

# 7

## Solid Waste System Finance

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### Policies

- FIN-1 Utilize the assets of the King County Solid Waste Division exclusively for the benefit of the solid waste system, and fully reimburse the solid waste system for the value associated with the use or transfer of its assets.
- FIN-2 Maintain a Solid Waste Division financial forecast and cash-flow projection of three years or more.
- FIN-3 Keep tipping fees as low as reasonable, while covering the costs of effectively managing the system and providing service to customers.
- FIN-4 Assess fees for use of the solid waste transfer and disposal system at the point of service.
- FIN-5 Determine the tipping fees using a rate structure based on weight, unless the Metropolitan King County Council determines a change in the rate structure is appropriate.
- FIN-6 Charge the same basic fee at all transfer facilities, unless the Metropolitan King County Council determines a change in the rate structure is appropriate.
- FIN-7 Maintain the following reserve funds:
  - a. Landfill Reserve
  - b. Landfill Post-Closure Maintenance
  - c. Capital Equipment Recovery Program
  - d. Construction
- FIN-8 Maintain the Landfill Post-Closure Maintenance Fund at a level to ensure that environmental monitoring and maintenance of the closed landfills for which the county has responsibility will be fully funded through the end of their post-closure maintenance periods, as defined by applicable law.
- FIN-9 Routinely evaluate all reserve funds for long-term adequacy and set contributions to maintain reasonable rate stability.

# Solid Waste System Finance

## Summary of Recommendations

Responsibility		Action	Detailed Discussion
1	County	Continue to evaluate and implement fiscally responsible operational changes to support a sustainable business model.	Page 7-10
2	County	Study the advantages and disadvantages of alternatives to the current rate methodology, such as incorporating a transaction fee into the rate structure.	Page 7-11
3	County, cities	Continue to explore new revenue sources to help finance the solid waste system.	Page 7-12
4	County	Consider discounts for low-income customers consistent with RCW 81.77.195.	Page 7-11

# SOLID WASTE SYSTEM FINANCE

Even as the division embarks on its most extensive capital program in 50 years, keeping fees low and stable remains a fundamental objective.

Due to the effects of the global economic downturn, since late 2007 the system has seen reductions in garbage tonnage and corresponding revenues. The division has responded to this economic trend by reducing both staff and programs, and, as necessary, by increasing fees to cover rising operating costs, to pay for renovating the transfer system, and to ensure continued solvency of the landfill reserve fund. In 2012, following a rate study, the Metropolitan King County Council approved new fees for the years 2013 and 2014 (KCSWD 2012).

Financial policies help guide the solid waste system's operations and investments. The division will work with its advisory committees, the executive, the County Council, and the Regional Policy Committee to develop and/or revise policies that address debt issuance, rate stabilization, cost containment, reserves, asset ownership and use, and other financial issues. The policies will be codified at the same time as comprehensive solid waste management plan updates, but may be adopted from time to time as appropriate outside of the plan process.



*Tipping fees are collected at the scale house at each transfer station.*

This chapter provides a brief summary of the division's financial structure, including descriptions of funding sources, revenues, and expenditures. The remainder of the chapter describes a range of influences expected to have a financial impact on the division in the future.

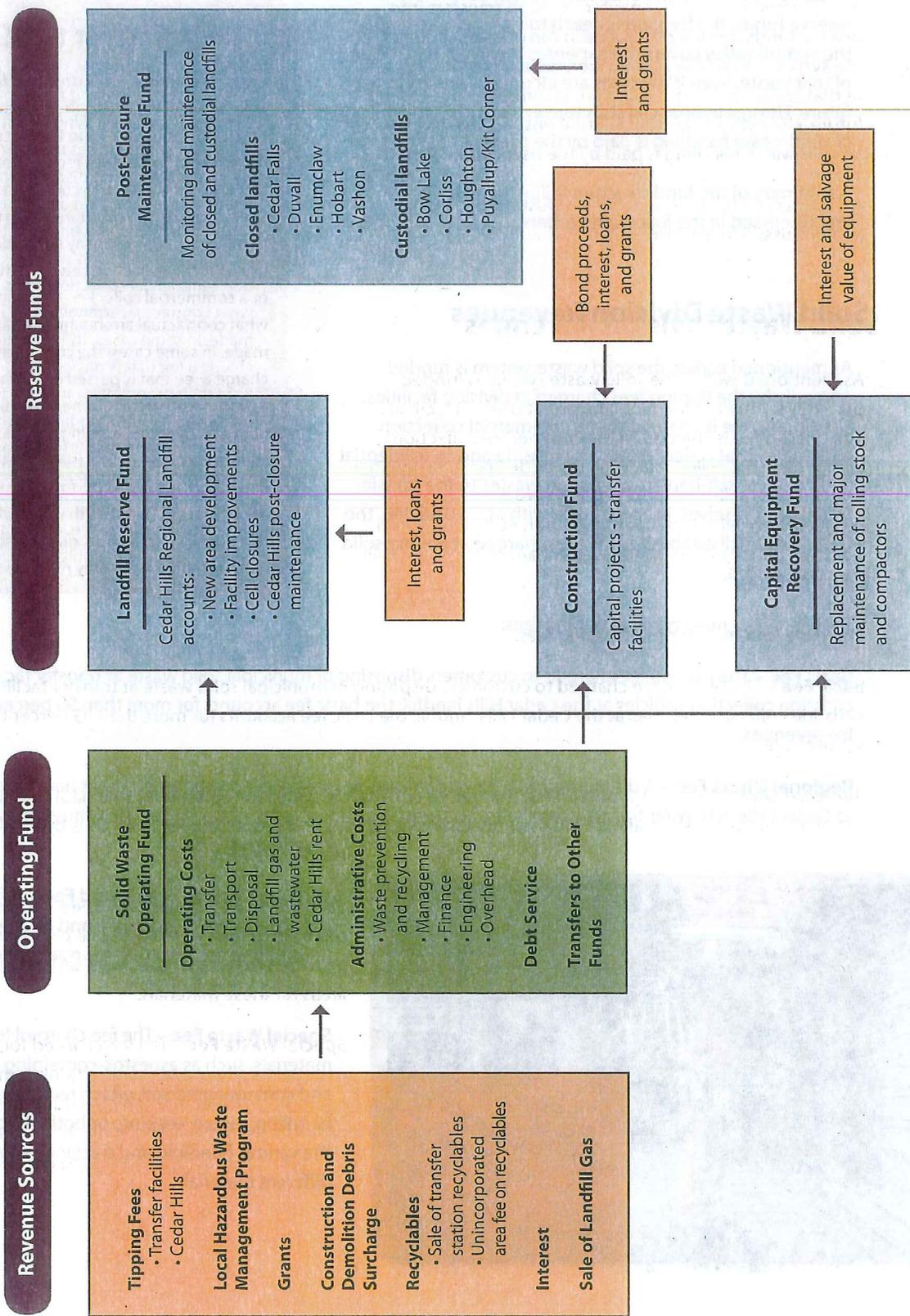
## FUNDING OF SOLID WASTE SERVICES AND PROGRAMS

King County's solid waste transfer and disposal system is a public-sector operation that is funded almost entirely by fees collected from its customers. The division is an enterprise fund, managing nearly all of its expenses with revenues earned through these fees.

The fees charged at county facilities, called tipping fees, pay for the operation and maintenance of transfer and disposal facilities and equipment, education and promotion related to waste prevention and recycling (WPR), grants to cities to support WPR efforts, and administrative operating expenses and overhead.

Tipping fees also pay for the construction of transfer facilities. Bonds or loans may be used for large projects, but repayment of this debt is funded by tipping fees.

Figure 7-1. Solid Waste Division fund structure



As discussed later in this chapter, through transfers into reserve funds, the fee paid for each ton of waste entering the system today covers the expenses involved in disposal of that waste, even if the costs are incurred decades in the future. Using this financial structure ensures that the full cost of solid waste handling is paid by the users of the system.

A summary of the fund structure is illustrated in Figure 7-1 and discussed in the following sections.

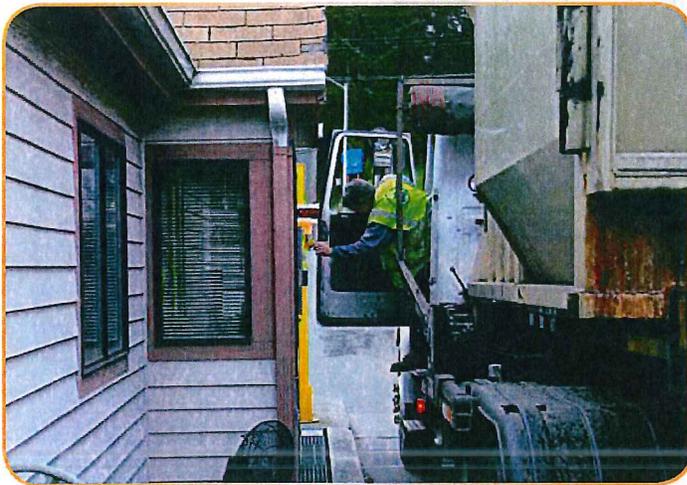
## Solid Waste Division Revenues

As mentioned earlier, the solid waste system is funded primarily by the tipping fees charged at division facilities. The tipping fee is charged to the commercial collection companies that collect materials curbside and to residential and business self-haulers who bring wastes to the transfer facilities themselves. In accordance with KCC 10.08.040, the County Council establishes the fees charged at county solid waste facilities.

There are four main types of tipping fees:

**Basic Fee** – The per-ton fee charged to customers disposing of municipal solid waste at transfer facilities and to curbside collection vehicles at the Cedar Hills landfill; the basic fee accounts for more than 95 percent of tipping fee revenues.

**Regional Direct Fee** – A discounted fee charged to commercial collection companies that haul solid waste to Cedar Hills in transfer trailers from their own transfer stations and processing facilities, thus bypassing county transfer stations.



**Yard Waste and Clean Wood Fee** – A fee for separated, clean yard waste and clean wood delivered to facilities that have separate collection areas for these materials.

**Special Waste Fee** – The fee charged for certain materials, such as asbestos-containing materials and contaminated soil, which require special handling, record keeping, or both. Two fees reflect the various handling and tracking requirements of different materials.

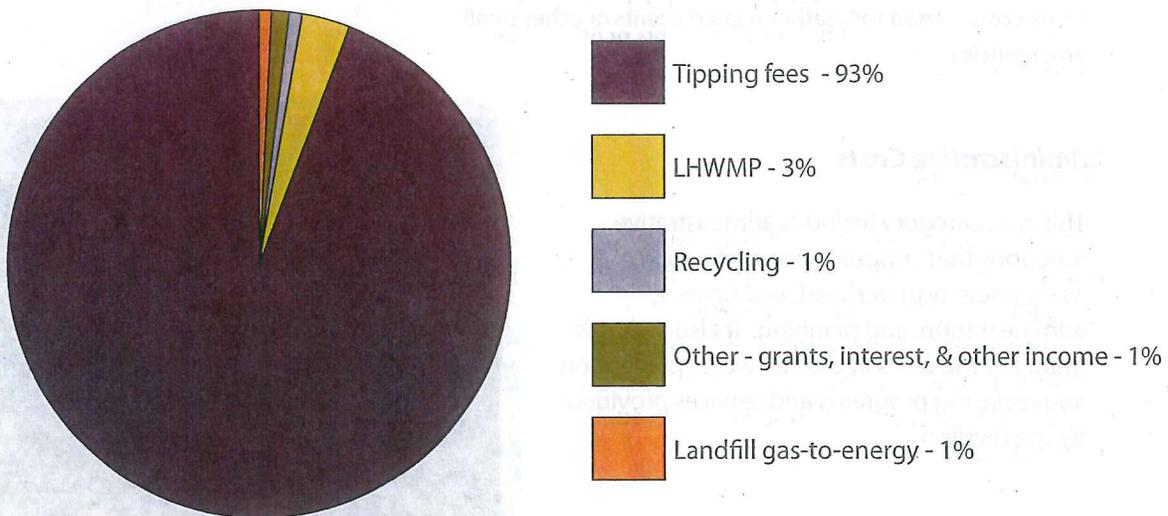
## Funding for the Cities

Cities fund their solid waste and WPR programs in a variety of ways, and the resources available to the 37 cities in the King County system vary widely. Some cities receive revenue from fees paid for solid waste collection services. These fees may be paid directly to the city or to the collection company depending on who provides the collection service – the city itself or a commercial collection company – and what contractual arrangements have been made. In some cases, the collection companies charge a fee that is passed on to the city to fund their programs. Some cities also charge a utility tax. Another funding source for cities is state and county grants (see Chapter 3, *Waste Prevention and Recycling*, for more information about grants). For cities that do not receive any revenue from collection, grants and the city's general fund are the only revenue sources.

Other fees are charged for recyclables, such as appliances. KCC 10.12.021.G authorizes the division director to set fees for recyclable materials for which no fee has yet been established by ordinance; these fees may be set to encourage recycling and need not recover the full cost of handling and processing. In accordance with state law (RCW 70.93.097), the division also charges a fee to vehicles with unsecured loads arriving at any staffed transfer facility or landfill in the jurisdiction of King County.

Figure 7-2 shows the breakdown of revenues as projected for 2013 and 2014 in the 2012 Rate Study. As shown, more than 90 percent of the division's revenue comes from tipping fees. The remainder of the division's revenue comes from a few additional sources. The most significant of those is the Local Hazardous Waste Management Program (LHWMP). Other sources of revenue include revenue from the sale of landfill gas from the Cedar Hills landfill; interest earned on fund balances; recyclables revenue, including revenue from both the sale of recyclable materials received at division transfer facilities and from a fee on recyclables collected in unincorporated areas; and Washington State Department of Ecology grants to help clean up litter and illegal dumping throughout the county, as well as to support WPR. Based on economic and market conditions, revenues from the sale of recyclable materials and interest earned can vary considerably.

**Figure 7-2. Projected sources of revenue 2013 (\$104,013,422) and 2014 (\$105,266,787)**



In late 2007, the division began to see reductions in garbage tons delivered to the division's facilities, stemming primarily from reductions in consumer spending and overall business activity in the region. Since then, solid waste tons have decreased about 20 percent overall. While the division has not seen a return to the higher tonnage levels of early 2007, the declines have begun to moderate. The division has implemented budget controls to balance expenses with the steady declines in tonnage.

## Solid Waste Division Expenditures

Division expenditures, paid through the Solid Waste Operating Fund, can be divided into four broad categories: operating costs, administrative costs, debt service, and transfers to other funds. The division maintains an average balance in the Operating Fund sufficient to cover 45 days of direct operating costs.

Figure 7-3 uses 2013 and 2014 projections to illustrate the various division expenditures, which are described in the following sections.

### Operating Costs

Operating costs include the day-to-day expenses for transfer, transport, and landfill operations, including maintenance of equipment and facilities, and management of landfill gas and wastewater. It also includes business and occupation (B&O) tax, rent for use of the Cedar Hills landfill property, and an emergency contingency to cover some costs related to weather-related events or other small emergencies.

### Administrative Costs

This cost category includes administrative functions that support operations, such as engineering, overhead, and finance, administration, and planning. It also includes grants to the cities and other waste prevention and recycling programs and services provided by the division.

### Debt Service

Debt service is the payment of interest and principal on bonds and loans. Major transfer facility capital projects are generally financed by general obligation (GO) bonds backed by the full faith and credit of the county's General Fund. It is anticipated that with approval of the County Council, GO bonds will be issued for future transfer facility capital projects. In 2011 and 2012, the division took

## Construction and Demolition Debris Surcharge

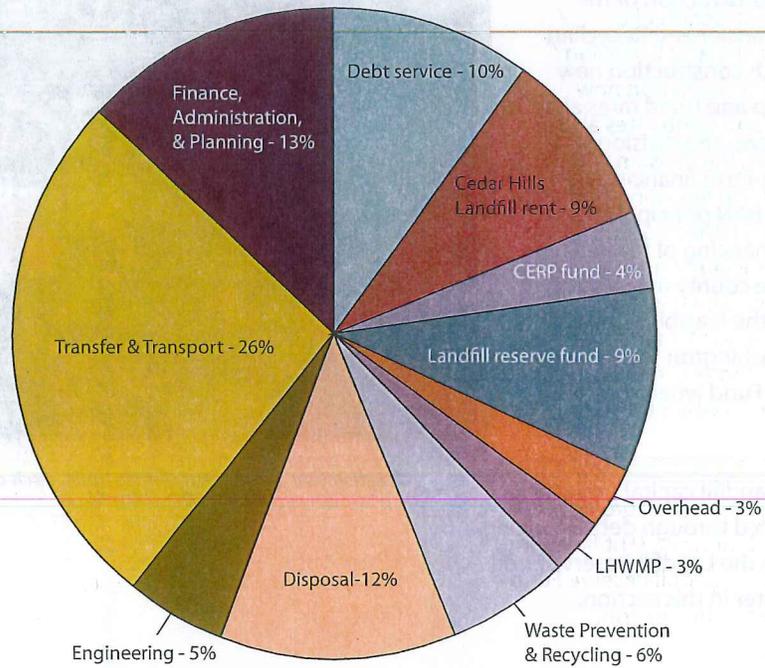
King County has contracts with two private companies – Republic Services and Waste Management – to manage the majority of the county's construction and demolition (C&D) waste. Customers disposing of C&D at any of the facilities operated by these companies pay a per-ton fee based on the type of material.

Republic Services and Waste Management pay the county a \$4.25 per ton surcharge, established by county code (KCC 10.30.050), for all C&D debris generated in the county's jurisdiction. The surcharge is used to pay incentives to these companies based on the amount of C&D material they recycle. To date, the total amount paid to the county has surpassed the amount paid back in incentives. The surcharge is set to expire in 2014 when the current C&D contracts expire.

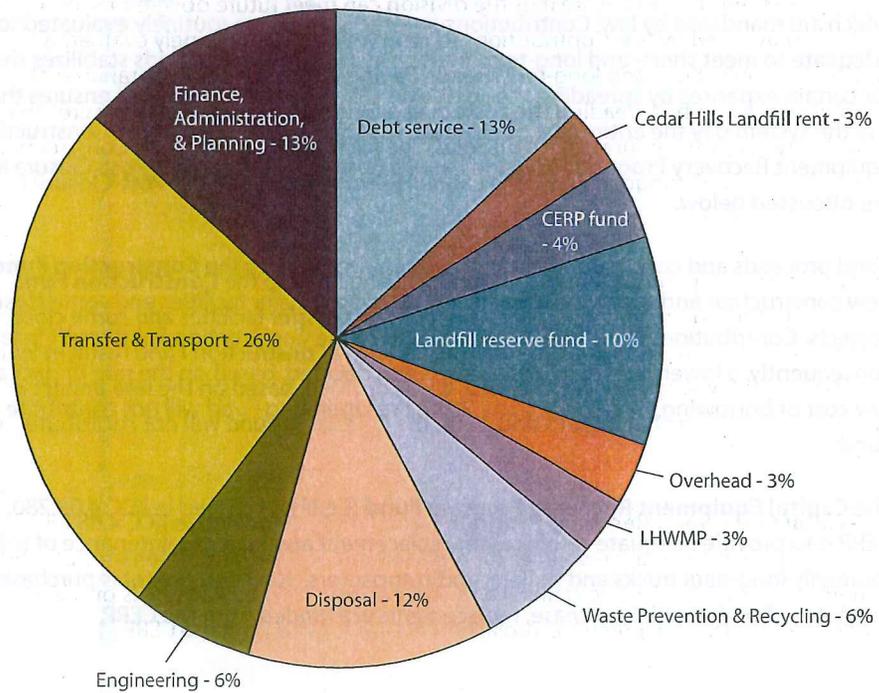


*Equipment repair and maintenance is included in the division's operating costs.*

Figure 7-3. Projected 2013 expenditures (\$105,956,954)



Projected 2014 expenditures (\$105,335,089)



advantage of historically low Bond Anticipation Note (BAN) rates for short-term borrowing to finance construction of the Bow Lake Transfer and Recycling Station. With construction now wrapping up and bond rates also at historic lows, the division will shift to long-term financing that will pay the BAN principal and begin the financing of future projects. The county may also investigate the feasibility of loans from the Washington State Public Works Trust Fund when they are available.



*Construction of new transfer stations, such as the Bow Lake station, is financed using general obligation bonds.*

Cedar Hills landfill capital projects are not funded through debt financing, but through the Landfill Reserve Fund discussed later in this section.

### **Transfers to Reserve Funds**

Transfers from the Operating Fund to reserve funds make up a portion of the division's costs. These reserve funds were established to ensure that the division can meet future obligations, or expenses, some of which are mandated by law. Contributions to reserve funds are routinely evaluated to ensure they are adequate to meet short- and long-term needs. Paying into reserve funds stabilizes the impact on rates for certain expenses by spreading the costs over a longer time period, and ensures that customers who use the system pay the entire cost of disposal. The four reserve funds – the Construction Fund, the Capital Equipment Recovery Program Fund, the Landfill Reserve Fund, and the Post-Closure Maintenance Fund – are discussed below.

Bond proceeds and contributions from the Operating Fund to the **Construction Fund** are used to finance new construction and major maintenance of division transfer facilities and some closed landfill mitigation projects. Contributions from the Operating Fund to the Construction Fund result in less borrowing, and consequently, a lower level of debt service. It was decided, based on the rate impact and the historically low cost of borrowing, that in 2013 and 2014, the Operating Fund will not contribute to the Construction Fund.

The **Capital Equipment Recovery Program Fund** (CERP) is codified in KCC 4.08.280. The purpose of the CERP is to provide adequate resources for replacement and major maintenance of solid waste rolling stock (primarily long-haul trucks and trailers) and compactors. New equipment is purchased from the Operating Fund, but after the initial purchase, replacements are funded from the CERP.

By accumulating funds in the CERP, the division ensures that it is able to cover the variable expenditures that come with replacing needed equipment even while revenue fluctuates, without impacting rates. Annual contributions to the CERP are calculated by projecting future replacement costs, salvage values, and equipment life.

Contributions are adjusted to reflect changes in facilities and operations that affect equipment needs. The contributions are held in an account, earning interest, until needed.

The **Landfill Reserve Fund (LRF)**, codified in KCC 4.08.045, covers the costs of four major accounts

maintained for the Cedar Hills landfill, shown below. The new area development and facility improvement

accounts ensure sufficient funds for capital projects. The cell closure and post-closure maintenance accounts are mandated by federal and state law.

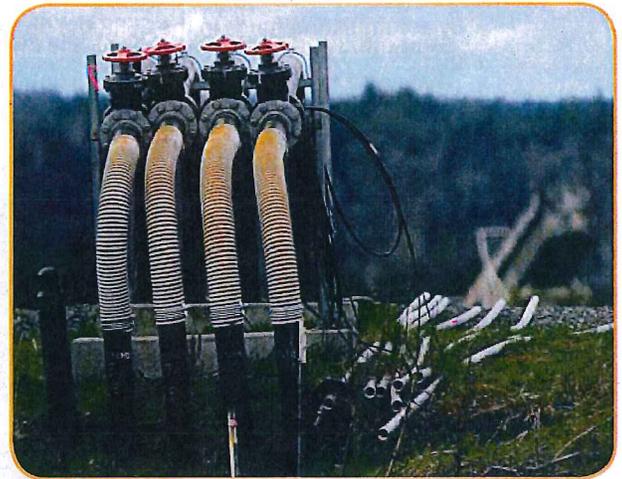


*The CERP fund helps the division maintain a fleet of long-haul tractors and trailers to transport solid waste to the landfill.*

- **New area development account** – Covers the costs for planning, designing, permitting, and building new disposal areas.
- **Facility improvements account** – Covers a wide range of capital investments required to sustain the infrastructure and operations at the landfill, such as enhancements to the landfill gas and wastewater systems.
- **Closure account** – Covers the cost of closing operating areas within the landfill that have reached capacity. These contributions help the division prepare incrementally for the cost of final closure of the entire landfill.
- **Post-closure maintenance account** – Accumulates funds to pay for post-closure maintenance of the Cedar Hills landfill for 30 years.

The sum of all four accounts, based on projected cost obligations, makes up the LRF contribution from the operating fund. Projected cost obligations are based on the current plan for the landfill. When Cedar Hills closes, the division will discontinue its contributions to the LRF. After final closure, the balance of the LRF will be transferred to the Post-Closure Maintenance Fund to pay for Cedar Hills' post-closure maintenance and monitoring.

The **Post-Closure Maintenance Fund** is a separate fund that pays for the maintenance and environmental monitoring of nine closed and custodial landfills in the county (see Chapter 6). Federal and state laws require this fund for closed landfills. The county has also included funding for custodial landfills – landfills which were not operated by the county, but for which the county assumed responsibility. At this time, the balance of this fund is sufficient to cover expenses, thus no money is currently being transferred to the fund. However, additional funds may be needed in the future. Although many of these landfills have met the obligatory number of years of post-closure care, there are on-going needs for monitoring and maintenance. The division will work with regulators to assess these needs and will review the fund to ensure that it remains sufficient.



*Collecting landfill gas as the garbage decomposes over time is a crucial element of pre- and post-closure maintenance.*

## **INFLUENCES ON FUTURE COSTS AND REVENUE**

In addition to the unanticipated reductions in tonnage due to the economy, there are other factors that can be expected to influence costs and revenues. These can be projected and budgeted for with varying degrees of certainty. Those influences are summarized briefly in this section.

### **Interest Earnings**

The division's reserve funds are invested to earn interest during the years, or even decades, before the funds are needed. This is particularly significant for the long-term Landfill Reserve Fund, which will finance landfill closure and 30 years of post-closure care, a period expected to run from about 2026 through 2058; making interest earnings a considerable factor in the amount that needs to be put aside. In 2011, the value of interest earned was less than inflation. As of August 2012, the King County Office of Economic and Financial Analysis was forecasting that this pattern would continue through 2017. The county is looking at how the funds might be invested differently to earn a higher rate of return.

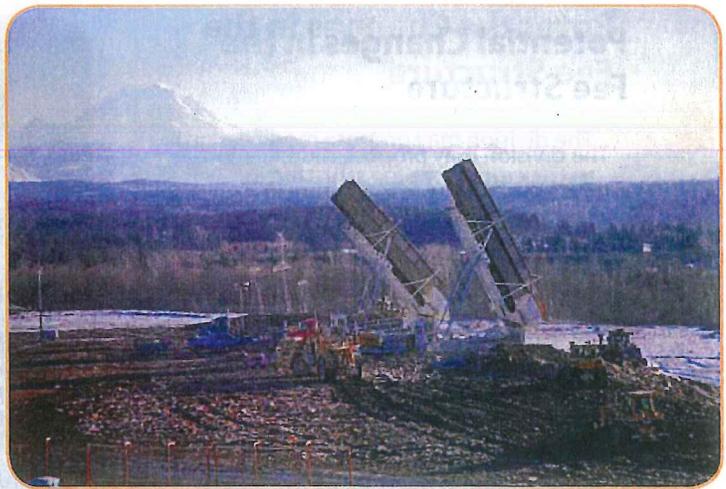
### **Waste Prevention and Recycling**

As discussed earlier, revenues from garbage tipping fees cover the costs of WPR services and programs. This financing structure requires the division to estimate the effects of WPR on garbage disposal to reasonably project future revenues.

While the revenue stream relies primarily on garbage tipping fees, the current priorities in solid waste management are waste prevention and recycling – which lead to reductions in the amount of solid waste

disposed, and hence in revenues received. The reduction in the amount of waste received due to WPR has been gradual, and the system has adjusted to lower revenues. Further reductions through increasingly rigorous WPR efforts will continue to affect the revenues of King County and other jurisdictions across the state. The state's *Beyond Waste Plan 2009 Update* recognizes that it "is important to ensure reliable and adequate funding for all elements of the solid waste system, including reduction and recycling" (Ecology 2009). The county is participating in discussions with its regional planning partners to develop options for improving funding and will study options for developing a sustainable financing model that is aligned with WPR.

Increased WPR efforts have had positive influences on the financial aspects of the system as well. As discussed in Chapters 3 and 6, WPR has contributed to extending the life of the Cedar Hills landfill, which will save money for ratepayers (see "Closure of the Cedar Hills Regional Landfill" on page 7-11). Another aspect of WPR that has had a positive financial effect is product stewardship. Product stewardship shifts the management of materials at the end of their life to the product manufacturer. This shift reduces the costs to cities and counties of managing products such as televisions, computers, and fluorescent bulbs and tubes, to name a few. The savings are most substantial for products that contain hazardous materials and are more difficult and expensive to manage within the public collection, transfer, and disposal system.



## Operational Efficiencies

The division continually seeks to eliminate waste and variability in its operations. This commitment ensures the division's ability to provide value to its customers, while improving the quality of service, controlling costs, and upholding the county's environmental goals. Examples of operational efficiencies that are producing significant and long-term results are discussed briefly below

### ***Landfill Tippers***

The division uses tippers to empty garbage from transfer trailers at the landfill. The tippers replaced the use of older walking floor trailers (see Chapter 6, *Landfill Management and Solid Waste Disposal*, for more details). Tippers save staff time and other resources, as well as reduce equipment and tire damage.

## **Solid Waste Compactors**

As discussed in Chapter 5, the transfer system in King County is undergoing major renovations to update station technology, improve efficiencies, and enhance environmental sustainability. The installation of solid waste compactors at all transfer stations is one important component of that plan. The Bow Lake, Enumclaw, Shoreline, and Vashon stations currently have waste compactors. All newly constructed recycling and transfer stations will incorporate compactors as well.

Compacting solid waste at the stations reduces the number of trips necessary to transport the waste by up to 30 percent. Fewer trips translate directly into lower costs for fuel, equipment, and staff. In July 2012, the Bow Lake Recycling and Transfer Station began operating with a compactor, saving almost 900 trips and over 8,400 gallons of diesel during the last six months of the year.

## **Potential Changes in the Fee Structure**

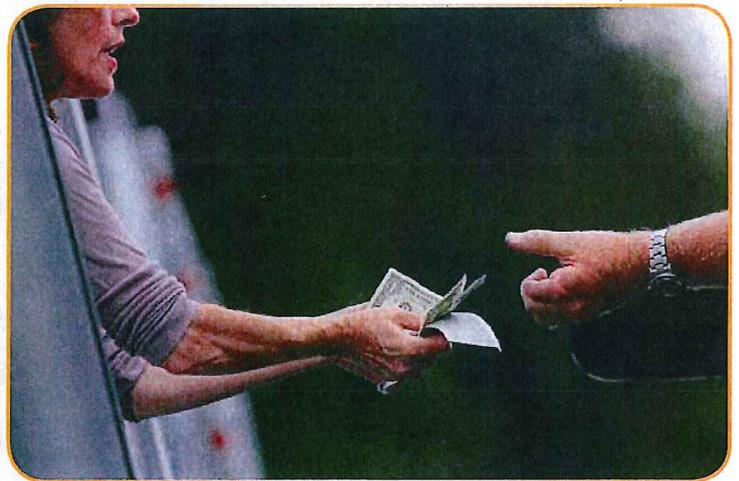
The division may propose modifications to the current the fee structure in future rate studies. Possible changes include incorporating a transaction fee, establishing different customer classes, and discounts for low income customers.

The *2001 Comprehensive Solid Waste Management Plan* introduced the possibility of adding a flat fee to customer transactions at the transfer facilities to cover the fixed costs associated with each transaction. A transaction fee would be based on the incremental costs of providing service that are constant regardless of the amount of waste disposed. The cost elements of the transaction fee would then be separated from the tonnage-based fee.

To equitably allocate the benefits and costs of transfer system improvements, the division may consider different customer classes. This would ensure that system users do not pay a disproportionate share of the cost of these improvements as a result of a decision by a city not to extend the term of the Solid Waste Interlocal Agreement.

In 2010, legislation was passed authorizing the WUTC to approve discounts for low-income customers under certain circumstances. The division will consider what would be involved in establishing such a policy, and whether it should be implemented in King County.

Before changes to the fee structure could be proposed, a number of factors would need to be studied, including the impact on revenue and cost, equity issues, and system-wide financing implications. These factors would be considered in a future rate study.



## Closure of the Cedar Hills Regional Landfill

When Cedar Hills reaches capacity and closes, the division's solid waste tipping fee is expected to increase to cover the cost of using an alternate means of disposal. Whether it is export to an out-of-county landfill or disposal at a waste-to-energy facility, a preliminary study indicates that the cost for disposal after Cedar Hills closes will be higher (R.W. Beck 2007). As discussed in Chapter 6, *Landfill Management and Solid Waste Disposal*, the county is monitoring and tracking a wide range of options for disposal after the closure of Cedar Hills, including export to an out-of-county landfill, waste conversion technologies, and incineration with energy recovery.

Implementation of the approved development alternative in the Cedar Hills Project Program Plan (discussed in Chapter 6) will be financed through the landfill reserve fund. New area development, associated facility improvements, and area closure will cost approximately \$70 million (in current dollars). The cost to operate Cedar Hills is expected to rise by inflation, but remain consistent with current costs. Assuming costs for waste export, which is estimated to have lower costs than other disposal options (R.W. Beck 2007), the additional landfill capacity could save ratepayers about \$100 million.

## New Revenue Sources

The division is continually exploring new sources of revenue to help offset reductions in tonnage. Cities may also want to consider additional funding sources to support their solid waste and WPR programs.

### ***Sales from the Landfill Gas-to-Energy Facility***

An example of the successful development of a new revenue source is the sale of landfill gas. In 2009, a landfill gas-to-energy facility began operations at Cedar Hills, and the division began to receive revenues from the sale of landfill gas. The facility, which is privately owned and operated by Bio Energy (Washington) LLC (BEW), converts methane collected from the landfill into pipeline quality natural gas, which BEW sells to Puget Sound Energy (PSE). The division will receive revenue in the range of \$1 to \$1.4 million depending on production rates and the market price.



*The landfill gas-to-energy facility produces revenue and environmental benefits for the division.*

### ***Carbon Emissions Credits***

Carbon emissions credits, also called greenhouse gas offsets, from the landfill gas-to-energy facility at Cedar Hills offer another promising source of revenue. The conversion of landfill gas to a renewable source

of green energy will generate greenhouse gas offsets, which have value in the market. The division, rather than the owner of the landfill gas facility, BEW, has contractually retained the offset rights associated with the project. In January of 2011, the Metropolitan King County Council unanimously approved an ordinance authorizing the division to enter into a contract to sell carbon emissions credits associated with the landfill gas to energy project to PSE. The contract with PSE is structured so that the county shares in profits that PSE gets when selling the emissions credits associated with the gas. The county anticipates that the sale of the rights to the emissions credits should provide an estimated \$500,000 annually. The division will also be investigating the possibility of attaining greenhouse gas offsets from other sources related to solid waste operations or programs.

The division will continue to explore innovative opportunities to earn additional revenues and achieve savings through operational efficiencies. Although in many cases, these efforts may involve relatively small amounts of money, they can have a cumulative effect over time and contribute to stabilizing rates for solid waste customers.