



# Year End Report

## Fiscal Year 2013





**Ada County Solid Waste Management**

**2013 Year End Report**

**200 West Front Street**

**Boise Idaho 83702**

**208-577-4725**

**[Adacountylandfill.com](http://Adacountylandfill.com)**



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*Jim Tibbs*, District 1  
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*John Evans*, City of Garden City  
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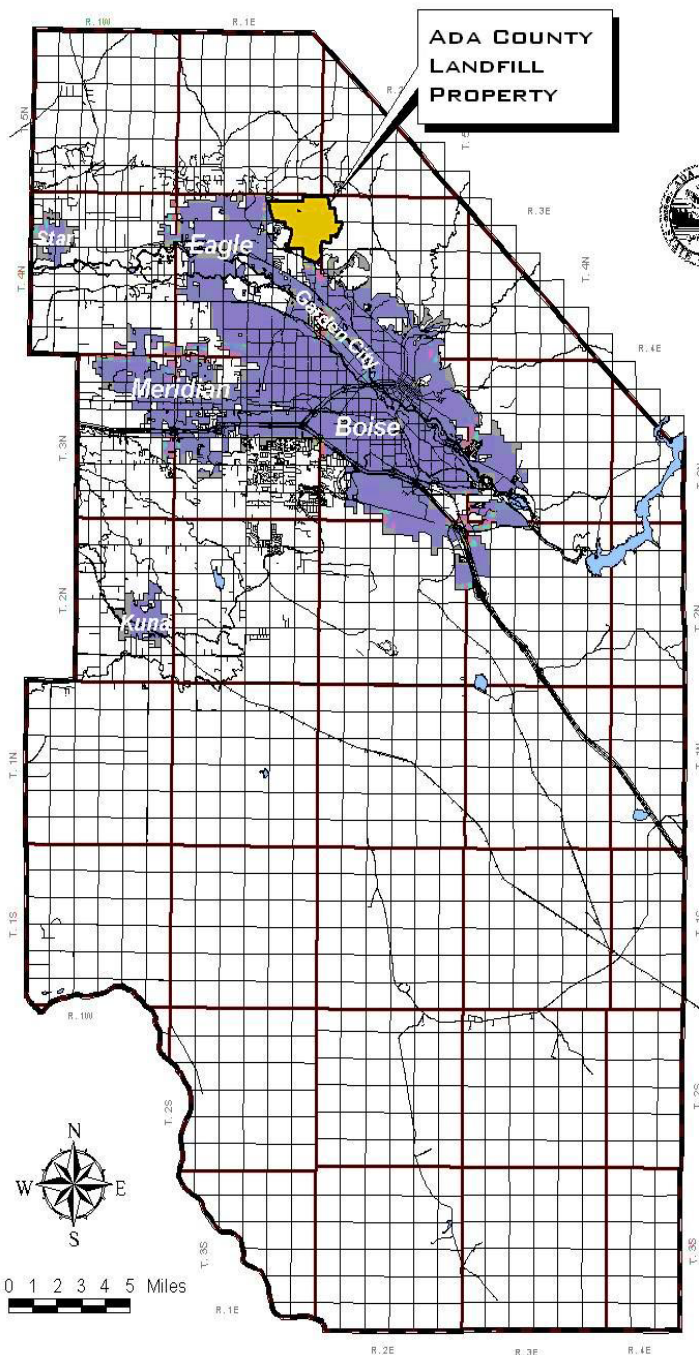
### Solid Waste Management

*David Logan*, Director of Ada County Operations  
*Ted Hutchinson*, Deputy Solid Waste Director  
*Kenneth Wall*, Hazardous Materials Coordinator  
*Kurt Hunt*, Landfill Operations Coordinator  
*Benny Poole*, Business Process Analyst  
*Justin McConnell*, Environmental Systems Coordinator  
*Kathie Herman*, Account Clerk  
*Amos Nava*, Environmental Systems Technician  
*Micah Munion*, Landfill Technician  
*Eric Estes*, Landfill Technician  
*Barbara Burkhardt*, Cashier  
*Kathy Foster*, Cashier  
*Carol Hyde*, Cashier  
*Kathy Nelson*, Cashier  
*Jay Camp*, Cashier



*Solid Waste Management seeks to pro-actively manage County waste disposal facilities, enforce applicable codes, and provide reasonably priced and environmentally acceptable methods for solid and hazardous wastes reduction and disposal for County residents and businesses. Services provided by the Division include:*

## Division Mission



- Maintenance of a sanitary landfill for acceptance of wastes generated by County residents,
- Operation of a permanent year-round facility for disposal of household and small business hazardous wastes,
- Contractual oversight of the franchised trash collection in unincorporated Ada County ensuring compliance with trash pick-up, recycling and rates,
- On-site recycling programs for wood, tires, automotive batteries, refrigerators and air conditioners,
- Educational resource for local schools and service groups.

# Executive Summary

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## *Landfill Economics*

Ada County is required, under State of Idaho laws and regulations, to maintain a municipal solid waste disposal system. To meet these obligations, Ada County established the Solid Waste Enterprise Fund for development and operation of the disposal system. Charged with the responsibilities of complying with federal, state and local laws, rules and regulations, the County's Solid Waste Division oversees operation and management of the County's:

- Landfills – Hidden Hollow and North Ravine;
- Household Hazardous Waste collection and disposal;
- Wood and organics recycling;
- Solid waste collection contract; and
- 2,700-acre multi-use Ada County Landfill Complex.

As an enterprise fund, Solid Waste does not receive any support from tax-dollars for the activities of the division. Responsibilities are met through collection of user fees assessed at the landfill gate. Those fees support all daily operations, payroll expense, long-term obligations (i.e., landfill closure and post-closure care), capital improvements, special waste collections, and diversion and recycling programs (i.e., household hazardous waste management and organics recycling).

Across the board, waste disposal volumes were fairly consistent over the last three years. Though the amount of waste has diminished, comparatively from historical levels, the amount of waste is remaining steady. Division revenues are generated mostly through waste volumes and expenditures have been adjusted to compensate for the lower, yet steady, volumes.

Some of the expenditures that the Landfill has incurred during Fiscal Year 2013 are:

- The purchase of a 2013 Ford F350 quad cab four wheel drive pickup truck that is used for the transportation of the Sheriff's Inmate Labor Detail Crews. The truck was fitted with a toolbox bed.
- Expanded the gas field to allow for more of Hidden Hollow to be harvested for landfill gas.
- The landfill upgraded the lighting in the office, replacing the old, inefficient lighting ballasts and fluorescent lighting, with energy efficient LED compatible lighting fixtures.

# What We Do

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## *The Division*

Solid Waste, as a division of the Ada County Operations Department, functions under Ada County's government. As such, the Operations Director reports to the Board of Ada County Commissions. All daily operational decisions are under the discretion of the Director. Long-term plans for the landfill are discussed with and approved by the Board of Ada County Commissioners.



To accomplish its responsibilities, goals and mission, the division consists of three functions identified by their primary objectives. The three divisions are Solid Waste, Hazardous Waste, and Environmental. Although the functions define the division of labor, the three functions are closely allied and coordinated to achieve the common objectives of environmentally and fiscally sound management of Ada County's municipal solid waste management system.

## **Solid Waste**

The oversight of the daily operations and landfill activities fall under *Solid Waste*. This function works directly with the onsite contractors in the daily receipt, placement and cover of the waste into the landfill or through the wood-waste recycling area.

## **Environmental**

*Environmental* oversees operation and maintenance of the landfill-gas extraction system, leachate collection and control systems, and other environmental facilities located at the Hidden Hollow Sanitary Landfill. This function is also responsible for creating reports regarding systems function and operation.

## **Hazardous Waste**

*Hazardous Waste* oversees operation and maintenance of the County's hazardous materials collection program. This function works with the municipalities in the County to provide a seamless program for proper disposal of household hazardous wastes.<sup>1</sup>

## *The Staff*

These functions within the division would fall apart were it not for the dedicated staff of the landfill. The landfill functions with 15 employees, five of whom work part time.

The Deputy Director oversees the overall daily activities at the landfill. Providing short and long range analysis, plan developments for various solid and hazardous waste functions and activities, conducts analysis of annual waste streams, recommends the development of new programs that result in diversion and/or reduction of the waste stream, and conducts studies of special areas of emphasis.

The Business Process Analyst reflects upon the current practices of the landfill and supplies insight and suggestions to change any practices that are not in the best interest of the Solid Waste Division. The Business Process Analyst helps to implement and design new practices.

An Account Clerk performs the full range of record-keeping work in the detailed maintenance of the financial status of Solid Waste Management Division, maintains accurate details of daily receipts and transactions, and monitors charge account activities of approved customers, and accomplishes secretarial duties for the Division.

The Environmental Systems Coordinator oversees operation and maintenance of the landfill-gas extraction system, leachate collection and control systems, irrigation system, and other facilities located at the Hidden Hollow Sanitary Landfill. This position is also responsible for creating reports regarding systems function and operation.

The Environmental Systems Technician assists the Environmental Systems Coordinator with the maintenance of the environmental systems at the landfill. The Environmental Systems Technician takes gas readings from wells to determine pressure and levels of gases produced by the landfill.

The Hazardous Materials Coordinator oversees operation and maintenance of the County's hazardous materials collection program. This position works with the municipalities in the County to provide a seamless program for proper disposal of household hazardous wastes.

The Landfill Operations Coordinator oversees the daily operation and landfill activities. This position works directly with the onsite contractors in the daily receipt, placement and cover of the waste into the landfill or through the wood-waste recycling area. The Landfill Operations Coordinator supervises technicians and identifies facility maintenance projects as needed.

*The Landfill Operations Technicians work across the division by performing hazardous waste screening, assisting with environmental monitoring, participation in the recycling activities and in miscellaneous landfill maintenance and operational activities.*

*Cashiers greet customers, charge and collect fees from landfill customers, maintain custody and account for money received. The landfill employs five cashiers, each cashier works part time.*

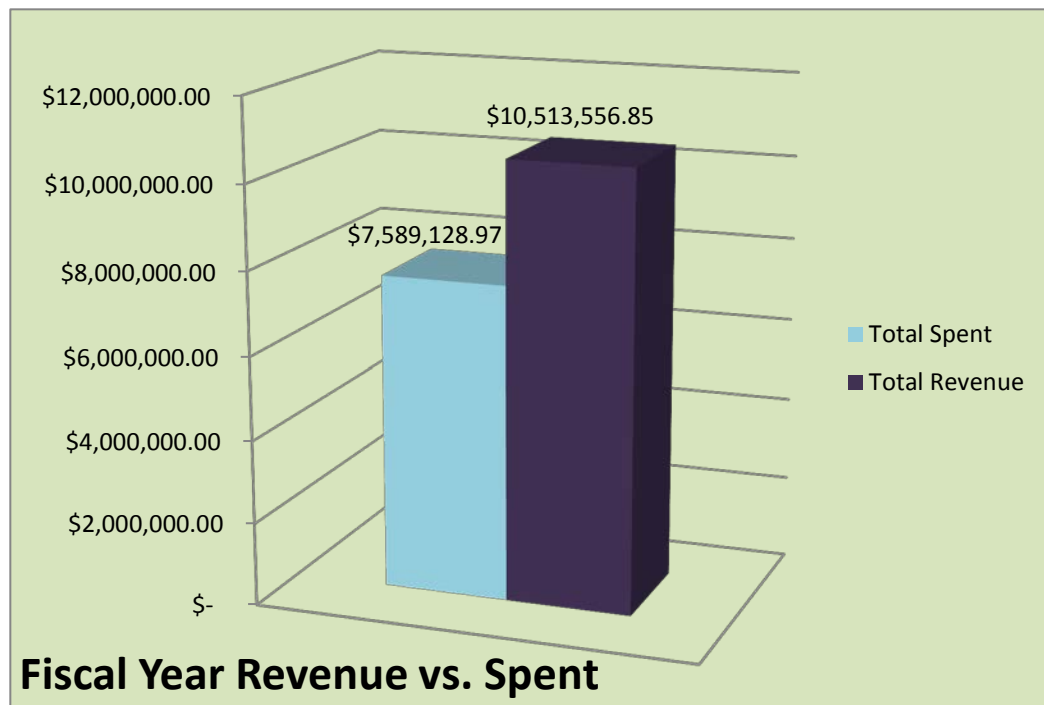
*Supplementing the County's staff are temporary employees from a contracted employment services company. These supplemental employees help with supervising Sheriff Inmate Labor Details in grounds maintenance, litter control and onsite routine grounds maintenance.*



# Financial Health

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The Financial Health examines expenditures and revenues, the impact of revenues on long-term planning, and scrutinizes the effects on landfill programs subsidized by landfill user fees. Because Solid Waste Management functions directly on the fees collected at the gate, the financial health of the division and current operational and future development of projects and plans, are dependent upon the volume of waste that is dropped at the landfill. During Fiscal Year 2013 the landfill's revenue exceeded expenses for the year, by nearly \$3 million. The monies not expended this fiscal year will be placed into the enterprise fund and set aside for future endeavors.

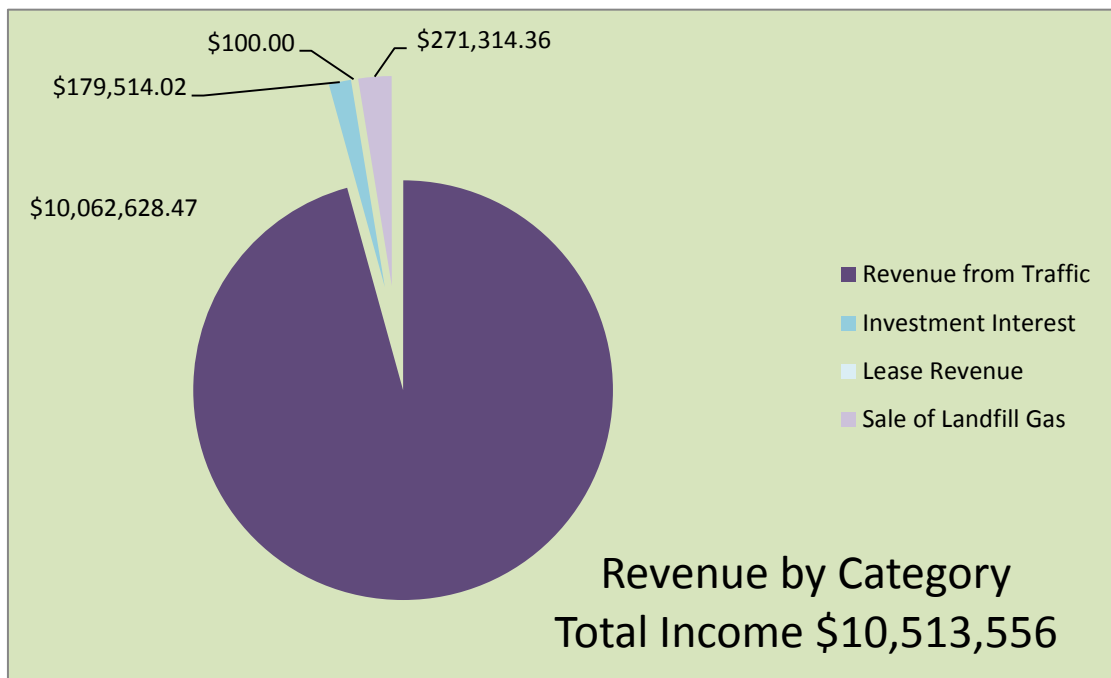


# Revenue

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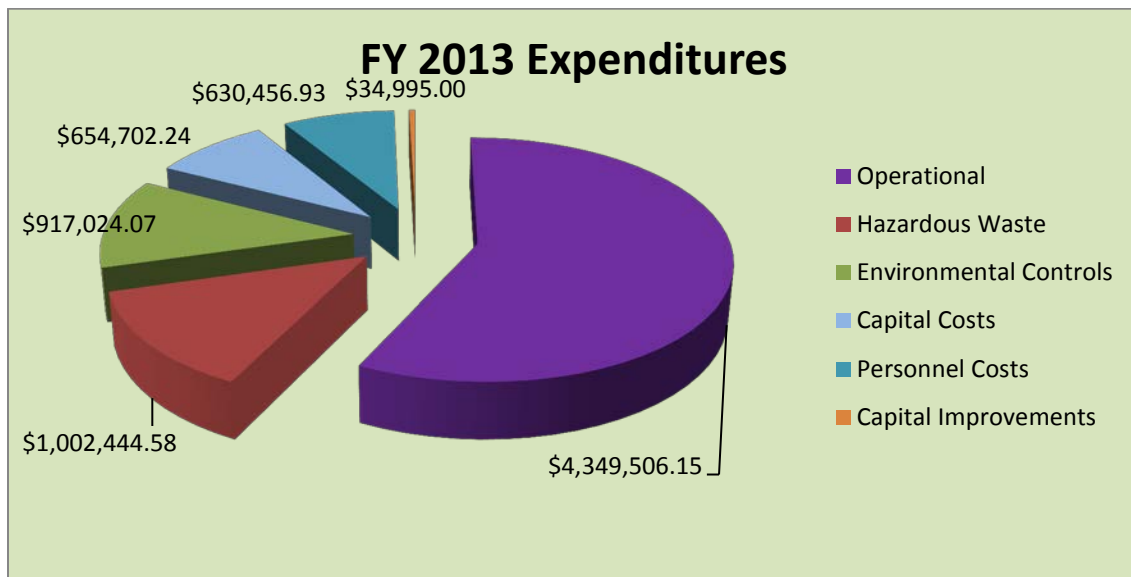
Revenue, for the most part, is generated by the fees that are collected at the gate. Gate fees reflect 96% of the total revenue for the landfill. These monies are accrued by the collection of municipal waste in the Cities of Boise, Meridian, Star, Garden City, and unincorporated Ada County. This total amount also reflects cash customers at the landfill gates and customers who have in-house charge accounts.

In addition to the fees collected at the gate, the remaining 4% of the revenue that is generated for the landfill include lease revenue, investment interests and the second largest revenue source, the sale of landfill gas for the production of electricity.



# Expenditures by Category

Solid Waste Management oversees a variety of projects to increase efficiency, and to promote environmentally friendly methods for disposing of municipal solid waste from Ada County. However, the majority of the expenditures that Solid Waste Management incurs are centered on daily landfill operations. There are six major categories of expenses for the landfill: Personnel Costs, Administrative Costs, Capital Costs, Hazardous Waste Costs, Environmental Control Costs and capital Improvements. Over all the landfill spent \$7,589,128.97 for all of the expenses for operating and maintaining the landfill. The chart provides a glimpse of how the categories reflected in the spending at the landfill in fiscal year 2013.



**Operational Costs** are the highest portion of spending at the landfill. Administrative costs include operational contracts for landfill operations, Hidden Hollow Closure, various operational insurances, grounds maintenance, tire recycling, wood waste recycling and the daily operational costs associated with maintaining an office environment. In fiscal year 2013 the landfill spent \$4,349,506.15 in administrative costs.

**Hazardous waste disposal** is the second largest expense for the landfill. PSC Environmental, the County's hazardous waste contractor, received 97% of the total amount spent in this area. The Landfill paid PSC Environmental \$978,170 for the management and disposal of hazardous materials from Ada County citizens. The remainder of the money spent was to maintain the department with office supplies and trainings. The Hazardous Waste division spent a total of \$1,002,444.58 in Fiscal Year 2013.

***Environmental Controls*** come in third for the largest portion of landfill spending. Environmental Controls focus on landfill gas extraction systems and the environmental impact of the landfill. The two major portions of this budget are engineering services and gas collection. Engineering services are provided by CH2MHill. Part of the contractual obligations for CH2MHill is to reporting to the landfill regarding environmental issues and landfill capacity. Gas collection is provided by a system of pipes and wells that have been installed to extract landfill gas. The gas is, in turn, sold to a third party that uses the gas to generate electricity. Whatever gas is not sold is sent to the onsite flare system, where it is destroyed, with minimal emissions. The Landfill spent \$917,024.07 for Environmental Controls in fiscal year 2013. To offset this cost the sale of the landfill gas resulted in \$271,314.36.

***Personnel*** costs are crucial to the functionality of the Landfill. The landfill operates with fifteen staff members, five of those are part time employees. Part of the personnel costs includes County provided benefits for the employees. The landfill operates with the assistance of temporary employees contracted through a temporary employment agency, the cost of which is included in the Administrative Costs budget. For Landfill personnel the landfill spent \$630,456.93.

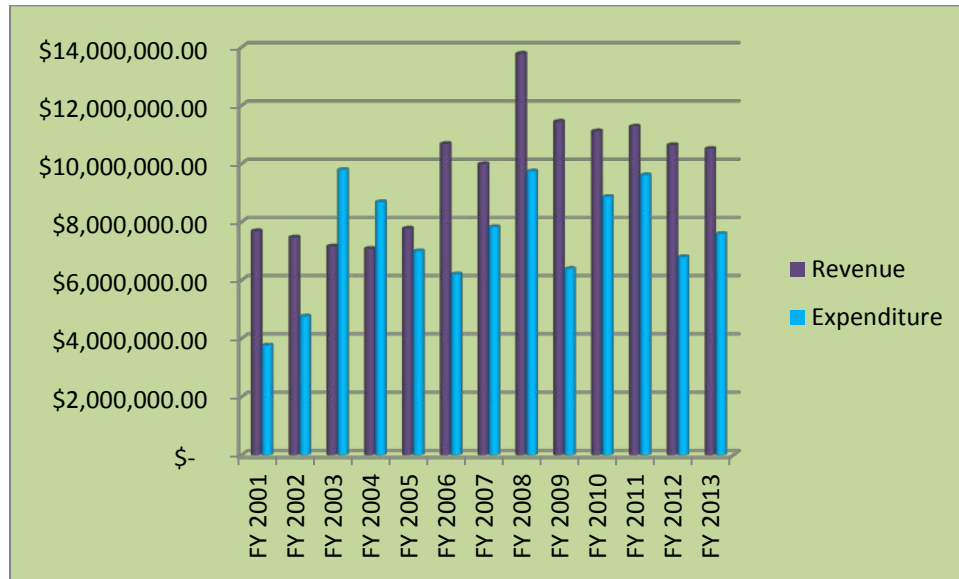
Next are ***Capital Costs***. Capital Costs are physical items purchased for the department, including vehicles, office furniture, computers and major equipment. During Fiscal Year 2013 the landfill purchased a Ford F350 quad-cab pickup truck fitted with a toolbox bed. For additional staff, there were computer and furniture purchases. For all capital costs in fiscal year 2013, the landfill spent \$654,702.24.

### ***Enterprise fund***

During fiscal year 2013, as discussed previously, the Landfill received more money than expended by nearly \$3 million. The funds not spent during the fiscal year are placed in a reserve fund managed by the Ada County Treasurer's Office. This reserve account is used for capital expenditures or special construction projects. This fund also holds funding for the long-term obligations for maintaining the landfill's post closure care. This long term obligation requires Ada County to maintain and monitor the landfill for a minimum of thirty years after the final load has been left and the landfill closed.

When major projects are planned in a fiscal year, the funds for the project are included in the budget to cover the expense of the project. These projects, when added into the budget, give the impression that Solid Waste Management is operating below the revenue levels, or in the "red". However, the funds are taken from the reserve fund. Solid Waste Management cannot spend more than the enterprise fund can provide. The following chart provides an example of previous budgets for Solid Waste Management and the reflections of expenses in comparison to the revenue for the appropriate year.

As an enterprise fund, tax dollars are not included in any function in landfill activities. The following chart reflects how, for the majority of the past 12 years, the landfill has operated well under the amount rendered for payments. On average for the reflected years the landfill put over \$2 million into the enterprise reserve fund each year.



The largest expense facing the division, with the exception of closing the Hidden Hollow Cell, is construction of the new North Ravine Cell (NRC) for future disposal. In September 2013, all waste was directed to the first stage of the North Ravine Cell, to allow settlement to occur in the Hidden Hollow Cell. During the period set aside for Hidden Hollow settlement, the division expanded the landfill gas extraction system.

The NRC construction began in 2005. The first stage was completed in 2007 at the cost of \$17 million; this cost was covered with money from the enterprise reserve fund. Stage two of the NRC was constructed in 2009 and cost approximately \$7 million. Again these funds were available prior to construction. The funds that cover the expenses of expanding the NRC and other capital projects are continually accrued in order to facilitate projects.

### Major Projects

During Fiscal Year 2013, some of the major projects undertaken by the landfill were:

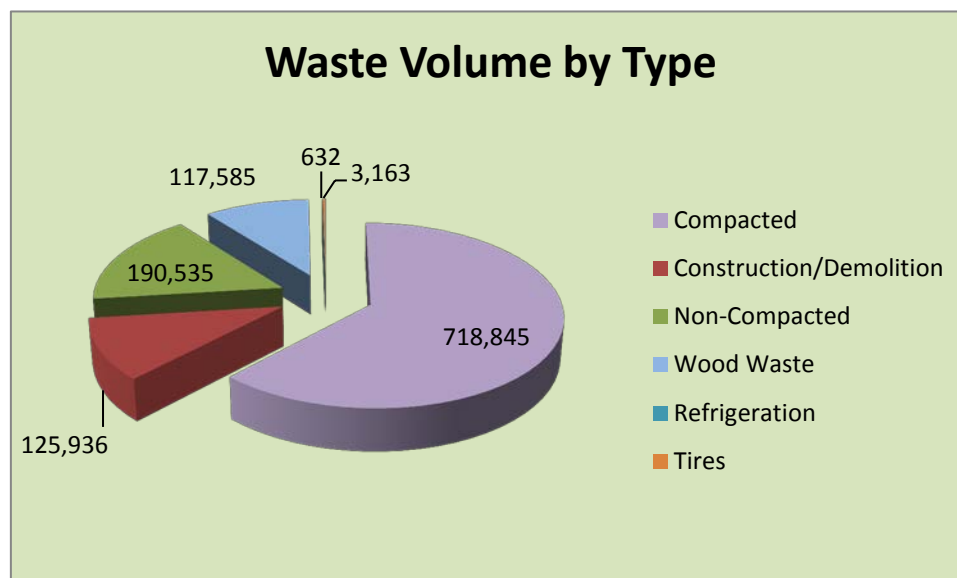
- Expanded the landfill gas extraction systems by drilling new wells and laying pipes in the Hidden Hollow cell.
- Upgraded the lighting in the office buildings on site by replacing old lighting fixtures with energy efficient LED lighting fixtures.

# Disposed Materials by Category

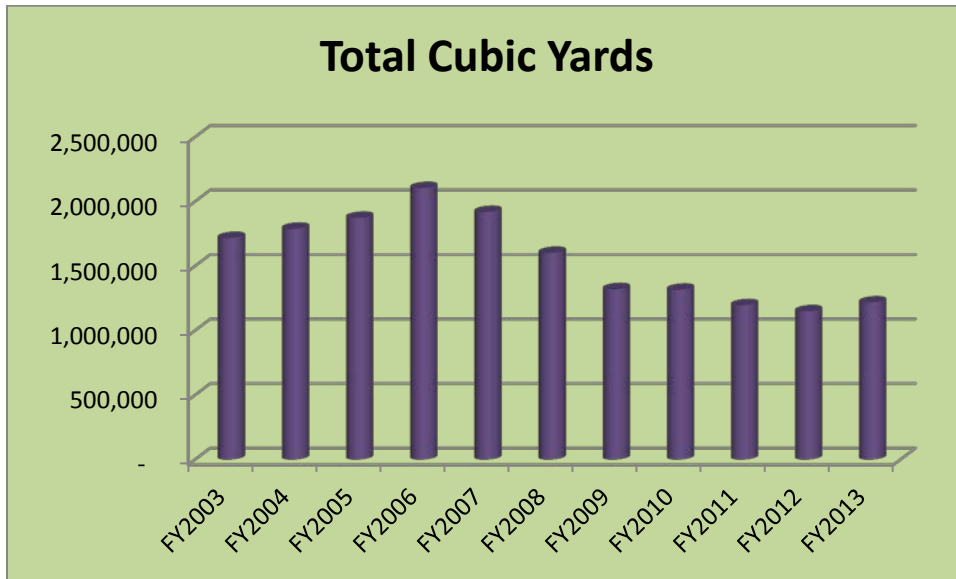
The Solid Waste Management tracks several types of waste. Customers are charged:

- **Compacted** waste is rubbish that is brought mostly by commercial carriers. This waste has been compacted in a vehicle and takes up less space when it initially arrives at the landfill.
- **Construction** and Demolition waste is the refuse that comes from constructing or demolishing a building or yard. This waste is delivered frequently by private builders and contractors. This waste also includes mobile homes, asbestos disposal which also includes certification of disposal and certification of burial.
- **Non-Compacted** Waste is brought by average citizens of Ada County. These can be property owners, renters or anyone who has anything that needs to be disposed of.
- **Wood recycling** is a growing program at the landfill. This includes all branches from trees, clean lumber, and Christmas trees, which are accepted for free for a limited time after the holidays. This program also includes leaves that are accepted, free of charge during the fall.
- **Household Hazardous Waste** is classified as anything with the potential to be dangerous to humans, environment or wildlife. In this category are included refrigerators, television sets with Cathode Ray Tubes (CRT), cleaners, oils, pesticides and herbicides. For the residents of Ada County disposing of all of these products free of charge, with the exception of refrigeration units, including air conditioners, freezers and refrigerators. Small quantity generator small businesses use this service as well, for a nominal fee.
- **Tire Recycling** is a program that the landfill employs to keep tires out of the landfill. Ada County has contracted with a local company to take the tires away and to apply them for different purposes.

Because the landfill charges by volume, the volume of incoming waste is estimated at the scale house. In Fiscal Year 2013, Ada County Landfill accepted 1,216,411 cubic yards of waste. The adjoining chart depicts how the waste is represented in the total amount received.

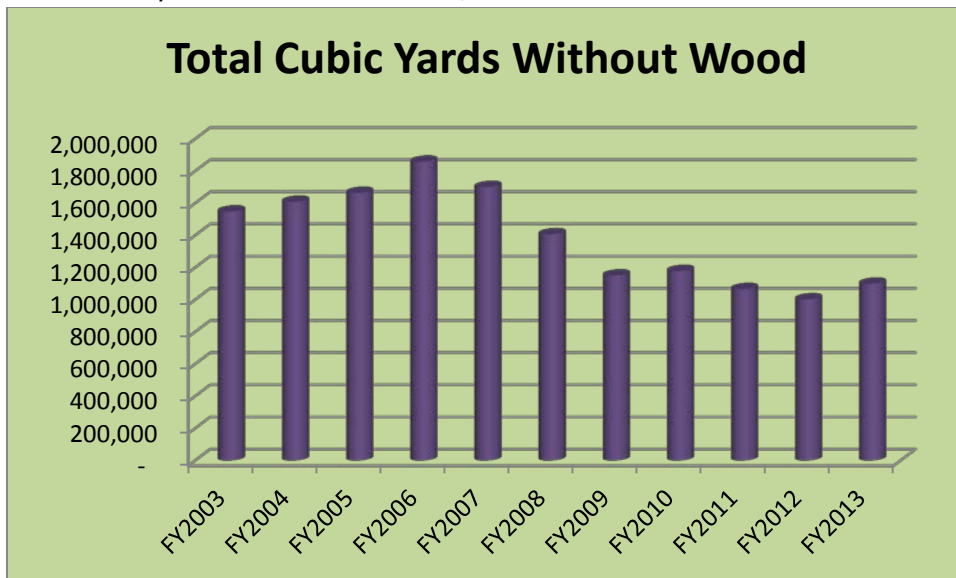


Though this number is not the highest amount of volume that the landfill has accepted in recent years. It is an increase from the last couple of years, as reflected in the following chart.



These numbers do reflect the amount of wood waste that is brought to the landfill. Wood waste is the only natural recyclable commodity that the landfill accepts, the numbers are tracked separately, however to provide a detailed assessment of the amount of waste accepted initially, the categories are combined.

Without the wood waste the cubic yards accepted are brought down to 1,098,826. The historical data shows consistency for the volume of waste, with the absence of the wood waste.



# Fees, Discounts, Waivers and Donations

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As Solid Waste Management operates as an Enterprise Fund, the operations and finances are covered from the fees that are collected at the gate. The fees that are charged are determined by the Board of Ada County Commissioners and are applied to all customers equally; there are a few exceptions that are approved by the Board of Ada County Commissioners. Those exemptions for fees fall under categories.

## **Charitable Organizations**

Many charitable organizations become inundated with items impossible for them to sell or to use, leaving the organization crippled with garbage. Because of the services they provide to the community, the Board of Ada County Commissioners has authorized a discounted rate for the waste they bring to the landfill. Without this discount, many of the organizations would be unable to continue to offer the community many of their important services.

## **Community Service Groups**

Often, Community service Groups undertake projects to assist elderly or less fortunate individuals in maintenance of their homes and property. Typically a one-time project, there is often a considerable amount of trash collected by the groups. An organization may request from the Board a one-time fee waiver. An example of this fee waiver is the Paint the Town Organization's annual program.

## **Clean Up Projects**

Different Community groups benefit the community by gathering litter and illegally discarded items in public areas. Oftentimes, the waste hauling companies in the communities donate their services to haul the collected trash. When these projects are undertaken, the County typically donates the disposal fees as authorized by the Commissioners.

## **Miscellaneous**

The one fee that is discounted for any customer, who utilizes the landfill services, is the rate for disposal of recyclable wood. Customers who separate their scrap wood and tree limbs from the rest of their load receive a considerable per yard discount on their disposal fees.

For specified periods each year, the landfill accepts, at no charge, leaves and Christmas trees. When the Landfill has the need, these items are processed into compost at the landfill for re-vegetation projects and erosion-control projects.



# Typical Fees

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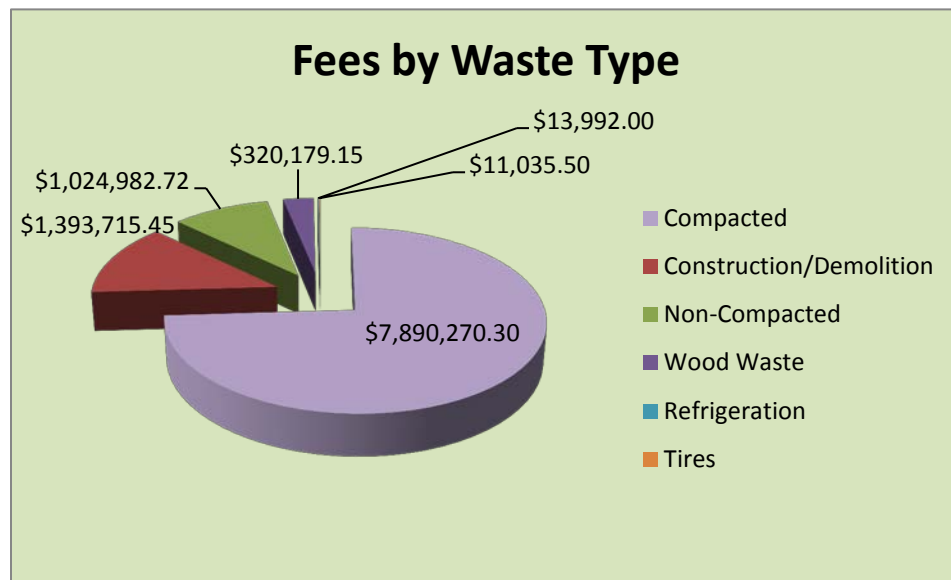
The largest waste type that the landfill accepts is *Compacted Waste*. This waste is billed at \$11 per cubic yard. This is typically waste brought in by the contracted waste hauler, Republic Services. For Fiscal Year 2013 the landfill collected \$7,890,270.30 for this waste.

*Construction and Demolition Waste* any waste that is generated as a result of constructing or demolishing a building or structure. This waste is billed at \$11 per cubic yard and created \$1,394,111.45 of revenue in Fiscal Year 2013.

*Non-Compacted Waste* is brought to the landfill by residents. As this is “typical household waste” there is a broad definition of what this waste can include. This waste is billed at \$5.50 per cubic yard; however it also has an \$11 minimum for each load. In Fiscal Year 2013 non-compacted waste generated \$1,024,586.72 of revenue.

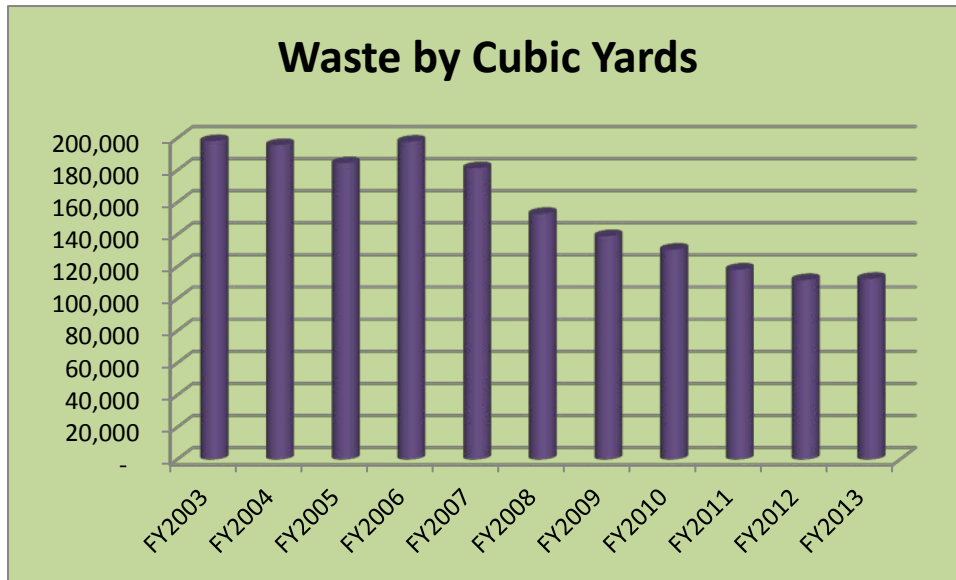
*Wood Recycling* reflects the largest recycling program at the landfill. The wood is ground into mulch and is repurposed by the contractor. This disposal is billed at \$2.75 per cubic yard; again there is an \$11 minimum for every load that the landfill accepts. In Fiscal Year 2013 the landfill accepted \$320,179.15 for wood waste.

*Hazardous Waste* disposal is free for Ada County Residents, however occasionally there are some fees that are charged with the disposal of Hazardous Waste. These fees can include testing fees, or small businesses are charged to dispose of their hazardous waste.

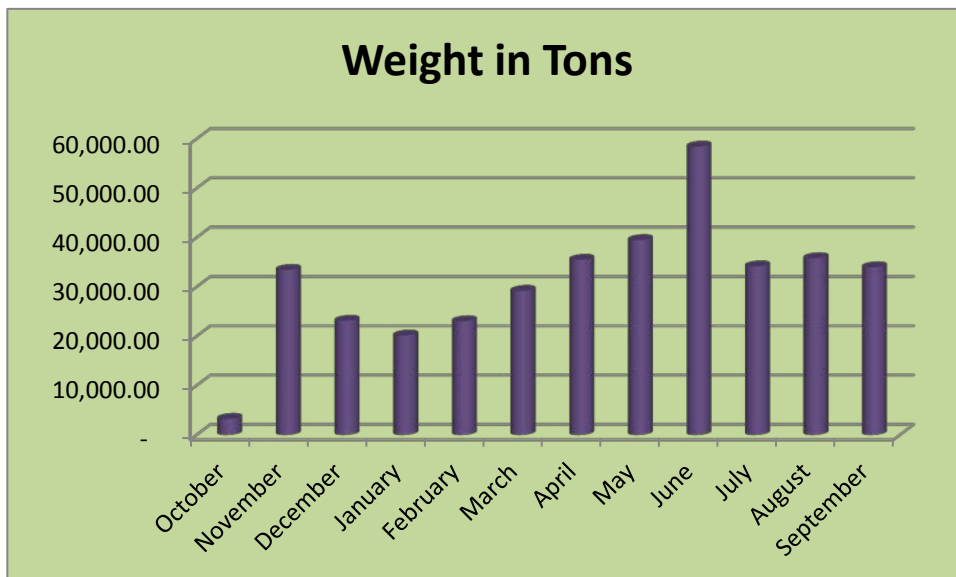


# How much waste do we take?

In fiscal year 2013 the Ada County Landfill accepted 112,371 loads of waste, including 11,708 loads of wood waste. The number of loads reflects the number of customers that came through the gates of the landfill.



Until the beginning of 2012 the weight of the waste that was brought to the landfill was only estimated, until the installation of truck scales provided the ability to weight the rubbish that Ada County accepted. In Fiscal year 2013, the first complete year where data is available, the landfill accepted 369,485.19 tons of waste, including wood waste. On average the Landfill accepted 30,790.43 tons of waste per month, but the breakdown for each month of Fiscal Year 2013 follows.





# Hazardous Waste

## Hazardous Materials Management

Since 1988, Ada County has proactively worked to keep household hazardous waste from entering the landfill. The initiative started with a one-day annual collection event. However, after some time the need for a facility to collect hazardous material throughout the year became a necessity. In 1998, the County opened its Household Hazardous Material Collection Facility. The facility is operated by an outside contractor experienced in hazardous waste management. Ada County currently contracts with PSC Environmental for hazardous material management and disposal. PSC Environmental operates the facility according to an operations plan and contract documents. For fiscal year 2012, the County paid PSC Environmental \$978,170 for this service. Over the course of the year the Household Hazardous Waste Facility serviced 6,669 households at the facility.



## Collection of Hazardous Materials

### *Household Hazardous Waste Facility*

The Household Hazardous Waste Facility, located at the Ada County Landfill, accepts hazardous waste from county residents. PSC Environmental is contracted to accept the materials from residents free of charge. Materials that are accepted include but are not limited to, paints, pesticides, fertilizers, cleansers, solvents and automotive products. Residents are welcome to bring their hazardous waste to the facility on Fridays and Saturdays. Additionally, conditionally exempt small quantity professional generators may use the facility for a nominal fee; these generators must produce less than 220 pounds of hazardous waste, or 2.2 pounds of acutely hazardous material. These conditionally exempt producers are served at the Household Hazardous Waste Facility by appointment only.



### *City of Boise*

The City of Boise has been a long-time partner and supporter of the hazardous material collection program in Ada County. With the opening of Ada County's permanent facility, Boise City recognized an opportunity to provide a convenient service to its residents. Boise City purchased a van and equipped it for use as a mobile collection vehicle. Each week, the City visits eleven (11) sites around the City. 10,630 city households took advantage of the collection sites in fiscal year 2013, disposing of a total of 287,990 pounds of hazardous waste.

All hazardous waste that is generated in Ada County Households and qualifying small quantity business generators is processed through the Household Hazardous Waste Facility at the Ada County Landfill, regardless of where it was disposed of.

### *City of Meridian*

Each Monday, residents in the Meridian area can take their household hazardous materials to the Meridian collection site. Through a cooperative agreement with the City of Boise, the City of Meridian is able to use the Boise's collection van for the weekly event. 5,678 households took advantage of the Meridian collection site during Fiscal Year 2012. As a community Meridian disposed of 167,138 pounds of hazardous material in Fiscal Year 2013

The Meridian event is rather unique in its design. Meridian's trash collection company, Republic Services collects recyclable commodities at curbside. Revenue from the sales of the collected items pays for the collection event and any money left over goes to the City. The City has paid for playground equipment with the extra funds.

### *City of Kuna*

Another unique program happens within the City of Kuna. Each spring the City of Kuna promotes a weeklong community clean up. J&M Sanitation, the City's trash collection contractor, is a major contributor to the event by paying the hazardous waste firm to manage the household hazardous material collected during the last day of the event. The City of Kuna and J&M Sanitation also sponsor a quarterly household hazardous material collection. This fiscal year, 463 households participated in the household hazardous material collection events. The residents of Kuna disposed of 20,924 pounds of hazardous waste in Fiscal Year 2013.

### *City of Eagle*

Quarterly, the City of Eagle sponsors collection locations for household hazardous waste. 530 residents in the Eagle area dropped off material during these collections. For Fiscal Year 2013 the residents of Eagle disposed of 13,598 pounds of hazardous materials.

### Collected Materials

Hazardous material collected in the countywide program is taken to the County's Household Hazardous Waste Facility for processing and shipment to disposal facilities. Ada County's hazardous material contractor, PSC categorized and processed 1,168,675 pounds of material.

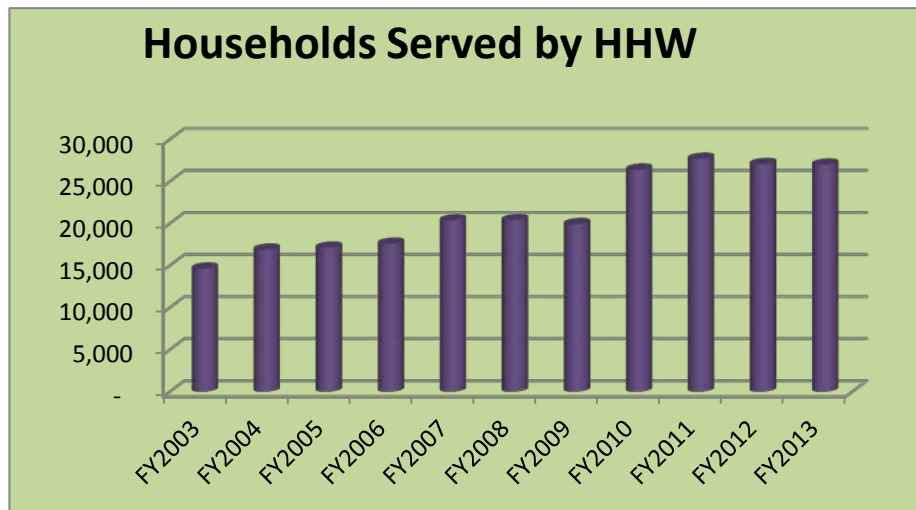
PSC Environmental segregates the materials into categories:

- Reuse Program
- Automotive Batteries
- Oil-based Paint
- Flammable Liquids
- Latex Paint
- Motor Oil
- Antifreeze
- Pesticides
- Other

Due in large part to Ada County's priority for waste management, PSC strives to recycle/reuse as much of the collected material as possible. This past fiscal year saw 1,134,003 pounds (97%) recycled/reused, with 34,672 pounds (3%) destroyed at an off-site incinerator.

Much of the materials that are collected are partially used materials. Instead of disposing and destroying the materials they are placed in the Household Hazardous Waste Facility for County residents to take, free of charge, for their personal use.

For the past decade the number of Ada County Residents that have utilized the Household Hazardous Waste Facility and Collection sites has increased. In Fiscal Year 2013 27,000 households utilized the program. The following chart presents the trend in the number of households that have taken advantage of the Household Hazardous Waste program at the Landfill.



### *Computer Monitors and Televisions*

An expensive problem in the waste stream is electronics disposal. Modern electronics contain various hazardous or potentially hazardous components, such as heavy metals. Because technology changes rapidly, computer equipment quickly becomes obsolete. Of particular concern to Ada County are computer monitors and television sets with cathode ray tubes (CRTs). A CRT can contain up to eight pounds of lead. If the glass of the CRT is broken, the lead becomes leachable and can be a hazard to human health and the environment.

In Fiscal Year 2013 Ada County shipped 46,539 CRT Units to a recycling facility. PSC processed 94 shipments, totaling 2,098,532 pounds. Since the program's inception PSC has processed 264,535 CRT units weighing 12,456,766 pounds.

Digital and flat screen technology has contributed to the waste stream as more people transition and discard their old units. However, the newer technology-units contain potentially hazardous components that may, in the future, be subject to greater disposal regulations.



Ada County residents are encouraged to bring their televisions and computer monitors to the Ada County Landfill or to the mobile collections sites (with units smaller than 27") for proper disposal, free of charge.

The success of the hazardous materials collection program is directly attributable to the partners who have committed to the health and safety of our environment through meticulous planning and

execution of the programs. Ada County sincerely wishes to thank the public and private agencies for their efforts and resources that have helped Ada County reduce the environmental threat to our community, namely:

- City of Boise
- City of Meridian
- City of Eagle
- Ada County Highway District
- Idaho Department of Environmental Quality
- Central District Health Department
- Republic Waste Services of Idaho
- City of Kuna

### **Mobile Collection**

PSC Environmental contracts with the cities of Ada County to offer mobile collection throughout the month. As an active partner in the proper disposal of hazardous material Ada County Solid Waste Management incurs the cost of properly disposing of the hazardous materials collected during these events. The City of Boise has eleven (11) sites for this mobile collection; each site is open one day per month. The city of Meridian contracts for each Monday of the month, with the exception of holidays. The city of Eagle contracts for quarterly collection and the city of Kuna contracts with their trash collector to provide quarterly collection as well. To find locations Ada County Citizens can find the days and times on the new website: [adacountylandfill.com](http://adacountylandfill.com).

The mobile collection program served 17,301 households in Ada County. From October 1, 2012 through September 30, 2013, the mobile collection sites collected nearly half a million pounds of hazardous waste.



# Environmental Compliance

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The Environmental Division oversees the specialized systems for landfill gas, groundwater remediation, leachate management, and other mechanical/electrical systems around the landfill. Two full-time employees are responsible for these various systems to ensure compliance with regulations and operating requirements.

## Landfill Gas Management

### *From Nuisance to Resource*

Landfill gas is the natural by-product of the decomposition of organic materials in landfills. It is only created when oxygen is depleted within the environment, or an anaerobic state. Primarily the composition includes two (2) colorless and odorless gases: carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>). Methane is also known as natural gas. Though together they formulate landfill gas, individually their characteristics are quite different.

Carbon dioxide is lighter than air and has many uses including use as a fire extinguisher. Methane is heavier than air and it has many uses including use as a fuel. In landfill gas, these two gases are created in nearly equal amounts. There are very small amounts of “trace gases” including sulfides that, unlike carbon dioxide and methane, are not odorless and is primarily responsible for the odor that landfill gasses produce, ultimately causing a nuisance for landfills.

Having half the BTU value of natural gas, the odors of the trace gases, and their tendency toward corrosiveness, landfill gas does not have many uses. Typically, landfills manage landfill gas by funneling it into an enclosed utility flare for destruction: Ada County embarked into this practice in 2001.

### *Nuisance to Useful*

In 2005, the Board of Ada County Commissioners entered into an agreement for the utilization of the County’s landfill gas. The gas is used as fuel in an electricity co-generation facility. Presently, Ada County captures enough landfill gas for its contractor to generate roughly 3.2 mega-watts of electricity. Fortistar Energy, the Contractor for the landfill gas uses the gas produced at the County’s landfill: ultimately paying Ada County \$271,314 for the gas to produce enough energy to power approximately 2,400 homes.





Whatever gas is not sold to Fortistar is burned in our flare. During FY 2013 the flare destroyed 103,387 metric tons of landfill gas. In comparison to previous years in FY 2012 the flare destroyed 106,014 of landfill gas and in FY 2011: 266,180.

## What We've Been Working On

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The staff of the Environmental Division spends a considerable amount of time taking gas readings from the gas extraction wells on the property. During Fiscal Year 2013 additional pipes were installed in the Hidden Hollow cell for landfill gas extraction. The installation of these pipes is will theoretically increase landfill gas extraction, ultimately resulting in additional revenue for the Enterprise fund from which the landfill operates.

With the opening of the North Ravine Cell, a unique opportunity was presented to Solid Waste Management: unlike the opening of Hidden Hollow, the technology for the gas extraction currently exists and is being installed as the cell is being filled. When gas extraction was started in Hidden Hollow the wells were installed into an existing landfill, requiring digging and drilling into the decades old trash. Eventually, when there is enough waste in the landfill, extraction can begin immediately. Ideally this will prove to be more cost effective and save time and labor for the future landfill operations.

The Environmental Division also regulates and maintains the onsite flare. The flare destroys excess landfill gas with minimal emissions and reduces odor that could be detectable from the landfill. After some minor repairs to the flares this year they are functioning optimally.

During Fiscal Year 2013 the Environmental Division also sent out a request for proposals for a hydrogen sulfide removal system. This system will allow the County to balance the landfill gas control system for more overall efficiency. This scrubber will be installed in Fiscal Year 2014.

# Working Together

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## *Public-Private Partnership*

From the landfill's opening in the spring of 1972, Ada County has evaluated which services it could most economically perform in-house and which services it would be most cost effective to contract with privately-owned companies. This evaluation is reviewed regularly to ensure that revenues are being spent in the most cost-effective manner.

When it is determined to contract for services with privately-owned companies, Ada County is able to ensure the most cost-effective service delivery for the County through competitive bids. Before issuing any contract for services, the County issues a Request for Qualifications or a Request for Proposal. The request specifies the criteria for qualifications and the specifics of the work to be performed under the terms of the contract.

Through carefully written contracts, Ada County provides an effective, low-cost solid waste disposal system to the residents, businesses and institutions in the county.

## **The Contracts**

### *Landfill Operations*

Typically, Solid Waste Management's largest contract is for daily operations. This includes waste compaction, daily waste cover, intermediate cover, road construction and maintenance, as well as other incidental work keeping the landfill open and operating.

**Republic Services, Inc.** operates under this contract, and as required by the contract between Ada County and Republic Services, Inc. this contractor supplies all the equipment and personnel necessary to complete the work specified in the contract.

Since 2007, the County has been operating in both the North Ravine Cell and in Hidden Hollow Cell. While this operation of two cells can increase the daily operating expenses, it is necessary as the Hidden Hollow Cell reaches its volume capacity.

For the services provided to Ada County through their contracts, Republic Services, Inc. was paid \$2,983,767.

### *Engineering*

**CH2M HILL, Inc.** is the Division's engineering consultant. They provide a full-range of engineering services that includes annual operations, surveying, rate-of-fill calculations, landfill gas system design, and support services. In fiscal year 2013, the County paid CH2M HILL \$610,361.

### **Organics Recycling**

Wood-waste recycling is a very popular and highly successful program at the landfill. Since 1994, landfill customers have been encouraged to separate their wood waste from their other waste for recycling. From its modest beginnings with 10,000 cubic yards of wood recycled the first year, the program has grown. Over 140,000 cubic yards of wood were recycled in fiscal year 2013. The economic slow-down has affected the wood-recycling program. In fiscal year 2006, 197,593 cubic yards of wood was recycled; in fiscal year 2010, 137,220 cubic yards. This is a ~30% decrease in volume. This decrease can be attributed to the reduction in construction in the valley, with less construction there is less material for disposal. Regardless of the reduction the wood waste recycling program remains the most successful recycling program at the landfill.



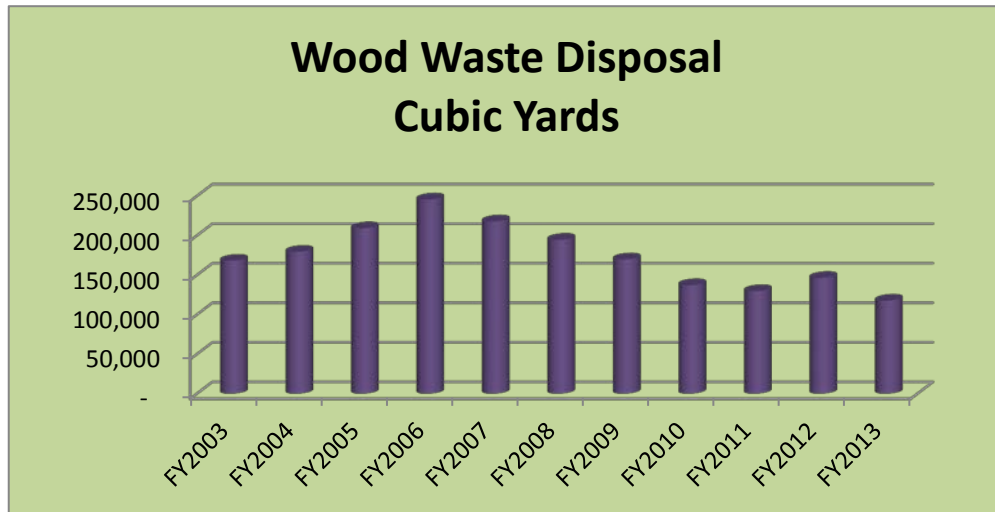
**M.M. Demolition** is the new contractor for wood and organics recycling. The former contractor, Enviro-Progress, opted to terminate their contract with Ada County in April 2013. For their services in Fiscal Year 2013 Enviro-Progress charged the Landfill \$265,646. After a Request for Proposals was issued, M.M. Demolition won the bid and started grinding in April 2013. The County pays this firm for material that is chipped and hauled away from the landfill; M.M Demolition is paid per cubic yard and they received \$172,602 for their services in fiscal year 2013. The total amount for wood recycling for fiscal year 2013 was \$438,248.

Along with wood recycling, Ada County provides programs to encourage leaf and Christmas tree recycling. In the fall, residents can bring their leaves to the landfill at no charge during a six-week period. In addition, following Christmas, residents may bring their Christmas trees, free of charge, to the landfill for recycling. Even though the contractor charges to dispose of both of these items the landfill absorbs the cost to dispose of them as part of a community service for Ada County residents.

## Onsite Recycling

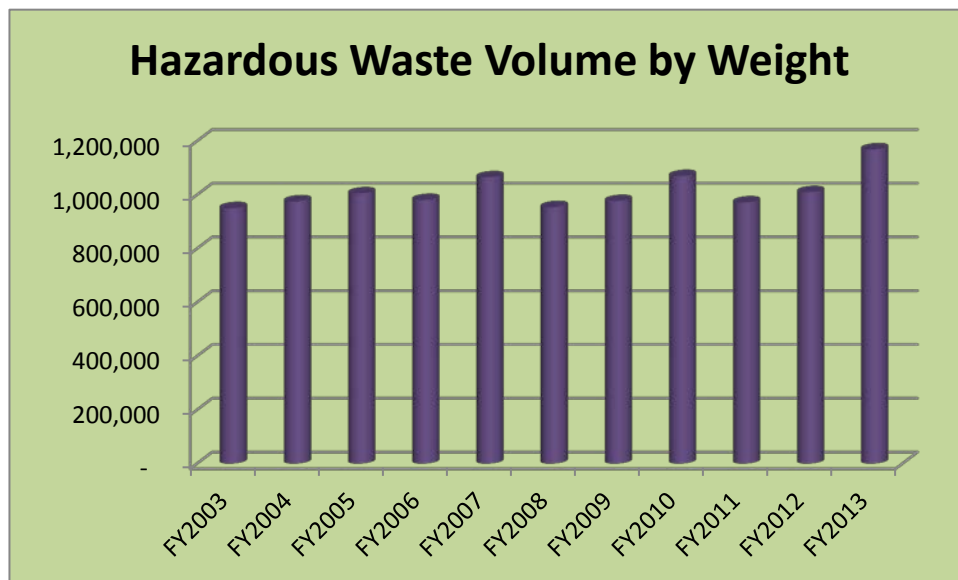
### Wood Waste Recycling

The decreases in the past fiscal years reflect the effects of the collapse of the building industry. With less construction, there is less material for disposal. Wood waste remains the most successful recycling program at the landfill.



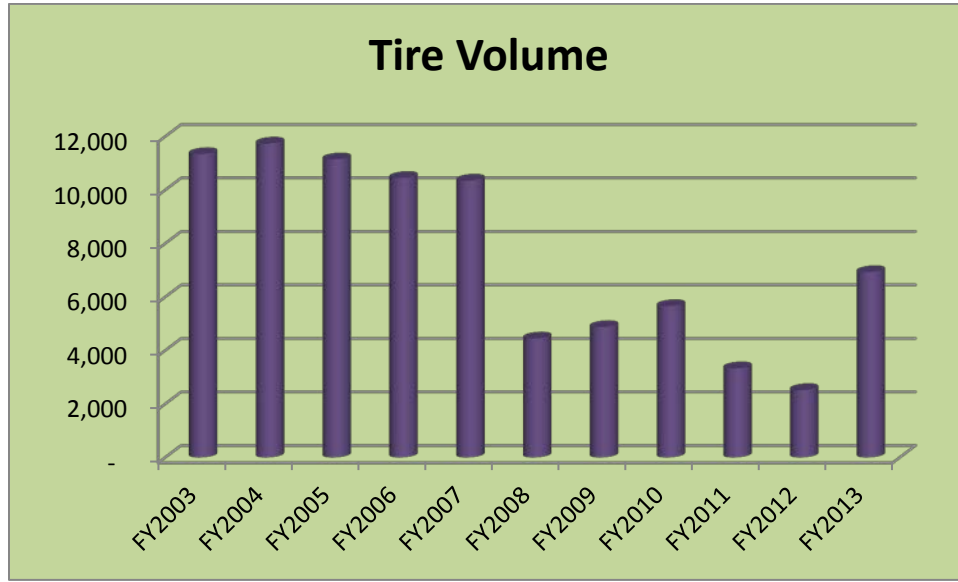
### Household Hazardous Waste

Household hazardous waste is recycled or reused in a variety of ways depending on its composition. It can either be reused for its original intended purpose or used to make another product.



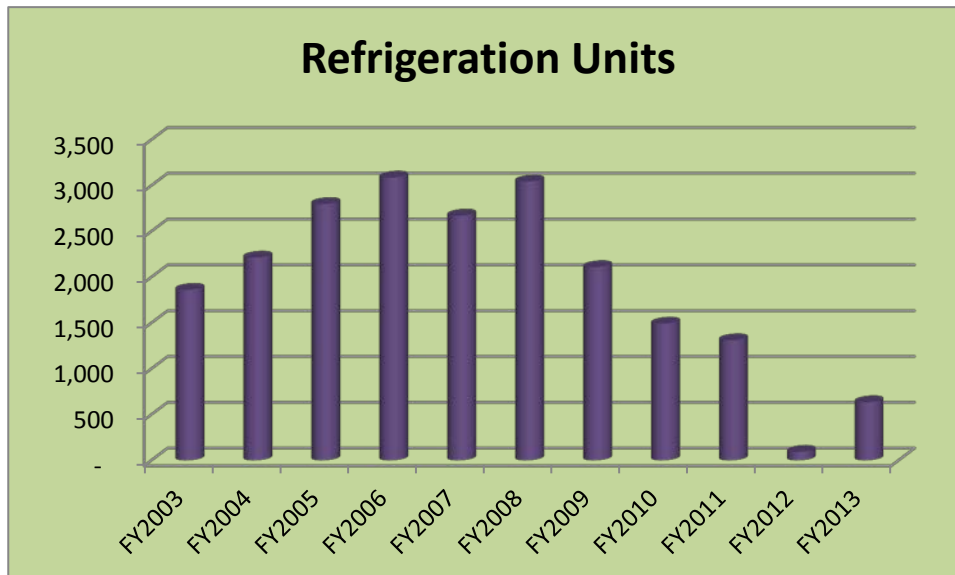
### Tire Recycling

Tires delivered to the landfill are recycled through a privately owned company. The tires are used for various projects, such as athletic tracks, road base, and fuel in the process of making cement. Tire Recycling at the landfill has decreased considerably over the past few years. However, in fiscal year 2013 we saw an increase in the number of tires that were recycled.



### Refrigeration Unit Recycling

Appliances that use Freon are collected separately at the landfill because Freon is a greenhouse gas. If the Freon from these units were released to the atmosphere, the Freon would damage the ozone layer of the atmosphere. Qualified technicians at the landfill remove the Freon for recycling. The metal cases from the appliances are then shipped to a local metals recycler. Approximately 121,400 pounds of metal was recycled as a result of the appliances and a voluntary drop off area for all metals. The number of refrigeration units has declined over the years, however 2013 saw an increase from the previous year.



# Moving Toward the Future

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Developing new ways to inform and educate the public about the landfill and its programs is another focus of the Division. In August 2013 the landfill adopted a new logo, stimulating the ideal of environmental connectivity and sustainability.



In addition to the new logo, the Division employed a public relations firm to develop a new website to encourage public awareness and to focus on the future of the programs at the landfill. The new website will discuss current projects that are being focused on, and, on hopes for the future. There will be an option for the users to contact the landfill staff with questions and offer the option to report landfill smells. This website will be used as an educational tool for the general public. On the site there will be information on recycling, trash pickup, hours and days of operation and a detailed overview of the different types of waste and solutions, just to name a few of the functions. After the website goes live, it will be administered by Landfill staff to ensure accuracy and the addition of new content.

# What to Expect in 2014

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FY 2013-2014 will see many changes at the Ada County Landfill.

Some changes to watch for in the coming fiscal year include:

- A Change in the CRT Program to include more e-waste
- On-Site Recycling of metals
- North Ravine Cell at full utilization
- Installation of a hydrogen sulfide removal system to increase landfill gas capture to reduce odors.
- Begin the second stage of the final cover for the Hidden Hollow Cell
- Continue to install the gas extraction pipes in the NRC
- Expand the Leachate collection lines from the NRC
- Waste Stream Analysis
- Many More projects

# Synopsis

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The operation of the Ada County Landfill by Solid Waste Management continues to concentrate on meeting daily obligations while looking to the demands of the future. The Hidden Hollow Cell has nearly reached its designed capacity and the County needs to ensure that funds are accrued in reserve to cover the extensive work that will be performed to place this cell into final closure. All incoming waste is being directed to the North Ravine Cell and, again, the funds to continue expansion of this cell must be accrued prior to any construction.

Careful planning, innovative cost-saving procedures and continual vigilance on the evolving regulatory requirements will ensure the Ada County Solid Waste Management continues its excellent record of operating the landfills in the most efficient and compliant manner while meeting the needs of the community, now and in the future.

We are consistently looking for ways to reduce the amount of waste being deposited into the landfill. With the expansion of recycling programs we are ensuring that the North Ravine Cell will accommodate the needs of Ada County Citizens and businesses for a century or better.

The Solid Waste Management thanks you for your interest in the progress of the division.