

Executive Proposed

Solid Waste Disposal Fees 2008-2010

September 2006

Executive Proposed

**Solid Waste Disposal Fees
2008-2010**

September 2006



King County

Department of
Natural Resources and Parks
Solid Waste Division

CONTENTS

INTRODUCTION	1
<i>Table 1. Comparison of current and proposed tipping fees</i>	2
FACTORS USED IN CALCULATING THE TIPPING FEES	3
TONNAGE FORECASTS	3
<i>Table 2. Forecast of solid waste tons per year –</i> <i>2008 through 2010</i>	4
DIVISION EXPENDITURES	5
Solid Waste Operating Costs	5
Administrative Costs	6
Transfers to Other Funds	6
OTHER SOURCES OF REVENUE	7
DESCRIPTION OF THE RATE MODELING PROCESS	9
MODEL INPUTS AND CALCULATIONS	9
<i>Figure 1. Rate Models</i>	10
CALCULATION OF THE 2008-2010 TIPPING FEES	13
BASIC FEE	13
<i>Table 3. Projected expenditures per ton by low org –</i> <i>2008-2010</i>	13
REGIONAL DIRECT FEE	14
SPECIAL WASTE FEE	15
YARD WASTE FEE	15
EFFECT OF THE FEE INCREASE ON THE AVERAGE CUSTOMER IN KING COUNTY	17

Appendix A: Detailed Tonnage Forecasts Through 2016

Appendix B: Detailed Results of the Rate Model Through 2028

Appendix C: Landfill Reserve Fund

Appendix D: Capital Improvement Program–Construction Fund

INTRODUCTION

The King County Solid Waste Division (the division) is proposing a rate increase that would become effective January 1, 2008. Under this proposal, the Basic Fee would increase from \$82.50 to \$95.00 per ton for the three-year period between 2008 and 2010. This is the first change in the Basic Fee requested by the division since 1999; it represents an average increase of 1.6 percent per year since the last rate increase. With this increase, the effect on the average customer with weekly one-can collection service would be \$0.73 per month.

The purpose of this report is to describe the key factors underlying the rate proposal and how the new fees were derived. The division's tonnage, expenditures, and non-fee revenues were projected considering the effects of inflation, changes in the local economy and demographics, upgrades required to the solid waste transfer system, and assumptions about the expected lifespan of the Cedar Hills Regional Landfill.

A major consideration in this analysis is the expected closure of the landfill by the end of 2016. Once the landfill closes, the county plans to transition to waste export to an out-of-county landfill. To accommodate this transition while keeping pace with growth in the region and running a cost-efficient operation, the county's aging transfer system must be improved. The proposed changes to the transfer system include construction of four replacement transfer stations. This rate proposal will provide for the financing of cost-effective, efficient, and up-to-date solid waste and recycling services to the more than 1 million customers who use them annually. A complete explanation of the recommendations proposed for upgrading the solid waste management system are presented in the 2006 *Solid Waste Transfer and Waste Export System Plan* (the Plan).

There are four types of tipping fees charged by the division:

- **Basic Fee:** The per-ton fee charged to customers disposing of municipal solid waste at King County solid waste facilities
- **Regional Direct Fee:** The reduced fee charged to commercial collection companies that haul solid waste to the Cedar Hills landfill from their own transfer stations and processing facilities, bypassing county transfer stations
- **Yard Waste Fee:** The charge for source-separated yard waste and clean (untreated) wood
- **Special Waste Fee:** The charge for waste that requires special handling or examination to determine if it is acceptable for landfill disposal

The Basic Fee accounts for about 97 percent of the revenues brought in by all the tipping fees. It is used as the foundation for calculating the regional direct, yard waste, and special waste fees. Table 1 summarizes the changes proposed in the current tipping fees.

Table 1. Comparison of current and proposed tipping fees

Tipping Fee	Last Change in the Fee	Current Fee	Proposed Fee 2008-2010	Change in Per Ton Fee	Percent Change	Projected Annual Tonnage*
		\$ per ton				
Basic Fee	1999	\$82.50	\$95.00	\$12.50	15%	1,049,617
Regional Direct	2004	\$69.50	\$80.00	\$10.50	15%	10,814
Yard Waste	1999	\$75.00	\$82.50	\$7.50	10%	4,067
Special Waste	1999	\$132.00	\$145.00	\$13.00	10%	2,060

* Projected average annual tonnage over the three-year rate period from 2008 to 2010.

FACTORS USED IN CALCULATING THE TIPPING FEES

The King County Solid Waste Division is an enterprise that is intended to be self-supporting through fees charged for services to the public. These fees – the Basic Fee, Regional Direct Fee, Yard Waste Fee, and Special Waste Fee – are charged at county transfer facilities and the Cedar Hills Regional Landfill. The Basic Fee accounts for about 97 percent of the tipping fee revenues.

The division receives approximately 93 percent of its total revenue from tipping fees, which are deposited in the Solid Waste Operating Fund. This revenue funds the operation, maintenance, and capital improvement costs for managing the county's solid waste system. Major new capital investments are funded through the tipping fees, as well as through General Obligation (GO) bonds issued by the county. The tipping fees are also used to fund reserves that cover the ongoing costs to manage landfill development, closure, and post-closure care and remediation; to replace heavy equipment as needed; and to pay debt incurred through the GO bonds. The division receives the remaining 7 percent of its total revenues from grants, interest, and other incidental sources, discussed later in this section.

An econometric rate model is used to determine the tipping fees required to support the operational and other costs for managing the division. First, the division's expenditures over the rate period are estimated, including operating and administrative costs and transfers to reserve, construction, and other funds. The revenues received from all non-tipping fee sources are subtracted from the total expenditures to arrive at the amount of fee-based revenue needed to support the division over the rate period, in this case 2008-2010. That dollar amount divided by the forecasted tons equals the per-ton Basic Fee. Tipping fees for regional direct, yard, and special wastes are derived using the Basic Fee as a foundation.

What follows is a more detailed discussion of how the division arrives at a Basic Fee that 1) fulfills the need to maintain an efficient and cost-effective solid waste transfer and disposal system and 2) meets the county's commitment to keep increases at or below the rate of inflation. This section describes the various categories of revenues, expenditures, and fund transfers that are used in the rate model to calculate the Basic Fee. A description of the rate model is provided in the next section.

TONNAGE FORECASTS

The primary driver in determining disposal fees is the forecast of solid waste tonnage. The division has an econometric model for forecasting tonnage in each of the four major categories: solid waste charged at the Basic Fee, regional direct tonnage, yard waste, and special waste. The econometric model considers factors that affect the amount of waste expected to be generated in the future, including population growth, regional employment, household size, and per capita income.

Forecasts for projected waste generation are developed for each of the solid waste facilities, including the landfill. Table 2 summarizes the forecast of solid waste tons between 2008 and 2010. Appendix A provides detailed tonnage forecasts through 2016. The forecast assumes a 43 percent recycling rate over the three-year rate period.

Table 2. Forecast of solid waste tons per year – 2008 through 2010

	2008	2009	2010	3-Year Average
Transfer Facilities				
Factoria	178,800	183,905	189,758	184,154
Houghton	186,300	191,619	197,718	191,879
Renton	77,800	80,021	82,568	80,130
Algona	163,600	168,271	173,626	168,499
Bow Lake	308,400	317,205	327,301	317,635
First Northeast	65,000	66,856	68,984	66,946
Enumclaw	25,300	26,022	26,851	26,058
Vashon	9,600	9,874	10,188	9,887
Cedar Falls Drop Box	4,300	4,423	4,564	4,429
Skykomish Drop Box*	600	617	637	618
Subtotal	1,019,100	1,048,195	1,081,557	1,049,617
Cedar Hills Landfill				
Regional Direct Waste	10,500	10,800	11,144	10,814
Special Waste	2,000	2,057	2,123	2,060
Other Municipal Waste	19,200	19,748	20,377	19,775
Subtotal	31,700	32,605	33,643	32,649
TOTAL	1,050,800	1,080,800	1,115,200	1,082,267
Yard Waste (transferred to composting facility)	4,000	4,100	4,100	4,067

* Solid waste collected at the Skykomish drop box is transported to the Houghton transfer station for disposal. The projected tons for Skykomish are shown for illustrative purposes, but are counted in the Houghton tonnage figures.

DIVISION EXPENDITURES

The division's Operating Fund expenditures can be divided into three broad categories: operating costs, administrative costs, and transfers to other funds. The following cost centers are included in the projection of division expenditures:

- **Administration:** Division management and planning, King County and Department of Natural Resources and Parks overhead costs, and contributions to various reserve funds (discussed in more detail under *Transfers to Other Funds*)
- **Engineering Services:** Facility and landfill design, construction management, management of special wastes, and environmental monitoring
- **Recycling and Environmental Services:** Waste reduction and recycling programs and services
- **Finance and Administration:** Accounts payable/receivable, information services, payroll, budget and finance, and contracts
- **Shop/Maintenance:** Repair and maintenance of transport, landfill, and transfer station equipment, and maintenance of solid waste facilities
- **Transfer Operations:** Staffing and related costs for transfer station operations
- **Transportation:** Staffing and related costs for transport of solid waste to the Cedar Hills Regional Landfill, including fuel use
- **Cedar Hills Disposal:** All direct costs, including staffing, for operation of the landfill
- **Legal Support:** Division-wide legal support
- **Operations Management:** Management of transfer station, transport, and landfill operations
- **Landfill Gas and Wastewater:** Costs for staffing and maintaining the landfill gas and wastewater collection systems at Cedar Hills
- **Customer Transactions:** Staffing and related costs for scale operators at transfer stations, drop boxes, and the landfill

The expenditures are described in more detail below.

Solid Waste Operating Costs

This category of expenditures includes the day-to-day costs for transfer and landfill operations; equipment shop and maintenance activities; and the management of landfill gas and wastewater. For forecasting purposes these costs are divided into variable and fixed components. Variable components are those affected by the amount of tonnage received at solid waste facilities, as well as inflation. Fixed costs are affected by inflation alone, in most cases. A more extensive projection of costs, extending to 2028, is provided in Appendix B.

Administrative Costs

This category of expenditures includes administrative costs that support operations, such as engineering, financial analysis, payroll, information systems support, customer service, and management. It also includes the programs and services supported by the Recycling and Environmental Services Section.

Transfers to Other Funds

A substantial portion of the division's costs are transfers from the Solid Waste Operating Fund to various other funds. Some of these funds are mandated by law to ensure the safe management and maintenance of both operating and closed landfills. A description of the accounts into which the division makes transfers each year is provided below.

Landfill Reserve Fund (LRF): This fund is used to pay for new capital projects at the Cedar Hills landfill, and to build sufficient reserves to fund post-closure maintenance for 30 years after landfill closure. It is financed by a per-ton charge, which is built into the Basic Fee. During the 2008-2010 rate period, the LRF contribution will average about \$6.12 per ton. The exact charge can vary slightly each year based on actual project bids received and the timing of landfill projects, as well as the projected number of years until landfill closure. Details on the LRF calculations are provided in Appendix C.

Capital Equipment Replacement Fund (CERP): This fund provides for the scheduled replacement of heavy machinery used at the Cedar Hills landfill and the transfer stations, as well as the tractors and trailers that transport solid waste to the landfill. The CERP fund ensures that revenues are available for the timely and efficient replacement of equipment needed to handle solid waste and support operations.

Construction Fund: The division deposits bond proceeds and contributions from the Operating Fund into the Construction Fund to pay for capital improvements to the transfer system. This fund supports new construction as well as the maintenance of division facilities. Detail on the Capital Improvement Program that implements the Plan recommendations is presented in Appendix D.

A major consideration in the analysis for this rate period is the expected closure of the landfill by the end of 2016 or beyond. Once the landfill closes, the county plans to export waste to an out-of-county landfill. To accommodate this transition and to keep pace with the region's growing population and economic base, the county's aging transfer system must be improved. The enhancements proposed by the division include the construction of four replacement transfer stations. These improvements will be paid

for through the Construction Fund, using both transfers from the Operating Fund and the issue of GO bonds.

Some of the recommended improvements to the transfer station network are scheduled to be implemented during the 2008-2010 rate period. The major capital project that will be undertaken and completed during the rate period is the reconstruction of the Bow Lake transfer station. The Factoria station in Bellevue will enter the design phase. The First Northeast transfer station in Shoreline is currently under construction and is expected to be completed by the end of 2007.

Debt Service: Debt service is the payment of both interest and principle on the GO bonds issued by the county. For a utility of its size, the division has historically had a relatively small amount of debt, due to a philosophy to fund projects through available revenues as much as possible rather than through borrowing. The division's existing debt will be paid off by 2012.

Rent on the Cedar Hills Landfill: In 2004, the division began making rent payments to the county for the use of the landfill property, at an initial rate of \$7 million per year. This expense increases by 3 percent annually. When the landfill closes, the rent payments will be discontinued.

OTHER SOURCES OF REVENUE

Approximately 93 percent of the division's total revenue comes from tipping fees. The division also receives some revenue from other sources, including incidental fees, grants from state and federal agencies, interest earned on fund balances, and revenue from the sale of recycled materials brought to the transfer stations.

Another source of non-fee revenue is the Local Hazardous Waste Management Program (LHWMP), which is jointly administered by King County, the suburban cities, and the City of Seattle. This program funds a variety of efforts to support the proper use and disposal of moderate risk waste (MRW). The division manages MRW collection outside of Seattle and receives revenue sufficient to cover the costs involved. The division collects MRW at the Factoria transfer station in Bellevue and via the Household Hazardous Wastemobile, which travels to designated sites or special events.

DESCRIPTION OF THE RATE MODELING PROCESS

The division projects tipping fees using four interactive economic and financial models. These models employ various assumptions and projections to calculate detailed revenues and expenses over the three-year rate period, as well as over the longer-term. The tipping fees are calculated such that:

- Revenues are sufficient to cover the daily costs of operations and services as required by a variety of regulatory and legal mandates
- Funds are available to provide for landfill maintenance and closure, as well as capital investment projects for the transfer and disposal system
- An adequate Operating Fund balance is maintained for contingencies, such as natural disasters or other events, that might disrupt the flow of revenue required to keep the entire system operational for the protection of public health and the environment
- Any increase in the Basic Fee meets the county's commitment to keep increases at or below the rate of inflation

Figure 1 shows the basic design of the models and the inputs and variables used in calculating the tipping fees. The models solve for the Basic Fee first because it accounts for about 97 percent of total revenues from fees. The yard waste, special waste, and regional direct fees are then calculated using the Basic Fee as a foundation.

MODEL INPUTS AND CALCULATIONS

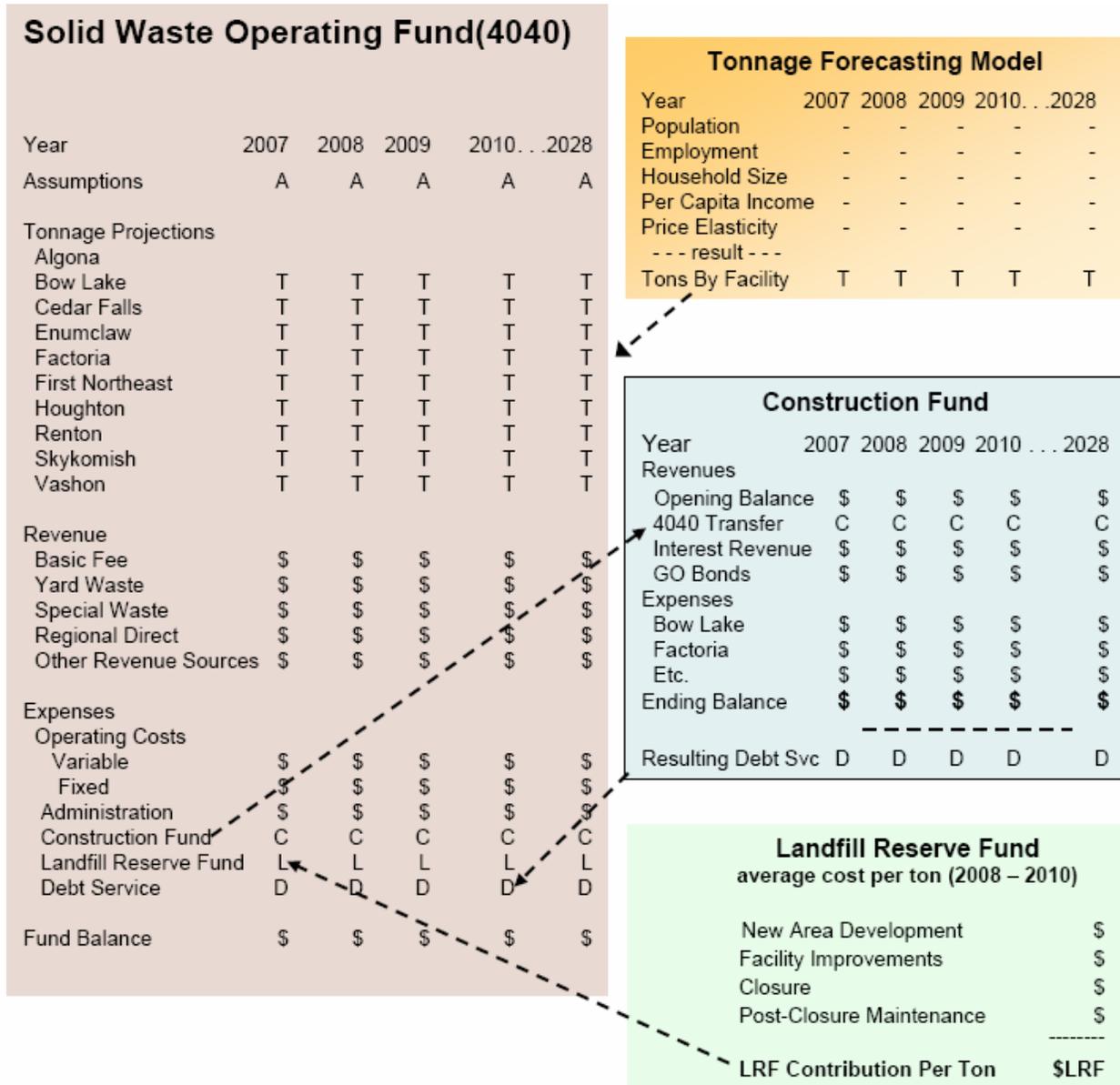
The Solid Waste rate models bring together all of the data needed to derive the four tipping fees. Projections from the Tonnage Forecast, Construction Fund, and Landfill Reserve Fund models provide input to the financial forecast for the Operating Fund model, which then calculates total revenues and costs expected over the rate period under various assumptions regarding the Basic Fee.

A more detailed description of the interactive variables of the models is provided below.

Assumptions: Financial assumptions used in the model include primarily estimates of future interest rates and rates of inflation.

Tonnage Projections: The most fundamental input to the Solid Waste Operating Fund model is the tons of waste expected to be disposed at division facilities during each year of the planning horizon. The Tonnage Forecast projects future tons based on historical data and demographic variables, such as population growth, regional employment, household size, and per capita income. It also factors in the recycling rate, which is currently 43 percent. The annual projection of tons is multiplied by the tipping fees to calculate revenues.

Figure 1. Rate models



Sources of Revenues: The Solid Waste Division is an enterprise, which generates revenues from two different sources. The majority of revenues are from tipping fees, which are calculated based on the forecast of solid waste tonnage and the fees charged for each category of waste. In addition, there are several non-fee sources of revenue, such as interest earned, grants, and the sale of recyclable materials that are forecast over the rate period.

Costs: For each year of the planning horizon, projections are made for the division's Operating and Administrative costs, and for the numerous transfers that are funded by revenues earned each year. A major element among these transfers is the Construction Fund, which is used to finance capital projects for the transfer station network. The Construction Fund receives annual transfers of tipping fee revenues; however, major capital construction projects may also require the issuance of GO bonds to ensure adequate funding at the time of construction. Borrowings from the GO fund are deposited into the Construction Fund. The resulting debt service costs are calculated by the Construction Fund model and paid out of the Solid Waste Operating Fund.

The Operating Costs category also includes the transfer to reserve funds, such as the LRF. The LRF model calculates how much money is required annually to pay for capital projects at the Cedar Hills landfill, and to build sufficient reserves to fund post-closure maintenance for 30 years. The per-ton cost to support the LRF is paid from the Solid Waste Operating Fund.

Fund Balance: The model ensures that when all revenues and expenditures are considered, the division retains a 45-day reserve in the fund balance.

CALCULATION OF THE 2008-2010 TIPPING FEES

This section presents the calculated tipping fees for 2008-2010 based on projected expenditures and revenues.

BASIC FEE

Table 3 shows the breakdown of anticipated expenditures and their effect on the Basic Fee.

Table 3. Projected expenditures per ton by low org – 2008-2010

	Average Annual Cost	Per-Ton Cost
Administration		
Division Administration	\$ 6,227,000	\$ 5.84
Debt Service (old)	2,716,000	2.55
Debt Service (new)	5,925,000	5.56
Capital Equipment Replacement Fund	5,104,000	4.79
Landfill Reserve Fund	6,616,000	6.21
Overhead	4,261,000	4.00
Legal Support	1,509,000	1.42
Construction Fund Contributions	3,000,000	2.81
Finance and Administration	4,767,000	4.47
Recycling and Environmental Services	7,085,000	6.65
Household Hazardous Waste	3,673,000	3.45
Engineering Services	5,804,000	5.44
Shop/Maintenance	11,284,000	10.59
Transfer Operations	8,284,000	7.77
Transportation	11,173,000	10.48
Cedar Hills Disposal	13,442,000	12.61
Operations Management	1,697,000	1.59
Landfill Gas and Wastewater	1,913,000	1.79
Customer Transactions	2,707,000	2.54
Total	\$ 107,186,000	\$ 100.55
Adjustments for Costs Supported by Funds Other Than the Basic Fee		(5.13)
Adjustment for Fund Balance Reduction		(0.49)
Basic Fee Calculated		94.93
Basic Fee Proposed		\$ 95.00

Once the Basic Fee is established, the regional direct, yard, and special waste fees are calculated. A discussion of each fee is provided below.

REGIONAL DIRECT FEE

The Regional Direct Fee is the reduced fee charged to commercial collection companies that haul solid waste to the Cedar Hills landfill in large refuse trailers from their own transfer stations and processing facilities, bypassing county transfer stations.

As recommended in the *2004 Business Plan*, the Regional Direct Fee was raised from \$59.50 to \$69.50 (compared with the Basic Fee of \$82.50). As a consequence, the amount of solid waste tons transported by commercial haulers via regional direct declined from 250,000 to about 7,200 tons per year.

At the time the Regional Direct Fee was changed, the division estimated that the marginal cost of transfer and transport services was \$13 per ton. This estimate was based on the savings that the division expected to realize by not transferring and transporting the waste that went directly to Cedar Hills from the private stations. The \$13 differential was then used to calculate the new Regional Direct Fee of \$69.50 per ton that was adopted by County Council in late 2003 (i.e., \$82.50 - \$13 = \$69.50).

Once the new Regional Direct Fee went into effect, the commercial collection companies stopped using their own facilities and hauled most of that waste directly to the county's transfer system. This change resulted in a 36 percent increase in the tonnage handled at division transfer facilities. It also provided a unique opportunity to calculate the actual marginal cost of transfer and transport based on what occurred with this large shift in tonnage. The division now has data on how many staff were added, what additional equipment was purchased, and how much more was spent on fuel. The results, inflated to 2009 costs (the mid-point of the new rate period), are shown below.

	Cost per Ton	
Transportation		
Truck Driver labor	\$ 7.02	
Diesel	1.16	
Equipment replacement	<u>0.74</u>	
	8.93	
Transfer Stations		
Transfer Station Operator labor	4.06	
Scale Operator labor	1.58	
Additional supervision	<u>0.41</u>	
	6.04	
Total Marginal Cost	\$ 14.97	
Basic Fee		\$ 95.00
Less marginal cost of transfer/transport (rounded)		(15.00) /ton
Regional Direct Fee		\$ 80.00 /ton

SPECIAL WASTE FEE

Special wastes are non-hazardous materials that require special handling or have properties that require a formal waste clearance by the division and/or Public Health – Seattle & King County before the wastes can be disposed of in the landfill. Examples include contaminated soil, biomedical wastes, and asbestos-containing materials. These wastes are charged at a higher rate to cover the cost of extra handling and documentation required for safe disposal.

Setting the fee for special wastes involves determining the additional costs, beyond the Basic Fee, that are required to manage the waste, averaged over the three-year rate period:

Item	Cost per Ton
Basic Fee	\$ 95.00
Additional management costs	44.80
Additional state refuse tax at 3.6%	5.03

Special Waste Fee (rounded)	\$ 145.00

YARD WASTE FEE

Source-separated yard waste and clean (untreated) wood in King County is collected largely at the curb by the commercial haulers, who take it to a composting facility. A small portion of the yard waste is brought directly to division transfer stations by self haulers (including landscaping businesses). The division pays a contractor to transport this material to the composting facility. Because yard waste does not go to the landfill, the costs for using the landfill are subtracted when determining this fee:

Item	Cost Per Ton
Basic Fee	\$ 95.00
Less cost of disposal at Cedar Hills	(32.24)
Less cost of transport to Cedar Hills	(11.19)
Cost to transport and process yard waste	31.20

Yard Waste Fee calculated	82.77
Yard Waste Fee proposed	\$ 82.50

EFFECT OF THE FEE INCREASE ON THE AVERAGE CUSTOMER IN KING COUNTY

The county's Basic Fee of \$82.50 per ton has been in effect since January of 1999. A change to \$95.00 per ton beginning in 2008 will increase the cost for the average one-can customer by only \$0.73 per month.

The average garbage can placed at the curb contains 27 pounds of waste. Assuming 52 weeks of pick-up service, the monthly average weight is 117 pounds, or 0.0585 tons. At \$95.00 per ton, the county's charge for disposal rises from \$4.83 to \$5.56 per month. This charge is only one component of the customer bill, in addition to the cost of collection, recycling, and other incidental charges.

With the division's increase in the disposal fee, the average monthly bill for a customer with one-can pick-up would be approximately \$10.38, which amounts to about a 7 percent increase, as shown below

	Cost
Average 1-can monthly disposal cost at \$95.00/ton $[(27 \text{ lbs} * 52) / 12] * 95.00$	\$ 5.56
Average 1-can monthly disposal cost at \$82.50/ton $[(27 \text{ lbs} * 52) / 12] * 82.50$	4.83
Change in average cost for disposal	\$ 0.73

APPENDIX A

Detailed Tonnage Forecasts Through 2016

Appendix A. Long Term Tonnage Forecast by Facility

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Transfer Facilities											
Algona	153,200	158,500	163,600	168,300	173,600	176,500	180,600	183,500	188,400	193,400	196,900
Bow Lake	319,300	325,000	308,400	317,200	327,300	332,800	340,500	346,000	355,200	364,500	371,200
Enumclaw	24,300	24,500	25,300	26,000	26,900	27,300	27,900	28,400	29,100	29,900	30,500
Factoria	164,200	177,000	178,800	183,900	189,800	192,900	197,400	200,600	205,900	211,400	215,200
First NE	18,600	11,000	65,000	66,900	69,000	70,100	71,800	72,900	74,900	76,800	78,200
Houghton	177,500	182,000	186,300	191,600	197,700	201,000	205,700	209,000	214,600	220,200	224,300
Renton	72,700	76,500	77,800	80,000	82,600	83,900	85,900	87,300	89,600	92,000	93,700
Vashon	8,400	9,200	9,600	9,900	10,200	10,400	10,600	10,800	11,100	11,300	11,600
Cedar Falls Drop Box	4,400	4,600	4,300	4,400	4,600	4,600	4,700	4,800	5,000	5,100	5,200
Total Transfer Tons	942,600	968,300	1,019,100	1,048,200	1,081,700	1,099,500	1,125,100	1,143,300	1,173,800	1,204,600	1,226,800
Cedar Hills											
Regional Direct	7,800	7,800	10,500	10,800	11,100	11,300	11,600	11,800	12,100	12,400	12,600
Special Waste	2,600	2,700	2,000	2,100	2,100	2,200	2,200	2,200	2,300	2,400	2,400
Other CH Waste	13,400	14,000	19,200	19,700	20,400	20,700	21,200	21,500	22,100	22,700	23,100
Snohomish Co (1st NE)	16,800	22,000									
Total Disposal Tons	983,200	1,014,800	1,050,800	1,080,800	1,115,300	1,133,700	1,160,100	1,178,800	1,210,300	1,242,100	1,264,900
Yard Waste	1,500	1,900	4,000	4,100	4,100	7,300	7,400	7,700	7,700	8,000	8,000

APPENDIX B

Detailed Results of the Rate Model Through 2028

Appendix B. Rate Model Through 2028
Solid Waste Division Financial Forecasting and Rate Model

	2006e	2007	2008	2009	2010	2011	2012	2013
1 1999 Basic Fee plus inflation	95.37	98.23	101.18	104.22	107.34	110.56	113.88	117.30
2 Basic Fee proposed/projected	82.50	82.50	95.00	95.00	95.00	102.00	102.00	102.00
3 Interest earnings rate (per OMB)	4.25	4.81	5.10	5.10	5.10	5.10	4.50	4.50
4 Revenues								
5 Net Disposal Fees	81,830,489	83,170,290	99,302,026	102,173,720	105,424,620	114,764,101	117,432,488	119,287,064
6 MRW (LW HMP)	3,112,435	3,460,885	3,564,712	3,671,653	3,781,802	3,895,257	4,012,114	4,132,478
7 Interest Earnings	1,028,628	694,897	660,803	665,380	569,319	522,489	494,559	499,960
8 Grants	1,027,027	900,000	537,000	537,000	337,000	337,000	337,000	337,000
9 LF gas	0	0	0	200,000	200,000	200,000	200,000	200,000
10 Recycling	503,000	453,000	481,590	496,038	510,919	526,246	542,034	558,295
11 Other Revenues	317,221	64,646	64,646	64,646	64,646	64,646	64,646	64,646
12 Total	87,818,800	88,743,718	104,610,776	107,808,436	110,888,307	120,309,739	123,082,841	125,079,442
13								
14 Operating Expenditures								
15 Debt Service Existing	6,272,857	6,290,715	2,714,284	2,711,743	2,722,137	1,190,338	1,191,803	0
16 Debt Service New: (20 yr @ 5.0%)	0	0	3,410,310	5,576,860	8,786,563	12,878,935	12,878,935	14,483,787
17 Total Debt Svc	6,272,857	6,290,715	6,124,594	8,288,603	11,508,700	14,069,273	14,070,738	14,483,787
18 Rent - Cedar Hills	7,426,300	7,657,589	7,887,317	8,123,936	8,367,654	8,618,684	8,877,244	9,143,562
19 LRF	5,634,432	5,849,280	6,230,963	6,601,470	7,016,332	7,327,447	7,723,130	8,080,862
20 CERP	3,398,342	4,099,189	5,603,946	5,103,946	4,603,946	4,103,946	3,603,946	3,103,946
21 Construction Fund	1,706,290	3,746,792	3,000,000	3,000,000	3,000,000	3,000,000	4,000,000	3,000,000
22 Prior yr. carry-forward	3,200,431	0	0	0	0	0	0	0
23 Sub total - Transfers Out	27,638,652	27,643,565	28,846,819	31,117,954	34,496,632	37,119,350	38,275,059	37,812,156
24 DRNP Admin + Ovhead	3,841,375	4,015,037	4,135,488	4,259,553	4,387,339	4,518,960	4,654,528	4,794,164
25 SWD Admin (net 1454)	6,391,331	5,867,647	6,043,676	6,224,987	6,411,736	6,604,088	6,802,211	7,006,277
26 Legal	655,549	1,422,053	1,464,715	1,508,656	1,553,916	1,600,533	1,648,549	1,698,006
27 Finance & Admin	4,167,469	4,491,938	4,626,696	4,765,497	4,908,462	5,055,716	5,207,387	5,363,609
28 Recycling & Enviro Svcs	9,186,400	6,676,798	6,877,102	7,083,415	7,295,917	7,514,795	7,740,239	7,972,446
29 Household Hzds Waste	0	3,460,885	3,564,712	3,671,653	3,781,802	3,895,257	4,012,114	4,132,478
30 Host city mitigation	0	0	800,000	822,883	849,123	860,946	881,007	894,966
31 Waste Export Costs	0	0	0	0	0	0	0	0
32 Variable Operating Costs								
33 (a) Disposal	1,628,305	1,718,256	1,800,524	1,908,410	2,029,171	2,117,807	2,233,172	2,337,704
34 (b) Transfer & Transport	14,524,998	15,433,717	16,475,360	17,499,694	18,646,166	19,404,335	20,504,102	21,506,521
35 Savings from Compaction	0	0	(173,823)	(182,283)	(1,348,247)	(1,411,361)	(2,062,490)	(2,156,934)
36 Fixed Operating Costs								
37 (a) Disposal	13,286,470	13,987,948	14,407,587	14,839,814	15,285,009	15,743,559	16,215,866	16,702,342
38 (b) Transfer/Transport	12,561,716	15,047,889	13,213,756	13,610,169	14,018,474	14,439,028	14,872,199	15,318,365
39 B & O Tax	1,246,109	1,243,164	1,489,530	1,532,606	1,581,369	1,721,462	1,761,487	1,789,306
40 Total SWD Operating Costs	67,489,722	73,365,333	74,725,323	77,545,054	79,400,238	82,065,123	84,470,372	87,359,249
41 Total SWD Costs	95,128,374	101,008,898	103,572,142	108,663,008	113,896,870	119,184,473	122,745,431	125,171,405
42 Under-expenditures	1,900,508	2,070,134	0	0	0	0	0	0
43								
44 Ending Fund Balance	22,963,049	12,768,003	13,806,637	12,952,065	9,943,502	11,068,768	11,406,178	11,314,215
45 Target (45 day cash reserve)	<u>8,436,215</u>	<u>9,170,667</u>	<u>9,340,665</u>	<u>9,693,132</u>	<u>9,925,030</u>	<u>10,258,140</u>	<u>10,558,797</u>	<u>10,919,906</u>
46 Above / Below Target	14,526,834	3,597,336	4,465,972	3,258,933	18,472	810,628	847,382	394,309

Appendix B. Rate Model Through 2028
Solid Waste Division Financial Forecasting and Rate Model

	2014	2015	2016	2017	2018	2019	2020	2021
1 1999 Basic Fee plus inflation	120.81	124.44	128.17	132.02	135.98	140.06	144.26	148.59
2 Basic Fee proposed/projected	107.00	107.00	107.00	138.00	138.00	138.00	141.00	141.00
3 Interest earnings rate (per OMB)	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
4 Revenues								
5 Net Disposal Fees	128,506,256	131,878,978	134,306,615	177,589,270	181,988,407	185,589,968	194,505,750	196,485,388
6 MRW (LWHMP)	4,256,452	4,384,146	4,515,670	4,651,140	4,790,674	4,934,394	5,082,426	5,234,899
7 Interest Earnings	504,833	542,332	573,495	716,968	956,064	1,087,245	1,190,951	1,243,770
8 Grants	337,000	337,000	337,000	337,000	337,000	337,000	337,000	337,000
9 LF gas	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
10 Recycling	575,044	592,295	610,064	628,366	647,217	666,633	686,632	707,231
11 Other Revenues	64,646	64,646	64,646	64,646	64,646	64,646	64,646	64,646
12 Total	134,444,230	137,999,396	140,607,490	184,187,390	188,984,008	192,879,887	202,067,405	204,272,934
13								
14 Operating Expenditures								
15 Debt Service Existing	0	0	0	0	0	0	0	0
16 Debt Service New: (20 yr @ 5.0%)	17,934,218	19,619,313	19,619,313	19,619,313	19,619,313	19,619,313	19,619,313	19,619,313
17 Total Debt Svc	17,934,218	19,619,313	19,619,313	19,619,313	19,619,313	19,619,313	19,619,313	19,619,313
18 Rent - Cedar Hills	9,417,869	9,700,405	9,991,417	0	0	0	0	0
19 LRF	8,546,746	9,034,771	9,477,406	0	0	0	0	0
20 CERP	2,603,946	2,103,946	1,603,946	1,668,104	1,734,828	1,804,221	1,876,390	1,951,445
21 Construction Fund	5,000,000	3,500,000	4,000,000	0	0	0	0	0
22 Prior yr. carry-forward	0	0	0	0	0	0	0	0
23 Sub total - Transfers Out	43,502,778	43,958,434	44,692,081	21,287,416	21,354,145	21,423,538	21,495,707	21,570,761
24 DRNP Admin + Ovhead	4,937,989	5,086,129	5,238,713	5,395,874	5,557,750	5,724,483	5,896,217	6,073,104
25 SWD Admin (net 1454)	7,216,466	7,432,960	7,655,948	7,885,627	8,122,196	8,365,862	8,616,837	8,875,343
26 Legal	1,748,946	1,801,414	1,855,457	1,261,339	1,299,180	1,338,155	1,378,300	1,419,649
27 Finance & Admin	5,524,517	5,690,253	5,860,960	6,036,789	6,217,893	6,404,430	6,596,562	6,794,459
28 Recycling & Enviro Svcs	8,211,619	8,457,968	8,711,707	8,973,058	9,242,250	9,519,517	9,805,103	10,099,256
29 Household Hzds Waste	4,256,452	4,384,146	4,515,670	4,651,140	4,790,674	4,934,394	5,082,426	5,234,899
30 Host city mitigation	918,993	943,173	960,564	984,134	1,008,543	1,028,528	1,054,996	1,065,751
31 Waste Export Costs	0	0	0	79,317,361	83,235,449	86,922,033	91,298,716	94,442,967
32 Variable Operating Costs								
33 (a) Disposal	2,471,809	2,614,078	2,743,346	0	0	0	0	0
34 (b) Transfer & Transport	22,711,972	24,067,193	25,305,604	26,176,647	27,711,082	29,190,009	30,862,639	32,199,445
35 Savings from Compaction	(2,279,645)	(3,776,036)	(3,962,494)	(4,181,407)	(4,414,124)	(4,636,322)	(4,899,702)	(5,132,796)
36 Fixed Operating Costs								
37 (a) Disposal	17,203,412	17,719,515	18,251,100	0	0	0	0	0
38 (b) Transfer/Transport	15,777,916	16,251,253	16,738,791	17,240,955	17,758,183	18,290,929	18,839,657	19,404,846
39 B & O Tax	1,927,594	1,978,185	2,014,599	2,663,839	2,729,826	2,783,850	2,917,586	2,947,281
40 Total SWD Operating Costs	90,628,041	92,650,229	95,889,965	156,405,356	163,258,902	169,865,866	177,449,338	183,424,203
41 Total SWD Costs	134,130,819	136,608,663	140,582,046	177,692,772	184,613,047	191,289,403	198,945,045	204,994,964
42 Under-expenditures	0	0	0	0	0	0	0	0
43								
44 Ending Fund Balance	11,627,626	13,018,359	13,043,803	19,538,421	23,909,381	25,499,865	28,622,224	27,900,194
45 Target (45 day cash reserve)	<u>11,328,505</u>	<u>11,581,279</u>	<u>11,986,246</u>	<u>19,550,669</u>	<u>20,407,363</u>	<u>21,233,233</u>	<u>22,181,167</u>	<u>22,928,025</u>
46 Above / Below Target	299,121	1,437,081	1,057,557	(12,248)	3,502,019	4,266,632	6,441,057	4,972,168

Appendix B. Rate Model Through 2028
Solid Waste Division Financial Forecasting and Rate Model

	2022	2023	2024	2025	2026	2027	2028
1 1999 Basic Fee plus inflation	153.04	157.64	162.36	167.23	172.25	177.42	182.74
2 Basic Fee proposed/projected	141.00	150.00	150.00	150.00	158.00	158.00	158.00
3 Interest earnings rate (per OMB)	4.50	4.50	4.50	4.50	4.50	4.50	4.50
4 Revenues							
5 Net Disposal Fees	201,246,985	214,882,615	220,273,857	225,828,222	239,128,541	245,196,117	249,080,983
6 MRW (LWHMP)	5,391,946	5,553,704	5,720,316	5,891,925	6,068,683	6,250,743	6,438,266
7 Interest Earnings	1,139,736	1,142,944	1,255,703	1,219,356	1,256,242	1,364,159	1,359,976
8 Grants	337,000	337,000	337,000	337,000	337,000	337,000	337,000
9 LF gas	200,000	200,000	200,000	200,000	200,000	200,000	200,000
10 Recycling	728,448	750,302	772,811	795,995	819,875	844,471	869,805
11 Other Revenues	64,646	64,646	64,646	64,646	64,646	64,646	64,646
12 Total	209,108,761	222,931,210	228,624,332	234,337,145	247,874,987	254,257,137	258,350,676
13							
14 Operating Expenditures							
15 Debt Service Existing	0	0	0	0	0	0	0
16 Debt Service New: (20 yr @ 5.0%)	19,619,313	19,619,313	19,619,313	19,619,313	19,619,313	19,619,313	16,209,003
17 Total Debt Svc	19,619,313	19,619,313	19,619,313	19,619,313	19,619,313	19,619,313	16,209,003
18 Rent - Cedar Hills	0	0	0	0	0	0	0
19 LRF	0	0	0	0	0	0	0
20 CERP	2,029,503	2,110,683	2,195,110	2,282,915	2,374,231	2,469,201	2,567,969
21 Construction Fund	0	0	0	0	0	0	0
22 Prior yr. carry-forward							
23 Sub total - Transfers Out	21,648,820	21,729,999	21,814,423	21,902,227	21,993,544	22,088,513	18,776,971
24 DRNP Admin + Ovhead	6,255,297	6,442,956	6,636,244	6,835,332	7,040,392	7,251,603	7,469,152
25 SWD Admin (net 1454)	9,141,603	9,415,851	9,698,326	9,989,276	10,288,955	10,597,623	10,915,552
26 Legal	1,462,238	1,506,105	1,551,288	1,597,827	1,645,762	1,695,135	1,745,989
27 Finance & Admin	6,998,293	7,208,242	7,424,489	7,647,224	7,876,640	8,112,940	8,356,328
28 Recycling & Enviro Svcs	10,402,234	10,714,301	11,035,730	11,366,802	11,707,806	12,059,040	12,420,811
29 Household Hzds Waste	5,391,946	5,553,704	5,720,316	5,891,925	6,068,683	6,250,743	6,438,266
30 Host city mitigation	1,091,609	1,096,110	1,123,646	1,152,021	1,158,505	1,187,948	1,206,789
31 Waste Export Costs	99,056,044	101,851,569	106,916,108	112,246,832	115,587,645	121,369,889	126,253,862
32 Variable Operating Costs							
33 (a) Disposal	0	0	0	0	0	0	0
34 (b) Transfer & Transport	34,058,951	35,126,113	37,186,186	39,368,810	40,701,446	43,096,256	45,203,237
35 Savings from Compaction	(5,398,265)	(5,675,041)	(5,963,566)	(6,264,295)	(6,577,700)	(6,904,272)	(7,244,518)
36 Fixed Operating Costs							
37 (a) Disposal	0	0	0	0	0	0	0
38 (b) Transfer/Transport	19,986,992	20,586,601	21,204,199	21,840,325	22,495,535	23,170,401	23,865,513
39 B & O Tax	3,018,705	3,223,239	3,304,108	3,387,423	3,586,928	3,677,942	3,736,215
40 Total SWD Operating Costs	191,465,647	197,049,750	205,837,076	215,059,502	221,580,596	231,565,248	240,367,194
41 Total SWD Costs	213,114,468	218,779,749	227,651,499	236,961,730	243,574,140	253,653,762	259,144,166
42 Under-expenditures	0	0	0	0	0	0	0
43							
44 Ending Fund Balance	23,894,487	28,045,949	29,018,782	26,394,197	30,695,044	31,298,419	30,504,929
45 Target (45 day cash reserve)	<u>23,933,206</u>	<u>24,631,219</u>	<u>25,729,634</u>	<u>26,882,438</u>	<u>27,697,575</u>	<u>28,945,656</u>	<u>30,045,899</u>
46 Above / Below Target	(38,719)	3,414,730	3,289,147	(488,241)	2,997,469	2,352,763	459,029

APPENDIX C

Landfill Reserve Fund

LANDFILL RESERVE FUND

The Landfill Reserve Fund (LRF) maintains reserves that support capital expenditures for new area development and closure projects at the Cedar Hills Regional Landfill, as well as reserves to fund post-closure maintenance costs after the landfill closes. The funding source is a monthly transfer from the Solid Waste Operating Fund (Fund 4040) based on an annual LRF contribution per ton of waste disposed at Cedar Hills. The contribution is set so that LRF reserves and accumulated interest will be equal to expenditures for landfill capital costs and post-closure maintenance. The amount is adjusted annually based on existing reserves, future tonnage projections, the remaining landfill capacity, and updated cost estimates.

The LRF fee component for the 2008 through 2010 rate period has been calculated to ensure that all projects at the Cedar Hills landfill are fully funded by the date of landfill closure, currently estimated to occur in 2016. The expenditure projections are based, to the extent possible, on actual bids received for similar projects at Cedar Hills.

As in previous rate studies, the determination of the LRF fee components is a result of an iterative process that calculates the per ton contribution required to fund all of the planned LRF projects over the life of the landfill. Contributions are calculated using current year dollars and an assumed real interest rate (interest minus inflation) of 3 percent. The contribution is then inflated for the rate period being studied.

There are currently four accounts in the Landfill Reserve Fund:

New Area Development

Development and operation of the Cedar Hills landfill is carried out according to an approved Site Development Plan. Municipal solid waste is disposed in designed cells or "Areas." Currently, waste is being disposed in Area 6 of the landfill, and construction of Area 7 is scheduled to begin in 2008. New area development is largely a process of soil excavation and stockpiling, and liner placement.

Facility Improvements

Projects and improvements at the landfill that are not directly related to the process of landfilling - such as pump stations, environmental control systems, administrative offices, and shop maintenance facilities - are funded through this account.

Landfill Closure

Landfill closure consists of covering the filled disposal areas with plastic, soils, gravel, and vegetation to keep rainwater from wetting the refuse and producing leachate. A staged approach is used for the construction of final closure facilities in order to increase the efficiency of the landfill gas collection system. Current plans call for deferring installation of the final cover on Areas 5, 6, and 7 so that the projected

airspace gained from the settlement of refuse can be used. Federal regulations require that landfill operators set aside reserves to pay for landfill closure and 30 years of post-closure maintenance.

Post-Closure Maintenance

Post-closure maintenance is a continuation of environmental monitoring and control activities done during the operating life of the landfill. It also includes equipment replacement, and site and fence maintenance. In 2006 dollars, we expect to spend close to \$2 million annually on these activities. When Cedar Hills closes, the funds collected to pay for the 30 years of landfill maintenance will be transferred to the Landfill Post-Closure Maintenance Fund (Fund 1040), which is a dedicated operating fund that is already being used to maintain the closed rural landfills for which the Solid Waste Division has custodial responsibility.

The contribution to the LRF over the 2008-2010 rate period will be an average of \$6.12 per ton. This reflects the 2006 result inflated by 3 percent annually.

Summary Tables

The tables that follow provide detailed information on the LRF used in the rate models.

Table C-1 shows the annual disposal forecast for the remaining life of Cedar Hills.

Table C-2 shows detail on the planned expenditures for LRF projects (in 2006 dollars).

Table C-3 is a summary of the components of the LRF per ton contribution from the Operating Fund.

Tables C-4 through C-7 show the revenues, expenditures, timing, and fund balances for each LRF account.

Table C-1. Long range Cedar Hills disposal forecast

tons per year

Year	Cedar Hills disposal tons
2006	976,700
2007	1,005,500
2008	1,050,800
2009	1,080,800
2010	1,115,200
2011	1,133,800
2012	1,160,200
2013	1,178,800
2014	1,210,200
2015	1,242,100
2016	1,264,900

Table C-2. Landfill Reserve Fund project cost estimates

in thousands of 2006 dollars

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cedar Hills Landfill New Area Development												
Area 6 Development	100											
Surface Water Improvements	350	1,126	183									
Area 7 Development	250	935	1,367	4,218	227							
Flare Station Relocation	79	350	579	214								
Audit Services	25	50	92									
Landfill Gas to Energy	5	150	150	139								
Cedar Hills Landfill New Area Development Projects	809	2,611	2,371	4,571	227							
Cedar Hills Facility Improvement												
Pump Station & Conveyance Facility	150	1,133	641									
Shop Fac. Evaluation & Planning	1											
Facility Improvements	60	400	477									
Cedar Hills Facility Improvement Projects	212	1,533	1,118									
Cedar Hills Landfill Closure												
Area 5 Closure	5,008	2,131										
Area 6 Closure	125	2,437	3,599	4,419	2,321	774						
Area 7 Closure			70	80	594	3,285	11,362	4,029	4,029	1,462		
Areas 5, 6, & 7 Top Lift											22,923	7,641
Groundwater Monitoring Wells & Hydrogeologic Report	300	175										
Leachate & Landfill Gas Mgmt System Eval	372	1,712	481	371	124							
Cedar Hills Landfill Closure Projects	5,804	6,454	4,150	4,870	3,039	4,059	11,362	4,029	4,029	1,462	22,923	7,641

**Table C-3. Average per ton contribution
to the Landfill Reserve Fund**

2008 - 2010 rate period

Landfill Reserve Fund	
New area development	\$0.01
Facility improvements	\$0.54
Closure	\$5.57
Post-closure maintenance	\$0.00
Contribution per ton	\$6.12

Table C-4. Landfill Reserve Fund contribution calculation
 Cedar Hills new area development account

Projections in year 2006 dollars

New area development per ton rate, 2006: \$0.49

Year	Revenue	Interest earnings (3% real)	Expenditures	Year-end balance
2005				4,286,605
2006	607,497	260,977	809,402	4,345,676
2007	625,410	100,591	2,610,667	2,461,011
2008	514,892	45,990	2,370,882	651,011
2009	529,592	(41,095)	4,571,292	(3,431,784)
2010	546,448	(98,162)	227,001	(3,210,499)
2011	555,562	(87,982)		(2,742,918)
2012	568,498	(73,760)		(2,248,181)
2013	577,612	(58,781)		(1,729,350)
2014	592,998	(42,986)		(1,179,337)
2015	608,629	(26,251)		(596,959)
2016	619,801	(8,612)		14,230

Average contribution per ton, 2008-2010: \$0.54

Table C-5. Landfill Reserve Fund contribution calculation
 Cedar Hills facility improvements account

Projections in year 2006 dollars

Facility improvements per ton rate, 2006: \$0.01

Year	Revenue	Interest earnings (3% real)	Expenditures	Year-end balance
2005				1,904,621
2006	327,914	107,932	211,523	2,128,944
2007	337,583	45,937	1,533,000	979,464
2008	10,508	12,777	1,117,647	(114,898)
2009	10,808	(3,285)		(107,375)
2010	11,152	(3,054)		(99,277)
2011	11,338	(2,808)		(90,747)
2012	11,602	(2,548)		(81,694)
2013	11,788	(2,274)		(72,180)
2014	12,102	(1,984)		(62,061)
2015	12,421	(1,676)		(51,316)
2016	12,649	(1,350)		(40,017)

Average contribution per ton, 2008-2010: \$0.01

Table C-6. Landfill Reserve Fund contribution calculation

Cedar Hills closure account

Projections in year 2006 dollars

Closure per ton rate, 2006:

\$5.10

Year	Revenue/ Transfers	Interest earnings (3% real)	Expenditures	Year-end balance
2005				9,757,418
2006	4,686,194	551,896	5,804,485	9,191,023
2007	4,824,376	251,288	6,453,915	7,812,772
2008	5,359,080	252,513	4,150,414	9,273,951
2009	5,512,080	287,843	4,870,418	10,203,457
2010	5,687,520	345,836	3,038,674	13,198,140
2011	5,782,380	421,799	4,058,718	15,343,600
2012	5,917,020	378,633	11,361,997	10,277,257
2013	6,011,880	338,060	4,029,077	12,598,120
2014	6,172,020	410,088	4,029,077	15,151,150
2015	6,334,710	527,633	1,461,510	20,551,983
2016	6,450,990	369,483	22,922,761	4,449,695
2017	3,085,483 *	65,159	7,640,920	(40,583)

Average contribution per ton, 2008-2010:

\$5.57

* Excess \$3m in post-closure maintenance account will be transferred to the closure account.

Table C-7. Landfill Reserve Fund contribution calculation
Cedar Hills post-closure maintenance account

Projections in year 2006 dollars

Post-closure maintenance per ton rate, 2006: \$0.00 *

Year	Revenue	Interest earnings (3% real)	Set-Aside	Year-end balance
2005				28,747,967
2006	0	1,724,878	0	30,472,845
2007	0	914,185	0	31,387,030
2008	0	941,611	0	32,328,641
2009	0	969,859	0	33,298,500
2010	0	998,955	0	34,297,455
2011	0	1,028,924	0	35,326,379
2012	0	1,059,791	0	36,386,170
2013	0	1,091,585	0	37,477,756
2014	0	1,124,333	0	38,602,088
2015	0	1,158,063	0	39,760,151
2016	0	1,192,805	0	40,952,955
2017	0	650,814	38,518,286	3,085,483 **

Annual post-closure maintenance cost, 2006\$: 1,965,174

Present value of annual post-closure maintenance
cost for 30 years at 3% real discount rate: 38,518,286

* Assuming future interest earnings, this account is fully funded & no longer requires additional contributions.

** Excess \$3m remaining when transfer to post-closure maintenance fund occurs will be added to the closure account.

APPENDIX D

Construction Fund – Projected Balances

Appendix D. Capital Improvement Program Construction Fund

Revenues, expenditure cash flows, and fund balances

to implement the *Solid Waste Transfer System and Waste Export System Plan* recommendations

(in thousands of real dollars)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Beginning Fund Balance	15,627	2,656	3,405	626	1,793	4,348	4,633	1,721	745	1,841
Revenues										
Transfers from Op Fund	0	3,747	3,000	3,000	3,000	3,000	4,000	3,000	5,000	3,500
Interest earned	446	922	525	791	1,199	1,536	253	621	1,234	665
Bond proceeds	0	28,000	14,500	27,000	40,000	51,000	0	20,000	43,000	21,000
Total Revenues	446	32,669	18,025	30,791	44,199	55,536	4,253	23,621	49,234	25,165
Expenditures										
First Northeast	11,864	23,610	900	120	0	0	0	0	0	0
Bow Lake	550	4,120	12,731	25,679	18,008	2,319	0	0	0	0
Factoria/Eastgate	0	52	2,122	2,185	20,259	24,182	2,388	0	0	0
NE Lake Washington	0	309	796	820	1,688	17,053	2,388	12,299	24,069	13,048
South King Co	0	309	796	820	1,688	11,697	2,388	12,299	24,069	13,048
Other capital projects	1,003	3,520	3,460	0	0	0	0	0	0	0
Total Expenditures	13,417	31,920	20,804	29,624	41,644	55,251	7,164	24,597	48,137	26,095
Ending Fund Balance	2,656	3,405	626	1,793	4,348	4,633	1,721	745	1,841	910

