

WASTE MANAGEMENT IN SAN LUIS OBISPO COUNTY

INTRODUCTION

The 2007-2008 Grand Jury undertook an investigation into waste management in San Luis Obispo County as a follow-up to the 2002-2003 Grand Jury report which noted problems in the landfill inspection and permitting process. In addition, the Integrated Waste Management Authority (IWMA), a county joint powers agency founded in 1994, had not been reviewed by the 2002-2003 Grand Jury and some inquiry seemed appropriate. Finally, the jury believed that a review of current operations, financing, environmental issues and long-term outlook for waste disposal in the county would be of interest to the community.

METHOD

As part of this inquiry the Grand Jury:

- Reviewed the report: *Improvement Needed in the Integrated Waste Management Program* by the 2002-2003 San Luis Obispo Grand Jury
- Interviewed the director of the IWMA
- Toured the landfill and recycling operation at Cold Canyon
- Interviewed managers of Cold Canyon and Chicago Grade landfills and recycling operations
- Interviewed the Utilities Manager for the city of Paso Robles
- Reviewed internet information on state regulations of waste disposal, particularly AB939 (1989) and SB1322 (1989)
- Reviewed internet information from the California Integrated Waste Management Board (CIWMB), the state's coordinating and enforcement agency for waste management

- Reviewed recent inspection reports as posted by the CIWMB
- Examined the most recent financial report of the IWMA

NARRATIVE

Inspection and Permitting – The 2002-2003 Grand Jury Report

Since the 2002-2003 Grand Jury report, major changes have occurred in the inspection and permitting of the landfill operations in the county. Rather than resolving the many in-house problems found by the previous Grand Jury, the county chose to turn all inspection and permitting over to the California Integrated Waste Management Board (CIWMB). In the opinion of all interviewed this has been a much more satisfactory arrangement and no problems were reported.

Structure of Solid Waste Management in San Luis Obispo County

San Luis Obispo County is served by three landfill operations:

- Cold Canyon Landfill (Cold Canyon), owned by Waste Connection, has a permitted daily capacity (pdc) of 1200 tons,
- Chicago Grade Landfill & Recycling (Chicago Grade), which is locally owned, has a pdc of 500 tons and
- Paso Robles Landfill, also locally owned, has a pdc of 250 tons.

The Nipomo Transfer Station, with a pdc of 500 tons, serves as a temporary depository for material destined for Chicago Grade.

The sorting and marketing of material collected from blue recycling bins is carried out at three locations. Non-agricultural composting of green waste, “green bin” materials, is done at six sites in the county. In addition to the recycling of these standard residential materials, there is also specialized recycling of tires and construction and demolition materials.

There are eight hauling companies that have exclusive franchises with one or more of the many agencies (county, cities, and districts) in the county. There are 23 such contracts between

agencies and haulers currently active in the county. The haulers bill the residents and commercial operations for the waste collection service, pay a franchise fee to the agencies, and pay the landfill, recycling, and composting operations. The three landfill operations charge different amounts, but charges for recycle materials are less than for green waste which are, in turn, less than for landfill.

In addition there are individual drop-offs, for a fee, at the three landfills and the transfer station in Nipomo. Roll-offs, the large debris containers usually seen at construction sites, are also used for waste removal. Generally the roll-off companies are not franchised, are paid by the job, and pay the landfill when the waste material is dropped off.

Integrated Waste Management Authority (IWMA)

The IWMA is an agency created by San Luis Obispo County in 1994 to facilitate the attainment of solid waste reduction mandated by the State of California in AB939 (1989). That statute required:

“... each city or county plan to include an implementation schedule which shows: diversion of 25 percent of all solid waste from landfill or transformation facilities by January 1, 1995 through source reduction, recycling, and composting activities; and, diversion of 50 percent of all solid waste by January 1, 2000 through source reduction, recycling, and composting activities.”

CIWMB History of California Solid Waste Law

The IWMA is one of only ten district-wide coordinating agencies in the state. At the time the IWMA was established, there was very little recycling or composting of green waste within the county.

The IWMA is a joint powers agency governed by a 13 member board consisting of the five county supervisors, representatives of each of the seven cities in the county and one representative of all the districts in the county with waste collection responsibilities. The current Manager of the IWMA was appointed in 1995. Accomplishments of the IWMA include:

- Expanded recycling and green waste collection to over 90% of the county.
- Established the uniform definition of recyclables and green waste throughout the county.

- Arranged for residential collection charges to depend only on gray bin size.
- Established five free household hazardous waste (HHW) drop-off sites in the county and arranged for the hauling and destruction (via recycling, incineration or chemical treatment) of the hazardous waste.
- Promoted merchant take-back programs for dry cells and automobile batteries and oil. (State law requires merchants to take back plastic bags.)
- Received over \$4.5 million in grants to plan and improve environmentally sound waste disposal. The grants provided support for planning and/or implementation of composting; HHW drop-offs; used oil and tire handling; the promotion and facilitation of recycling by commercial establishments; and battery, plastic bag, and sharps merchant take-backs.
- Provided school based educational programs on recycling and composting, including field trips to a recycling center.

The effort to increase the percentage of the county's waste stream diverted from landfills has been quite successful with the current diversion rate of 61%, well above the 50% target and the 2006 statewide diversion rate of 54%. It should be understood that this ratio is computed from the actual annual landfill tonnage; an estimated figure for total waste, recycled or not, in a base year (currently 2003); and an adjustment based upon changes in population, taxable sales and employment since the base year. Note that with this formula, the diversion percentage can increase, even as the amount deposited in the landfill rises more rapidly than population.

The IWMA has been recognized for the excellence of its programs a number of times: twice by the North American Hazardous Materials Management Association, twice by the California Environmental Protection Agency and twice by the California Resource Recovery Association.

Financing of the IWMA has been provided by a \$3/ton "tipping fee" on all waste going to the landfill – excluding recycle materials and green waste. Beginning in January, 2008, that funding is being supplemented by an additional monthly fee of \$0.30 (30 cents) on residential accounts and a 2% surcharge on business accounts to cover the high cost of the HHW program.

Household hazardous waste collection grew from approximately 25 tons in fiscal year 97/98 to almost 350 tons in fiscal year 05/06 with the disposal cost to the IWMA rising to over \$400,000.

Health and Safety Issues of the Landfills

Health and safety issues of landfills include:

- Leached materials from the landfill which could contaminate groundwater
- Materials dispersed from the landfill by vectors (insects, birds, and animals), fires, odors, blowing litter and scavenging
- Methane release during decomposition in the landfill
- Problems arising after closure or abandonment of a landfill

All landfills in the county are lined with modern materials, typically including a layer of thick plastic sheeting and a thick layer of compacted clay or synthetic product. The landfill is further designed to transport leachate to a collection point. While no lining is totally impervious, this liner is quite effective in greatly reducing the quantity of leachate that escapes the landfill. The landfills in San Luis Obispo County are also in relatively dry locations which further reduces the leaching. Finally, all of the sites are inspected monthly by the CIWMB, quarterly by the Central Coast Regional Water Board and annually by the State Water Resources Control Board for contaminants below the liner using wells drilled for that purpose.

To protect against material dispersal, inactive portions of the landfill are provided a permanent cover with properties regulated by the federal government and the state. As an example, quoting from the Cold Canyon web site, “Approximately 15 acres of the southwest portion of the landfill have been closed through the placement of final cover. The final cover includes a 2 foot foundation soil layer above waste, a geosynthetic clay liner and a 1.5 foot vegetative soil layer containing drainage geocomposite panels.” The active section of the landfill is also covered during non-working hours. A variety of materials are used for this “alternative daily cover.” They can include waste-derived materials such as sludge, demolition waste, and shredded tires or non-waste-derived materials include foams, fabrics, panels, and sprayed cement. The problem vectors at Cold Canyon are gulls which are not only messy, but which actively disperse materials. The chosen solution for gulls at this landfill is the employment of a falconer whose birds quite successfully scare the gulls away. The other two landfill sites, which are farther from

the ocean, are not so troubled by gulls. The landfills are regularly inspected by the California Air Resources Board.

Methane gas, produced with carbon dioxide, arises from decomposition in the landfill. Because methane is an air pollutant it cannot simply be released to the atmosphere. At the Paso Robles and Chicago Grade landfills, the gas is collected and burned. While methane is a potentially valuable by-product of the landfill, separating it from the comparable amount of carbon dioxide makes extraction of methane commercially uneconomical in most cases. Cold Canyon, however, sells the unseparated gasses to an oil field a few miles away where it is mixed with commercial methane to increase its purity. The methane is used to heat water which is pumped into the wells to increase oil extraction.

By state law, landfill operators or owners are required to submit a plan for maintenance of a landfill site for thirty years after closure. They are also required to establish a trust fund or other security acceptable to the CIWMB to provide for maintenance of the closed landfill for that period with the amount adjusted annually to reflect inflation and changing circumstances. The fund must be established and fully funded for a landfill to operate.

Long-term Outlook

The recycling landscape, years and decades down the road, depends upon a number of factors: government decisions about waste diversion goals, increase in the range of recycled materials, changes in the efficiency of initial separation of recyclables through education or law, introduction of transformation (the conversion of waste to energy or a new commodity) and, ultimately, the limitations on landfill capacity.

The California Legislature is currently considering SB 1020 which requires the CIWMB, by July 1, 2009, to develop a strategic plan to achieve a 75% statewide diversion rate on or before January 1, 2020. Any such increase in waste diversion will require both the transfer of some material types from the landfill to the recycle stream and an increase in sorting efficiency.

One possible transfer being considered is the inclusion of food – both pre-consumer and post-consumer food waste - as a new source for composting. Such material constitutes up to 30% of

current California landfill tonnage. The proposed change is controversial, largely because of concerns about health and odors. Increases in sorting efficiency could come about by mandating recycling and/or additional financial incentives, particularly for commercial operations.

The manager at Cold Canyon estimates that half of the material presently going to the landfill is recyclable paper, much of which could be removed by more efficient sorting at the source.

In addition to SB 1020, the legislature is looking at redefining the way diversion is computed. Instead of using the formula described above, goals would be based more simply on the amount of actual landfill material with appropriate compensation for population growth and other factors.

The county has recently seen an increase in the recycling of construction and demolition materials. Such materials can be a significant component in landfills and much can be recycled.



Some other changes being considered in our county are based less on landfill volume than safety and environmental concerns. Controls on plastics, particularly plastic bags and Styrofoam containers, which have major, negative impact on the environment, are under consideration. The IWMA web site includes an informative piece on this topic at [http://www.iwma.com/programs-events/Impact of Plastic.html](http://www.iwma.com/programs-events/Impact%20of%20Plastic.html). Take-back programs for plastic bags, batteries, fluorescent lamps and other materials have been implemented and are expanding.

Transformation includes composting of green waste and the production of energy. The transformation of waste to energy has not been developed in San Luis Obispo County at this time but is under consideration as a means of reducing landfill. The most common form is incineration, using the resulting heat locally or making transportable energy (electricity, for example). While incineration brings its own problems, it is also possible to use an anaerobic composting process on organic waste to produce methane as well as compost. The methane can then be used to generate electricity or to produce liquid fuel.

The final long-term issue is landfill capacity. The landfill operators interviewed agree that establishing a new landfill would be very difficult now and is likely to become even more difficult in the future. Fortunately, our landfill capacity, measured in years based upon current rates of waste production, appears to be adequate for another three decades, longer with higher rates of diversion.

Resources of Possible Interest

- Information on recycling, including household and business recycling and special drop-off, and information on haulers and landfills can be found under **Recycling** in the yellow pages of the telephone book of the landline telephone provider (currently AT&T).
- Similar information can also be found on the IWMA web site: <http://www.iwma.com/>.
- The web site of the CIWMB, <http://www.ciwmb.ca.gov/>, provides a wealth of information about waste management in the state.
- The history of California solid waste law can be found on the web site of the CIWMB at: <http://www.ciwmb.ca.gov/Statutes/Legislation/CalHist/>.

COMMENDATION

The Grand Jury would like to commend the individuals whom we interviewed. It is our opinion, from those interviews and from materials we have obtained from the landfill managers and from county and state agencies, that waste management in San Luis Obispo County is operating effectively. All interviewees reflected competence, pride in their work, and an involvement in the larger questions of waste management and the environment for the future.

REQUIRED RESPONSES

No responses to this report are required.