		0.0398	0.3397	0.1446	2.1700e-003		0.0275	0.0275		0.0275	0.0275	0.0000	393.4169	393.4169	7.5400e-003	7.2100e-003	395.8112

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	5.2761e+006	0.0285	0.2431	0.1035	1.5500e-003		0.0197	0.0197		0.0197	0.0197	0.0000	281.5526	281.5526	5.4000e-003	5.1600e-003	283.2661
Apartments Low Rise	128508	6.9000e-004	5.9200e-003	2.5200e-003	4.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004	0.0000	6.8577	6.8577	1.3000e-004	1.3000e-004	6.8994
Mobile Home Park	468416	2.5300e-003	0.0216	9.1800e-003	1.4000e-004		1.7500e-003	1.7500e-003		1.7500e-003	1.7500e-003	0.0000	24.9965	24.9965	4.8000e-004	4.6000e-004	25.1486
Total		0.0317	0.2706	0.1152	1.7300e-003		0.0219	0.0219		0.0219	0.0219	0.0000	313.4068	313.4068	6.0100e-003	5.7500e-003	315.3141

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	42261.5	9.4247	4.2000e-004	1.0000e-004	9.4632
Mobile Home Park	190301	42.4387	1.9000e-003	4.3000e-004	42.6124
Single Family Housing	1.61704e+006	360.6146	0.0161	3.6700e-003	362.0904
Total		412.4780	0.0185	4.2000e-003	414.1660

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	41159.5	9.1789	4.1000e-004	9.0000e-005	9.2165
Mobile Home Park	183135	40.8407	1.8300e-003	4.2000e-004	41.0078
Single Family Housing	1.56636e+006	349.3110	0.0156	3.5500e-003	350.7405
Total		399.3306	0.0179	4.0600e-003	400.9648

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.1761	0.0220	1.9048	1.0000e-004		0.0184	0.0184		0.0183	0.0183	0.0000	115.3138	115.3138	5.1000e-003	2.0600e-003	116.0586
Unmitigated	2.1769	0.0221	1.9186	1.0000e-004		0.0185	0.0185		0.0184	0.0184	0.0000	115.3421	115.3421	5.1400e-003	2.0600e-003	116.0878

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4085					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.6997					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0113	0.0000	6.2000e-004	0.0000		7.8300e-003	7.8300e-003		7.7500e-003	7.7500e-003	0.0000	112.2007	112.2007	2.1500e-003	2.0600e-003	112.8836
Landscaping	0.0574	0.0221	1.9180	1.0000e-004		0.0107	0.0107		0.0107	0.0107	0.0000	3.1414	3.1414	2.9900e-003	0.0000	3.2042
Total	2.1769	0.0221	1.9186	1.0000e-004		0.0185	0.0185		0.0184	0.0184	0.0000	115.3421	115.3421	5.1400e-003	2.0600e-003	116.0878

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4085					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.6997					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0113	0.0000	6.2000e-004	0.0000		7.8300e-003	7.8300e-003		7.7500e-003	7.7500e-003	0.0000	112.2007	112.2007	2.1500e-003	2.0600e-003	112.8836
Landscaping	0.0566	0.0220	1.9042	1.0000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	3.1131	3.1131	2.9500e-003	0.0000	3.1750
Total	2.1760	0.0220	1.9048	1.0000e-004		0.0184	0.0184		0.0183	0.0183	0.0000	115.3138	115.3138	5.1000e-003	2.0600e-003	116.0586

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	34.0203	0.5511	0.0133	49.7028
Unmitigated	34.0203	0.5512	0.0133	49.7097

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	0.716694 / 0.451829	1.4449	0.0234	5.6000e-004	2.1112
Mobile Home Park	2.4107 / 1.51979	4.8600	0.0787	1.9000e-003	7.1014
Single Family Housing	13.7475 / 8.6669	27.7153	0.4490	0.0108	40.4971
Total		34.0203	0.5512	0.0133	49.7097

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	0.716694 / 0.451829	1.4449	0.0234	5.6000e-004	2.1109
Mobile Home Park	2.4107 / 1.51979	4.8600	0.0787	1.8900e-003	7.1004
Single Family Housing	13.7475 / 8.6669	27.7153	0.4490	0.0108	40.4914
Total		34.0203	0.5511	0.0133	49.7028

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	48.5473	2.8691	0.0000	108.7977
Unmitigated	48.5473	2.8691	0.0000	108.7977

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	5.06	1.0271	0.0607	0.0000	2.3019
Mobile Home Park	17.02	3.4549	0.2042	0.0000	7.7427
Single Family Housing	217.08	44.0653	2.6042	0.0000	98.7531
Total		48.5473	2.8691	0.0000	108.7977

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	5.06	1.0271	0.0607	0.0000	2.3019
Mobile Home Park	17.02	3.4549	0.2042	0.0000	7.7427
Single Family Housing	217.08	44.0653	2.6042	0.0000	98.7531
Total		48.5473	2.8691	0.0000	108.7977

Pixley Community Plan - Commercial 2030

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government Office Building	1.94	1000sqft	0.04	1,940.00	0
Medical Office Building	1.66	1000sqft	0.04	1,660.00	0
Day-Care Center	2.12	1000sqft	0.05	2,120.00	0
Elementary School	30.57	1000sqft	0.70	30,570.00	0
Place of Worship	7.04	1000sqft	0.16	7,040.00	0
Motel	2.30	Room	0.10	4,508.46	0
Quality Restaurant	4.61	1000sqft	0.11	4,610.00	0
Automobile Care Center	16.64	1000sqft	0.38	16,640.00	0
Convenience Market With Gas Pumps	3.78	1000sqft	0.09	3,780.00	0
Strip Mall	11.79	1000sqft	0.27	11,790.00	0
Supermarket	4.12	1000sqft	0.09	4,120.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3	Operational Year	2030		
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	491.65	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 2020 emission factors: BAU emissions factors for Energy reflect compliance with the 33% RPS standard.

Vehicle Emission Factors - LEV III reductions incorporated (19.5% reduction in LDA, LDT1, and LDT2 EF)

Construction Off-road Equipment Mitigation - Compliance with Regulation VIII

Area Mitigation - California Building Code

Energy Mitigation - Newest Title 24 (2013) is not accounted for in this version of CalEEMod. Title 24 2013 is 30% more efficient than the previous Title 24 2008 standards for non-residential buildings.

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2014	2030
tblVehicleEF	LDA	6.6410e-003	5.3460e-003
tblVehicleEF	LDA	3.2400e-003	2.6080e-003
tblVehicleEF	LDA	0.53	0.42
tblVehicleEF	LDA	0.90	0.72
tblVehicleEF	LDA	198.19	159.54
tblVehicleEF	LDA	44.85	36.10
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	8.0000e-003	6.4400e-003
tblVehicleEF	LDA	1.7960e-003	1.4460e-003
tblVehicleEF	LDA	5.1000e-003	4.1060e-003
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tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	8.3490e-003	6.7210e-003
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tblVehicleEF	LDA	0.06	0.05
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tblVehicleEF	LDA	0.03	0.02

tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.02	0.01
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tblVehicleEF	LDT1	0.09	0.07
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tblVehicleEF	LDT1	8.0000e-003	6.4400e-003
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tblVehicleEF	LDT1	0.06	0.05
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tblVehicleEF	LDT1	0.09	0.07

tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.51	0.41
tblVehicleEF	LDT1	0.12	0.09
tblVehicleEF	LDT2	8.3280e-003	6.7040e-003
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tblVehicleEF	LDT2	8.0000e-003	6.4400e-003
tblVehicleEF	LDT2	1.7860e-003	1.4380e-003
tblVehicleEF	LDT2	5.0090e-003	4.0320e-003
tblVehicleEF	LDT2	0.02	0.01
tblVehicleEF	LDT2	2.0000e-003	1.6100e-003
tblVehicleEF	LDT2	1.6570e-003	1.3340e-003
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tblVehicleEF	LDT2	0.07	0.05
tblVehicleEF	LDT2	0.10	0.08
tblVehicleEF	LDT2	0.05	0.04
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tblVehicleEF	LDT2	0.08	0.06
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tblVehicleEF	LDT2	0.07	0.05

tblVehicleEF	LDT2	0.10	0.08
tblVehicleEF	LDT2	0.05	0.04
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.36	0.29
tblVehicleEF	LDT2	0.08	0.07

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4085	1.0000e-005	7.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5500e-003	1.5500e-003	0.0000	0.0000	1.6300e-003
Energy	0.0152	0.1381	0.1160	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	372.1813	372.1813	0.0128	5.0100e-003	374.0041
Mobile	2.1329	3.4653	18.4501	0.0362	2.2762	0.0613	2.3376	0.6058	0.0566	0.6624	0.0000	2,492.4747	2,492.4747	0.0607	0.0000	2,493.7484
Waste						0.0000	0.0000		0.0000	0.0000	44.3271	0.0000	44.3271	2.6197	0.0000	99.3400
Water						0.0000	0.0000		0.0000	0.0000	2.0544	11.6478	13.7022	0.2115	5.1000e-003	19.7256
Total	2.5566	3.6034	18.5669	0.0370	2.2762	0.0718	2.3481	0.6058	0.0671	0.6729	46.3816	2,876.3053	2,922.6869	2.9047	0.0101	2,986.8197

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4085	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5300e-003	1.5300e-003	0.0000	0.0000	1.6100e-003
Energy	0.0124	0.1126	0.0946	6.8000e-004		8.5600e-003	8.5600e-003		8.5600e-003	8.5600e-003	0.0000	326.0990	326.0990	0.0115	4.3200e-003	327.6779
Mobile	2.1329	3.4653	18.4501	0.0362	2.2762	0.0613	2.3376	0.6058	0.0566	0.6624	0.0000	2,492.4747	2,492.4747	0.0607	0.0000	2,493.7484
Waste						0.0000	0.0000		0.0000	0.0000	44.3271	0.0000	44.3271	2.6197	0.0000	99.3400
Water						0.0000	0.0000		0.0000	0.0000	2.0544	11.6478	13.7022	0.2115	5.0900e-003	19.7229
Total	2.5538	3.5779	18.5455	0.0368	2.2762	0.0699	2.3461	0.6058	0.0651	0.6709	46.3816	2,830.2230	2,876.6046	2.9033	9.4100e-003	2,940.4908

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.11	0.71	0.12	0.41	0.00	2.70	0.08	0.00	2.89	0.29	0.00	1.60	1.58	0.05	6.92	1.55

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.1329	3.4653	18.4501	0.0362	2.2762	0.0613	2.3376	0.6058	0.0566	0.6624	0.0000	2,492.4747	2,492.4747	0.0607	0.0000	2,493.7484
Unmitigated	2.1329	3.4653	18.4501	0.0362	2.2762	0.0613	2.3376	0.6058	0.0566	0.6624	0.0000	2,492.4747	2,492.4747	0.0607	0.0000	2,493.7484

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	3,196.37	5,474.69	4468.26	1,986,595	1,986,595
Day-Care Center	168.03	13.17	12.36	145,636	145,636
Automobile Care Center	1,031.68	1,031.68	1031.68	1,027,745	1,027,745
Elementary School	471.70	0.00	0.00	742,899	742,899
Place of Worship	64.13	73.00	257.88	174,121	174,121
Government Office Building	133.72	0.00	0.00	163,801	163,801
Medical Office Building	59.98	14.87	2.57	88,726	88,726
Motel	12.95	12.95	12.95	24,574	24,574
Quality Restaurant	414.67	435.00	332.66	481,415	481,415
Strip Mall	522.53	495.65	240.87	736,837	736,837
Supermarket	421.23	731.67	685.73	572,548	572,548
Total	6,496.99	8,282.68	7,044.96	6,144,898	6,144,898

4.3 Trip Type Information

			Miles			Trip %			Trip Purpose %			
Land Use			H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by	
Convenience Market With Gas			9.50	7.30	7.30	0.80	80.20	19.00	14	21	65	
Day-Care Center			9.50	7.30	7.30	12.70	82.30	5.00	28	58	14	
Automobile Care Center			9.50	7.30	7.30	33.00	48.00	19.00	21	51	28	
Elementary School			9.50	7.30	7.30	65.00	30.00	5.00	63	25	12	
Place of Worship			9.50	7.30	7.30	0.00	95.00	5.00	64	25	11	
Government Office Building			9.50	7.30	7.30	33.00	62.00	5.00	50	34	16	
Medical Office Building			9.50	7.30	7.30	29.60	51.40	19.00	60	30	10	
Motel			9.50	7.30	7.30	19.00	62.00	19.00	58	38	4	
Quality Restaurant			9.50	7.30	7.30	12.00	69.00	19.00	38	18	44	
Strip Mall			9.50	7.30	7.30	16.60	64.40	19.00	45	40	15	
Supermarket			9.50	7.30	7.30	6.50	74.50	19.00	34	30	36	
LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409681	0.072697	0.163067	0.193134	0.057567	0.008269	0.019683	0.062967	0.001805	0.001512	0.006347	0.000997	0.002274

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	203.5316	203.5316	9.1100e-003	2.0700e-003	204.3645
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	221.8429	221.8429	9.9300e-003	2.2600e-003	222.7507
NaturalGas Mitigated	0.0124	0.1126	0.0946	6.8000e-004		8.5600e-003	8.5600e-003		8.5600e-003	8.5600e-003	0.0000	122.5675	122.5675	2.3500e-003	2.2500e-003	123.3134
NaturalGas Unmitigated	0.0152	0.1381	0.1160	8.3000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	150.3385	150.3385	2.8800e-003	2.7600e-003	151.2534

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	362086	1.9500e-003	0.0178	0.0149	1.1000e-004		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	19.3223	19.3223	3.7000e-004	3.5000e-004	19.4399
Convenience Market With Gas Pump	42147	2.3000e-004	2.0700e-003	1.7400e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.2491	2.2491	4.0000e-005	4.0000e-005	2.2628
Day-Care Center	55819.6	3.0000e-004	2.7400e-003	2.3000e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	2.9788	2.9788	6.0000e-005	5.0000e-005	2.9969
Elementary School	804908	4.3400e-003	0.0395	0.0331	2.4000e-004		3.0000e-003	3.0000e-003		3.0000e-003	3.0000e-003	0.0000	42.9530	42.9530	8.2000e-004	7.9000e-004	43.2144
Government Office Building	26616.8	1.4000e-004	1.3000e-003	1.1000e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	1.4204	1.4204	3.0000e-005	3.0000e-005	1.4290
Medical Office Building	22775.2	1.2000e-004	1.1200e-003	9.4000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.2154	1.2154	2.0000e-005	2.0000e-005	1.2228
Motel	117626	6.3000e-004	5.7700e-003	4.8400e-003	3.0000e-005		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	6.2770	6.2770	1.2000e-004	1.2000e-004	6.3152
Place of Worship	153190	8.3000e-004	7.5100e-003	6.3100e-003	5.0000e-005		5.7000e-004	5.7000e-004		5.7000e-004	5.7000e-004	0.0000	8.1748	8.1748	1.6000e-004	1.5000e-004	8.2246
Quality Restaurant	978657	5.2800e-003	0.0480	0.0403	2.9000e-004		3.6500e-003	3.6500e-003		3.6500e-003	3.6500e-003	0.0000	52.2249	52.2249	1.0000e-003	9.6000e-004	52.5427
Strip Mall	131459	7.1000e-004	6.4400e-003	5.4100e-003	4.0000e-005		4.9000e-004	4.9000e-004		4.9000e-004	4.9000e-004	0.0000	7.0151	7.0151	1.3000e-004	1.3000e-004	7.0578
Supermarket	121952	6.6000e-004	5.9800e-003	5.0200e-003	4.0000e-005		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	6.5078	6.5078	1.2000e-004	1.2000e-004	6.5474
Total		0.0152	0.1381	0.1160	8.5000e-004		0.0105	0.0105		0.0105	0.0105	0.0000	150.3385	150.3385	2.8700e-003	2.7600e-003	151.2534

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	272630	1.4700e-003	0.0134	0.0112	8.0000e-005		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003	0.0000	14.5486	14.5486	2.8000e-004	2.7000e-004	14.6371
Convenience Market With Gas	31861.6	1.7000e-004	1.5600e-003	1.3100e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.7003	1.7003	3.0000e-005	3.0000e-005	1.7106
Day-Care Center	40294.8	2.2000e-004	1.9800e-003	1.6600e-003	1.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	2.1503	2.1503	4.0000e-005	4.0000e-005	2.1634
Elementary School	581044	3.1300e-003	0.0285	0.0239	1.7000e-004		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003	0.0000	31.0067	31.0067	5.9000e-004	5.7000e-004	31.1954
Government Office Building	18794.7	1.0000e-004	9.2000e-004	7.7000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0030	1.0030	2.0000e-005	2.0000e-005	1.0091
Medical Office Building	16082.1	9.0000e-005	7.9000e-004	6.6000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.8582	0.8582	2.0000e-005	2.0000e-005	0.8634
Motel	92022.2	5.0000e-004	4.5100e-003	3.7900e-003	3.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	4.9107	4.9107	9.0000e-005	9.0000e-005	4.9405
Place of Worship	115343	6.2000e-004	5.6500e-003	4.7500e-003	3.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004	0.0000	6.1552	6.1552	1.2000e-004	1.1000e-004	6.1926
Quality Restaurant	926670	5.0000e-003	0.0454	0.0382	2.7000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003	0.0000	49.4506	49.4506	9.5000e-004	9.1000e-004	49.7516
Strip Mall	99377.9	5.4000e-004	4.8700e-003	4.0900e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	5.3032	5.3032	1.0000e-004	1.0000e-004	5.3355
Supermarket	102707	5.5000e-004	5.0300e-003	4.2300e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	5.4809	5.4809	1.1000e-004	1.0000e-004	5.5142
Total		0.0124	0.1126	0.0946	6.7000e-004		8.5500e-003	8.5500e-003		8.5500e-003	8.5500e-003	0.0000	122.5675	122.5675	2.3500e-003	2.2600e-003	123.3134

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	160742	35.8470	1.6000e-003	3.6000e-004	35.9937
Convenience Market With Gas Pump	34511.4	7.6963	3.4000e-004	8.0000e-005	7.7278
Day-Care Center	16832.8	3.7539	1.7000e-004	4.0000e-005	3.7692
Elementary School	242726	54.1300	2.4200e-003	5.5000e-004	54.3515
Government Office Building	19632.8	4.3783	2.0000e-004	4.0000e-005	4.3962
Medical Office Building	16799.2	3.7464	1.7000e-004	4.0000e-005	3.7617
Motel	41252.4	9.1997	4.1000e-004	9.0000e-005	9.2373
Place of Worship	68006.4	15.1660	6.8000e-004	1.5000e-004	15.2281
Quality Restaurant	143786	32.0655	1.4300e-003	3.3000e-004	32.1967
Strip Mall	107643	24.0053	1.0700e-003	2.4000e-004	24.1035
Supermarket	142840	31.8547	1.4300e-003	3.2000e-004	31.9850
Total		221.8429	9.9200e-003	2.2400e-003	222.7507

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	148812	33.1863	1.4800e-003	3.4000e-004	33.3221
Convenience Market With Gas	31551.7	7.0363	3.1000e-004	7.0000e-005	7.0651
Day-Care Center	15166.5	3.3823	1.5000e-004	3.0000e-005	3.3961
Elementary School	218698	48.7715	2.1800e-003	5.0000e-004	48.9711
Government Office Building	17770.4	3.9630	1.8000e-004	4.0000e-005	3.9792
Medical Office Building	15205.6	3.3910	1.5000e-004	3.0000e-005	3.4049
Motel	34422.1	7.6764	3.4000e-004	8.0000e-005	7.7078
Place of Worship	62958.7	14.0403	6.3000e-004	1.4000e-004	14.0978
Quality Restaurant	132722	29.5981	1.3200e-003	3.0000e-004	29.7193
Strip Mall	98411.1	21.9465	9.8000e-004	2.2000e-004	22.0364
Supermarket	136945	30.5399	1.3700e-003	3.1000e-004	30.6648
Total		203.5316	9.0900e-003	2.0600e-003	204.3645

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4085	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5300e-003	1.5300e-003	0.0000	0.0000	1.6100e-003
Unmitigated	0.4085	1.0000e-005	7.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5500e-003	1.5500e-003	0.0000	0.0000	1.6300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0617					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3467					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5500e-003	1.5500e-003	0.0000	0.0000	1.6300e-003
Total	0.4085	1.0000e-005	7.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5500e-003	1.5500e-003	0.0000	0.0000	1.6300e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0617					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3467					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5300e-003	1.5300e-003	0.0000	0.0000	1.6100e-003
Total	0.4085	1.0000e-005	7.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5300e-003	1.5300e-003	0.0000	0.0000	1.6100e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	13.7022	0.2115	5.0900e-003	19.7229
Unmitigated	13.7022	0.2115	5.1000e-003	19.7256

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	1.56551 / 0.959506	3.1347	0.0511	1.2300e-003	4.5901
Convenience Market With Gas	0.279994 / 0.171609	0.5606	9.1400e-003	2.2000e-004	0.8210
Day-Care Center	0.0909259 / 0.233809	0.3211	2.9800e-003	7.0000e-005	0.4062
Elementary School	0.886436 / 2.27941	3.1300	0.0290	7.1000e-004	3.9597
Government Office Building	0.3854 / 0.236213	0.7717	0.0126	3.0000e-004	1.1300
Medical Office Building	0.208298 / 0.0396758	0.3484	6.8000e-003	1.6000e-004	0.5418
Motel	0.0583436 / 0.0064826	0.0940	1.9000e-003	5.0000e-005	0.1481
Place of Worship	0.220274 / 0.344531	0.6046	7.2000e-003	1.7000e-004	0.8101
Quality Restaurant	1.39929 / 0.0893164	2.2022	0.0457	1.0900e-003	3.5006
Strip Mall	0.873315 / 0.535258	1.7487	0.0285	6.9000e-004	2.5606
Supermarket	0.507865 / 0.0157072	0.7862	0.0166	4.0000e-004	1.2574
Total		13.7022	0.2115	5.0900e-003	19.7256

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	1.56551 / 0.959506	3.1347	0.0511	1.2300e-003	4.5895
Convenience Market With Gas	0.279994 / 0.171609	0.5606	9.1400e-003	2.2000e-004	0.8208
Day-Care Center	0.0909259 / 0.233809	0.3211	2.9800e-003	7.0000e-005	0.4061
Elementary School	0.886436 / 2.27941	3.1300	0.0290	7.1000e-004	3.9593
Government Office Building	0.3854 / 0.236213	0.7717	0.0126	3.0000e-004	1.1299
Medical Office Building	0.208298 / 0.0396758	0.3484	6.8000e-003	1.6000e-004	0.5417
Motel	0.0583436 / 0.0064826	0.0940	1.9000e-003	5.0000e-005	0.1481
Place of Worship	0.220274 / 0.344531	0.6046	7.2000e-003	1.7000e-004	0.8100
Quality Restaurant	1.39929 / 0.0893164	2.2022	0.0457	1.0900e-003	3.5001
Strip Mall	0.873315 / 0.535258	1.7487	0.0285	6.9000e-004	2.5602
Supermarket	0.507865 / 0.0157072	0.7862	0.0166	4.0000e-004	1.2572
Total		13.7022	0.2115	5.0900e-003	19.7229

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	44.3271	2.6197	0.0000	99.3400
Mitigated	44.3271	2.6197	0.0000	99.3400

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	63.56	12.9021	0.7625	0.0000	28.9145
Convenience Market With Gas	11.36	2.3060	0.1363	0.0000	5.1678
Day-Care Center	2.76	0.5603	0.0331	0.0000	1.2556
Elementary School	39.74	8.0669	0.4767	0.0000	18.0784
Government Office Building	1.8	0.3654	0.0216	0.0000	0.8189
Medical Office Building	17.93	3.6396	0.2151	0.0000	8.1566
Motel	1.26	0.2558	0.0151	0.0000	0.5732
Place of Worship	40.13	8.1460	0.4814	0.0000	18.2558
Quality Restaurant	4.21	0.8546	0.0505	0.0000	1.9152
Strip Mall	12.38	2.5130	0.1485	0.0000	5.6319
Supermarket	23.24	4.7175	0.2788	0.0000	10.5722
Total		44.3272	2.6197	0.0000	99.3400

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	63.56	12.9021	0.7625	0.0000	28.9145
Convenience Market With Gas	11.36	2.3060	0.1363	0.0000	5.1678
Day-Care Center	2.76	0.5603	0.0331	0.0000	1.2556
Elementary School	39.74	8.0669	0.4767	0.0000	18.0784
Government Office Building	1.8	0.3654	0.0216	0.0000	0.8189
Medical Office Building	17.93	3.6396	0.2151	0.0000	8.1566
Motel	1.26	0.2558	0.0151	0.0000	0.5732
Place of Worship	40.13	8.1460	0.4814	0.0000	18.2558
Quality Restaurant	4.21	0.8546	0.0505	0.0000	1.9152
Strip Mall	12.38	2.5130	0.1485	0.0000	5.6319
Supermarket	23.24	4.7175	0.2788	0.0000	10.5722
Total		44.3272	2.6197	0.0000	99.3400

Pixley Community Plan - Industrial 2030

Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	88.36	1000sqft	2.03	88,360.00	0
General Light Industry	10.96	1000sqft	0.25	10,960.00	0
Unrefrigerated Warehouse-No Rail	29.84	1000sqft	0.69	29,840.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2030
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	491.65	CH4 Intensity (lb/MWhr)	0.022	N2O Intensity (lb/MWhr)	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 2020 emission factors: BAU emissions factors for Energy reflect compliance with the 33% RPS standard.

Vehicle Emission Factors - 'LEV III reductions incorporated (19.5% reduction in LDA, LDT1, and LDT2 EF)

Construction Off-road Equipment Mitigation - Compliance with Regulation VIII

Area Mitigation - California Building Code

Energy Mitigation - Newest Title 24 (2013) is not accounted for in this version of CalEEMod. Title 24 2013 is 30% more efficient than the previous Title 24 2008 standards for non-residential buildings.

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2014	2030
tblVehicleEF	LDA	6.6410e-003	5.3460e-003
tblVehicleEF	LDA	3.2400e-003	2.6080e-003
tblVehicleEF	LDA	0.53	0.42
tblVehicleEF	LDA	0.90	0.72
tblVehicleEF	LDA	198.19	159.54
tblVehicleEF	LDA	44.85	36.10
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	8.0000e-003	6.4400e-003
tblVehicleEF	LDA	1.7960e-003	1.4460e-003
tblVehicleEF	LDA	5.1000e-003	4.1060e-003
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	2.0000e-003	1.6100e-003
tblVehicleEF	LDA	1.6660e-003	1.3410e-003
tblVehicleEF	LDA	4.7320e-003	3.8090e-003
tblVehicleEF	LDA	0.03	0.02
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	8.3490e-003	6.7210e-003
tblVehicleEF	LDA	0.17	0.14
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	3.2920e-003	2.6500e-003
tblVehicleEF	LDA	7.5400e-004	6.0700e-004
tblVehicleEF	LDA	0.03	0.02

tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.17	0.14
tblVehicleEF	LDA	0.06	0.05
tblVehicleEF	LDT1	9.4140e-003	7.5780e-003
tblVehicleEF	LDT1	6.0770e-003	4.8920e-003
tblVehicleEF	LDT1	0.81	0.65
tblVehicleEF	LDT1	1.55	1.25
tblVehicleEF	LDT1	239.41	192.73
tblVehicleEF	LDT1	54.48	43.86
tblVehicleEF	LDT1	0.09	0.07
tblVehicleEF	LDT1	0.09	0.07
tblVehicleEF	LDT1	0.04	0.03
tblVehicleEF	LDT1	8.0000e-003	6.4400e-003
tblVehicleEF	LDT1	2.0110e-003	1.6190e-003
tblVehicleEF	LDT1	5.0140e-003	4.0360e-003
tblVehicleEF	LDT1	0.02	0.01
tblVehicleEF	LDT1	2.0000e-003	1.6100e-003
tblVehicleEF	LDT1	1.8660e-003	1.5020e-003
tblVehicleEF	LDT1	4.6520e-003	3.7450e-003
tblVehicleEF	LDT1	0.09	0.07
tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.01	0.01
tblVehicleEF	LDT1	0.51	0.41
tblVehicleEF	LDT1	0.11	0.09
tblVehicleEF	LDT1	3.8220e-003	3.0770e-003
tblVehicleEF	LDT1	8.8600e-004	7.1300e-004
tblVehicleEF	LDT1	0.09	0.07

tblVehicleEF	LDT1	0.15	0.12
tblVehicleEF	LDT1	0.06	0.05
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.51	0.41
tblVehicleEF	LDT1	0.12	0.09
tblVehicleEF	LDT2	8.3280e-003	6.7040e-003
tblVehicleEF	LDT2	4.4330e-003	3.5690e-003
tblVehicleEF	LDT2	0.65	0.53
tblVehicleEF	LDT2	1.16	0.94
tblVehicleEF	LDT2	307.23	247.32
tblVehicleEF	LDT2	69.69	56.10
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tblVehicleEF	LDT2	0.08	0.07
tblVehicleEF	LDT2	0.04	0.03
tblVehicleEF	LDT2	8.0000e-003	6.4400e-003
tblVehicleEF	LDT2	1.7860e-003	1.4380e-003
tblVehicleEF	LDT2	5.0090e-003	4.0320e-003
tblVehicleEF	LDT2	0.02	0.01
tblVehicleEF	LDT2	2.0000e-003	1.6100e-003
tblVehicleEF	LDT2	1.6570e-003	1.3340e-003
tblVehicleEF	LDT2	4.6480e-003	3.7420e-003
tblVehicleEF	LDT2	0.07	0.05
tblVehicleEF	LDT2	0.10	0.08
tblVehicleEF	LDT2	0.05	0.04
tblVehicleEF	LDT2	0.01	8.8240e-003
tblVehicleEF	LDT2	0.36	0.29
tblVehicleEF	LDT2	0.08	0.06
tblVehicleEF	LDT2	4.4730e-003	3.6010e-003
tblVehicleEF	LDT2	1.0290e-003	8.2800e-004
tblVehicleEF	LDT2	0.07	0.05

tblVehicleEF	LDT2	0.10	0.08
tblVehicleEF	LDT2	0.05	0.04
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.36	0.29
tblVehicleEF	LDT2	0.08	0.07

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5943	1.0000e-005	1.1800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3100e-003	2.3100e-003	1.0000e-005	0.0000	2.4300e-003
Energy	0.0147	0.1337	0.1123	8.0000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	426.5105	426.5105	0.0154	5.5300e-003	428.5461
Mobile	0.1101	0.2923	1.1751	4.2800e-003	0.2893	6.7300e-003	0.2961	0.0770	6.2100e-003	0.0832	0.0000	295.3625	295.3625	6.3400e-003	0.0000	295.4957
Waste						0.0000	0.0000		0.0000	0.0000	30.6943	0.0000	30.6943	1.8140	0.0000	68.7878
Water						0.0000	0.0000		0.0000	0.0000	9.4758	36.0420	45.5178	0.9749	0.0234	73.2278
Total	0.7192	0.4260	1.2886	5.0800e-003	0.2893	0.0169	0.3062	0.0770	0.0164	0.0934	40.1701	757.9174	798.0875	2.8106	0.0289	866.0598

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5943	1.0000e-005	1.1700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2800e-003	2.2800e-003	1.0000e-005	0.0000	2.4000e-003
Energy	0.0110	0.0997	0.0837	6.0000e-004		7.5700e-003	7.5700e-003		7.5700e-003	7.5700e-003	0.0000	371.0402	371.0402	0.0138	4.6600e-003	372.7749
Mobile	0.1101	0.2923	1.1751	4.2800e-003	0.2893	6.7300e-003	0.2961	0.0770	6.2100e-003	0.0832	0.0000	295.3625	295.3625	6.3400e-003	0.0000	295.4957
Waste						0.0000	0.0000		0.0000	0.0000	30.6943	0.0000	30.6943	1.8140	0.0000	68.7878
Water						0.0000	0.0000		0.0000	0.0000	9.4758	36.0420	45.5178	0.9747	0.0233	73.2154
Total	0.7154	0.3919	1.2600	4.8800e-003	0.2893	0.0143	0.3036	0.0770	0.0138	0.0908	40.1701	702.4471	742.6171	2.8089	0.0280	810.2763

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.52	7.99	2.22	3.94	0.00	15.33	0.85	0.00	15.82	2.77	0.00	7.32	6.95	0.06	3.12	6.44

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1101	0.2923	1.1751	4.2800e-003	0.2893	6.7300e-003	0.2961	0.0770	6.2100e-003	0.0832	0.0000	295.3625	295.3625	6.3400e-003	0.0000	295.4957
Unmitigated	0.1101	0.2923	1.1751	4.2800e-003	0.2893	6.7300e-003	0.2961	0.0770	6.2100e-003	0.0832	0.0000	295.3625	295.3625	6.3400e-003	0.0000	295.4957

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	132.54	132.54	132.54	386,952	386,952
General Light Industry	76.39	14.47	7.45	168,446	168,446
Unrefrigerated Warehouse-No Rail	77.29	77.29	77.29	225,636	225,636
Total	286.22	224.29	217.28	781,034	781,034

4.3 Trip Type Information

			Miles			Trip %			Trip Purpose %			
Land Use			H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by	
General Heavy Industry			9.50	7.30	7.30	59.00	28.00	13.00	92	5	3	
General Light Industry			9.50	7.30	7.30	59.00	28.00	13.00	92	5	3	
Unrefrigerated Warehouse-No			9.50	7.30	7.30	59.00	0.00	41.00	92	5	3	
LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409681	0.072697	0.163067	0.193134	0.057567	0.008269	0.019683	0.062967	0.001805	0.001512	0.006347	0.000997	0.002274

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	262.5567	262.5567	0.0118	2.6700e-003	263.6312
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	280.9731	280.9731	0.0126	2.8600e-003	282.1230
NaturalGas Mitigated	0.0110	0.0997	0.0837	6.0000e-004		7.5700e-003	7.5700e-003		7.5700e-003	7.5700e-003	0.0000	108.4835	108.4835	2.0800e-003	1.9900e-003	109.1437
NaturalGas Unmitigated	0.0147	0.1337	0.1123	8.0000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	145.5374	145.5374	2.7900e-003	2.6700e-003	146.4231

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	1.92271e+006	0.0104	0.0943	0.0792	5.7000e-004		7.1600e-003	7.1600e-003		7.1600e-003	7.1600e-003	0.0000	102.6033	102.6033	1.9700e-003	1.8800e-003	103.2278
General Light Industry	238490	1.2900e-003	0.0117	9.8200e-003	7.0000e-005		8.9000e-004	8.9000e-004		8.9000e-004	8.9000e-004	0.0000	12.7267	12.7267	2.4000e-004	2.3000e-004	12.8042
Unrefrigerated Warehouse-No Cool	566065	3.0500e-003	0.0278	0.0233	1.7000e-004		2.1100e-003	2.1100e-003		2.1100e-003	2.1100e-003	0.0000	30.2074	30.2074	5.8000e-004	5.5000e-004	30.3912
Total		0.0147	0.1337	0.1123	8.1000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	145.5374	145.5374	2.7900e-003	2.6600e-003	146.4231

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	179569	9.7000e-004	8.8000e-003	7.3900e-003	5.0000e-005		6.7000e-004	6.7000e-004		6.7000e-004	6.7000e-004	0.0000	9.5825	9.5825	1.8000e-004	1.8000e-004	9.6408
Unrefrigerated Warehouse-No	405645	2.1900e-003	0.0199	0.0167	1.2000e-004		1.5100e-003	1.5100e-003		1.5100e-003	1.5100e-003	0.0000	21.6468	21.6468	4.1000e-004	4.0000e-004	21.7785
General Heavy Industry	1.44769e+006	7.8100e-003	0.0710	0.0596	4.3000e-004		5.3900e-003	5.3900e-003		5.3900e-003	5.3900e-003	0.0000	77.2543	77.2543	1.4800e-003	1.4200e-003	77.7244
Total		0.0110	0.0997	0.0837	6.0000e-004		7.5700e-003	7.5700e-003		7.5700e-003	7.5700e-003	0.0000	108.4835	108.4835	2.0700e-003	2.0000e-003	109.1437

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	853558	190.3508	8.5200e-003	1.9400e-003	191.1297
General Light Industry	105874	23.6107	1.0600e-003	2.4000e-004	23.7074
Unrefrigerated Warehouse-No	300489	67.0116	3.0000e-003	6.8000e-004	67.2859
Total		280.9731	0.0126	2.8600e-003	282.1230

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	790203	176.2222	7.8900e-003	1.7900e-003	176.9434
General Light Industry	98015.3	21.8583	9.8000e-004	2.2000e-004	21.9477
Unrefrigerated Warehouse-No	289120	64.4762	2.8900e-003	6.6000e-004	64.7401
Total		262.5567	0.0118	2.6700e-003	263.6312

6.0 Area Detail

6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5943	1.0000e-005	1.1700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2800e-003	2.2800e-003	1.0000e-005	0.0000	2.4000e-003
Unmitigated	0.5943	1.0000e-005	1.1800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3100e-003	2.3100e-003	1.0000e-005	0.0000	2.4300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0898					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5044					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1000e-004	1.0000e-005	1.1800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3100e-003	2.3100e-003	1.0000e-005	0.0000	2.4300e-003
Total	0.5943	1.0000e-005	1.1800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3100e-003	2.3100e-003	1.0000e-005	0.0000	2.4300e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0898					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5044					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.1000e-004	1.0000e-005	1.1700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2800e-003	2.2800e-003	1.0000e-005	0.0000	2.4000e-003
Total	0.5943	1.0000e-005	1.1700e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.2800e-003	2.2800e-003	1.0000e-005	0.0000	2.4000e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	45.5178	0.9747	0.0233	73.2154
Unmitigated	45.5178	0.9749	0.0234	73.2278

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	20.4333 / 0	31.1393	0.6669	0.0160	50.0960
General Light Industry	2.5345 / 0	3.8625	0.0827	1.9800e-003	6.2138
Unrefrigerated Warehouse-No	6.9005 / 0	10.5160	0.2252	5.3900e-003	16.9179
Total		45.5178	0.9749	0.0233	73.2278

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	20.4333 / 0	31.1393	0.6668	0.0160	50.0876
General Light Industry	2.5345 / 0	3.8625	0.0827	1.9800e-003	6.2128
Unrefrigerated Warehouse-No	6.9005 / 0	10.5160	0.2252	5.3900e-003	16.9151
Total		45.5178	0.9747	0.0233	73.2154

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	30.6943	1.8140	0.0000	68.7878
Unmitigated	30.6943	1.8140	0.0000	68.7878

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	109.57	22.2417	1.3145	0.0000	49.8451
General Light Industry	13.59	2.7587	0.1630	0.0000	6.1823
Unrefrigerated Warehouse-No	28.05	5.6939	0.3365	0.0000	12.7604
Total		30.6943	1.8140	0.0000	68.7878

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	109.57	22.2417	1.3145	0.0000	49.8451
General Light Industry	13.59	2.7587	0.1630	0.0000	6.1823
Unrefrigerated Warehouse-No	28.05	5.6939	0.3365	0.0000	12.7604
Total		30.6943	1.8140	0.0000	68.7878

Pixley Community Plan - Residential 2020 BAU
Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	5.00	Dwelling Unit	0.31	5,000.00	14
Mobile Home Park	17.00	Dwelling Unit	2.14	20,400.00	49
Single Family Housing	99.00	Dwelling Unit	32.14	178,200.00	283

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2005
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Vehicle Emission Factors - 2020 Residential Fleet Mix

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2005
tblVehicleEF	HHD	0.07	0.02
tblVehicleEF	LDA	0.39	0.51
tblVehicleEF	LDT1	0.14	0.21
tblVehicleEF	LDT2	0.20	0.17
tblVehicleEF	LHD1	0.03	2.1000e-003
tblVehicleEF	LHD2	9.4340e-003	1.0000e-003
tblVehicleEF	MCY	9.8420e-003	3.1000e-003
tblVehicleEF	MDV	0.12	0.06
tblVehicleEF	MH	2.8220e-003	2.3000e-003
tblVehicleEF	MHD	0.02	9.6000e-003
tblVehicleEF	OBUS	1.1860e-003	0.00
tblVehicleEF	SBUS	2.0530e-003	1.0000e-003
tblVehicleEF	UBUS	1.4140e-003	3.8000e-003

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	53.8857	53.8857	3.3500e-003	9.6000e-004	54.2540
Energy											0.0000	461.1734	461.1734	0.0156	6.1100e-003	463.3965
Mobile											0.0000	1,387.5982	1,387.5982	0.1606	0.0000	1,390.9700
Waste											22.7350	0.0000	22.7350	1.3436	0.0000	50.9506
Water											2.5011	17.4703	19.9715	0.2577	6.2300e-003	27.3137
Total											25.2361	1,920.1276	1,945.3637	1.7808	0.0133	1,986.8848

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	53.8857	53.8857	3.3500e-003	9.6000e-004	54.2540
Energy											0.0000	461.1734	461.1734	0.0156	6.1100e-003	463.3965
Mobile											0.0000	1,387.5982	1,387.5982	0.1606	0.0000	1,390.9700
Waste											22.7350	0.0000	22.7350	1.3436	0.0000	50.9506
Water											2.5011	17.4703	19.9715	0.2576	6.2200e-003	27.3097
Total											25.2361	1,920.1276	1,945.3637	1.7808	0.0133	1,986.8808
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	1,387.5982	1,387.5982	0.1606	0.0000	1,390.9700
Unmitigated											0.0000	1,387.5982	1,387.5982	0.1606	0.0000	1,390.9700

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	32.95	35.80	30.35	92,978	92,978
Mobile Home Park	84.83	85.00	74.12	234,869	234,869
Single Family Housing	947.43	997.92	868.23	2,658,992	2,658,992
Total	1,065.21	1,118.72	972.70	2,986,839	2,986,839

4.3 Trip Type Information

		Miles			Trip %			Trip Purpose %				
Land Use		H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by		
Apartments Low Rise		10.80	7.30	7.50	38.40	22.60	39.00	86	11	3		
Mobile Home Park		10.80	7.30	7.50	38.40	22.60	39.00	86	11	3		
Single Family Housing		10.80	7.30	7.50	38.40	22.60	39.00	86	11	3		
LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511200	0.213700	0.169200	0.061000	0.002100	0.001000	0.009600	0.022100	0.000000	0.003800	0.003100	0.001000	0.002300

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.0000	260.9504	260.9504	0.0118	2.4400e-003	261.9550
Electricity Unmitigated											0.0000	260.9504	260.9504	0.0118	2.4400e-003	261.9550
NaturalGas Mitigated											0.0000	200.2230	200.2230	3.8400e-003	3.6700e-003	201.4415
NaturalGas Unmitigated											0.0000	200.2230	200.2230	3.8400e-003	3.6700e-003	201.4415

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	78329.1											0.0000	4.1799	4.1799	8.0000e-005	8.0000e-005	4.2054
Mobile Home Park	292527											0.0000	15.6104	15.6104	3.0000e-004	2.9000e-004	15.7054
Single Family Housing	3.38118e+006											0.0000	180.4327	180.4327	3.4600e-003	3.3100e-003	181.5308
Total												0.0000	200.2230	200.2230	3.8400e-003	3.6800e-003	201.4415

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	78329.1											0.0000	4.1799	4.1799	8.0000e- 005	8.0000e- 005	4.2054
Mobile Home Park	292527											0.0000	15.6104	15.6104	3.0000e- 004	2.9000e- 004	15.7054
Single Family Housing	3.38118e+ 006											0.0000	180.4327	180.4327	3.4600e- 003	3.3100e- 003	181.5308
Total												0.0000	200.2230	200.2230	3.8400e- 003	3.6800e- 003	201.4415

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	19701.3	5.7313	2.6000e- 004	5.0000e- 005	5.7534
Mobile Home Park	90666.4	26.3759	1.1900e- 003	2.5000e- 004	26.4775
Single Family Housing	786642	228.8432	0.0104	2.1400e- 003	229.7242
Total		260.9504	0.0118	2.4400e- 003	261.9550

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	19701.3	5.7313	2.6000e- 004	5.0000e- 005	5.7534
Mobile Home Park	90666.4	26.3759	1.1900e- 003	2.5000e- 004	26.4775
Single Family Housing	786642	228.8432	0.0104	2.1400e- 003	229.7242
Total		260.9504	0.0118	2.4400e- 003	261.9550

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	53.8857	53.8857	3.3500e-003	9.6000e-004	54.2540
Unmitigated											0.0000	53.8857	53.8857	3.3500e-003	9.6000e-004	54.2540

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	52.4181	52.4181	1.0000e-003	9.6000e-004	52.7371
Landscaping											0.0000	1.4676	1.4676	2.3500e-003	0.0000	1.5169
Total											0.0000	53.8857	53.8857	3.3500e-003	9.6000e-004	54.2540

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	52.4181	52.4181	1.0000e-003	9.6000e-004	52.7371
Landscaping											0.0000	1.4676	1.4676	2.3500e-003	0.0000	1.5169
Total											0.0000	53.8857	53.8857	3.3500e-003	9.6000e-004	54.2540

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	19.9715	0.2576	6.2200e-003	27.3097
Unmitigated	19.9715	0.2577	6.2300e-003	27.3137

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	0.32577 / 0.205377	0.8253	0.0107	2.6000e-004	1.1287
Mobile Home Park	1.10762 / 0.698281	2.8059	0.0362	8.8000e-004	3.8375
Single Family Housing	6.45025 / 4.06646	16.3403	0.2108	5.1000e-003	22.3476
Total		19.9715	0.2577	6.2400e-003	27.3137

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	0.32577 / 0.205377	0.8253	0.0107	2.6000e-004	1.1285
Mobile Home Park	1.10762 / 0.698281	2.8059	0.0362	8.7000e-004	3.8369
Single Family Housing	6.45025 / 4.06646	16.3403	0.2108	5.0900e-003	22.3443
Total		19.9715	0.2576	6.2200e-003	27.3097

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	22.7350	1.3436	0.0000	50.9506
Unmitigated	22.7350	1.3436	0.0000	50.9506

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	2.3	0.4669	0.0276	0.0000	1.0463
Mobile Home Park	7.82	1.5874	0.0938	0.0000	3.5574
Single Family Housing	101.88	20.6807	1.2222	0.0000	46.3468
Total		22.7350	1.3436	0.0000	50.9506

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	2.3	0.4669	0.0276	0.0000	1.0463
Mobile Home Park	7.82	1.5874	0.0938	0.0000	3.5574
Single Family Housing	101.88	20.6807	1.2222	0.0000	46.3468
Total		22.7350	1.3436	0.0000	50.9506

Pixley Community Plan - Commercial 2020 BAU
Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government Office Building	0.68	1000sqft	0.02	680.00	0
Medical Office Building	0.58	1000sqft	0.01	580.00	0
Day-Care Center	0.74	1000sqft	0.02	740.00	0
Elementary School	10.73	1000sqft	0.25	10,730.00	0
Place of Worship	2.47	1000sqft	0.06	2,470.00	0
Motel	0.81	Room	0.04	1,587.76	0
Quality Restaurant	1.62	1000sqft	0.04	1,620.00	0
Automobile Care Center	5.84	1000sqft	0.13	5,840.00	0
Convenience Market With Gas Pumps	1.33	1000sqft	0.03	1,330.00	0
Strip Mall	4.14	1000sqft	0.10	4,140.00	0
Supermarket	1.45	1000sqft	0.03	1,450.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2005
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Vehicle Emission Factors - 2020 Fleet Mix

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	150
tblProjectCharacteristics	OperationalYear	2014	2005
tblVehicleEF	HHD	0.07	0.06
tblVehicleEF	LDA	0.39	0.41
tblVehicleEF	LDT1	0.14	0.07
tblVehicleEF	LDT2	0.20	0.16
tblVehicleEF	LHD1	0.03	0.06
tblVehicleEF	LHD2	9.4340e-003	8.2370e-003
tblVehicleEF	MCY	9.8420e-003	6.0550e-003
tblVehicleEF	MDV	0.12	0.02
tblVehicleEF	MH	2.8220e-003	2.2380e-003
tblVehicleEF	MHD	0.02	0.20
tblVehicleEF	OBUS	1.1860e-003	1.8130e-003
tblVehicleEF	SBUS	2.0530e-003	1.1060e-003
tblVehicleEF	UBUS	1.4140e-003	1.4630e-003

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	6.0000e-004
Energy											0.0000	162.2816	162.2816	5.8700e-003	2.0200e-003	163.0322
Mobile											0.0000	1,686.6540	1,686.6540	0.1756	0.0000	1,690.3410
Waste											15.5572	0.0000	15.5572	0.9194	0.0000	34.8648
Water											0.7213	5.3339	6.0552	0.0743	1.8000e-003	8.1738
Total											16.2786	1,854.2700	1,870.5485	1.1752	3.8200e-003	1,896.4123

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	6.0000e-004
Energy											0.0000	162.2816	162.2816	5.8700e-003	2.0200e-003	163.0322
Mobile											0.0000	1,686.6540	1,686.6540	0.1756	0.0000	1,690.3410
Waste											15.5572	0.0000	15.5572	0.9194	0.0000	34.8648
Water											0.7213	5.3339	6.0552	0.0743	1.8000e-003	8.1727
Total											16.2786	1,854.2700	1,870.5485	1.1752	3.8200e-003	1,896.4112
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	1,686.6540	1,686.6540	0.1756	0.0000	1,690.3410
Unmitigated											0.0000	1,686.6540	1,686.6540	0.1756	0.0000	1,690.3410

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	362.08	362.08	362.08	360,699	360,699
Convenience Market With Gas Pumps	1,124.65	1,926.28	1572.17	698,987	698,987
Day-Care Center	58.65	4.60	4.31	50,835	50,835
Elementary School	165.56	0.00	0.00	260,756	260,756
Government Office Building	46.87	0.00	0.00	57,415	57,415
Medical Office Building	20.96	5.20	0.90	31,001	31,001
Motel	4.56	4.56	4.56	8,654	8,654
Place of Worship	22.50	25.61	90.48	61,091	61,091
Quality Restaurant	145.72	152.86	116.90	169,174	169,174
Strip Mall	183.48	174.05	84.58	258,737	258,737
Supermarket	148.25	257.51	241.34	201,504	201,504
Total	2,283.29	2,912.74	2,477.31	2,158,852	2,158,852

4.3 Trip Type Information

			Miles			Trip %			Trip Purpose %			
Land Use			H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by	
Automobile Care Center			9.50	7.30	7.30	33.00	48.00	19.00	21	51	28	
Convenience Market With Gas			9.50	7.30	7.30	0.80	80.20	19.00	14	21	65	
Day-Care Center			9.50	7.30	7.30	12.70	82.30	5.00	28	58	14	
Elementary School			9.50	7.30	7.30	65.00	30.00	5.00	63	25	12	
Government Office Building			9.50	7.30	7.30	33.00	62.00	5.00	50	34	16	
Medical Office Building			9.50	7.30	7.30	29.60	51.40	19.00	60	30	10	
Motel			9.50	7.30	7.30	19.00	62.00	19.00	58	38	4	
Place of Worship			9.50	7.30	7.30	0.00	95.00	5.00	64	25	11	
Quality Restaurant			9.50	7.30	7.30	12.00	69.00	19.00	38	18	44	
Strip Mall			9.50	7.30	7.30	16.60	64.40	19.00	45	40	15	
Supermarket			9.50	7.30	7.30	6.50	74.50	19.00	34	30	36	
LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.407130	0.071843	0.163335	0.019528	0.057212	0.008237	0.198220	0.064465	0.001813	0.001463	0.006055	0.001106	0.002238

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.0000	105.9887	105.9887	4.7900e-003	9.9000e-004	106.3968
Electricity Unmitigated											0.0000	105.9887	105.9887	4.7900e-003	9.9000e-004	106.3968
NaturalGas Mitigated											0.0000	56.2928	56.2928	1.0800e-003	1.0300e-003	56.6354
NaturalGas Unmitigated											0.0000	56.2928	56.2928	1.0800e-003	1.0300e-003	56.6354

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	138817											0.0000	7.4078	7.4078	1.4000e-004	1.4000e-004	7.4529
Convenience Market With Gas Pumps	16625											0.0000	0.8872	0.8872	2.0000e-005	2.0000e-005	0.8926
Day-Care Center	21563.6											0.0000	1.1507	1.1507	2.0000e-005	2.0000e-005	1.1577
Elementary School	312672											0.0000	16.6854	16.6854	3.2000e-004	3.1000e-004	16.7869
Government Office Building	10648.8											0.0000	0.5683	0.5683	1.0000e-005	1.0000e-005	0.5717
Medical Office Building	9082.8											0.0000	0.4847	0.4847	1.0000e-005	1.0000e-005	0.4876
Motel	42821.9											0.0000	2.2851	2.2851	4.0000e-005	4.0000e-005	2.2991
Place of Worship	58711.9											0.0000	3.1331	3.1331	6.0000e-005	6.0000e-005	3.1522
Quality Restaurant	346259											0.0000	18.4777	18.4777	3.5000e-004	3.4000e-004	18.5901
Strip Mall	51750											0.0000	2.7616	2.7616	5.0000e-005	5.0000e-005	2.7784
Supermarket	45936											0.0000	2.4513	2.4513	5.0000e-005	4.0000e-005	2.4662
Total												0.0000	56.2928	56.2928	1.0700e-003	1.0400e-003	56.6354

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	138817											0.0000	7.4078	7.4078	1.4000e-004	1.4000e-004	7.4529
Convenience Market With Gas	16625											0.0000	0.8872	0.8872	2.0000e-005	2.0000e-005	0.8926
Day-Care Center	21563.6											0.0000	1.1507	1.1507	2.0000e-005	2.0000e-005	1.1577
Elementary School	312672											0.0000	16.6854	16.6854	3.2000e-004	3.1000e-004	16.7869
Government Office Building	10648.8											0.0000	0.5683	0.5683	1.0000e-005	1.0000e-005	0.5717
Medical Office Building	9082.8											0.0000	0.4847	0.4847	1.0000e-005	1.0000e-005	0.4876
Motel	42821.9											0.0000	2.2851	2.2851	4.0000e-005	4.0000e-005	2.2991
Place of Worship	58711.9											0.0000	3.1331	3.1331	6.0000e-005	6.0000e-005	3.1522
Quality Restaurant	346259											0.0000	18.4777	18.4777	3.5000e-004	3.4000e-004	18.5901
Strip Mall	51750											0.0000	2.7616	2.7616	5.0000e-005	5.0000e-005	2.7784
Supermarket	45936											0.0000	2.4513	2.4513	5.0000e-005	4.0000e-005	2.4662
Total												0.0000	56.2928	56.2928	1.0700e-003	1.0400e-003	56.6354

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	58575.2	17.0402	7.7000e-004	1.6000e-004	17.1058
Convenience Market With Gas Pump	12768	3.7144	1.7000e-004	3.0000e-005	3.7287
Day-Care Center	6208.6	1.8062	8.0000e-005	2.0000e-005	1.8131
Elementary School	90024.7	26.1892	1.1800e-003	2.5000e-004	26.2900
Government Office Building	7214.8	2.0989	9.0000e-005	2.0000e-005	2.1070
Medical Office Building	6153.8	1.7902	8.0000e-005	2.0000e-005	1.7971
Motel	15258.4	4.4388	2.0000e-004	4.0000e-005	4.4559
Place of Worship	24774.1	7.2071	3.3000e-004	7.0000e-005	7.2348
Quality Restaurant	52180.2	15.1798	6.9000e-004	1.4000e-004	15.2383
Strip Mall	39744	11.5620	5.2000e-004	1.1000e-004	11.6065
Supermarket	51431.5	14.9620	6.8000e-004	1.4000e-004	15.0196
Total		105.9887	4.7900e-003	1.0000e-003	106.3968

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	58575.2	17.0402	7.7000e-004	1.6000e-004	17.1058
Convenience Market With Gas	12768	3.7144	1.7000e-004	3.0000e-005	3.7287
Day-Care Center	6208.6	1.8062	8.0000e-005	2.0000e-005	1.8131
Elementary School	90024.7	26.1892	1.1800e-003	2.5000e-004	26.2900
Government Office Building	7214.8	2.0989	9.0000e-005	2.0000e-005	2.1070
Medical Office Building	6153.8	1.7902	8.0000e-005	2.0000e-005	1.7971
Motel	15258.4	4.4388	2.0000e-004	4.0000e-005	4.4559
Place of Worship	24774.1	7.2071	3.3000e-004	7.0000e-005	7.2348
Quality Restaurant	52180.2	15.1798	6.9000e-004	1.4000e-004	15.2383
Strip Mall	39744	11.5620	5.2000e-004	1.1000e-004	11.6065
Supermarket	51431.5	14.9620	6.8000e-004	1.4000e-004	15.0196
Total		105.9887	4.7900e-003	1.0000e-003	106.3968

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	6.0000e-004
Unmitigated											0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	6.0000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	6.0000e-004
Total											0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	6.0000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	6.0000e-004
Total											0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	6.0000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	6.0552	0.0743	1.8000e-003	8.1727
Unmitigated	6.0552	0.0743	1.8000e-003	8.1738

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0.549434 / 0.33675	1.3821	0.0180	4.3000e-004	1.8937
Convenience Market With Gas	0.0985164 / 0.0603844	0.2478	3.2200e-003	8.0000e-005	0.3396
Day-Care Center	0.0317383 / 0.0846427	0.1431	1.0400e-003	3.0000e-005	0.1729
Elementary School	0.311137 / 0.800066	1.4031	0.0102	2.5000e-004	1.6952
Government Office Building	0.135089 / 0.0827962	0.3398	4.4200e-003	1.1000e-004	0.4656
Medical Office Building	0.0727787 / 0.0408626	0.1518	2.3800e-003	6.0000e-005	0.2194
Motel	0.0205471 / 0.0037820	0.0412	6.7000e-004	2.0000e-005	0.0603
Place of Worship	0.0772836 / 0.120879	0.2693	2.5300e-003	6.0000e-005	0.3415
Quality Restaurant	0.491725 / 0.0313867	0.9620	0.0161	3.9000e-004	1.4189
Strip Mall	0.30666 / 0.187953	0.7714	0.0100	2.4000e-004	1.0570
Supermarket	0.178739 / 0.0055280	0.3437	5.8400e-003	1.4000e-004	0.5097
Total		6.0552	0.0743	1.8100e-003	8.1738

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	0.549434 / 0.33675	1.3821	0.0180	4.3000e-004	1.8935
Convenience Market With Gas	0.0985164 / 0.0600044	0.2478	3.2200e-003	8.0000e-005	0.3395
Day-Care Center	0.0317383 / 0.0016127	0.1431	1.0400e-003	3.0000e-005	0.1729
Elementary School	0.311137 / 0.800066	1.4031	0.0102	2.5000e-004	1.6951
Government Office Building	0.135089 / 0.0827962	0.3398	4.4100e-003	1.1000e-004	0.4655
Medical Office Building	0.0727787 / 0.0128626	0.1518	2.3800e-003	6.0000e-005	0.2194
Motel	0.0205471 / 0.0022820	0.0412	6.7000e-004	2.0000e-005	0.0603
Place of Worship	0.0772836 / 0.120879	0.2693	2.5300e-003	6.0000e-005	0.3415
Quality Restaurant	0.491725 / 0.0313867	0.9620	0.0161	3.9000e-004	1.4186
Strip Mall	0.30666 / 0.187953	0.7714	0.0100	2.4000e-004	1.0568
Supermarket	0.178739 / 0.0055280	0.3437	5.8400e-003	1.4000e-004	0.5097
Total		6.0552	0.0743	1.8100e-003	8.1727

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	15.5572	0.9194	0.0000	34.8648
Mitigated	15.5572	0.9194	0.0000	34.8648

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	22.31	4.5287	0.2676	0.0000	10.1492
Convenience Market With Gas Drive-Through	4	0.8120	0.0480	0.0000	1.8197
Day-Care Center	0.96	0.1949	0.0115	0.0000	0.4367
Elementary School	13.95	2.8317	0.1674	0.0000	6.3461
Government Office Building	0.63	0.1279	7.5600e-003	0.0000	0.2866
Medical Office Building	6.26	1.2707	0.0751	0.0000	2.8478
Motel	0.44	0.0893	5.2800e-003	0.0000	0.2002
Place of Worship	14.08	2.8581	0.1689	0.0000	6.4052
Quality Restaurant	1.48	0.3004	0.0178	0.0000	0.6733
Strip Mall	4.35	0.8830	0.0522	0.0000	1.9789
Supermarket	8.18	1.6605	0.0981	0.0000	3.7212
Total		15.5572	0.9194	0.0000	34.8647

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	22.31	4.5287	0.2676	0.0000	10.1492
Convenience Market With Gas	4	0.8120	0.0480	0.0000	1.8197
Day-Care Center	0.96	0.1949	0.0115	0.0000	0.4367
Elementary School	13.95	2.8317	0.1674	0.0000	6.3461
Government Office Building	0.63	0.1279	7.5600e-003	0.0000	0.2866
Medical Office Building	6.26	1.2707	0.0751	0.0000	2.8478
Motel	0.44	0.0893	5.2800e-003	0.0000	0.2002
Place of Worship	14.08	2.8581	0.1689	0.0000	6.4052
Quality Restaurant	1.48	0.3004	0.0178	0.0000	0.6733
Strip Mall	4.35	0.8830	0.0522	0.0000	1.9789
Supermarket	8.18	1.6605	0.0981	0.0000	3.7212
Total		15.5572	0.9194	0.0000	34.8647

Pixley Community Plan - Industrial 2020 BAU
Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	31.02	1000sqft	0.71	31,020.00	0
General Light Industry	3.85	1000sqft	0.09	3,850.00	0
Unrefrigerated Warehouse-No Rail	10.47	1000sqft	0.24	10,470.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2005
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Vehicle Emission Factors - 2020 Fleet Mix

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2005
tblVehicleEF	HHD	0.07	0.06
tblVehicleEF	LDA	0.39	0.41
tblVehicleEF	LDT1	0.14	0.07
tblVehicleEF	LDT2	0.20	0.16
tblVehicleEF	LHD1	0.03	0.06
tblVehicleEF	LHD2	9.4340e-003	8.2370e-003
tblVehicleEF	MCY	9.8420e-003	6.0550e-003
tblVehicleEF	MDV	0.12	0.20
tblVehicleEF	MH	2.8220e-003	2.2380e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	OBUS	1.1860e-003	1.8130e-003
tblVehicleEF	SBUS	2.0530e-003	1.1060e-003
tblVehicleEF	UBUS	1.4140e-003	1.4630e-003

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	8.1000e-004	8.1000e-004	0.0000	0.0000	8.9000e-004
Energy											0.0000	188.3768	188.3768	7.0900e-003	2.2500e-003	189.2247
Mobile											0.0000	161.7272	161.7272	0.0156	0.0000	162.0549
Waste											10.7727	0.0000	10.7727	0.6367	0.0000	24.1424
Water											3.3264	16.5045	19.8308	0.3424	8.2200e-003	29.5698
Total											14.0991	366.6093	380.7084	1.0018	0.0105	404.9927

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	8.1000e-004	8.1000e-004	0.0000	0.0000	8.9000e-004
Energy											0.0000	188.3768	188.3768	7.0900e-003	2.2500e-003	189.2247
Mobile											0.0000	161.7272	161.7272	0.0156	0.0000	162.0549
Waste											10.7727	0.0000	10.7727	0.6367	0.0000	24.1424
Water											3.3264	16.5045	19.8308	0.3423	8.2100e-003	29.5645
Total											14.0991	366.6093	380.7084	1.0017	0.0105	404.9874
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10	0.00

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	161.7272	161.7272	0.0156	0.0000	162.0549
Unmitigated											0.0000	161.7272	161.7272	0.0156	0.0000	162.0549

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	46.53	46.53	46.53	135,845	135,845
General Light Industry	26.83	5.08	2.62	59,171	59,171
Unrefrigerated Warehouse-No Rail	27.12	27.12	27.12	79,169	79,169
Total	100.48	78.73	76.27	274,185	274,185

4.3 Trip Type Information

		Miles			Trip %			Trip Purpose %				
Land Use		H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by		
General Heavy Industry		9.50	7.30	7.30	59.00	28.00	13.00	92	5	3		
General Light Industry		9.50	7.30	7.30	59.00	28.00	13.00	92	5	3		
Unrefrigerated Warehouse-No		9.50	7.30	7.30	59.00	0.00	41.00	92	5	3		
LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.407130	0.071843	0.163335	0.195282	0.057212	0.008237	0.019822	0.064465	0.001813	0.001463	0.006055	0.001106	0.002238

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.0000	133.5133	133.5133	6.0400e-003	1.2500e-003	134.0273
Electricity Unmitigated											0.0000	133.5133	133.5133	6.0400e-003	1.2500e-003	134.0273
NaturalGas Mitigated											0.0000	54.8635	54.8635	1.0500e-003	1.0100e-003	55.1974
NaturalGas Unmitigated											0.0000	54.8635	54.8635	1.0500e-003	1.0100e-003	55.1974

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	737345											0.0000	39.3476	39.3476	7.5000e-004	7.2000e-004	39.5870
General Light Industry	91514.5											0.0000	4.8836	4.8836	9.0000e-005	9.0000e-005	4.9133
Unrefrigerated Warehouse-No	199244											0.0000	10.6324	10.6324	2.0000e-004	1.9000e-004	10.6971
Total												0.0000	54.8635	54.8635	1.0400e-003	1.0000e-003	55.1974

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	737345											0.0000	39.3476	39.3476	7.5000e-004	7.2000e-004	39.5870
General Light Industry	91514.5											0.0000	4.8836	4.8836	9.0000e-005	9.0000e-005	4.9133
Unrefrigerated Warehouse-No Cooling	199244											0.0000	10.6324	10.6324	2.0000e-004	1.9000e-004	10.6971
Total												0.0000	54.8635	54.8635	1.0400e-003	1.0000e-003	55.1974

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	311131	90.5115	4.0900e-003	8.5000e-004	90.8599
General Light Industry	38615.5	11.2337	5.1000e-004	1.1000e-004	11.2769
Unrefrigerated Warehouse-No Cooling	109202	31.7681	1.4400e-003	3.0000e-004	31.8904
Total		133.5133	6.0400e-003	1.2600e-003	134.0273

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	311131	90.5115	4.0900e-003	8.5000e-004	90.8599
General Light Industry	38615.5	11.2337	5.1000e-004	1.1000e-004	11.2769
Unrefrigerated Warehouse-No Cooling	109202	31.7681	1.4400e-003	3.0000e-004	31.8904
Total		133.5133	6.0400e-003	1.2600e-003	134.0273

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	8.1000e-004	8.1000e-004	0.0000	0.0000	8.9000e-004
Unmitigated											0.0000	8.1000e-004	8.1000e-004	0.0000	0.0000	8.9000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	8.1000e-004	8.1000e-004	0.0000	0.0000	8.9000e-004
Total											0.0000	8.1000e-004	8.1000e-004	0.0000	0.0000	8.9000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	8.1000e-004	8.1000e-004	0.0000	0.0000	8.9000e-004
Total											0.0000	8.1000e-004	8.1000e-004	0.0000	0.0000	8.9000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	19.8308	0.3423	8.2100e-003	29.5645
Unmitigated	19.8308	0.3424	8.2200e-003	29.5698

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	7.17338 / 0	13.5676	0.2343	5.6200e-003	20.2306
General Light Industry	0.890312 / 0	1.6839	0.0291	7.0000e-004	2.5109
Unrefrigerated Warehouse-No Dry	2.42119 / 0	4.5794	0.0791	1.9000e-003	6.8283
Total		19.8309	0.3424	8.2200e-003	29.5698

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	7.17338 / 0	13.5676	0.2342	5.6200e-003	20.2270
General Light Industry	0.890312 / 0	1.6839	0.0291	7.0000e-004	2.5104
Unrefrigerated Warehouse-No Dry	2.42119 / 0	4.5794	0.0791	1.9000e-003	6.8271
Total		19.8309	0.3423	8.2200e-003	29.5645

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	10.7727	0.6367	0.0000	24.1424
Unmitigated	10.7727	0.6367	0.0000	24.1424

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	38.46	7.8070	0.4614	0.0000	17.4961
General Light Industry	4.77	0.9683	0.0572	0.0000	2.1700
Unrefrigerated Warehouse-No	9.84	1.9974	0.1180	0.0000	4.4764
Total		10.7727	0.6366	0.0000	24.1424

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	38.46	7.8070	0.4614	0.0000	17.4961
General Light Industry	4.77	0.9683	0.0572	0.0000	2.1700
Unrefrigerated Warehouse-No	9.84	1.9974	0.1180	0.0000	4.4764
Total		10.7727	0.6366	0.0000	24.1424

Pixley Community Plan - Residential 2030 BAU
Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	11.00	Dwelling Unit	0.69	11,000.00	31
Mobile Home Park	37.00	Dwelling Unit	4.66	44,400.00	106
Single Family Housing	211.00	Dwelling Unit	68.51	379,800.00	603

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2005
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Vehicle Emission Factors - 2030 SJVAPCD Residential Fleet Mix

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2005
tblVehicleEF	HHD	0.07	0.02
tblVehicleEF	LDA	0.39	0.50
tblVehicleEF	LDT1	0.14	0.22
tblVehicleEF	LDT2	0.20	0.17
tblVehicleEF	LHD1	0.03	1.0000e-003
tblVehicleEF	LHD2	9.4340e-003	1.0000e-003
tblVehicleEF	MCY	9.8420e-003	3.1000e-003
tblVehicleEF	MDV	0.12	0.06
tblVehicleEF	MH	2.8220e-003	4.3000e-003
tblVehicleEF	MHD	0.02	8.6000e-003
tblVehicleEF	OBUS	1.1860e-003	0.00
tblVehicleEF	SBUS	2.0530e-003	1.0000e-003
tblVehicleEF	UBUS	1.4140e-003	3.9000e-003

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	115.3421	115.3421	7.1800e-003	2.0600e-003	116.1306
Energy											0.0000	985.4817	985.4817	0.0334	0.0131	990.2320
Mobile											0.0000	2,931.2734	2,931.2734	0.3438	0.0000	2,938.4924
Waste											48.5473	0.0000	48.5473	2.8691	0.0000	108.7977
Water											5.3536	37.3952	42.7488	0.5516	0.0133	58.4649
Total											53.9009	4,069.4923	4,123.3933	3.8050	0.0285	4,212.1175

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	115.3421	115.3421	7.1800e-003	2.0600e-003	116.1306
Energy											0.0000	985.4817	985.4817	0.0334	0.0131	990.2320
Mobile											0.0000	2,931.2734	2,931.2734	0.3438	0.0000	2,938.4924
Waste											48.5473	0.0000	48.5473	2.8691	0.0000	108.7977
Water											5.3536	37.3952	42.7488	0.5515	0.0133	58.4564
Total											53.9009	4,069.4923	4,123.3933	3.8049	0.0284	4,212.1090
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	2,931.2734	2,931.2734	0.3438	0.0000	2,938.4924
Unmitigated											0.0000	2,931.2734	2,931.2734	0.3438	0.0000	2,938.4924

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	72.49	78.76	66.77	204,552	204,552
Mobile Home Park	184.63	185.00	161.32	511,185	511,185
Single Family Housing	2,019.27	2,126.88	1850.47	5,667,145	5,667,145
Total	2,276.39	2,390.64	2,078.56	6,382,882	6,382,882

4.3 Trip Type Information

		Miles			Trip %			Trip Purpose %				
Land Use		H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by		
Apartments Low Rise		10.80	7.30	7.50	38.40	22.60	39.00	86	11	3		
Mobile Home Park		10.80	7.30	7.50	38.40	22.60	39.00	86	11	3		
Single Family Housing		10.80	7.30	7.50	38.40	22.60	39.00	86	11	3		
LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.498100	0.224600	0.172300	0.063800	0.001000	0.001000	0.008600	0.018200	0.000000	0.003900	0.003100	0.001000	0.004300

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.0000	557.7518	557.7518	0.0252	5.2200e-003	559.8990
Electricity Unmitigated											0.0000	557.7518	557.7518	0.0252	5.2200e-003	559.8990
NaturalGas Mitigated											0.0000	427.7299	427.7299	8.2000e-003	7.8400e-003	430.3330
NaturalGas Unmitigated											0.0000	427.7299	427.7299	8.2000e-003	7.8400e-003	430.3330

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	7.20635e+006											0.0000	384.5585	384.5585	7.3700e-003	7.0500e-003	386.8989
Apartments Low Rise	172324											0.0000	9.1959	9.1959	1.8000e-004	1.7000e-004	9.2518
Mobile Home Park	636676											0.0000	33.9755	33.9755	6.5000e-004	6.2000e-004	34.1822
Total												0.0000	427.7299	427.7299	8.2000e-003	7.8400e-003	430.3330

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	7.20635e+006											0.0000	384.5585	384.5585	7.3700e-003	7.0500e-003	386.8989
Apartments Low Rise	172324											0.0000	9.1959	9.1959	1.8000e-004	1.7000e-004	9.2518
Mobile Home Park	636676											0.0000	33.9755	33.9755	6.5000e-004	6.2000e-004	34.1822
Total												0.0000	427.7299	427.7299	8.2000e-003	7.8400e-003	430.3330

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	43342.8	12.6089	5.7000e-004	1.2000e-004	12.6574
Mobile Home Park	197333	57.4064	2.6000e-003	5.4000e-004	57.6274
Single Family Housing	1.67658e+006	487.7365	0.0221	4.5600e-003	489.6142
Total		557.7518	0.0252	5.2200e-003	559.8990

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	43342.8	12.6089	5.7000e-004	1.2000e-004	12.6574
Mobile Home Park	197333	57.4064	2.6000e-003	5.4000e-004	57.6274
Single Family Housing	1.67658e+006	487.7365	0.0221	4.5600e-003	489.6142
Total		557.7518	0.0252	5.2200e-003	559.8990

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	115.3421	115.3421	7.1800e-003	2.0600e-003	116.1306
Unmitigated											0.0000	115.3421	115.3421	7.1800e-003	2.0600e-003	116.1306

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	112.2007	112.2007	2.1500e-003	2.0600e-003	112.8836
Landscaping											0.0000	3.1414	3.1414	5.0300e-003	0.0000	3.2470
Total											0.0000	115.3421	115.3421	7.1800e-003	2.0600e-003	116.1306

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth											0.0000	112.2007	112.2007	2.1500e-003	2.0600e-003	112.8836
Landscaping											0.0000	3.1414	3.1414	5.0300e-003	0.0000	3.2470
Total											0.0000	115.3421	115.3421	7.1800e-003	2.0600e-003	116.1306

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	42.7488	0.5515	0.0133	58.4564
Unmitigated	42.7488	0.5516	0.0133	58.4649

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	0.716694 / 0.451829	1.8156	0.0234	5.7000e-004	2.4831
Mobile Home Park	2.4107 / 1.51979	6.1070	0.0788	1.9000e-003	8.3521
Single Family Housing	13.7475 / 8.6669	34.8262	0.4493	0.0109	47.6297
Total		42.7488	0.5516	0.0133	58.4649

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	0.716694 / 0.451829	1.8156	0.0234	5.7000e-004	2.4827
Mobile Home Park	2.4107 / 1.51979	6.1070	0.0788	1.9000e-003	8.3509
Single Family Housing	13.7475 / 8.6669	34.8262	0.4493	0.0109	47.6228
Total		42.7488	0.5515	0.0133	58.4564

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	48.5473	2.8691	0.0000	108.7977
Unmitigated	48.5473	2.8691	0.0000	108.7977

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	5.06	1.0271	0.0607	0.0000	2.3019
Mobile Home Park	17.02	3.4549	0.2042	0.0000	7.7427
Single Family Housing	217.08	44.0653	2.6042	0.0000	98.7531
Total		48.5473	2.8691	0.0000	108.7977

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	5.06	1.0271	0.0607	0.0000	2.3019
Mobile Home Park	17.02	3.4549	0.2042	0.0000	7.7427
Single Family Housing	217.08	44.0653	2.6042	0.0000	98.7531
Total		48.5473	2.8691	0.0000	108.7977

Pixley Community Plan - Commercial 2030 BAU
Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government Office Building	1.94	1000sqft	0.04	1,940.00	0
Medical Office Building	1.66	1000sqft	0.04	1,660.00	0
Day-Care Center	2.12	1000sqft	0.05	2,120.00	0
Elementary School	30.57	1000sqft	0.70	30,570.00	0
Place of Worship	7.04	1000sqft	0.16	7,040.00	0
Motel	2.30	Room	0.10	4,508.46	0
Quality Restaurant	4.61	1000sqft	0.11	4,610.00	0
Automobile Care Center	16.64	1000sqft	0.38	16,640.00	0
Convenience Market With Gas Pumps	3.78	1000sqft	0.09	3,780.00	0
Strip Mall	11.79	1000sqft	0.27	11,790.00	0
Supermarket	4.12	1000sqft	0.09	4,120.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2005
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Vehicle Emission Factors - 2030 Fleet Mix

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2005
tblVehicleEF	HHD	0.07	0.06
tblVehicleEF	LDA	0.39	0.41
tblVehicleEF	LDT1	0.14	0.07
tblVehicleEF	LDT2	0.20	0.16
tblVehicleEF	LHD1	0.03	0.06
tblVehicleEF	LHD2	9.4340e-003	8.2690e-003
tblVehicleEF	MCY	9.8420e-003	6.3470e-003
tblVehicleEF	MDV	0.12	0.19
tblVehicleEF	MH	2.8220e-003	2.2740e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	OBUS	1.1860e-003	1.8050e-003
tblVehicleEF	SBUS	2.0530e-003	9.9700e-004
tblVehicleEF	UBUS	1.4140e-003	1.5120e-003

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	1.5500e-003	1.5500e-003	1.0000e-005	0.0000	1.7000e-003
Energy											0.0000	462.0915	462.0915	0.0167	5.7600e-003	464.2289
Mobile											0.0000	3,923.8083	3,923.8083	0.4792	0.0000	3,933.8707
Waste											44.3271	0.0000	44.3271	2.6197	0.0000	99.3400
Water											2.0544	15.1943	17.2487	0.2117	5.1200e-003	23.2830
Total											46.3816	4,401.0957	4,447.4772	3.3273	0.0109	4,520.7242

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	1.5500e-003	1.5500e-003	1.0000e-005	0.0000	1.7000e-003
Energy											0.0000	462.0915	462.0915	0.0167	5.7600e-003	464.2289
Mobile											0.0000	3,923.8083	3,923.8083	0.4792	0.0000	3,933.8707
Waste											44.3271	0.0000	44.3271	2.6197	0.0000	99.3400
Water											2.0544	15.1943	17.2487	0.2117	5.1200e-003	23.2797
Total											46.3816	4,401.0957	4,447.4772	3.3272	0.0109	4,520.7209
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	3,923.8083	3,923.8083	0.4792	0.0000	3,933.8707
Unmitigated											0.0000	3,923.8083	3,923.8083	0.4792	0.0000	3,933.8707

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	3,196.37	5,474.69	4468.26	1,986,595	1,986,595
Day-Care Center	168.03	13.17	12.36	145,636	145,636
Automobile Care Center	1,031.68	1,031.68	1031.68	1,027,745	1,027,745
Elementary School	471.70	0.00	0.00	742,899	742,899
Place of Worship	64.13	73.00	257.88	174,121	174,121
Government Office Building	133.72	0.00	0.00	163,801	163,801
Medical Office Building	59.98	14.87	2.57	88,726	88,726
Motel	12.95	12.95	12.95	24,574	24,574
Quality Restaurant	414.67	435.00	332.66	481,415	481,415
Strip Mall	522.53	495.65	240.87	736,837	736,837
Supermarket	421.23	731.67	685.73	572,548	572,548
Total	6,496.99	8,282.68	7,044.96	6,144,898	6,144,898

4.3 Trip Type Information

			Miles			Trip %			Trip Purpose %			
Land Use			H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by	
Convenience Market With Gas			9.50	7.30	7.30	0.80	80.20	19.00	14	21	65	
Day-Care Center			9.50	7.30	7.30	12.70	82.30	5.00	28	58	14	
Automobile Care Center			9.50	7.30	7.30	33.00	48.00	19.00	21	51	28	
Elementary School			9.50	7.30	7.30	65.00	30.00	5.00	63	25	12	
Place of Worship			9.50	7.30	7.30	0.00	95.00	5.00	64	25	11	
Government Office Building			9.50	7.30	7.30	33.00	62.00	5.00	50	34	16	
Medical Office Building			9.50	7.30	7.30	29.60	51.40	19.00	60	30	10	
Motel			9.50	7.30	7.30	19.00	62.00	19.00	58	38	4	
Quality Restaurant			9.50	7.30	7.30	12.00	69.00	19.00	38	18	44	
Strip Mall			9.50	7.30	7.30	16.60	64.40	19.00	45	40	15	
Supermarket			9.50	7.30	7.30	6.50	74.50	19.00	34	30	36	
LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409681	0.072697	0.163067	0.193134	0.057567	0.008269	0.019683	0.062967	0.001805	0.001512	0.006347	0.000997	0.002274

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.0000	301.7911	301.7911	0.0137	2.8200e-003	302.9529
Electricity Unmitigated											0.0000	301.7911	301.7911	0.0137	2.8200e-003	302.9529
NaturalGas Mitigated											0.0000	160.3005	160.3005	3.0700e-003	2.9400e-003	161.2760
NaturalGas Unmitigated											0.0000	160.3005	160.3005	3.0700e-003	2.9400e-003	161.2760

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	395533											0.0000	21.1071	21.1071	4.0000e-004	3.9000e-004	21.2356
Convenience Market With Gas Pump	47250											0.0000	2.5214	2.5214	5.0000e-005	5.0000e-005	2.5368
Day-Care Center	61776.8											0.0000	3.2967	3.2967	6.0000e-005	6.0000e-005	3.3167
Elementary School	890810											0.0000	47.5370	47.5370	9.1000e-004	8.7000e-004	47.8263
Government Office Building	30380.4											0.0000	1.6212	1.6212	3.0000e-005	3.0000e-005	1.6311
Medical Office Building	25995.6											0.0000	1.3872	1.3872	3.0000e-005	3.0000e-005	1.3957
Motel	121593											0.0000	6.4887	6.4887	1.2000e-004	1.2000e-004	6.5282
Place of Worship	167341											0.0000	8.9299	8.9299	1.7000e-004	1.6000e-004	8.9843
Quality Restaurant	985341											0.0000	52.5816	52.5816	1.0100e-003	9.6000e-004	52.9016
Strip Mall	147375											0.0000	7.8645	7.8645	1.5000e-004	1.4000e-004	7.9124
Supermarket	130522											0.0000	6.9651	6.9651	1.3000e-004	1.3000e-004	7.0075
Total												0.0000	160.3005	160.3005	3.0600e-003	2.9400e-003	161.2760

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Automobile Care Center	395533											0.0000	21.1071	21.1071	4.0000e-004	3.9000e-004	21.2356
Convenience Market With Gas	47250											0.0000	2.5214	2.5214	5.0000e-005	5.0000e-005	2.5368
Day-Care Center	61776.8											0.0000	3.2967	3.2967	6.0000e-005	6.0000e-005	3.3167
Elementary School	890810											0.0000	47.5370	47.5370	9.1000e-004	8.7000e-004	47.8263
Government Office Building	30380.4											0.0000	1.6212	1.6212	3.0000e-005	3.0000e-005	1.6311
Medical Office Building	25995.6											0.0000	1.3872	1.3872	3.0000e-005	3.0000e-005	1.3957
Motel	121593											0.0000	6.4887	6.4887	1.2000e-004	1.2000e-004	6.5282
Place of Worship	167341											0.0000	8.9299	8.9299	1.7000e-004	1.6000e-004	8.9843
Quality Restaurant	985341											0.0000	52.5816	52.5816	1.0100e-003	9.6000e-004	52.9016
Strip Mall	147375											0.0000	7.8645	7.8645	1.5000e-004	1.4000e-004	7.9124
Supermarket	130522											0.0000	6.9651	6.9651	1.3000e-004	1.3000e-004	7.0075
Total												0.0000	160.3005	160.3005	3.0600e-003	2.9400e-003	161.2760

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	166899	48.5529	2.2000e-003	4.5000e-004	48.7398
Convenience Market With Gas Pump	36288	10.5566	4.8000e-004	1.0000e-004	10.5972
Day-Care Center	17786.8	5.1744	2.3000e-004	5.0000e-005	5.1943
Elementary School	256482	74.6136	3.3700e-003	7.0000e-004	74.9009
Government Office Building	20583.4	5.9880	2.7000e-004	6.0000e-005	6.0110
Medical Office Building	17612.6	5.1237	2.3000e-004	5.0000e-005	5.1434
Motel	43326.3	12.6041	5.7000e-004	1.2000e-004	12.6526
Place of Worship	70611.2	20.5416	9.3000e-004	1.9000e-004	20.6207
Quality Restaurant	148488	43.1969	1.9500e-003	4.0000e-004	43.3632
Strip Mall	113184	32.9265	1.4900e-003	3.1000e-004	33.0533
Supermarket	146136	42.5128	1.9200e-003	4.0000e-004	42.6764
Total		301.7911	0.0136	2.8300e-003	302.9529

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Automobile Care Center	166899	48.5529	2.2000e-003	4.5000e-004	48.7398
Convenience Market With Gas	36288	10.5566	4.8000e-004	1.0000e-004	10.5972
Day-Care Center	17786.8	5.1744	2.3000e-004	5.0000e-005	5.1943
Elementary School	256482	74.6136	3.3700e-003	7.0000e-004	74.9009
Government Office Building	20583.4	5.9880	2.7000e-004	6.0000e-005	6.0110
Medical Office Building	17612.6	5.1237	2.3000e-004	5.0000e-005	5.1434
Motel	43326.3	12.6041	5.7000e-004	1.2000e-004	12.6526
Place of Worship	70611.2	20.5416	9.3000e-004	1.9000e-004	20.6207
Quality Restaurant	148488	43.1969	1.9500e-003	4.0000e-004	43.3632
Strip Mall	113184	32.9265	1.4900e-003	3.1000e-004	33.0533
Supermarket	146136	42.5128	1.9200e-003	4.0000e-004	42.6764
Total		301.7911	0.0136	2.8300e-003	302.9529

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	1.5500e-003	1.5500e-003	1.0000e-005	0.0000	1.7000e-003
Unmitigated											0.0000	1.5500e-003	1.5500e-003	1.0000e-005	0.0000	1.7000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	1.5500e-003	1.5500e-003	1.0000e-005	0.0000	1.7000e-003
Total											0.0000	1.5500e-003	1.5500e-003	1.0000e-005	0.0000	1.7000e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	1.5500e-003	1.5500e-003	1.0000e-005	0.0000	1.7000e-003
Total											0.0000	1.5500e-003	1.5500e-003	1.0000e-005	0.0000	1.7000e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	17.2487	0.2117	5.1200e-003	23.2797
Unmitigated	17.2487	0.2117	5.1200e-003	23.2830

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	1.56551 / 0.959506	3.9379	0.0512	1.2400e-003	5.3958
Convenience Market With Gas Drive-Through	0.279994 / 0.171609	0.7043	9.1500e-003	2.2000e-004	0.9651
Day-Care Center	0.0909259 / 0.233809	0.4100	2.9800e-003	7.0000e-005	0.4954
Elementary School	0.886436 / 2.27941	3.9975	0.0291	7.2000e-004	4.8298
Government Office Building	0.3854 / 0.236213	0.9695	0.0126	3.0000e-004	1.3284
Medical Office Building	0.208298 / 0.0396758	0.4344	6.8000e-003	1.6000e-004	0.6280
Motel	0.0583436 / 0.0064826	0.1170	1.9100e-003	5.0000e-005	0.1712
Place of Worship	0.220274 / 0.344531	0.7674	7.2100e-003	1.8000e-004	0.9734
Quality Restaurant	1.39929 / 0.0893164	2.7375	0.0457	1.1000e-003	4.0376
Strip Mall	0.873315 / 0.535258	2.1968	0.0285	6.9000e-004	3.0101
Supermarket	0.507865 / 0.0157072	0.9766	0.0166	4.0000e-004	1.4484
Total		17.2488	0.2117	5.1300e-003	23.2830

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Automobile Care Center	1.56551 / 0.959506	3.9379	0.0512	1.2300e-003	5.3950
Convenience Market With Gas	0.279994 / 0.171609	0.7043	9.1500e-003	2.2000e-004	0.9649
Day-Care Center	0.0909259 / 0.233809	0.4100	2.9800e-003	7.0000e-005	0.4954
Elementary School	0.886436 / 2.27941	3.9975	0.0291	7.2000e-004	4.8293
Government Office Building	0.3854 / 0.236213	0.9695	0.0126	3.0000e-004	1.3282
Medical Office Building	0.208298 / 0.0396758	0.4344	6.8000e-003	1.6000e-004	0.6279
Motel	0.0583436 / 0.0064826	0.1170	1.9100e-003	5.0000e-005	0.1711
Place of Worship	0.220274 / 0.344531	0.7674	7.2100e-003	1.8000e-004	0.9733
Quality Restaurant	1.39929 / 0.0893164	2.7375	0.0457	1.1000e-003	4.0369
Strip Mall	0.873315 / 0.535258	2.1968	0.0285	6.9000e-004	3.0096
Supermarket	0.507865 / 0.0157072	0.9766	0.0166	4.0000e-004	1.4481
Total		17.2488	0.2117	5.1200e-003	23.2797

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	44.3271	2.6197	0.0000	99.3400
Mitigated	44.3271	2.6197	0.0000	99.3400

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	63.56	12.9021	0.7625	0.0000	28.9145
Convenience Market With Gas	11.36	2.3060	0.1363	0.0000	5.1678
Day-Care Center	2.76	0.5603	0.0331	0.0000	1.2556
Elementary School	39.74	8.0669	0.4767	0.0000	18.0784
Government Office Building	1.8	0.3654	0.0216	0.0000	0.8189
Medical Office Building	17.93	3.6396	0.2151	0.0000	8.1566
Motel	1.26	0.2558	0.0151	0.0000	0.5732
Place of Worship	40.13	8.1460	0.4814	0.0000	18.2558
Quality Restaurant	4.21	0.8546	0.0505	0.0000	1.9152
Strip Mall	12.38	2.5130	0.1485	0.0000	5.6319
Supermarket	23.24	4.7175	0.2788	0.0000	10.5722
Total		44.3272	2.6197	0.0000	99.3400

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Automobile Care Center	63.56	12.9021	0.7625	0.0000	28.9145
Convenience Market With Gas	11.36	2.3060	0.1363	0.0000	5.1678
Day-Care Center	2.76	0.5603	0.0331	0.0000	1.2556
Elementary School	39.74	8.0669	0.4767	0.0000	18.0784
Government Office Building	1.8	0.3654	0.0216	0.0000	0.8189
Medical Office Building	17.93	3.6396	0.2151	0.0000	8.1566
Motel	1.26	0.2558	0.0151	0.0000	0.5732
Place of Worship	40.13	8.1460	0.4814	0.0000	18.2558
Quality Restaurant	4.21	0.8546	0.0505	0.0000	1.9152
Strip Mall	12.38	2.5130	0.1485	0.0000	5.6319
Supermarket	23.24	4.7175	0.2788	0.0000	10.5722
Total		44.3272	2.6197	0.0000	99.3400

Pixley Community Plan - Industrial 2030 BAU
Tulare County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	88.36	1000sqft	2.03	88,360.00	0
General Light Industry	10.96	1000sqft	0.25	10,960.00	0
Unrefrigerated Warehouse-No Rail	29.84	1000sqft	0.69	29,840.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2005
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Vehicle Emission Factors - 2030 Fleet Mix

Table Name	Column Name	Default Value	New Value
tblProjectCharacteristics	OperationalYear	2014	2005
tblVehicleEF	HHD	0.07	0.06
tblVehicleEF	LDA	0.39	0.41
tblVehicleEF	LDT1	0.14	0.07
tblVehicleEF	LDT2	0.20	0.16
tblVehicleEF	LHD1	0.03	0.06
tblVehicleEF	LHD2	9.4340e-003	8.2690e-003
tblVehicleEF	MCY	9.8420e-003	6.3470e-003
tblVehicleEF	MDV	0.12	0.19
tblVehicleEF	MH	2.8220e-003	2.2740e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	OBUS	1.1860e-003	1.8050e-003
tblVehicleEF	SBUS	2.0530e-003	9.9700e-003
tblVehicleEF	UBUS	1.4140e-003	1.5120e-003

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015											0.0000	99.1914	99.1914	0.0181	0.0000	99.5718
Total											0.0000	99.1914	99.1914	0.0181	0.0000	99.5718

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015											0.0000	99.1914	99.1914	0.0181	0.0000	99.5718
Total											0.0000	99.1914	99.1914	0.0181	0.0000	99.5718
	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	2.3100e-003	2.3100e-003	1.0000e-005	0.0000	2.5300e-003
Energy											0.0000	536.6269	536.6269	0.0202	6.4200e-003	539.0423
Mobile											0.0000	468.2414	468.2414	0.0450	0.0000	469.1858
Waste											30.6943	0.0000	30.6943	1.8140	0.0000	68.7878
Water											9.4758	47.0163	56.4921	0.9754	0.0234	84.2355
Total											40.1701	1,051.8869	1,092.0570	2.8545	0.0298	1,161.2539

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.0000	2.3100e-003	2.3100e-003	1.0000e-005	0.0000	2.5300e-003
Energy											0.0000	536.6269	536.6269	0.0202	6.4200e-003	539.0423
Mobile											0.0000	468.2414	468.2414	0.0450	0.0000	469.1858
Waste											30.6943	0.0000	30.6943	1.8140	0.0000	68.7878
Water											9.4758	47.0163	56.4921	0.9752	0.0234	84.2204
Total											40.1701	1,051.8869	1,092.0570	2.8544	0.0298	1,161.2388

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.13	0.00

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	468.2414	468.2414	0.0450	0.0000	469.1858
Unmitigated											0.0000	468.2414	468.2414	0.0450	0.0000	469.1858

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	132.54	132.54	132.54	386,952	386,952
General Light Industry	76.39	14.47	7.45	168,446	168,446
Unrefrigerated Warehouse-No Rail	77.29	77.29	77.29	225,636	225,636
Total	286.22	224.29	217.28	781,034	781,034

4.3 Trip Type Information

		Miles			Trip %			Trip Purpose %				
Land Use		H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by		
General Heavy Industry		9.50	7.30	7.30	59.00	28.00	13.00	92	5	3		
General Light Industry		9.50	7.30	7.30	59.00	28.00	13.00	92	5	3		
Unrefrigerated Warehouse-No		9.50	7.30	7.30	59.00	0.00	41.00	92	5	3		
LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.409681	0.072697	0.163067	0.193134	0.057567	0.008269	0.019683	0.062967	0.001805	0.001512	0.006347	0.009970	0.002274

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.0000	380.3408	380.3408	0.0172	3.5600e-003	381.8050
Electricity Unmitigated											0.0000	380.3408	380.3408	0.0172	3.5600e-003	381.8050
NaturalGas Mitigated											0.0000	156.2861	156.2861	3.0000e-003	2.8700e-003	157.2373
NaturalGas Unmitigated											0.0000	156.2861	156.2861	3.0000e-003	2.8700e-003	157.2373

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	2.10032e+006											0.0000	112.0809	112.0809	2.1500e-003	2.0500e-003	112.7630
General Light Industry	260519											0.0000	13.9023	13.9023	2.7000e-004	2.5000e-004	13.9869
Unrefrigerated Warehouse-No	567855											0.0000	30.3029	30.3029	5.8000e-004	5.6000e-004	30.4873
Total												0.0000	156.2861	156.2861	3.0000e-003	2.8600e-003	157.2373

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	260519											0.0000	13.9023	13.9023	2.7000e- 004	2.5000e- 004	13.9869
Unrefrigerated Warehouse-No Cooling	567855											0.0000	30.3029	30.3029	5.8000e- 004	5.6000e- 004	30.4873
General Heavy Industry	2.10032e+ 006											0.0000	112.0809	112.0809	2.1500e- 003	2.0500e- 003	112.7630
Total												0.0000	156.2861	156.2861	3.0000e- 003	2.8600e- 003	157.2373

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	886251	257.8205	0.0117	2.4100e- 003	258.8131
General Light Industry	109929	31.9796	1.4500e- 003	3.0000e- 004	32.1027
Unrefrigerated Warehouse-No Cooling	311231	90.5407	4.0900e- 003	8.5000e- 004	90.8893
Total		380.3408	0.0172	3.5600e- 003	381.8050

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	886251	257.8205	0.0117	2.4100e- 003	258.8131
General Light Industry	109929	31.9796	1.4500e- 003	3.0000e- 004	32.1027
Unrefrigerated Warehouse-No Cooling	311231	90.5407	4.0900e- 003	8.5000e- 004	90.8893
Total		380.3408	0.0172	3.5600e- 003	381.8050

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.0000	2.3100e-003	2.3100e-003	1.0000e-005	0.0000	2.5300e-003
Unmitigated											0.0000	2.3100e-003	2.3100e-003	1.0000e-005	0.0000	2.5300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	2.3100e-003	2.3100e-003	1.0000e-005	0.0000	2.5300e-003
Total											0.0000	2.3100e-003	2.3100e-003	1.0000e-005	0.0000	2.5300e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping											0.0000	2.3100e-003	2.3100e-003	1.0000e-005	0.0000	2.5300e-003
Total											0.0000	2.3100e-003	2.3100e-003	1.0000e-005	0.0000	2.5300e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	56.4921	0.9752	0.0234	84.2204
Unmitigated	56.4921	0.9754	0.0234	84.2355

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	20.4333 / 0	38.6470	0.6673	0.0160	57.6266
General Light Industry	2.5345 / 0	4.7937	0.0828	1.9900e-003	7.1479
Unrefrigerated Warehouse-No Pool	6.9005 / 0	13.0514	0.2253	5.4100e-003	19.4610
Total		56.4921	0.9754	0.0234	84.2355

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	20.4333 / 0	38.6470	0.6672	0.0160	57.6162
General Light Industry	2.5345 / 0	4.7937	0.0828	1.9800e-003	7.1466
Unrefrigerated Warehouse-No Pool	6.9005 / 0	13.0514	0.2253	5.4000e-003	19.4576
Total		56.4921	0.9752	0.0234	84.2204

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	30.6943	1.8140	0.0000	68.7878
Unmitigated	30.6943	1.8140	0.0000	68.7878

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	109.57	22.2417	1.3145	0.0000	49.8451
General Light Industry	13.59	2.7587	0.1630	0.0000	6.1823
Unrefrigerated Warehouse-No	28.05	5.6939	0.3365	0.0000	12.7604
Total		30.6943	1.8140	0.0000	68.7878

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	109.57	22.2417	1.3145	0.0000	49.8451
General Light Industry	13.59	2.7587	0.1630	0.0000	6.1823
Unrefrigerated Warehouse-No	28.05	5.6939	0.3365	0.0000	12.7604
Total		30.6943	1.8140	0.0000	68.7878

Appendix E

Noise Study

Noise Element

1 INTRODUCTION

The purpose of this Noise Element Update for the community of Pixley is to provide a policy framework for addressing potential noise impacts encountered in the planning process. The Noise Element shall be used as a guide for establishing land use patterns that minimize noise impacts on the community and shall include measures and solutions to address existing and foreseeable noise conflicts. It is intended that this Element be the adopted Noise Element of the Pixley Community Plan, in conformance with Section 65302 (f) of the California Government Code.

The community of Pixley lies within the central portion of the San Joaquin Valley. The community is located on the Valley floor at an elevation of approximately 271 feet above sea level with the surrounding area mostly flat. Figure 1 shows Pixley in the context of its region. The transportation system within the Pixley planning area includes State Route (SR) 99 as well as several County routes and a grid of local streets as shown in Figure 2.

The public transit system in the community of Pixley includes public transit services, and within Tulare County it includes common bus carriers, AMTRAK and other local agency transit and paratransit services. In addition, the County transportation system includes general aviation facilities, air passenger facilities, freight rail service, and bicycle and pedestrian facilities.

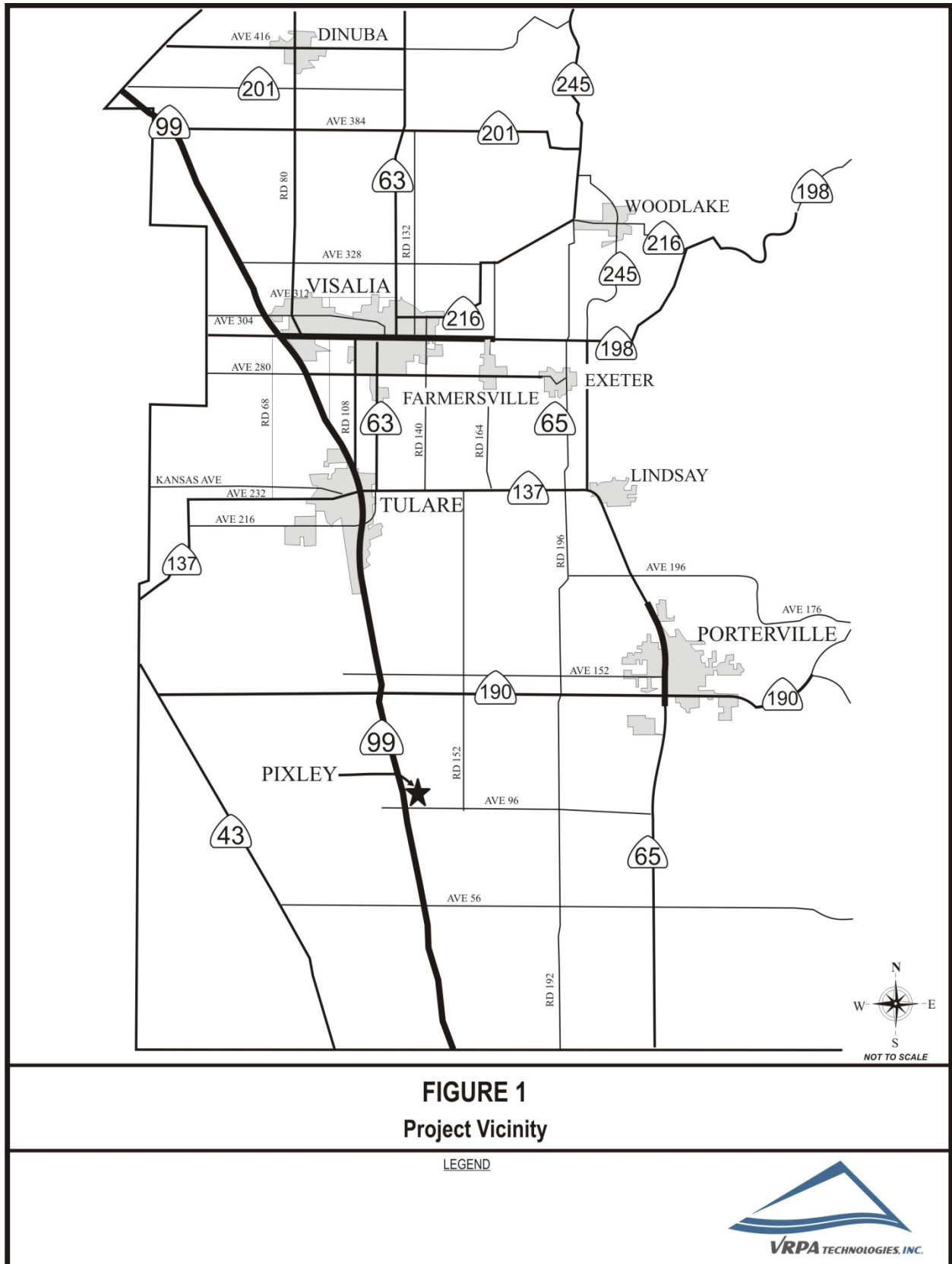
1.1 Street and Highway System

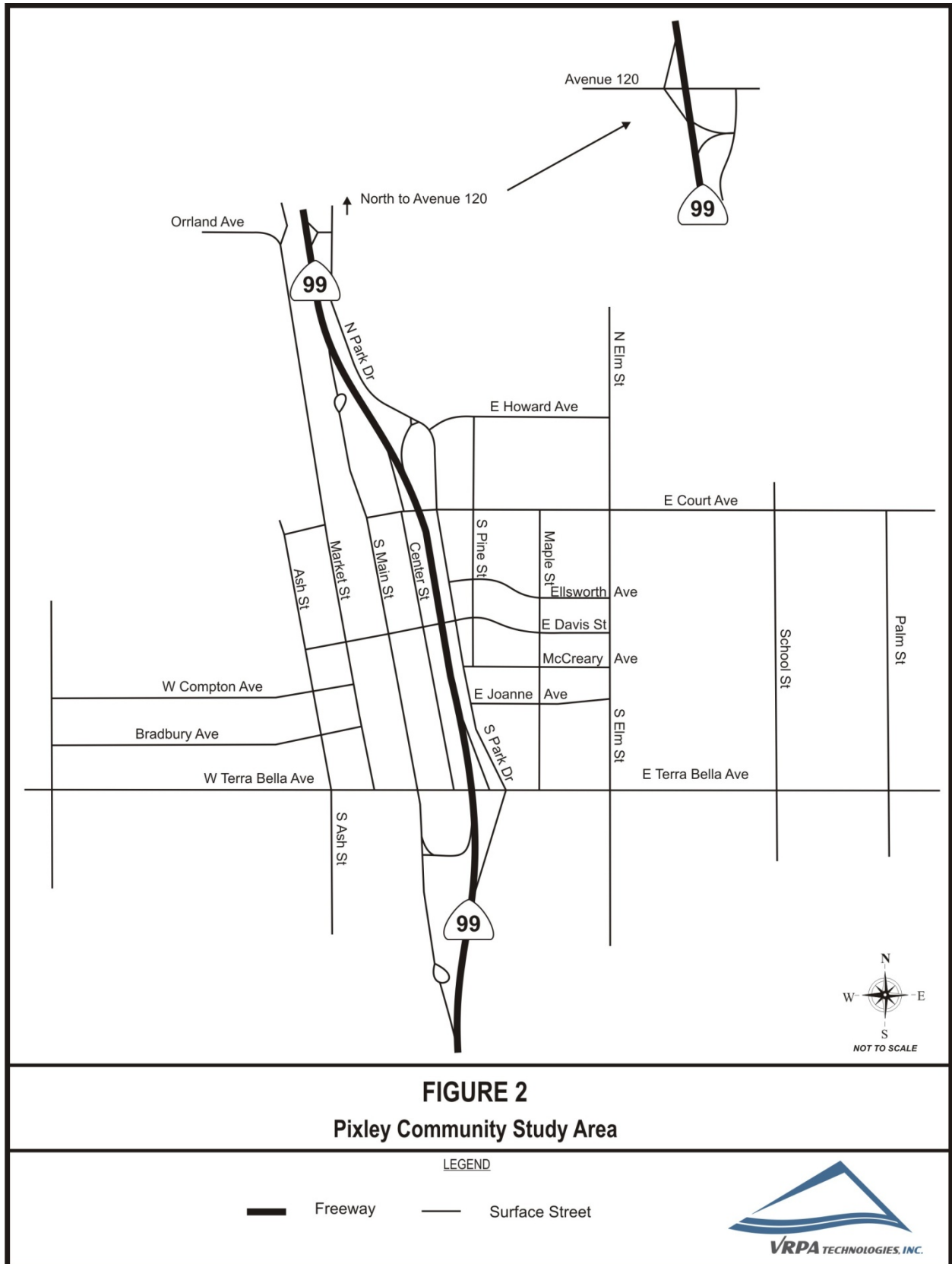
Functional classification is the process by which streets and highways are grouped into classes according to the type of service they provide. Streets and highways are classified according to their primary function and may be assigned into several basic classifications:

- ✓ State Highways (which may be freeways, expressways or conventional highways)
- ✓ Arterials and Collectors
- ✓ Local Streets

State Highways connect regional destinations and generally pass through several jurisdictions. Traffic carrying capacity is maintained through access control at two-mile or more intervals, with shorter intervals between access points permitted in large urban areas.

Arterials serve as the principal network for cross-town traffic flow. They connect areas of major traffic generation within the community area and connect with important county roads and state highways. They also provide for the distribution and collection of through traffic to and from collector and local streets.





Collectors provide for traffic movement between arterial and local streets, traffic movement within and between neighborhoods and major activity centers, and limited direct access to abutting properties.

Local streets provide for direct access to abutting properties and for very localized traffic movements within residential, commercial and industrial areas.

In recent years the concept of “Complete Streets” has evolved. Under this concept, while streets may still carry a primary functional classification, the design of streets aims to allow all modes and trip purposes to be safely accommodated to the extent feasible and as warranted by local needs and conditions.

1.2 Existing Circulation and Traffic Conditions

State Highways: California State Route 99 is in the Pixley area, State Route (SR) 99 is freeway with two travel lanes northbound and southbound. There are interchanges at Avenue 320, Court Avenue and Terra Bella Avenue, affording good access between Pixley and Valley-wide destinations served by the freeway.

Arterials: Avenue 320, also known as Hesse Avenue, is a rural arterial roadway about two miles north of the center of Pixley. As noted above it has an interchange with SR 99. It follows an east-west alignment and provides one traffic lane in each direction throughout the area.

Court Avenue is a major street that is bifurcated into eastern and western segments by SR 99, which it crosses via an overpass bridge. Court Avenue combines the functions of both an arterial and collector street and provides one traffic lane in each direction for its length through central Pixley. Court Avenue serves the Pixley Elementary School, which is just northeast of its intersection with School Street.

Terra Bella Avenue also known as Road J24, is a major east-west arterial street. Like Court Avenue, Terra Bella is bifurcated into east and west segments by SR 99 and crosses SR 99 via an overpass bridge.

Airport Avenue (also known as Road 120) is a two-lane north-south arterial street that traverses mainly agricultural areas west of Pixley.

Main Street is a two-lane north-south street immediately west of SR 99 that provides access to a mix of uses in the community’s center. Like Court Avenue Main Street combines the functions of both an arterial and collector street. Its northernmost segment serves as southbound off-ramp for SR 99 traffic accessing Court Avenue and destinations on the west side of the freeway. South of Terra Bella Avenue Main Street also receives traffic from another southbound SR 99 off-ramp, and the southernmost segment of Main Street functions as a southbound on-ramp to SR 99.

Center Street is a two-lane north-south street immediately west of SR 99 that provides access to a mix of uses in the community's center. Like Court Avenue and Main Street it combines the functions of both an arterial and collector street, and like Main Street its northernmost segment serves as southbound off-ramp for SR 99 traffic accessing Court Avenue and other destinations in Pixley.

Park Drive is a two-lane north-south street immediately east of SR 99 that also provides access to a mix of uses in the community's center. It too combines the functions of both an arterial and collector street. Its southernmost segment serves as northbound off-ramp for SR 99 traffic accessing Terra Bella Avenue, Court Street and destinations on the east side of the freeway.

School Street is a north-south street that combines the function of a collector and local street. Its paved portion runs from Terra Bella Avenue at the southerly edge of the planning area across Court Avenue to Pixley Elementary School. It affords access to abutting residential properties to west and currently undeveloped parcels to the east.

Local Streets: All other streets and roads in the community's planning area function essentially as local streets, mainly carrying traffic accessing abutting urban and rural properties.

2 Sound and the Human Ear

The amplitude of a sound determines its loudness. Loudness of sound increases and decreases with increasing and decreasing amplitude. Sound pressure amplitude is measured in units of micro-Newton per square meter (N/m²), also called micro-Pascal (μPa). One μPa is approximately one-hundred billionth (0.0000000001) of normal atmospheric pressure. The pressure of a very loud sound may be 200 million μPa, or 10 million times the pressure of the weakest audible sound (20 μPa). Because expressing sound levels in terms of μPa would be very cumbersome, sound pressure level (SPL) is used instead to describe in logarithmic units the ratio of actual sound pressures to a reference pressure squared. These units are called bels, named after Alexander Graham Bell. To provide a finer resolution, a bel is subdivided into 10 decibels, abbreviated dB.

2.1 A-Weighted Decibels

Sound pressure level alone is not a reliable indicator of loudness. The frequency, or pitch, of a sound also has a substantial effect on how humans will respond. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear. Human hearing is limited not only in the range of audible frequencies but also in the way it perceives the SPL in that range. In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz, and it perceives a sound within that range as being more intense than a sound of higher or lower frequency with the same magnitude. To approximate the frequency response of the human ear, a series of SPL adjustments is usually applied to the sound measured by a sound level meter. The adjustments (referred to as a weighting network) are frequency

dependent. The A-scale weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Other weighting networks have been devised to address high noise levels or other special problems (e.g., B-scale, C-scale, D-scale), but these scales are rarely, if ever, used in conjunction with highway traffic noise. Noise levels for traffic noise reports are typically reported in terms of A-weighted dBAs. In environmental noise studies, A-weighted SPLs are commonly referred to as noise levels.

Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise, or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance, and habituation to noise over differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment, referred to as the "ambient" environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by the hearers. With regard to increases in A-weighted noise level, knowledge of the following relationships will be helpful in understanding this report:

- ✓ Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived by humans.
- ✓ Outside of the laboratory, a 3 dB change is considered a just-perceivable difference.
- ✓ A change in level of at least 5 dB is required before any noticeable change in community response would be expected.
- ✓ A 10 dB change is subjectively heard as approximately a doubling in loudness.

2.2 Sound Pressure Levels and Decibels

Because of the ability of the human ear to detect a wide range of sound pressure fluctuations, sound pressure levels are expressed in logarithmic units called decibels. The sound pressure level in decibels is calculated by taking the log of the ratio between the actual sound pressure and the reference sound pressure squared. The reference sound pressure is considered the absolute hearing threshold. In addition, because the human ear is not equally sensitive to all sound frequencies, a specific frequency-dependent rating scale was devised to relate noise to human sensitivity. A dBA scale performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. The basis for comparison is the faintest sound audible to the average ear at the frequency of maximum sensitivity. This dBA scale has been chosen by most authorities for purposes of environmental noise regulation. Typical indoor and outdoor noise levels are presented in Figure 3 (Common Environmental Sound Levels).

2.3 Sound, Noise, and Acoustics

Sound is a disturbance created by a moving or vibrating source in a gaseous or liquid medium or the elastic stage of a solid and is capable of being detected by the hearing organs. Sound may be thought of as the mechanical energy of a vibrating object transmitted by pressure waves through a medium to a hearing organ, such as a human ear. For traffic sound, the medium of concern is air. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired. Sound is actually a process that consists of three components: the sound source, the sound path, and the sound receiver. All three components must be present for sound to exist. Without a source to produce sound, there is no sound. Likewise, without a medium to transmit sound pressure waves, there is also no sound. Finally, sound must be received; a hearing organ, sensor, or object must be present to perceive, register, or be affected by sound or noise. In most situations, there are many different sound sources, paths, and receptors rather than just one of each. Acoustics is the field of science that deals with the production, propagation, reception, effects, and control of sound.

2.4 Frequency and Hertz

A continuous sound can be described by its frequency (pitch) and its amplitude (loudness). Frequency relates to the number of pressure oscillations per second. Low-frequency sounds are low in pitch, like the low notes on a piano, whereas high-frequency sounds are high in pitch, like the high notes on a piano. Frequency is expressed in terms of oscillations, or cycles, per second. Cycles per second are commonly referred to as Hertz (Hz). A frequency of 250 cycles per second is referred to as 250 Hz. High frequencies are sometimes more conveniently expressed in units of kilo-Hertz (kHz), or thousands of Hertz. The extreme range of frequencies that can be heard by the healthiest human ear spans from 16–20 Hz on the low end to about 20,000 Hz (or 20 kHz) on the high end.

2.5 Addition of Decibels

Because decibels are logarithmic units, sound pressure levels cannot be added or subtracted by ordinary arithmetic means. For example, if one automobile produces an SPL of 70 dBA as it passes an observer, two cars passing simultaneously would not produce 140 dBA; they would, in fact, combine to produce 73 dBA. When two sounds of equal SPL are combined, they will produce a combined SPL 3 dBA greater than the original individual SPL. In other words, sound energy must be doubled to produce a 3 dBA increase. If two sound levels differ by 10 dBA or more, the combined SPL is equal to the higher SPL; in other words, the lower sound level does not increase the higher sound level.

3 Characteristics of Sound Propagation and Attenuation

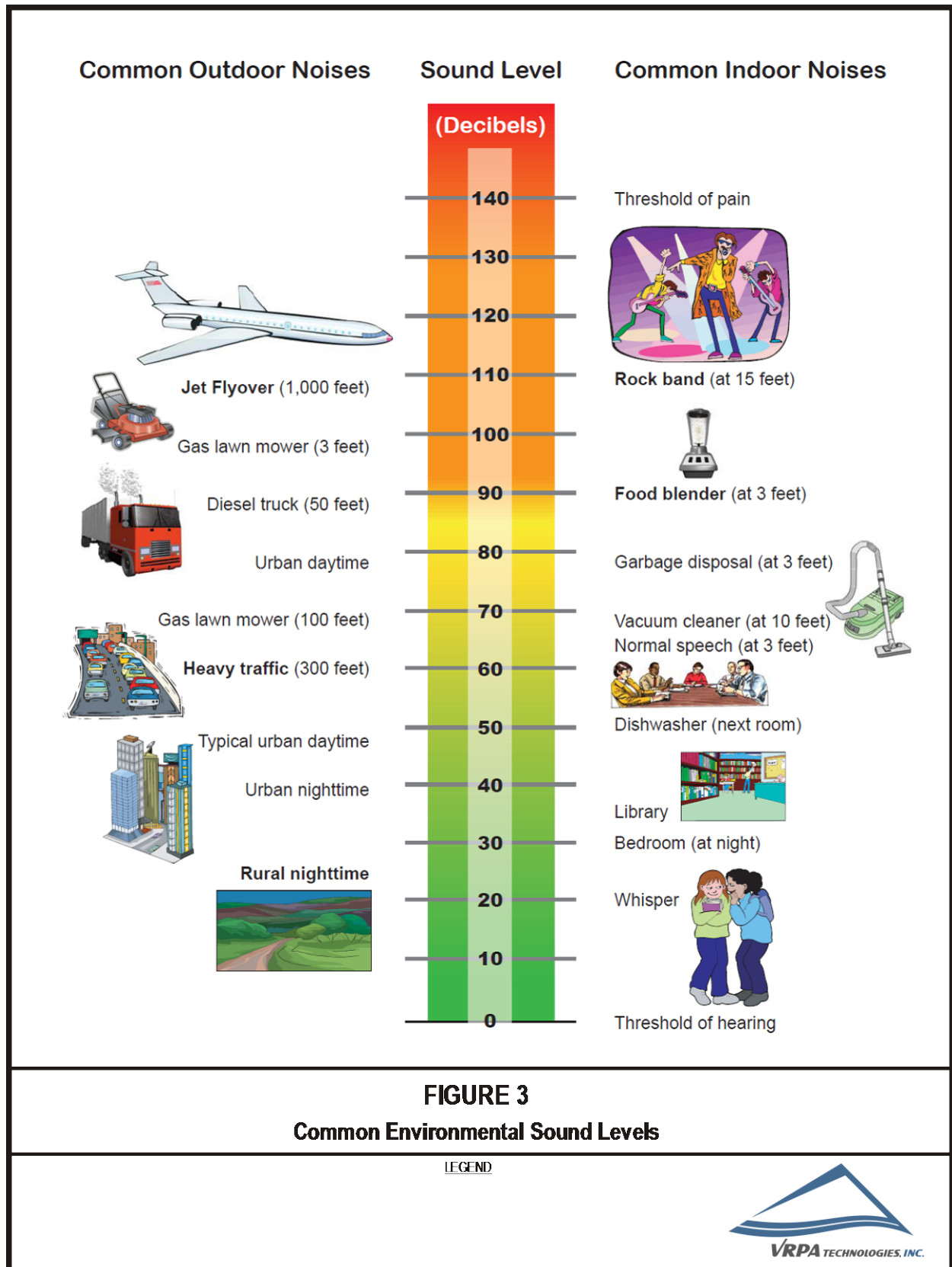
Noise can be generated by a number of sources, including mobile sources such as automobiles, trucks, and airplanes, and stationary sources such as construction sites, machinery, and industrial operations. Noise generated by mobile sources typically attenuates (is reduced) at a rate between 3.0 and 4.5 dBA

per doubling of distance. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3.0 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance. Noise generated by stationary sources typically attenuates at a rate between 6.0 and about 7.5 dBA per doubling of distance. Sound levels can be reduced by placing barriers between the noise source and the receiver. In general, barriers contribute to decreasing noise levels only when the structure breaks the “line of sight” between the source and the receiver. Buildings, concrete walls, and berms can all act as effective noise barriers. Wooden fences or broad areas of dense foliage can also reduce noise, but are less effective than solid barriers.

3.1 Noise Descriptors

Noise in the daily environment fluctuates over time. Some of the fluctuations are minor; some are substantial. Some noise levels occur in regular patterns; others are random. Some noise levels fluctuate rapidly, others slowly. Some noise levels vary widely; others are relatively constant. Various noise descriptors have been developed to describe time-varying noise levels. The following is a list of the noise descriptors most commonly used in traffic noise analysis:

- ✓ Equivalent Sound Level (Leq) - Leq represents an average of the sound energy occurring over a specified period. Leq is, in effect, the steady-state sound level that, in a stated period, would contain the same acoustical energy as the time-varying sound that actually occurs during the same period. The one-hour A-weighted equivalent sound level, Leq(h), is the energy average of the A-weighted sound levels occurring during a one-hour period and is the basis for the Noise Abatement Criteria (NAC) used by the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA).
- ✓ Percentile-Exceeded Sound Level (Lx) - Lx represents the sound level exceeded for a given percentage of a specified period. For example, L10 is the sound level exceeded 10 percent of the time, and L90 is the sound level exceeded 90 percent of the time.
- ✓ Maximum Sound Level (Lmax) - Lmax is the highest instantaneous sound level measured during a specified period.



3.2 Sound Propagation

When sound propagates over a distance, it changes in both level and frequency content. The manner in which noise reduces with distance depends on the following factors:

- ✓ Geometric Spreading - Sound from a small, localized source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates (or drops off) at a rate of six dBA for each doubling of distance. Highway noise is not a single, stationary point source of sound. The movement of the vehicles on a highway makes the source of the sound appear to emanate from a line (i.e., a line source) rather than a point. This line source results in cylindrical spreading rather than the spherical spreading that results from a point source. The change in sound level from a line source is three dBA per doubling of distance.
- ✓ Ground Absorption - Most often, the noise path between the highway and the observer is very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is done for simplification only; for distances of less than 60 m (200 ft), prediction results based on this scheme are sufficiently accurate. For acoustically hard sites (i.e., those sites with a reflective surface, such as a parking lot or a smooth body of water, between the source and the receiver), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees, between the source and the receiver), an excess ground attenuation value of 1.5 dBA per doubling of distance is normally assumed. When added to the geometric spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dBA per doubling of distance for a line source and 7.5 dBA per doubling of distance for a point source.
- ✓ Atmospheric Effects - Research by Caltrans and others has shown that atmospheric conditions can have a significant effect on noise levels within 60 m (200 ft) of a highway. Wind has been shown to be the most important meteorological factor within approximately 150 m (500 ft) of the source, whereas vertical air temperature gradients are more important for greater distances. Other factors such as air temperature, humidity, and turbulence also have significant effects. Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lower noise levels. Increased sound levels can also occur as a result of temperature inversion conditions (i.e., increasing temperature with elevation).
- ✓ Shielding by Natural and Human-Made Features - A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by this shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receiver specifically to reduce noise. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dBA of noise reduction.

4 Methodology

When preparing a Noise Element, guidelines set by affected agencies must be followed. In analyzing noise levels, the FHWA Highway Traffic Noise Prediction methodology must be applied. Safety concerns must also be analyzed to determine the need for appropriate mitigation resulting from increased noise due to increased traffic in the community area and other evaluations such as the need for noise barriers and other noise abatement improvements. Unless otherwise stated, all sound levels reported are in A-weighted decibels (dBA). A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards use A-weighting, as it provides a high degree of correlation with human annoyance and health effects.

4.1 California Government Code

The content of the Noise Element and the methods used in its preparation have been determined by the requirements of Section 65302 (f) of the California Government Code and by the Guidelines for the Preparation and Content of Noise Elements of the General Plan adopted and published by the California Office of Noise Control (ONC) in 1976. The ONC Guidelines require that major noise sources be quantified by preparing generalized noise exposure contours for current and projected conditions. The Noise Element shall be used as a guide for establishing land use patterns that minimize noise impacts on the Community and shall include measures and solutions to address existing and foreseeable noise conflicts.

4.2 Tulare County

The Health and Safety section of Tulare County's 2030 General Plan serves as the primary policy statement for the County for implementing policies to maintain and improve the noise environment in the Tulare County sphere of influence. The Health and Safety section presents Goals and Objectives relative to planning for the noise environment within the County. Future noise/land use incompatibilities can be avoided or reduced with implementation of Tulare County's noise criteria and standards. Tulare County realizes that it may not always be possible to avoid constructing noise sensitive developments in existing noisy areas and therefore provides noise reduction strategies to be implemented in situations with potential noise/land use conflicts.

Table 1 shows Tulare County's Land Use Compatibility for Community Noise Environments. During preparation of this Noise Element, conformance to the Land Use Compatibility for Community Noise Environments is used to evaluate potential noise impacts.

TABLE 1
Tulare County Land Use Compatibility for Community Noise Environments

Land Use Category		Community Noise Exposure- L_{dn} or CNEL (dB)						
		50	55	60	65	70	75	80
	Residential - Low Density Single Family, Duplex, Mobile Homes	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>						
	Residential - Multi-Family	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>						
	Transient Lodging - Motels, Hotels	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>						
	Schools, Libraries, Churches, Hospitals, Nursing Homes	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>						
	Auditoriums, Concert Halls, Amphitheaters	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>						
	Sports Arenas, Outdoor Spectator Sports	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>						
	Playgrounds, Neighborhood Parks	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>						
	Golf Courses, Riding Stables, Water Recreation, Cemeteries	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>						
	Office Buildings, Business Commercial and Professional	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>						
	Industrial, Manufacturing, Utilities, Agriculture	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>						
	Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.						
	Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air						
	Normally Unacceptable	New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.						
	Clearly Unacceptable	New construction or development generally should not be undertaken.						

Source: Tulare County General Plan

4.3 Study Methods and Procedures

Site Selection

Developed and undeveloped land uses in the community of Pixley were identified through land use maps, aerial photography, and site inspection. Within each land use category, sensitive receptors were then identified. Land uses in the community of Pixley include agricultural, single-family residences, retail, and industrial uses. The generalized land use data and location of particular sensitive receptors and existing traffic volumes were the basis for the selection of the noise monitoring and analysis sites. Three (3) field receptor locations were measured in the field and represent residential, industrial, and recreational land uses adjacent to local roadways within the community. Pixley is a small community with a population of just 3300 and Court Avenue and Terra Bella Avenue, which are the northern and southern border of the community, provide access to a majority of the local roads. Field receptor locations are shown in Figure 4 and described in Table 2. Figure 4 also shows additional modeled receptor locations that reflect locations of other sensitive receptor locations. Modeled receptors 4 - 10 represent outdoor areas of residential, industrial, office/retail, and school land uses.

Noise Level Measurement Procedure

Existing noise levels in the community of Pixley were sampled in the afternoon because traffic counts conducted in the study area show a greater volume of traffic in the PM peak hour than the AM peak hour. All measurements were made using an Extech Type 2 sound level meter datalogger.

The following measurement procedure was utilized:

- ✓ Calibrate sound level meter.
- ✓ Set up sound level meter at a height of 1.5 m (5 ft).
- ✓ Commence noise monitoring.
- ✓ Collect site-specific data such as date, time, direction of traffic, and distance from sound level meter to the center of the roadway.
- ✓ Count passing vehicles for a period of 5 minutes.
- ✓ Stop measurement after 5 minutes.

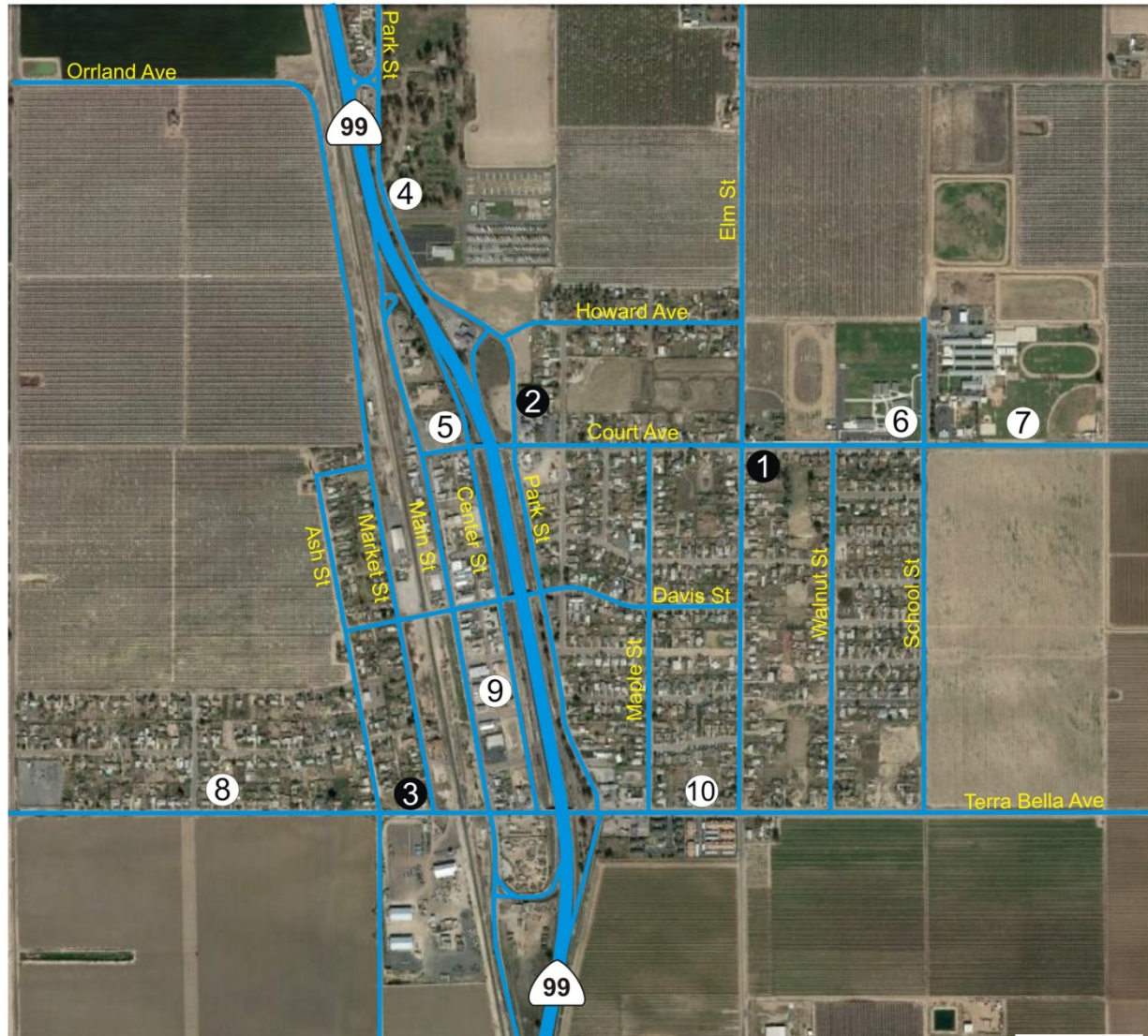


FIGURE 4
Noise Receptor Locations

LEGEND

- Field Receptor Locations ○ Modeled Receptor Locations



TABLE 2
Receptor Locations

Receptor I.D. No.	Location	Type of Development
1	Approximately 60 feet from Court Street Centerline	Residential
2	Approximately 50 feet from Park Street Centerline	Office/Commercial
3	Approximately 50 feet from Terra Bella Avenue Centerline	Industrial
4	Approximately 50 feet from Park Street Centerline	Neighborhood Park
5	Approximately 135 feet from Court Street Centerline	Industrial
6	Approximately 100 feet from Court Street Centerline	School
7	Approximately 100 feet from Court Street Centerline	School
8	Approximately 90 feet from Terra Bella Avenue Centerline	Residential
9	Approximately 65 feet from Center Street Centerline	Industrial
10	Approximately 90 feet from Terra Bella Avenue Centerline	Residential

5 Existing Noise Conditions

Existing traffic noise levels are established based on previously collected traffic data and using the Traffic Noise Model (TNM) Version 2.5. TNM 2.5 is an FHWA Traffic Noise Prediction Program. Once existing levels are established, future levels, based on expected traffic growth, are calculated and compared to both the existing noise level and the maximum allowable noise exposure to noise generation sources as described in Tulare County's General Plan. Referencing Table 1, Tulare County's criteria shows that mitigation must be considered when the exterior noise exposure level of 60 Ldn/CNEL for single family residential and exterior noise exposure level of 65 to 75 Ldn/CNEL for multi-family, transient lodging,

hospitals, churches, schools, business commercial, industrial, and meeting halls has been exceeded. Levels reported in this section are in terms of A-weighted levels.

Existing traffic noise levels were evaluated using TNM 2.5. Traffic volumes collected from the circulation element completed for the Pixley Community Plan and average vehicle speeds along various roadways within the study area were entered into the model to estimate noise levels at various land uses in the Pixley Community. In order to calibrate the TNM 2.5 model, the existing counts, lane geometry, and any other pertinent existing conditions were added to the model. The noise level measurements taken in the Pixley area were then compared to the noise levels computed by the model. The difference between the measured and modeled noise levels, referred to as the “K constant”, is then added to the modeled receptors for the Existing calculated noise levels to obtain the estimated noise levels for the 7 additional modeled receptors.

To assess the traffic noise on sensitive receptors in the community of Pixley, the first step is to determine the baseline or the existing noise condition. The second is to then compare the baseline to future level results, based on expected traffic growth, and Tulare County’s Land Use Compatibility for Community Noise Environments.

As shown in Table 3, the highest peak hour sound level for the study area is 65.4 Leq (h) dBA at receptor 2. When it comes to noise levels, generally the Ldn is determined to be within +/- 2 dBA of the peak hour Leq under normal traffic conditions based upon Caltrans’ Traffic Analysis Noise Protocol. Caltrans’ Technical Noise Supplement includes methodology for the purpose of converting peak hour Leq to Ldn (See Appendices). Table 3 also includes the calculated Ldn based on the peak hour Leq measured at noise receptors. Results of the analysis show that none of the receptors will exceed Tulare County’s Land Use Compatibility for Community Noise Environments.

Table 4 shows the existing traffic noise exposure levels at a setback of 60 feet from the roadway centerline and the approximate distances from the roadway centerline necessary to achieve 60 Ldn dB in the absence of any noise attenuating barriers.

TABLE 3
Existing Noise Levels

Receptor I.D. No.	Location	Type of Development	Existing Noise Level Leq(h) dBA	Existing Noise Level Ldn dB	Tulare County Noise Standard dBA Ldn	Impact
1	Approximately 60 feet from Court Street Centerline	Residential	53.1	53.8	60	None
2	Approximately 50 feet from Park Street Centerline	Office/Commercial	65.4	66.1	70	None
3	Approximately 50 feet from Terra Bella Avenue Centerline	Industrial	60.9	61.6	75	None
4	Approximately 50 feet from Park Street Centerline	Neighborhood Park	64.4	65.1	70	None
5	Approximately 135 feet from Court Street Centerline	Industrial	64.3	65.0	75	None
6	Approximately 100 feet from Court Street Centerline	School	51.6	52.3	70	None
7	Approximately 100 feet from Court Street Centerline	School	49.2	49.9	70	None
8	Approximately 90 feet from Terra Bella Avenue Centerline	Residential	55.9	56.6	60	None
9	Approximately 65 feet from Center Street Centerline	Industrial	63.8	64.5	75	None
10	Approximately 90 feet from Terra Bella Avenue Centerline	Residential	58.5	59.2	60	None

TABLE 4
Existing Noise Levels for Roadway Segments

Roadway	Segment	Existing Conditions	
		Noise Level Leq(h) dBA @ 60' From Roadway Centerlines	Distance (Feet) to 60 Ldn dB from Roadway Centerline
Court Avenue	Between SR 99 and Palm Street	56.0	41
Terra Bella Avenue	Between SR 99 and Palm Street	62.0	82
Terra Bella Avenue	Between Airport Street and SR 99	59.4	61
Center Street	Between Court Avenue and Terra Bella Avenue	64.5	109
Park Street	Between Court Avenue and Terra Bella Avenue	63.8	101

6 Future Year Conditions

The noise impacts to the Pixley community were analyzed considering future traffic conditions in the year 2032. The levels of traffic expected in 2032 relate to the cumulative effect of traffic increases resulting from the implementation of the General Plan of local agencies. Traffic conditions in the Year 2032 were estimated using the Tulare County Association of Governments (TCAG) regional travel model.

Traffic volumes, truck mix, and vehicle speeds were used as inputs to the model for the Future Year 2032 scenario. Traffic volumes and truck mix were determined by the Circulation Element prepared for the Pixley Community Plan. Table 5 shows the predicted noise levels at the 10 sensitive receptors evaluated in this noise element. Results of the analysis show that Receptor 10 will exceed Tulare County's Land Use Compatibility for Community Noise Environments for the Future Year 2032 scenario. Receptor 10 is located adjacent to Terra Bella Avenue and represents a residential land use. As noted in the existing conditions analysis, Receptor 10 currently experiences noise levels that do not exceed Tulare County's Land Use Compatibility for Community Noise Environments.

As noted previously, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment, referred to as the "ambient" environment. Overall traffic volumes in the study area are expected to increase due to growth in population and employment anticipated under the Tulare County General Plan. Table 5 provides a comparison of existing noise levels to the estimated future year noise levels. Results show that the greatest increase between existing conditions and future conditions is 1.5 dB's, which occurs at Receptors 3, 7, and 8. A change in level of at least 5 dB is required before any noticeable change in community response would be expected and a 10 dB change is subjectively heard as approximately a doubling in loudness. Therefore, the increase in traffic volumes as a result of population and employment increase in the Tulare County General Plan would not cause potentially significant impacts at Receptor 10.

Table 6 shows the Future Year 2032 traffic noise exposure levels at a setback of 60 feet from the roadway centerline and the distances from the roadway centerline necessary to achieve 60 Ldn dB in the absence of any noise attenuating barriers.

6.1 Union Pacific Railroad Noise

The Union Pacific Railroad (UPR) operates 3,267 miles of track in California. The UPR serves the rich agricultural central valley, the Port of Oakland and the San Francisco Bay area, as well as the Los Angeles metropolitan area with its two major ports at Los Angeles and Long Beach. The I-5 and Hwy 99 corridors offer the most efficient north-south transportation service to freight customers in all three Pacific Coast states.

The UPR runs adjacent to SR 99 and the industrial and residential land uses in the community of Pixley. UPR's current operations at the Terra Bella Avenue and Davis Avenue crossings consist of approximately

19 train movements per day based on the United State Department of Transportation crossing inventory. The typical speed of the trains over the crossing ranges from 5 to 65 mph. Train operators are required to sound the warning horn when approaching within approximately 1,000 feet of a grade crossing. As a result, train noise levels are higher at locations near grade crossings, such as the crossings at Terra Bella Avenue and Davis Avenue. It is estimated that noise level's from train pass-bys (with warning horn) at approximately 175 feet from the tracks range from 94 – 102 dB's. Table 7 shows the Existing and Future Year 2032 noise exposure levels from railroad activity along the UPR. The noise levels were calculated using the Federal Transit Administration (FTA) CREATE Freight Noise and Vibration Model. Results of the Analysis show that noise levels at residences adjacent to the UPR will not exceed Tulare County's noise standards.

TABLE 5
Traffic Noise Impacts for the Future Year 2032 Scenario

Receptor I.D. No.	Type of Development	Existing Noise Level Ldn dB	Future Year 2032 Noise Level Ldn dB	Existing vs Future Year Comparison	Tulare County Noise Standard dBA Ldn	Impact
1	Residential	53.8	55.0	1.2	60	None
2	Office/Commercial	66.1	67.1	1.0	70	None
3	Industrial	61.6	63.1	1.5	75	None
4	Neighborhood Park	65.1	66.1	1.0	70	None
5	Industrial	65.0	65.8	0.8	75	None
6	School	52.3	53.7	1.4	70	None
7	School	49.9	51.4	1.5	70	None
8	Residential	56.6	58.1	1.5	60	None
9	Industrial	64.5	65.3	0.8	75	None
10	Residential	59.2	60.5	1.3	60	Yes

TABLE 6
Roadway Segment Noise Levels for the Future Year 2032 Scenario

Roadway	Segment	Future Year 2032 Conditions	
		Noise Level Leq(h) dBA @ 60' Fom Roadway Centerlines	Distance (Feet) to 60 Ldn dB from Roadway Centerline
Court Avenue	Between SR 99 and Palm Street	57.4	48
Terra Bella Avenue	Between SR 99 and Palm Street	63.3	95
Terra Bella Avenue	Between Airport Street and SR 99	60.9	72
Center Street	Between Court Avenue and Terra Bella Avenue	65.3	120
Park Street	Between Court Avenue and Terra Bella Avenue	64.8	113

TABLE 7
Estimated Existing and Future Traffic Noise Levels

Noise Source	Existing Sound Levels Measured (Ldn dB at residences adjacent to rail line)	Future Year 2032 Sound Levels Measured (Ldn dB at residences adjacent to rail line)
Union Pacific Railroad	60	60

6.2 Ground-borne Vibration

Ambient vibration levels in residential areas are typically 50 VdB, which is well below human perception. The operation of heating/air conditioning systems and slamming of doors produce typical indoor vibrations that are noticeable to humans. The most common exterior sources of ground vibration that can be noticeable to humans inside residences include constructions activities, train operations, and street traffic. Table 8 provides some common sources of ground vibration and the relationship to human perception. This information comes from the Federal Transit Administration’s “Basic Ground-Bourne Vibration Concepts.”

Construction Vibrations

Construction activity can result in ground vibration, depending upon the types of equipment used. Operation of construction equipment causes ground vibrations which spread through the ground and diminish in strength with distance from the source generating the vibration. Building structures that are founded on the soil in the vicinity of the construction site respond to these vibrations, with varied results. Ground vibrations as a result of construction activities very rarely reach vibration levels that will damage structures, but can cause low rumbling sounds and feelable vibrations for buildings very close to

the site. Construction activities that generally create the most severe vibrations are blasting and impact pile driving.

Vibration levels from various types of construction equipment are shown in Table 9. The primary concern with construction vibration is building damage. Therefore, construction vibration is generally assessed in terms of peak particle velocity (PPV). It should be noted that there is a considerable variation in reported ground vibration levels from construction activities. The data provides a reasonable estimate for a wide range of soil conditions.

TABLE 8
Typical Levels of Ground-Borne Vibration

Human/Structural Response	Velocity Level, VdB	Typical Events (50 ft. Setback)
Threshold, minor cosmetic damage fragile buildings	100	Blasting from construction projects
		Bulldozers and other heavy tracked construction equipment
Difficulty with tasks such as reading a video or computer screen	90	
		Commuter rail, upper range
Residential annoyance, infrequent events (e.g commuter rail)	80	Rapid transit, upper range
		Commuter rail, typical
Residential annoyance, infrequent events (e.g rapid transit)	70	Bus or truck over bump
		Rapid transit, typical
Limit for vibration sensitive equipment. Approx. threshold for human perception of vibration	60	Bus or truck, typical
	50	Typical background vibration

TABLE 9
Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 ft (in/sec)	Approximate L_v^* at 25 ft
Large bulldozer	0.089	87
Caisson drilling	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

* RMS velocity in decibels (VdB) re 1 μ inch/second

Despite the perceptibility threshold of about 65 VdB, human reaction to vibration is not significant unless the vibration exceeds 75 VdB according to the United States Department of Transportation. In order to estimate the impact of vibrations from construction activities at distances of 100 feet, 150 feet, and 200 feet, the following formula was applied.

$$L_v(D) = L_v(25 \text{ ft}) - 20 \log (D/25)$$

Using the highest vibration level shown in Table 9 (L_v 87) and the formula shown above, the anticipated vibration level at 100 feet, 150 feet, and 200 feet is 75, 71, and 69 VdB, respectively.

Construction activities associated with the build-out of the Tulare County General Plan would likely require the use of various tractors, trucks, and jackhammers. Based on the vibration levels provided in Table 9, ground vibration generated by common construction equipment would be 75 VdB or less at a distance of 100 feet or more. Given that much of the construction activities would occur on vacant parcels in sparsely to moderately developed areas, the nearest offsite structures to a particular project site would likely be located in excess of 100 feet from construction activities. As a result, predicted vibration levels at the nearest offsite structures would not exceed vibration levels greater than 75 VdB.

Union Pacific Railroad Vibrations

Union Pacific Railroad (UPR) activity can also generate ground vibration as a result railroad activities. The U.S. Department of Transportation, Federal Transit Administration Operation provides a vibration screening methodology in the “Transit Noise and Vibration Impact Assessment” document. Based on the vibration screening methodology coupled with the infrequent daily train movements and proximity of sensitive receptors, railroad activity along the UPR will not likely have an impact to nearby sensitive receptors.

7 Standards of Significance

An important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment, referred to as the "ambient" environment. Overall traffic volumes in the study area are expected to increase due to growth in population and employment anticipated under the Tulare County General Plan. Table 5 provides a comparison of existing noise levels to the estimated future year noise levels. Results show that the greatest increase between existing conditions and future conditions is 1.5 dB's, which occurs at Receptors 3, 7, and 8. A change in level of at least 5 dB is required before any noticeable change in community response would be expected and a 10 dB change is subjectively heard as approximately a doubling in loudness. Therefore, the increase in traffic volumes as a result of population and employment increase in the Tulare County General Plan would not cause potentially significant impacts at Receptor 10, which is currently experiencing a noise level of 59.2 Ldn dB and is projected to experience a noise level of 60.5 Ldn dB in the future.

CEQA Environmental Checklist

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. Implementation of the Pixley Community Plan Update would result in a significant impact if it would:

- ✓ Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Table 5 shows the predicted noise levels at the 10 sensitive receptors evaluated in this noise element. Results of the analysis show that Receptor 10 will exceed Tulare County's Land Use Compatibility for Community Noise Environments for the Future Year 2032 scenario. Receptor 10 is located adjacent to Terra Bella Avenue and represents a residential land use. As noted in the existing conditions analysis, Receptor 10 currently experiences noise levels that do not exceed Tulare County's Land Use Compatibility for Community Noise Environments.

Table 5 also provides a comparison of existing noise levels to the estimated future year noise levels. Results show that the greatest increase between existing conditions and future conditions is 1.5 dB's, which occurs at Receptors 3, 7, and 8. A change in level of at least 5 dB is required before any noticeable change in community response would be expected and a 10 dB change is subjectively heard as approximately a doubling in loudness. Therefore, the increase in traffic volumes as a result of population and employment increase in the Tulare County General Plan would not cause potentially significant impacts at Receptor 10, which is currently experiencing a noise level of 59.2 Ldn dB and is projected to experience a noise level of 60.5 Ldn dB in the future.

- ✓ Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Ambient vibration levels in residential areas are typically 50 VdB, which is well below human perception. The operation of heating/air conditioning systems and slamming of doors produce typical indoor vibrations that are noticeable to humans. Construction activity can result in ground vibration, depending upon the types of equipment used. Operation of construction equipment causes ground vibrations which spread through the ground and diminish in strength with distance from the source generating the vibration. Building structures that are founded on the soil in the vicinity of the construction site respond to these vibrations, with varied results. Ground vibrations as a result of construction activities very rarely reach vibration levels that will damage structures, but can cause low rumbling sounds and feelable vibrations for buildings very close to the site. Construction activities that generally create the most severe vibrations are blasting and impact pile driving.

Vibration levels from various types of construction equipment are shown in Table 9. The primary concern with construction vibration is building damage. Therefore, construction vibration is generally assessed in terms of peak particle velocity (PPV). Using the highest vibration level shown in Table 9 (Lv 87), the anticipated vibration level at 100 feet, 150 feet, and 200 feet is 75, 71, and 69 VdB, respectively.

Construction activities associated with the build-out of the Tulare County General Plan would likely require the use of various tractors, trucks, and jackhammers. Based on the vibration levels provided in Table 9, ground vibration generated by common construction equipment would be 75 VdB or less at a distance of 100 feet or more. Given that much of the construction activities would occur on vacant parcels in sparsely to moderately developed areas, the nearest offsite structures to a particular project site would likely be located in excess of 100 feet from construction activities. As a result, predicted vibration levels at the nearest offsite structures would not exceed vibration levels greater than 75 VdB.

- ✓ A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Table 5 provides a comparison of existing noise levels to the estimated future year noise levels. Results show that the greatest increase between existing conditions and future conditions is 1.5 dB's, which occurs at Receptors 3, 7, and 8. A change in level of at least 5 dB is required before any noticeable change in community response would be expected and a 10 dB change is subjectively heard as approximately a doubling in loudness. Therefore, the increase in traffic volumes as a result of population and employment increase in the Tulare County General Plan would not cause potentially significant impacts at Receptor 10, which is currently experiencing a noise level of 59.2 Ldn dB and is projected to experience a noise level of 60.5 Ldn dB in the future.

- ✓ A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Implementation of the proposed community plan will result in construction activities that could generate temporary noise and groundborne vibration. Table 10 depicts typical construction equipment

noise. Construction equipment noise is controlled by the Environmental Protection Agency's Noise Control Program (Part 204 of Title 40, Code of Federal Regulations).

TABLE 10
Construction Equipment Noise

TYPE	MAXIMUM LEVEL, dB AT 50 FEET
Bulldozers	87
Heavy Trucks	88
Backhoe	85
Pneumatic Tools	85

Source: Environmental Noise Pollution, 1977

Construction activities associated with new development would be temporary in nature and related noise impacts would be short-term. However, since construction activities could substantially increase ambient noise levels at noise-sensitive locations, construction noise could result in potentially significant impacts to sensitive receptors. Activities involved in construction would generate maximum noise levels, as indicated in Table 10, ranging from 85 to 88dB at a distance of 50 feet. Construction activities will be temporary in nature and are expected to occur during normal daytime working hours. Construction noise impacts could result in annoyance or sleep disruption for nearby residences if nighttime operations occurred, or if unusually noisy equipment was used.

In order to reduce potential construction noise impacts to sensitive receptors near the Project area, the proposed Project shall comply with the following mitigation measure:

The hours of future construction shall be limited to 7:00 a.m. to 7:00 p.m. Monday through Friday or weekends (if allowed by the County) where residential uses are within 200 feet of where the activity is taking place. If residential uses are beyond 300 feet limited work hours are not required.

- ✓ For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The Pixley Airport, also known as Harmon Field, was a county-owned public-use airport located in Tulare County, one mile southwest of the central business district of the Pixley community. The airport opened in 1949 and was closed in the early 1990s due to pesticide contamination from its years as a base for crop dusting. It remained in published Federal Aviation Administration (FAA) records until 2008, when it

was noted as “closed indefinitely”. Based on FAA records, for the 12-month period ending July 20, 1993, the airport had 8,400 general aviation aircraft operations, an average of 23 per day.

- ✓ For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

The Pixley Community is not located within the vicinity of a private airstrip.

8 Goals and Policies

The intent of the Pixley Community Noise Element is to provide a policy framework for addressing potential noise impacts encountered in the planning process. The goals and policies outline below are consistent with Tulare County policies.

Goal 1: Protect the citizens of Tulare County from the harmful effects of exposure to excessive noise.

Policies and Standards:

1. Areas within the Pixley Community shall be designated as noise-impacted if exposed to existing or projected future noise levels at the exterior of buildings which exceed 60 dB Ldn (or CNEL).
2. New development of residential or other noise-sensitive land uses which require discretionary approval under the Tulare County Zoning Ordinance of the Tulare County Subdivision Ordinance (e.g. use permits, zone changes, subdivision maps, parcel maps) will not be permitted in noise-impacted areas unless effective mitigation measures are incorporated into the specific design of such projects to reduce noise levels to 60 dB Ldn (or CNEL) or less within outdoor activity areas and 45 dB Ldn (or CNEL) or less within interior living spaces. Where it is not possible to reduce exterior noise level of up to reduce exterior noise levels within outdoor activity areas to 60 dB Ldn (or CNEL) or less after the practical application of the best available noise reduction technology, an exterior noise level of up to 65 dB Ldn (or CNEL) will be allowed. Under no circumstances will an interior noise level exceeding 45 dB Ldn be allowed with the windows and doors closed. It should be noted that in instances where the windows and doors must remain closed to achieve the required acoustical isolation, mechanical ventilation or air conditioning must be provided.
3. Noise level criteria applied to land uses other than residential or other noise-sensitive uses shall be consistent with the recommendations of the California Office of Noise Control. Tulare County shall enforce the State Noise Insulation Standards (California Administrative Code, Title 24) and Chapter 35 of the Uniform Building Code (UBC). Title 24 requires that interior noise levels not exceed 45 dB Ldn (or CNEL) with the windows and doors closed within new developments of multifamily dwellings, condominiums, hotels or motels. UBC Chapter 35 requires that common wall and floor/ceiling assemblies within multi-family dwellings comply with minimum standards

concerning the transmission of airborne sound and structure-borne impact noise. Title 24 requires that conformance with the above-described standards be documented by the submission of an acoustical analysis whenever new multi-family dwellings, condominiums, hotels or motels are proposed for areas within the 60 dB Ldn (or CNEL) contour of a major noise source as determined by the local jurisdiction.

4. In conformance with the directives of State planning law, the County shall ensure that the Noise Element is consistent with and does not conflict with other elements of the Pixley Community Plan.
5. Where existing noise-sensitive uses may be exposed to increased noise levels due to roadway improvement projects, the County shall apply the following criteria to determine the significance of the impact:
 - a. Where existing noise levels are less than 60 Ldn dB at outdoor activity areas of noise-sensitive uses, a 5 Ldn dB increase in noise levels will be considered significant;
 - b. Where existing noise levels are between 60 and 65 Ldn dB at outdoor activity areas of noise-sensitive uses, a 3 Ldn dB increase in noise levels will be considered significant; and
 - c. Where existing noise levels are greater than 65 Ldn dB at outdoor activity areas of noise-sensitive uses, a 1.5 Ldn dB increase in noise levels will be considered significant.

Goal 2: Protect the economic base of Tulare County by preventing the encroachment of incompatible land uses near known noise-producing industries, railroads, airports and other sources.

Policies and Standards:

1. New development of industrial, commercial or other noise-generating land uses will not be permitted if resulting noise levels will exceed 60 dB Ldn (or CNEL) at the boundary of areas planned and zoned for residential or other noise-sensitive land uses, unless determined to be necessary to promote the public health, safety and welfare of the Pixley Community.

Appendix F

Traffic Impact Assessment

Circulation Element

The purpose of this Circulation Element Update for the community of Pixley is to provide for a safe, convenient and efficient transportation system. The Circulation Element has been designed to accommodate anticipated transportation needs based on the land use element. In compliance with state law, all city and county general plans must contain a circulation element that designates future road improvements and extensions, addresses non-motorized transportation alternatives, and identifies funding options. The intent of the Circulation Element is to:

- ✓ identify transportation needs and issues within Pixley, as well as regional relationships that affect the transportation system;
- ✓ consider alternatives to the single-occupant vehicle as means of providing services and access to facilities; and
- ✓ establish policies that coordinate the Pixley transportation planning circulation system with General Plan and area plan land use maps and provide direction for future decision-making.

Figure 1 shows Pixley in the context of its region. The transportation system within the Pixley planning area includes State Route (SR) 99 as well as several County routes and a grid of local streets as shown on Figure 2. This figure also shows key intersections that were selected for detailed analysis.

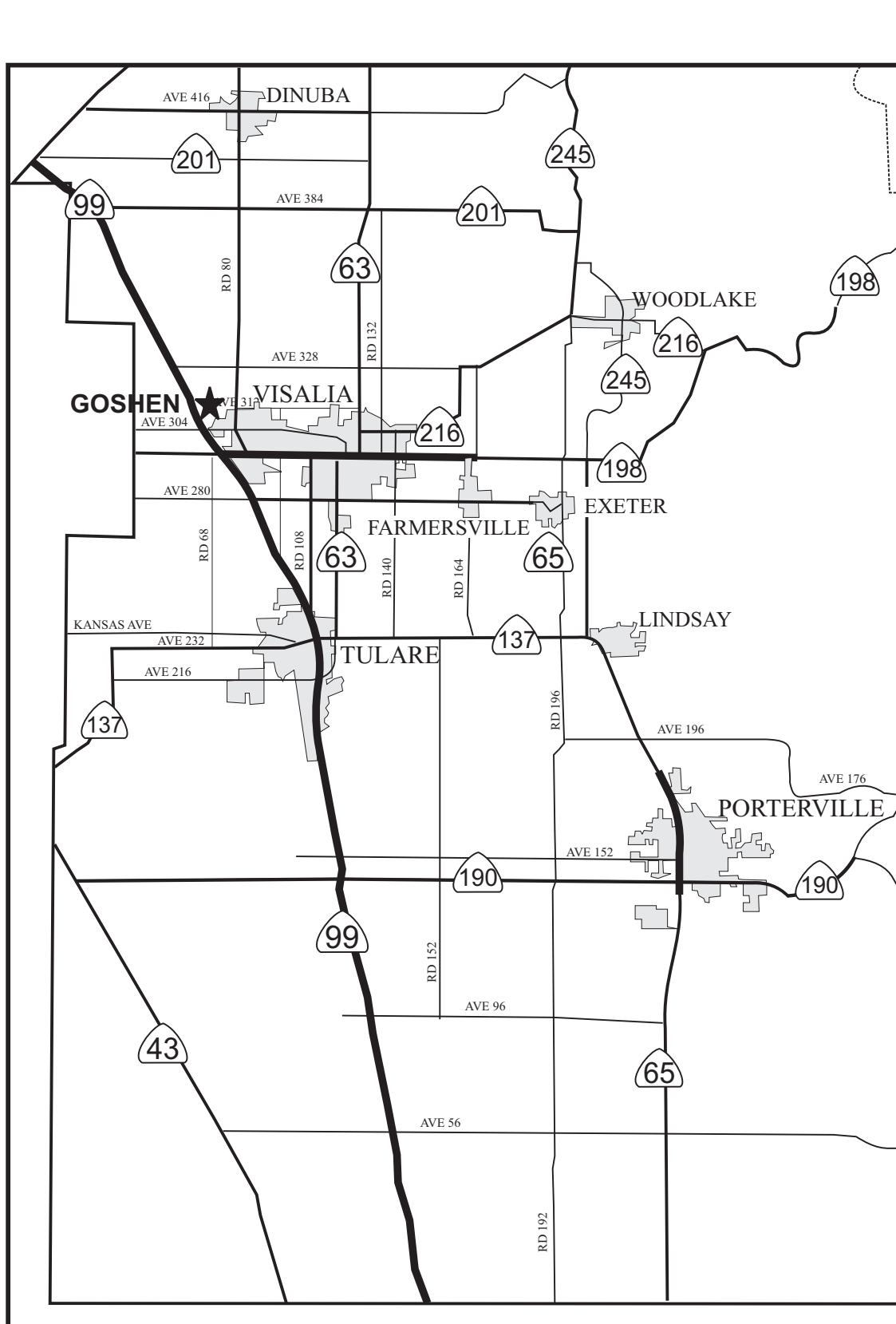
Within Tulare County additional passenger travel service is provided by common bus carriers, AMTRAK and other local agency transit and paratransit services. The County transportation system includes general aviation facilities, air passenger facilities, freight rail service, and bicycle and pedestrian facilities.

1 Regional Transportation Planning

Tulare County Association of Governments (TCAG) Regional Transportation Plan

The Regional Transportation Plan (RTP) is a multi-modal, long-range planning document prepared by the Tulare County Association of Governments (TCAG). The RTP includes programs and policies for congestion management, transit, bicycles and pedestrians, roadways, freight, and finances for Tulare County. The RTP is prepared every four years and contains a listing of projects considered to be financially feasible within a 25-year planning time frame. All federally funded transportation projects must be consistent with the RTP.

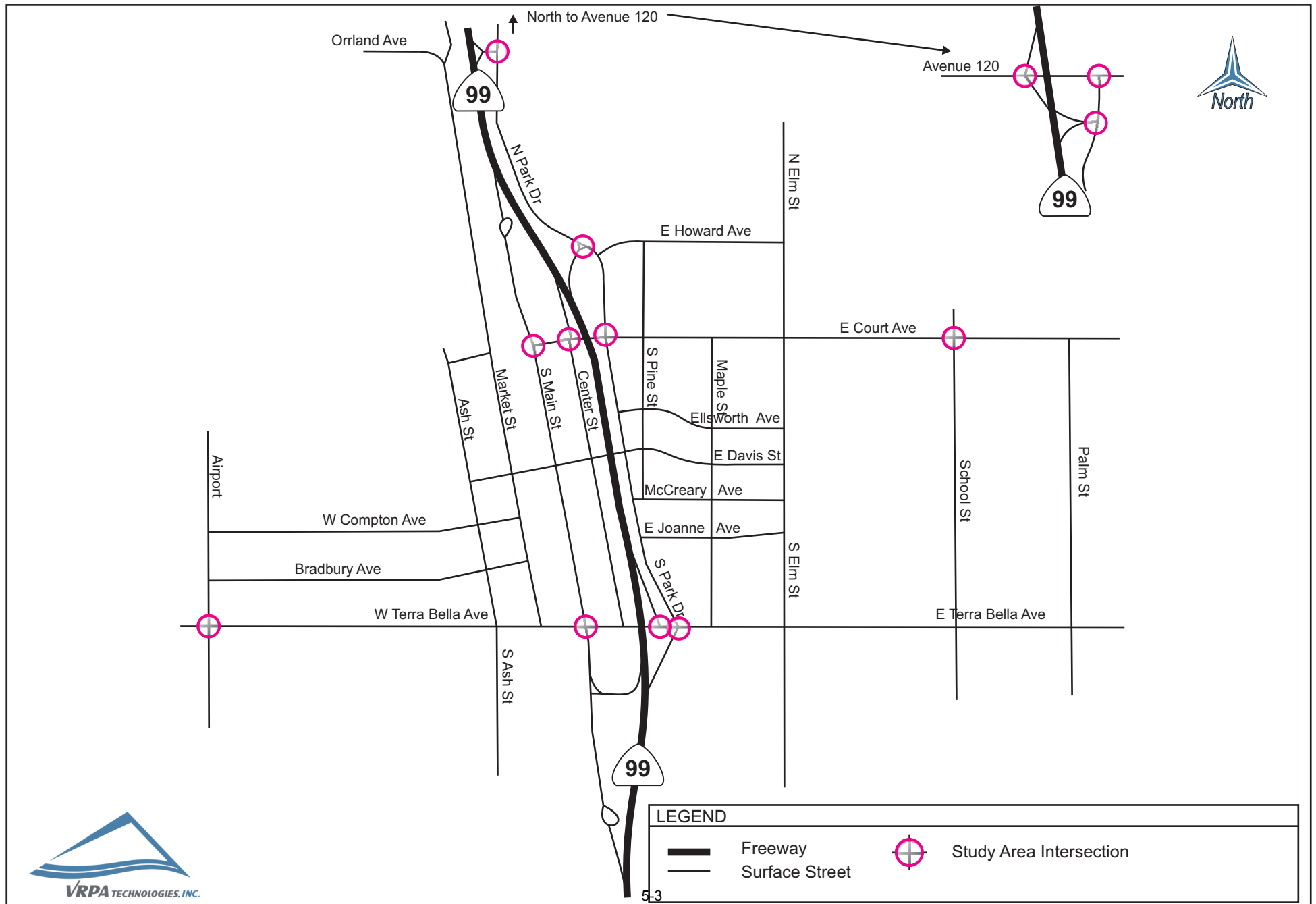
The RTP for Tulare has recently been updated and was adopted in July 2014. The new RTP is the first to respond to state legislation (SB 375) that requires that the RTP show reductions in greenhouse gas emissions from passenger vehicles. Thus, there is a new emphasis in the RTP on promoting ridesharing (transit, van and carpools) and active transportation (walking and bicycling). To this end, the RTP now includes a Sustainable Communities Strategy (SCS), a blueprint for land use patterns and transportation facilities and services that will facilitate fewer vehicle trips and vehicle miles traveled.



Pixley Community Plan Update

Traffic Analysis Study Area

Figure
2



San Joaquin Valley Air Quality Management Plan

The San Joaquin Valley Air Pollution Control District (SJVAPCD) has prepared the Air Quality Management Plan (AQMP) and various other regulations to reduce air emissions. Both the plan and several regulations aim to reduce emissions from mobile sources – automobiles and trucks, as well as other modes of transportation.

Measure R ½ Percent Sales Tax for Transportation

Measure R is the half-percent sales tax measure for transportation improvements passed by the voters of Tulare County in 2006 and managed by the Tulare County Transportation Authority (TCTA). The Measure provides funding for transportation projects (highway, transit, and ridesharing) over the 20-year duration of the Measure. Measure R funds are used by the County in Pixley to repair streets, and to improve the existing and planned transportation system.

Intelligent Transportation Systems (ITS) Planning

Visalia will soon undertake an ITS Strategic Plan that may also consider countywide goals and policies to use communication and information technologies to improve mobility and enhance safety within the region. Potential ITS components include Freeway Management; Transit Management; Incident Management; Electronic Fare Payment; Electronic Toll Collection; Railroad Grade Crossings; Emergency Management Services; and Regional Multimodal Traveler Information. Being part of the ITS plan will assist the County with application for federal or State funding for specific types of ITS projects.

2 Existing Transportation Conditions

Street and Highway System

Functional classification is the process by which streets and highways are grouped into classes according to the type of service they provide. Streets and highways are classified according to their primary function and may be assigned into several basic classifications:

- ✓ State Highways (which may be freeways, expressways or conventional highways)
- ✓ Arterials and Collectors
- ✓ Local Streets

State Highways connect regional destinations and generally pass through several jurisdictions. Traffic carrying capacity is maintained through access control at two-mile or more intervals, with shorter intervals between access points permitted in large urban areas.

Arterials serve as the principal network for cross-town traffic flow. They connect areas of major traffic generation within the community area and connect with important county roads and state highways.

They also provide for the distribution and collection of through traffic to and from collector and local streets.

Collectors provide for traffic movement between arterial and local streets, traffic movement within and between neighborhoods and major activity centers, and limited direct access to abutting properties.

Local streets provide for direct access to abutting properties and for very localized traffic movements within residential, commercial and industrial areas.

In recent years the concept of “Complete Streets” has evolved. Under this concept, while streets may still carry a functional classification, the design of streets aims to allow all modes and trip purposes to be safely accommodated to the extent feasible and as warranted by local needs and conditions.

Existing Circulation and Traffic Conditions

California State Route 99 is In the Pixley area, State Route (SR) 99 is freeway with two travel lanes northbound and southbound. There are interchanges at Avenue 320, Court Avenue and Terra Bella Avenue, affording good access between Pixley and Valley-wide destinations served by the freeway.

Avenue 320, also known as Hesse Avenue, is a rural arterial roadway about two miles north of the center of Pixley. As noted above it has an interchange with SR 99. It follows an east-west alignment and provides one traffic lane in each direction throughout the area.

Court Avenue is a major street that is bifurcated into eastern and western segments by SR 99, which it crosses via an overpass bridge. Court Avenue combines the functions of both an arterial and collector street and provides one traffic lane in each direction for its length through central Pixley. Court Avenue serves the Pixley Elementary School, which is just northeast of its intersection with School Street.

Terra Bella Avenue also known as Road J24, is a major east-west arterial street. Like Court Avenue, Terra Bella is bifurcated into east and west segments by SR 99 and crosses SR 99 via an overpass bridge.

Airport Avenue (also known as Road 120) is a two-lane north-south arterial street that traverses mainly agricultural areas west of Pixley.

Main Street is a two-lane north-south street immediately west of SR 99 that provides access to a mix of uses in the community’s center. Like Court Avenue Main Street combines the functions of both an arterial and collector street. Its northernmost segment serves as southbound off-ramp for SR 99 traffic accessing Court Avenue and destinations on the west side of the freeway. South of Terra Bella Avenue Main Street also receives traffic from another southbound SR 99 off-ramp, and the southernmost segment of Main Street functions as a southbound on-ramp to SR 99.

Center Street is a two-lane north-south street immediately west of SR 99 that provides access to a mix of uses in the community's center. Like Court Avenue and Main Street it combines the functions of both an arterial and collector street, and like Main Street its northernmost segment serves as southbound off-ramp for SR 99 traffic accessing Court Avenue and other destinations in Pixley.

Park Drive is a two-lane north-south street immediately east of SR 99 that also provides access to a mix of uses in the community's center. It too combines the functions of both an arterial and collector street. Its southernmost segment serves as northbound off-ramp for SR 99 traffic accessing Terra Bella Avenue, Court Street and destinations on the east side of the freeway.

School Street is a north-south street that combines the function of a collector and local street. Its paved portion runs from Terra Bella Avenue at the southerly edge of the planning area across Court Avenue to Pixley Elementary School. It affords access to abutting residential properties to west and currently undeveloped parcels to the east.

All other streets and roads in the community's planning area function essentially as local streets, mainly carrying traffic accessing abutting urban and rural properties.

Public Transit System

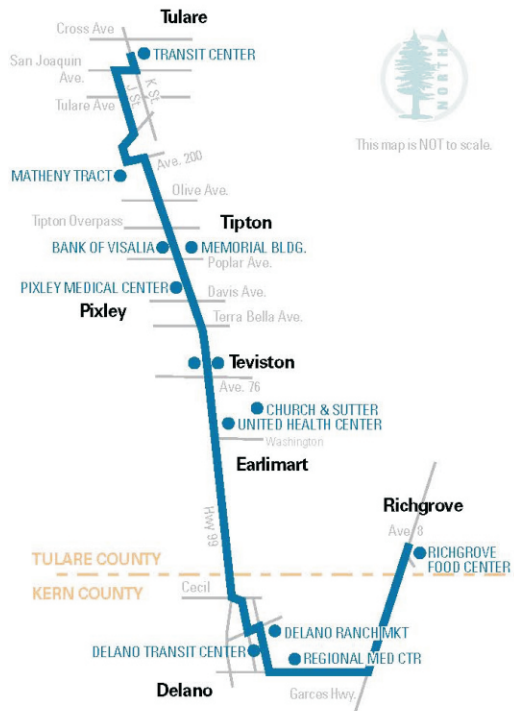
The private automobile is the dominant mode of travel within Tulare County. Census data for Pixley indicate that about two-thirds of commuters drive alone to work, while just over one-quarter carpool or vanpool, and about 10 percent walk, bike or work at home.¹ The Census bureau does not collect data on non-work trips, which represent a greater share of travel than work trips, but tend to be less concentrated in peak traffic periods.

While congestion is not even an emerging issue in Pixley, overreliance on automobiles creates costs for both society and households, and means that many in the community who cannot drive (the young, the old, the disabled, the poor) must rely on those who can drive for their mobility. For this reason, it is important to encourage public transit systems and increased use of active modes of transportation, including bicycles and walking. The public transit system alternatives for Pixley include fixed route public transit systems, common bus carriers (which currently must be accessed in Tulare or Delano) and other local agency transit and paratransit services.

The Tulare County Transit Agency (TCaT) operates fixed-route services that link communities with each other and with Visalia and Tulare's urban transit systems. Pixley is connected via TCaT Route 20 to the City of Tulare and its transit center (see Figure 3). TCaT Route 20 also connects Pixley Delano (Kern County) in the south. Route 20 has nine northbound and ten southbound buses serving Pixley on weekdays and three buses in each direction on Saturdays and Sundays. In Tulare, transfers can be made to connect to Visalia, and the remainder of the TCaT public transit system. TCaT vehicles are wheelchair accessible and all full size buses include bike racks. TCaT supports a number of specialized

¹ Source: ProximityOne.com website: <http://proximityone.com/places12dp3.htm>; accessed 8/28/14.

20 South County Route



Pass Sales Outlets

Porterville Transit Center	35 W. Oak St., Porterville
Tulare County Government Plaza	5961 S. Mooney Blvd., Visalia
Tulare Transit Center	360 N. 'K' St., Tulare
Visalia Transit Center	Oak & Santa Fe, Visalia

Southbound

WEEKDAY SERVICE

TULARE Transit Center	MATHENY TRACT Pratt & Addie	TIPTON Bank of Visalia	TIPTON Memorial Building	PIXLEY Pixley Med Center	TEVISTON Avenue 76	EARLIMART Church & Sutter	EARLIMART United Health Center	DELANO Transit Center	DELANO Ranch Market	DELANO Regional Med Center	RICHGROVE Richgrove Food Center
5:45	5:55	6:09	6:11	6:21	6:26	6:32	6:35	ARR	DEP	—	—
6:45	6:55	7:09	7:11	7:21	7:26	7:32	7:35	7:48	7:53	7:56	—
7:27	7:37	7:51	7:53	8:03	8:08	8:14	8:17	8:30	8:35	8:38	—
9:04	9:14	9:28	9:30	9:40	9:45	9:51	9:54	10:07	10:12	10:15	—
10:41	10:51	11:05	11:07	11:17	11:22	11:28	11:31	11:44	11:49	11:52	11:57
12:18	12:28	12:42	12:44	12:54	12:59	1:05	1:08	1:21	1:26	1:29	12:12
1:43	1:53	2:07	2:09	2:19	2:24	2:30	2:33	2:46	2:51	2:54	2:59
2:37	2:47	3:01	3:03	3:13	3:18	3:24	3:27	3:40	3:45	3:48	—
4:53	5:03	5:17	5:19	5:29	5:34	5:40	5:43	5:56	6:01	6:04	—
5:51	6:01	6:15	6:17	6:27	6:32	6:38	6:41	6:54	6:59	7:02	—

WEEKEND SERVICE

9:30	9:40	9:54	9:56	10:06	10:11	10:17	10:20	10:33	10:38	10:41	—
12:43	12:53	1:07	1:09	1:19	1:24	1:30	1:33	1:46	1:51	1:54	—
3:02	3:12	3:26	3:28	3:38	3:43	3:49	3:52	4:05	4:10	4:13	—

Northbound

WEEKDAY SERVICE

DELANO Regional Med Center	DELANO Ranch Market	DELANO Transit Center	EARLIMART Church & Sutter	EARLIMART United Health Center	TEVISTON Avenue 76	PIXLEY Pixley Med Center	TIPTON Bank of Visalia	TIPTON Memorial Building	MATHENY TRACT Pratt & Addie	TULARE Transit Center
—	—	—	—	6:35	6:41	6:46	6:56	6:58	7:12	7:22
—	—	7:53	8:09	8:12	8:18	8:23	8:33	8:35	8:49	8:59
—	—	8:35	8:51	8:54	9:00	9:05	9:15	9:17	9:31	9:41
—	—	10:12	10:28	10:31	10:37	10:42	10:52	10:54	11:08	11:18
12:27	12:32	12:35	12:48	12:51	12:57	1:02	1:12	1:14	1:28	1:38
—	—	1:26	1:42	1:45	1:51	1:56	2:06	2:08	2:22	2:32
3:29	3:34	3:37	3:50	3:53*	4:10	4:15	EXPRESS ROUTE			4:23
—	—	3:45	4:01	4:04	4:10	4:15	4:25	4:27	4:41	4:51
—	—	6:01	6:17	6:20	6:26	6:31	6:41	6:43	6:57	7:07
—	—	6:59	7:15	7:18	7:24	7:29	7:39	7:41	7:55	8:05

WEEKEND SERVICE

—	—	10:38	10:53	10:56	11:02	11:07	11:17	11:19	11:33	11:43
—	—	1:51	2:07	2:10	2:16	2:21	2:31	2:33	2:47	2:57
—	—	4:10	4:26	4:29	4:35	4:40	4:50	4:52	5:05	5:15

Light type = AM
Bold type = PM

*Free transfer to Northbound 4:04 PM bus.

transportation programs, including shared-ride car and vanpool services, social service dial-a-ride, and specialized services for seniors and persons with disabilities.

Paratransit services are transportation services such as carpooling, vanpooling, taxi service, and dial-a-ride programs. The County supports reliable and efficient paratransit service by encouraging development of service systems that satisfy the transit needs of the elderly and physically handicapped.

AMTRAK

The Corcoran AMTRAK station, located 21 miles to the northwest in Kings County, is the closest station to Pixley providing passenger rail service. The San Joaquin Joint Powers Authority (SJJPA) is comprised of ten agencies including TCAG; it currently oversees the operation of six trains daily serving each of these stations. Service is provided to points north including San Francisco and Sacramento and to points south including Bakersfield and Los Angeles.

High-Speed Rail

The California High-Speed Rail Authority (HSRA) has determined that high-speed rail is technically, environmentally and economically feasible once constructed, and would be operationally self-sufficient. The Authority's purpose is to fund and construct the high-speed rail system throughout California. The proposed service would serve new stations in Kings County near the Tulare line and in Fresno.

Aviation

A general aviation facility on the west side of the community, Harmon Field, was closed in the 1990s. The nearest operational general aviation is Mefford Field in Tulare, 13 miles north of Pixley.

Fresno Yosemite International Airport (FAT), 64 miles northwest of Pixley, is the principal passenger and airfreight airport in the central San Joaquin Valley. Visalia Municipal Airport, 28 miles north, offers passenger service to Los Angeles. Meadows Field, Bakersfield's principal commercial airport, is 42 miles to the south of Pixley.

Bikeways and Pedestrian Facilities

Investment in bikeways provides an inexpensive environment-friendly transportation opportunity. Bicycling is considered an effective alternative mode of transportation that can help to improve air quality and reduce the number of vehicles traveling along existing highways, especially within the cities and unincorporated communities. While the numbers of cyclists is small in comparison to the amount of auto traffic, the size of the community of Pixley means that most local trips can be as fast by bicycle as by car.

Pedestrian facilities include sidewalks, walkways, crosswalks, signals, lighting, and benches, among other items. Where such facilities exist, people will be much more likely to make shorter trips by walking rather than by vehicle. Pedestrian facilities serving the school and recreational facilities enhance the safety of those who choose to walk to and from these destinations.

Goods Movement

The ability of Tulare County to compete domestically and internationally on an economic basis requires an efficient and cost-effective method for distributing and receiving products. Pixley is a part of this system with its proximity to both SR 99 and the UP Railroad mainline.

As industrial and economic growth is anticipated in Pixley, industrial-related truck traffic will increase. Statewide, over three-quarters of all freight is shipped by truck. It is anticipated that the region's truck volumes will grow faster than auto traffic through 2040.

Designated truck routes are intended to be used for long-distance truck movement. Truck movements for local deliveries within a community may use the most direct route to the particular delivery location, including local streets.

Air cargo is a growing method of transporting goods in and out of the Central Valley and is expected to continue to increase. As noted above, Fresno Yosemite International Airport is the major cargo-handling airport in the San Joaquin Valley.

The Union Pacific (UP) Railroad provides freight service, connecting Pixley with major markets in northern and southern California. Rail can be the most cost-effective mode for long-haul traffic traveling to or from destinations beyond the Valley. Trucking is still likely to be the predominant mode for freight movements within the County and Valley for the foreseeable future.

Transportation Demand Management

Transportation demand management (TDM) strategies reduce dependence on the single-occupant vehicle, increase the ability of the existing transportation system to carry more people, and enhance mobility in the increasingly congested Highway 99 corridor. Examples of TDM strategies include telecommuting, flexible work hours, and electronic commerce that enable people to work and shop from home. According to Caltrans, the major vanpool broker in the Valley, vanpools are becoming more prevalent for short-to-medium range commute trips, as well as for traditional long-distance usage: Key vanpool users include agricultural workers, and employees at large firms and government agencies. Park-n-ride facilities and carpooling will also continue to be a significant link between highway and transit modes.

3 Traffic Impact and Circulation Analysis

Existing Transportation/Circulation Conditions

To identify current traffic conditions, AM and PM peak hour turning movement counts were conducted at thirteen intersections in the Pixley area in early June, 2014, while local schools were still in session.

Data on roadway approach lanes at intersection was collected at the same time. Based upon these data and methodologies prescribed by the County, traffic levels of service (LOS) were determined and the adequacy of the community's road network for serving current and future traffic demand was assessed.

Data was collected at the following thirteen intersections and the adjacent roadway segments:

1. SR 99 SB Ramps at Ave 120
2. Ave 120/Diagonal 122
3. SR 99 NB Ramps at Diagonal 122
4. SR 99 NB Ramps at Park (North of Pixley)
5. SR 99 NB Off Ramp at Park
6. SR 99 SB Off Ramp at Main and Court
7. SR 99 SB Off Ramp at Court
8. Court and Park
9. Court and School
10. Airport and Terra Bella
11. Main and Terra Bella
12. Terra Bella at SR 99 NB On Ramp
13. Terra Bella at SR 99 NB Off Ramp

Figure 4 indicates the number of lanes at each study intersection. All approaches to all intersections are single lane, with through traffic sharing the approach lane with turning traffic.

Figure 5, shows existing Average Daily Traffic conditions. Average Daily Traffic was estimated based on peak hour turning movement counts. Figures 6 and 7 show existing traffic turning movements in the morning (AM) and afternoon (PM) peak.

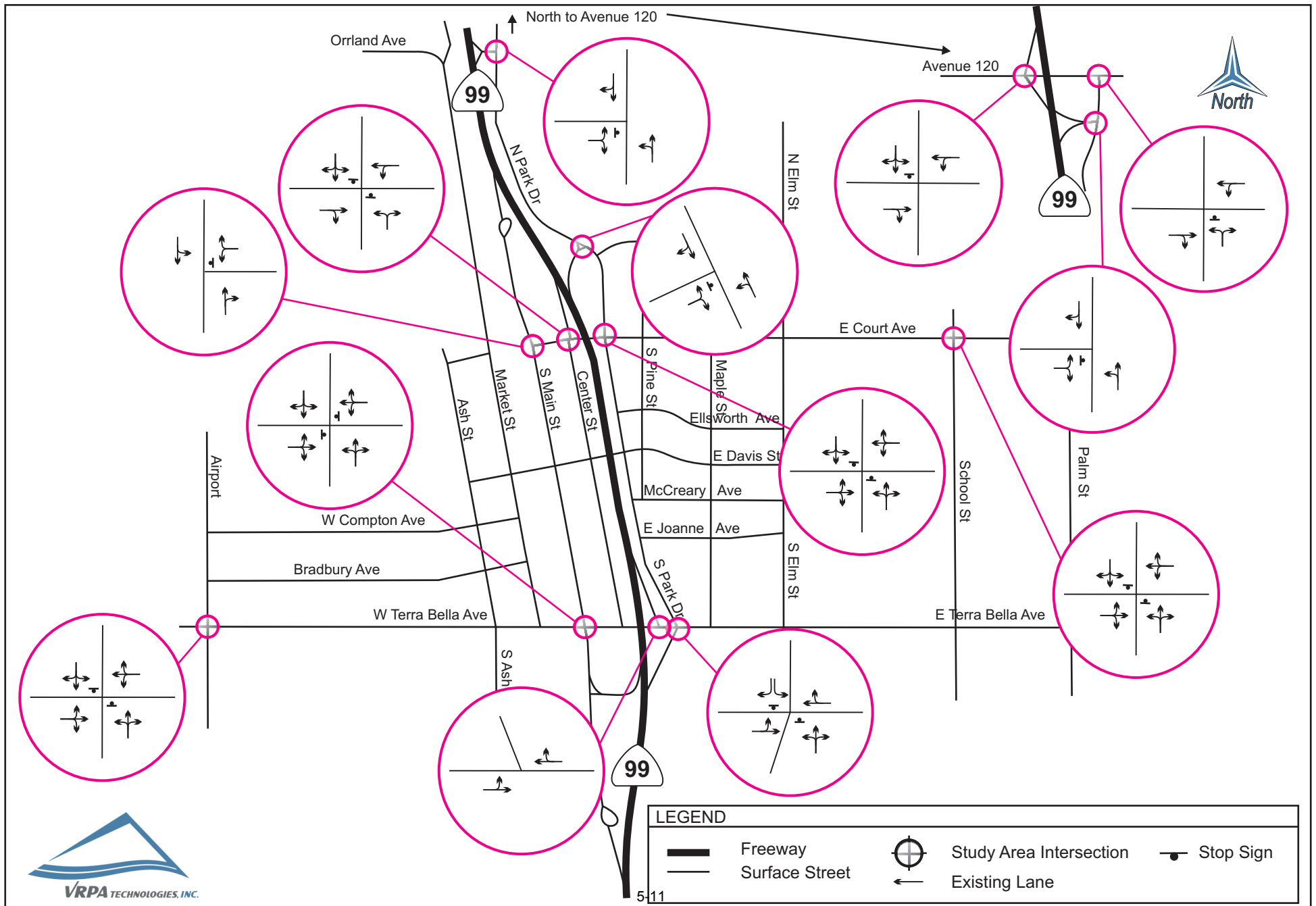
Intersection Capacity Analysis

For both 2014 existing and projected 2030 traffic, intersection operating conditions were calculated using the Transportation Research Board's 2010 Highway Capacity Manual (HCM 2010). Actual calculations were performed using Synchro intersection analysis software. This method results in a level of service (LOS) with a letter grade of from A to F, with LOS A indicating no delay for side street traffic and LOS F indicating severe delay. Table 1 further defines level of service grades. In Tulare County, the goal for peak hour traffic operations is LOS D, per the 2012 County General Plan (p. 13-4.)

Pixley Community Plan Update

Existing (2014) Lane Geometry

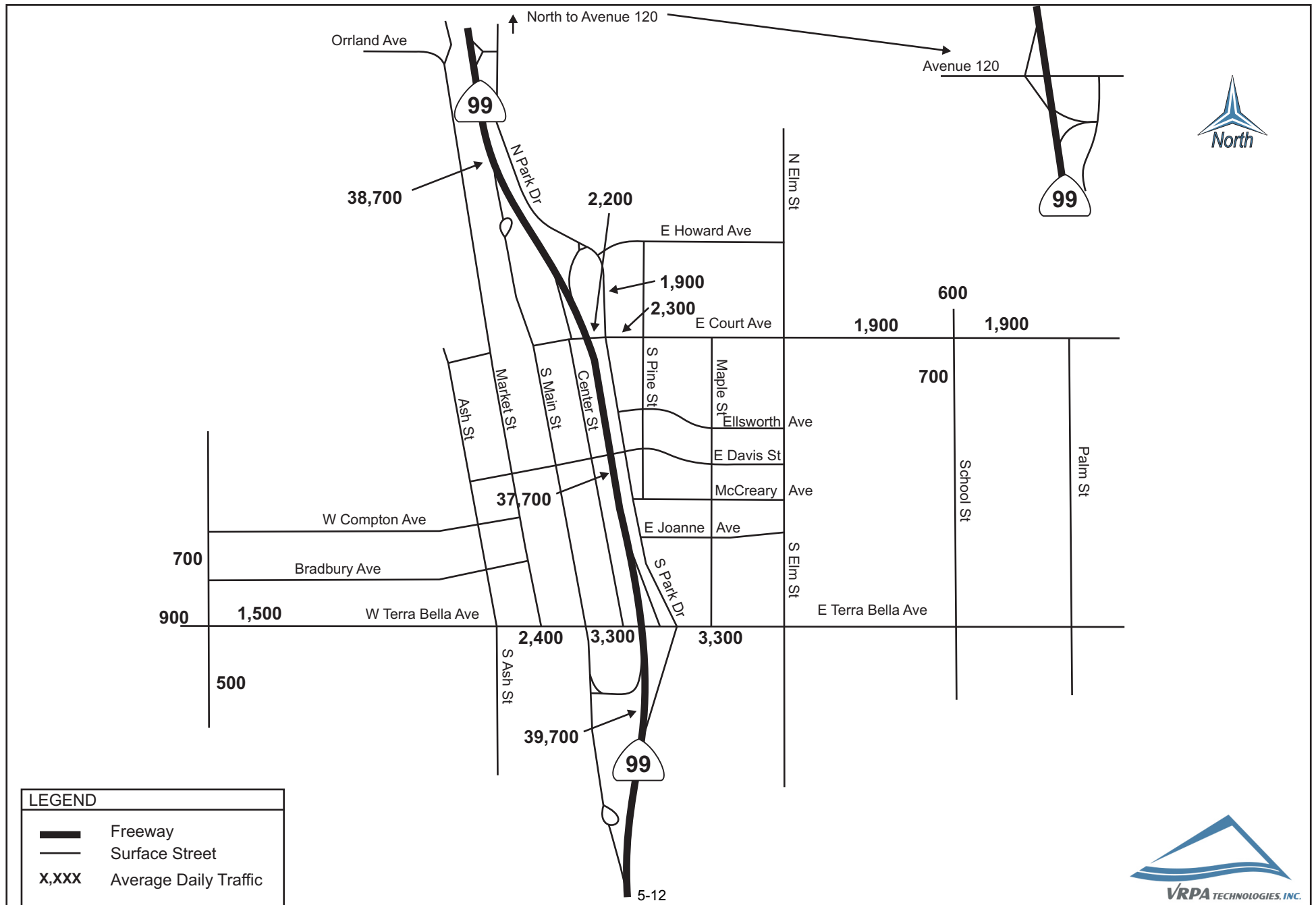
Figure
4



Pixley Community Plan Update

Existing (2014) Average Daily Traffic

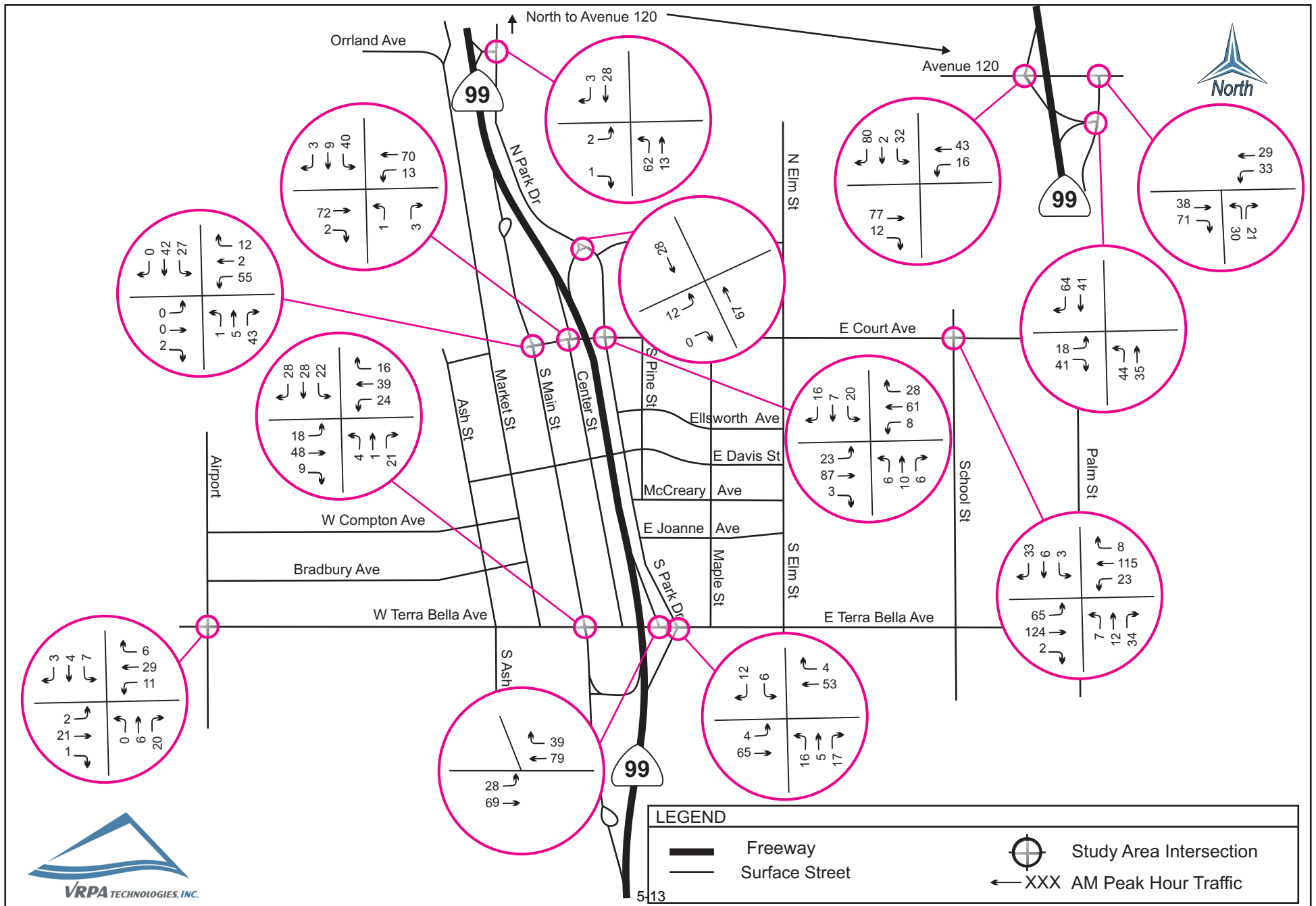
Figure 5



Pixley Community Plan Update

Existing (2014) AM Peak Hour Traffic

Figure 6



Pixley Community Plan Update

Existing (2014) PM Peak Hour Traffic

Figure 7

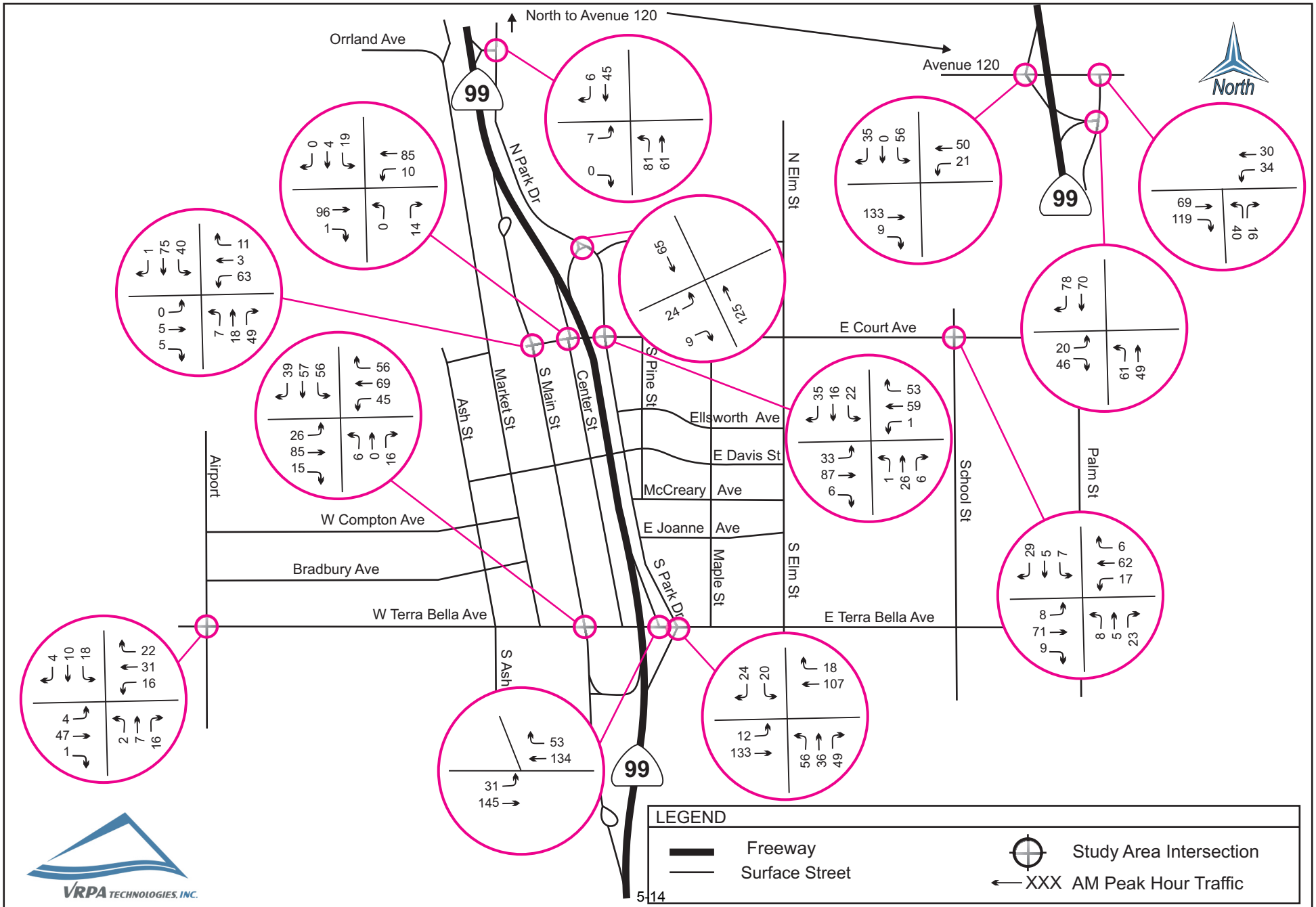


Table 1
UNSIGNALIZED INTERSECTIONS
LEVEL OF SERVICE DEFINITIONS
(Source: 2010 Highway Capacity Manual)

LEVEL OF SERVICE	DEFINITION	AVERAGE TOTAL DELAY (sec/veh)
A	Very minor delay for stop-controlled approaches.	0 - 10.0
B	Describes operations with minor delay.	> 10.0 - 15.0
C	Describes operations with moderate delays.	> 15.0 - 25.0
D	Describes operations with some delays.	> 25.0 - 35.0
E	Describes operations with high delays and long queues.	> 35.0 - 50.0
F	Describes operations with extreme congestion, with very high delays and long queues unacceptable to most drivers.	> 50.0

Future Transportation/Circulation Conditions

In order to project future traffic roadway conditions, a variety of sources were used. Historic population data indicate that the population of Pixley has been 3,310 at the 2010 census, up from 2,175 in 1990. This reflects an annual growth rate of about two percent. TCAG's current RTP forecast indicates a slower population growth of about 0.4% per year from 2010 to 2032 in the 14 TCAG RTP model traffic analysis zones (TAZs) that cover Pixley and vicinity. TCAG's jobs forecast shows employment in Pixley and vicinity increasing at a somewhat higher annual rate of just over 1% between 2010 and 2032.

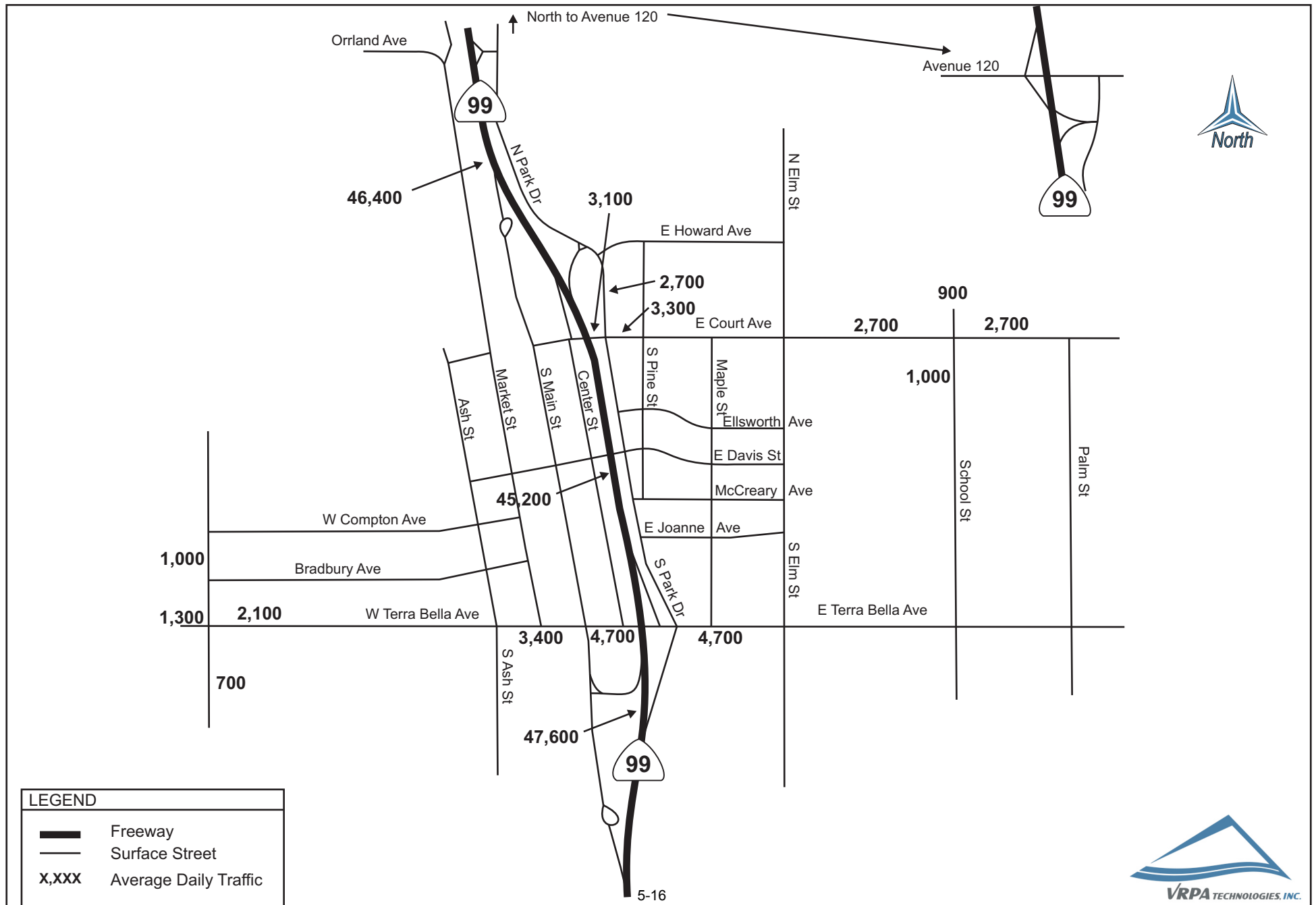
Based on these and other data provided by TCAG and County planning staff, an overall rate of traffic growth of 2% per year was determined to be a reasonably conservative forecast assumption. This rate of growth was applied to existing traffic count data to create future year (2032) traffic levels. This annual rate results in an overall growth in peak hour traffic of approximately 43% for the period 2014-2032. For consistency with TCAG and Caltrans forecasts, a lower annual traffic growth rate of 1% was applied to SR 99 volumes.

Figure 8 shows Average Daily traffic conditions for 2032. Figures 9 and 10 show projected 2030 traffic turning movements in the morning (AM) and afternoon (PM) peak hours, as well as delay levels and LOS

Pixley Community Plan Update

Future (2032) Average Daily Traffic

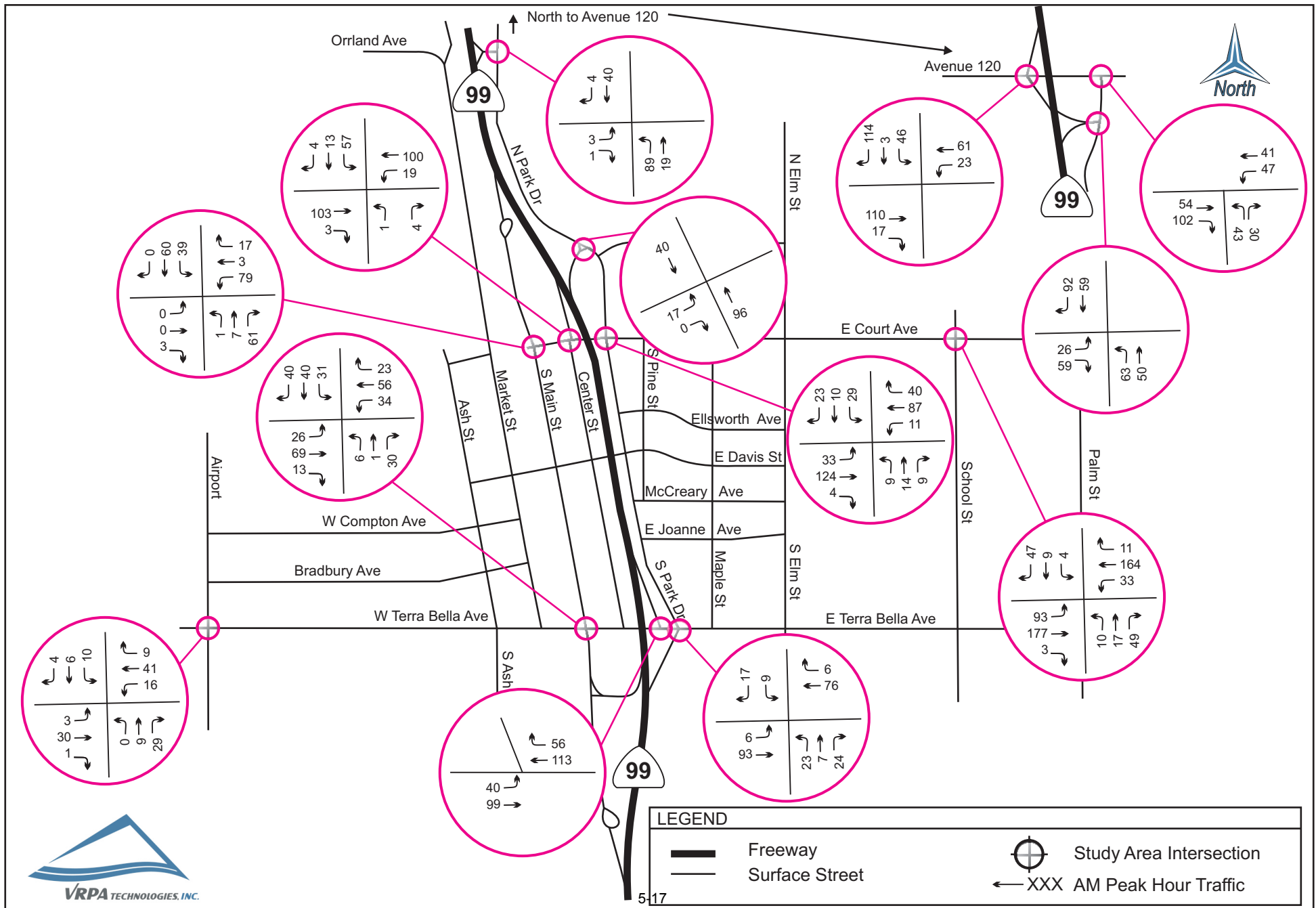
Figure 8



Pixley Community Plan Update

Future (2032) AM Peak Hour Traffic

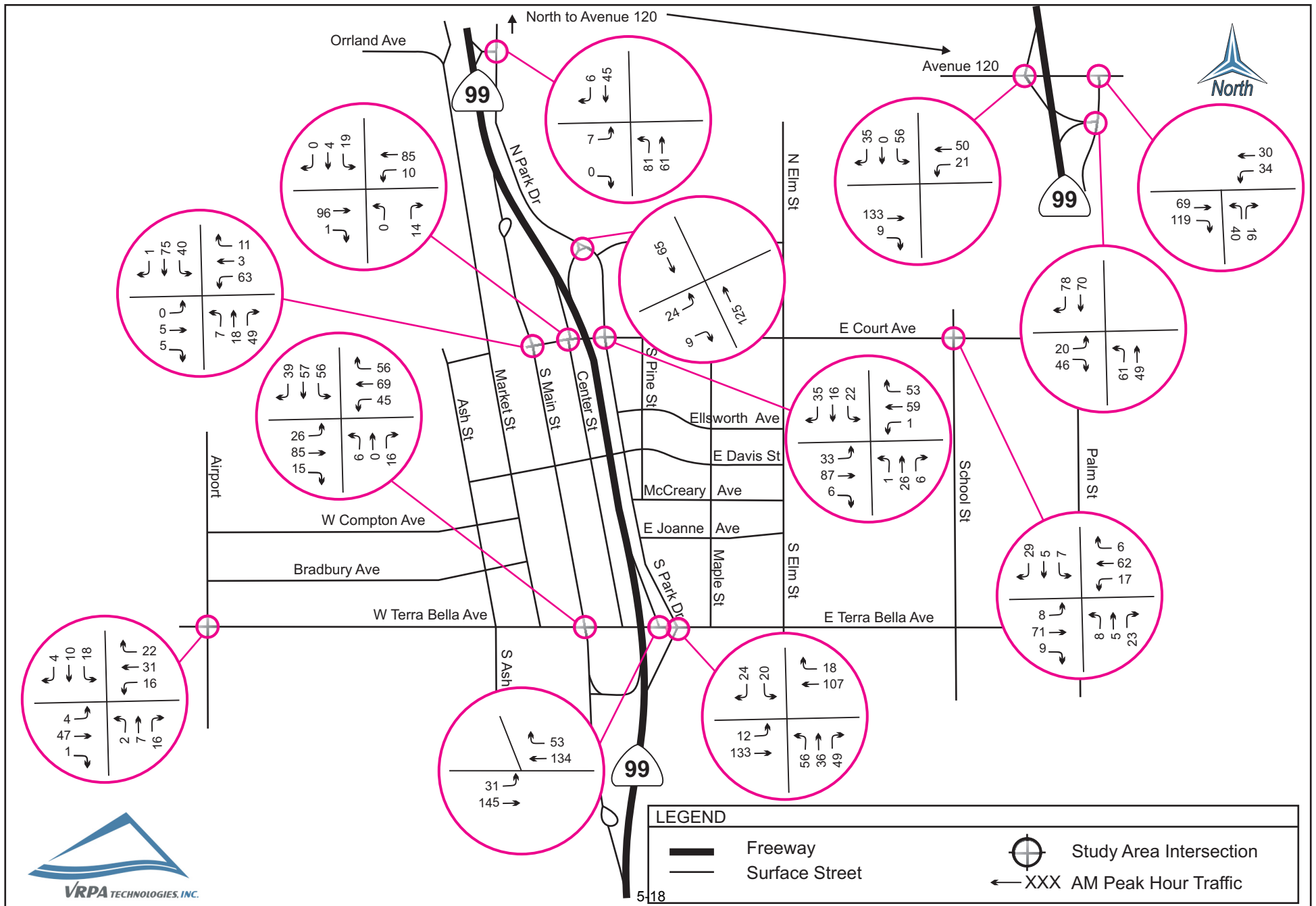
Figure 9



Pixley Community Plan Update

Existing (2010) PM Peak Hour Traffic

Figure 10



results at each intersection. Table 2 summarizes delay and LOS results at all intersections in both the AM and PM peak hours and under both current and 2032 conditions.

Examining Table 2, it is evident that all intersections meet or exceed the County LOS D standard under all scenarios. In fact, all intersections will perform at LOS B or better.

Public transit, bicycles, and pedestrian circulation

As noted above, Pixley has limited transit service and pedestrian and bicycle facilities. Public transit is likely to remain a limited option due to fiscal constraints and the high cost of providing services to a community of less than one thousand residents. The low level of auto congestion in Pixley, now and in the future suggests that driving will continue to be more convenient than transit for those with access to a private car. For those without access to a car, the best approach for improving transit in Pixley will be to enhance rider information systems that give potential transit patrons precise arrival and departure times for transit and paratransit vehicles. Such real time information systems, by reducing the uncertainty and time spent waiting, can both increase demand for transit and paratransit and improve riders' overall experience.

With respect to pedestrian and bicycle modes, the current and projected low levels of vehicular traffic in Pixley, together with short travel distances within the community, means that these modes can be very competitive for trips within Pixley, even with minimal facilities. A reasonably flat, safe surface on the side of a low traffic road can often suffice for pedestrians and bicycles, especially if signs alert drivers to the presence of non-motorized traffic.

4 Summary of Circulation Issues

The current street system functions adequately and barring major unforeseen development in Pixley will continue to do so through the year 2030. Nonetheless, there are some areas of concern, such as the poor pavement condition of many local residential streets, and the lack of sidewalks, curbs and gutters throughout the community. The County is currently addressing these issues through the Trevor community Complete Streets project within the limits of available resources. Two other issues include:

1. While almost all existing and future roadways need be no more than two travel lanes to accommodate expected traffic to 2030, wider rights-of-way may be needed at certain junctions to safely handle potential increased truck traffic, or to allow restricted turn movements into developed areas or at intersections.
2. Given Pixley's favorable location and availability of land and facilities for growth in goods movement activities, truck traffic and potential growth in truck traffic should be monitored. Streets and driveway plans should be updated to reflect new growth areas and changes in freight traffic patterns.

Table 2
Pixley Intersection Analysis

INTERSECTION	PEAK HOUR	EXISTING (2014)		FUTURE (2032)	
		Delay	LOS	Delay	LOS
SR99 SB Ramps @ Ave 120	AM	9.4	A	10.1	B
	PM	10.2	B	11.5	B
Ave 120 @ Diagonal 122	AM	9.5	A	10.1	B
	PM	10.1	B	11.2	B
SR99 NB Ramps @ Diagonal 122	AM	10.3	B	11.5	B
	PM	11.1	B	13.1	B
SR 99 NB Ramps @ Park (N/O Pixley)	AM	9.2	A	9.5	A
	PM	9.9	B	10.6	B
SR99 NB Off Ramp @ Park	AM	9.6	A	9.9	A
	PM	10.3	B	11.1	B
Main St @ Court	AM	10.5	B	11.7	B
	PM	11.4	B	13.5	B
SR99 SB Off Ramp @ Court	AM	10.1	B	11.1	B
	PM	10.4	B	11.4	B
School @ Court	AM	10.9	B	12.9	B
	PM	9.5	A	10.1	B
Park @ Court	AM	10.3	B	11.3	B
	PM	10.9	B	12.2	B
Main St @ Terra Bella	AM	7.7	A	8.2	A
	PM	8.9	A	10.6	B
Terra Bella @ SR99 NB On Ramp	AM	2.3	A	2.4	A
	PM	1.5	A	1.7	A
Terra Bella @ SR99 NB Off Ramp	AM	9.3	A	9.8	A
	PM	11.7	B	14.9	B
Terra Bella @ Airport	AM	9.3	A	9.6	A
	PM	9.8	A	10.4	B

5 Goals, Policies, and Standards

The intent of the Pixley Community Circulation Element is to establish a comprehensive multi-modal transportation system that is efficient, environmentally and financially sound, and coordinated with the Land Use Element.

Goal 1: Design and implement a multi-modal transportation system that will serve projected future travel demand, minimize congestion, and address future growth in Pixley.

Policies and Standards:

1. Utilize existing infrastructure and utilities to the maximum extent practical and provide for the logical, timely, and economically efficient extension of infrastructure and services.
2. Designate streets according to the following functional classifications:
 - a) Freeways (SR 99 and SR 198) carry regional traffic through the community with access only at interchanges with major streets.
 - b) Arterials serve as the principal network for cross-town traffic flow. They connect areas of major traffic generation within the urban area and connect with important county roads and state highways. They also provide for the distribution and collection of through traffic to and from collector and local streets.
 - c) Collectors provide for traffic movement between arterial and local streets, traffic movement within and between neighborhoods and major activity centers, and limited direct access to abutting properties.
 - d) Local streets provide for direct access to abutting properties and for very localized traffic movements within residential, commercial and industrial areas.

All facility-types above (except freeways) should be capable of accommodating transit and paratransit vehicles. Furthermore, all facility-types except freeway should include provisions for active modes of transportation (walking and cycling).

3. Develop and apply consistent standards for new streets (and existing streets where feasible without substantial right-of-way (ROW) takes) based on the roadway classification.
4. Require applicants for new development projects to dedicate needed ROW and construct and/or upgrade to County standards the streets and roads which will serve their projects.

5. Plan new arterial and collector streets as needed to improve access and enhance the development potential of land designated for commercial and industrial uses.
6. Improvement standards for local and minor streets shall include perpendicular curbs, gutters and adequate street lighting at intersections.
7. Access to arterials by driveways, local and minor streets, and alleys should be controlled as needed in order to ensure efficient traffic flow and safety along these streets.
8. Local streets should be designed to discourage high traffic volumes and through traffic.
9. Develop a Circulation Map showing the public street system. Designated streets and recommended rights-of-way should be indicated on this map.
10. Allow standards for new street development to be altered or refined where it can be demonstrated that projected traffic flows can be accommodated.
11. Plan for peak-hour Level of Service (LOS) "D" or better throughout the circulation network.
12. Make intersection improvements to the existing major street system selectively, favoring traffic engineering solutions rather than major structural improvements. This could include signalization, intersection channelization, use of directional signs, and diversion of traffic onto underutilized streets.
13. Use complete streets concepts in the design of new local streets where such techniques will improve safety and manage traffic flow.
14. Ensure the street network provides efficient routes for emergency vehicles, meeting necessary street widths, turn around radius, and other factors as determined by the County in consultation with fire and other emergency service providers.
15. Cooperate with local, regional, State and federal agencies to plan for, establish and maintain good connectivity to an efficient multimodal regional transportation system.

Goal 2: Provide designated routes and loading standards that reduce the noise and safety concerns associated with truck traffic.

Policies and Standards:

1. Designate truck routes for use by heavy commercial and industrial traffic.
 - a) Initially, designated truck routes shall be:
 - Airport Avenue

- Main Street
 - Park Drive
 - Avenue 120
 - Court Avenue
 - Terra Bella Avenue
2. Design interior street systems for commercial and industrial subdivisions to accommodate the movement of heavy trucks.
 3. Restrict heavy duty truck through-traffic in residential areas and plan land uses so that trucks do not need to traverse these areas.
 4. Design off-street loading facilities for all new commercial and industrial developments so that they do not face surrounding roadways or residential neighborhoods. Truck backing and maneuvering to access loading areas shall not be permitted on the public road system, except when specifically permitted by the County Engineer.

Goal 3: Provide safe and convenient pedestrian access between residential neighborhoods, parks, open space, and schools that service those neighborhoods.

Policies and Standards:

1. Provide a safe walking environment for pedestrians.
 - a) New development should include safe and pleasant designs which promote pedestrian access to arterials and collectors and consider the location of community services, such as schools, parks and neighborhood shopping activity centers in the accessibility of their design for all persons.
 - b) Require the installation of sidewalks as an integral part of all street construction where appropriate.
 - c) Require street lighting within the rights-of-way of all public streets.
 - d) Include pedestrian signal indicators as an integral part of the installation of traffic signals.
2. Maximize visibility and access for pedestrians and encourage the removal of barriers (walls, easements, and fences) for safe and convenient movement of pedestrians. Special emphasis should be placed on the needs of disabled persons considering ADA regulations.

3. Plan for pedestrian access consistent with road design standards while designing street and road projects. Provisions for pedestrian paths or sidewalks and timing of traffic signals to allow safe pedestrian street crossing shall be included.
4. Collaborate with the Pixley Elementary School and the School District to ensure that school children have adequate transportation routes available, such as a local pedestrian or bike paths, or local bus service.
5. Encourage safe pedestrian walkways within commercial, office, industrial, residential, and recreational developments that comply with the Americans with Disabilities Act (ADA) requirements.
6. Coordinate with TCaT and other transit operators to ensure that pedestrian facilities are provided along and/or near transit routes, whenever feasible. New land developments may be required to provide pedestrian facilities due to existing or future planned transit routes even if demand for a pedestrian facility is not otherwise warranted.
7. Review all existing roadways without pedestrian facilities when they are considered for improvements (whether maintenance or upgrade) to determine if new pedestrian facilities are warranted. New roadways should also be assessed for pedestrian facilities.

Goal 4: Ensure the provision of adequate off-street parking for all land uses.

Policies and Standards:

1. Require all new development to identify adequate on-street and off-street parking based on expected parking needs.
2. Encourage shared parking among nearby uses with complementary parking demand patterns.
3. Provide adequate loading areas within off-street parking areas for all commercial and manufacturing land uses.
4. Anticipate parking needs at proposed and expected activity centers, particularly commercial areas.

Goal 5: Improve the aesthetics of transportation system routes with landscaping.

Policies and Standards:

1. Encourage Caltrans to install and maintain and enhance landscaping elements along SR 99 and the ramps serving Pixley.
2. Encourage the use of drought-tolerant native plants and the use of recycled water for roadway landscaping.
3. Require parking areas of all commercial and industrial land uses that abut residential areas to be buffered and shielded by adequate landscaping.

Goal 6: Provide a transportation system that is integrated with the region.

Policies and Standards:

1. Coordinate local transportation planning with the TCAG Congestion Management Plan to ensure eligibility for state and federal funding.
2. Incorporate the Regional Transportation Plan and the Tulare County Short- and Long-Range Transit Plans into the Community Plan Circulation Element, and encourage the active participation of Caltrans in the design of highway capital improvement projects.

Goal 7: Encourage the use of public transit services to reduce reliance on the automobile.

Policies and Standards:

1. Encourage transit alternatives to meet the basic transportation needs of the young, the elderly, the handicapped, and people without access to an automobile.
 - a) Maintain opportunities for a transit center within Pixley where alternative transit modes could connect with private ridesharing.
 - b) Encourage and provide for ridesharing, park and ride, and other programs that can reduce emissions, save energy, and reduce monetary costs for firms and workers.
2. Planning and development of arterial and collector streets shall include design features which can be used a future public transit stops.
3. Support the expansion and improvement of transit systems and ride sharing programs to reduce the production of automobile emissions.
4. Support the use of alternate fuel vehicles and fueling stations for public transit vehicles, and County public agency vehicles.

5. Support TCaT and other transit operators' programs to foster transit usage.
6. Support all operator efforts to maximize revenue sources for short and long range transit needs that utilize all funding mechanisms available including federal grants, state enabling legislation, and farebox revenue. This can be accomplished through TCAG and the Tulare County Transit Agency (TCaT) through the development of the Short and Long Range Transit Plans.
7. Support programs developed by transit agencies/operators to provide paratransit service.
8. Incorporate the potential for public transit service in the design of developments identified as major trip attractions (i.e. community centers and employment centers).
9. Explore potential development of a park-n-ride lot in Pixley.
10. Support continued improvements to AMTRAK rail passenger service within Tulare County and throughout the San Joaquin Valley.

Goal 8: Provide efficient goods movement

Policies and Standards:

1. Encourage the efficient movement of goods and people by rail through a shift of a portion of the goods previously moved by trucks onto the rail freight system.
2. Implement street and highway projects to provide convenient and economical goods movement, including access to rail terminals, in areas where large concentrations of truck traffic exist.
3. Identify street and highway improvement and maintenance projects that will improve goods movement and implement projects that are economically feasible.

Goal 9: Provide safe and convenient facilities for non-motorized modes of transportation that enhance the future livability and character of Pixley.

Policies and Standards:

1. Consider developing a Bikeway plan for Pixley based on the following facility designations:
 - a) Bike Path (Class I). A special pathway for the exclusive use of bicycles, which is separated from motor vehicle facilities by space or a physical barrier. It is identified by guide signing and pavement markings.

- b) Bike Lane (Class II). A lane on the paved area of a road for preferential use by bicycles. It is usually located along the right edge of the paved area or between the parking lane and the first motor vehicle lane. It is identified by a "Bike Lane" guide sign, special lane lines, and other pavement markings.
 - c) Bike Route (Class III). A recommended route for bicycle travel along an existing right-of-way which is signed but not striped.
 - d) Bikeway. All facilities which explicitly provide for bicycle travel. The bikeway can be anything from a separate facility to a simple signed street.
- 2. Give priority to bikeways which will serve the highest concentration of cyclists and destination areas of highest demand, especially Pixley Elementary School.
 - 3. Provide bikeways in proximity to major traffic generators such as commercial centers, schools, recreational areas, and major public facilities.
 - 4. Develop a visually clear, simple, and consistent bicycle system with standard signs and markings, as designated by the State of California Traffic Control Devices Committee and the State Bikeway Committee.
 - 5. Support the installation of bike parking racks at public and private places of assembly such as parks, schools, employment sites, churches, and retail commercial developments.
 - 6. Provide non-motorized alternatives for commuter travel as well as recreational opportunities.
 - 7. Provide separate rights-of-way for non-motorized facilities whenever economically and physically feasible.
 - 11. Develop bikeways in compliance with the standards established in the Caltrans Highway Design Manual or other appropriate standards.

Goal 10: *Design, construct, and operate the transportation system in a manner that maintains a high level of environmental quality.*

Policies and Standards:

- 1. Control dust and mitigate other environmental impacts during all stages of roadway construction.

2. Protect residents from transportation generated noise hazards. Increased setbacks, walls, landscaped berms, other sound absorbing barriers, or a combination thereof shall be provided along four lane highways in order to protect adjacent noise-sensitive land uses from traffic-generated noise impacts. Additionally, noise generators such as commercial, manufacturing, and/or industrial activities shall use these techniques to mitigate exterior noise levels to no more than 60 decibels.
3. Review and monitor proposals for expansion of pipelines for the transport of suitable products and materials, and require mitigation of environmental impacts. In particular, require mitigation of the potential for hazardous chemical or gas leakage and explosion.
4. Encourage the use of non-polluting vehicles for both public and private uses.
5. Include noise mitigation measures in the design of roadway projects in Pixley.

Goal 11: ***Support the use of Transportation Demand Management (TDM) strategies to reduce dependence on the single-occupant vehicle, increase the ability of the existing transportation system to carry more people, and enhance mobility along congested corridors.***

Policies and Standards:

1. New development shall consider Transportation System Management and Transportation Demand Management as strategies for the mitigation of traffic and parking congestion. Public transit, traffic management, ride sharing and parking management are to be used to the greatest extent practical to implement transportation management strategies.
2. Coordinate with Caltrans, TCAG, transit agencies and other responsible agencies to identify the need for additional park-n-ride facilities along major commuter travel corridors.

Goal 12: ***Utilize Intelligent Transportation Systems (ITS) to improve the safety and performance of the surface transportation system using new technology in detection, communication, computing, and traffic control.***

Policies and Standards:

1. Encourage the integration of Intelligent Transportation Systems (ITS) consistent with the principles and recommendations referenced in the TCAG Regional Transportation Plan.

Appendix G

Memo- Water Supply



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MEMORANDUM

To: Aaron Bock, Tulare County Resource Management Agency

From: David McGlasson, PE

Subject: Pixley Water Usage

Date: March 25, 2015

This memo discusses the community of Pixley's recorded recent water use, calculated current water use, projected water use, current water quality issues, and potential environmental impacts of growth along with suggested mitigation measures.

Recorded Water Usage

Provost and Pritchard (P&P) compiled monthly well production data for the four wells operated by Pixley Public Utilities District (PPUD) for the years 2007 through 2014 (see attached *Pixley Water Well Spreadsheet* for raw data). A summary of annual water use is shown in Table 1.

Table 1
Recorded Water Use

Calendar Year	Annual Water Use (Million Gallons)
2007	218.65
2008	252.08
2009	248.73
2010	214.97
2011	209.78
2012	209.4
2013	213.92
2014	194.17

There are several observations to be made regarding these data, which affect how they should be used to project usage into the future. First, record water usage data are missing for the months of January through April, 2007, making the recorded total for the year 2007 inaccurate. Second, we note a significant decrease in water usage between calendar years 2009 and 2010. Annual water use decreased by 13.5% from 248.73

million gallons (MG) in 2009 to 214.97 MG in 2010. We also note the reduced use continues in 2011 through 2014, meaning the drop in 2010 appears to be not an anomaly but a lasting change. We attribute the decrease to the installation of water meters in the system in 2009. As a result of the data problems with 2007 and the change in system use characteristics in 2010, water use data from 2007 through 2009 has not been used to project to the future.

The table above also shows Pixley's annual water use in 2010 through 2013 to be consistent at 212 million gallons, with a variance of less than 2 percent. In 2014, however, use dropped 8% to 194 million gallons. There were no equipment failures in 2014 to explain the drop as being, for example, a result of lack of production capacity.

Analysis of the relationship between average and peak demands for 2010 through 2014 at least sheds some light on how the 2014 total came to be lower than the average of the previous four years, even if there is no definitive reason for the change. Using the average demand for the year and the demand for the highest-production day of the year, peaking factors were calculated for each of the five years. Average peaking factors were calculated for the four years 2010 through 2013, and the five years 2010 through 2014. This calculation is shown in **Table 2**.

Table 2
Calculation of Peaking Factors

Calendar Year	(a) Average Water Demand (GPM)	(b) Maximum Day Water Demand (GPM)	Peaking Factor (b/a)
2010	409	808	1.98
2011	399	1,074	2.69
2012	398	962	2.41
2013	407	718	1.76
2014	369	628	1.70
Avg '10-'13	403	891	2.21
Avg '10-'14	397	838	2.11

The peaking factors for 2013 and 2014 were 1.76 and 1.70 respectively, very low compared to previous years and the averages. Because the peaking factors for 2013 and 2014 are both below average, and those two years were both very dry years, we believe they are a result of water use reductions due to the drought and are representative of results that might be achieved in dry years. These results will not be sustained in years of average or above average rainfall. Overall water use, year after year, will tend to normalize at the slightly higher rates observed in 2010 through 2012 and water system planning should be based on those higher values.

Table 3 restates the information in Table 1 for only the years 2010 through 2014, and shows the average of annual production for the four years 2010 through 2013, and the five years 2010 through 2014.

Table 3
Average Annual Water Use

Calendar Year	Annual Water Use (Million Gallons)
2010	214.97
2011	209.78
2012	209.4
2013	213.92
2014	194.17
Avg '10-'13	212.02
Avg '10-'14	208.45

There is a difference of less than 2% in the average for the four-year period versus the average for the five-year period. We have used the higher, four-year, value below as the basis for projecting future use, to add a small measure of conservatism to the projection.

Water Use Per Dwelling and Per Person

According to the 2010 US Census, Pixley had a population in that year of 3,310. In addition to serving the local elementary and middle schools, the water system has 814 residential connections, which implies 4.06 persons per household, slightly more than the County-average household formation rate of 3.89. Gross water use per capita is 175 gallons per person per day. Gross water use per equivalent dwelling unit (EDU) is 712 gallons per EDU per day.

However, Pixley Utility District data show that nearly 10 percent of the water produced serves the two schools, with a large but unquantified percentage of that water going to irrigate the Middle School campus. While school populations can be expected to increase with population growth, school irrigation demand will remain constant over time unless the campus is expanded. There are no known plans for such an expansion.

Projected Water Usage

Projected community water use over a 20-year planning horizon was calculated based on the 2010-2013 average water demand of 212.02 MG, or a per-capita use of 175 gallons per capita per day. **Table 4** employs an annual usage growth rate of 1.30%, in accordance with direction from the Tulare County Planning Department. Because water demand at the schools will not grow directly in proportion to the growth in population, using 1.30% as the water demand growth rate is conservative. If this rate holds over the

planning horizon, total annual water use in Pixley will be 274.51 million gallons in 2034, or 29.5% more than current use.

Table 4
Projected Water Usage

Year	Growth Rate (%)	Population	Usage Increase (MG)	Total Usage (MG)
Base	-	2,457	-	212.02
2015	1.3%	2,489	2.76	214.78
2016	1.3%	2,521	2.79	217.57
2017	1.3%	2,554	2.83	220.40
2018	1.3%	2,587	2.87	223.26
2019	1.3%	2,621	2.90	226.16
2020	1.3%	2,655	2.94	229.10
2021	1.3%	2,689	2.98	232.08
2022	1.3%	2,724	3.02	235.10
2023	1.3%	2,760	3.06	238.16
2024	1.3%	2,796	3.10	241.25
2025	1.3%	2,832	3.14	244.39
2026	1.3%	2,869	3.18	247.57
2027	1.3%	2,906	3.22	250.78
2028	1.3%	2,944	3.26	254.04
2029	1.3%	2,982	3.30	257.35
2030	1.3%	3,021	3.35	260.69
2031	1.3%	3,060	3.39	264.08
2032	1.3%	3,100	3.43	267.51
2033	1.3%	3,140	3.48	270.99
2034	1.3%	3,181	3.52	274.51

System Production Capacity

PPUD is in the process of seeking funding for two new wells, to replace two of the four existing wells, with the goal of reducing arsenic contamination (see system water quality section, below). It is anticipated that these new wells will provide production capacity at least equal to current, leaving PPUD with the capacity to deliver current production quantities of water well into the future. Over a 20-year horizon, attention to the two remaining wells and to all of the well pumps will be required as a matter of normal operations and maintenance.

System Water Quality

PPUD provided Provost & Pritchard with Consumer Confidence Reports (CCRs) for the years 2009 through 2013 (see attached *Pixley CCR for 2009-2013*). In those years, the system has exceeded Maximum Contaminate Levels (MCLs) for Arsenic for the years 2009-2014, and Iron for the years 2011-2013.

Total Coliform Bacteria readings were detected in the years 2011 and 2013, however, further tests in 2013 showed no detection. Turbidity levels are close to but do not exceed MCLs and should be monitored. A summary of these results are shown in the tables below.

Table 5
Arsenic Readings

Year	Level Detected (ppm)	Range of Detections (ppm)	MCL (ppm)
2009	16.25	3-24	10
2010	14	3-22	10
2011	12.66	5-19	10
2012	20.5	20-21	10
2013	19.1	3-26	10

Table 6
Iron Readings

Year	Level Detected (ppm)	Range of Detections (ppm)	MCL (ppm)
2011	306.66	ND-510	300
2012	306.66	ND-510	300
2013	306.66	ND-510	300

Table 7
Total Coliform Readings

Year	Highest # of Detection	No. of months in violation	MCL
2011	8	2.00	# of Detection per month \leq 1
2013	3	1.00	# of Detection per month \leq 1

Table 8			
Turbidity			
Year	Level Detected (ppm)	Range of Detection	MCL (ppm)
2009	4	0.6-69	5
2010	4	0.6-69	5
2011	2.66	0.60-4.40	5
2012	2.66	0.60-4.40	5
2013	2.66	0.60-4.40	5

PPUD has applied for and is currently awaiting award of construction funds to drill two new wells that will avoid arsenic, as indicated by test wells already drilled. Two of the four existing wells will be abandoned, and PPUD will attempt to modify the production zones of the other two to block arsenic-producing strata. Construction is contingent on funding through SWRCB-DDW. Arsenic removal increases system operating costs, and this increase must be accounted for in future rate projections for the system.

Iron, as a Secondary MCL, is of concern as an aesthetic issue in the water, but does not pose a health threat and does not require immediate action. Iron removal may be considered at the time arsenic removal is being designed.

Neither Coliform nor turbidity are at actionable levels at this time, though the positive tests bear continued monitoring.

Environmental Impacts

The following are mitigation measures that are seen as feasible in Pixley and could allow the impact to be reduced to less than significance. Each of these is currently in use in one or more California communities:

1. Continue to require metering of all domestic and commercial connections. Develop and maintain a progressive, tiered water rate to encourage water conservation.
2. Retrofit homes with water-efficient faucets, showers and toilets.
3. Limit permissible landscape area for each residence to 2,500 square feet or less.
4. Adopt limited outdoor watering days and hours (now in force statewide, as of August 1, 2014, by order of the Department of Water Resources).
5. Mandate use of native and drought-tolerant species for all landscaping.
6. Acquire a new surface water supply that could be shown to benefit the basin and offset the pumping that comes with growth.

The first five measures could reduce per-unit water consumption by 25-30 percent cumulatively, though 8 to 10 percentage points of that decrease have already been

realized through implementation of water meters in 2010. Fully realizing all that potential per-capita reduction in consumption has the potential to almost completely offset 20 years of 1.3-percent growth, which would be an increase of 29 percent. The sixth measure would be necessary only if the first five were not fully effective in offsetting the growth that is experienced. If the first five measures are fully realized, their effect would be to reduce groundwater impacts to less than significance.



Attachments:

Pixley Water Well Spreadsheet
Pixley 2014 Water Usage Summary
Pixley CCR

2/2/2015

Year: 2006		Well No. 1				Well No. 2A				Well No. 3A				Well No. 4				Total Well Production		
		Notes: on@43psi/of@45psi, installed before 1962, drilled 960', pump@320', new 100 hp motor in 2006, 14" col. As=23				Notes: on@36psi/of@43.5psi, installed in '99, drilled 800', pump@340', 100 hp motor,As=23				Notes: on@37psi/of@40psi, installed in '99, drilled 800', pump@320', 75 hp motor, As=21 43gpm New Capacity gross - 9/29/08				Notes: on@36psi/of@43.5psi, drilled in '78, installed in early '90's, using old 2 parts, drilled 598', pump@340', 75 hp motor, As=4						
Note: Grouted numbers are estimated		Estimated Well Production Rate (gpm)'		824		Estimated Well Production Rate (gpm)'		852		Estimated Well Production Rate (gpm)'		439		495		Estimated Well Production Rate (gpm)'		611		
Date		Meter Reading	Production (meter factor) 1,000	Estimated Hours Per Day	Average Day	Meter Reading	Production (meter factor) 10,000 1,000	Estimated Hours Per Day	Average Day	Meter Reading	Production (meter factor) 10,000 1,000	Estimated Hours Per Day	Average Day	Meter Reading	Production (meter factor) 1,000	Estimated Hours Per Day	Average Day		Gallons	
			gallons	hours	gallons		gallons	hours	gallons		after 4/16/2010 gallons	hours	gallons		gallons	hours	gallons			
1/1/2007																				
1/2/2007																				
1/3/2007																				
1/4/2007																				
1/5/2007																				
1/6/2007																				
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1/12/2007																				
1/13/2007																				
1/14/2007																				
1/15/2007																				
1/16/2007																				
1/17/2007																				
1/18/07		7,101	Start	N/A	N/A	Not Read	N/A	N/A	N/A	Not Read	N/A	N/A	N/A	23,588	Start	N/A	N/A	N/A	N/A	
1/19/07																				
1/20/07																				
1/21/07																				
1/22/07																				
1/23/07																				
1/24/07																				
1/25/07		10,059	2,958,000	9	422,571	Not Read	N/A	N/A	N/A	Not Read	N/A	N/A	N/A	23,680	92,000	0	13,143	N/A	N/A	
1/26/07																				
1/27/07																				
1/28/07																				
1/29/07																				
1/30/07																				
1/31/07																				
January Total			2,958,000				0				0				92,000		0		0	
Max Day							0				0				13,143		0		0	
Average Day			96,600				0				0				3,067		N/A		N/A	
2/1/07																				
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2/7/07																				
2/8/07																				
2/9/07		15,000	4,941,000	7	329,400	23,062	N/A	N/A	N/A	47,747	N/A	N/A	N/A	24,237	557,000	1	37,133	N/A	N/A	
2/10/07																				
2/11/07																				
2/12/07		15,930	930,000	6	310,000	23,147	850,000	6	283,333	47,810	630,000	4	210,000	24,775	538,000	4	179,333	2,948,000	2,948,000	
2/13/07																				
2/14/07																				
2/15/07																				
2/16/07																				
2/17/07																				
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2/21/07																				
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2/24/07																				
2/25/07																				
2/26/07																				
2/27/07											</									

Year: 2008	Well No. 1				Well No. 2A				Well No. 3A				Well No. 4				Total Well Production
3/24/07																	
3/25/07																	
3/26/07	26,300	2,935,000	3	172,647	23,404	860,000	1	50,588	47,999	630,000	1	37,059	26,392	539,000	1	31,706	4,964,000
3/27/07																	
3/28/07	26,722	422,000	4	211,000	23,500	960,000	9	480,000	48,063	640,000	6	320,000	26,931	539,000	5	269,500	2,561,000
3/29/07																	
3/30/07																	
3/31/07																	
March Total		10,792,000				3,530,000				2,530,000				2,156,000			19,008,000
Max Day		350,833				960,000				640,000				269,500			8,344,000
Average Day		359,733				117,667				84,333				71,867			4,752,000
4/1/07																	
4/2/07	27,311	589,000	2	117,800	23,570	700,000	3	140,000	48,337	2,740,000	11	548,000	27,173	242,000	1	48,400	4,271,000
4/3/07																	
4/4/07																	
4/5/07	28,222	911,000	6	303,667	23,640	700,000	5	233,333	48,360	230,000	1	76,667	27,415	242,000	2	80,667	2,083,000
4/6/07	28,500	278,000	6	278,000	23,660	200,000	4	200,000	48,383	230,000	4	230,000	27,657	242,000	5	242,000	950,000
4/7/07																	
4/8/07																	
4/9/07																	
4/10/07	30,044	1,544,000	8	386,000	23,748	880,000	4	220,000	48,406	230,000	1	57,500	27,899	242,000	1	60,500	2,896,000
4/11/07	30,234	190,000	4	190,000	23,800	520,000	10	520,000	48,430	240,000	5	240,000	27,947	48,000	1	48,000	998,000
4/12/07																	
4/13/07																	
4/14/07																	
4/15/07																	
4/16/07																	
4/17/07																	
4/18/07	30,424	190,000	1	27,143	24,218	4,180,000	12	597,143	48,453	230,000	1	32,857	27,996	49,000	0	7,000	4,649,000
4/19/07																	
4/20/07	30,614	190,000	2	95,000	24,219	10,000	0	5,000	48,477	240,000	4	120,000	28,045	49,000	1	24,500	489,000
4/21/07	30,804	190,000	4	190,000	24,220	10,000	0	10,000	48,510	330,000	6	330,000	28,047	2,000	0	2,000	532,000
4/22/07	30,994	190,000	4	190,000	24,220	0	0	0	48,543	330,000	6	330,000	28,049	2,000	0	2,000	522,000
4/23/07	31,187		4	193,000	24,221	10,000	0	10,000	48,576	330,000	6	330,000	28,051	2,000	0	2,000	535,000
4/24/07	31,307	193,000	2	120,000	24,222	10,000	0	10,000	48,610	340,000	6	340,000	28,054	3,000	0	3,000	473,000
4/25/07	31,427	120,000	2	120,000	24,224	20,000	0	20,000	48,668	580,000	10	580,000	28,056	2,000	0	2,000	722,000
4/26/07	31,547	120,000	2	120,000	24,229	50,000	1	50,000	48,757	890,000	15	890,000	28,058	2,000	0	2,000	1,062,000
4/27/07	31,667	120,000	2	120,000	24,294	650,000	13	650,000	48,761	40,000	1	40,000	28,061	3,000	0	3,000	813,000
4/28/07	31,787	120,000	2	120,000	24,392	980,000	19	980,000	48,766	50,000	1	50,000	28,063	2,000	0	2,000	1,152,000
4/29/07	31,907	120,000	2	120,000	24,490	980,000	19	980,000	48,771	50,000	1	50,000	28,065	2,000	0	2,000	1,152,000
4/30/07	32,027	120,000	2	120,000	24,567	770,000	15	770,000	48,775	40,000	1	40,000	28,068	3,000	0	3,000	933,000
April Total		5,305,000				10,670,000				7,120,000				1,137,000			24,232,000
Max Day		422,571				980,000				890,000				269,500			4,649,000
Average Day		55,010				104,608				89,804				11,147			1,425,412
MAY																	
5/1/07	32,147	120,000	2	120,000	24,656	437,000	9	437,000	48,780	50,000	2	50,000	28,068	23,000	1	23,000	630,000
5/2/07	32,267	120,000	2	120,000	24,696	400,000	8	400,000	48,785	50,000	2	50,000	28,540	472,000	13	472,000	1,042,000
5/3/07	32,387	120,000	2	120,000	24,711	150,000	3	150,000	48,789	40,000	1	40,000	29,117	577,000	16	577,000	887,000
5/4/07	32,507	120,000	2	120,000	24,726	150,000	3	150,000	48,794	50,000	2	50,000	29,647	530,000	14	530,000	850,000
5/5/07	32,627	120,000	2	120,000	24,735	90,000	2	90,000	48,799	50,000	2	50,000	30,100	453,000	12	453,000	713,000
5/6/07	32,747	120,000	2	120,000	24,752	170,000	3	170,000	48,803	40,000	1	40,000	30,671	571,000	16	571,000	901,000
5/7/07	32,867	120,000	2	120,000	24,757	50,000	1	50,000	48,808	50,000	2	50,000	30,720	49,000	1	49,000	269,000
5/8/07	32,987	120,000	2	120,000	24,762	50,000	1	50,000	48,813	50,000	2	50,000	30,783	63,000	2	63,000	283,000
5/9/07	33,107	120,000	2	120,000	24,774	120,000	2	120,000	48,818	50,000	2	50,000	30,877	94,000	3	94,000	384,000
5/10/07	33,129	22,000	0	22,000	24,786	120,000	2	120,000	48,896	780,000	26	780,000	31,088	211,000	6	211,000	1,133,000
5/11/07	33,129	0	0	0	24,804	180,000	4	180,000	48,973	770,000	26	770,000	31,196	108,000	3	108,000	1,058,000
5/12/07	33,129	0	0	0	24,821	170,000	3	170,000	49,050	770,000	26	770,000	31,250	94,000	1	94,000	994,000
5/13/07	33,129	0	0	0	24,842	210,000	4	210,000	49,127	770,000	26	770,000	31,355	105,000	3	105,000	1,085,000
5/14/07	33,951	822,000	17	822,000	24,862	200,000	4	200,000	49,135	80,000	3	80,000	31,439	84,000	2	84,000	1,186,000
5/15/07	34,815	864,000	17	864,000	24,882	200,000	4	200,000	49,142	70,000	2	70,000	31,523	84,000	2	84,000	1,218,000
5/16/07	34,815	0	0	0	24,902	200,000	4	200,000	49,215	730,000	25	730,000	31,608	85,000	2	85,000	1,015,000
5/17/07	34,815	0	0	0	24,923	210,000	4	210,000	49,223	80,000	3	80,000	31,698	90,000	2	90,000	380,000
5/18/07	34,815	0	0	0	25,016	930,000	18	930,000	49,231	80,000	3	80,000	31,779	81,000	2	81,000	1,091,000
5/19/07	34,829	14,000	0	14,000	25,107	910,000	18	910,000	49,239	80,000	3	80,000	31,798	19,000	1	19,000	1,023,000
5/20/07	35,897	978,000	20	978,000	25,110	30,000	1	30,000	49,247	80,000	3	80,000	31,820	22,000	1	22,000	1,110,000
5/21/07	36,785	978,000	20	978,000	25,115	50,000	1	50,000	49,256	90,000	3	90,000	31,840	20,000	1	20,000	1,138,000
5/22/07	36,900	115,000	2	115,000	25,200	850,000	17	850,000	49,264	80,000	3	80,000	31,885	25,000	1	25,000	1,070,000
5/23/07	37,015	115,000	2	115,000	25,291	910,000	18	910,000	49,272	80,000	3	80,000	31,961	96,000	3	96,000	1,201,000
5/24/07	37,130	115,000	2	115,000	25,386	950,000	19	950,000	49,280	80,000	3	80,000	32,046	85,000	2	85,000	1,230,000
5/25/07	37,245	115,000	2	115,000	25,423	370,000	7	370,000	49,289	90,000	3	90,000	32,060	14,000	0	14,000	589,000
5/26/07	37,359	114,000	2	114,000	25,439	160,000	3	160,000	49,334	450,000	15	450,000	32,074	14,000	0	14,000	738,000
5/27/07	38,181	822,000	17	822,000	25,528	890,000	17	890,000	49,353	190,000	6	190,000	32,088	14,000	0	14,000	1,916,000
5/28/07	39,061	880,000	18	880,000	25,617	890,000	17	890,000	49,377	240,000	8	240,000	32,102	14,000	0	14,000	2,024,000
5/29/07	39,915	854,000	17	854,000	25,708	890,000	17	890,000	49,410	330,000	11	330,000	32,116	14,000	0	14,000	2,088,000
5/30/07	40,085	170,000	3	170,000	25,528	0	0	0	49,413	30,000	1	30,000	32,130	0	0	14,000	214,000
5/31/07	40,255	170,000	3	170,000	25,620	920,000	18	920,000	49,413	0	0	0	32,241	111,000	3	111,000	1,201,000
May Total		8,228,000				11,857,000				6,380,000				4,196,000			30,661,000

Year: 2008		Well No. 1				Well No. 2A				Well No. 3A				Well No. 4				Total Well Production
JUNE	6/1/07	39,915	0	0	25,717	970,000	19	970,000	49,414	10,000	0	10,000	32,338	97,000	3	97,000	1,077,000	
	6/2/07	39,915	0	0	25,804	870,000	17	870,000	49,414	0	0	32,525	187,000	5	187,000	1,057,000		
	6/3/07	40,787	852,000	17	852,000	25,804	0	0	49,414	0	0	32,526	1,000	0	1,000	853,000		
	6/4/07	41,796	1,029,000	21	1,029,000	25,811	1	70,000	49,414	0	0	32,598	72,000	2	72,000	1,031,000		
	6/5/07	42,718	922,000	19	922,000	25,815	1	70,000	49,414	0	0	32,636	38,000	1	38,000	1,030,000		
	6/6/07	43,016	298,000	6	298,000	25,865	10	500,000	49,414	0	0	32,674	38,000	1	38,000	838,000		
	6/7/07	43,016	0	0	25,936	680,000	13	680,000	49,414	0	0	32,809	135,000	4	135,000	815,000		
	6/8/07	43,016	0	0	26,008	720,000	14	720,000	49,414	0	0	32,940	131,000	4	131,000	851,000		
	6/9/07	43,016	0	0	26,090	820,000	16	820,000	49,424	100,000	3	100,000	33,018	78,000	2	78,000	998,000	
	6/10/07	43,800	784,000	16	784,000	26,100	2	100,000	49,424	0	0	33,050	32,000	1	32,000	916,000		
	6/11/07	44,846	1,046,000	21	1,046,000	26,103	1	30,000	49,424	0	0	33,081	31,000	1	31,000	1,107,000		
	6/12/07	44,820	0	0	26,189	860,000	17	860,000	49,433	90,000	3	90,000	33,297	216,000	6	216,000	1,166,000	
	6/13/07	45,477	657,000	13	657,000	26,239	10	500,000	49,433	0	0	33,432	135,000	4	135,000	1,292,000		
	6/14/07	46,435	958,000	19	958,000	26,261	4	230,000	49,433	0	0	33,469	37,000	1	37,000	1,215,000		
	6/15/07	47,433	998,000	20	998,000	26,284	4	230,000	49,433	0	0	33,505	36,000	1	36,000	1,264,000		
	6/16/07	48,373	940,000	19	940,000	26,305	4	210,000	49,433	0	0	33,565	60,000	2	60,000	1,210,000		
	6/17/07	49,300	927,000	19	927,000	26,310	1	50,000	49,433	0	0	33,600	35,000	1	35,000	1,012,000		
	6/18/07	50,349	1,049,000	21	1,049,000	26,323	5	240,000	49,433	0	0	33,618	18,000	0	18,000	1,307,000		
	6/19/07	51,202	853,000	17	853,000	26,334	8	430,000	49,457	240,000	8	240,000	33,652	34,000	1	34,000	1,557,000	
	6/20/07	51,831	629,000	13	629,000	26,377	8	430,000	49,457	0	0	33,763	111,000	3	111,000	1,170,000		
	6/21/07	52,620	789,000	16	789,000	26,420	3	130,000	49,457	0	0	33,784	21,000	1	21,000	940,000		
	6/22/07	53,536	916,000	19	916,000	26,433	3	170,000	49,480	230,000	8	230,000	33,794	10,000	0	10,000	1,326,000	
	6/23/07	54,500	964,000	19	964,000	26,450	3	170,000	49,480	0	0	33,830	36,000	1	36,000	1,170,000		
	6/24/07	55,445	945,000	19	945,000	26,467	2	90,000	49,480	0	0	33,871	41,000	1	41,000	1,076,000		
	6/25/07	56,402	957,000	19	957,000	26,476	2	90,000	49,480	0	0	33,877	8,000	0	8,000	1,063,000		
	6/26/07	57,270	868,000	18	868,000	26,485	2	90,000	49,507	270,000	9	270,000	33,886	9,000	0	9,000	1,237,000	
	6/27/07	58,139	869,000	18	869,000	26,495	2	100,000	49,528	210,000	7	210,000	33,907	21,000	1	21,000	1,200,000	
	6/28/07	58,987	848,000	17	848,000	26,528	6	330,000	49,528	0	0	33,925	18,000	0	18,000	1,196,000		
	6/29/07	59,921	934,000	19	934,000	26,550	4	220,000	49,528	0	0	33,949	24,000	1	24,000	1,178,000		
	6/30/07	60,787	876,000	18	876,000	26,553	1	30,000	49,557	290,000	10	290,000	33,970	21,000	1	21,000	1,217,000	
	June Total		20,908,000			9,420,000				1,440,000				1,729,000			33,497,000	
	Max Day		1,049,000			970,000				290,000				216,000			1,557,000	
	Average Day		720,966			324,828				48,000				57,633			1,116,567	
JULY	7/1/07	61,694	897,000	18	897,000	26,560	1	70,000	49,557	0	0	34,013	43,000	1	43,000	1,010,000		
	7/2/07	62,666	972,000	20	972,000	26,565	2	80,000	49,557	0	0	34,040	27,000	1	27,000	1,070,000		
	7/3/07	63,488	802,000	16	802,000	26,609	8	410,000	49,557	0	0	34,088	48,000	1	48,000	1,260,000		
	7/4/07	64,499	1,031,000	21	1,031,000	26,625	3	160,000	49,571	14,000	0	14,000	34,159	71,000	2	71,000	1,278,000	
	7/5/07	65,285	786,000	16	786,000	26,644	4	190,000	49,571	0	0	34,203	44,000	1	44,000	1,020,000		
	7/6/07	66,157	872,000	18	872,000	26,659	3	150,000	49,593	22,000	1	22,000	34,209	5,000	0	5,000	1,050,000	
	7/7/07	66,951	794,000	16	794,000	26,696	7	370,000	49,593	0	0	34,231	22,000	1	22,000	1,186,000		
	7/8/07	67,918	967,000	20	967,000	26,712	3	160,000	49,593	0	0	34,261	30,000	1	30,000	1,157,000		
	7/9/07	68,862	944,000	19	944,000	26,720	2	80,000	49,593	0	0	34,357	96,000	3	96,000	1,120,000		
	7/10/07	69,747	885,000	18	885,000	26,737	3	170,000	49,607	14,000	0	14,000	34,374	17,000	0	17,000	1,086,000	
	7/11/07	70,657	910,000	18	910,000	26,748	2	110,000	49,614	7,000	0	7,000	34,387	23,000	1	23,000	1,050,000	
	7/12/07	70,780	123,000	2	123,000	26,801	10	530,000	49,642	28,000	1	28,000	34,547	150,000	1	150,000	831,000	
	7/13/07	71,132	352,000	7	352,000	26,824	4	230,000	49,667	25,000	1	25,000	34,749	202,000	6	202,000	809,000	
	7/14/07	72,001	869,000	18	869,000	26,825	0	10,000	49,674	7,000	0	7,000	34,858	109,000	3	109,000	995,000	
	7/15/07	73,000	999,000	20	999,000	26,825	0	0	49,674	0	0	34,900	42,000	1	42,000	1,041,000		
	7/16/07	73,971	971,000	20	971,000	26,825	0	0	49,674	0	0	35,121	221,000	6	221,000	1,192,000		
	7/17/07	73,971	0	0	26,836	110,000	2	110,000	49,745	71,000	2	71,000	35,445	324,000	9	324,000	505,000	
	7/18/07	73,971	0	0	26,853	170,000	3	170,000	49,814	69,000	2	69,000	35,737	292,000	8	292,000	531,000	
	7/19/07	73,971	0	0	26,858	50,000	1	50,000	49,881	67,000	2	67,000	36,069	332,000	9	332,000	449,000	
	7/20/07	73,971	0	0	26,858	0	0	0	49,952	71,000	2	71,000	36,433	364,000	10	364,000	435,000	
	7/21/07	73,971	0	0	26,878	200,000	4	200,000	50,024	72,000	2	72,000	36,611	178,000	5	178,000	450,000	
	7/22/07	74,902	931,000	19	931,000	26,878	0	0	50,024	0	0	36,714	103,000	3	103,000	1,034,000		
	7/23/07	75,839	937,000	19	937,000	26,878	0	0	50,024	0	0	36,887	153,000	4	153,000	1,090,000		
	7/24/07	75,839	0	0	26,942	640,000	13	640,000	50,024	0	0	37,381	494,000	13	494,000	1,134,000		
	7/25/07	75,839	0	0	27,012	700,000	14	700,000	50,024	0	0	37,803	442,000	12	442,000	1,142,000		
	7/26/07	75,839	0	0	27,078	660,000	13	660,000	50,024	0	0	38,237	434,000	12	434,000	1,094,000		
	7/27/07	75,839	0	0	27,142	640,000	13	640,000	50,024	0	0	38,756	519,000	14	519,000	1,159,000		
	7/28/07	75,839	0	0	27,162	200,000	4	200,000	50,088	64,000	2	64,000	39,117	361,000	10	361,000	825,000	
	7/29/07	76,812	973,000	20	973,000	27,162	0	0	50,088	0	0	39,301	184,000	5	184,000	1,157,000		
	7/30/07	77,765	953,000	19	953,000	27,162	0	0	50,088	0	0	39,514	213,000	6	213,000	1,166,000		
	7/31/07	77,765	0	0	27,193	0	6	310,000	50,146	58,000	2	58,000	39,848	334,000	9	334,000	792,000	
	July Total		16,968,000			6,400,000				589,000				5,878,000			29,835,000	
	Max Day		1,031,000			700,000				72,000				519,000			1,278,000	
	Average Day		565,600			213,333				19,633				195,933			962,419	
AUGUST	8/1/07	77,765	0	0	27,239	460,000	9	460,000	50,215	690,000	23	690,000	39,951	103,000	3	103,000	1,253,000	
	8/2/07	77,765	0	0	27,290	510,000	10	510,000	50,283	680,000	23	680,000	40,053	102,000	3	102,000	1,202,000	
	8/3/07	77,765	0	0	27,336	460,000	9	460,000	50,356	730,000	25	730,000	40,174	121,000	3	121,000	1,311,000	
	8/4/07	78,590	825,000	17	825,000	27,339	1	30,000	50,387	310,000	10	310,000	40,184	10,000	0	10,000	1,175,000	
	8/5/07	79,417	827,000	17	827,000	27,339</												

Year: 2008	Well No. 1				Well No. 2A				Well No. 3A				Well No. 4				Total Well Production
8/31/07	87,562		0	0	27,843		130,000	3	130,000	51,761		680,000	23	680,000	41,367	102,000	912,000
August Total		9,800,000				6,500,000				16,150,000					1,519,000		33,969,000
Max Day		906,000				510,000				760,000					346,000		1,342,000
Average Day		326,667				216,667				536,333					90,633		1,095,774
SEPT	9/1/07	87,583	1,000	0	1,000	27,856	13,000	0	13,000	51,829	68,000	2	68,000	41,511	144,000	4	226,000
	9/2/07	88,285	722,000	15	722,000	27,856	0	0	0	51,858	290,000	10	290,000	41,511	0	0	1,012,000
	9/3/07	88,124	839,000	17	839,000	27,856	0	0	0	51,873	150,000	5	150,000	41,511	0	0	989,000
	9/4/07	89,904	780,000	16	780,000	27,856	0	0	0	51,906	330,000	11	330,000	41,511	0	0	1,110,000
	9/5/07	90,026	122,000	2	122,000	27,862	60,000	1	60,000	51,964	580,000	20	580,000	41,633	122,000	3	884,000
	9/6/07	90,026	0	0	0	27,882	200,000	4	200,000	52,032	680,000	23	680,000	41,713	80,000	2	960,000
	9/7/07	90,026	0	0	0	27,899	170,000	3	170,000	52,097	650,000	22	650,000	41,797	84,000	2	904,000
	9/8/07	90,026	774,000	16	774,000	27,915	160,000	3	160,000	52,163	660,000	22	660,000	41,877	80,000	2	1,674,000
	9/9/07	90,800	908,000	18	908,000	27,915	0	0	0	52,175	120,000	4	120,000	41,877	0	0	1,028,000
	9/10/07	91,708	926,000	19	926,000	27,915	0	0	0	52,175	0	0	0	41,931	54,000	1	980,000
	9/11/07	92,434	926,000	19	926,000	27,915	0	0	0	52,196	110,000	4	110,000	41,931	0	0	1,036,000
	9/12/07	92,634	0	0	0	27,918	30,000	1	30,000	52,253	670,000	23	670,000	42,116	185,000	5	1,085,000
	9/13/07	92,644	10,000	0	10,000	27,934	160,000	3	160,000	52,323	700,000	24	700,000	42,201	85,000	2	955,000
	9/14/07	92,644	0	0	0	27,954	200,000	4	200,000	52,400	770,000	26	770,000	42,201	0	0	970,000
	9/15/07	92,644	0	0	0	27,955	10,000	0	10,000	52,458	580,000	20	580,000	42,297	96,000	3	686,000
	9/16/07	93,412	768,000	16	768,000	27,955	0	0	0	52,459	10,000	0	10,000	42,297	0	0	778,000
	9/17/07	94,223	811,000	16	811,000	27,955	0	0	0	52,464	50,000	2	50,000	42,297	0	0	861,000
	9/18/07	95,071	848,000	17	848,000	27,955	0	0	0	52,470	60,000	2	60,000	42,297	0	0	908,000
	9/19/07	95,071	0	0	0	27,957	20,000	0	20,000	52,538	680,000	23	680,000	42,457	160,000	4	860,000
	9/20/07	95,071	0	0	0	27,996	390,000	8	390,000	52,538	0	0	0	42,754	297,000	8	887,000
	9/21/07	95,071	0	0	0	28,015	190,000	4	190,000	52,538	0	0	0	43,233	479,000	13	660,000
	9/22/07	95,071	0	0	0	28,015	0	0	0	52,594	560,000	19	560,000	43,257	24,000	1	584,000
	9/23/07	95,546	475,000	10	475,000	28,015	0	0	0	52,595	10,000	0	10,000	43,257	0	0	485,000
	9/24/07	96,096	550,000	11	550,000	28,015	0	0	0	52,595	0	0	0	43,257	0	0	550,000
	9/25/07	96,096	0	0	0	28,015	0	0	0	52,657	620,000	21	620,000	43,257	0	0	620,000
	9/26/07	96,096	0	0	0	28,075	600,000	12	600,000	52,659	20,000	1	20,000	43,257	0	0	620,000
	9/27/07	96,096	0	0	0	28,147	720,000	14	720,000	52,659	0	0	0	43,257	0	0	720,000
	9/28/07	96,096	0	0	0	28,216	690,000	13	690,000	52,659	0	0	0	43,257	0	0	690,000
	9/29/07	96,533	437,000	9	437,000	28,216	0	0	0	52,659	0	0	0	43,480	223,000	6	660,000
	9/30/07	97,186	653,000	13	653,000	28,216	0	0	0	52,659	0	0	0	43,480	0	0	653,000
September Total			10,550,000			3,613,000				8,368,000					2,113,000		24,644,000
Max Day			926,000			720,000				770,000					479,000		1,674,000
Average Day			363,793			124,586				288,552					72,862		821,457
OCT	10/1/07	97,911	725,000	15	725,000	28,216	0	0	0	52,659	0	0	0	43,480	0	0	725,000
	10/2/07	97,911	0	0	0	28,216	0	0	0	52,725	660,000	22	660,000	43,560	80,000	2	740,000
	10/3/07	97,911	0	0	0	28,216	0	0	0	52,796	710,000	24	710,000	43,660	100,000	3	810,000
	10/4/07	97,911	0	0	0	28,216	0	0	0	52,868	720,000	24	720,000	43,736	76,000	2	796,000
	10/5/07	97,911	0	0	0	28,282	660,000	13	660,000	52,868	0	0	0	43,736	0	0	660,000
	10/6/07	98,345	434,000	9	434,000	28,303	210,000	4	210,000	52,868	0	0	0	43,736	0	0	644,000
	10/7/07	98,987	642,000	13	642,000	28,303	0	0	0	52,868	0	0	0	43,736	0	0	642,000
	10/8/07	99,699	712,000	14	712,000	28,303	0	0	0	52,868	0	0	0	43,736	0	0	712,000
	10/9/07	99,699	0	0	0	28,303	0	0	0	52,868	0	0	0	44,422	686,000	19	686,000
	10/10/07	99,699	0	0	0	28,303	0	0	0	52,920	520,000	18	520,000	44,621	199,000	5	719,000
	10/11/07	99,699	0	0	0	28,303	0	0	0	52,982	620,000	21	620,000	44,658	37,000	1	657,000
	10/12/07	99,699	0	0	0	28,303	0	0	0	53,048	660,000	22	660,000	44,658	0	0	660,000
	10/13/07	99,699	0	0	0	28,365	620,000	12	620,000	53,048	0	0	0	44,658	0	0	620,000
	10/14/07	100,214	515,000	10	515,000	28,365	0	0	0	53,048	0	0	0	44,658	0	0	515,000
	10/15/07	100,772	558,000	11	558,000	28,365	0	0	0	53,048	0	0	0	44,658	0	0	558,000
	10/16/07	100,772	0	0	0	28,414	490,000	10	490,000	53,048	0	0	0	44,658	0	0	490,000
	10/17/07	100,772	0	0	0	28,414	0	0	0	53,048	0	0	0	45,150	492,000	13	492,000
	10/18/07	100,772	0	0	0	28,414	0	0	0	53,094	460,000	15	460,000	45,210	60,000	2	520,000
	10/19/07	100,772	0	0	0	28,414	0	0	0	53,152	580,000	20	580,000	45,248	38,000	1	618,000
	10/20/07	100,772	0	0	0	28,414	0	0	0	53,211	590,000	20	590,000	45,248	0	0	590,000
	10/21/07	101,321	549,000	11	549,000	28,414	0	0	0	53,211	0	0	0	45,248	0	0	549,000
	10/22/07	101,936	615,000	12	615,000	28,414	0	0	0	53,211	0	0	0	45,248	0	0	615,000
	10/23/07	101,936	0	0	0	28,465	510,000	10	510,000	53,220	90,000	3	90,000	45,248	0	0	600,000
	10/24/07	101,936	0	0	0	28,528	630,000	12	630,000	53,220	0	0	0	45,248	0	0	630,000
	10/25/07	101,936	0	0	0	28,589	610,000	12	610,000	53,220	0	0	0	45,248	0	0	610,000
	10/26/07	101,936	0	0	0	28,657	680,000	13	680,000	53,220	0	0	0	45,248	0	0	680,000
	10/27/07	101,936	0	0	0	28,657	0	0	0	53,220	0	0	0	45,858	610,000	17	610,000
	10/28/07	102,277	341,000	7	341,000	28,657	0	0	0	53,220	0	0	0	46,075	217,000	6	558,000
	10/29/07	102,843	566,000	11	566,000	28,657	0	0	0	53,220	0	0	0	46,075	0	0	566,000
	10/30/07	103,331	488,000	10	488,000	28,657	0	0	0	53,220	0	0	0	46,075	0	0	488,000
	10/31/07	103,331	0	0	0	28,657	0	0	0	53,254	340,000	11	340,000	46,145	70,000	2	410,000
October Total			6,145,000			4,410,000				5,950,000					2,665,000		19,170,000
Max Day			725,000			680,000				720,000					686,000		810,000
Average Day			204,833			147,000				198,333					88,833		618,367
NOV	11/1/07	103,331	0	0	0	28,657	0	0	0	53,297	43,000	1	43,000	46,145	0	0	43,000
	11/2/07	103,331	0	0	0	28,657	0	0	0	53,338	410,000	14	410,000	46,149	4,000	0	414,000
	11/3/07	103,331	0	0	0	28,697	400,000	8	400,000	53,339	10,000	0	10,000	46,149	0	0	410,000
	11/4/07	103,867	536,000	11	536,000	28,697	0	0	0	53,339	0	0	0	46,149	0	0	536,000
	11/5/07	104,414	547,000	11	547,000	28,697	0	0	0	53,339	0	0					

Year: 2008	Well No. 1				Well No. 2A				Well No. 3A				Well No. 4				Total Well Production
	11/27/07	110,921	482,000	10	482,000	28,876	420,000	8	420,000	53,481	0	0	0	46,785	0	0	902,000
	11/28/07	110,921	0	0	0	28,876	0	0	0	53,481	0	0	0	47,185	400,000	11	400,000
	11/29/07	110,921	0	0	0	28,876	0	0	0	53,481	0	0	0	47,588	403,000	11	403,000
	11/30/07	110,921	0	0	0	28,876	0	0	0	53,481	0	0	0	48,020	432,000	12	432,000
	November Total		7,590,000				2,190,000				1,883,000			1,875,000			13,538,000
	Max Day		547,000				590,000				440,000			432,000			902,000
	Average Day		261,724				75,517				64,931			64,655			468,828
CEMB	12/1/07	111,245	324,000	7	324,000	28,885	90,000	2	90,000	53,481	0	0	0	48,063	43,000	1	43,000
	12/2/07	111,733	488,000	10	488,000	28,885	0	0	0	53,481	0	0	0	48,063	0	0	488,000
	12/3/07	112,190	457,000	9	457,000	28,885	0	0	0	53,481	0	0	0	48,063	0	0	457,000
	12/4/07	112,190	0	0	0	28,885	0	0	0	53,488	70,000	2	70,000	48,273	210,000	6	210,000
	12/5/07	112,190	0	0	0	28,885	0	0	0	53,488	0	0	0	48,531	258,000	7	258,000
	12/6/07	112,500	310,000	6	310,000	28,885	0	0	0	53,528	400,000	13	400,000	48,531	0	0	710,000
	12/7/07	112,824	324,000	7	324,000	28,889	40,000	1	40,000	53,528	0	0	0	48,536	5,000	0	369,000
	12/8/07	113,000	176,000	4	176,000	28,915	260,000	5	260,000	53,528	0	0	0	48,591	55,000	2	491,000
	12/9/07	113,422	422,000	9	422,000	28,915	0	0	0	53,528	0	0	0	48,591	0	0	422,000
	12/10/07	113,796	374,000	8	374,000	28,915	0	0	0	53,528	0	0	0	48,591	0	0	374,000
	12/11/07	113,796	0	0	0	28,919	40,000	1	40,000	53,528	0	0	0	48,925	334,000	9	334,000
	12/12/07	113,796	0	0	0	28,919	0	0	0	53,528	0	0	0	49,283	358,000	10	358,000
	12/13/07	113,796	0	0	0	28,919	0	0	0	53,528	0	0	0	49,631	348,000	9	348,000
	12/14/07	113,796	0	0	0	28,919	0	0	0	53,528	0	0	0	49,990	359,000	10	359,000
	12/15/07	113,796	0	0	0	28,919	0	0	0	53,564	360,000	12	360,000	49,990	0	0	360,000
	12/16/07	113,796	0	0	0	28,919	0	0	0	53,580	160,000	5	160,000	49,990	0	0	160,000
	12/17/07	113,796	0	0	0	28,919	0	0	0	53,645	650,000	21	650,000	49,990	0	0	650,000
	12/18/07	114,112	316,000	6	316,000	28,919	0	0	0	53,661	160,000	5	160,000	49,990	0	0	470,000
	12/19/07	114,112	0	0	0	28,920	10,000	0	10,000	53,661	0	0	0	50,248	258,000	7	258,000
	12/20/07	114,112	0	0	0	28,920	0	0	0	53,661	0	0	0	50,558	310,000	8	310,000
	12/21/07	114,112	0	0	0	28,920	0	0	0	53,661	0	0	0	50,877	319,000	9	319,000
	12/22/07	114,322	210,000	4	210,000	28,920	0	0	0	53,661	0	0	0	51,023	146,000	4	146,000
	12/23/07	114,684	362,000	7	362,000	28,920	0	0	0	53,663	20,000	1	20,000	51,023	0	0	382,000
	12/24/07	115,007	323,000	7	323,000	28,920	0	0	0	53,663	0	0	0	51,023	0	0	323,000
	12/25/07	115,336	329,000	7	329,000	28,920	0	0	0	53,663	0	0	0	51,023	0	0	329,000
	12/26/07	115,658	322,000	7	322,000	28,920	0	0	0	53,663	0	0	0	51,023	0	0	322,000
	12/27/07	115,658	0	0	0	28,920	0	0	0	53,663	0	0	0	51,343	320,000	9	320,000
	12/28/07	115,658	0	0	0	28,920	0	0	0	53,663	0	0	0	51,700	357,000	10	357,000
	12/29/07	115,889	211,000	4	211,000	28,920	0	0	0	53,680	170,000	6	170,000	51,700	0	0	381,000
	12/30/07	116,237	368,000	7	368,000	28,920	0	0	0	53,680	0	0	0	51,700	0	0	368,000
	12/31/07	116,565	328,000	7	328,000	28,920	0	0	0	53,680	0	0	0	51,700	0	0	328,000
	December Total		5,644,000				440,000				1,990,000			3,680,000			11,754,000
	Max Day		488,000				260,000				650,000			359,000			710,000
	Average Day		194,621				15,172				68,621			126,897			379,161
Early Production(2007)			77,605,000				59,880,000				53,030,000			28,135,000			218,650,000
	Maximum Day		1,049,000				980,000				890,000			686,000			1,049,000
	Average Day		407,061				201,916				188,236			102,528			225,036
	Maximum Month		20,906,000				11,657,000				16,150,000			5,878,000			20,906,000
	01/01/08	116,565	0	0	0	28,920	0	0	0	53,689	90,000	3	90,000	51,981	281,000	8	281,000
	01/02/08	116,565	0	0	0	28,920	0	0	0	53,689	0	0	0	52,303	322,000	9	322,000
	01/03/08	116,565	0	0	0	28,920	0	0	0	53,689	0	0	0	52,660	357,000	10	357,000
	01/04/08	116,565	0	0	0	28,920	0	0	0	53,706	170,000	6	170,000	52,864	204,000	6	204,000
	01/05/08	116,804	239,000	5	239,000	28,920	0	0	0	53,717	110,000	4	110,000	52,868	4,000	0	353,000
	01/06/08	117,154	350,000	7	350,000	28,920	0	0	0	53,717	0	0	0	52,868	0	0	350,000
	01/07/08	117,493	339,000	7	339,000	28,920	0	0	0	53,717	0	0	0	52,868	0	0	339,000
	01/08/08	117,493	0	0	0	28,920	0	0	0	53,717	0	0	0	53,209	341,000	9	341,000
	01/09/08	117,493	0	0	0	28,920	0	0	0	53,717	0	0	0	53,524	315,000	9	315,000
	01/10/08	117,493	0	0	0	28,920	0	0	0	53,717	0	0	0	53,860	336,000	9	336,000
	01/11/08	117,493	0	0	0	28,920	0	0	0	53,753	360,000	12	360,000	53,860	0	0	360,000
	01/12/08	117,493	0	0	0	28,920	0	0	0	53,788	350,000	12	350,000	53,860	0	0	350,000
	01/13/08	117,840	347,000	7	347,000	28,920	0	0	0	53,788	0	0	0	53,860	0	0	347,000
	01/14/08	118,175	335,000	7	335,000	28,920	0	0	0	53,788	0	0	0	53,860	0	0	335,000
	01/15/08	118,500	325,000	7	325,000	28,920	0	0	0	53,788	0	0	0	53,860	0	0	325,000
	01/16/08	118,831	331,000	7	331,000	28,920	0	0	0	53,788	0	0	0	53,860	0	0	331,000
	01/17/08	118,831	0	0	0	28,920	0	0	0	53,824	360,000	12	360,000	53,860	0	0	360,000
	01/18/08	118,950	119,000	2	119,000	28,920	0	0	0	53,861	370,000	12	370,000	53,860	0	0	489,000
	01/19/08	119,081	131,000	3	131,000	28,920	0	0	0	53,874	130,000	4	130,000	53,860	0	0	261,000
	01/20/08	119,453	372,000	6	372,000	28,920	0	0	0	53,874	0	0	0	53,860	0	0	372,000
	01/21/08	119,806	353,000	7	353,000	28,920	0	0	0	53,874	0	0	0	53,860	0	0	353,000
	01/22/08	119,806	0	0	0	28,920	0	0	0	53,874	0	0	0	54,215	355,000	10	355,000
	01/23/08	119,806	0	0	0	28,920	0	0	0	53,874	0	0	0	54,525	310,000	8	310,000
	01/24/08	119,806	0	0	0	28,920	0	0	0	53,874	0	0	0	54,843	318,000	9	318,000
	01/25/08	119,806	0	0	0	28,920	0	0	0	53,874	0	0	0	55,170	327,000	9	327,000
	01/26/08	119,806	0	0	0	28,920	0	0	0	53,909	350,000	12	350,000	55,176	6,000	0	356,000
	01/27/08	120,060	254,000	5	254,000	28,920	0	0	0	53,918	90,000	3	90,000	55,176	0	0	344,000
	01/28/08	120,314	254,000	5	254,000	28,920	0	0	0	53,918	0	0	0	55,176	0	0	254,000
	01/29/08	120,727	413,000	8	413,000	28,920	0	0	0	53,918	0	0	0	55,176	0	0	413,000
	01/30/08	120,727	0	0	0	28,920	0	0	0	53,918	0	0	0	55,504	328,000	9	328,000
	01/31/08	120,727	0	0	0	28,920	100,000	2	100,000	53,918	0	0	0	55,650	146,000	4	146,000
	January Total		4,162,000				100,000				2,380,000			3,950,000			10,346,000
	Max Day		413,000				0				370,000			357,000			489,000
	Average Day																

Year: 2008	Well No. 1				Well No. 2A				Well No. 3A				Well No. 4				Total Well Production
02/19/08	125,058	277,000	0	277,000	29,014	0	0	53,930	0	0	0	56,774	0	0	0	0	277,000
02/20/08	125,431	373,000	0	373,000	29,014	0	0	53,930	0	0	0	56,774	0	0	0	0	373,000
02/21/08	125,431	0	0	0	29,014	0	0	53,930	0	0	0	57,055	281,000	8	281,000	0	281,000
02/22/08	125,431	0	0	0	29,014	0	0	53,930	0	0	0	57,388	313,000	9	313,000	0	313,000
02/23/08	125,431	0	0	0	29,014	0	0	53,930	0	0	0	57,671	303,000	8	303,000	0	303,000
02/24/08	125,431	0	0	0	29,014	0	0	53,930	0	0	0	58,034	363,000	10	363,000	0	363,000
02/25/08	125,431	0	0	0	29,014	0	0	53,930	0	0	0	58,384	350,000	10	350,000	0	350,000
02/26/08	125,787	356,000	0	356,000	29,014	0	0	53,930	0	0	0	58,384	0	0	0	0	356,000
02/27/08	126,126	339,000	0	339,000	29,014	0	0	53,930	0	0	0	58,384	0	0	0	0	339,000
02/28/08	126,126	0	0	0	29,014	0	0	53,967	370,000	12	370,000	58,384	0	0	0	0	370,000
02/29/08	126,126	0	0	0	29,014	0	0	54,005	380,000	13	380,000	58,384	0	0	0	0	380,000
February Total		5,399,000				940,000					870,000				2,880,000		10,089,000
Max Day		393,000									380,000				368,000		676,000
Average Day		186,172				32,414					30,000				99,310		347,897
03/01/08	126,126	0	0	0	29,014	0	0	54,050	450,000	15	450,000	58,384	0	0	0	0	450,000
03/02/08	126,472	0	0	0	29,014	0	0	54,050	0	0	0	58,384	0	0	0	0	450,000
03/03/08	126,870	398,000	0	398,000	29,014	0	0	54,050	0	0	0	58,384	0	0	0	0	398,000
03/04/08	127,256	386,000	0	386,000	29,014	0	0	54,050	0	0	0	58,384	0	0	0	0	386,000
03/05/08	127,615	359,000	0	359,000	29,014	0	0	54,050	0	0	0	58,384	0	0	0	0	359,000
03/06/08	127,615	0	0	0	29,016	20,000	0	20,000	54,095	15	450,000	58,384	0	0	0	0	470,000
03/07/08	127,615	0	0	0	29,016	0	0	54,139	440,000	15	440,000	58,384	0	0	0	0	440,000
03/08/08	127,615	0	0	0	29,016	0	0	54,182	430,000	14	430,000	58,384	0	0	0	0	430,000
03/09/08	128,028	413,000	0	413,000	29,016	0	0	54,182	0	0	0	58,384	0	0	0	0	413,000
03/10/08	128,473	445,000	0	445,000	29,016	0	0	54,182	0	0	0	58,384	0	0	0	0	445,000
03/11/08	128,700	227,000	0	227,000	29,016	0	0	54,182	0	0	0	58,384	0	0	0	0	227,000
03/12/08	128,998	298,000	0	298,000	29,016	0	0	54,182	0	0	0	58,696	312,000	9	312,000	0	610,000
03/13/08	128,998	0	0	0	29,026	100,000	2	100,000	54,182	0	0	59,058	362,000	10	362,000	0	462,000
03/14/08	128,998	0	0	0	29,070	440,000	9	440,000	54,182	0	0	59,058	0	0	0	0	440,000
03/15/08	128,998	0	0	0	29,113	430,000	8	430,000	54,182	0	0	59,058	0	0	0	0	430,000
03/16/08	128,998	0	0	0	29,159	460,000	9	460,000	54,182	0	0	59,058	0	0	0	0	460,000
03/17/08	128,998	0	0	0	29,204	450,000	9	450,000	54,182	0	0	59,058	0	0	0	0	450,000
03/18/08	129,449	451,000	0	451,000	29,204	0	0	54,182	0	0	0	59,058	0	0	0	0	451,000
03/19/08	129,476	27,000	0	27,000	29,204	0	0	54,237	550,000	19	550,000	59,058	0	0	0	0	577,000
03/20/08	129,476	0	0	0	29,204	0	0	54,296	590,000	20	590,000	59,058	0	0	0	0	590,000
03/21/08	129,476	0	0	0	29,204	0	0	54,354	580,000	20	580,000	59,058	0	0	0	0	580,000
03/22/08	129,811	335,000	0	335,000	29,204	0	0	54,377	230,000	8	230,000	59,058	0	0	0	0	565,000
03/23/08	130,344	533,000	0	533,000	29,204	0	0	54,377	0	0	0	59,058	0	0	0	0	533,000
03/24/08	130,802	458,000	0	458,000	29,204	0	0	54,377	0	0	0	59,058	0	0	0	0	458,000
03/25/08	131,384	582,000	0	582,000	29,204	0	0	54,377	0	0	0	59,058	0	0	0	0	582,000
03/26/08	131,986	602,000	0	602,000	29,204	0	0	54,377	0	0	0	59,058	0	0	0	0	602,000
03/27/08	131,986	0	0	0	29,204	0	0	54,444	670,000	23	670,000	59,058	0	0	0	0	670,000
03/28/08	131,986	0	0	0	29,262	580,000	11	580,000	54,444	0	0	59,058	0	0	0	0	580,000
03/29/08	131,986	0	0	0	29,324	620,000	12	620,000	54,444	0	0	59,058	0	0	0	0	620,000
03/30/08	131,986	0	0	0	29,392	680,000	13	680,000	54,444	0	0	59,058	0	0	0	0	680,000
03/31/08	131,986	0	0	0	29,446	560,000	11	560,000	54,444	0	0	59,058	0	0	0	0	560,000
March Total		5,860,000				4,340,000					4,390,000				674,000		15,264,000
Max Day		602,000				580,000					670,000				362,000		680,000
Average Day		208,489				86,635					152,414				26,666		492,387
04/01/08	131,986	0	0	0	29,514	660,000	13	660,000	54,444	0	0	59,058	0	0	0	0	660,000
04/02/08	131,986	0	0	0	29,583	690,000	13	690,000	54,444	0	0	59,058	0	0	0	0	690,000
04/03/08	131,986	0	0	0	29,605	220,000	4	220,000	54,444	0	0	59,461	403,000	11	403,000	0	623,000
04/04/08	131,986	0	0	0	29,605	0	0	54,444	0	0	0	60,106	645,000	18	645,000	0	645,000
04/05/08	132,506	520,000	0	520,000	29,605	0	0	54,444	0	0	0	60,205	99,000	3	99,000	0	619,000
04/06/08	133,144	638,000	0	638,000	29,605	0	0	54,444	0	0	0	60,205	0	0	0	0	638,000
04/07/08	133,743	599,000	0	599,000	29,605	0	0	54,444	0	0	0	60,205	0	0	0	0	599,000
04/08/08	134,353	610,000	0	610,000	29,605	0	0	54,444	0	0	0	60,205	0	0	0	0	610,000
04/09/08	134,353	0	0	0	29,607	20,000	0	20,000	54,491	16	470,000	60,391	186,000	5	186,000	0	676,000
04/10/08	134,353	0	0	0	29,614	70,000	1	70,000	54,557	22	660,000	60,391	0	0	0	0	730,000
04/11/08	134,353	0	0	0	29,627	130,000	3	130,000	54,635	26	780,000	60,391	0	0	0	0	910,000
04/12/08	134,357	4,000	0	4,000	29,663	360,000	7	360,000	54,636	10,000	0	60,723	332,000	9	332,000	0	706,000
04/13/08	134,357	0	0	0	29,706	430,000	8	430,000	54,636	0	0	61,077	354,000	10	354,000	0	784,000
04/14/08	134,357	0	0	0	29,761	550,000	11	550,000	54,636	0	0	61,384	307,000	8	307,000	0	857,000
04/15/08	135,110	753,000	0	753,000	29,761	0	0	54,636	0	0	0	61,384	0	0	0	0	753,000
04/16/08	135,149	39,000	0	39,000	29,788	70,000	1	70,000	54,636	0	0	61,976	592,000	16	592,000	0	701,000
04/17/08	135,149	0	0	0	29,788	0	0	54,708	720,000	24	720,000	62,184	206,000	6	206,000	0	928,000
04/18/08	135,149	0	0	0	29,788	200,000	4	200,000	54,785	26	770,000	62,187	3,000	0	3,000	0	973,000
04/19/08	135,149	0	0	0	29,809	210,000	4	210,000	54,855	24	700,000	62,187	0	0	0	0	910,000
04/20/08	135,149	0	0	0	29,822	130,000	3	130,000	54,931	26	760,000	62,187	0	0	0	0	890,000
04/21/08	135,818	669,000	0	669,000	29,822	0	0	54,931	0	0	0	62,187	0	0	0	0	669,000
04/22/08	136,466	648,000	0	648,000	29,822	0	0	54,931	0	0	0	62,187	0	0	0	0	648,000
04/23/08	136,466	0	0	0	29,843	210,000	4	210,000	55,003	24	720,000	62,187	0	0	0	0	930,000
04/24/08	136,466	0	0	0	29,899	560,000	11	560,000	55,003	0	0	62,478	291,000	8	291,000	0	851,000
04/25/08	136,466	0	0	0	29,932	330,000	6	330,000	55,003	0	0	62,937	459,000	13	459,000	0	789,000
04/26/08	136,466	0	0	0	29,992	800,000	12	800,000	55,003	0	0	63,187	260,000	7	260,000	0	860,000
04/27/08	136,466	0	0	0	30,014	220,000	4	220,000	55,088	29	850,000	63,187	0	0	0	0	1,070,000
04/																	

Year: 2008	Well No. 1				Well No. 2A				Well No. 3A				Well No. 4				Total Well Production
05/17/08	143,505	344,000	7	344,000	30,441	690,000	13	690,000	55,610	0	0	0	65,788	68,000	2	68,000	1,102,000
05/18/08	144,172	667,000	13	667,000	30,484	430,000	8	430,000	55,610	0	0	0	65,817	29,000	1	29,000	1,126,000
05/19/08	144,882	710,000	14	710,000	30,484	0	0	0	55,654	440,000	15	440,000	65,817	0	0	0	1,150,000
05/20/08	145,628	746,000	15	746,000	30,484	0	0	0	55,879	250,000	8	250,000	65,817	0	0	0	996,000
05/21/08	145,882	257,000	5	257,000	30,515	310,000	6	310,000	55,726	470,000	16	470,000	65,827	10,000	0	10,000	1,047,000
05/22/08	145,885	0	0	0	30,565	510,000	10	510,000	55,726	0	0	0	66,109	282,000	8	282,000	792,000
05/23/08	146,390	505,000	10	505,000	30,600	340,000	7	340,000	55,726	0	0	0	66,180	71,000	2	71,000	916,000
05/24/08	146,412	22,000	0	22,000	30,653	530,000	10	530,000	55,726	0	0	0	66,393	213,000	6	213,000	765,000
05/25/08	147,093	681,000	14	681,000	30,654	10,000	0	10,000	55,746	200,000	7	200,000	66,393	0	0	0	891,000
05/26/08	147,093	0	0	0	30,654	0	0	0	55,804	580,000	20	580,000	66,393	0	0	0	580,000
05/27/08	147,093	0	0	0	30,654	0	0	0	55,872	680,000	23	680,000	66,393	0	0	0	680,000
05/28/08	147,093	0	0	0	30,687	330,000	6	330,000	55,872	0	0	0	66,741	348,000	9	348,000	678,000
05/29/08	147,515	422,000	9	422,000	30,699	120,000	2	120,000	55,872	0	0	0	66,933	192,000	5	192,000	734,000
05/30/08	147,515	0	0	0	30,750	510,000	10	510,000	55,912	400,000	13	400,000	66,933	0	0	0	910,000
05/31/08	147,515	0	0	0	30,772	220,000	4	220,000	55,986	740,000	25	740,000	66,933	0	0	0	960,000
May Total		9,630,000				7,580,000				8,100,000				3,577,000			28,887,000
Max Day		917,000				820,000				800,000				350,000			1,331,000
Average Day		307,094				242,668				260,658				116,141			931,839
06/01/08	148,294	779,000	16	779,000	30,772	0	0	0	55,986	0	0	0	66,933	0	0	0	779,000
06/02/08	148,883	589,000	12	589,000	30,772	0	0	0	56,011	250,000	8	250,000	66,933	0	0	0	839,000
06/03/08	149,585	702,000	14	702,000	30,772	0	0	0	56,011	0	0	0	66,986	53,000	1	53,000	755,000
06/04/08	149,651	66,000	1	66,000	30,831	590,000	12	590,000	56,011	0	0	0	67,230	244,000	7	244,000	900,000
06/05/08	149,654	3,000	0	3,000	30,887	560,000	11	560,000	56,011	0	0	0	67,492	262,000	7	262,000	825,000
06/06/08	150,500	846,000	17	846,000	30,899	120,000	2	120,000	56,011	0	0	0	67,492	0	0	0	966,000
06/07/08	151,128	828,000	13	828,000	30,899	0	0	0	56,034	230,000	8	230,000	67,492	0	0	0	853,000
06/08/08	151,687	539,000	11	539,000	30,899	0	0	0	56,061	270,000	9	270,000	67,492	0	0	0	809,000
06/09/08	152,324	657,000	13	657,000	30,899	0	0	0	56,089	280,000	9	280,000	67,492	0	0	0	937,000
06/10/08	153,145	821,000	17	821,000	30,899	0	0	0	56,109	200,000	7	200,000	67,492	0	0	0	1,021,000
06/11/08	153,145	0	0	0	30,928	290,000	6	290,000	56,180	710,000	24	710,000	67,492	0	0	0	1,000,000
06/12/08	153,145	0	0	0	30,968	400,000	8	400,000	56,257	770,000	26	770,000	67,492	0	0	0	1,170,000
06/13/08	153,145	0	0	0	30,997	290,000	6	290,000	56,331	740,000	25	740,000	67,688	196,000	5	196,000	1,226,000
06/14/08	153,145	0	0	0	31,068	710,000	14	710,000	56,331	0	0	0	67,993	305,000	8	305,000	1,015,000
06/15/08	153,145	0	0	0	31,156	880,000	17	880,000	56,331	0	0	0	68,218	225,000	6	225,000	1,105,000
06/16/08	153,998	853,000	17	853,000	31,159	30,000	1	30,000	56,331	0	0	0	68,303	85,000	2	85,000	968,000
06/17/08	154,671	673,000	14	673,000	31,162	30,000	1	30,000	56,331	0	0	0	68,412	109,000	3	109,000	812,000
06/18/08	155,490	819,000	17	819,000	31,162	0	0	0	56,331	0	0	0	68,588	156,000	4	156,000	975,000
06/19/08	155,490	0	0	0	31,171	90,000	2	90,000	56,402	710,000	24	710,000	68,845	277,000	8	277,000	1,077,000
06/20/08	155,490	0	0	0	31,186	150,000	3	150,000	56,476	740,000	25	740,000	69,103	258,000	7	258,000	1,148,000
06/21/08	155,490	0	0	0	31,218	320,000	6	320,000	56,535	590,000	20	590,000	69,284	181,000	5	181,000	1,091,000
06/22/08	155,490	0	0	0	31,256	380,000	7	380,000	56,608	730,000	25	730,000	69,442	158,000	4	158,000	1,268,000
06/23/08	155,656	166,000	3	166,000	31,324	680,000	13	680,000	56,608	0	0	0	69,683	241,000	7	241,000	1,087,000
06/24/08	156,545	889,000	18	889,000	31,328	40,000	1	40,000	56,608	0	0	0	69,816	133,000	4	133,000	1,062,000
06/25/08	157,453	908,000	18	908,000	31,331	30,000	1	30,000	56,608	0	0	0	69,982	166,000	5	166,000	1,104,000
06/26/08	157,453	0	0	0	31,412	810,000	16	810,000	56,608	0	0	0	70,240	258,000	7	258,000	1,068,000
06/27/08	157,453	0	0	0	31,494	820,000	16	820,000	56,608	0	0	0	70,510	270,000	7	270,000	1,090,000
06/28/08	157,453	0	0	0	31,581	870,000	17	870,000	56,608	0	0	0	70,745	235,000	6	235,000	1,105,000
06/29/08	157,453	0	0	0	31,588	70,000	1	70,000	56,675	670,000	23	670,000	71,025	280,000	8	280,000	1,020,000
06/30/08	157,453	0	0	0	31,597	90,000	2	90,000	56,745	700,000	24	700,000	71,300	275,000	8	275,000	1,065,000
June Total		9,938,000				8,250,000				7,590,000				4,367,000			30,145,000
Max Day		908,000				880,000				770,000				305,000			1,268,000
Average Day		331,267				275,000				253,000				145,567			1,004,833
07/01/08	157,997	544,000	11	544,000	31,607	100,000	2	100,000	56,781	360,000	12	360,000	71,399	99,000	3	99,000	1,103,000
07/02/08	158,751	754,000	15	754,000	31,607	0	0	0	56,800	190,000	0	0	71,399	0	0	0	944,000
07/03/08	158,751	0	0	0	31,668	610,000	0	0	56,800	0	0	0	71,645	246,000	7	246,000	856,000
07/04/08	158,751	0	0	0	31,746	800,000	16	800,000	56,800	0	0	0	71,851	206,000	6	206,000	1,006,000
07/05/08	158,751	0	0	0	31,815	670,000	13	670,000	56,800	0	0	0	72,221	370,000	10	370,000	1,040,000
07/06/08	159,547	796,000	16	796,000	31,815	0	0	0	56,817	170,000	6	170,000	72,315	94,000	3	94,000	1,060,000
07/07/08	160,364	817,000	17	817,000	31,815	0	0	0	56,817	0	0	0	72,454	139,000	4	139,000	956,000
07/08/08	161,157	793,000	16	793,000	31,818	30,000	1	30,000	56,817	0	0	0	72,586	142,000	4	142,000	965,000
07/09/08	162,047	890,000	18	890,000	31,827	90,000	2	90,000	56,817	0	0	0	72,776	180,000	5	180,000	1,160,000
07/10/08	162,152	105,000	2	105,000	31,901	740,000	14	740,000	56,817	0	0	0	73,160	384,000	10	384,000	1,229,000
07/11/08	162,153	1,000	0	1,000	31,962	610,000	12	610,000	56,862	450,000	15	450,000	73,250	90,000	2	90,000	1,151,000
07/12/08	162,153	0	0	0	31,977	150,000	3	150,000	56,938	760,000	26	760,000	73,540	290,000	8	290,000	1,200,000
07/13/08	162,703	550,000	11	550,000	31,977	0	0	0	56,974	360,000	12	360,000	73,654	114,000	3	114,000	1,024,000
07/14/08	163,437	734,000	15	734,000	31,977	0	0	0	56,974	0	0	0	73,771	117,000	3	117,000	851,000
07/15/08	164,288	851,000	17	851,000	31,977	0	0	0	56,974	0	0	0	73,894	123,000	3	123,000	974,000
07/16/08	164,888	600,000	12	600,000	31,977	0	0	0	56,974	0	0	0	74,035	141,000	4	141,000	741,000
07/17/08	165,274	386,000	8	386,000	31,977	0	0	0	56,999	250,000	8	250,000	74,035	0	0	0	636,000
07/18/08	165,611	337,000	7	337,000	31,977	0	0	0	57,030	310,000	10	310,000	74,035	0	0	0	647,000
07/19/08	165,858	247,000	5	247,000	32,008	310,0											

Year: 2008	Well No. 1				Well No. 2A				Well No. 3A				Well No. 4				Total Well Production
08/13/08	175,717	117,000	2	117,000	32,309	670,000	13	670,000	57,446	200,000	7	200,000	77,241	241,000	7	241,000	1,228,000
08/14/08	175,717	0	0	0	32,396	870,000	17	870,000	57,446	200,000	7	200,000	77,476	235,000	6	235,000	1,305,000
08/15/08	175,717	0	0	0	32,481	850,000	17	850,000	57,446	200,000	7	200,000	77,500	24,000	1	24,000	1,074,000
08/16/08	175,761	44,000	1	44,000	32,515	940,000	7	940,000	57,446	200,000	7	200,000	77,885	385,000	11	385,000	969,000
08/17/08	175,761	600,000	0	0	32,529	140,000	3	140,000	57,446	200,000	7	200,000	77,989	104,000	3	104,000	1,044,000
08/18/08	175,761	600,000	0	0	32,538	90,000	2	90,000	57,446	200,000	7	200,000	78,067	78,000	2	78,000	968,000
08/19/08	175,761	600,000	0	0	32,544	60,000	1	60,000	57,446	200,000	7	200,000	78,165	98,000	3	98,000	958,000
08/20/08	175,761	600,000	0	0	32,544	0	0	0	57,446	200,000	7	200,000	78,263	98,000	3	98,000	898,000
08/21/08	175,761	0	0	0	32,619	750,000	15	750,000	57,450	0	0	0	78,415	152,000	4	152,000	902,000
08/22/08	175,761	0	0	0	32,704	850,000	17	850,000	57,450	0	0	0	78,556	141,000	4	141,000	991,000
08/23/08	175,761	0	0	0	32,788	840,000	16	840,000	57,450	0	0	0	78,672	116,000	3	116,000	956,000
08/24/08	175,761	600,000	12	600,000	32,800	120,000	2	120,000	57,450	0	0	0	78,820	148,000	4	148,000	868,000
08/25/08	175,761	200,000	4	200,000	32,805	50,000	1	50,000	57,450	200,000	7	200,000	78,926	106,000	3	106,000	556,000
08/26/08	175,761	0	0	0	32,859	540,000	11	540,000	57,450	200,000	7	200,000	79,103	177,000	5	177,000	917,000
08/27/08	175,761	0	0	0	32,938	790,000	15	790,000	57,450	200,000	7	200,000	79,283	180,000	5	180,000	1,170,000
08/28/08	175,761	0	0	0	33,016	780,000	15	780,000	57,450	200,000	7	200,000	79,461	178,000	5	178,000	1,158,000
08/29/08	175,761	0	0	0	33,099	830,000	16	830,000	57,450	200,000	7	200,000	79,654	193,000	5	193,000	1,223,000
08/30/08	175,761	0	0	0	33,186	1,700,000	33	850,000	57,450	0	0	0	79,834	373,000	10	186,500	2,073,000
08/31/08	175,761	0	0	0	33,190	910,000	18	455,000	57,450	200,000	7	100,000	80,009	355,000	10	177,500	1,465,000
August Total		8,789,000				12,790,000				6,610,000				4,652,000			32,841,000
Max Day		770,000				1,700,000				700,000				385,000			2,073,000
Average Day		283,516				412,581				213,226				150,065			1,059,387
09/01/08	17,761	800,000	16	800,000	33,190	0	0	0	57,450	0	0	0	80,157	148,000	4	148,000	948,000
09/02/08	17,761	800,000	16	800,000	33,190	0	0	0	57,450	0	0	0	80,236	79,000	2	79,000	879,000
09/03/08	17,761	800,000	16	800,000	33,190	0	0	0	57,450	0	0	0	80,283	47,000	1	47,000	847,000
09/04/08	17,761	800,000	16	800,000	33,190	0	0	0	57,450	0	0	0	80,327	44,000	1	44,000	844,000
09/05/08	17,761	800,000	16	800,000	33,195	50,000	1	50,000	57,450	0	0	0	80,365	38,000	1	38,000	888,000
09/06/08	17,761	800,000	16	800,000	33,198	30,000	1	30,000	57,450	0	0	0	80,420	55,000	2	55,000	885,000
09/07/08	17,761	800,000	16	800,000	33,201	30,000	1	30,000	57,450	0	0	0	80,504	84,000	2	84,000	914,000
09/08/08	17,761	800,000	16	800,000	33,205	40,000	1	40,000	57,450	0	0	0	80,595	91,000	2	91,000	931,000
09/09/08	17,761	800,000	16	800,000	33,205	0	0	0	57,450	0	0	0	80,690	95,000	3	95,000	895,000
09/10/08	17,761	0	0	0	33,285	800,000	16	800,000	57,450	0	0	0	80,815	125,000	3	125,000	925,000
09/11/08	17,761	0	0	0	33,358	710,000	14	710,000	57,450	0	0	0	80,947	132,000	4	132,000	842,000
09/12/08	17,761	0	0	0	33,438	800,000	16	800,000	57,450	0	0	0	81,082	135,000	4	135,000	935,000
09/13/08	17,761	0	0	0	33,517	810,000	16	810,000	57,450	0	0	0	81,191	109,000	3	109,000	919,000
09/14/08	17,761	0	0	0	33,595	780,000	15	780,000	57,450	0	0	0	81,381	190,000	5	190,000	970,000
New Meter	09/15/08	17,761	0	0	33,678	810,000	16	810,000	57,450	0	0	0	81,543	162,000	4	162,000	972,000
09/16/08	0	0	0	0	33,740	640,000	13	640,000	57,450	0	0	0	81,741	198,000	5	198,000	838,000
09/17/08	624	624,000	13	624,000	33,752	120,000	2	120,000	57,450	0	0	0	81,889	148,000	4	148,000	892,000
09/18/08	1,443	819,000	17	819,000	33,752	0	0	0	57,450	0	0	0	81,909	20,000	1	20,000	839,000
09/19/08	2,207	764,000	15	764,000	33,752	0	0	0	57,450	0	0	0	81,927	18,000	0	18,000	782,000
09/20/08	2,977	770,000	16	770,000	33,752	0	0	0	57,450	0	0	0	81,927	0	0	0	770,000
09/21/08	3,756	779,000	16	779,000	33,752	0	0	0	57,450	0	0	0	81,931	4,000	0	4,000	783,000
09/22/08	4,586	830,000	17	830,000	33,752	0	0	0	57,450	0	0	0	81,937	6,000	0	6,000	836,000
09/23/08	5,351	735,000	15	735,000	33,752	0	0	0	57,450	0	0	0	81,937	0	0	0	735,000
09/24/08	6,103	782,000	16	782,000	33,752	0	0	0	57,450	0	0	0	81,954	17,000	0	17,000	799,000
09/25/08	6,901	798,000	16	798,000	33,752	0	0	0	57,450	0	0	0	81,980	26,000	1	26,000	824,000
09/26/08	7,737	836,000	17	836,000	33,752	0	0	0	57,450	0	0	0	82,023	43,000	1	43,000	879,000
09/27/08	8,596	829,000	17	829,000	33,752	0	0	0	57,450	0	0	0	82,045	22,000	1	22,000	851,000
09/28/08	9,418	852,000	17	852,000	33,752	0	0	0	57,450	0	0	0	82,076	31,000	1	31,000	883,000
09/29/08	10,236	818,000	17	818,000	33,752	0	0	0	57,450	0	0	0	82,103	27,000	1	27,000	845,000
09/30/08	11,044	808,000	16	404,000	33,752	0	0	0	57,450	0	0	0	82,120	17,000	0	8,500	825,000
September Total		18,244,000				5,620,000				0				2,111,000			25,975,000
Max Day		852,000				810,000				0				198,000			972,000
Average Day		608,133				187,333				0				70,387			865,833
10/01/08	11,842	798,000	16	798,000	33,752	0	0	0	57,450	0	0	0	82,142	22,000	1	22,000	820,000
10/02/08	12,639	797,000	16	797,000	33,752	0	0	0	57,450	0	0	0	82,181	39,000	1	39,000	836,000
10/03/08	13,423	784,000	16	784,000	33,752	0	0	0	57,450	0	0	0	82,181	0	0	0	784,000
10/04/08	14,174	751,000	15	751,000	33,752	0	0	0	57,450	0	0	0	82,181	0	0	0	751,000
10/05/08	14,401	227,000	5	227,000	33,752	0	0	0	57,450	0	0	0	82,700	519,000	14	519,000	746,000
10/06/08	14,401	0	0	0	33,753	10,000	0	10,000	57,450	0	0	0	83,145	445,000	12	445,000	455,000
10/07/08	14,401	0	0	0	33,763	100,000	2	100,000	57,450	0	0	0	83,694	549,000	15	549,000	649,000
10/08/08	14,401	0	0	0	33,769	60,000	1	60,000	57,450	0	0	0	84,321	627,000	17	627,000	687,000
10/09/08	14,401	0	0	0	33,786	170,000	3	170,000	57,450	0	0	0	84,844	523,000	14	523,000	693,000
10/10/08	14,401	0	0	0	33,786	0	0	0	57,450	0	0	0	85,498	654,000	18	654,000	654,000
10/11/08	15,025	624,000	13	624,000	33,786	0	0	0	57,450	0	0	0	85,498	0	0	0	624,000
10/12/08	15,637	612,000	12	612,000	33,786	0	0	0	57,450	0	0	0	85,498	0	0	0	612,000
10/13/08	16,294	657,000	13	657,000	33,786	0	0	0	57,450	0	0	0	85,498	0	0	0	657,000
10/14/08	16,947	653,000	13	653,000	33,786	0	0	0	57,450	0	0	0	85,498	0	0	0	653,000
10/15/08	17,420	473,000	10	473,000	33,804	180,000	4	180,000	57,450	0	0	0	85,498	0	0	0	653,000
10/16/08	17,845	425,000	9	425,000	33,816	120,000	2	120,000	57,450	0	0	0	85,607	109,000	3	109,000	654,000
10/17/08	18,295	450,															

Year: 2008	Well No. 1				Well No. 2A				Well No. 3A				Well No. 4				Total Well Production
11/09/08	27,332	0	0	33,819	0	0	57,450	0	0	0	89,915	739,000	20	739,000	739,000		
11/10/08	27,332	0	0	33,819	0	0	57,450	0	0	0	90,699	784,000	21	784,000	784,000		
11/11/08	27,332	0	0	33,826	70,000	1	70,000	57,450	0	0	91,014	315,000	9	315,000	385,000		
11/12/08	27,332	0	0	33,869	430,000	8	430,000	57,450	0	0	91,038	24,000	1	24,000	454,000		
11/13/08	27,332	0	0	33,875	90,000	2	90,000	57,458	380,000	13	380,000	91,038	0	0	470,000		
11/14/08	27,332	0	0	33,879	10,000	0	10,000	57,531	430,000	14	430,000	91,038	0	0	440,000		
11/15/08	27,332	0	0	33,879	0	0	57,586	550,000	19	550,000	91,038	0	0	0	560,000		
11/16/08	27,332	0	0	33,879	0	0	57,633	470,000	16	470,000	91,038	0	0	0	470,000		
11/17/08	27,332	0	0	33,879	0	0	57,685	520,000	18	520,000	91,038	0	0	0	520,000		
11/18/08	27,332	0	0	33,879	0	0	57,728	430,000	14	430,000	91,038	0	0	0	430,000		
11/19/08	27,332	0	0	33,879	0	0	57,771	430,000	14	430,000	91,038	0	0	0	430,000		
11/20/08	27,332	0	0	33,879	0	0	57,814	430,000	14	430,000	91,038	0	0	0	430,000		
11/21/08	27,332	0	0	33,879	0	0	57,840	260,000	9	260,000	91,038	0	0	0	260,000		
11/22/08	27,332	0	0	33,879	0	0	57,870	300,000	10	300,000	91,038	0	0	0	300,000		
11/23/08	27,332	0	0	33,879	0	0	57,890	200,000	7	200,000	91,038	0	0	0	200,000		
11/24/08	27,332	0	0	33,879	0	0	57,901	110,000	4	110,000	91,038	0	0	0	110,000		
11/25/08	27,332	0	0	33,914	350,000	7	350,000	57,901	0	0	91,038	0	0	0	350,000		
11/26/08	27,719	387,000	8	387,000	33,914	0	0	57,901	0	0	91,038	0	0	0	387,000		
11/27/08	28,065	346,000	7	346,000	33,914	0	0	57,901	0	0	91,038	0	0	0	346,000		
11/28/08	28,427	362,000	7	362,000	33,914	0	0	57,901	0	0	91,038	0	0	0	362,000		
11/29/08	28,767	340,000	7	340,000	33,914	0	0	57,901	0	0	91,038	0	0	0	340,000		
11/30/08	29,152	725,000	15	362,500	33,914	0	0	57,901	0	0	91,038	0	0	0	725,000		
November Total		3,757,000					950,000		4,510,000			3,618,000				12,835,000	
Max Day		725,000					430,000		550,000			784,000				784,000	
Average Day		125,233					31,667		150,333			120,660				427,833	
12/01/08	29,508	356,000	7	356,000	33,914	0	0	57,901	0	0	91,038	0	0	0	356,000		
12/02/08	29,875	367,000	7	367,000	33,914	0	0	57,901	0	0	91,038	0	0	0	367,000		
12/03/08	30,200	325,000	7	325,000	33,914	0	0	57,901	0	0	91,038	0	0	0	325,000		
12/04/08	30,520	320,000	6	320,000	33,914	0	0	57,901	0	0	91,038	0	0	0	320,000		
12/05/08	30,854	334,000	7	334,000	33,914	0	0	57,901	0	0	91,038	0	0	0	334,000		
12/06/08	31,168	314,000	6	314,000	33,914	0	0	57,901	0	0	91,038	0	0	0	314,000		
12/07/08	31,493	325,000	7	325,000	33,914	0	0	57,901	0	0	91,038	0	0	0	325,000		
12/08/08	31,841	348,000	7	348,000	33,914	0	0	57,901	0	0	91,038	0	0	0	348,000		
12/09/08	32,188	327,000	7	327,000	33,914	0	0	57,901	0	0	91,038	0	0	0	327,000		
12/10/08	32,552	354,000	7	354,000	33,914	0	0	57,901	0	0	91,038	0	0	0	354,000		
12/11/08	32,828	306,000	6	306,000	33,914	0	0	57,901	0	0	91,038	0	0	0	306,000		
12/12/08	33,130	302,000	6	302,000	33,914	0	0	57,901	0	0	91,038	0	0	0	302,000		
12/13/08	33,450	320,000	6	320,000	33,914	0	0	57,901	0	0	91,038	0	0	0	320,000		
12/14/08	33,786	336,000	7	336,000	33,914	0	0	57,901	0	0	91,038	0	0	0	336,000		
12/15/08	34,134	348,000	7	348,000	33,914	0	0	57,901	0	0	91,038	0	0	0	348,000		
12/16/08	34,458	324,000	7	324,000	33,914	0	0	57,901	0	0	91,038	0	0	0	324,000		
12/17/08	34,789	331,000	7	331,000	33,914	0	0	57,901	0	0	91,038	0	0	0	331,000		
12/18/08	35,115	326,000	7	326,000	33,914	0	0	57,901	0	0	91,038	0	0	0	326,000		
12/19/08	35,428	313,000	6	313,000	33,914	0	0	57,901	0	0	91,038	0	0	0	313,000		
12/20/08	35,771	343,000	7	343,000	33,914	0	0	57,901	0	0	91,038	0	0	0	343,000		
12/21/08	36,093	322,000	7	322,000	33,914	0	0	57,901	0	0	91,038	0	0	0	322,000		
12/22/08	36,460	367,000	7	367,000	33,914	0	0	57,901	0	0	91,038	0	0	0	367,000		
12/23/08	36,728	268,000	5	268,000	33,914	0	0	57,901	0	0	91,038	0	0	0	268,000		
12/24/08	37,037	309,000	6	309,000	33,914	0	0	57,901	0	0	91,038	0	0	0	309,000		
12/25/08	37,344	307,000	6	307,000	33,914	0	0	57,901	0	0	91,038	0	0	0	307,000		
12/26/08	37,620	276,000	6	276,000	33,914	0	0	57,901	0	0	91,038	0	0	0	276,000		
12/27/08	37,954	334,000	7	334,000	33,914	0	0	57,901	0	0	91,038	0	0	0	334,000		
12/28/08	38,293	339,000	7	339,000	33,914	0	0	57,901	0	0	91,038	0	0	0	339,000		
12/29/08	38,607	314,000	6	314,000	33,914	0	0	57,901	0	0	91,038	0	0	0	314,000		
12/30/08	38,959	666,000	13	666,000	33,914	0	0	57,901	0	0	91,038	0	0	0	666,000		
12/31/08	39,305	698,000	14	349,000	33,914	0	0	57,901	0	0	91,038	0	0	0	698,000		
December Total		10,819,000					0		0			0				10,819,000	
Max Day		698,000					0		0			0				698,000	
Average Day		349,000					0		0			0				349,000	
01/01/09	39,640	335,000	7	335,000	33,914	0	0	57,901	0	0	91,038	0	0	0	335,000		
01/02/09	39,912	272,000	6	272,000	33,914	0	0	57,901	0	0	91,038	0	0	0	272,000		
01/03/09	40,255	343,000	7	343,000	33,914	0	0	57,901	0	0	91,038	0	0	0	343,000		
01/04/09	40,581	326,000	7	326,000	33,914	0	0	57,901	0	0	91,038	0	0	0	326,000		
01/05/09	40,987	286,000	6	286,000	33,914	0	0	57,901	0	0	91,038	0	0	0	286,000		
01/06/09	41,193	328,000	7	328,000	33,914	0	0	57,901	0	0	91,038	0	0	0	328,000		
01/07/09	41,533	340,000	7	340,000	33,914	0	0	57,901	0	0	91,038	0	0	0	340,000		
01/08/09	41,866	333,000	7	333,000	33,914	0	0	57,901	0	0	91,038	0	0	0	333,000		
01/09/09	42,167	301,000	6	301,000	33,914	0	0	57,901	0	0	91,038	0	0	0	301,000		
01/10/09	42,500	333,000	7	333,000	33,914	0	0	57,901	0	0	91,038	0	0	0	333,000		
01/11/09	42,830	330,000	7	330,000	33,914	0	0	57,901	0	0	91,038	0	0	0	330,000		
01/12/09	43,179	349,000	7	349,000	33,914	0	0	57,901	0	0	91,038	0	0	0	349,000		
01/13/09	43,568	389,000	8	389,000	33,914	0	0	57,901	0	0	91,038	0	0	0	389,000		
01/14/09	43,945	377,000	8	377,000	33,914	0	0	57,901	0	0	91,038	0	0	0	377,000		
01/15/09	44,277	332,000	7	332,000	33,914	0	0	57,901	0	0	91,038	0	0	0	332,000		
01/16/09	44,602	325,000	7	325,000	33,914	0	0	57,901	0	0	91,038	0	0	0	325,000		
01/17/09	44,913	311,000	6	311,000	33,914	0	0	57,901	0	0	91,038	0	0	0	311,000		
01/18/09	45,239	326,000	7	326,000	33,914	0	0	57,901	0	0	91,038	0	0	0	326,000		
01/19/09	45,596	357,000	7	357,000	33,914	0	0	57,901	0	0	91,038	0	0	0	357,000		
01/20/09	45,982	386,000	8	386,000	33,914	0	0	57,901	0	0	91,038	0	0	0	386,000		
01/21/09	45,985	3,000	0	3,000	33,916	20,000	20,000	57,902	10,000	0	10,000	91,382	344,000	9	344,000	377,000	
01/22/09	45,985	0	0	33,916	0	0	0	57,902	0	0	91,719	337,000</					

Year: 2008	Well No. 1				Well No. 2A				Well No. 3A				Well No. 4				Total Well Production
02/05/09	45,985	0	0	33,916	0	0	0	57,902	0	0	0	96,545	319,000	9	319,000	319,000	
02/06/09	45,985	0	0	33,916	0	0	0	57,902	0	0	0	96,850	305,000	8	305,000	305,000	
02/07/09	45,985	0	0	33,916	0	0	0	57,902	0	0	0	97,178	328,000	9	328,000	328,000	
02/08/09	45,985	0	0	33,916	0	0	0	57,902	0	0	0	97,504	326,000	9	326,000	326,000	
02/09/09	45,985	0	0	33,916	0	0	0	57,902	0	0	0	97,819	315,000	9	315,000	315,000	
02/10/09	45,985	0	0	33,916	0	0	0	57,902	0	0	0	98,112	293,000	8	293,000	293,000	
02/11/09	45,985	0	0	33,916	0	0	0	57,902	0	0	0	98,420	308,000	8	308,000	308,000	
02/12/09	45,985	0	0	33,916	0	0	0	57,902	0	0	0	98,752	332,000	9	332,000	332,000	
02/13/09	45,985	0	0	33,916	0	0	0	57,902	0	0	0	99,029	277,000	8	277,000	277,000	
02/14/09	45,985	0	0	33,916	0	0	0	57,902	0	0	0	99,326	297,000	8	297,000	297,000	
02/15/09	45,985	0	0	33,916	0	0	0	57,902	0	0	0	99,617	291,000	8	291,000	291,000	
02/16/09	46,301	316,000	6	316,000	33,916	0	0	57,902	0	0	0	99,617	0	0	0	316,000	
02/17/09	46,602	301,000	6	301,000	33,916	0	0	57,902	0	0	0	99,617	0	0	0	301,000	
02/18/09	46,922	320,000	6	320,000	33,916	0	0	57,902	0	0	0	99,617	0	0	0	320,000	
02/19/09	47,237	315,000	6	315,000	33,916	0	0	57,902	0	0	0	99,617	0	0	0	315,000	
02/20/09	47,307	70,000	1	70,000	33,916	0	0	57,907	50,000	2	50,000	99,797	180,000	5	180,000	300,000	
02/21/09	47,307	0	0	33,916	0	0	0	57,937	300,000	10	300,000	99,820	23,000	1	23,000	323,000	
02/22/09	47,307	0	0	33,916	0	0	0	57,969	320,000	11	320,000	99,820	0	0	0	320,000	
02/23/09	47,307	0	0	33,916	0	0	0	57,969	0	0	0	99,820	0	0	0	0	
02/24/09	47,307	0	0	33,916	0	0	0	58,035	660,000	22	660,000	99,820	0	0	0	660,000	
02/25/09	47,307	0	0	33,916	0	0	0	58,067	320,000	11	320,000	99,820	0	0	0	320,000	
02/26/09	47,307	0	0	33,916	0	0	0	58,067	0	0	0	100,112	292,000	8	292,000	292,000	
02/27/09	47,307	0	0	33,916	0	0	0	58,067	0	0	0	100,443	331,000	9	331,000	331,000	
02/28/09	47,307	0	0	33,916	0	0	0	58,067	0	0	0	100,764	321,000	9	321,000	321,000	
February Total		1,322,000							1,650,000				5,840,000			8,821,000	
Max Day		320,000							660,000				356,000			660,000	
Average Day		47,214							58,929				208,893			326,704	
03/01/09	47,307	0	0	33,916	0	0	0	58,067	0	0	0	101,106	342,000	9	342,000	342,000	
03/02/09	47,307	0	0	33,916	0	0	0	58,067	0	0	0	101,447	341,000	9	341,000	341,000	
03/03/09	47,307	0	0	33,916	0	0	0	58,067	0	0	0	101,775	328,000	9	328,000	328,000	
03/04/09	47,307	0	0	33,916	0	0	0	58,067	0	0	0	102,129	354,000	10	354,000	354,000	
03/05/09	47,307	0	0	33,916	0	0	0	58,067	0	0	0	102,425	296,000	8	296,000	296,000	
03/06/09	47,307	0	0	33,916	0	0	0	58,067	0	0	0	102,741	316,000	9	316,000	316,000	
03/07/09	47,398	91,000	2	91,000	33,916	0	0	58,083	160,000	5	160,000	102,854	113,000	3	113,000	364,000	
03/08/09	47,780	382,000	6	382,000	33,916	0	0	58,083	0	0	0	102,854	0	0	0	382,000	
03/09/09	48,157	377,000	8	377,000	33,916	0	0	58,083	0	0	0	102,854	0	0	0	377,000	
03/10/09	48,518	361,000	7	361,000	33,916	0	0	58,083	0	0	0	102,854	0	0	0	361,000	
03/11/09	48,910	392,000	8	392,000	33,916	0	0	58,083	0	0	0	102,854	0	0	0	392,000	
03/12/09	48,910	0	0	33,916	0	0	0	58,126	430,000	14	430,000	102,854	0	0	0	430,000	
03/13/09	48,910	0	0	33,916	0	0	0	58,189	630,000	21	630,000	102,854	0	0	0	630,000	
03/14/09	48,910	0	0	33,916	0	0	0	58,189	0	0	0	103,143	289,000	8	289,000	289,000	
03/15/09	48,910	0	0	33,916	0	0	0	58,189	0	0	0	103,580	437,000	12	437,000	437,000	
03/16/09	48,910	0	0	33,916	0	0	0	58,189	0	0	0	103,995	415,000	11	415,000	415,000	
03/17/09	48,910	0	0	33,916	0	0	0	58,189	0	0	0	104,458	463,000	13	463,000	463,000	
03/18/09	48,910	0	0	33,916	0	0	0	58,189	0	0	0	104,951	493,000	13	493,000	493,000	
03/19/09	48,910	0	0	33,916	0	0	0	58,189	0	0	0	105,493	542,000	15	542,000	542,000	
03/20/09	48,910	0	0	33,916	0	0	0	58,189	0	0	0	106,023	530,000	14	530,000	530,000	
03/21/09	48,910	0	0	33,916	0	0	0	58,189	0	0	0	106,560	537,000	15	537,000	537,000	
03/22/09	48,910	0	0	33,916	0	0	0	58,189	0	0	0	107,100	540,000	15	540,000	540,000	
03/23/09	48,910	0	0	33,916	0	0	0	58,189	0	0	0	107,453	353,000	10	353,000	353,000	
03/24/09	48,910	0	0	33,916	0	0	0	58,189	0	0	0	107,914	461,000	13	461,000	461,000	
03/25/09	48,910	0	0	33,916	0	0	0	58,189	0	0	0	108,460	546,000	15	546,000	546,000	
03/26/09	48,910	0	0	33,916	0	0	0	58,189	0	0	0	109,031	571,000	16	571,000	571,000	
03/27/09	48,910	0	0	33,916	0	0	0	58,189	0	0	0	109,382	351,000	10	351,000	351,000	
03/28/09	48,910	0	0	33,916	0	0	0	58,243	540,000	18	540,000	109,382	0	0	0	540,000	
03/29/09	49,925	1,015,000	21	1,015,000	33,916	0	0	58,243	0	0	0	109,382	0	0	0	1,015,000	
03/30/09	50,466	1,556,000	31	778,000	33,916	0	0	58,243	0	0	0	109,382	0	0	0	1,556,000	
03/31/09	50,160	235,000	5	117,500	33,916	0	0	58,248	50,000	2	25,000	109,382	0	0	0	285,000	
March Total		4,409,000							1,810,000				8,618,000			14,837,000	
Max Day		1,556,000							630,000				571,000			1,556,000	
Average Day		142,226							58,387				278,000			478,613	
04/01/09	51,664	1,504,000	30	1,504,000	33,916	0	0	58,248	0	0	0	109,382	0	0	0	1,504,000	
04/02/09	52,308	644,000	13	644,000	33,916	0	0	58,248	0	0	0	109,382	0	0	0	644,000	
04/03/09	53,007	699,000	14	699,000	33,916	0	0	58,248	0	0	0	109,382	0	0	0	699,000	
04/04/09	53,007	0	0	33,925	90,000	0	2	90,000	58,274	9	260,000	109,487	105,000	3	105,000	455,000	
04/05/09	53,007	0	0	33,925	0	0	0	58,303	290,000	10	290,000	109,878	391,000	11	391,000	681,000	

Pixley 2014 Water Usage Summary

PIXLEY PUBLIC UTILITY DISTRICT

2014

WATER USE		GALLONS		MAX DAY
JAN		10,700,000		681,000
FEB		8,705,000		353,000
MAR		11,855,000		629,999
APR		15,241,000		734,000
MAY		21,411,000		814,000
JUN		24,522,000		
JUL		24,632,000		904,000
AUG		22,859,000		888,000
SEP		19,427,000		764,000
OCT		15,410,000		616,000
NOV		10,271,000		390,000
DEC		9,139,000		498,000
TOTAL		194,172,000		

AVERAGE DAILY DEMAND 531,978 gpd

MAXIMUM MONTH July, 2014

MAXIMUM DAY DEMAND January 1, 1900

PEAKING FACTOR (MDD/ADD) 1.70

Note - daily flowmeter records for June 2014 are not available.

Pixley Water Usage Summary :

	2008	2009	2010	2011	2012	2013	2014
JAN	10,346,000	11,256,000	10,636,000	10,102,000	10,469,000	10,132,000	10,700,000
FEB	10,089,000	8,821,000	9,205,000	9,858,000	10,285,000	9,078,000	8,705,000
MAR	15,264,000	14,837,000	11,790,000	10,407,000	11,755,000	12,712,000	11,855,000
APR	23,177,000	20,366,000	12,968,000	14,353,000	12,397,000	18,696,000	15,241,000
MAY	28,887,000	31,399,000	20,536,000	21,568,000	21,686,000	20,185,000	21,411,000
JUN	30,145,000	29,764,000	29,005,000	24,014,000	27,082,000	26,543,000	24,522,000
JUL	31,038,000	35,276,000	30,819,000	29,718,000	29,153,000	27,451,000	24,632,000
AUG	32,841,000	29,373,000	28,128,000	28,110,000	27,111,000	25,798,000	22,859,000
SEP	25,975,000	26,198,000	22,959,000	23,625,000	22,785,000	22,196,000	19,427,000
OCT	20,661,000	17,254,000	16,964,000	16,423,000	16,504,000	17,622,000	15,410,000
NOV	12,835,000	13,234,000	11,688,000	11,092,000	10,735,000	12,899,000	10,271,000
DEC	10,819,000	10,947,000	10,268,000	10,512,000	9,440,000	10,612,000	9,139,000
per year	252,077,000	248,725,000	214,966,000	209,782,000	209,402,000	213,924,000	194,172,000
per day	690622	681438	588948	574745	573704	586093	531978
per minute	480	473	409	399	398	407	369
MDD	7/30/2008	5/30/2009	6/3/2010	7/3/2011	7/26/2012	6/28/2013	7/3/2014
per day	2,141,000	2,117,000	1,164,000	1,547,000	1,385,000	1,034,000	904,000
per minute	1487	1470	808	1074	962	718	628
Factor	3.10	3.11	1.98	2.69	2.41	1.76	1.70
					Average PF for 2010-14		2.11

Pixley CCR

	Arsenic Readings		
Year	Level Detected (ppm)	Range of Detections (ppm)	MCL (ppm)
2009	16.25	3_24	10
2010	14	3_22	10
2011	12.66	5_19	10
2012	20.5	20_21	10
2013	19.1	3_26	10

	Total Coliform Readings		
Year	Highest # of Detection	No. of months in violation	MCL
2009	0	0.00	# of Detection per month \leq 1
2010	1	0.00	# of Detection per month \leq 2
2011	8	2.00	# of Detection per month \leq 3
2012	1	0.00	# of Detection per month \leq 4
2013	3	1.00	# of Detection per month \leq 5

	Iron Readings		
Year	Level Detected (ppm)	Range of Detections (ppm)	MCL (ppm)
2009	65	ND-110	300
2010	65	ND-110	300
2011	306.66	ND-510	300
2012	306.66	ND-510	300
2013	306.66	ND-510	300

	Turbidity		
Year	Level Detected (ppm)	Range of Detection	MCL (ppm)
2009	4	0.6-69	5
2010	4	0.6-69	5
2011	2.66	0.60-4.40	5
2012	2.66	0.60-4.40	5
2013	2.66	0.60-4.40	5

In Violation

Appendix H

Notice of Preparation

NOTICE OF PREPARATION

To: State Clearinghouse
PO Box 3044/1400 Tenth St
Sacramento, CA 95814

From: Tulare County RMA
5961 S Mooney Blvd
Visalia, CA 93277

Date: February 20, 2014

Subject: **Notice of Preparation of a Draft Environmental Impact Report**

Project Title: General Plan Amendment No. 14-002 to Update the Pixley Community Plan

Project Applicant: Tulare County Resource Management Agency

Project Location: The unincorporated community of Pixley consists of approximately 1,992 acres and is located approximately 25 miles south of Visalia and approximately 63 miles south of Fresno on State Route 99 on the western edge of Tulare County.

Tulare County Resource Management Agency (RMA) will be the Lead Agency and will prepare an environmental impact report (EIR) for the Pixley Community Plan Update (PCPU). We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permits and other approvals for the project.

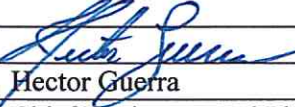
The project description, location, and the potential environmental effects are contained in the attached materials.

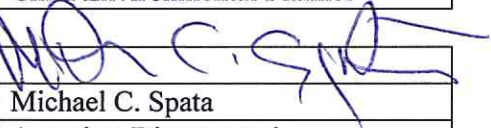
Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

A scoping meeting is scheduled for March 6, 2014 at 3:00 pm in the Main Conference Room of the Tulare County Resource Management Agency at the address shown above.

Please direct your response to Hector Guerra, Chief Environmental Planner at the address shown above, by e-mail at hguerra@co.tulare.ca.us, or by telephone at 559-624-7121.

Please provide us with the name of a contact person in your agency.

Date	2/20/14	Signature	
			Hector Guerra
		Title	Chief Environmental Planner

Date	2/20/14	Signature	
			Michael C. Spata
		Title	Associate Director and Environmental Assessment Officer

Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375.

Project Description:

On December 10, 2013 the Tulare County Board of Supervisors (BOS) approved, the Planning Branch proposal to update the Pixley Community Plan. The Pixley Community Plan update will become consistent with the recent approval of the General Plan 2030 update, and will include the following primary goals and objectives.

- 1) **Land Use and Environmental Planning** - Promote development within planning areas next to the Regional Highway 99 Corridor in order to implement the following General Plan goals:
 - a) Update the affected Urban Development Boundaries to include newly expanded Enterprise Zone areas;
 - b) Ensure that the text and mapping of the Community Plan Designations and Zoning Reclassifications address various development matters such as encouraging Agricultural Adaptive Reuse activities, recognizing Non-Conforming Use activities, and facilitating Ministerial Permit approvals;
 - c) Encourage infill development within Urban Development Boundaries, thereby discouraging leapfrog development within Tulare County;
 - d) Reduce development pressure on agriculturally-designated lands within the Valley Floor, thereby encouraging agricultural production to flourish;
 - e) Reduce vehicle miles travelled throughout the County, thereby positively affecting air quality and greenhouse gas reduction; and
 - f) Help to improve the circulation, transit and railroad transportation system within this community, including, but not limited to, laying the groundwork for the construction of key projects such as Safe Routes to Schools, Complete Streets, and Bike Lanes/Pedestrian Paths.
- 2) **Improvements for a “disadvantaged community”** - It is expected that the community planning areas will be improved for the following reasons:
 - a) With faster project processing resulting from an updated community plan, increased employment opportunities are more likely to be provided by the private sector as proposed project developments can be approved as expeditiously as possible;
 - b) Increased housing grant awards are more likely to occur based on updated community plans that are consistent with the policies of the recently adopted (August 2013) General Plan Update and Housing Element; and
 - c) With updated community plans, enhanced infrastructure grant awards are more likely, thereby providing access to funding to install or upgrade road, water, wastewater, and storm water facilities.
- 3) **Strengthening Relationship with TCAG** - An important benefit of this expedited community plan process will be the opportunity for RMA to strengthen the County’s relationship with the Tulare County Association of Governments (TCAG) in that this and other community plans will help to facilitate the funding and implementation of several key transportation programs such as Safe Routes to Schools, Complete Streets, and Bike/Pedestrian Projects.

By pursuing these transportation programs through a heightened collaborative process, the likelihood of getting actual projects in the ground will be realized faster than historically achieved. In doing so, these communities and others can become safer and healthier by providing a more efficient transportation network.

Location:

Pixley is a rural unincorporated community of 2,457 persons located in the southwest portion of Tulare County, approximately 25 miles south of the City of Visalia and approximately 63 miles south of Fresno on State Highway 99. The community is predominantly a rural agricultural service center. It is an area where agricultural enterprises are located, and is a bedroom community for many of the area's farm workers.

Maps: See attachment “C” for Pixley Community Plan Update map and project boundaries.

Land Use:

Pixley, an unincorporated community in Tulare County, is located in the southwest portion of the County between the communities of Tipton and Earlimart along State Route (SR) 99. Pixley is bisected in a north-south direction by SR 99, which runs east of and parallel to the Southern Pacific Railroad (S.P.R.R.) tracks. Local roads that provide access across SR 99 include East Court Avenue, Davis Avenue, and Terra Bella Avenue (interchange). Local railroad crossings are located at Davis Avenue and Terra Bella Avenue.

In 1872, the Southern Pacific Railroad placed a rail line through what is now Pixley. Pixley prospered as a major grain shipping point for many years until a series of fires, poor crops, and low prices induced many families to leave. In addition, the water levels declined and groundwater needed to be pumped to the surface. Present-day growth in Pixley has been largely influenced by its proximity to State Highway 99 and the Union Pacific Railroad which are parallel to each other and traverse Pixley in a north-south fashion.

The first homesteads were established in the area in 1882, and the Pixley Townsite Company was incorporated in 1886. Generally, the community's urban growth has been well planned. Growth has remained compact through infilling and contiguous development. Pixley is surrounded by land in agricultural production. Crops grown on these lands include cotton, alfalfa, beans, grain and vineyards. The dairy industry is also prevalent. Unlike many valley communities, there is little rural residential development surrounding the denser urbanized area has been strongly influenced by State Highway 99.

Potential Environmental Impacts:

It is anticipated that potential environmental impacts may include, but are not limited to, biological resources, cultural resources, air quality, green house gases, hydrology, water supply and water quality, land use and planning, noise, and traffic.

Reviewing Agencies:

1) State and Federal:

- a) California Department of Conservation, Division of Land Resource Protection
- b) California Department of Fish and Wildlife Region #4
- c) California Water Resources Control Board #5
- d) California Department of Toxic Substance Control
- e) California Environmental Protection Agency
- f) California Department of Transportation (Caltrans) District #6
- g) Native American Heritage Commission
- h) United States Fish & Wildlife Service

2) Local and Regional:

- a) Tulare County Resource Management Agency:
 - i) Public Works Branch
 - ii) Flood Control
 - iii) Fire
 - iv) Planning Branch: Project Review, Environmental Planning, and Building Divisions
- b) Health and Human Services Agency, Environmental Health Services Division
- c) Goshen Community Services District
- d) Tulare County Association of Governments (TCAG)
- e) City of Visalia
- f) Visalia Unified School District

- g) Tulare County Fire Warden
- h) Tulare County Sheriff's Office
- i) San Joaquin Valley Unified Air Pollution Control District (Air District)
- j) Regional Water Quality Control Board, Central Region
- k) Southern California Edison
- l) Southern California Gas Company

Pixley Community Plan Update

