

LANDFILLS – TECHNOLOGY OF WASTE DISPOSAL

BACKGROUND:

Waste disposal in Tulare County has evolved appreciably since the 1950's when it was placed in ground pits and burned. Today the Tulare County Solid Waste Department, in accordance with the Tulare County Integrated Waste Management Plan, utilizes its latest comprehensive strategies to resolve the many challenges of county waste. United States Environmental Protection Agency (USEPA) standards are instrumental in driving decisions on how solid waste is managed. Household, electronics recycling, tire recovery, yard waste recycling, metal recycling and appliance recovery are included in the programs.

REASON FOR INVESTIGATION:

The 2014-2015 Tulare County Grand Jury on its own initiative, investigated Tulare County's waste management practices. The Grand Jury is aware that no report has been written within the past five years concerning landfills, which are in the jurisdiction of the Solid Waste Department.

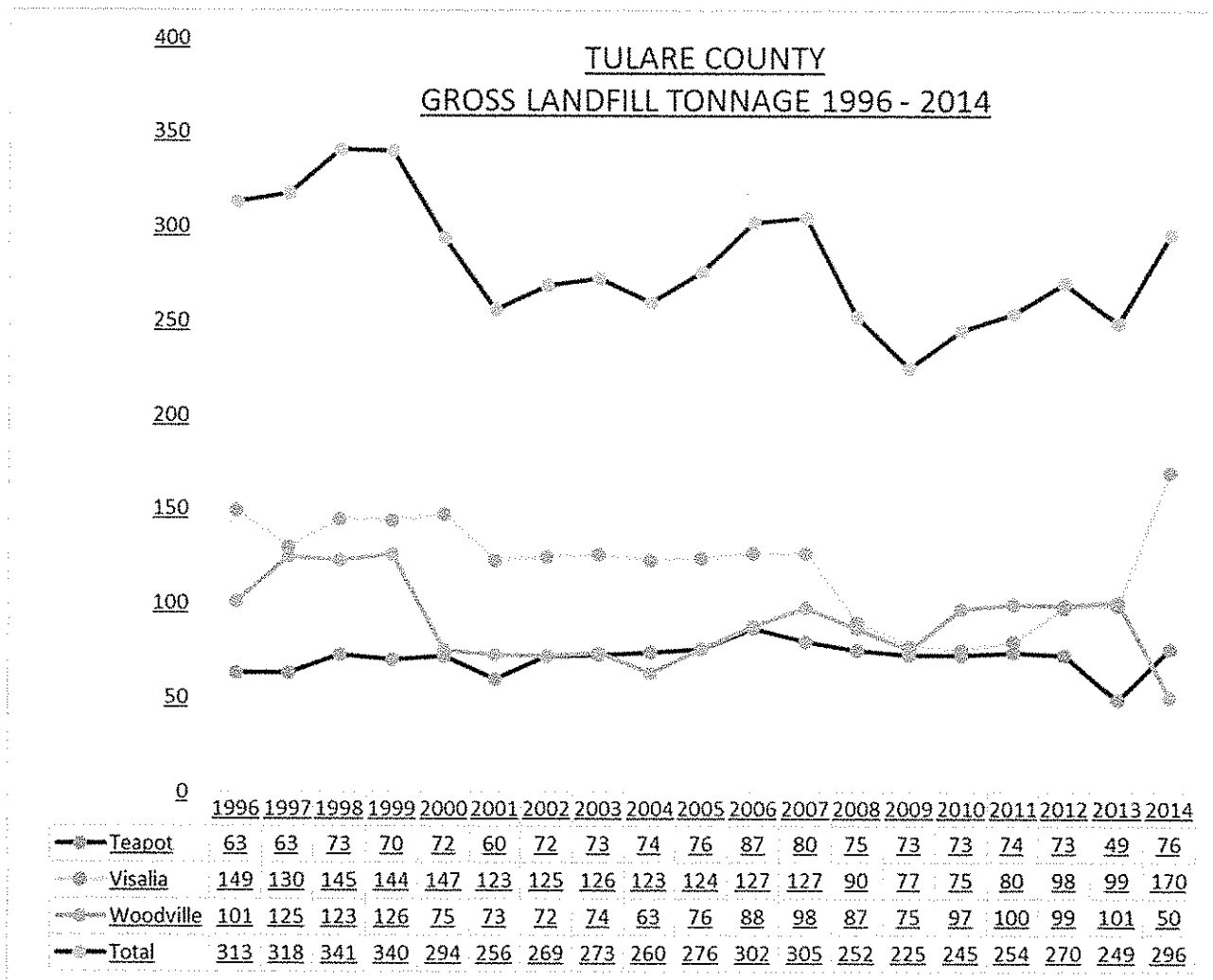
METHOD OF INVESTIGATION:

Members of the Grand Jury visited Visalia and Teapot Dome landfills. The Grand Jury interviewed employees of the Solid Waste Department, and reviewed specific documents.

FACTS:

1. A landfill is a carefully designed structure built into or on top of the ground which isolates trash from the surrounding environment; groundwater, air, and rain. A landfill is a very long construction project with finite volume of space for waste that takes many years (or decades) to complete. Landfills have a predetermined final shape when it is filled to capacity.
2. A sanitary landfill uses a clay or plastic liner to further isolate the trash from the environment. Visalia, Woodville (Tulare) and Teapot Dome (Porterville) are the sanitary landfills owned and operated by the County of Tulare.

The county landfills accept approximately 300,000 tons of waste recycling per year, an equivalent of about one ton per county resident annually.



3. Tulare County currently operates Visalia Landfill, northwest of Visalia and Teapot Dome Landfill, southwest of Porterville, as well as six transfer stations.
4. The Woodville Landfill, southeast of Tulare was closed in the Spring of 2014. When Teapot Dome meets its capacity, it is anticipated that the Woodville Landfill will be reopened.
5. Building a new landfill is a long arduous job. Purchasing land, obtaining environmental impact reports, and dealing with litigation all drive the cost and time up.
6. Landfills are nonprofit and pay no taxes. Funds are generated by what comes in through the gate. Rates are set by the Tulare County Board of Supervisors.
7. The Tulare County Board of Supervisors oversees the budget for operation of the landfills. A large portion of the budget goes for the upkeep, purchase and maintenance of machinery and salaries.

8. Currently, rates are \$34.00/ton or \$15.00/pickup load. No money may be used from the Tulare County General Fund to maintain the landfills.
9. Within the next three to four years a decision will need to be made about whether to have one large landfill with substations or two landfills. The preference of the county citizens will be influential in the final decision.
10. No hazardous waste is accepted by the Solid Waste Department. Both landfills have sensors in the liners to test for any buildup of methane gas or other toxic waste. Ground water probes in the soil check for leakage.
11. Batteries are picked up by a contractor, with most eventually ending up in Oregon. Independent contractors recycle much of the metal and various types of refuse, thereby allowing more room for additional refuse. Mattresses are a very difficult item for the landfills because they tend to float up to the surface. Plastic bags also create a problem at the landfills.
12. Visalia Landfill General Information:
 - a. Total Facility Area: 631 acres are permitted for refuse in two distinct units
 - b. Permitted Capacity: 18,630,666 cubic yards
 - c. Maximum Depth of Fill: Old area to West: 30 feet/ New lined area: 25 feet
 - d. Average Daily Tonnage: 730 tons (2000 tons maximum permitted per day)
 - e. Average Number of Vehicle trips per day: 300-350 trips (900 vehicle trips maximum permitted per day)
 - f. Days of Operation: 313 per year
 - g. Tipping Fees: \$34/ton or \$15/pickup load
 - h. Expected Life: 30-70 years, depending on the compaction and materials that are deposited
 - i. Funding for Operations: Tipping Fees
13. Teapot Dome Landfill General Information:
 - a. Total Facility Area: 122 Acres- 71 acres are permitted for refuse
 - b. Permitted Capacity: 7,880,307 cubic yards
 - c. Maximum Depth of Fill: 40 feet average
 - d. Daily Tonnage: 375 tons (600 tons maximum permitted per day)
 - e. Average numbers of vehicle trips per day: 160-200 trips (300 vehicle trips maximum allowed per day)

- f. Permitted Days of Operation: 313 per year
- g. Tipping Fees: \$34/ton or \$15/pickup load
- h. Expected Life: 7-10 years, depending on the compaction and materials that are deposited
- i. Funding for Operation: Tipping Fees

14. Current Transfer Stations include:

- a. Balance Rock Transfer Station
- b. Badger Transfer Station
- c. Camp Nelson Transfer Station
- d. Kennedy Meadows
- e. Pine Flat Transfer Station
- f. Springville Transfer Station

15. Transfer station hours vary by location and seasons.

16. Solid waste is regulated under the umbrella of the USEPA.

17. Three California specific agencies are part of the USEPA: Cal Recycle, San Joaquin Valley Air Pollution Control District, and the Central Valley Regional Water Quality Control Board (CVRWQCB).

FINDINGS:

F.1. The biggest challenge to the operation of a landfill is containment, i.e. causing problems with the environment.

Rates of Decomposition for Various Forms of Wastes

Paper	2-5 months
Orange Peels	6 months
Milk Cartons	5 years
Filter Tip Cigarettes	10-12 years
Plastic Bags	10-20 years
Leather Shoes	25-40 years
Plastic Containers	50-80 years
Disposable Diapers	75 years
Tin Cans	100 years
Aluminum Cans	200-500 years
Styrofoam	NEVER

- F.2. Determining a landfill location requires an environmental impact study at the site. It can take up to twenty years and cost in excess of \$15,000,000.00 before a landfill can be authorized or operational.
- F.3. Recycling programs are in place at both Teapot Dome and Visalia Landfills. Recycling programs include wood and yard waste, tires, construction and demolition debris, metal, and appliances and, as of January 1, 2015, mattresses.
- F.4. In place are constant measures to monitor for methane, ground water and any pollutants that may leak from the landfills. These systems are mandated by state, federal and county laws which are in place forever.
- F.5. Equipment such as a new Caterpillar D-7 Dozer costs \$800,000.00. This dozer is used for pushing, spreading, compacting waste and deploying Alternative Cover (ADC) Tarps (ADC reduces the amount of soil necessary for cover by use of tarps).

RECOMMENDATIONS:

1. None

REQUIRED RESPONSES:

1. Solid Waste Department

Disclaimer

Grand Jury reports are based on documentary evidence and the testimony of sworn or admonished witnesses, not on conjecture or opinion. However, the Grand Jury is precluded by law from disclosing such evidence except upon specific approval of the Presiding Judge of the Superior Court, or another judge appointed by the Presiding Judge (Penal Code Section 911, 924.1 (a) and 929). Similarly, the Grand Jury is precluded by law from disclosing the identity of witnesses except upon an order of the court for narrowly defined purposes (Penal Code Section 924.2 and 929).



COUNTY OF TULARE

SOLID WASTE DEPARTMENT

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BRYCE HOWARD, DIRECTOR

March 26, 2015

The Honorable Judge Hillman
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Visalia, CA 93291

Tulare County Grand Jury
5963 S. Mooney Blvd.
Visalia, CA 93277

Tulare County Board of Supervisors
2800 W. Burrell Ave.
Visalia, CA 93291

**RE: Department Response to 2014/2015 Tulare County Grand Jury Report ,
"Landfills – Technology of Waste Disposal"**


Dear Sirs and Madams,

The Tulare County Solid Waste Department is pleased to have had the opportunity meet with members of the Tulare County Grand Jury at the County landfills and provide information for the preparation of their 2014/2015 report entitled, "*Landfills – Technology of Waste Disposal.*"

The Solid Waste Department has reviewed the final report and agrees with the findings presented with the exception of Finding F.3. The finding states incorrectly that mattress recycling began on January 1, 2015. The mattress recycling program began at the landfills on March 1, 2015.

If I can be of any further assistance, please do not hesitate to contact me at (559)747-4907.

Yours very truly,


Bryce Howard, Director
Solid Waste Department

RECEIVED
3-24-2015

cc: Jean Rousseau, County Administrative Officer