



Year End Report

Fiscal Year 2017





Ada County Solid Waste Management

2017 Year End Report

200 West Front Street

Boise Idaho 83702

208-577-4725

Adacountylandfill.com



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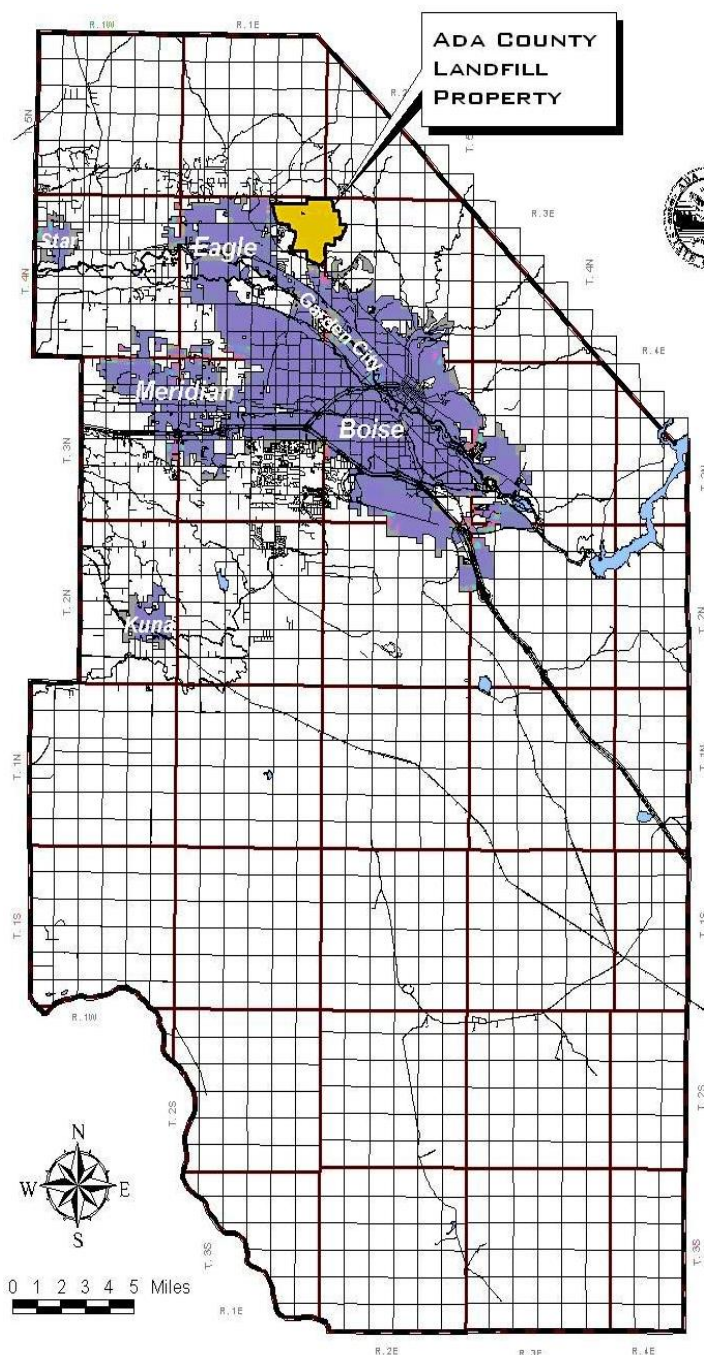
Solid Waste Management

Scott Williams, Director of Ada County Operations
Ted Hutchinson, Deputy Director of Solid Waste
Kurt Hunt, Solid Waste Manager
Kenneth Wall, Hazardous Materials Coordinator
Theresa Rademacher, Business Analyst
Justin McConnell, Environmental Systems Coordinator
Mary Pera, Account Clerk
Micah Munion, Environmental Systems Technician
David Dyer, Landfill Technician
William "Billy" Martin, Landfill Technician
Cody Mendenhall, Landfill Technician
Barbara Burkhardt, Cashier
Kathy Hollandsworth, Cashier
Marna Poulson, Cashier
Cearah Munion, Cashier
Jay Camp, Cashier
Douglas Cox, Construction Manager



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

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:

- Landfill Cells – Hidden Hollow and North Ravine;
- Household Hazardous Waste collection and disposal;
- Electronic, 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, electronic recycling, 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 and for fiscal year 2016 there was a slight increase to the amount of waste that the division brought in. 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 2017 are:

- Closed the Hidden Hollow Cell
- Expanded the gas field to allow for more gas from of Hidden Hollow to be extracted
- New E-Waste Contractor
- New Communications Tower
- Upgraded the onsite server
- Purchased new equipment to ensure safe and effective operations

What We Do

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 Commissioners. All daily operational decisions are under the discretion of the Deputy Director. Long-term plans for the landfill are discussed with and approved by the Board of Ada County Commissioners.

Although the Division has the large responsibility of ensuring proper disposal of Ada County's municipal solid waste, it does so with a staff of 16 – five of whom are part-time workers.

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 the *Solid Waste* division. 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

The *Environmental* division 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

The *Hazardous Waste* division 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.

The Staff

These functions within the division would fall apart were it not for the dedicated staff of the landfill. The landfill functions with 16 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 Analyst is primarily responsible for continuously reviewing policies and procedures and providing recommendations for improvement as needed to ensure the safety and efficacy of the division. The Analyst also analyzes ticket data, revenue and expenditure data and looks for inconsistencies and providing recommended policy changes as needed. The Business Analyst authors reports and offers data for presentation.

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 Solid Waste Manager 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 Solid Waste Manager 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.

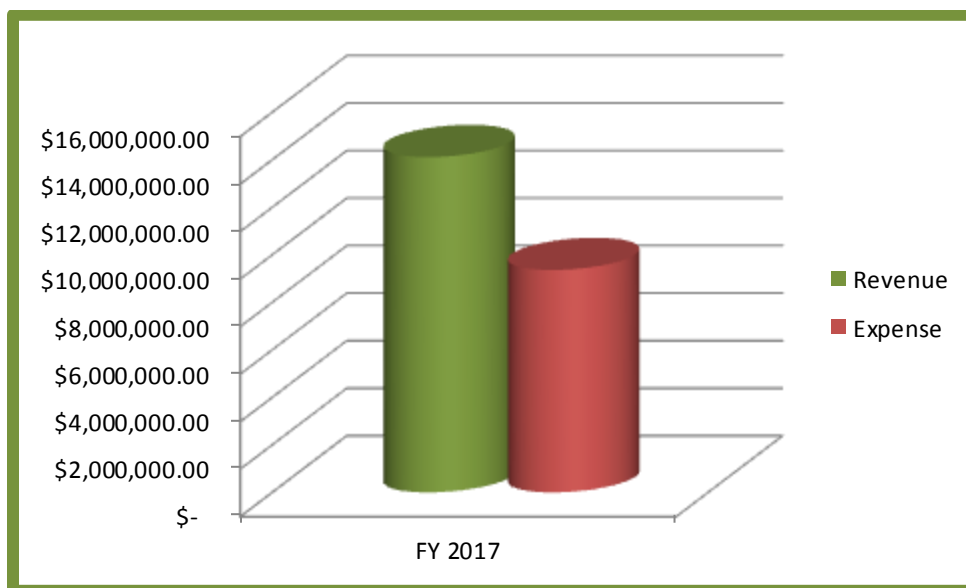
Cashiers greet customers, assess and collect fees from landfill customers, maintain custody and account for money received. The landfill employs five cashiers, each cashier works part time.

The Construction Manager, while officially part of the landfill staff, oversees construction projects for Ada County Landfill. This position additionally oversees construction projects throughout the county for Ada County Operations.

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

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, current operations, and future development of projects and plans, are dependent upon the volume of waste that is dropped at the landfill. The landfill contributes to the enterprise fund, which supports all operations. For Fiscal Year 2017 this remained true. The expenses to operate the division totaled \$9,359,195, while the revenue reported for Fiscal Year 2017 was \$14,112,341; leaving an excess of \$4,753,145, all of which is placed in the enterprise fund for future obligations.



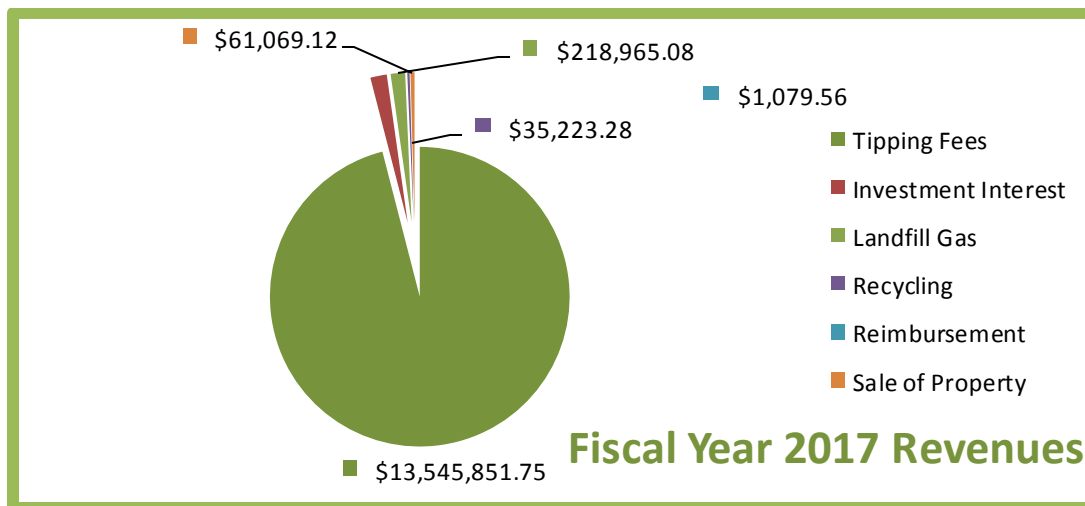
Revenue

Revenue, for the most part, is generated by the fees that are collected at the gate. Gate fees typically reflect the majority of the income for the landfill. Fiscal year 2017 is no exception; in fiscal year 2017 the gate fees were responsible for 96% of the total revenue for the landfill. These monies are accrued by the collection of municipal solid 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. The total amount of revenue from gate fees totaled \$13,545,851.75 for fiscal year 2017.

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, from the sale of recyclable materials, and for this year the sale of property. These revenue sources brought a total of \$566,489.60.

The Sale of property included two transactions. The first is the sale of property to the City of Eagle; this sale resulted in \$42,069.12 for the division. The second transaction was the sale of a Bob-Cat Skid Steer to Ada County Operations. The division sold this piece of equipment for \$19,000. The total revenue for the sale of property resulted in a total of \$61,069.12 for the division.

Total revenue for the landfill in Fiscal Year 2017 exceeded expectations, bringing in \$14,751,993.33.



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 \$9,359,195.54 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.

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 2017 the landfill spent \$6,829,752.06 in operational costs.

Hazardous waste disposal is typically the second largest expense for the landfill. Stericycle is the County's hazardous waste contractor. As part of their contract they staff the Hazardous Waste Facility and the Mobile collection trucks, process all the waste received and monitor the free recycling program for county residents. This contract represents 95% of the total amount spent for Hazardous Waste disposal. The Landfill paid Stericycle \$586,184.29 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 \$614,911.93 in Fiscal Year 2017.

Environmental Controls is traditionally 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, provided by CH2MHill and gas collection. Part of the contractual obligations for CH2MHill is to report 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 \$577,179.94 for Environmental Controls in fiscal year 2017.

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 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 division spent \$959,595.38.

Capital Costs are physical, high cost, items purchased for the department, including vehicles, office furniture, computers and major equipment. During Fiscal Year 2017 the division did purchase several new items falling under the category of Capital Costs.

The first line item falls under Machinery and Equipment. In this category there were several large purchases the division incurred.

During Fiscal Year 2017 the division purchased several items from Federal Surplus Property, including:

- A forklift for \$4,500.
- A Tracked Dozer for \$17,500
- A 5 Ton Dump Truck for \$5,000 and a second 5 Ton Dump truck for \$2,500. The second, less expensive vehicle was intended to be used for parts to repair the other dump truck, and a similar truck purchased in Fiscal Year 2016. However, the staff at the division was able to repair and use it
- A Water Pump for \$1,500.
- A Road Grader for \$22,500

Barry Equipment and Rental supplied two different pieces of equipment in Fiscal Year 2017 these purchases include:

- A Bobcat T870 for \$64,947.
- A Brush Cat Mower for \$6,296.

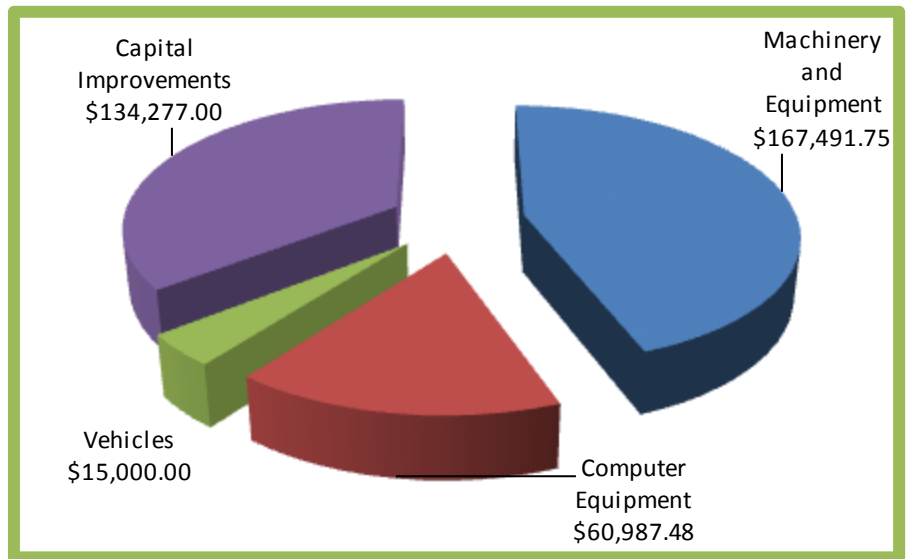
In September of Fiscal Year 2017 the division purchased a drum roller from Coastline Equipment Company for \$47,748.75.

The second category in the Capital Budget is Computer Equipment. In July 2017 the server at the landfill failed and put the operations of the day in jeopardy. This prompted an investigation into the equipment. It was determined that the server, which typically has a lifespan of approximately five years had failed early due to the excess of dust and dirt in the environment. The capable Information Technology department of the County was able to move operations to a backup server for a quick fix, getting operations back on line.

To offer a more permanent solution to the issues the division was experiencing, a new server was purchased. Additionally, the software and operating systems required were purchased. For the year the Capital Computer Equipment expenditures saw \$60,987.48.

Vehicles During fiscal year 2017 the division did make one Capital Vehicle purchase. In March 2017 a large truck was purchased from Federal Surplus Supply for \$15,000. This vehicle has been retro fitted to accommodate a large water tank; essentially making it a water truck to be used for road maintenance and dust control.

Capital Improvements During fiscal year 2017 the Landfill added an upgraded communications tower. This tower provided increased efficiency county wide, for many different departments. With the communications tower the new west campus for County offices could more effectively communicate with the downtown courthouse. This new communications tower cost the landfill \$134,277.

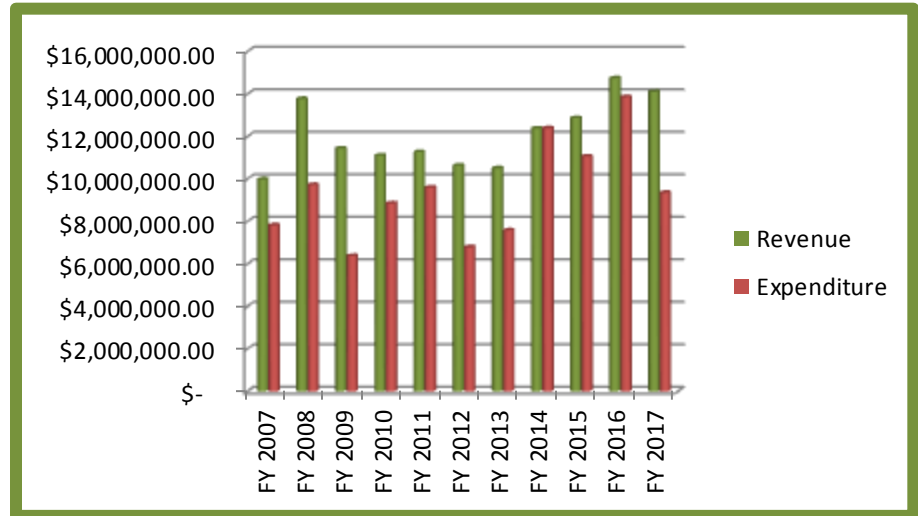


Enterprise fund

During Fiscal Year 2017, the landfill maintained the historical trend of spending less than was brought in; for this fiscal year the landfill was able to add \$4,753,145.81 to the enterprise fund. 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 cell closed.

When the landfill has major projects planned the funding must be available to cover all expenses. The enterprise fund facilitates that need. The projects are budgeted when the division presents the budget to the board. These projects, when budgeted increase the spending for the landfill for the year; this gives the impression that the landfill is operating outside of their capacity. However, the funding for these projects are taken from the

Enterprise Fund and the division is never without funds, allowing the division to operate completely free of tax payer monies.



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 is expansion of the North Ravine Cell (NRC); the division anticipates expansion of the NRC in Fiscal Year 2018. In addition to the expansion of the NRC in Fiscal Year 2018, the division will cap, and close the Hidden Hollow Cell. Both of these projects will require monies from the Enterprise fund. Details for the projects can be found in the Fiscal Year budget for 2018.

Major Projects

During Fiscal Year 2017, some of the major projects undertaken by the landfill were:

- Communications Tower
- Horizontal Pipes
- Hidden Hollow Closure
- New Server
- Updated Office Entrance

Communications Tower

In Fiscal Year 2017 the landfill undertook a project to install a new communications tower. This tower facilitates communications between county facilities, primarily those in the west end of the county to the main courthouse building in downtown Boise. This project, performed by Idaho Tower Construction Company cost the division \$134,277.



Horizontal Pipes

During Fiscal Year 2017 the staff at the landfill installed horizontal gas collection pipes into the North Ravine Cell Landfill. This is an ongoing project and as the cell is filled up there will always be more pipes to be installed. In Fiscal Year 2017 spent approximately \$50,000 for the expansion of the gas field.



Hidden Hollow Closure

During July 2017 the last load was dumped into the Hidden Hollow Cell. Constructed in 1972, the Hidden Hollow Cell accepted many different types of waste from Ada County Residents. For Fiscal Year 2017 there were not any significant costs with the closure of the cell, however in Fiscal Year 2018 there will be expenses associated with the final closing of this cell.

New Server

In July of 2017 the server at the landfill malfunctioned. This malfunction caused major disruptions in scale operations for a Saturday Morning. When the event was rectified it was determined that the server in place was several years old and due to be replaced within 24 months. The department immediately replaced the server for an updated version. This updated server, with all of the programming ultimately cost the division \$67,788.



County Commissioner Dave Case and Commissioner Jim Tibbs oversee the last load into the Hidden Hollow Landfill

Office Entrance

In the early part of the Fiscal Year 2017 the staff for the department noticed some deterioration in the entrance steps for the administration building at the Landfill. The deterioration was not a complete surprise, as the building was first constructed in 1987. Deciding that the weakening of the steps was an opportunity, the division decided to redesign the entrance of the administrative office. The division employed Insight Architects for provided the architectural services for the project, for \$7,892. Vista Construction, the winning bidder, charged the division \$35,663 for the redesign and construction of the office entrance. The total project cost the division \$43,554.98.



2005



2017

Disposed Materials by Category and Typical Fees

Starting off fiscal year 2015 was a new rate structure for the residential customers of the landfill. While commercial customers are still charged by the cubic yard, residential customers are now charged by the weight. The standard charge for residential customers is \$33 per ton for general waste, construction and demolition debris and for wood waste the charge is \$22 per ton. There is an \$11 minimum for all loads that minimum will cover up to 680 and 1,000 pounds respectively.



As previously discussed the fees collected at the gate account for 96% of the income for the landfill. These fees are collected from every load that is brought to the landfill which generates a fee. The only loads that would not generate a fee through the gate are loads of E-Waste. These can consist of up to 10 units or one single television. Additionally leaves and Christmas trees are taken, for limited periods, free of charge. The fee collected at the Scalehouse generated \$13,545,851.75 in revenue for fiscal year 2017.

The Solid Waste Management tracks several types of waste: since this is how customers are charged these are the most common forms of waste accepted at the Ada County Landfill:

- **Compacted** waste 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. During fiscal year 2017 the landfill accepted 318,743.31 tons of compacted material. Compacted waste is billed at \$11 per yard. For Fiscal Year 2017 compacted material resulted in \$8,910,471.33 of revenue for 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 asbestos disposal which also includes certification of disposal and certification of burial. Construction and demolition debris are billed at \$11 per yard for commercial customers, however for residential customers the material is billed at \$33 per ton. For fiscal year 2017 the landfill saw a sharp increase of tons of construction and demolition debris, to 74,560.14 tons; effectively a 15% increase from the past fiscal year. The revenue accumulated by Construction and demolition debris increased as a reflection of the increased volume and resulted in \$2,565,143.75.
- **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. Non-Compacted waste includes several different categories of waste; however in fiscal year 2017 the landfill saw a 24% decrease from 2016 and accepted 40,677.71 tons and \$1,533,085.33. Non-Compacted waste is billed at \$5.50 per cubic yard for commercial customers and residential customers can expect to pay \$33 per ton for the material.
- **Wood recycling** is a popular 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. For Fiscal Year 2017 the landfill accepted

15,620 pounds of Christmas Trees and 10,464,280 pounds of leaves. For compensable material the landfill accepted 15,663.57 tons of wood for recycling. Residential customers pay \$22 per ton for wood while commercial customers will pay \$2.75 per cubic yard, with a four yard minimum; resulting in an income of \$374,234.80 for Fiscal Year 2017.

- **Household Hazardous Waste** is classified as anything with the potential to be hazardous to human health or environment. In this category are refrigerators, televisions 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. Conditionally Exempt small quantity generators may use this service as well, for a nominal fee. Typically these materials are taken to the Household Hazardous Waste Facility, however, at times when residents have only a small amount they are allowed to leave it at the recycling area for future processing. In fiscal year 2017 the Scalehouse accepted 15,260 pounds of hazardous waste.
- **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. In fiscal year 2017 the landfill accepted approximately 43,303 tires, for revenue of \$15,060.50.
- **Refrigeration Units**, including refrigerators, freezers and air conditioning are charged at \$22 per item; the landfill only accepts 2 items per household per year for this category. For Fiscal Year 2017 the landfill accepted 448 refrigerators for an income of \$9,702.

In addition to these waste types the landfill also charges for:

- Certificates of Disposal
- Asbestos Disposal

Discounts, Waivers and Donations

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 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 Board of County Commissioners.

Standard Discounts

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.

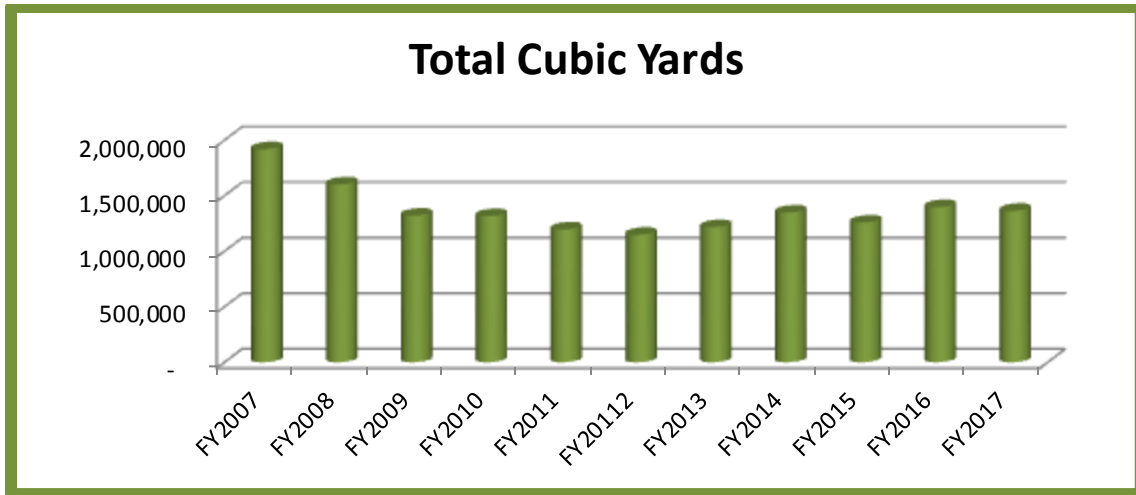
For specified periods each year, the landfill accepts, at no charge, leaves and Christmas trees. When the Landfill has the need, these items are processed into compost at the landfill for re-vegetation projects and erosion-control projects. In fiscal year 2017 the landfill accepted 10,464,280 pounds of leaves and 15,620 pounds of Christmas Trees.

As a standard practice the landfill accepts electronic waste (E-Waste) free of charge.

How much waste do we take?

In fiscal year 2017 the Ada County Landfill accepted 1,363,167 yards of waste, including wood waste.

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 weigh waste that is bough the Ada County Landfill. In Fiscal year 2017, the landfill accepted 477,682.15 tons of waste, including wood waste.





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 Stericycle for hazardous material management and disposal. Stericycle operates the facility according to an operations plan and contract documents. For fiscal year 2017, the County paid Stericycle \$586,184.29 for this service. Over the course of the year the Household Hazardous Waste Facility serviced 8,408 households at the facility.

Built in 1998, Ada County's Household Hazardous Waste Facility currently accepts hazardous waste on Friday and Saturday, every week from both residents and small quantity business generators.

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. Stericycle 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. During the hours of operation customers can leave hazardous waste at the facility. During fiscal year 2017 the facility collected 778,303 pounds of residential hazardous waste.

Mobile Collection of Hazardous Waste

Mobile Collection

Stericycle 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, while the City of Boise incurs the expense of operating the mobile



collection program. 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. Through a collaborative effort with the City of Boise Mobile Collection Sites are available to Ada County Residents. The collection sites are on a rotating schedule, and visible on the City of Boise's website, curbit.cityofboise.com, and the Landfill's website, adacountylandfill.com for customers who wish to utilize the services.

The mobile collection program served 16,751 households in Ada County. During fiscal year 2017, the mobile collection sites collected over 655,247 pounds of hazardous waste.

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

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 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 mobile collection van visits eleven (11) sites around the City. 9,466 households took advantage of the collection sites in fiscal year 2017, disposing of a total of 409,262 pounds of hazardous waste.

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. 5,446 households took advantage of the Meridian collection site during Fiscal Year 2017; during this year the city of Meridian disposed of 230,630 pounds of hazardous material.

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. For fiscal year 2017, 637 households participated in the household hazardous material collection events. The residents of Kuna disposed of 28,713 pounds of hazardous waste.

City of Eagle

Quarterly, the City of Eagle sponsors collection locations for household hazardous waste. 464 residents in the Eagle area dropped off material during these collections. For Fiscal Year 2017 the residents of Eagle disposed of 16,920 pounds of hazardous materials.

Collected Materials

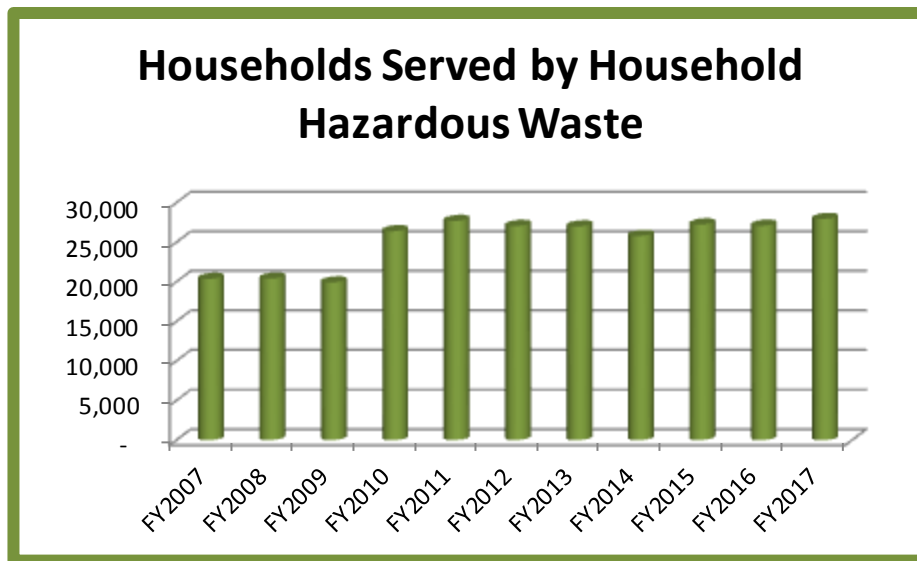
Hazardous material collected in the countywide program is taken to the County's Household Hazardous Waste Facility for processing and shipment to disposal facilities. Ada County's hazardous material contractor, Stericycle categorized and processed 1,463,828 pounds of material; of that 1,399,908 pounds were recycled by the community through the reuse program, 95% of the hazardous waste disposed of in the community. 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.

Due in large part to Ada County's priority for waste management, Stericycle strives to recycle/reuse as much of the collected material as possible. This past fiscal year saw 1,399,908 pounds (95%) recycled/reused, with 63,920 pounds (5%) destroyed at an off-site incinerator.

Stericycle segregates the materials into categories:

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

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 2017 27,939 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

At the beginning of fiscal year 2014 the landfill adopted the responsibility of disposing of electronic waste (E-Waste). The disposal of such units was, historically, the responsibility of the Hazardous Waste Contractor. After a proposal from ECS Refining, and the approval of the Board of Ada County Commissioners, the landfill chose to change the program.

In Fiscal Year 2017 Ada County shipped 1,414,864 pounds of E-waste to a recycling facility, with a mid-year change in contractor the division paid \$437,440 for the environmentally sound recycling of E-Waste.

However in Fiscal Year 2017 the division was notified by ECS Refining, the company taking these items for recycling, that they would not continue their contract with Ada County. ECS Refining did operate within their contract from October 2016 to January 2017. For those few months ECS Refining accepted 19 shipments, for a total of 418,838 pounds of E-Waste. As part of the contract, ECS Refining did compensate the division for the materials they took, at one half cent per pound; the division was paid \$2,786.27 for E-Waste taken by ECS Refining.

Once the Landfill was notified of ECS Refining's intent to discontinue the removal of E-Waste the division still needed to find an answer for all of the E-Waste received; ideally the division did not want to put them into the landfill. Procurement was contacted and a Request for Bids was published. Ultimately Onsite Electronics was awarded the contract for E-Waste Recycling at the Landfill. This contract was different than before however. With ECS Refining the division was being reimbursed for the materials taken off site; with Onsite Electronics the division is required to pay for the recycling of the components.

Onsite Electronics has different charges for different types of waste. For CRT (Cathode Ray Tube) units, such as older televisions or computer monitors the Division pays 39 cents per pound. For all other types of electronics the division pays 15 cents per pound. The change in this contract required the division to add a line item to the budget midyear; and fund the line item.

During the months of February, March, April and May there were not any shipments that were shipped out for Electronic Waste. Once Onsite Electronics was awarded the contract the company went to work to clean up months of E-Waste that had been stacking up. In June 2017 there were 18 shipments of E-Waste shipped from the landfill.

As stated previously the division was now responsible for the cost of disposal for the E-Waste. From June through September 50 loads were taken from the landfill. For those three months of service the division paid Onsite Electronics \$378,312.78. As this was a partial year the division is anticipating the cost for recycling electronics to be around \$1.5 Million for fiscal year 2018. The Division does not charge customers to dispose of these materials and the division incurs these costs without reimbursement.

In addition to the cost of recycling these materials the division also needed to staff the recycling area, provide fuel for the equipment at the area and for the few months that ECS Refining was operating maintain the program; these expenses reached \$59,127.74. For the Fiscal Year the division spent \$437,440 for E-Waste Recycling; essentially the division has gone from paying approximately six cents per pound to paying an average of 31 cents per pound for E-Waste Recycling.

Environmental Compliance

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 (CO₂) and methane (CH₄). 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 \$218,965.08 for the gas to produce enough energy to power approximately 2,400 homes.



Working Together

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.

Additionally, the contract with Republic Services was amended in fiscal year 2014 to include transporting full roll off boxes of E-Waste to the hangar, and returning an empty one. This service, while instrumental to the success of the E-Waste program, cost \$843.36. After the change in the E-Waste contract this service was not used after January 2017.

For the services provided to Ada County through their contracts, including the nominal amount for the transportation of E-Waste, Republic Services, Inc. was paid \$3,628,356.54.

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. CH2M Hill operates under two different contracts, one for the operations of the landfill and another for the environmental impact of the landfill. The operations contract resulted in \$730,022.16 to CH2M Hill, Inc. For their services regarding the environmental contract CH2M Hill, Inc. received \$190,760.73. In fiscal year 2017, the County paid CH2M HILL an accumulative \$920,782.89 for their services for both the operations, and the environmental division.

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. 77,188 cubic yards of wood were recycled in fiscal year 2017, including the seasonal free Christmas tree disposal. The total weight for wood recycling and Christmas Trees exceeded 15,600 pounds. **M.M. Demolition** is the contractor for wood and organics recycling. 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 for wood recycling for fiscal year 2017 was \$585,199.80.



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

For fiscal year 2017 the wood recycling program saw an increase in volume. With additional building in the area there was an increase of 9,000 cubic yards from the previous year, this was also seen in the significant increase in construction and demolition waste brought to the landfill.



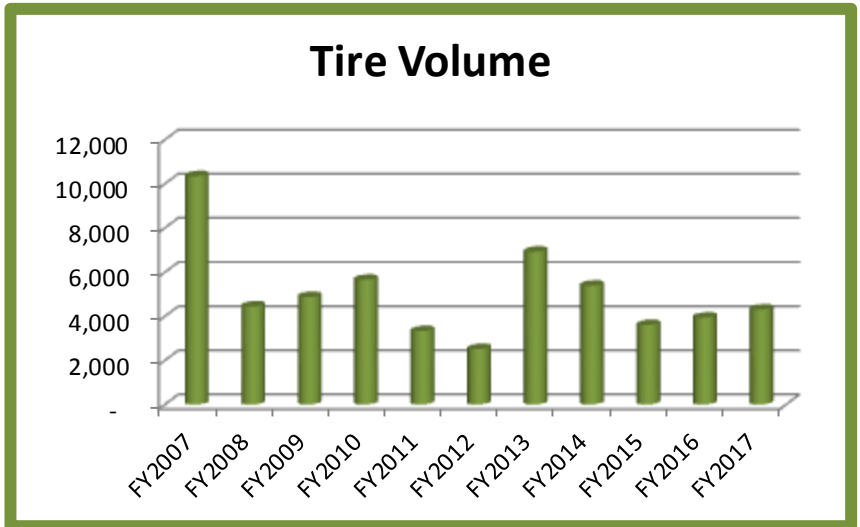
Household Hazardous Waste

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. Residents of Ada County are welcome to come and peruse the reuse shelf during the business hours of the Hazardous Waste Facility, Fridays and Saturdays from 8:00 until 6:00. For Fiscal Year 2017 the Hazardous Waste Facility processed 1,463,828 pounds of Hazardous Waste.



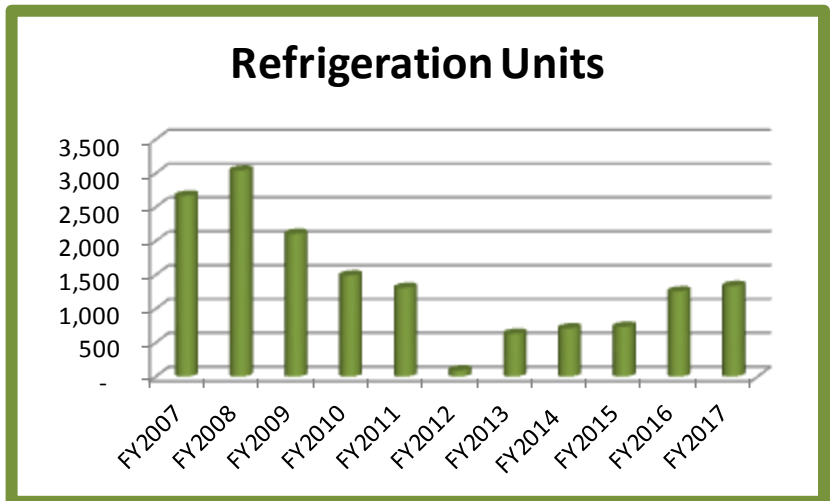
Tire Recycling

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 for fiscal years 2016 and 2017 the division is starting to see an increase in the number of tires accepted. For Fiscal Year 2017 the landfill took 4,303 tires from the public.



Refrigeration Unit Recycling

Appliances that use Freon are collected separately at the landfill because Freon is a greenhouse gas. Qualified technicians employed by Stericycle, the Hazardous Waste Contractor, at the landfill remove the Freon for recycling. In fiscal year 2017 the landfill accepted 1,336 refrigeration units; including refrigerators, freezers and air conditioners. The metal cases from the appliances are then shipped to a local metals recycler.



What to Expect in 2018

FY 2017-2018 will be a very exciting year for the Solid Waste Management Division. Some changes to watch for in the coming fiscal year include:

- The addition of more horizontal gas collection lines
- The development of an in house account billing program. Currently we are using a product from Sage, and we have found this product to be more than what the division needs, and the problems we have encountered with the product have been more than was anticipated.
- The Closure of the Hidden Hollow Cell of the landfill. This cell has been operating since 1972 and received the last load in July of 2017. In fiscal year 2018 the division will be adding the final cover to the landfill, closing it in perpetuity.
- Expansion of the North Ravine Cell. In fiscal year 2018 the division will be expanding the new landfill and adding 30 acres of disposal space to the already operating North Ravine Cell Landfill.
- The redesign of the condensate pumps system. This may include a complete redesign, or it may only be updating the current system. However this system is outdated and needs to be addressed to ensure environmental efficiency.
- Installing rain sheet in the North Ravine Cell to control the water migration on site.
- The addition of new positions within the division. The Landfill is expecting to add a total of four new positions:
 - A part time Cashier
 - Two full time landfill technicians
 - A full time administrative specialist.

Synopsis

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. While we saw one stage of this process this year, there is still more to come. Currently 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.

Through careful planning, innovative cost-saving procedures and continual vigilance on the evolving regulatory requirements the division 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 another century or better.

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