



ADA COUNTY

Solid Waste Management Department



FISCAL YEAR 2008 YEAR END REPORT

December 2008

SOLID WASTE MANAGEMENT DEPARTMENT

Fiscal Year 2008 – Year End Report

Ada County
Solid Waste Management Department
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SOLID WASTE MANAGEMENT DEPARTMENT

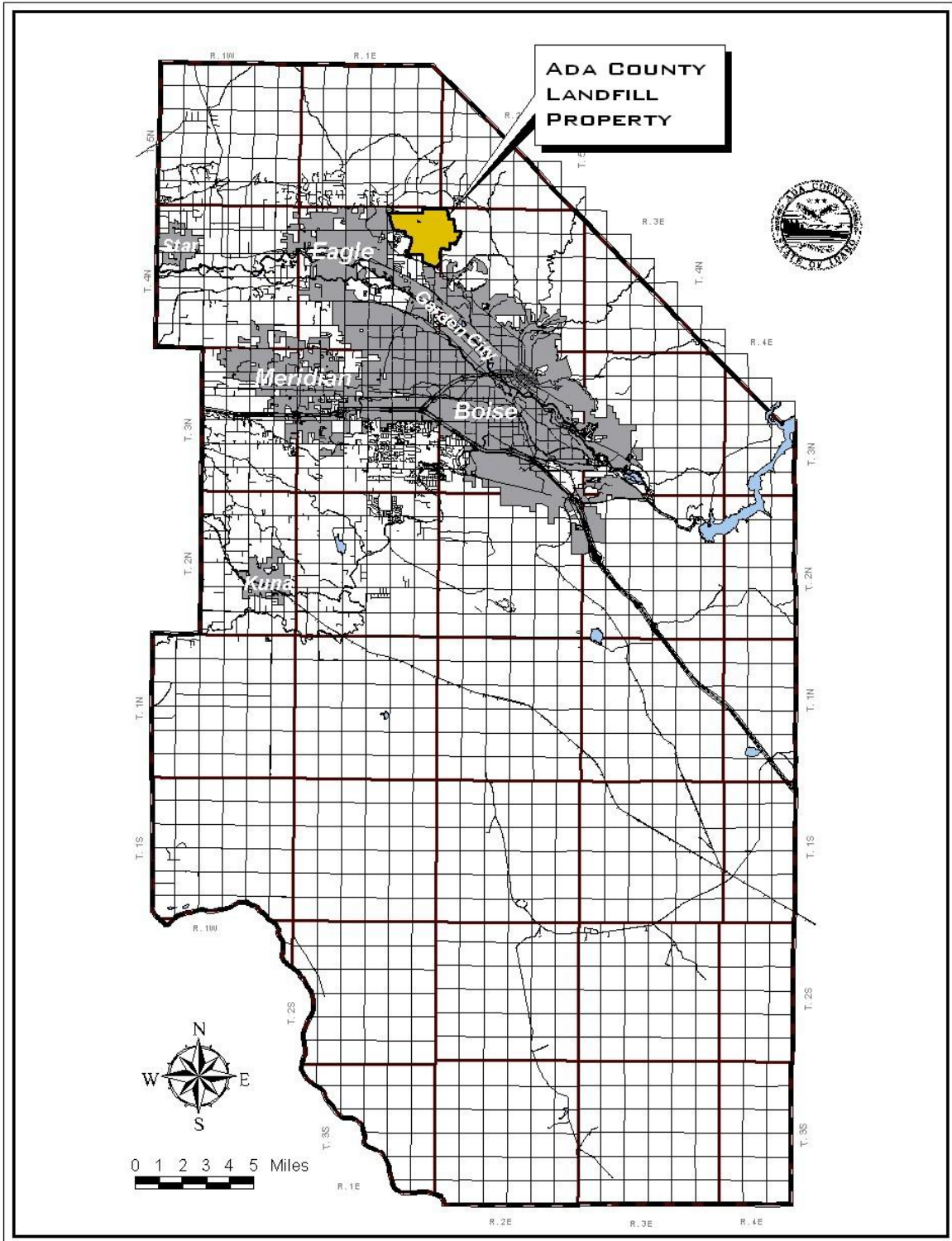
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ADA COUNTY - The County's property (purchased for landfill needs) is highlighted.

DEPARTMENT MISSION

The Solid Waste Management Department 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 department include:

- *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,*
- *Enforcement of health codes regarding accumulation of solid waste, and,*
- *Educational resource for local schools and service groups.*

Executive Summary

Landfill Economics

State of Idaho statutory obligations require Ada County to maintain a municipal solid waste disposal system. To meet these obligations, Ada County established the Solid Waste Enterprise Fund for the development and operation of the disposal system. Charged with the responsibilities of complying with the federal, state and local laws, rules and regulations, the County's Solid Waste Management Department 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 Hidden Hollow Complex.

As an enterprise fund, the Solid Waste Management Department receives no tax dollar support for the activities of the department. All departmental financial responsibilities are met through collection of user fees assessed at the landfill gate. User fees pay for all daily operations, long-term obligations (i.e., landfill closure and post-closure care), capital improvements, and special waste collections, diversion and recycling programs (i.e., household hazardous waste management and organics recycling). The user fees also pay the department's payroll for thirteen (13) employees who manage seven (7) contracts valued in excess of \$5 million.

Events in the national economy have affected the Solid Waste Management Department's abilities to meet its financial obligations. When the housing market dropped, so did the amount of construction debris delivered to the landfill. When fuel costs soared, so did the contractual costs at the landfill. Revenue projections began to fall short of budgetary expectations.

Across the board, waste disposal volumes at the landfill dropped. Total volume was down 16% from the previous year. One waste category, compacted waste, dropped by only 2%. The other categories - non-compacted, recyclable wood, and construction debris, suffered significant drops in volume. For the landfill, drop in volume equates to loss of revenue. Loss of revenue means the department must look for ways to cut expenditures to avoid a decrease in the services provided by the department while meeting its statutory obligations.

The Financial Health section of this report looks at expenditures and revenue; examines the impact of lower revenues on long-term planning; and, looks at the effects on landfill programs subsidized by landfill user fees. This year's report contains additional graphs with volume comparisons, customer counts and program costs covering several years.

2008 is the 10th anniversary of the Ada County Household Hazardous Material Collection Facility located at the landfill. The success of the countywide collection program is reflected in the participation rates that have grown since the program's inception. There is a special section in this year's report that looks at the Household Hazardous Waste Management Program in Ada County.

Financial Health

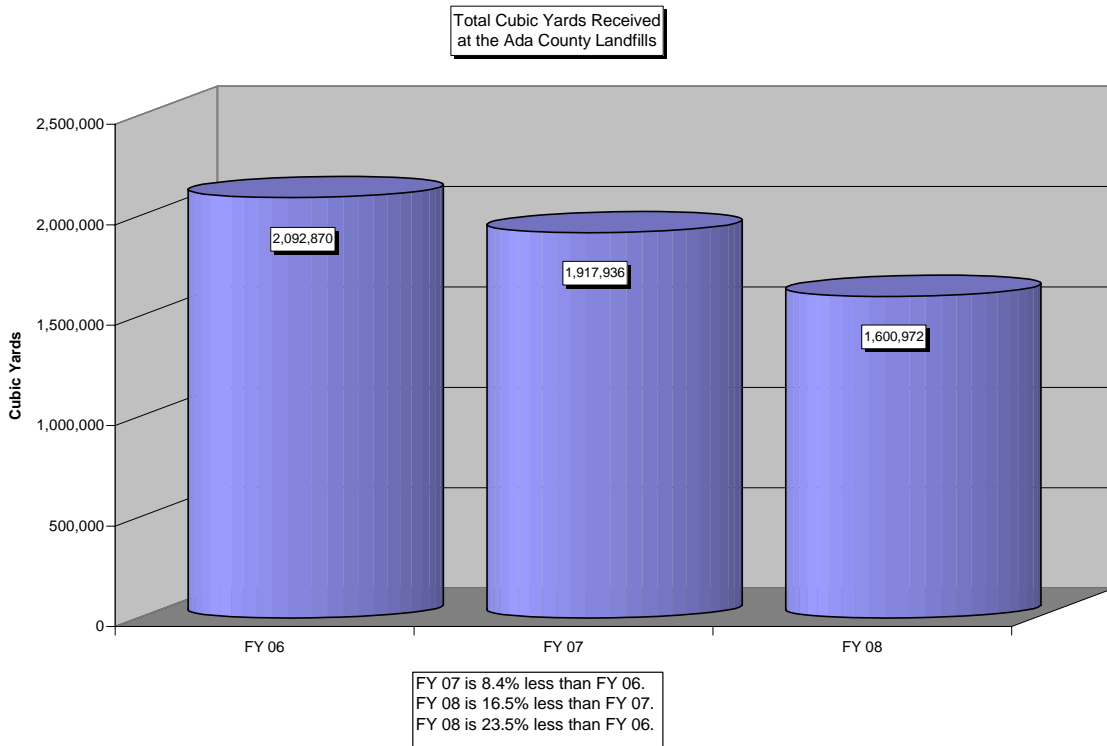
Landfill Operations as an Economic Indicator

Ada County’s Solid Waste Management Department was established by the Board of Ada County Commissioners as an Enterprise Fund. As an Enterprise Fund, the department is self-funded and self-supporting. There are no tax dollars used for department operations. The primary source of department revenue is from the landfill user fees collected at the landfill gates.

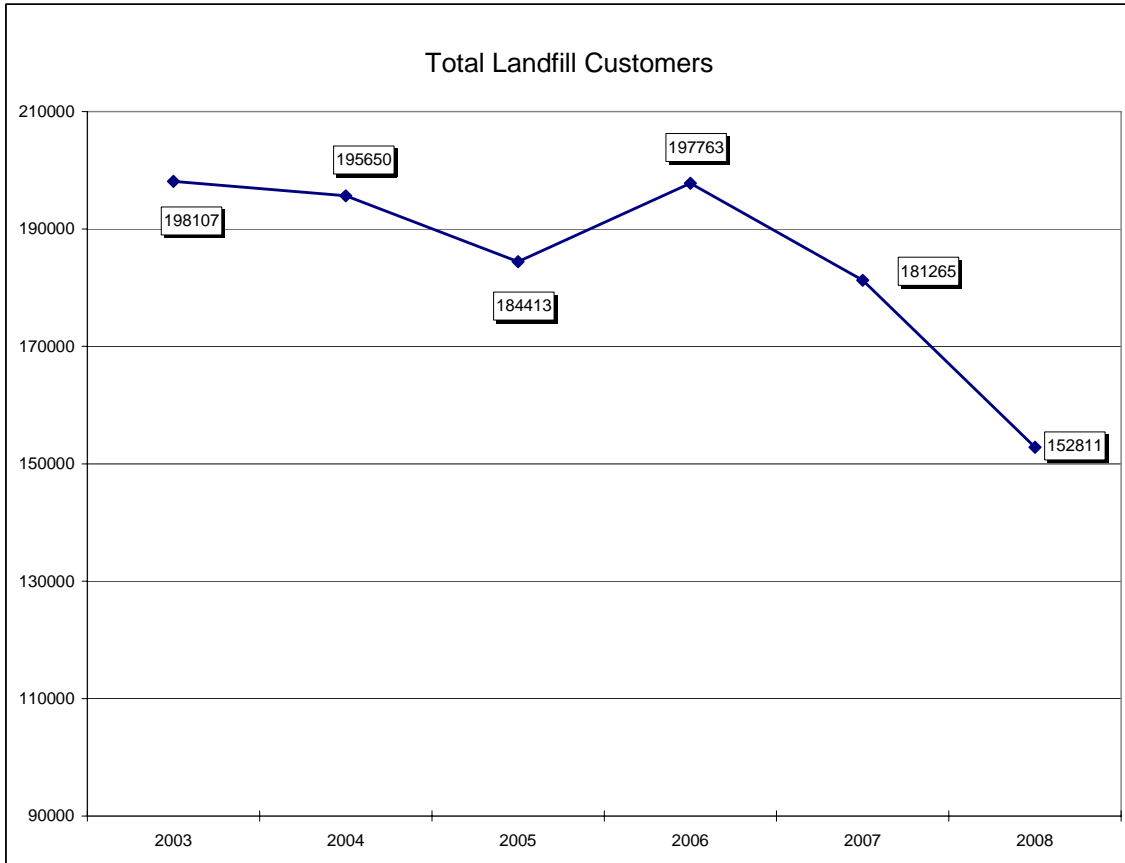
When the local economy was booming with new housing starts, the amount of waste being generated was booming too. This was good news for the department. More waste through the gate meant more revenue and as long as revenue exceeds expenditure, the department’s reserve account for long-term financial obligations and capital improvements grew.

During the 2007 fiscal year, the department saw indications that the economy was slowing. The amount of construction debris from new housing starts began to drop. The small companies hired by builders to clean up construction sites were having difficulty in obtaining work and in paying their landfill accounts. These small companies, called “scrappers” at the landfill were decreasing in number. The department recognized these signs and began a series of measures to control expenditures.

The following chart looks at the total volume of waste deposited at the Ada County landfills – Hidden Hollow and the new North Ravine Cell.



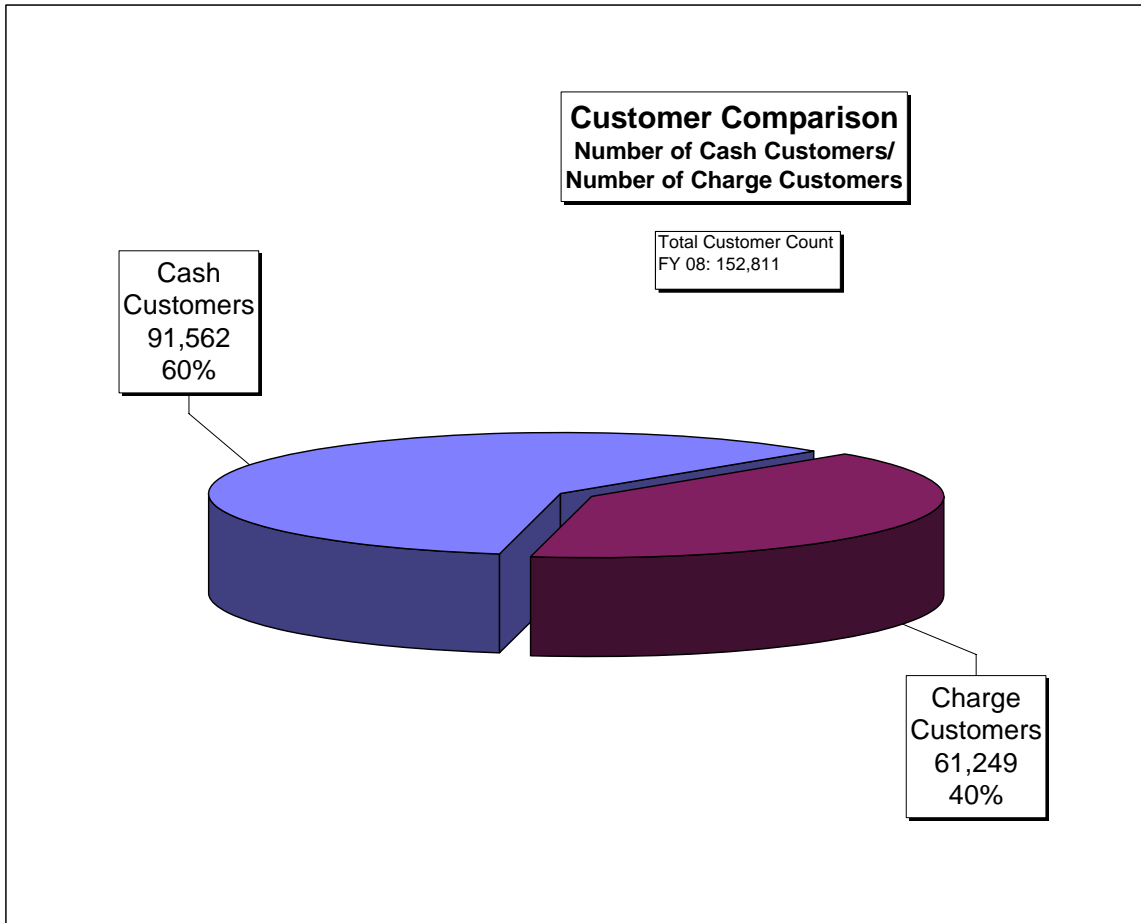
In 2 years, the volume of waste dropped over 23%. The department had to adjust its revenue projections to keep pace with the associated decline in landfill user fees.



Each customer through the landfill gates represents revenue. On average for FY 08, a typical customer delivered nine (9) cubic yards and paid \$76.40. However, when the contracted solid waste haulers – Allied Waste and Sanitary Services, are removed from the equation, these figures drop to about five (5) cubic yards paying \$22.84. The contracted solid waste haulers provide the largest portion of waste received at the landfill. This is the trash collected for residents at the curbside.

Non-compacted waste, typically regular household trash, yard trimmings, and other 'soft' materials, comes to the landfill in a variety of vehicles. These loads are typically not hauled by commercial transporters but rather by individuals in their private vehicles. This group represents the largest number of landfill users, but they also represent the lowest percentage of revenue generation.

Besides Allied Waste and Sanitary Services, the landfill has roughly 700 regular charge customers. The following chart compares the number of customer trips to the landfill by their method of payment (cash customer or charge customer).



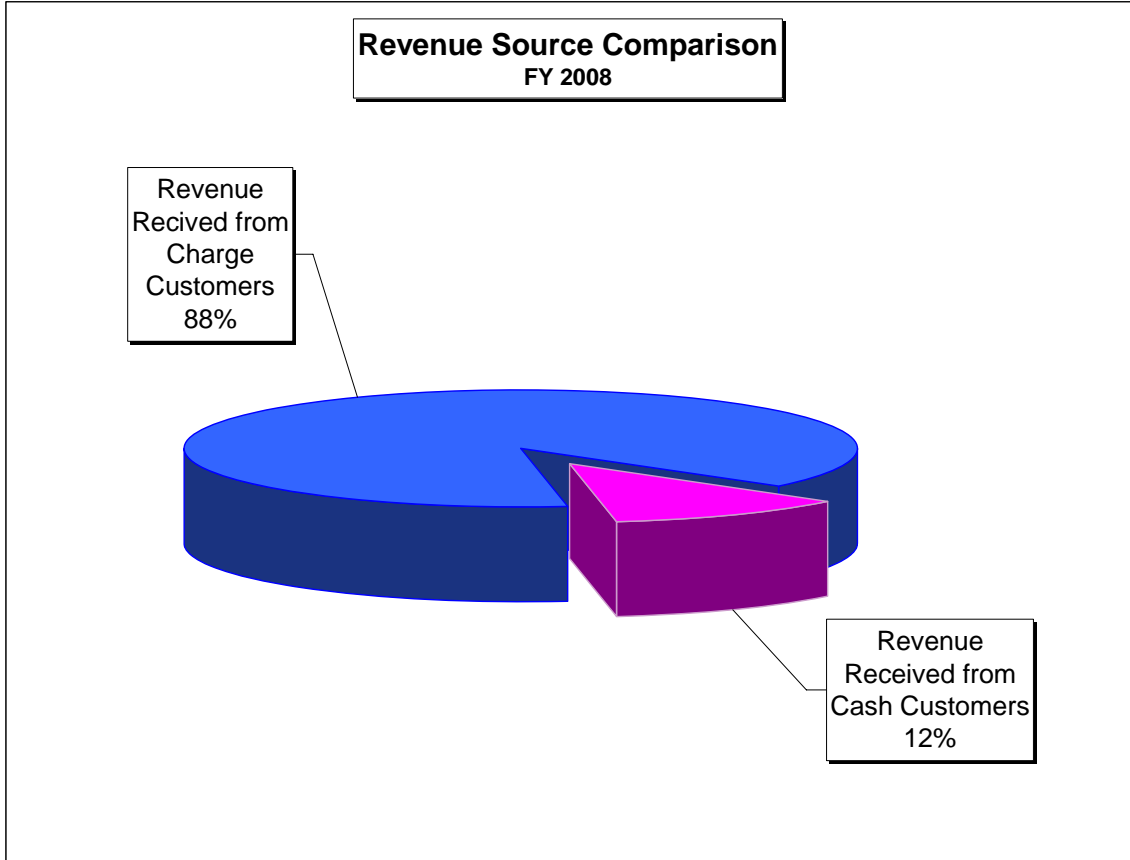
Landfill Safety:

The primary concern in landfill operations is the safety of those who visit or work at the landfill. Regular landfill traffic mixed with heavy landfill equipment presents a dangerous combination.

High customer counts are a negative factor in safe landfill operations. This becomes a dichotomous issue: high customer counts equate to revenue while at the same time reducing safety conditions.

Landfill customers are encouraged to take advantage of conveniently located, private-owned transfer stations. Using a transfer station saves the customer time and money and saves the landfill from encountering unsafe conditions.

As shown in the above-chart, 60% of the landfill’s customers are cash customers. Usually these customers come to the landfill once or twice a year. They often are uncertain about landfill operations and may require hours to unload their vehicles. The occasional customer presents a safety issue to workers and other customers; and, as the following chart shows, they provide only a small portion of the landfill’s revenue.



Revenue and Expenditures in Detail

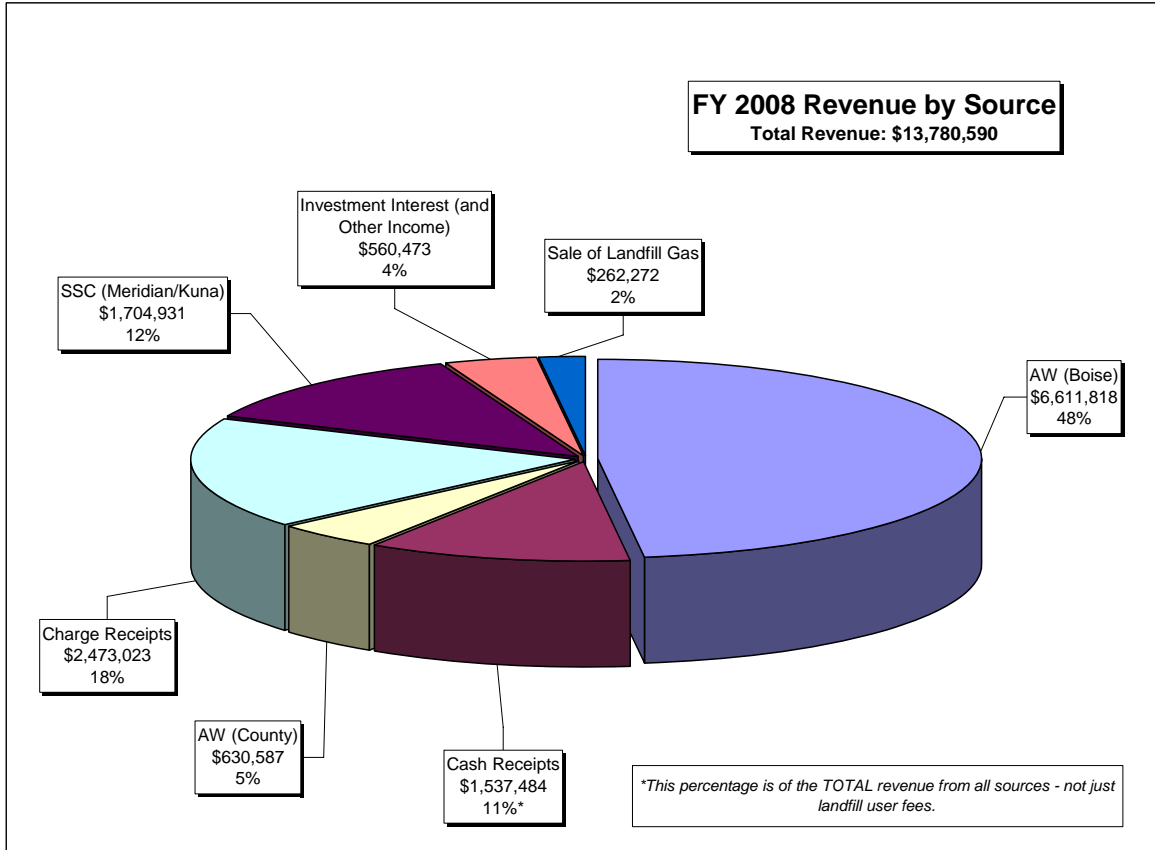
To gain a fuller understanding of the financial activities of the Solid Waste Management Department, a more detailed look at the revenue sources is in order. This will be followed with a detailed look at where the money goes.

Unfortunately, when looking at the activities of a single year, one is often unable to grasp the full implications of economic turmoil on the solid waste disposal system. After our look at the fiscal year numbers, there will be a number charts with multiple year data presented to provide a longer view of the financial aspects facing the department.

Special attention to the long-term view is required because that is where the major expenditures and obligations are found. Expansion of landfill capacity, closure and post-closure expenses, compliance with existing regulations and anticipating new requirements are all factors affecting the financial health and capabilities of the solid waste disposal system.

Because of the department's Enterprise Fund status, the department must face those factors head-on to ensure appropriate funding to meet regulatory requirements. The department must also look at the levels of service provided by the department, including the subsidized household hazardous material management program and the organics-recycling program.

Revenue by source and expenditures are charted below.



Fees collected at the landfill gate generate **94%** of the department's revenue.

The City of Boise, through its utility billing, pays the landfill for residential trash disposal. For a single-family residence within the City, the monthly trash bill is \$11.65. Of this \$11.65, the landfill received \$2.50 per household per month for landfill fees. The balance of the trash bill covers collection and curbside recycling services, fuel surcharges, and administrative fees.

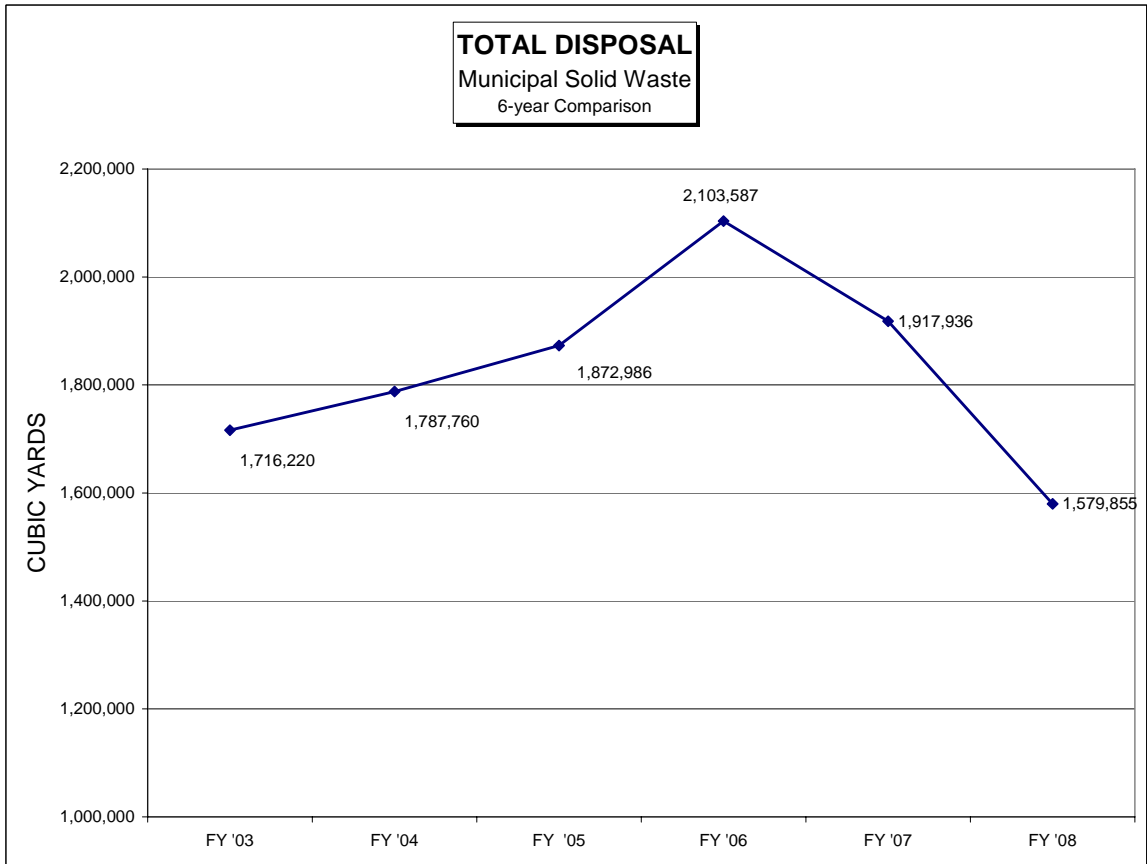
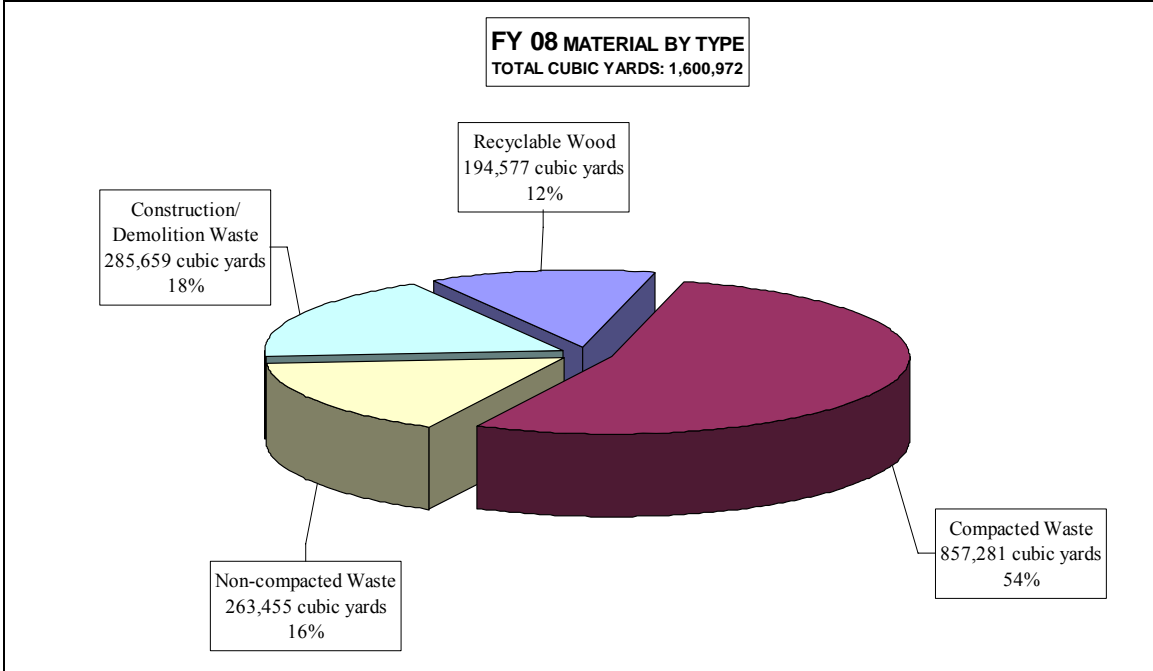
Ada County, through its trash billing services, pays the landfill for residential trash disposal. For a single-family residence in unincorporated Ada County, the monthly trash bill is \$13.60. Of this \$13.60, the landfill received \$3.00 per household per month for landfill fees. The balance of the trash bill covers collection and curbside recycling services, fuel surcharges, and administrative fees.

There is a direct correlation between the amount of trash disposed and the amount of revenue received. Although residential disposal rates do not fluctuate much, other materials, particularly construction and demolition wastes are affected by the local economy.

The next chart shows the amount of material received by the department by material type. The department tracks four (4) waste materials:

- ▶ Compacted waste
- ▶ Non-compacted waste
- ▶ Construction/Demolition waste
- ▶ Recyclable Wood

Following the material chart is a comparison of the total number of cubic yards received at the landfill over a 6-year period. It is easy to see when the local economy began faltering.



WHERE DOES THE MONEY GO

In all business ventures, there are 2 sides of the balance sheet. Looking at just one side of the ledger does not provide the complete picture of the financial health of the organization. As with the revenue picture, one must also look at a broad range of data, not just a single year.

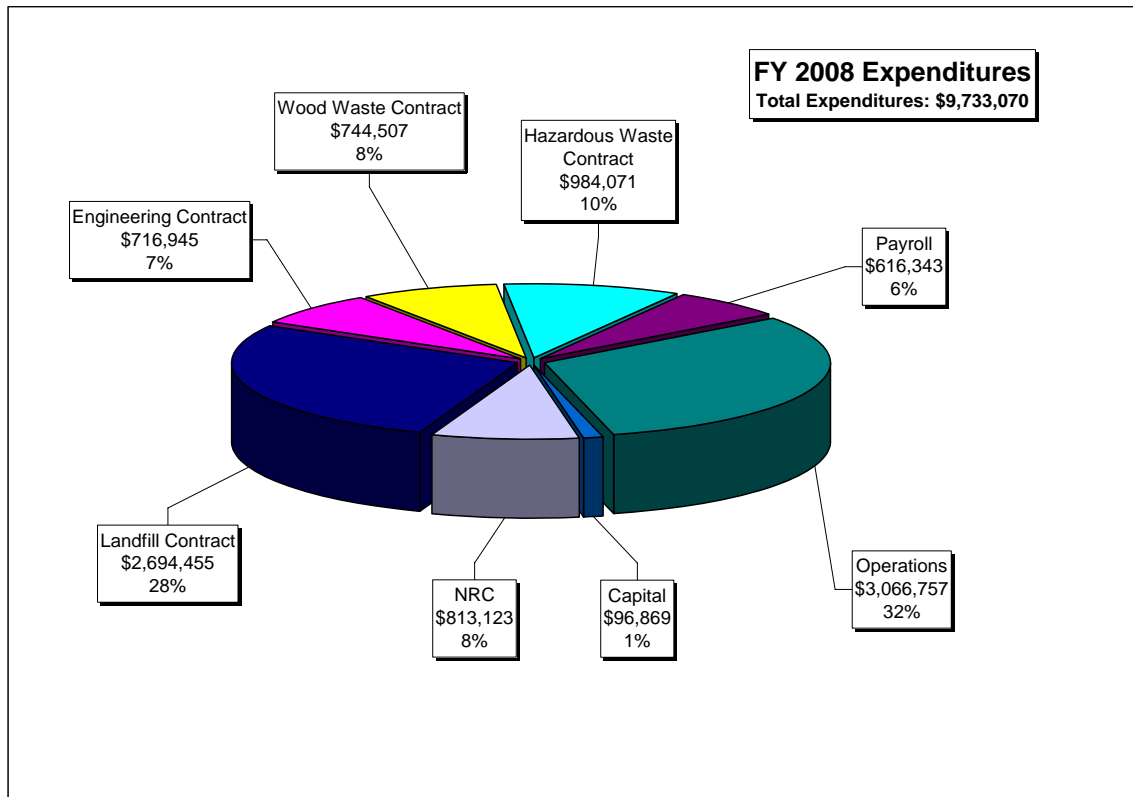
In this section, the department explains where the money went for Fiscal Year 2008 with a look at history and at future needs.

EXPENDITURES:

The Solid Waste Management Department oversees a variety of activities and contracts. Typically, the majority of departmental activities are centered on daily operations of the landfill. To accomplish the department’s mission, the department manages contracts for:

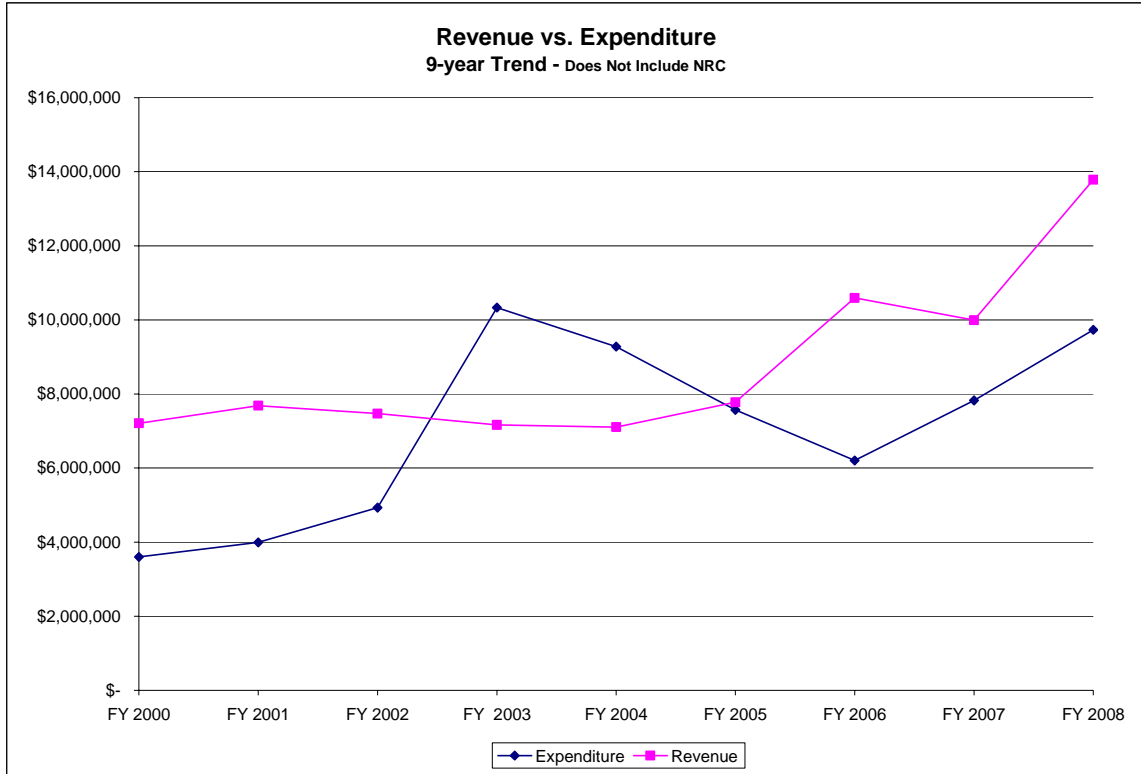
- ▶ Landfill services (\$2.69 million),
- ▶ Hazardous waste management (\$984,000),
- ▶ Wood and organics recycling (\$744,000), and
- ▶ Engineering services (\$716,000).

Beyond the contracts, the department spent more than \$4.5 million for environmental controls (landfill gas collection); equipment maintenance; improvements in the North Ravine Cell landfill; payroll; capital expenditures; and, other expenses. The following chart shows the major expenditure categories for the department.



In years when revenue exceeds expenditure, the excess funds are placed in a special reserve account that is managed by the Ada County Treasurer’s Office. The reserve account is used for capital expenditures and major construction projects. It is also for long-term financial obligations for maintenance of the landfill property once landfill operations have ceased. Ada County has a statutory obligation to care for the landfill for a minimum of 30 years after the landfill has closed.

In years where major construction projects are planned, a portion of the reserve account funds are included in the department’s budget to cover the contractual commitments of construction. These major projects often look like the department is operating in the ‘red’ by expending more money than it takes in. The following chart compares the department’s expenditures and revenues over a number of years.



Keeping in mind that when revenue exceeds expenditure, the money is deposited in the reserve account. When expenditures exceed revenue, money is removed from the reserve account. As an enterprise fund, no tax dollars are collected or used for support of the department.

The largest single expense the department faces is construction of additional landfill space. In 2005, Ada County began expanding its landfill space by constructing the first stage of the North Ravine Cell (NRC). The NRC is the replacement landfill for Hidden Hollow Landfill.

Being built in stages, the first NRC stage was finished in 2007. The 20-acre landfill cost over \$17 million. The project was paid for from the funds held in the department’s enterprise fund. The department began filling the first stage with trash on August 15, 2007. By the end of fiscal year 2008 (September 30, 2008), the first stage was nearly filled to capacity. Construction of expansion stage 2 will cost roughly \$12 million. As with all landfill projects, the funds are in the bank before a construction contract is issued. The tricky part of this system is ensuring there is enough capacity constructed in each successive stage to provide the department with enough time to replenish the enterprise fund in preparation for the next construction cycle.

FEES: DISCOUNTS, WAIVERS AND DONATIONS

Because the Solid Waste Management Department operates as an enterprise fund, the fees collected at the gate pay for all department activities. The rates charged at the gate are established by the Board of Ada County Commissioners and are applied equally to all customers.

CHARITABLE ORGANIZATIONS. Unfortunately, many charitable organizations become the dumping grounds for many unusable items. These organizations are often inundated with items impossible for them to sell or to use. 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 many of their important services.

COMMUNITY SERVICE GROUPS often 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. The landfill will waive fees for disposal of this waste. An example of this fee waiver is the Paint the Town organization's annual program.

Clean up projects performed by other community groups or scouts benefit the community by gathering litter and illegally discarded items in public areas. Oftentimes, the waste hauling companies in the community 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.

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

By far, the largest discount (in a dollar amount) is the discount offered for recyclable wood. Customers who separate their recyclable wood from their other trash receive a sizable discount for their wood placed in the wood recycling area. As noted in this report, over 139,200 cubic yards of wood was shipped away from the landfill for other uses.

All of these programs cost. In fiscal year 2008, the Solid Waste Management Department, through discounts, waivers and donations did not collect over \$400,000 in landfill fees.

What We Do

The Department

Although the department has the large responsibility of ensuring proper disposal of Ada County's municipal solid waste, it does so with a staff of 12, five who work part-time.

The Solid Waste Management Department is part of Ada County government. As such, the department Director answers directly to the Board of Ada County Commissioners. All daily operational decisions are under the discretion of the Director with long-term plans and needs discussed with the Commissioners. Besides daily operation and oversight of the previously mentioned contracts, the Director meets with the Ada County Treasurer to recommend

contractual adjustments to the waste collection contract to the Commissioners.

Staffing and Divisions

To accomplish its responsibilities, goals and mission, the department consists of three divisions identified by their primary objectives. The three divisions are: Solid Waste Division, Hazardous Waste Division, and Environmental Division. Although the department divisions define the division of labor, the three divisions 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 Division

The Solid Waste Division is the largest division in the department. Under the direction of the Director are a Deputy Director, a Health Protection Officer, two Account Clerks, one Environmental Systems Coordinator and five part-time Cashiers. These employees:

- ▶ Oversee contracts for waste collection, landfill operation, wood waste recycling, and solid waste screening;
- ▶ Account for department receipts and expenditures;
- ▶ Collect landfill disposal fees;
- ▶ Provide public education and outreach programs about solid and hazardous waste disposal, recycling, and waste reduction;
- ▶ Enforce Ada County codes relating to human health, waste accumulation, unlawful waste disposal, uncovered or unsecured loads, and littering;
- ▶ Issues burn permits for locales outside fire districts.

THE STAFF

The Deputy Director provides short and long range analysis and plan development 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 Health Protection Officer (HPO) is a sworn deputy for the Ada County Sheriff who works for the Solid Waste Management Department. The HPO enforces, by vehicular patrol and visual inspection, County ordinances and federal laws relating to solid waste, hazardous waste, and air pollution. With jurisdiction in the unincorporated areas of Ada County, the HPO patrols over 900 square miles. The HPO also serves as the first-line supervisor for the department. He ensures

proper landfill operation, oversees maintenance projects, and acts under the department's Director's authority in resolution of questions and disagreements.

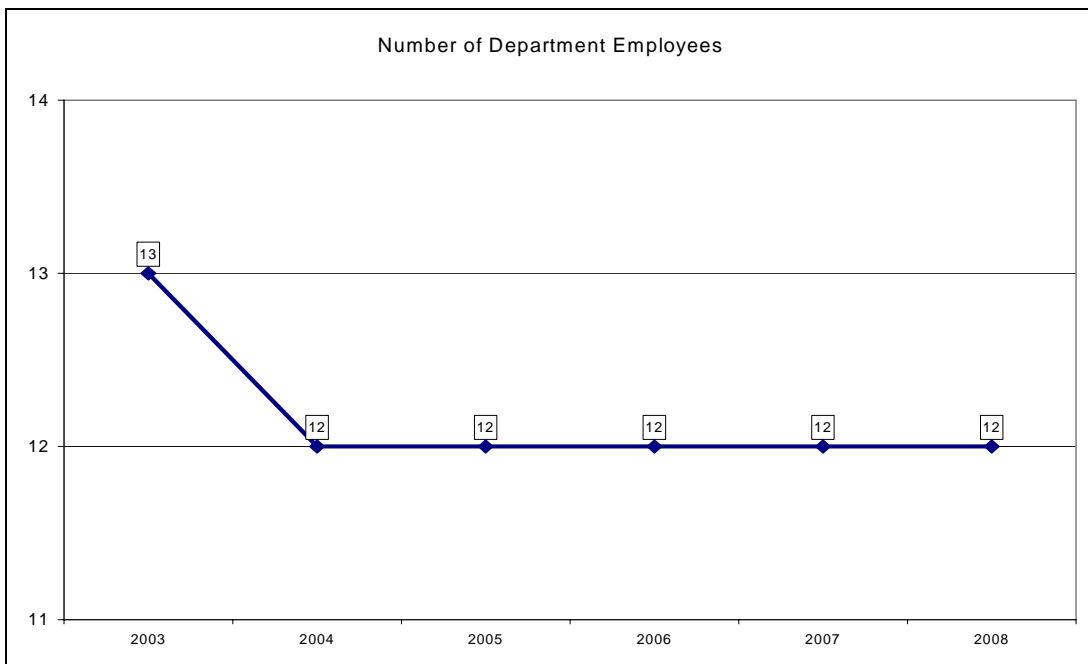
Account Clerks perform the full range of record keeping work in the detailed maintenance of the financial status of the Solid Waste Management Department, maintain accurate details of daily receipts and transactions, and monitor charge account activities of approved customers, and accomplish secretarial duties for the department.

The Environmental Systems Coordinator oversees operation and maintenance of the landfill-gas extraction system, 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.

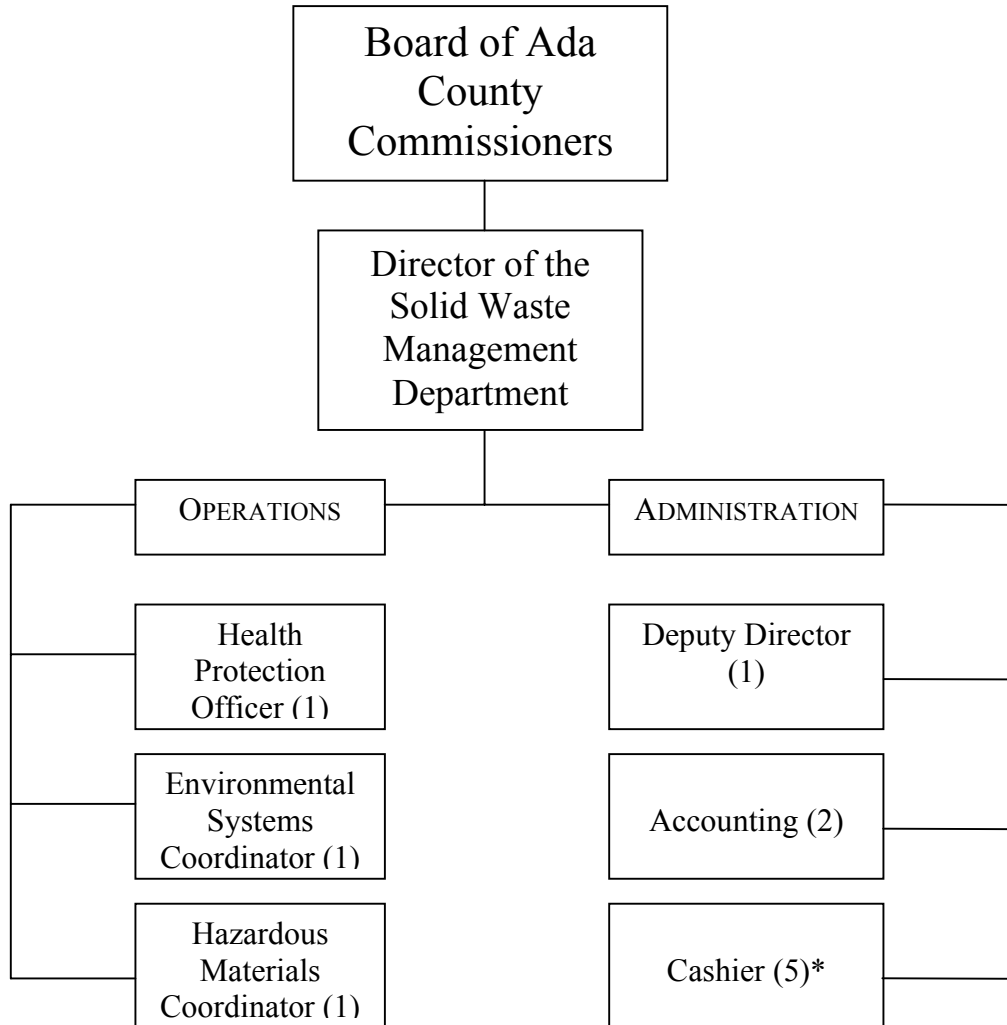
The Hazardous Materials Coordinator oversees operation and maintenance of the County's hazardous materials collection program. This position works with the municipalities in the County to provide a seamless program for proper disposal of household hazardous wastes.

Cashiers greet customers, charge and collect fees from landfill customers, maintain custody and account for money received.

Following is a graph depicting the staffing level for the Solid Waste Management Department for the past 10 years.



FISCAL YEAR 2008



* 5 part-time cashiers

BOARD OF ADA COUNTY COMMISSIONERS		
<u>First District</u> Paul R. Woods	<u>Second District</u> Rick Yzaquirre	<u>Third District</u> Fred Tilman

DIRECTOR OF THE SOLID WASTE MANAGEMENT DEPARTMENT Dave Neal
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Hazardous Waste Division



Ada County's Household Hazardous Materials Collection Facility

Hazardous Material Management

Located at the Landfill, Ada County's Household Hazardous Material Collection Facility accepts hazardous, potentially hazardous, or dangerous material from households in Ada County. Through a contract with a private firm specializing in hazardous material management (Clean Harbors, Inc.), County residents may bring their household hazardous materials, such as, paints, pesticides, fertilizers, cleansers, solvents and automotive products (oils, anti-freeze, batteries, etc.) to the Facility at no charge. Conditionally exempt small quantity generators (commercial enterprises that generate less than 220 pounds of hazardous wastes per month) may qualify to use the Facility services at a nominal cost.

During Fiscal Year 2008, more than 20,400 households participated in the collection program.

The Facility at the Landfill is open to Ada County residents each Friday and Saturday. The Facility accepts conditionally exempt small quantity generator waste by appointment only. Supplementing Landfill collection activities are collection activities in the cities of Boise, Meridian, and Kuna.



MOBILE COLLECTION – AN INTEGRAL PART

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 various sites around the City. More than 6,900 city households took advantage of the

collection sites in this last fiscal year.

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 monthly event. Over 3,000 households took advantage of the Meridian collection site during Fiscal Year 2008.

The Meridian event is rather unique in its design. Meridian's trash collection company, Sanitary Services Company (SSC) collects recyclable commodities at curbside. Revenue from the sales of the commodities pays for the collection event with any money left over going 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. Each Spring and each Fall, the City of Kuna and J&M Sanitation sponsor a one-day household hazardous material collection. This fiscal year, 217 households participated in the household hazardous material collection events.

CITY OF EAGLE

Quarterly, the City of Eagle sponsors collection locations for household hazardous waste. Over 323 residents in the Eagle area dropped off over 12,000 pounds of material.



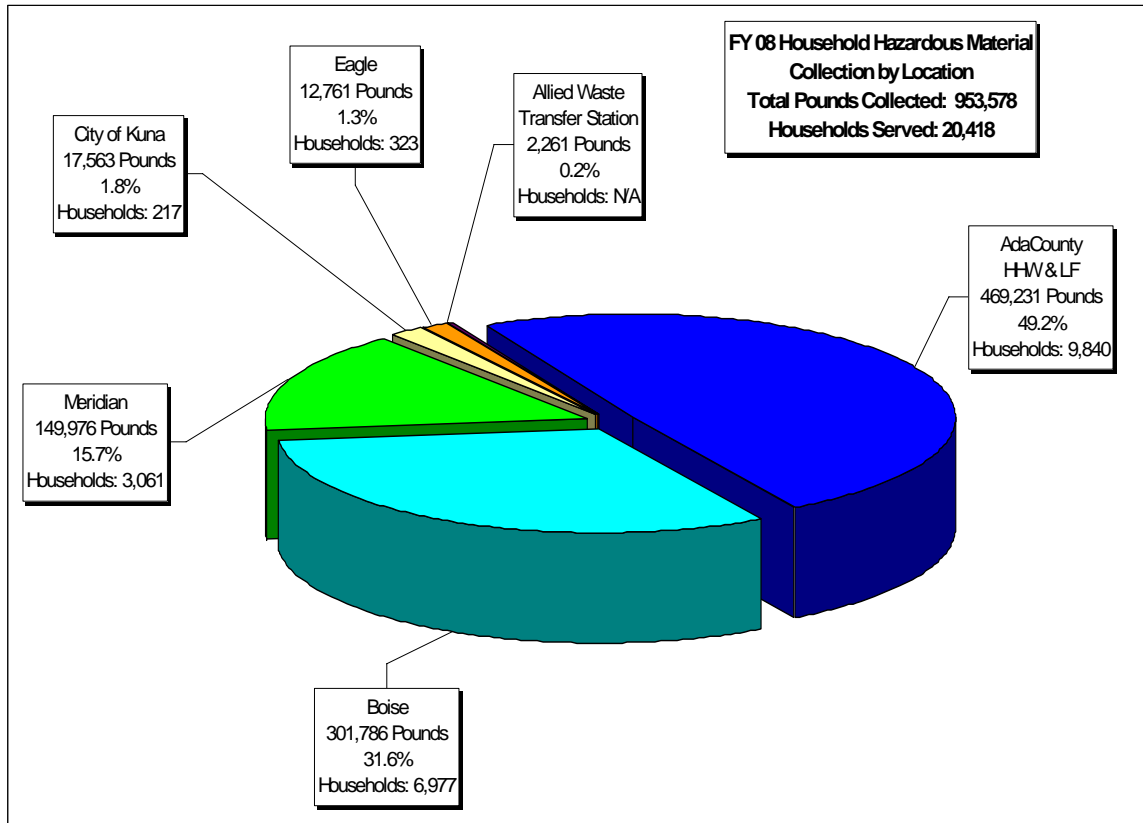
COLLECTED MATERIALS

Hazardous material collected in the countywide program is taken to the County's Facility for processing and shipment to disposal facilities. Ada County's hazardous material contractor, Clean Harbors, Inc., categorized and processed 953,578 pounds of material.

Clean Harbors, Inc. segregates the material into following 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, Clean Harbors, Inc. strives to recycle/reuse as much of the collected material as possible. This past fiscal year saw 804,060 pounds (84%) recycled/reused, with 149,518 pounds (16%) destroyed at an off-site incinerator.



While this program is free of charge to participating residents, Ada County pays the cost of disposal of the household hazardous materials collected in the countywide program. Ada County wishes to express its appreciation to the participating municipalities that help make the program such a success.

COMPUTER MONITORS AND TELEVISIONS

A real problem in the waste stream is electronics disposal. Modern electronics contain various hazardous or potential hazardous components, such as heavy metals. Because technology changes so rapidly, computer equipment quickly becomes obsolete. Of particular concern to Ada County are computer monitors and television sets.

Monitors and television sets, and other electronic devices containing a cathode ray tube (CRT), 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 2008, Ada County shipped more than 20,800 units (CRTs) to a recycling facility. Since the program began, Ada County has shipped over 101,200 units.

CRTs prepared for shipment to recycle center.

10 YEARS OF HHW SUCCESS

Recognizing a threat to the environment and to human health, Ada County established the Hazardous Waste Division to manage potentially hazardous material brought to the Landfill. The division is a direct descendant of annual household hazardous waste collection events held between 1989 and 1996. These highly successful and popular events were the result of cooperative efforts among Ada County, Boise City, the Central District Health Department, and the Ada County Highway District.



Because of the popularity and the increasing costs of the events, Ada County made the commitment to construct a permanent household hazardous material collection facility at the Landfill. In 1998, the County's Household Hazardous Material Collection Facility (Facility) opened. One County employee, a Hazardous Material Coordinator, oversees the operation of the Facility.

The Board of County Commissioners directed that any household hazardous material collected by local jurisdictions in Ada County could be brought to the facility and Ada County would pay the disposal costs. As part of its continuing support of the hazardous material collection program, the City of Boise purchased a van for use as a mobile collection site. Boise's very successful program has been copied, to a lesser extent, by the City of Meridian, the City of Eagle and the City of Kuna.



The last 2-day annual collection event was held in 1996. Year End Report for 1996 included the following description of the event.

“The eighth annual Household Hazardous Waste Collection event was conducted in May 1996. This year, over 4,700 households took advantage of the collection event. 6,216 gallons of latex paint, 7,300 gallons of used motor oil, 727 lead acid batteries, 160 fifty-five gallon drums of pesticides, 68 fifty-five gallon drums of oil-based paint and solvents, 3 fifty-five gallon drums of household batteries, 1,118 gallons of anti-freeze, 310 pounds of lab-pack materials, and 34 fifty-five gallon drums of miscellaneous materials were collected and diverted from Hidden Hollow. These materials could have legally been disposed in the landfill. However, because of their hazardous nature, it is better for landfill operations and for the environment that these items are diverted for other disposal.

The 1996 Household Hazardous Waste Collection event cost \$117,717.15. This was an average of \$24.80 per household using the event.”

Logistics, cost and participation at the 1996 event capped the County’s evaluation of the effectiveness of the annual household hazardous materials collection events. What started as a one-day, once a year event had grown by demand to a two-day, once a year event. As evidenced by the participation rates, the program needed further expansion.

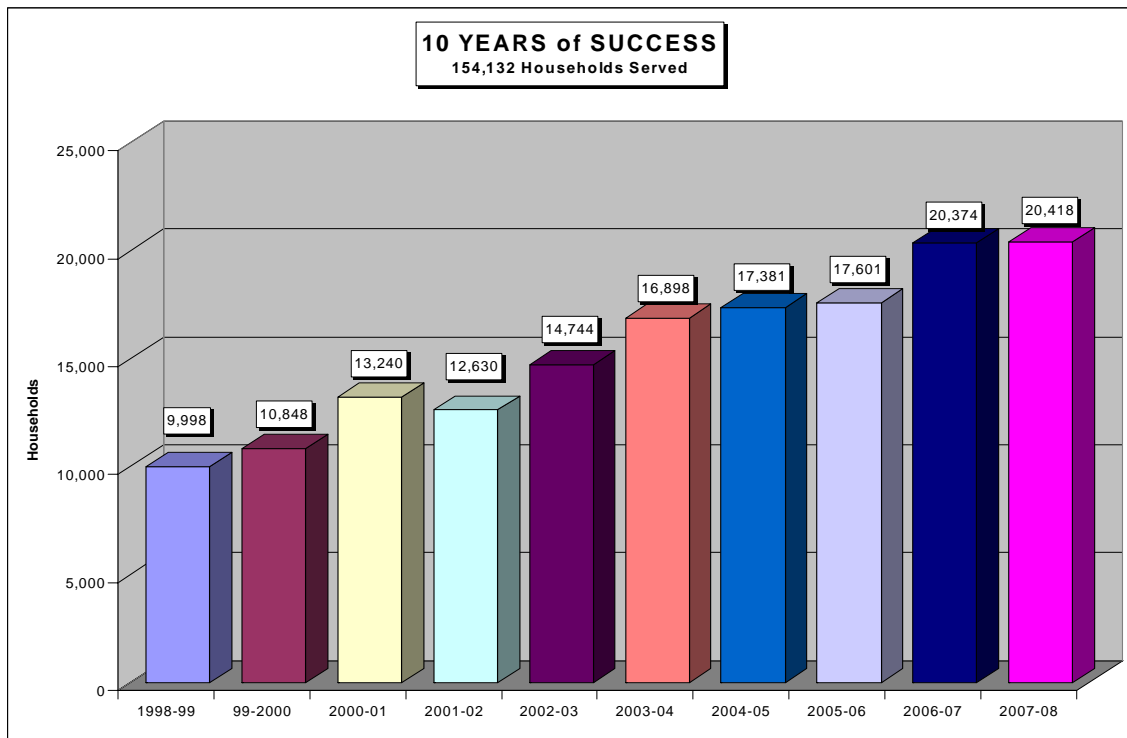
Ada County was aware of other HHW collection efforts in other localities. Reports at trade conferences confirmed the successes and the failures, the good and the bad, the beautiful and the ugly aspects of HHW collection. It was apparent by the reports given that Ada County’s program was on-track in its development – development that lead many localities to advance from annual collection events to establishment of a permanent facility with expandable capacity and availability.

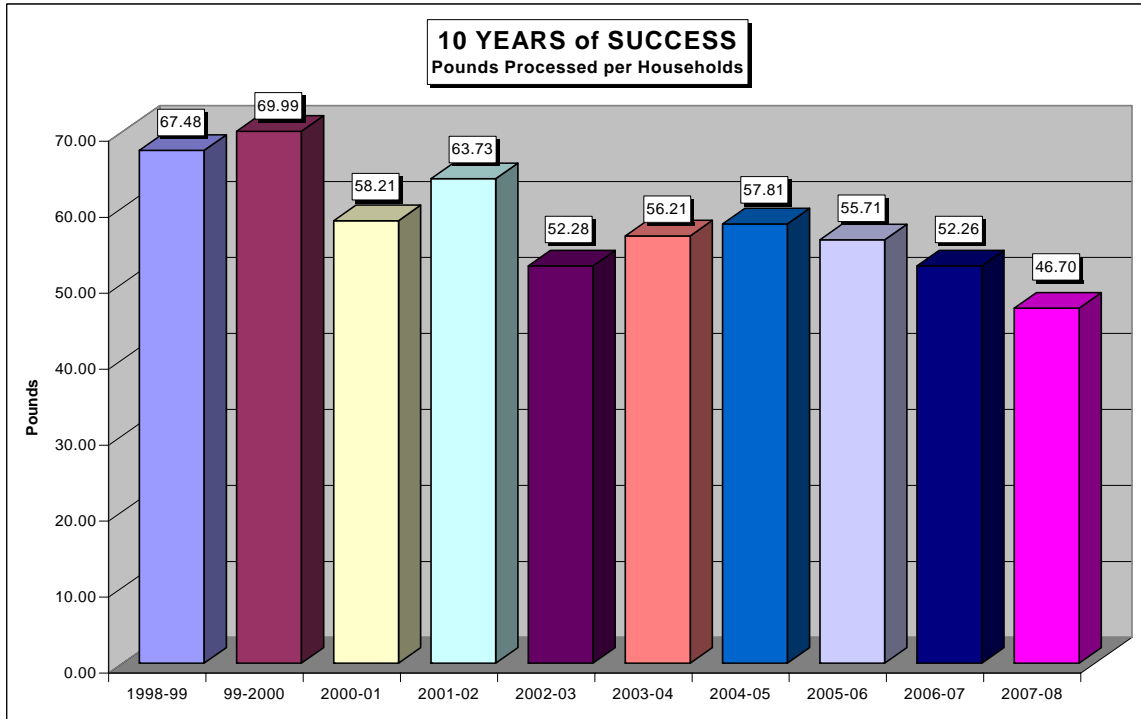
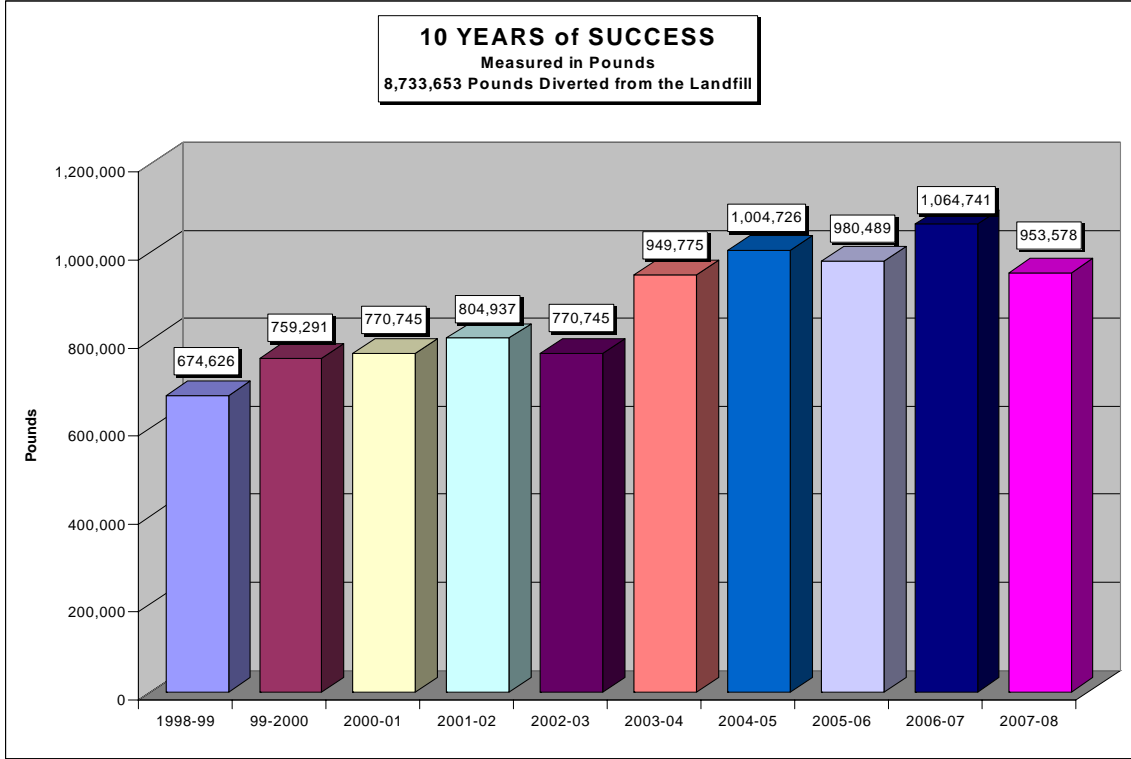
The 1996 Household Hazardous Waste Collection event cost \$117,717.15 and provided service to roughly 4,700 residents in 2 days.

Recognizing the demands and the growth, Ada County began the process of looking for a long-term solution that would effectively control not only hazardous waste disposal but also costs. The logical next step in the program was a move away from annual events to a more accessible and convenient option – construction of a permanent facility.

Ada County and its consultants looked at a variety of alternatives and programs. Visiting half-dozen facilities in western Washington, the County saw a wide variety of solutions to the same problems and issues present in the County’s program. Although there was no “one perfect solution,” there was a common theme. Based on the examination of the western Washington sites and research into other programs, Ada County directed its consulting architect to design an appropriate building for the County’s program. The building would be located at the landfill where it would be convenient to much of the County’s residents.

In 1998, the County opened the Household Hazardous Waste Collection Facility at the landfill. The following charts show the program’s success through participation.





The success of this program is directly attributable to the partners who have contributed so much to planning and execution. Ada County wishes to sincerely thank the following public agencies and private companies for their support, energy and resources that helped Ada County reduce the environmental threat to our community by over 8 millions pounds.

Thank you:

- ▶ City of Boise
- ▶ City of Meridian
- ▶ City of Eagle
- ▶ Ada County Highway District
- ▶ Idaho Department of Environmental Quality
- ▶ Central District Health Department
- ▶ Allied Waste Services of Idaho
- ▶ Sanitary Services Company

With this kind of support, the program's success of the last 10 years should easily be repeated in the next 10 years.

Environmental Division

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



Landfill Gas Well-drilling Rig.

LANDFILL GAS MANAGEMENT

Landfill gas management continues to be a high priority for the department. Balancing the gas extraction system to optimize gas control for regulatory compliance in nearly a full-time job in itself. The County also desires to maximize the amount of gas being used in the landfill-gas-to-energy project located at the landfill. To meet these goals, the department installed additional collectors in the Hidden Hollow Landfill.

Landfill gas collectors consist of both vertical collectors (wells) and horizontal collectors. Collectors are perforated HDPE pipe connected to a blower system. The blower system creates negative pressure in the landfill drawing the gas to the desired location. Ada County's desired location is the electricity cogeneration plant or the utility flare located in the Hidden Hollow Complex.



Horizontal Collector

FROM NUISANCE TO RESOURCE

LANDFILL-GAS 101

Landfill-gas is a nuisance at any landfill. It is the natural by-product of the decomposition of organic materials in the waste. It is only created when the buried waste has reached an anaerobic state (a condition where there is no oxygen present). It consists of primarily two (2) gases: carbon dioxide (CO₂) and methane (CH₄). Methane is also known as natural gas. Both gases are odorless and colorless. They have, however, very different characteristics.

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. It is this mix of gases – now called landfill gas – that is a problem for landfills.

Having half the Btu value of natural gas, the odors of the trace gases, and a tendency toward corrosiveness, landfill gas does not have many uses. Typically, landfills manage landfill gas by collecting it for destruction. In 2001, Ada County began destroying its landfill gas in an enclosed utility flare.

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 to be used as fuel in an electricity go-generation facility. Presently, Ada County captures enough landfill gas for its contractor to generate roughly 3.2 mega-watt of electricity – enough electricity to power about 2,400 homes.



Electricity co-generation facility.

Ada County contracts with G2 Energy for utilization of the landfill gas produced as the County’s landfill. In fiscal year 2008, G2 Energy paid Ada County over \$262,000.

Getting the Job Done

PUBLIC – PRIVATE PARTNERSHIP

From the landfill's opening in the spring of 1972, Ada County has contracted with privately owned companies for landfill operations. Over the years, the County has increased the number of private contractors performing work for the Solid Waste Management Department.

By contracting 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.

For more than 30 years, Ada County has proven the effectiveness and cost savings found through the public-private partnership. Ada County provides the core-management while the private sector provides the equipment and manpower to accomplish their tasks.

Through carefully written contracts, Ada County provides an effective, low-cost solid waste disposal system to the residents, businesses and institutions in the county. In a typical year, the Solid Waste Management Department oversees the performance of six (6) contracts for services ranging from engineering services to waste screening services.

THE CONTRACTORS

LANDFILL OPERATIONS



Typically, the Solid Waste Management Department'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.

Environmental Earthworks, Inc. fills the contract for daily operations. As required by

the contract between Ada County and Environmental Earthworks, this contractor supplies all the equipment and personnel necessary to complete the work specified in the contract.

In 2007, the County began operations in the North Ravine landfill with Environmental Earthworks providing the equipment and manpower. Operating both Hidden Hollow and the North Ravine increased the County's daily operating expenses.

Environmental Earthworks provides additional services to the department by installing parts of the landfill-gas extraction system and by doing preparatory work for expansion of the North Ravine landfill.



WASTE SCREENING

To ensure that hazardous, dangerous, or other inappropriate wastes are not deposited in the landfill, the County contracts for waste screening services. Employees of Environmental Earthworks interview landfill users and examine loads to intercept inappropriate material.

For the combined services provided to Ada County through their contracts, Environmental Earthworks, Inc. was paid \$2,694,455.

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. 139,278 cubic yards of wood was recycled in fiscal year 2008.

The economic slow-down of the past 2 years has affected the wood-recycling program. In fiscal year 2006, 197,593 cubic yards of wood was recycled; in fiscal year 2007, 161,924 cubic yards. **This is a 29.5% decrease in volume.**

Ada County contracts with Enviro-Progress, Inc. for wood and organics recycling. The County pays this firm for material that is chipped and hauled away from the landfill. Enviro-Progress is paid \$5.00 per cubic yard and they received \$744,507 for their services in fiscal year 2008.

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 6-week period. In addition, following Christmas, residents may bring their Christmas trees to the landfill for recycling.



HAZARDOUS WASTE MANAGEMENT

Since 1988, Ada County has proactively worked to keep household hazardous waste from entering the landfill. Starting with a one-day annual collection event, the popularity of the program grew to the point where Ada County saw the need for a permanent collection facility that was open year-round. In 1998, the County opened its Household Hazardous Material Collection Facility operated by a privately owned firm experienced in hazardous waste management.

Ada County contracted with Clean Harbors, Inc. for hazardous material management and disposal. Clean Harbors operated the facility according to an operations plan and contract documents. For fiscal year 2008, the County paid Clean Harbors, Inc. \$984,071.

The hazardous waste management contract includes the requirements of operating the mobile hazardous waste collection program for the City of Boise. The City pays for the personnel services but Ada County pays for disposal of the hazardous wastes collected at the mobile sites.

The City of Boise maintains eight (8) sites – each site open one day per month. The City of Meridian, through their franchise trash collection firm, maintains one (1) site that is open 5 days per month. The City of Eagle also participates in the program with quarterly collections. The City of Kuna, through their franchise trash collection firm, has semi-annual collection.



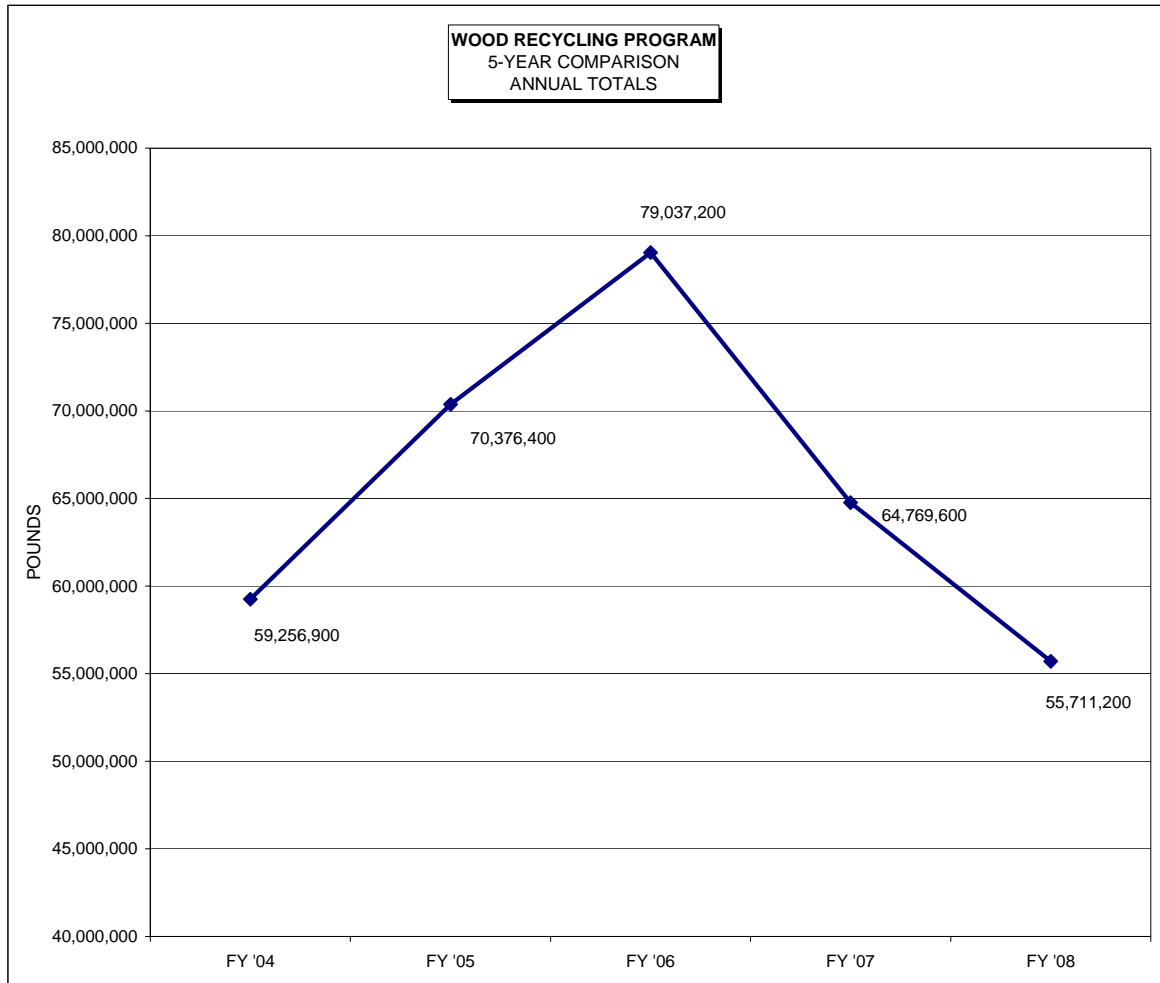
ENGINEERING

CH2M HILL, Inc. is the department'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 2008, the County paid CH2M HILL \$716,945.

DETAILS ON RECYCLING

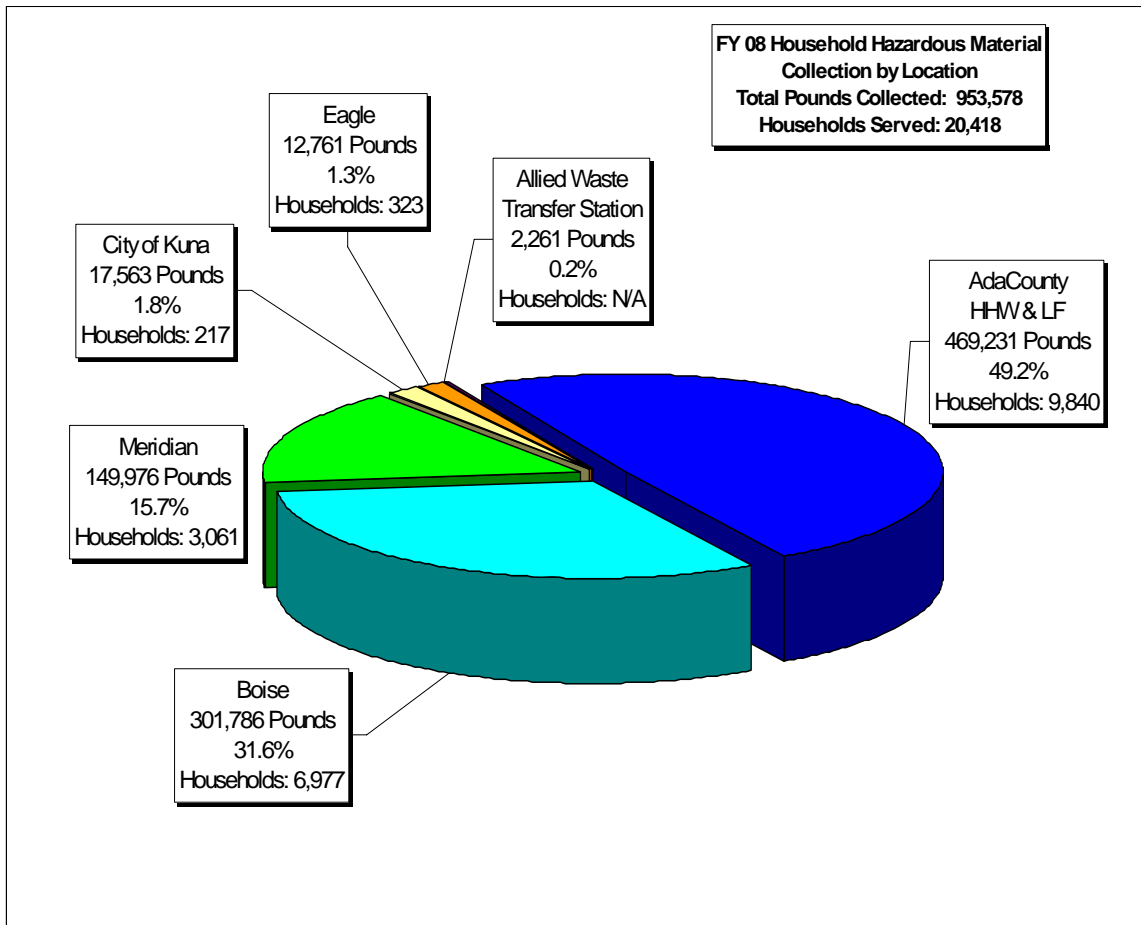
Following are the graphic details of the diversion and recycling programs at the landfill. These figures are important to the department in that they represent material that was not buried in the landfill. These graphs compare 5 years of data to serve as a guide and a reminder that sometimes more effort is due. They also serve as indicators of how well a program is working; and, it can show the effects of external events, such as economic status.

Wood Waste Recycling



The sharp decreases in the past 2 fiscal years reflect the affects of the collapse of the building industry. With less construction, there is less disposal. Wood waste remains the most successful recycling program at the landfill.

Household Hazardous Waste



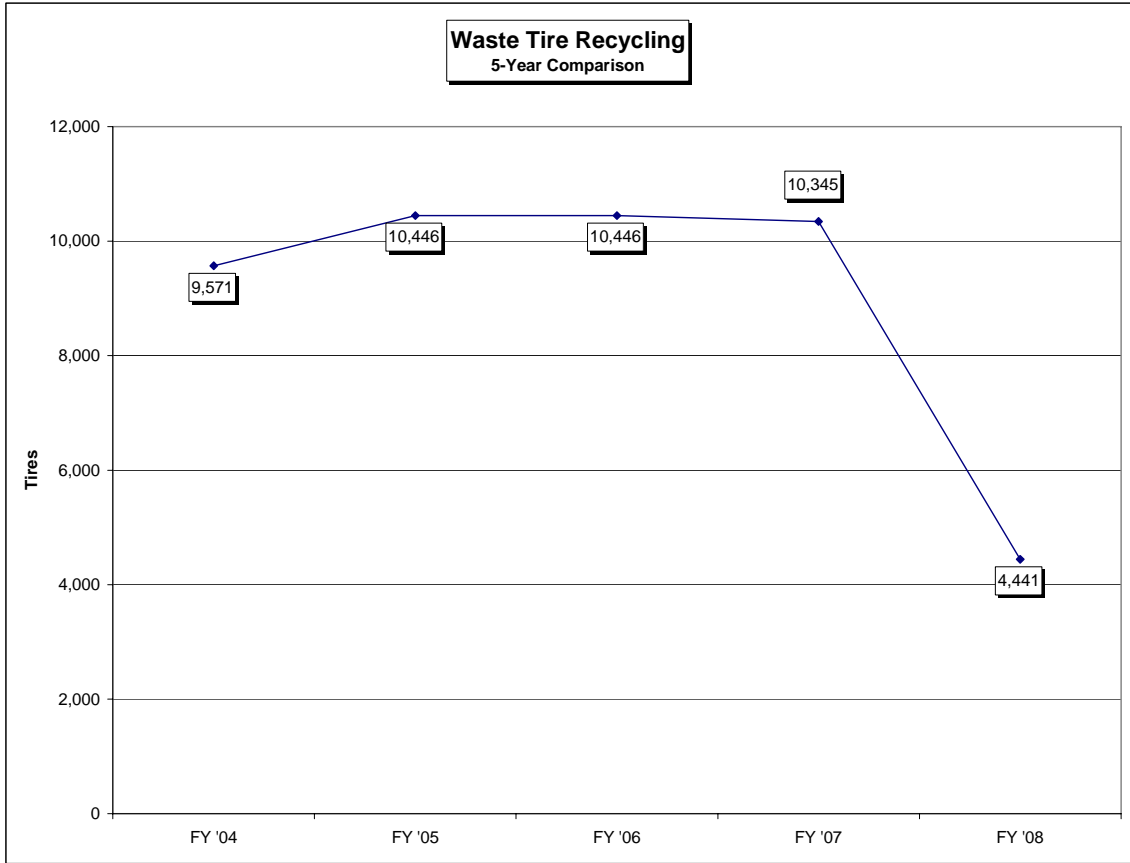
Household hazardous waste is recycled or reused in a variety of ways depending on its composition.

Curbside Recycling

In all, more than 12,000 tons of recyclable commodities were reported collected by the waste collection firms in Ada County. Because of its population concentration and size, the residents of the City of Boise set out the most at 8,390 tons. The residents of the City of Meridian did their part in setting out 1,874 tons. County residents (those living outside the cities' limits) set out 971 tons. Residents in the City of Eagle contributed 409 tons; residents of the City of Garden City 328 tons; residents in the City of Kuna 212 tons; and residents in the City of Star 72 tons.

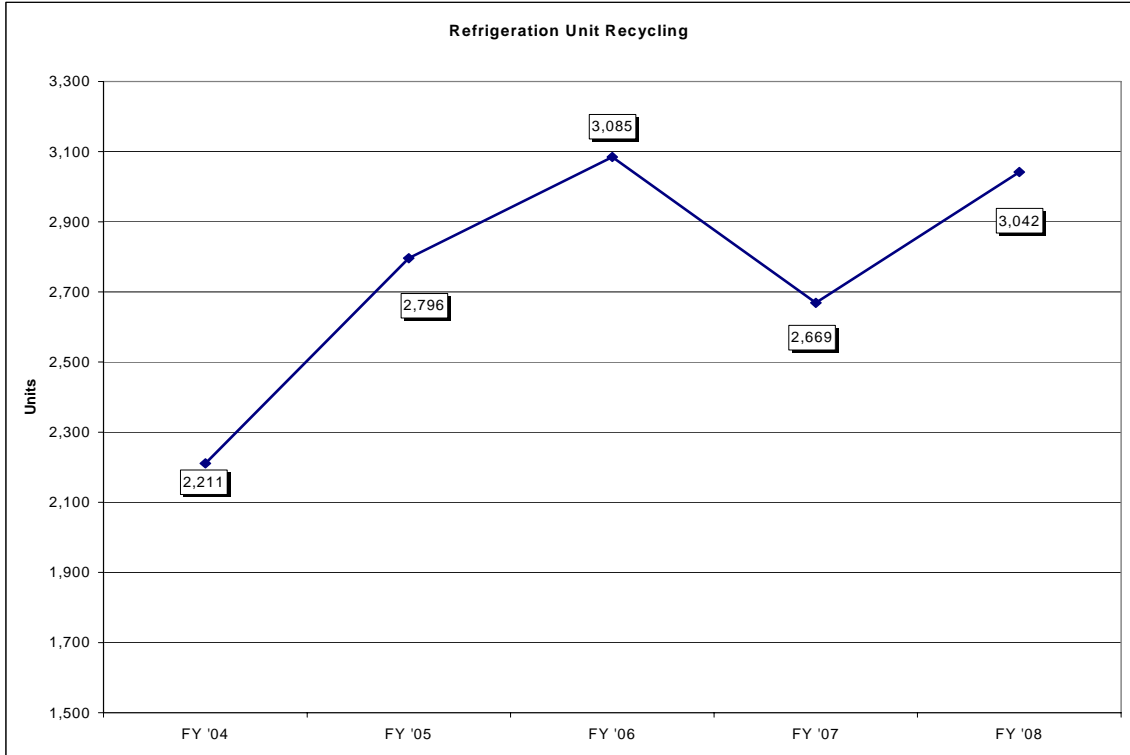
- Commodities Collected Curbside:
- ▶ Newspaper
 - ▶ Recovered paper/cardboard boxes
 - ▶ Plastic
 - ▶ Metal cans
 - ▶ Magazines and catalogs

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.

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. Last year, more than 666,320 pounds of metal was diverted to the metals recycler.

SYNOPSIS

This year, the Solid Waste Management Department chose the theme, “The Economics of Solid Waste Disposal.” In times of economic growth, the department makes strides toward meeting its long-term goals and commitments. Being an Enterprise Fund, the department readily feels the affects of the ‘boom or bust’ cycles of the economy.

In the past, the department was better able to handle the economic ups and downs. This was partly because the regulations for solid waste disposal were easier to comply with and there was sufficient space in the landfill to deal with periods of growth. As the capacity of Hidden Hollow diminishes, the need for expanded capacity in North Ravine is paramount. Being a modern landfill, North Ravine must meet a more stringent set of rules than were in place for Hidden Hollow.

North Ravine is an engineered structure. It contains all manner of environmental safeguards and controls, including an HDPE 60-mil liner, leachate management, landfill gas management, and storm water control. Although Hidden Hollow has some of these elements, North Ravine is required to have all of them. These requirements have driven up the cost of solid waste management.

To meet the economic challenges facing the department, management has looked at cost-cutting measures and other methods to save money. With the drop in waste volume in the past couple of years, the department has seen significant decreases in its revenue. Unfortunately, there is no way to turn down the waste flow. Modern life produces trash. Trash must be managed. However, when a goodly portion of the revenue stream disappears, it becomes necessary for the department to tighten its budgetary belt.

Because the department has been fiscally conservative over the years, the careful management of the department will see the department through this economic downturn and will be better positioned as the economy improves.

The department’s mission statement says, “The Solid Waste Management Department 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.”

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

Appendix - A

Ada County
Curbside Recycling Program
Commodities Collected by BFI/Allied Waste
(Measured in Tons)

Commodity	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
ONP	43.89	45.85	42.20	39.62	35.31	35.07	34.12	34.87	30.72	30.97	27.08	39.80	439.50
MWP/OCC	28.61	29.89	27.51	25.82	23.01	22.86	39.50	42.16	37.08	37.21	45.84	33.99	393.48
Plastic	5.18	5.41	4.98	4.67	4.17	4.14	6.13	6.27	5.52	5.57	2.62	7.16	61.82
Tin	2.54	2.75	2.61	2.44	2.20	2.16	2.45	2.56	2.25	2.27	2.27	4.07	30.57
Aluminum	1.27	1.37	1.30	1.22	1.10	1.08	1.23	1.28	1.13	1.13	1.13	2.04	15.28
OMG	2.97	3.10	2.86	2.68	2.39	2.37	2.68	2.74	2.42	2.44	1.15	3.13	30.93
Totals	84.46	88.37	81.46	76.45	68.18	67.68	86.11	89.88	79.12	79.59	80.06	90.18	971.54

ONP = Newspaper
MWP/OCC = Recovered Paper/Cardboard Boxes
Plastic = #1, #2, #3
Tin = Steel "Tin" Cans
OMG = Magazines and Catalogs

Appendix - B

City of Boise
 Curbside Recycling Program
 Commodities Collected by BFI/Allied Waste
 (Measured in Tons)

Commodity	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
ONP	364.98	381.31	350.93	329.47	293.61	291.64	283.72	290.02	255.51	257.55	301.70	275.62	3676.06
MWP/OCC	284.85	323.09	319.03	298.83	273.01	264.50	328.55	350.65	308.34	309.38	257.63	235.36	3553.22
Plastic	43.06	44.99	41.41	38.87	34.64	34.41	51.01	52.14	45.93	46.30	54.24	49.55	536.55
Tin	21.15	22.85	21.67	20.32	18.31	17.99	20.39	21.28	18.73	18.84	18.98	17.34	237.85
Aluminum	10.58	11.42	10.83	10.16	9.15	8.99	10.20	10.64	9.37	9.42	9.49	8.67	118.92
OMG	24.71	25.81	23.76	22.30	19.88	19.74	22.32	22.81	20.10	20.26	23.73	21.68	267.10
Totals	749.32	809.48	767.62	719.97	648.60	637.28	716.18	747.56	657.99	661.76	665.77	608.22	8389.75

ONP = Newspaper
 MWP/OCC = Recovered Paper/Cardboard Boxes
 Plastic = #1, #2, #3
 Tin = Steel "Tin" Cans
 OMG = Magazines and Catalogs

Appendix - C

City of Eagle
 Curbside Recycling Program
 Commodities Collected by BFI/Allied Waste
 (Measured in Tons)

Commodity	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
ONP	20.15	21.05	19.38	18.19	16.21	16.10	15.67	16.01	14.11	14.22	11.70	15.00	197.79
MWP/OCC	13.14	13.72	12.63	11.86	10.57	10.50	13.38	13.67	12.05	12.14	10.72	12.08	146.46
Plastic	2.38	2.48	2.29	2.15	1.91	1.90	2.82	2.88	2.54	2.56	1.20	3.59	28.70
Tin	1.17	1.26	1.20	1.12	1.01	.99	1.13	1.18	1.03	1.04	1.04	2.05	14.22
Aluminum	.58	.63	.60	.56	.51	.50	.56	.59	.52	.52	.52	1.02	7.11
OMG	1.36	1.43	1.31	1.23	1.10	1.09	1.23	1.26	1.11	1.12	.53	1.57	14.34
Totals	38.78	40.57	37.41	35.11	31.31	31.08	34.79	35.59	31.36	31.60	25.71	35.31	408.62

ONP = Newspaper
 MWP/OCC = Recovered Paper/Cardboard Boxes
 Plastic = #1, #2, #3
 Tin = Steel "Tin" Cans
 OMG = Magazines and Catalogs

Appendix - D

City of Garden City
 Curbside Recycling Program
 Commodities Collected by BFI/Allied Waste
 (Measured in Tons)

Commodity	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
ONP	13.88	14.50	13.35	12.53	11.17	11.09	10.79	11.03	9.72	9.8	4.61	8.92	131.39
MWP/OCC	10.84	12.29	12.13	11.37	10.38	10.08	12.50	13.34	11.73	11.77	18.44	19.55	154.42
Plastic	1.64	1.71	1.57	1.48	1.32	1.31	1.94	1.98	1.75	1.76	.83	1.60	18.89
Tin	.80	.87	.82	.77	.70	.68	.78	.81	.71	.72	.72	.91	9.29
Aluminum	.40	.43	.41	.39	.35	.34	.39	.40	.36	.36	.36	.46	4.65
OMG	.94	.98	.90	.85	.76	.75	.85	.87	.76	.77	.36	.70	9.49
Totals	28.50	30.78	29.18	27.36	24.68	24.23	27.25	28.43	25.03	25.18	25.32	32.14	328.08

ONP = Newspaper
 MWP/OCC = Recovered Paper/Cardboard Boxes
 Plastic = #1, #2, #3
 Tin = Steel "Tin" Cans
 OMG = Magazines and Catalogs

Appendix - E

City of Star
Curbside Recycling Program
Commodities Collected by BFI/Allied Waste
(Measured in Tons)

Commodity	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total				
ONP																	
MWP/OCC																	
Plastic			No monthly commodity breakdown is available for the City of Star – only the annual total.														
Tin																	
Aluminum																	
OMG																	
Totals	6.01	6.28	5.78	6.18	5.62	5.48	6.15	6.53	5.65	5.97	5.95	6.27	71.87				

ONP = Newspaper
MWP/OCC = Recovered Paper/Cardboard Boxes
Plastic = #1, #2, #3
Tin = Steel “Tin” Cans
OMG = Magazines and Catalogs

Appendix - F

City of Meridian
Curbside Recycling Program
Commodities Collected by SSC
(Measured in Tons)

Commodity	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
ONP/OMG	93.27	103.49	97.01	92.50	87.07	81.37	97.74	97.12	88.46	87.35	91.62	97.93	1,114.93
MWP/OCC	46.79	51.92	48.67	46.40	43.68	40.82	49.03	48.73	44.38	43.82	45.96	49.13	559.33
Plastic	9.61	10.66	10.00	9.53	8.97	8.38	10.07	10.01	9.11	9.00	9.44	10.09	114.87
Tin	4.57	5.07	4.75	4.53	4.27	3.99	4.79	4.76	4.33	4.28	4.49	4.80	54.63
Aluminum	2.52	2.80	2.62	2.50	2.35	2.20	2.64	2.62	2.39	2.36	2.48	2.65	31.13
Totals	156.76	173.94	163.05	155.46	146.34	136.76	164.27	163.24	148.67	146.81	153.99	164.60	1,873.89

ONP/OMG = Newspaper/Magazines/Catalogs
MWP/OCC = Recovered Paper/Cardboard Boxes
Plastic = #1 – #7
Tin = Steel “Tin” Cans

Residential Recycling Stops in Meridian

Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
30,307	28,394	27,723	29,682	27,529	28,317	31,970	32,625	41,586	36,291	31,433	35,085	380,942

Appendix - G

City of Kuna
 Curbside Recycling Program
 Commodities Collected by J&M Sanitation Inc.
 (Measured in Tons)

Commodity	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
ONP	9.68	11.89	9.45	11.29	9.90	10.74	10.70	11.77	9.42	9.40	11.86	10.11	126.21
MWP/OCC	4.86	5.97	4.74	5.66	4.96	5.39	5.37	5.90	4.73	4.72	5.95	5.07	63.32
Plastic	1.00	1.23	0.97	1.16	1.02	1.11	1.10	1.21	0.97	0.97	1.22	1.04	13.00
Tin	0.47	0.58	0.46	0.55	0.49	0.53	0.52	0.58	0.46	0.46	0.58	0.50	6.18
Aluminum	0.26	0.32	0.26	0.31	0.27	0.29	0.29	0.32	0.25	0.25	0.32	0.27	3.41
OMG													
Totals	16.27	19.99	15.88	18.97	16.64	18.06	17.98	19.78	15.83	15.80	19.93	16.99	212.12

ONP = Newspaper
 MWP/OCC = Recovered Paper/Cardboard Boxes
 Plastic = #1, #2, #3
 Tin = Steel "Tin" Cans
 OMG = Magazines and Catalogs

SPECIAL THANKS

The Ada County Solid Waste Management Department wishes to acknowledge and to extend a special “Thank You” to the following people and companies who helped in the preparation of this report.

THE BOARD OF ADA COUNTY COMMISSIONERS

Fred Tilman, Chairman
Paul R. Woods, Commissioner
Rick Yzaguirre, Commissioner

THE SOLID WASTE MANAGEMENT DEPARTMENT

Dave Neal, Director
Ted Hutchinson, Deputy Director
Rene Phillips, Health Protection Officer
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Rick Schreiber, Environmental System Coordinator
Kathie Herman, Account Clerk
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Barbara Burkhardt, Cashier
Kathy Foster, Cashier
Carol Hyde, Cashier
Kathy Nelson, Cashier

THE BOISE PUBLIC WORKS DEPARTMENT
ENVIRONMENTAL DIVISION

Catherine Chertudi

SANITARY SERVICES COMPANY

Steve Sedlacek
Symantha Miller

ALLIED WASTE SYSTEMS OF IDAHO

Dave Fisher, General Manager
Rachele Klein

J&M SANITATION

Tim Gordon
Chad Gordon
Todd Gordon

ENVIRONMENTAL EARTHWORKS, INC.

Stan Haile
Mike Howard

ENVIRO-PROGRESS, INC.

Devon Downs

CLEAN HARBORS ENVIRONMENTAL, INC.

KURT HUNT