



**Seattle Public Utilities
Solid Waste Fund
2009-2010 Rate Study**

August 2008

Notes on 2009-2010 Solid Waste Rate Study (1/12/2009)

Changes from Mayor's Proposal to Council Final Revisions (see approved Budget Green Sheet):

- Did not approve Construction Management Position
- Did not approve GIS Position, reassign existing position to data restoration work
- Reduced Dumpster-Free Alleys mandatory area, now between I-5 and Elliot Bay, and Denny and Yesler, plus Pioneer Square, and one additional opt-in neighborhood. Report results of program in first year. Prepare a DFA opt-in process for Council approval.
- Did not approve Commercial Recycling Inspector position
- Did not approve 5 Transfer Station Staff requested.
- Reduce consultant assistance for businesses adapting to expanded polystyrene ban
- Reduce SPU base services except: C&D program development, ½ consultant business recycling assistance, Waste-Free holidays, house moving study, waste prevention programs, NW Product Stewardship Council and Community Waste Reduction grants.

Other Decisions:

- 2009 rate increase of certain commercial can unit subscribers capped at 40% (to be fully phased in through 2012).
- 90% CIP accomplishment in 2010 (accomplishment rate does not affect 2009).
- Accept negative net income in 2009 due to delay of Green Fee.
- Pass long haul contract amendment, and tonnage tax legislation.

Contents

I. EXECUTIVE SUMMARY	1
II. INTRODUCTION.....	4
III. REVENUE REQUIREMENT	8
IV. COST ALLOCATION.....	15
V. DEMAND ANALYSIS	19
VI. RATE DESIGN.....	29
APPENDIX 1 ACTUAL AND PROJECTED RESULTS OF OPERATIONS	
APPENDIX 2 ACTUAL AND PROJECTED OPERATING CASH	
APPENDIX 3 RATE HISTORY	
APPENDIX 4 RATE DESIGN SUMMARY OF RECOMMENDATIONS	
APPENDIX 5 COST ALLOCATION DETAILS	

I. EXECUTIVE SUMMARY

The Solid Waste Utility provides curbside solid waste, organics (yard waste and foodwaste) and recycling services to Seattle residents through contracts with private haulers. The Utility also operates two transfer stations in Seattle that handle and transport the solid and yard waste collected within Seattle and provide residents with a place to “self haul” their solid waste and recycling. Solid waste services are supported almost entirely by utility rate revenue. For the most part, rates charged by SPU vary with the garbage service levels to which the customer subscribes to encourage more recycling.

Solid waste rates were last increased on January 1, 2008, when most rates were increased by 6.7 percent. Prior to that, the last significant increase to residential garbage can rates was in 1994.

This study proposes rate changes to take effect March 30, 2009 and January 1, 2010. Major changes will occur in the utility during the rate period. New collection contracts reflect increased costs of fuel and labor since 2000 when contracts were last signed, as well as service enhancements such as weekly yard waste / food waste collection. In addition, design and construction will begin on the two transfer stations, resulting in a reconfiguration of solid waste operations. Finally, the Green Fee on disposable shopping bags and a ban on polystyrene containers in food service settings will take effect on January 1, 2009, and Green Fee revenues will subsidize Solid Waste rates and programs.

The proposed rates support increases to the rate revenue requirement of \$21 million in 2009 and \$19 million in 2010, or a total of \$40.6 million over the two years. Table I-1 presents the change in the revenue requirement and the monthly impact of proposed rate increases on typical residential can customers, a sampling of dumpster customers, and self-haul customers. The proposed rates will affect dumpster customers to varying degrees depending on the service level to which they subscribe.

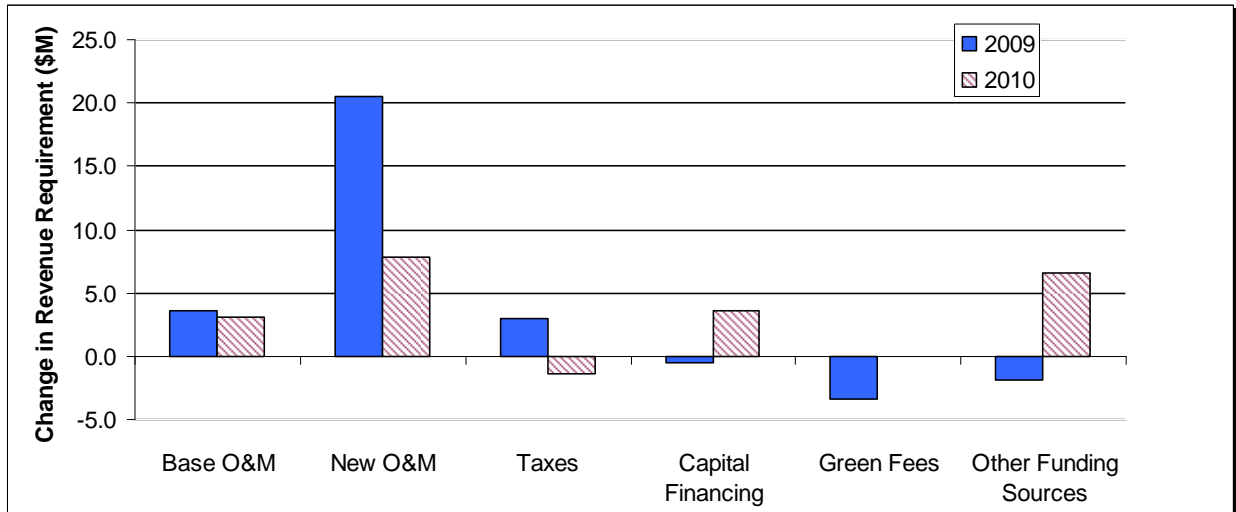
Table I-1
Proposed Solid Waste System Revenue Requirement and Bill Impacts

	2008	2009 Proposed		2010 Proposed	
			Change from 2008		Change from 2009
Rate Revenue Requirement	\$123,122,533	\$144,339,349	\$21,216,816	\$163,972,986	\$19,633,636
Typical Bills*					
32 Gallon Can	\$17.65	\$22.65	\$5.00	\$25.40	\$2.75
96 Gallon Organics	\$5.35	\$7.00	\$1.65	\$8.10	\$1.10
Apartment Building	\$224.80	\$308.45	\$83.65	\$325.77	\$17.32
Small Commercial	\$116.10	\$151.40	\$35.30	\$171.55	\$20.16
Large Commercial	\$716.50	\$932.96	\$216.46	\$1,007.24	\$74.28
Self Haul per ton	\$130.00	\$135.00	\$5.00	\$145.00	\$10.00

Proposed O&M spending increases account for the bulk of the increased spending (\$35M), with increases in CIP financing and taxes also contributing to the increase. The total system revenue requirement is funded by other sources such as the Green Fee, tonnage taxes, and

cash balances. Changes in these amounts from year to year affect the amount of revenue that must be generated by rates. Figure 1-1 breaks down, by year, the change in O&M, CIP financing and funding from other sources.

Figure I-1
Solid Waste Fund Revenue Requirement Drivers¹



Below is a further description of the drivers presented in Figure 1-1 above.

O&M

Base O&M. The 2009 amount represents cost increases above the 2008 amount projected in the 2008 rate study for existing O&M activities. Included in this figure is savings of \$1.7 million in 2009 and \$2.3 million in 2010 due to SPU’s successful re-negotiation of its long-haul disposal contract, legislation approving which will accompany the rate legislation.

New O&M. The bulk of new O&M costs are due to the new collection contracts, which incorporated adjustments for inflation, increased labor and fuel costs, and new services. New SPU costs are expected for contract and new program implementation, transfer station staffing, green fee and styrofoam ban implementation, higher fuel costs, and other programmatic adjustments.

TAXES

Tax payments increase along with revenues. Also, in 2010 the landfill closure tax will be eliminated so net tax payments will decrease.

¹ The 2010 increase for “Other Funding Sources” is not as large a rate driver as the chart may suggest because it reflects the elimination of the Landfill Closure Tax, which decreases both SPU revenue and expense at the same time. SPU ratepayers paid approximately 94 percent of this tax in 2007. The savings are reflected in the “Taxes” column.

CAPITAL FINANCING

Capital financing is a more significant rate driver in 2010, when a large CIP will require a larger cash contribution. Additional debt will also be issued in 2010, but will be offset when the landfill closure bonds are repaid by the end of 2009.

OTHER FUNDING SOURCES

Green Fees. It is estimated that Green Fees will generate \$3.4 million annually to offset solid waste rates. This estimate was derived based on Ireland's experience with a similar bag fee. Any amounts above \$3.4 million that the Fee generates will be reserved for future Executive-Council discussion of how to use it. Potential uses include rate breaks or new recycling programs.

Other. Other non-rate revenues such as tonnage taxes, grants, interest income, and the use of cash balances help offset the revenue requirement. They are generally stable from year-to-year; however, with the elimination of the landfill closure tax we will see a decrease in tonnage tax revenues.

Financial performance of the Solid Waste Fund (SWF) has been strong, and the SWF has met or exceeded most of its financial performance targets set out by City Council Resolution. The 2009-2010 rate study meets all financial policy targets. Net income is the binding constraint for this rate period. That is, the rate increase necessary to result in positive net income is more than sufficient to meet other financial targets. Table I-2 displays the current and projected financial performance for the Solid Waste Fund.

Table I-2
Solid Waste Fund Actual and Projected Financial Performance

	Target	Actual 2007	Projected 2008	-----Proposed-----					
		2009	2010	2011	2012	2013	2014		
Net Income (\$1,000's)	positive	3,422	757	506	821	488	620	836	1,234
Debt Service Coverage	1.7x	5.28	3.80	3.00	3.10	2.96	2.21	2.64	2.62
Cash Financing of the Capital Program	\$2.5m	3,274	2,706	2,760	5,717	2,872	4,847	4,242	3,200
Year-End Operating Cash (\$1,000's)	varies**	8,027	8,884	7,370	7,942	8,840	5,884	10,016	16,514

II. INTRODUCTION

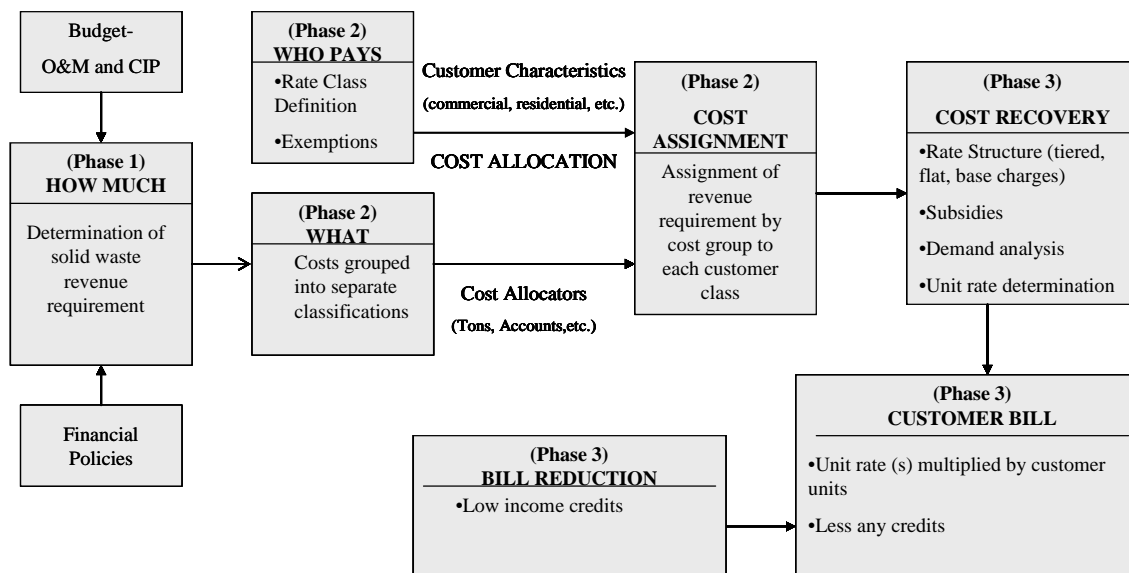
SPU finances the acquisition, operation, and maintenance of Seattle’s solid waste system through the Solid Waste Fund (SWF). As an enterprise fund, SWF functions like a self-supporting business which must generate operating revenues, predominantly through user charges (or “rates”), which are sufficient to cover all operating costs and meet financial policy targets.

This document provides a summary of the 2009-2010 Solid Waste Rate Study. The majority of it is devoted to the financial and policy issues of the Solid Waste Fund (SWF) that affect the rates. It also incorporates the recommendations proposed in the “Solid Waste Rate Design and Cost Allocation” document that was submitted to City Council in May of this year.² That document provides much of the background and analysis that drive the recommendations made in this proposal.

Ratemaking Process Overview

The following diagram displays the phases involved in the development of solid waste rates:

Figure II-1
Solid Waste Rate Setting Process



Chapters 3-6 of this document discuss each of these phases in detail. The Rate Design and Cost Allocation analysis mentioned earlier supports many of the recommendations in Phases 2 and 3.

Rate Setting Objectives

To set rates, we consider a number of factors to help evaluate policy and rate design decisions under consideration.

² The summary of recommendations from that document is included as an appendix to this document.

1. Revenue Requirement: Solid waste rates should be sufficient to meet the Solid Waste Fund's revenue requirement.
2. Customer Payment of Cost of Service: Each customer class should generate sufficient revenue to cover both indirect and direct costs of service to the customer over time.
3. Equity: Rates should reflect a fair apportionment of the different costs of providing service among groups of customers.
4. Conservation: The rate structures should encourage waste reduction and recycling activities.
5. Rate Stability: Rate levels and structures should be changed in an orderly manner over time.
6. Customer Understanding: The rate structures should be clear and understandable to the customer.
7. Financial Stability: Revenue recovery from rates and other revenue sources should ensure financial stability, consistent with financial policies of the City.
8. System and Administrative Costs: The rate structures should minimize long and short-term administrative costs, including customer service, billing, and contract administration.
9. Rate Impact Mitigation: Mitigation of the impacts of solid waste rate increases to certain customers based on upon social or economic factors may be considered and implemented.

Financial Policies

Financial policies provide a guiding framework for Solid Waste finances. The policies help determine how much revenue SWF must collect from its customers each year to remain financially healthy. In any year (on a planning basis), the desired revenue requirement is the lowest amount of money necessary to simultaneously satisfy all financial policies in that year. At this desired revenue, some financial policies may be exceeded, but none will be missed – the financial target that is met last is known as the binding constraint.

In addition, financial policies:

- ◆ shape the financial profile that SWF presents to lenders and other members of the financial community;
- ◆ establish SWF's exposure to financial risk; and
- ◆ allocate SWF's costs between current and future ratepayers.

In 2004, City Council passed Resolution 30695, which adopted new SWF financial policies that reflect changes and additions to the financial policies adopted in 1992. The policies and associated targets, as well as their importance are as follows:

NET INCOME

Net income should be generally positive. Positive net income is a contingency against projection errors and uncertainties regarding revenues. It is also a signal to bond rating agencies that the City is committed to establishing fees that cover costs.

Net income is the binding constraint for this rate period. That is, the rate increase necessary to result in positive net income is more than sufficient to meet cash and debt service coverage targets.

DEBT SERVICE COVERAGE RATIO

Debt service coverage should be at least 1.7 times debt service cost in each year on a planning basis. A higher debt service coverage ratio means that more “excess” revenue is available after debt payments are made. This reduces financial risk and provides more flexibility to respond to revenue shortfalls.

Historical and projected coverage (the latter includes a new issue in 2007) are well above both the policy target and the legal requirement (1.25).

OPERATING CASH BALANCE

The year-end operating cash balance should be at least equal to 20 days of contract expenses. The purpose of the cash balance target is to have sufficient cash on hand to pay operating expenses, taking into account the lag between cash disbursements and cash receipts, and to provide a cushion against projection errors.

CASH CONTRIBUTION TO THE CIP

The cash contribution to the CIP in a given year should be at least \$2.5 million in 2003 dollars (\$2.8m in 2008). This policy 1) helps to prevent a rapid increase in debt levels and 2) limits the escalation in the debt-to-assets ratio. While the solid waste CIP historically has been relatively small and the flat cash amount has been a substantial percentage, the CIP will grow significantly in the next few years. Therefore, during this temporary period of high CIP spending, we will apply an informal policy of the greater of \$2.5m or 10% of the CIP.

VARIABLE RATE DEBT

No more than 15% of total debt should be variable rate debt. A cap on variable rate debt balances the advantages of lower interest costs with the risk of unexpected increases in interest rates. The Solid Waste Fund currently does not have any variable rate debt.

A summary current and projected financial performance is presented in Table II-1.

**Table II-1
Solid Waste Fund Financial Performance**

	Target	Actual	-----Projected-----						
		2007	2008	2009	2010	2011	2012	2013	2014
Net Income (\$1,000's)	positive	3,422	757	506	821	488	620	836	1,234
Debt Service Coverage	1.7x	5.28	3.80	3.00	3.10	2.96	2.21	2.64	2.62
Cash Financing of the Capital Program	\$2.5m	3,274	2,706	2,760	5,717	2,872	4,847	4,242	3,200
Year-End Operating Cash (\$1,000's)	varies**	8,027	8,884	7,370	7,942	8,840	5,884	10,016	16,514

III. REVENUE REQUIREMENT

In the ratemaking process, the revenue requirement is the basis for determining how much revenue the resultant rates must generate. There are two sets of drivers to the revenue requirement. The first set of drivers is operational costs of the solid waste system. The second set of drivers relate to the financial policies discussed in Chapter II. The revenue requirement is the minimum amount of operating revenue required to cover the operational costs plus the financial requirements of the Fund, offset by any available revenue generated through non-rate means.

The rate revenue required for SWF to meet all its financial targets is \$144 million in 2009 and \$164 million in 2010, representing increases of 17% and 14%, respectively, over prior years. The key drivers of this increase in 2009 are higher operations costs due to new collection contracts and the implementation of those contracts, inflation, and higher taxes on the increased revenue requirement. Starting in 2009, revenue from Green Fees will also offset the revenue requirement. In 2010, new capital financing costs drive a significant portion of the rate increase. Implementing the rate increase mid-year, increased participation in the low income assistance program, and changes to the demand forecast also affect the rate increase necessary to meet financial targets.

Table III-1 summarizes the components of change in the SWF rate revenue requirement from 2008 to 2010. The current study proposes changes to the 2008 adopted rate. The change in the 2009 revenue requirement in Table III-1 and throughout this section is relative to the 2008 planned revenue requirement rather than the most recent year-end projection.

Table III-1
Components of the Change in the SWF Revenue Requirement
(\$ in thousands)

	2008 (as planned for rate setting)	2009	\$ Change	% Change in Rev Req	2010	\$ Change	% Change in Rev Req
Revenue Requirement Component							
Operations and Maintenance Expense (O&M)	98,039	122,155	24,116	19.6%	133,121	10,966	7.6%
Taxes	23,067	25,975	2,907	2.4%	24,526	(1,448)	-1.0%
Capital Financing							
Cash	2,760	2,760	-	0.0%	5,717	2,957	2.0%
Debt Service	11,318	10,740	(578)	-0.5%	11,364	624	0.4%
Total	14,079	13,501	(578)	-0.5%	17,081	3,581	2.5%
Total Revenue Requirement	135,185	161,630	26,445	21.5%	174,728	13,098	9.1%
Other Funding Sources							
Green Fees	-	(3,370)	(3,370)	-2.7%	(3,370)	-	0.0%
Tonnage Taxes	(10,286)	(10,039)	247	0.2%	(5,720)	4,320	3.0%
Other Misc Revenues	(1,679)	(2,368)	(689)	-0.6%	(2,237)	131	0.1%
Use of Cash Balances	(98)	(1,513)	(1,416)	-1.1%	572	2,085	1.4%
Total Other Funding Sources	(12,062)	(17,291)	(5,228)	-4.2%	(10,755)	6,536	4.5%
Net Rates Revenue Requirement	123,123	144,339	21,217	17.2%	163,973	19,634	13.6%
Other Rate Drivers							
Adjustment for March 30, 2009 implementation				5.7%			-4.7%
Adjustment for change in demand forecast				1.3%			-0.6%
Increase in low income rate assistance				0.7%			0.5%
Effective Increase in Average Rates				25.0%			8.9%

Operations and Maintenance Expense (O&M)

Under this proposal, O&M increases by \$24 million in 2009 and \$11 million in 2010, adding 19.6 percent and 7.6 percent to the revenue requirement in those respective years. Table III-2 presents increases in proposed O&M spending by source.

O&M is broken into two categories: Base O&M, which includes existing activities as well as changes to existing costs due to inflation or new policies. In particular, it includes savings of \$1.7 million in 2009 and \$2.3 million in 2010 due to SPU's successful re-negotiation of its long-haul disposal contract. The negotiation lowered the per-ton disposal rate by \$5.50 in 2009 and also guarantees that SPU will have sufficient private transfer capacity for compostables while it rebuild its own transfer stations. New O&M includes costs associated with new programs, staffing, or contracts. Further description of the new O&M activities can be found in the Budget Issue Papers (BIPs).

The solid waste system O&M revenue requirement includes a portion of administrative expense (i.e. finance, customer service, etc.) that solid waste shares with the other SPU funds, as well as direct solid waste operating expense. For the purposes of this study, O&M does not include debt service or taxes, which are discussed in separate sections.

**Table III-2
Change in Operating and Maintenance Expenditures**

(\$1,000's)	2008	2009	\$ Change	2010	\$ Change
Base O&M					
Inflation and other increases to base	98,039	99,788	1,749	104,819	5,031
Accounting Policy Changes		650	650	1,200	550
Total Base O&M	98,039	100,438	2,399	106,019	5,581
New O&M					
Contracts		17,952	17,952	24,346	6,394
Contract Implementation		1,354	1,354	337	(1,017)
Transfer Station Staffing		410	410	436	26
Green Fee/Food Service Sytro Implementation		858	858	658	(200)
Customer Service Branch MOAs		219	219	192	(28)
FFD and Non-Labor Inflation		857	857	997	140
Expand Commercial Enforcement		125	125	130	4
Other		(59)	(59)	6	65
Total New O&M		21,716	21,716	27,101	5,385
Total O&M		122,155	24,116	133,121	10,966

Other Expenses

TAXES

SWF tax expenses include state and city taxes as well as two types of tonnage taxes. Since 2005, the SWF has classified state refuse and sales tax expense as a payable rather than an expense. As such, these taxes (both the expense and the revenue associated with them) are not included on the SWF income statement. This procedure has no effect on the bottom line of SWF, as both revenue and expense are reduced equally. However, these taxes are included in the rate study and shown below to accurately reflect the full cost of service.

We are also proposing that the landfill closure (collection) tax of \$13.65 per ton be discontinued³ in 2010, when the landfill closure bonds are retired. As such, tax expenses (and revenues) will go down in 2010.

**Table III-3
Tax Expenses**

	2008	2009	2010
City B&O	9,849	12,009	13,633
State	5,060	6,177	7,028
Tonnage	7,796	7,788	3,865
Total	22,704	25,975	24,526

³ See the Solid Waste Rate Design Proposal for more detail on this issue.

Capital Financing

Financing of the capital program will decrease the revenue requirement by \$578k in 2009, and increase it by \$3.6 million in 2010. Table V-5 presents capital spending (CIP) and financing assumptions during the proposed rate period, and the rate impacts of capital financing.

Table III-4
Capital Spending and Financing Assumptions⁴

(\$1,000's)		2008 *	2009	2010
CIP Assumptions				
	Budgeted/Proposed CIP	11,940	27,144	57,173
CIP Financing Breakdown				
Revenue Financing				
	Revenue Financed Percentage		10.2%	10.0%
	Revenue Financing	2,760	2,760	5,717
Debt Financing				
	Bond Financing	9,180	24,384	51,456
Debt Service Details				
	1999 bond debt service			
	Interest	716	268	-
	Principal	4,635	4,885	-
	2007 bond debt service			
	Interest	4,178	3,937	3,865
	Principal	1,790	1,650	1,980
	2010 bond debt service			
	Interest	-	-	4,316
	Principal			1,203
	Total debt service	11,318	10,740	11,364
Rate Drivers				
	Change in Cash Financing	-	-	2,957
	Change in Debt Service	-	(578)	624
Total		-	(578)	3,581

* 2008 amounts are based on the 2008 rate study

CAPITAL SPENDING AND CASH FINANCING

Capital spending is expected to increase significantly over the rate period, largely due to the rebuilding of the south transfer station, which is projected to cost \$8.3 million in 2009 and \$41.3 million in 2010. The rebuilding of the north transfer station will most likely occur after 2010. Other significant projects include:

- South Park Development (\$2.4M in 2009, \$5M in 2010) - This project involves meeting the requirements of an anticipated WA State Department of Ecology Agreed Order for

⁴ 2008 CIP is the revised budget, 2009-2010 are the proposed budget with updated projections for transfer station rebuild project.

remediation of the historic South Park Landfill. The City of Seattle, King County and South Park Property Development are Potentially Liable Parties.

- Organics Cart Purchases (\$10.2M in 2009, \$4.7M in 2010) - New residential organics carts will be purchased coinciding with the implementation of the new collection contracts

SPU funds solid waste system capital projects through a combination of cash (revenues) and debt financing (revenue bonds). As discussed in Chapter I this rate study assumes that the minimum cash contribution to CIP is the greater of 10% of the CIP in a given year or \$2.5 million (in constant 2003 dollars). The balance will be funded with revenue bonds. The 10% minimum applies in 2010, when \$5.7 million of the CIP will be funded with cash.

DEBT SERVICE

SPU issued an \$82 million bond in late 2007, part of which repaid \$23.8 million outstanding on a line of credit. The remaining funds will be used to fund projects through early 2010. 2009 debt service is lower than what was assumed in the 2008 rate study, offsetting the rate increase necessary to meet financial targets.

SPU expects to issue an additional \$75 million in debt in 2010. There will also be no landfill closure (1999 issue) debt payments starting in 2010 because the debt will be retired by the end of 2009. The net result is an increase in to debt service of \$624k.

Other Funding Sources

A significant portion of the total solid waste system revenue requirement is funded through other operating and non-operating revenues. These non-rates revenues are expected to increase by \$5.2 million in 2009 and decrease by \$6.5 million in 2010.

GREEN FEES

Starting on January 1, 2009 a Green Fee of \$0.20 will be charged on each disposable bag, regardless of material, in order to discourage the use of throwaway bags and encourage shoppers to use reusable shopping bags, thus reducing the environmental impact and green house gas production caused by the production or logging, manufacture, use and disposal of these products.

The amount of revenue the Green Fee will generate is highly uncertain and depends fundamentally on how consumers react to the fee. This rate proposal has assumed that \$3.4 million would be available to offset solid waste rates (about \$3.1 million net of ongoing implementation expenses). That amount is based on the assumption that Seattle consumers react as vigorously as Irish consumers did to their bag tax and reduce disposable bag usage by 90 percent. If our assumptions are wrong and more revenue is raised, that amount could be used to offset rates in a future period or enact additional recycling programs. SPU will reserve any amounts over \$3.4 million the Fee generates for an Executive-Council discussion on its use next year. Potential uses include rate breaks and/or new recycling programs.

TONNAGE TAXES

Per ordinance, the receipts from the tonnage taxes are transferred from the General Fund to the Solid Waste Fund. These tax receipts offset the revenue requirement. Tonnage tax revenues (and expenses) will decrease significantly in 2010 when the landfill closure tax is no longer effective.

OTHER NON-RATE REVENUES

Other non-rate revenues, such as interest income, grants, and recycling revenues at the transfer stations offset the rates revenue requirement. An increase in interest income in 2009 from what was expected when the rates were set for 2008 will offset the 2009 revenue requirement.

USE OF CASH BALANCES

Revenue generated by rates is used to fund current operating expenses, maintain a cash balance as a safeguard against unexpected expense, and to fund a portion of the current capital program. A rate may be set to increase, hold constant, or decrease the SWF's operating fund cash balances. Decreasing, or drawing down a cash balance in a given year lowers the rates in that year as that cash does not need to be received through rate revenues. However, just like other funding sources, what affects rates is not the level in any one year, but the year to year change in funding from that source.

SWF is expected to end 2008 with a higher cash balance than its financial policies dictate. A portion of those cash balances will be used to offset the rate increase in 2009. In 2010, however, the cash balance will need to rise slightly to ensure the positive net income financial target is fulfilled.

Table III-5
Change in Solid Waste Fund Cash Balances

(\$1,000's)	2008 *	2009	\$ Change	2010	\$ Change
Beginning Cash Balance	3,761	8,884		7,370	
Ending Cash Balance	3,663	7,370		7,942	
Cash used to support revenue requirement	(98)	(1,513)	(1,416)	572	2,085

Other Rate Drivers

There are a number of items during the 2009 and 2010 rate period that do not increase the revenue requirement, but still have an effect on rates.

MID-YEAR RATE IMPLEMENTATION

Rates will be implemented on March 30 along with the new collection contracts. As a result, rates must be raised somewhat higher than the increase in the revenue requirement in order to collect the new revenues in only 9 months. Likewise, in 2010, rates do not have to be raised as much as the revenue requirement increase because of the adjustment in 2009.

CHANGE IN DEMAND FORECAST

Customer counts, tons and subscription levels affect the rate level and the required change in rates from year to year. Reduced tonnages reduce costs in some cases, but also reduce the number of units the costs are allocated to. The exact impact on rates depends on the relative changes in cost and revenue. For the 2009-2010 rate periods there are significant factors affecting the tonnages and subscription levels including:

- The 60% recycling goal programs
- Implementation of mandatory residential curbside organics with variable container sizes

- The 2008 opening of the King County transfer station in Shoreline
- Wider economic effects and uncertainty

The impact of these factors are included in this rate proposal and further described in the demand analysis section.

CHANGE IN LOW-INCOME PROGRAM PARTICIPATION

Similar to demand, changes in customer participation in the low income rate assistance program do not affect the Solid Waste Fund revenue requirement but do affect the rate increase. Increased participation in the program reduces revenues as more households are paying a discounted rate. The reduction in revenue must be made up through an increase in standard rates.

The Executive has proposed changes in the low income rate assistance program, including automatic enrollment with income self-certification, increasing the income threshold, and increased outreach. These are expected to increase the participation rate and therefore the total amount of discounts.

Table III-6
Change in Low Income Program Participation

(\$1,000's)	2008 *	2009	Change	2010	Change
Total Discount	1,405	2,038	632	2,995	957

IV. COST ALLOCATION

Cost allocation is the process by which the revenue requirement is divided among the different customer classes. Cost allocation allows us to estimate the true cost of serving a customer class and, therefore, what the rates would be if set at their cost of service. These cost allocations provide a foundation for rate design, although actual rates may vary from the assigned cost allocations because of the other (often times competing) ratemaking considerations. That is, for policy and other reasons, some customer classes may subsidize the rates of others.

The cost allocation process can be broken into four basic steps:

1. **Group Activities into Cost Centers**
2. **Determine Allocation Factors**
3. **Allocate Costs to Rate Elements**
4. **Analyze Impacts to Customer Classes and Cost of Service Rates**

Detailed explanation of each of these steps as well as proposed methodological changes were provided in the Rate Design and Cost Allocation document from May 2008, which is also included in Appendix 5.

Allocated Costs

The result of step 1 above is shown in Table IV-1, which presents costs grouped into cost centers for 2008-2010.

**Table IV-1
2008-2010 Allocated Costs
(\$1,000s)**

Cost Center	2008	2009	2010
Residential Can Garbage Collection	10,991	15,737	17,641
Can/Cart Recycling Collection	7,293	7,906	8,341
Compost Cart Collection	6,571	11,327	13,602
MF/Comm Garb Collection, Fixed	17,437	11,986	10,414
MF Garb Collection, Variable	-	3,200	4,311
Comm Garb Collection, Variable	-	5,060	6,415
Dumpster Free Alley Collection	-	1,345	3,432
MF Recy Collection, Fixed	-	1,774	2,420
MF Recy Collection, Variable	-	1,633	2,271
Comm Compost Collection, Fixed	264	382	431
Comm Compost Collection, Variable	-	-	-
Litter & Pub Place Recy, Fixed	-	382	523
Litter & Pub Place Recy, Variable	-	335	456
Contract Commercial Compost Hauling	72	76	958
Unused (formerly Contract YW Hauling)	-	-	-
Contract YW Processing	1,824	1,906	2,644
Contracts' Management	599	626	668
Contracts' Implementation	770	2,219	1,234
Collection Inspection	1,350	1,411	1,465
RDS-Material Loading	1,225	1,280	1,329
RDS-Operations	5,169	5,832	6,082
SPU Hauling-Garbage	733	766	795
SPU Hauling-Recycling	102	106	110
SPU Hauling-Yard Waste	331	346	360
SPU Hauling-Equip Maintenance	805	841	873
Contract G Disposal	19,096	18,238	17,762
MRW-General	2,075	2,168	2,251
MRW-GG/NL	237	248	257
Landfill Closure Operations	-	-	-
Billing	4,111	4,696	4,871
TSBS	85	89	92
G&A Communications	216	226	234
G&A General	8,229	6,845	7,555
G&A Strategic Policy	268	280	291
SEPA/General Environmental Mgmt	737	770	800
RR-Planning	2,012	2,103	2,182
RR-Waste Prevention & Recycling	323	1,234	1,064
RR-Residential Programs	829	866	899
RR-Commercial Programs	561	586	608
Clean City Programs	3,788	3,958	4,108
Interest Expense	2,536	3,527	6,751
City and State Taxes (Excluding Tonnage)	14,909	18,186	20,661
Other Revenues	(5,567)	(6,240)	(6,251)
Depreciation and Amortization	8,441	8,424	10,114
Total	118,422	142,682	161,027

As the table shows, the most significant increases in allocated costs are in cost centers 1-16, which represent the collection contract costs.⁵ Residential can contract costs, including residential compostable waste service, will increase more than in the other sectors. This is partially due to service level enhancements in that sector such as the increased pick-up frequency of compostable waste, inclusion of all food-waste with compost, improved truck fuel efficiency, and the ability to commingle recyclables. It is also due to an adjustment for inflation to bring previous prices to current year levels.

There are also costs associated with new services such as dumpster free alley collection. Contracted garbage disposal costs (cost center 26) will decrease in 2009 due to the renegotiation of that contract. Other cost increases as discussed in Chapter II are also reflected in this table.

A summary of costs after they have been allocated to customer sectors is shown in Table IV-2. The most common factors used to allocate costs include tonnage, accounts, workload estimates, direct assignment, and proportional assignment based on the customer class' share of the revenue requirement.

**Table IV-2
Allocated Costs by Customer Sector
(\$1,000s)**

Customer Class	2008	% of total	2009	% of total	2010	% of total
Residential Can	26,399	22%	41,412	29%	44,110	27%
Residential Compostables	13,545	11%	19,223	13%	23,880	15%
Multifamily	16,805	14%	21,429	15%	25,118	16%
Commercial	47,451	40%	45,824	32%	51,424	32%
Self-Haul Yard Waste	1,278	1%	1,369	1%	1,517	1%
Self-Haul Garbage	11,967	10%	12,475	9%	13,887	9%
Argo	975	1%	950	1%	1,091	1%

As discussed earlier, the most significant increases are in the residential can and compostables sectors mainly due to the contract cost increases. The multifamily sector also experienced a significant increase. The commercial sector's allocated costs decreased between 2008 and 2009. Costs allocated to self-haul garbage rise slightly in 2009 and then by somewhat more in 2010, when a new bond issue will be almost entirely dedicated to the rebuilding of the transfer stations.

The difference in the change in allocated costs between the sectors is due to several factors:

- Contractors bid on all services by area of the city. The contractors were allowed to use their discretion in grouping costs together, and contractors were chosen on their overall bid rather than individual groups of costs.
- This was the first time that commercial services were competitively bid, and the bids were structured differently than in prior contracts.

⁵ It is somewhat challenging to compare contract cost changes for the different sectors due to the change in the structure of the contracts. For example, costs for residential cans and dumpsters were part of the same contract before, and the new contracts lump together residential and commercial dumpsters.

- Because some overhead allocations are proportional to revenue requirement shares, adding service in the residential sector increases its overhead allocation, further magnifying the dollar increase of that sector.

As a result of the foregoing, we are seeing uneven changes in costs for each customer sector based on our cost allocation methodology.

V. DEMAND ANALYSIS

The demand analysis is the first step of the rate-setting process. From it, estimates of customer counts, tons and subscription levels needed for the revenue requirement, cost allocation and rate design portions of the Rate Study are derived. Demand analysis includes several steps:

1. Estimating the number of customers in each rate class.
2. Forecasting the number of tons generated by different sectors (residential, commercial, self haul).
3. Estimating customers' choices of service levels (i.e., can size, size of dumpster).

Each of these steps is described in the pages that follow.

Customer Sectors

The number of customers is important for determining the revenue requirement, allocating costs among classes and designing rates. Tonnage estimates are used to calculate the cost of collecting, processing and disposing waste and recyclable materials. They are also used (along with other factors) to allocate costs to the different classes to calculate the rates. Service level estimates are important in allocating costs and in rate design.

SPU provides solid waste services to three broad customer sectors:

1. **Residential Sector:** This customer sector consists of all single family and multifamily households in the City. Two City Contractors collect the waste generated by these households and deliver it to the City's Recycling and Disposal Stations. From there, SPU hauls it to the Argo rail yard, where it is loaded onto a train and taken to the City's disposal site (i.e., Washington Waste Systems' Columbia Ridge Landfill in Oregon). The City also offers contracted curbside recycling and organics⁶ (yard waste and food waste) service. Residential customers are billed through SPU's billing system (CCSS).
2. **Recycling and Disposal Station (Self-Haul) Sector:** These customers include residential and small commercial operations that bring garbage and recyclable materials (including yard waste and wood waste) to the City's Recycling and Disposal Stations. Like residential garbage, self-haul garbage is taken by SPU to the Argo rail yard and rail-hauled to the Columbia Ridge Landfill. Recyclable materials are hauled to various recycling buyers in the Seattle area. Sedans, station wagons, and sport utility vehicles are charged a flat rate. Other vehicles are charged based on load weight and type of material.
3. **Commercial Sector:** The City's contractors collect the city's commercial waste. This waste may be taken to either the city-owned transfer stations or the privately owned stations and then to Argo, where it is loaded onto a train and taken to Columbia Ridge. In addition to the contract tons, there is a small amount of commercial waste that is not covered by the commercial contracts - this waste is generally taken to the private transfer stations in the city and then to Argo for disposal. At Argo, a per-ton disposal fee is charged for these non-contract tons.

⁶ The terms organics, compostable waste and yard waste are used interchangeably in this document.

RESIDENTIAL SECTOR

The residential sector consists of the Variable Can, Dumpster, and Organics (Yard Waste and Food Waste) customer classes. Table V-1 presents actual and projected household counts for the Can and Dumpster customer classes. Table V-2 presents the historical and projected number of accounts for the Can, Dumpster and Organics customer classes. Historical information (2007) is from CCSS. The projections for 2008 through 2011 are based on historical growth rates.

Table V-1
Historical and Projected Number of Households by Customer Class

	2007	2008 (P)	2009 (P)	2010 (P)	2011(P)
Variable Can	167,972	169,984	170,664	171,347	172,032
Dumpster	117,899	119,590	121,286	122,988	124,694

Table V-2
Historical and Projected Number of Accounts by Customer Class

	2007	2008 (P)	2009 (P)	2010 (P)	2011(P)
Variable Can	149,794	150,700	151,303	151,908	152,516
Dumpster	5,547	5,547	5,547	5,547	5,547
Organics	105,800	106,964	134,817	136,921	138,427
Utility Credit	10,000	10,000	12,000	16,000	18,500

The number of organics accounts is projected to increase significantly with the advent of mandatory curbside organics collection. Subscription level forecasts are discussed further in sections "Residential Program" and "Subscriptions".

The number of utility credit accounts is also projected to increase. This is associated with proposed low income rate assistance program changes that are likely to result in increased program enrollment. These values include both CCSS-billed accounts and customers that receive a credit through their City Light Bill. These accounts receive a 50 percent rate reduction on their solid waste bills and this reduced revenue must be accounted for when determining the rate levels.

RECYCLING AND DISPOSAL STATION (SELF HAUL) SECTOR

There are essentially two types of Recycling and Disposal Station (RDS) customers: flat-rate customers and customers that are charged a per-ton rate. Sedans, station wagons, and sport utility vehicles are the only vehicles that qualify for the flat rate. All other vehicles are weighed in and out and charged a per-ton rate. This study does not estimate the number of trips for vehicles charged the tonnage rate but rather estimates the tonnage from these customers. The methodology for this estimate is discussed in the next section.

Table V-3 shows the actual and projected number of trips by flat-rate customers.

Table V-3
Actual and Projected Number of Trips (Flat Rate Customers)

	2007	2008(P)	2009 (P)	2010 (P)	2011(P)
Garbage	35,665	36,024	36,383	36,748	37,112
Yard Waste	3,952	4,300	4,300	4,300	4,300

Wood Waste	292	250	250	250	250
-------------------	-----	-----	-----	-----	-----

COMMERCIAL SECTOR⁷

The contracted commercial sector consists of both detachable container (dumpster) and drop box service customers for both garbage and organics waste. (Table V-11 (later in this chapter) presents the historic and projected subscription levels by container group for the commercial sector.) The commercial organics service began in June 2005. There continue to be some non-contract tons taken to Argo. SPU charges commercial haulers a per ton disposal fee at Argo for these non-contract tons.

Forecasts of Tons Disposed and Recycled

The second step in estimating demand is to forecast tons of waste and recyclable materials to be disposed by each major customer sector.

In 2004, SPU renewed its commitment to recycling and waste prevention for the residential, commercial and transfer station sectors, launching new programs that aimed to achieve the 60 percent recycling goal by 2010.⁸ In particular, this included an educational and promotional campaign in 2004 and 2005. The programs targeted easily recyclable materials that were entering the landfill in large quantities. Programs include:

- Commercial sector disposal ban of recyclable paper and cardboard
- Recycling service for businesses similar to that of single family residences
- Collection service for commercial food scraps and compostable paper
- Commercial waste prevention programs
- Residential sector disposal ban on recyclables
- Residential waste prevention programs
- Self-haul reuse and recycling

In 2008, the City has furthered these efforts and is recommending changes in several programs to facilitate more recycling and better customer service. These include the following:

- Weekly residential organics collection
- Mandatory curbside organics collection service
- Variable organics container sizes
- A Green Fee of \$0.20 for disposable shopping bags
- A 2009 requirement that restaurants replace disposable plastics and Styrofoam with compostable and/or recyclable alternatives.

The estimates of the tonnages associated with each of these programs factor into the final tonnage estimates for each sector as increases in recycling and organics tonnages or decreases in generated waste tonnages.

Table V-4 presents the historical (2007) and forecast tonnage for garbage, organics and recycling for each of the different sectors. Also included are forecasts for construction,

⁷ The commercial sector changed in April 2001 with the implementation of the commercial contracts. Prior to April 2001, SPU charged the franchised commercial haulers a per ton tipping fee for the disposal of commercial waste. Now SPU's costs for those collected commercial tons are recovered directly through commercial customer billings.

⁸ The 60 percent recycling goal has now been extended to 2012 in the Waste Reduction resolution.

demolition and land clearing debris (CDL) and out-of-city generated garbage (transferred through the City). CDL and out-of-city generated garbage are part of the basis for the study's tax revenue estimates.⁹ The forecast methodology for each waste stream is described in the text following the table.

Table V-4
Historical and Projected Tonnage

	2007	2008 (P)	2009 (P)	2010 (P)	2011(P)
Residential Programs					
Total Garbage	133,341	132,900	130,600	128,400	127,900
Can	77,494	77,238	75,095	71,903	70,984
Dumpster	55,847	55,662	55,505	56,496	56,916
Organics	54,573	53,500	56,821	61,162	62,529
Total Recycling	86,622	85,500	86,612	87,738	88,442
Single Family	66,121	65,300	66,149	67,009	67,444
Multifamily	20,501	20,200	20,463	20,729	20,998
Recycling and Disposal Station (Self-Haul) Programs					
Garbage	107,097	101,742	103,573	105,438	107,336
Organics	15,670	12,821	12,935	13,050	13,166
Commercial Programs					
Total ¹⁰	210,872	201,838	202,159	198,796	195,876
Non-Contract	11,904	12,070	12,239	12,411	12,584
Contract	198,968	189,768	189,920	186,385	183,292
Other					
CDL	175,104	192,100	192,100	192,100	192,100
Out-of-City Garbage	40,098	26,100	26,100	26,100	26,100

RESIDENTIAL PROGRAMS

Garbage

This study calculates the residential garbage tonnage forecast by estimating total generated tons less projected recycling. Residential garbage tons were slightly less (-0.3 percent) in 2007 compared with 2006, while recycling tons increased from 84,531 to 86,622. Approximately 1,340 tons of the increase in recycling tons came from the multi-family class, an increase of about 7 percent.

The projected garbage tons assume little growth from the base, only 0.2 percent for single-family customers and 1.1 percent for multifamily customers. The projected garbage tons are reduced by the number of residential waste reduction tons projected under the 60 percent recycling program and the 2008 program revisions. See Table V-7 for the total residential waste reduction tons (from the 60 percent and 2008 program revisions) used in this rate study. For this proposal, residential garbage tons are split between variable can (58 percent) and dumpster (42 percent) classes. This split reflects the 2007 estimated splits based on analysis of contractor truck weights.

⁹ CDL tons are subject to the collection and transfer taxes. Out-of-City generated tons that are transferred through the City for disposal are subject to the transfer tax.

¹⁰ Total is sum of non-contract and contract tons, and new food waste/yard waste. Food/Yard Waste projections are indicated in Table V-7.

Organics

The curbside organics program has consisted of providing one 96 gallon can for all yard waste and food waste which is picked up every two weeks. Beginning in 2009, all residents in the City will be required to have curbside organics service unless they are actively composting in their backyards and receive an exemption. Three different can sizes will be offered (15 or 20, 32 and 96 gallon). However, the exact distribution of can sizes is unknown at this time. The forecasted can distribution is discussed in "subscriptions." The 2007 solid waste customer survey¹¹ asked a random sample of customers what level of service they would select. Based on that survey, it is estimated that roughly 10% of current and prospective customers will choose to compost instead of subscribe to curbside service. The remaining 90% include those customers already subscribing and those that are currently not subscribing.

The overall total tons of organics is likely to increase due both to current composters that stop composting after small can size service becomes available and households that switch from putting organics in the garbage and begin putting it in the organics bin. The forecast is listed in Table V-5.

Table V-5
Historical and Projected Organics Tonnages

Year	2007	2008 (P)	2009 (P)	2010 (P)	2011 (P)
Collected Organics Tons	54,573	53,500	56,821	61,162	62,529

The rate model adjusts the organics tons for the programmatic effects of the 60 percent program and 2008 program revisions to project total collected organics tons for the rate study. See Table V-6 for the additional residential organics (food waste from the 60 percent and 2008 program revisions) tons included in this rate study. The total is included above in Table V-5.

Recycling

Over the period covered by this study, SPU is focusing a significant amount of resources towards the goal of 60 percent recycling. The following table presents the projected recycling tonnage impact of the 60 percent program and 2008 program revisions that is included in the residential class recycling tonnage projections.

Table V-6
60% Program Tonnage Projections - Residential

Program	2007	2008(P)	2009(P)	2010(P)	2011(P)
Residential Recyclables Ban	3,354	2,047	1,941	1,832	2,157
Residential Waste Reduction	17,789	20,582	23,010	25,266	26,393
Residential Organics (Food Waste)	14,487	17,815	20,958	25,078	26,206

The tonnages shown in Table V-6 for waste reduction and organics are included in the rate model as adjustments to the projected tons. (See discussion in residential garbage and residential organics sections, above.) The tons shown as recycling ban tons are used in the model to adjust recycling projections for both variable can and dumpster classes. The total tonnage projections are indicated in Table V-4.

¹¹ 2007 SPU Residential Customer Survey, Draft Report, January, 2008.

RECYCLING AND DISPOSAL STATION (SELF-HAUL) PROGRAMS

Garbage

The 2007 self-haul garbage tonnage was about 3.6 percent higher than 2006. Overall the growth rate from 2004 -2007 was approximately 2.4 percent. However, the totals for the first quarter of 2008 are significantly lower than would be expected if that growth rate were in effect in 2008. Factors likely include the opening of the King County transfer station in Shoreline, the 2008 rate increase, and the state of the economy. The forecast tonnages reflect the most recent projection for 2008 (based on 1st quarter 2008 data) and then increase consistent with the SDM (Seattle Discards Model).

Organics

The self-haul organics (yard waste) total for 2007 was 15,670 tons. Tonnages grew rapidly from 1994-2004 (at approximately 3.5 percent annually) but the growth rate has actually been negative from 2004-2007. The SDM projects little growth (+0.6 percent annually) for the coming years. First quarter 2008 values are down significantly from forecast (likely for the same reasons as self-haul garbage), and so the forecast relies on a projection for 2008 (based on 1st quarter 2008 data) and uses a 0.6% growth rate for years 2009-2011.

COMMERCIAL PROGRAMS

In-City Commercial Garbage

There are two categories of in-city commercial garbage: contract and non-contract tons. Contract tons, commercial garbage tons collected under the collection contracts make up the bulk of in-city commercial garbage (94 percent). Non-contract tons include the tons from the University of Washington, the Seattle School District and some federal governmental agencies who have elected to negotiate their own collection contracts. The forecast is for about 12,000 to 14,000 non-contract tons per year for 2008 through 2010.

Total 2007 in-city commercial tons were down about 2.1 percent compared to 2006 likely due to the impacts of the 60 percent programs. The study forecast assumes that overall commercial tons generated increase over time by a little more than 1% per year. However, actual garbage generated is forecast to decrease due to the 60 percent program and 2008 program revision impacts. Moreover, first quarter 2008 data indicate that commercial tons are down significantly from what was previously forecast. The tonnages in the rate study take this into account.

Under the contract, the collection, processing and disposal costs to SPU for serving the commercial sector (as well as the revenue received from customers) depends both on the total number of commercial tons and on the number of commercial subscriptions. Prior to the contracts, commercial costs and revenue varied only with the number of tons taken to Argo.

Commercial Recycling

The city offers recycling services to commercial customers. For example, curbside recycling service is available for the commercial sector. Under the program, in-city commercial customers served by the City's contractors are eligible for free recycling service. The service is limited to two (2) 96-gallon recycling carts per garbage account. In addition to the curbside recycling service, SPU implemented several other recycling programs in conjunction with the 60 percent recycling target. These programs have reduced commercial garbage tonnage through decreased generation and increased organics recycling. Table V-7 estimates these quantities for 2007 and provides a forecast for 2008-2011.

Table V-7
60% Program Tonnage Projections - Commercial

Program	2007	2008(P)	2009(P)	2010(P)	2011(P)
Decreased Commercial Garbage Generation (Expanded Curbside, Paper Ban, Waste Reduction)	20,369	28,545	28,578	32,220	34,910
Commercial New Food/Yard Waste	15,528	19,783	22,875	26,088	29,859

As was done for the residential and self-haul sectors tonnage projections, the commercial tonnages resulting from the 60 percent program and 2008 revisions are used to adjust the final projections of contract tons for the commercial class.

Out-of-City Generated Garbage

Tons generated outside the city but transferred through Seattle are subject to the Transfer Tax. Since 2003, based on tax receipts, these tons have been declining significantly. Out-of-city tons are difficult to forecast as they fluctuate from year to year and the reporting of the tax receipts in a given year may include taxes on tons generated in previous years. This rate study forecasts outside city tons based on total transfer tax receipts for 2007.

Construction, Demolition and Land Clearing Debris (CDL)

Total reported CDL tons for the City for 2007 was 175,104 as compared to 2006 reported CDL of 180,672. This study forecasts the City's CDL tonnage based on total transfer tax receipts for 2007.

Subscriptions

A critical part of estimating the revenue SPU will generate from rates is customer choice of service levels. If the number of customers that choose lower service levels, (such as the mini-can) is underestimated, the total revenue from residential collections will be lower than projected. On the other hand, if fewer customers than expected choose lower service levels, revenue will be higher than projected (all other things being equal).

This study forecasts subscription levels for both residential and commercial contract customers.

RESIDENTIAL

Can Subscriptions

Table V-8 shows the current and projected distribution of can subscriptions. There has been an underlying trend of customers selecting smaller can sizes from year to year. Moreover, when mandatory curbside organics collection goes into effect in 2009, it is expected that some existing customers will be able to switch to smaller garbage can sizes by depositing food waste that once went in the garbage can in the new food waste containers.

Table V-8
Current Distribution of Can Subscriptions

	2007	2008(P)	2009(P)	2010(P)	2011(P)
Micro Can	4.44%	4.70%	5.8%	6.8%	7.1%
Mini Can	21.68%	22.00%	22.5%	23.00%	23.3%
One Can	65.93%	65.55%	64.15%	62.85%	62.45%
Two Cans	7.95%	7.75%	7.55%	7.35%	7.15%

Note: This table includes utility credit, duplex, single family, and apartments on can service.

Food/Yard Waste Subscriptions

The proposed revisions to the residential organics program will lead to significant changes in the number of subscriptions and subscription levels for organics. In 2009, organics service will be mandatory for all but those who compost at home. Three can sizes will be offered and organics collection will be provided weekly. SPU proposes to implement mandatory service using existing accounts that have yardwaste codes listed as “inactive” in CCSS.”¹²

Though, it is not known exactly how many customers will choose each can size, the 2007 residential customer survey offers some insight into how people will respond. At the time of the survey (December, 2007), only 32 gallon and 96 gallon cans were being considered for service. A sample of customers were asked which can size they would choose under mandatory service and bi-weekly pick-up. Those that did not prefer the 32 gallon can with bi-weekly service were asked their preferred service level with weekly service. The overall results are presented in Table V-9.

Table V-9
**2007 Residential Customer Curbside Organics Subscription Survey Results
 (Assuming weekly service)**

Proposed Service	% of Total
96 Gallon	16%
32 Gallon	74%
No Service	10%

No question was asked about a can size smaller than 32 gallon. However, it can be assumed that a significant portion of those that indicated they would pick the 32 gallon can under bi-weekly service would pick a smaller can size if offered on a weekly basis. For the forecast, it was assumed 50% would pick the smaller can size.

¹² When new customers are signed up for garbage service but elect to not have organics service an inactive rate code is established. As of 2008, there are approximately 42,000 inactive services.

Table V-10
Forecast Organics Can Distribution

	2007	2008	2009*	2010	2011
96 gal	105,800	106,964	51,198	23,664	23,924
32 gal	0	0	31,964	48,232	48,763
15-20 gal	0	0	43,092	65,024	65,740
No service	41,800	41,800	24,063	15,604	15,775
Total	147,600	148,764	150,317	152,525	154,202

*The can distribution for 2009 is a weighted average of subscription levels under the existing curbside program and that in place after the April 1, 2009 implementation date (and assumes some delay by customers on changing can sizes). It is used to set appropriate rates given the mid-year implementation.

Dumpster Subscriptions

Dumpster service levels vary by frequency of collection, number of containers, and the size of containers. Owners and managers generally subscribe to the lowest level of service that will accommodate their tenants (i.e., the smallest possible weekly volume of service), to minimize costs and economize on the use of outside space. The City's inspectors try to ensure that every apartment has enough service to accommodate tenants and prevent the overflow of dumpsters without requiring over subscription.

Under the existing rate structure, the cost of dumpster service depended on the number of containers served, pickups per week (frequency), the volume of the container(s) and the number of dwelling units. Under the proposed rate structure, rates would vary based on a fixed account fee and a variable cost based on the number of pickups, and the volume of the container(s). In addition, the proposed dumpster-free-alley (DFA) program requires a forecast of the number of bags collected. Table V-11 presents the dumpster and DFA bag subscription information used in the rate model for both the 2008 through first quarter of 2009 rate period under the existing rate structure and the period after the proposed rate structure goes into effect (April, 2009 and beyond). Cases where the value is either not currently required for the existing rate calculation or where it will not be required for the proposed rate calculation are labeled "N/A". The inputs include:

1. **Frequency:** number of accounts multiplied by the number collections per week. This will not be relevant under the proposed dumpster rate structure and so the values for 2009 through 2011 and labeled "N/A".
2. **Containers:** number of containers collected per week (the number of containers multiplied by the frequency). This will not be relevant under the proposed dumpster rate structure and so the values for 2009 through 2011 and labeled "N/A".
3. **Accounts:** actual or forecast number of accounts each year
4. **Pickups:** Number of pick-ups per month (Required input under the proposed rate structure).
5. **Volume:** total cubic yards collected each week (the size of the dumpster multiplied by the number of containers collected per week).
6. **DFA Bags:** Number of bags collected per week in the proposed DFA program

New dumpster accounts are projected to have the same relative frequency, container and volume distribution as existing accounts.

Table V-11
Historical and Projected Dumpster Frequency, Volume and Number of Containers

	2007	2008 (P)	2009 (P)	2010 (P)	2011 (P)
Frequency	7,780	7,754	N/A	N/A	N/A
Containers	9,530	9,498	N/A	N/A	N/A
Accounts	5,637	5,654	5,671	5,688	5,705
Pickups	9,530	9,498	9,411	9,439	9,498
Volume	19,998	19,932	19,614	19,328	19,448
DFA Bags	N/A	N/A	418	1,477	1,486

COMMERCIAL

Table V-12 shows the historical and projected number of commercial accounts as well as container and drop box subscription information for 2007 through 2011. 2007 data is from commercial service and billing information. The rate study uses the 2007 historic levels and an annual growth rate of 0.3 percent to project future subscription levels and future revenue.

Table V-12
Historical and Projected Commercial Dumpster Frequency, Volume and Number of Containers

	2007	2008 (P)	2009 (P)	2010 (P)	2011(P)
Accounts (including Drop Box Accounts)	8,609	8,635	8,661	8,687	8,713
Detachable Container Service					
Number of Containers	9,105	9,132	N/A	N/A	N/A
Pickups (Containers Served/Week)	10,759	10,527	10,280	9,478	9,516
Volume (Subscribed Cubic Yards Served/Week)	28,817	28,198	27,589	25,547	25,646
Drop Box Service					
Rental Units (Number of Containers/Mo)	429	430	432	433	434
Pickups (Containers Served/Year)	23,501	23,571	23,642	23,713	23,784
Dumpster Free Alley Bags Collected (No./week)	N/A	N/A	5,789	16,924	16,990

VI. RATE DESIGN

Rate Design is the last step in the rate-setting process. In this last step we must determine the structure of the rates for each of the different services and service levels. For example, we must decide how to price the mini-can, one-can and extra can service for the variable can customers. In the case of the dumpster customers, we must determine the rate at which a customer's bill increases with more frequent collections, additional containers and additional volumes of service.

Rate design is the point at which non-cost considerations such as rate gradualism, encouraging waste reduction, low-income rate assistance, and other policy issues are factored into the rates. In some cases these considerations justify deviations from setting rates at their cost of service.

2009-2010 Rate Design Strategy

For this rate study SPU conducted a full review of its rate structure taking into account both cost structure and service level changes associated with the new collection contracts, as well as recycling and waste reduction goals. The proposed rate design in this chapter reflects the analysis and recommendations from the "2009-2010 Solid Waste Rate Design and Cost Allocation" document dated May 2009. Significant structural changes are proposed for residential compostable waste rates, residential dumpsters and commercial dumpsters.

As discussed in Chapter IV, costs for the residential can sector will rise significantly more than for the other customer sectors. SPU proposes to mitigate this increase with new cross-subsidies for several reasons:

- First, residential can customers have had the most significant changes to service levels (i.e. mandatory organics), shifting service costs and overhead allocations into that sector. It is likely that future service changes (reducing residential garbage collection to bi-weekly and adding recycling / food waste programs in the multifamily and commercial sectors) will shift costs in the opposite direction, so it is prudent to smooth those transitions to avoid abrupt rate changes. Furthermore, a correction to the cost allocation methodology resulted in a shift of costs to the residential organics sector.¹³
- Second, SPU has new long-term contracts featuring a new bidding and service delivery structure. The contractors bid on a suite of services across all sectors, with SPU selecting the bidders on overall cost and performance. Different sectors saw different patterns of cost increases for reasons that had to do with the bid structure and the bidders' choice of internal cost allocations. It is prudent to smooth the transition over multiple rate cycles.

Our proposed strategy is to phase in the cost allocation changes to the various customer sectors over the course of 5-6 years. The residential sector would under-recover its costs, while the other sectors would over-recover their costs. Table VI-1 shows the estimated amount that

¹³ See Solid Waste Rate Design and Cost Allocation document.

each customer sector is over or under-recovering in a given year. By 2014, it is expected that each customer sector will recover most of its costs.¹⁴

CUSTOMER SECTOR COST RECOVERY

Table VI-1
Customer Sector Cost Recovery

Sector	2008	2009	2010	2011	2012	2013	2014
Residential Can (inc compost)	643	(11,630)	(11,131)	(3,595)	(3,327)	(1,870)	(1,712)
Multifamily	2,246	3,227	3,439	2,906	1,739	573	159
Commercial	(3,964)	6,773	6,739	5,413	2,503	454	874
Self-Haul	287	457	484	686	134	9	55

The following sections discuss the proposed individual rates within each customer sector. All rates proposed will be effective March 30, 2009 and January 1, 2010.

Residential Variable Can Rate Design

The rates charged by SPU for residential can service are known as “variable can rates” because they vary with the garbage service levels to which the customer subscribes. Currently, SPU’s variable can rates are structured so that the customer’s bill/rate increases with the amount of garbage service to which he/she subscribes. This structure results from the fact that it costs more to provide service to customers at relatively higher service levels and from an explicit policy decision to structure the rates to encourage recycling.

Both single family and multifamily dwellings can subscribe to variable can service. In general, garbage is collected from the curb or alley; however, customers can elect to have their garbage collected from their backyards.

Can rates were increased in 2008 by 6.8 percent and in 2007 by 1.2 percent. In addition to covering the can customer class’ share of allocated costs, can rates cover the bulk of the subsidies to low-income rate customers and in the past have covered the subsidy to residential compostable waste service. For 2009 and 2010 we are proposing that can rates cover their customer class’ share of allocated costs and subsidies to low-income customers, but do not cover the subsidy to residential compostable waste.

PROPOSED VARIABLE CAN RATES

We are proposing the can rates shown in Table VI-2 for 2009-2010. As before, the rate for a second (or third) can is twice (three times) that of a single can by city policy, although the cost of picking up that second (third) can is less than this amount. These rates provide important price signals to customers to recycle, reduce waste and minimize their can size.

¹⁴ Assumes a drop in residential can collection costs in 2011 from the move from every week to every other week garbage collection. Also assumes moderate annual rate increases for residential can, dumpster and commercial customer sectors after 2010.

Table VI-2
Current and Proposed 2008-2010 Curb/Alley Can Service Monthly Rates

	2008	2009	2010
Vacancy	\$6.85	\$6.85	\$6.85
Micro-Can	\$11.05	\$14.20	\$15.90
Mini-Can	\$13.55	\$17.40	\$19.50
One-Can	\$17.65	\$22.65	\$25.40
Additional Cans	\$17.65	\$22.65	\$25.40

Backyard Service

Currently, SPU offers backyard collection service at rates that are 40 percent higher than curb/alley rates. (This service is not available at the micro and mini can service levels or for compostable waste). We recommend that backyard service continue to be provided at a 40 percent premium to discourage overuse of the service. Customers may continue to qualify for backyard rate exemptions.

Table VI-3
Current and Proposed 2008-2010 Backyard Can Service Monthly Rates

	2008	2009	2010
One-Can	\$24.70	\$31.70	\$35.55
Additional Cans	\$24.70	\$31.70	\$35.55

Consolidated Can Rates for Multiplex Buildings

In the past, multiplex customers desiring consolidation of service were charged in an ad-hoc manner, and there was less financial incentive for service consolidation. As such, we are proposing a new rate for multiplex residences with a single utility account (such as small condominium complexes with a homeowners association or individual townhomes with a water irrigation meter). In the event of consolidation, an additional consolidation charge of \$6.85 (equal to the vacancy charge) will be applied to each dwelling unit in excess of the number of garbage service units.

Curbside Electronics Recycling

Under the new collection contracts beginning 2009, SPU has opted to offer single-family residential customers an on-call curbside electronics recycling program. This program will provide curbside pickup and hauling of electronics to registered collection and processing sites, where the products can be properly recycled. Customers will be charged \$20.00 for each pickup they request. A pickup is defined as up to three of the following:

- One TV or monitor greater than 4" diagonal
- One computer CPU
- One laptop
- A/V equipment
- Phones
- Hand-held electronics

Speakers, small appliances, and other household products are *not* covered, and items may not exceed 2'x2'x2' or weigh over 60 pounds. Also beginning 2009, the Washington Materials Management and Finance Authority will offer residents free self-haul drop off depots for electronics recycling. These depots will only accept TVs, monitors, CPUs, and laptops. SPU's curbside program is designed to increase electronics recycling by offering a convenient service and covering a wider variety of electronics. Eliminating individual vehicle trips to the drop off depots is expected to produce a net reduction in emissions. The rate for this on-call service has been set at a level expected to fully cover SPU's curbside electronics recycling program costs.

Residential Compostable Waste (Yard Waste) Rate

Under 2008 rates, customers can set out a 96 gallon container plus one additional 32 gallon container per collection for \$5.35 per month. Yard waste plus other vegetative food waste is collected bi-weekly. Additional containers or bundles are charged at \$1.60 each. The compostable waste rates are substantially subsidized by garbage can rates and generate only about half of the revenue required to cover their cost of service. In 2009, we are proposing approximately the same level of subsidy, but the source of the subsidy will be other customer sectors rather than residential garbage can rates.

PROPOSED 2009-2010 COMPOSTABLE WASTE (YARD WASTE) RATE

Beginning in 2009 all can customers will receive compostable waste service.¹⁵ Containers will now be collected weekly, and all food waste (including meat and dairy) will now be accepted in the containers. To accommodate this change in service, three container sizes will now be offered. The sizes to be offered were selected based on the results of customer focus groups. The price ratio between the various levels is roughly the same as the price ratio for the garbage can rates. This ratio was selected to provide a price incentive for customers who desire a smaller can, but a disincentive for customers to downsize their cans and utilize the extras service on a regular basis. Monthly rates are proposed as shown in Table VI-4.

Table VI-4
Current and Proposed Monthly Compostable Waste Rates

	2008	2009	2010
Yard Waste - Can			
96 Gallon	\$5.35	\$7.00	\$8.10
32 Gallon		\$5.45	\$6.30
20 Gallon		\$3.65	\$4.20
Yard Waste-Extras	\$1.60	\$3.00	\$4.00

COMPOSTABLE WASTE RATE EXEMPTIONS

Residential can customers who can demonstrate that they actively compost all vegetative foodwaste on-site are eligible for a compostable waste rate exemption. To qualify for this exemption, customers must agree to public and environmental health guidelines and submit to inspection of their composting methods, as required, by SPU inspection staff.

¹⁵ Currently only about two thirds of customers are signed up for this service.

Residential Detachable Container Rate Design

The rates charged for buildings receiving residential dumpster service are known as “detachable container rates.” Detachable container service is available to apartment buildings with five or more residential units.

Residential detachable container rates were increased by 6.7 percent in 2008, and by 9 percent in 2007.

2008 rates vary with the number of containers, frequency of collection, and container size. The rate for each service level is higher if a compactor is used. The 2008 rate formulas are as follows:

Un-Compacted Dumpster: $\$10.30 + \$20.35f + \$31.75fn + \$49.80fns + \$0.65d$
 Compacted Dumpster: $\$10.25 + \$20.25f + \$31.60fn + \$121.45fns + \$0.65d$

Where:

- f = number of pick-ups per week
- n = number of containers served
- s = size of the container, in cubic yards
- d = number of premises

PROPOSED 2009-2010 RATE STRUCTURE

Because of the historical differences in residential and commercial dumpster service provision, residential and commercial dumpster rate structures have also differed. With the implementation of the new collection contracts on March 30, 2009 there will be no distinction between SPU’s contract costs for residential and commercial dumpsters. As a result of this change, we took the opportunity to review the dumpster rate structures.

We recommend creating a new rate design for residential and commercial dumpsters that is reflective of their new cost structure. The rates reflect contract payments per dumpster pick up that vary with container size. While the rate *structure* will be the same for commercial and residential customers, rate levels vary because non-contract costs are different between the two customer groups.

Dumpster rate components vary from what allocated costs dictate in an effort to further encourage dumpster customers to recycle, reduce waste and minimize the number of collections per week and the number of containers. Dumpster rates are also set to recover at least the cost of service for the class, and part of the cost of service for the can sector for this rate period.

The 2009 and 2010 proposed rate formulas are as follows:

	Non-Compacted Material	Compacted Material
2009:	$27.00+17.00m +((16.00*cy)*m)$	$27.00+17.00m +((32.48*cy)*m)$
2010:	$27.00+21.00m +((16.00*cy)*m)$	$27.00+21.00m +((32.48*cy)*m)$

Where:

m=the total number of pick-ups (lifts of individual containers) per month
 cy=the number of cubic yards collected on each pick-up

Compacted rates are higher than un-compacted rates because a compacted container can hold up to 5 times the garbage of an un-compacted container. Currently, the difference is reflected in the volume component of the rate formula. Based on new data, the ratio of the volume component for compacted container rates has been revised from 2.44 times to 2.03 times that of the uncompact container rates.

Table VI-5 illustrates the changes in the dumpster bills for typical service levels.

Table VI-5
Current and Proposed Dumpster Bill for Typical Service Levels

	2008	2009	2010
One 1-Cubic Yard Dumpster Collected Once Per Week	\$118.70	\$169.89	\$187.21
One 3-Cubic Yard Dumpster Collected Once Per Week	\$224.80	\$308.45	\$325.77
One 2-Cubic Yard Dumpster Collected Twice Per Week	\$333.20	\$451.34	\$485.98
Two 2-Cubic Yard Dumpster Collected Twice Per Week	\$607.60	\$875.68	\$944.96

Compostable Waste Service

Residential customers with detachable container service who want compostable waste service can subscribe to the residential service at the rates shown above, or to the commercial service, which is described later in this chapter.

Low Income Rate Assistance Program

Qualified low-income customers receive a 50 percent discount on their solid waste bill or a fixed credit on their City Light bill (if they do not receive an SPU bill directly). For can customers the fixed credit is equal to 50 percent of the typical solid waste customer's bill (i.e., 50 percent of the single can rate. For apartment dwellers the fixed credit is equal to 50 percent of the average dumpster bill per household). This approach is consistent with the other City utilities.

There is no discount on extra garbage charges for qualified low-income customers. Extra garbage is beyond the base service SPU provides and is not considered part of the low-income program.

Yard waste monthly charges and yard waste extras are discounted 50 percent for SPU billed qualified low-income customers. Non-SPU billed low income customers that are yard waste subscribers, receive a credit equal to 50 percent of the yard waste base rate but no discount on the extra charge.

CURRENT AND PROPOSED LOW INCOME RATE ASSISTANCE CREDITS

For 2009-10 we are proposing to maintain the current structure of the Low Income Rate Assistance Program. Table VI-6 shows the changes in the fixed credit amounts based on the proposed rates.

Table VI-6
Current and Proposed Low Income Credits

	2008	2009	2010
SPU Billed can customers	50%	50%	50%
Fixed Credits			
Can	\$8.95	\$11.35	\$12.70
Yard Waste	\$2.65	\$3.50	\$4.05
Detachable Container	\$6.90	\$9.30	\$10.40

UTILITY LOW INCOME EMERGENCY ASSISTANCE PROGRAM

An Emergency Assistance Program offers eligible low-income customers facing shut off due to delinquent bills an emergency credit of 50 percent off their past-due combined bill, up to a maximum credit of \$225. They are eligible to receive this credit once per 12-month period. In 2007, 330 customers were assisted through bill reductions of \$57,920.

Recycling and Disposal Station Rates (RDS)

SPU provides self-haul disposal services at two sites in the City (the North and South Recycling and Disposal Stations). Self-haul customers in cars or trucks can deliver garbage, yard waste, wood waste, appliances, and recyclable materials to either of these stations.

In 2008 self-haul garbage rates were brought up to their full cost of service. We propose to raise self haul garbage rates in 2009 and 2010 to continue to cover their cost of service.

There has been a significant decrease in self-haul garbage tonnages at the transfer stations in 2008. Some of this decrease could be due to the 2008 rate increase, but other significant contributing factors include the reopening of King County's transfer station in Shoreline, and less favorable economic conditions. While we have accounted for the decreased tonnage in our projections, there is still some risk of further tonnage declines due to the proposed rate increase.

Self-haul yard waste remained below the cost of service in 2008. We propose to bring self-haul yard waste rates to just below their cost of service in 2009 and 2010. In this manner the self-haul sector will cover it's sector's share of costs, and temporarily cover a small portion of the can sector's costs.

Current and proposed rates can be found in Table VI-7.

Table VI-7
Current and Proposed Recycling and Disposal Station Rates

		2008	2009	2010
Garbage	per ton	\$130	\$135	\$145
	minimum/flat rate	\$25	\$27	\$30
Yard Waste	per ton	\$85	\$100	\$110
	minimum/flat rate	\$15	\$18	\$20
Wood Waste	per ton	\$59	\$100	\$110
	minimum/flat rate	\$15	\$18	\$20
Tires	per load (up to 4 tires)	\$11	\$12	\$13
Appliances	per appliance	\$25	\$30	\$30
	per appliance if included	\$7	\$8	\$8

CHARITABLE ORGANIZATIONS RATE

We are recommending that the self-haul rate for qualified charitable organizations be increased by the same percentage as the regular self-haul rate. Table VI-8 shows the current and proposed self haul garbage rates for charitable organizations.

Table VI-8
Charitable Organizations Rate

	2008	2009	2010
Charitable Organizations (per ton)	\$74.10	\$76.95	\$82.65

SEATTLE HOUSING AUTHORITY

The Seattle Housing Authority (SHA) is currently allowed to dispose of 5,800 tons of garbage at the transfer stations for \$74.10 per ton (the Charitable Organization Rate). Additional tons are charged the regular self-haul rate. We are recommending that SHA's discounted rate be increased in the same manner as the Charitable Organizations rate and that SHA continue to be allowed to dispose of 5,800 tons at that discounted rate.

Disposal (Tipping) Fee at the Railhead

Non-contract commercial waste is brought by the private transfer stations to the railhead in South Seattle, where it is placed on a train and taken to the SPU's contract landfill in Arlington, Oregon. Currently, SPU charges \$71.50 per ton for this waste. This rate covers the cost of disposal, billing and a share of the general and administrative costs of SWF. Very few tons are charged this disposal fee as it is charged only to non-contract tons that are disposed at Argo. In 2007, this fee generated less than \$1M. 2009 and 2010 proposed rates are shown in Table VI-9.

Table VI-9
Commercial Tip Fee

	2008	2009	2010
Commercial Tip Fee (per ton)	\$71.50	\$80.00	\$90.00

Commercial Rates

Commercial rates were increased by 6.7 percent in 2008, and by an average of 14 percent in 2007. Also, in 2008, taxes were embedded into the monthly charges where previously they had been charged separately.

In 2009 and 2010 commercial rates are set to recover at least the cost of service for the class, and a portion of the cost of service for the can sector for this rate period. Individual rate components may vary from what allocated costs dictate in an effort to further encourage dumpster customers to recycle, reduce waste and minimize the number of collections and containers. It is expected that in future rate periods, this subsidy from commercial to can customers will be significantly reduced or eliminated.

CONTAINER SERVICE

Container service includes compacted and uncompactd dumpster service, as well as can service. In container service the contents of the container are tipped into the collection vehicle and customers are charged for each tip (pick up), regardless of the amount of waste within the container.

The current commercial dumpster rates vary by the size of container and the number of pick-ups. 2008 Rates for the most common commercial dumpster service levels are shown in Table VI-10.

**Table VI-10
2008 Commercial Dumpster Rates**

Service Type	60 Gal.	90 Gal.	1 Yd	1.5 Yd	2 Yd	3 Yd	4 Yd	5 Yd
First Pickup	\$8.75	\$10.35	\$23.00	\$32.70	\$39.90	\$55.95	\$72.20	\$88.60
Ea. Add'l Pickup	\$8.75	\$10.35	\$23.00	\$32.70	\$39.90	\$55.95	\$72.20	\$88.60
Monthly Rent	\$2.35	\$2.35	\$6.35	\$9.25	\$11.95	\$14.85	\$16.95	\$23.30
Flat Monthly Pickup Charge (excludes rental rates)	\$37.85	\$44.80	\$100.75	\$142.00	\$173.15	\$242.50	\$312.70	\$383.90

Proposed 2009-10 Rate Structure

Similar to residential dumpster rates, we are recommending a change in commercial dumpster rate structure where there is a fixed charge, a separate flat charge per pick-up, and a third charge per pick-up that varies by dumpster size. The proposed compacted ratio for the volume component is 2.03. Dumpster customers will no longer pay a rental fee.

The 2009 and 2010 proposed rate formulas are as follows:

	Non-Compacted Material	Compacted Material
2009:	$15.00 + 10.00m + ((21.00 * cy) * m)$	$15.00 + 10.00m + ((43.65 * cy) * m)$
2010:	$20.00 + 13.00m + ((22.00 * cy) * m)$	$20.00 + 13.00m + ((44.66 * cy) * m)$

Where:

m=the total number of pick-ups (lifts of individual containers) per month

cy=the number of cubic yards collected at each pick-up

Table VI-11 illustrates the changes in the dumpster bills for typical service levels.

Table VI-11
Current and Proposed Dumpster Bill for Typical Service Levels

	2008	2009	2010
One 1-Cubic Yard Dumpster Collected Once Per Week	\$116.10	\$151.40	\$171.55
One 3-Cubic Yard Dumpster Collected Once Per Week	\$266.35	\$337.59	\$362.07
One 2-Cubic Yard Dumpster Collected Twice Per Week	\$367.25	\$473.98	\$513.62
Two 2-Cubic Yard Dumpster Collected Twice Per Week	\$716.50	\$932.96	\$1,007.24

DROP BOX SERVICE

With drop box service customers are delivered a roll-off container that is then picked up and transferred for disposal through one of the transfer stations. Customers are charged for the delivery of the container, the pick up of the container, a rental/account fee, and a per ton (disposal) fee for its content.

Drop Box Pick-Up and Rental Fees

Current and proposed drop box fees are shown in Table VI-12

Table VI-12
Current and Proposed Drop Box Fees

Service Type	2008	2009	2010
Pick Up (under 10 cu yd)	90.75	111.75	122.95
Pick Up (over 10 cu yd)	121.80	150.00	165.00
Special/Temp Pick-Up (under 10 cu yd)	105.25	122.90	135.25
Special/Temp Pick-Up (over 10 cu yd)	134.25	165.00	181.50
Monthly Account/Rental	varies	100.00	100.00

Disposal Fee for Drop Box Service

Currently, customers with drop box service pay a disposal fee of \$117.45 per ton. This fee is intended to cover SPU's cost of transfer and disposal, the transfer tax on the tons disposed, and

a portion of SPU's administrative costs. Table VI-13 shows the proposed disposal fees for 2009-10.

Table VI-13
Current and Proposed Drop Box Disposal Fee

	2008	2009	2010
Drop Box Disposal Fee (per ton)	\$117.45	\$140.00	\$140.00

COMPOSTABLE WASTE SERVICE

In January 2005, the City began providing compostable waste collection services to the commercial sector. These rates are set at 68 percent of the primary service rates. Currently, there are only about 200 compostable waste customers. Compostable waste service is not subject to the City's B&O, collection or transfer taxes.

Proposed 2009-10 Compostable Waste Service Fees

We propose to continue charge 68 percent of the primary service garbage rates for commercial compostable waste service. In addition, commercial customers who generate small amounts of organics material can utilize the residential organics service. We will also continue to provide training and free bags to new compost subscribers. Finally, we will study the possibility of implementing a "heavy" garbage rate in 2010 for large generators of commercial food waste who do not subscribe to organics service. This "heavy" rate will provide an incentive for those customers to subscribe to compostable waste service.

Processing Fee for Compostable Waste Drop Boxes

The transfer and processing costs for compostable waste differ from the transfer and disposal costs of garbage. The compostable waste costs are lower and the current rate for this service reflects that lower cost. Currently, customers with compostable waste drop boxes are charged a processing fee of \$50.00 per ton. We are proposing to increase this processing fee to \$70.00 in 2009 and 2010.

TAXES AND FEES

Commercial customers pay the city's collection taxes, state solid waste taxes and retail sales tax on container rentals. As the commercial collection and disposal rates increase, the amount of taxes paid by the customer increase; however, we are not forecasting any increase in any of the tax rates. Customers also pay a LHWMP fee of \$9.07 per month, which will not change in 2009 or 2010. All taxes and fees are embedded in the customer rates.

Per Ton Taxes

BACKGROUND

The City currently levies two solid waste taxes:

- A collection tax on non-recycled residential and commercial tons collected within Seattle; and
- A tax on non-recycled solid waste transferred for disposal in Seattle.

These taxes are paid by SPU, as both a collector of solid waste and an operator of a transfer station in the City. The taxes are also paid by about a dozen entities, including Waste

Management and Rabanco, for the non-contract tons they collect and/or transfer within the city limits.

BENEFITS OF THE TAXES

There are two primary benefits to these tonnage taxes. The taxes:

1. Provide funding for the Clean City programs; and
2. Allow the City to more equitably recover the cost of landfill closure. City records indicate that at least 7 percent of all waste that went into the City’s two Superfund Landfills came from waste generators outside the city. Since these outside-the-city waste generators are not paying SPU’s collection or transfer station rates, the tonnage taxes were (and continue to be) seen as the most equitable means of recovering costs from those who contributed to the environmental impacts of the Kent and Midway landfills.

TONNAGE TAXES AND SOLID WASTE RATES

Solid waste rates are set to recover the cost of paying the tonnage taxes to the City. SPU recovers revenue in the rates, pays the City its tax obligation and then the City transfers the total tonnage tax receipts back to SPU to pay for certain programs and costs.

TONNAGE TAXES 2009-2010

The landfill closure debt is slated to be retired in 2009. As such, SPU recommends eliminating the collection tax in 2010, while maintaining the transfer tax. This will simplify the tax structure while maintaining a viable funding source for the Clean City programs. It also maintains a financial incentive to recycle (i.e. garbage and CDL tons transferred within the city are subject to the transfer tax, while recycled materials are not). We also propose increasing the transfer tax in 2010 to cover the cost of the Clean Cities programs, ongoing landfill-related O&M expenses and future landfill-related Capital program expense. The current and proposed tonnage taxes are shown in Table VI-14.

Table VI-14
Proposed Per Ton Taxes

	2008	2009	2010
Collection Tax	\$13.65	\$13.65	\$0.00
Transfer Tax	\$7.50	\$7.50	\$8.50

Other Fees and Charges

ACCOUNT SET UP/CHANGE FEE

Currently SPU assesses a \$10 account set up/change fee. This fee is intended to cover the cost of setting up an account and printing and mailing new customer information packets (collection schedules, recycling information etc.). We are not recommending any changes to this fee.

BULKY ITEM PICK-UP

SPU customers can receive curbside pick-up of items such as sofas and white goods such as refrigerators for a per item fee of \$25. There is a \$6 additional charge for items that contain hazardous waste such as CFCs. We are recommending that the per-item fee be increased to \$30.00 and the additional charge be increased to \$8.

EXTRA GARBAGE

Extra garbage (garbage that doesn't fit in a customer's subscribed container) is collected for a \$6.00 per unit (bundle) charge. We are recommending that this fee be increased to \$7.75 for 2009 and 2010.

PAID SPECIALS

SPU provides extra collection service, "paid specials", on a fee basis. The fee is designed to cover customer service and billing costs, inspector time, contractor payments and transferring, hauling, and disposal costs associated with the "Paid Special".

Currently, variable can customers pay \$26 for the first container and \$2.65 for each additional container. We are proposing to increase this rate to \$35 for the first container and \$3.75 for each additional unit for 2009 and 2010.

The rates for special pickups of residential and commercial detachable containers are shown in Table VI-15.

Table VI-15
Current and Proposed Paid Specials

	Un-Compacted			Compacted		
	2008	2009	2010	2008	2009	2010
¾ Cubic Yard	\$41.35	\$41.35	\$41.35	\$53.80	\$53.80	\$53.80
1 Cubic Yard	\$44.25	\$44.25	\$44.25	\$60.75	\$60.75	\$60.75
1½ Cubic Yards	\$50.70	\$50.70	\$50.70	\$75.50	\$75.50	\$75.50
2 Cubic Yards	\$66.40	\$66.40	\$66.40	\$99.50	\$99.50	\$99.50
3 Cubic Yards	\$79.35	\$79.35	\$79.35	\$129.00	\$129.00	\$129.00
4 Cubic Yards	\$92.25	\$92.25	\$92.25	\$158.45	\$158.45	\$158.45
6 Cubic Yards	\$116.60	\$116.60	\$116.60	\$215.95	\$215.95	\$215.95
8 Cubic Yards	\$141.75	\$141.75	\$141.75	\$274.20	\$274.20	\$274.20
10 Cubic Yards	\$285.75	\$285.75	\$285.75	\$451.30	\$451.30	\$451.30
20 Cubic Yards	\$400.65	\$400.65	\$400.65	\$731.75	\$731.75	\$731.75

ANCILLARY AND ELECTIVE SERVICES

The contractors provide a number of ancillary and elective services to customers. While these services only applied to commercial customers in the past, starting in 2009 they will apply to both residential and commercial customers, as applicable. These services have typically generated about \$0.5 million annually.

Starting in 2009 the following fees will be charged to customers for both garbage and recycling/compost ancillary services:

**Table VI-16
Ancillary and Elective Services**

Type of Service	2008	2009	2010
Deliveries/Pick-Ups/Swap-outs			
Can/Toter	\$15.00	\$18.50	\$20.70
Detachable Container	\$17.60	\$22.20	\$24.85
Drop Box 2-8 CY	\$24.90	\$29.60	\$33.15
Drop Box 10-40 CY	\$39.35	\$46.25	\$51.80
Pickup Ancillary Services			
Can/Cart Roll out (>100 fit or up/down stairs)		\$1.85	\$2.05
Roll Out, Container (<3 CY)		\$5.55	\$6.20
Reposition, Container >2 CY		\$5.55	\$6.20
Entering Secured Buildings		\$3.70	\$4.15
Container Special Services			
Detachable Container Washing and Steam Cleaning, per container	\$2.60/CY, \$19.65 minimum	\$27.75	\$31.10
Drop Box Washing and Steam Cleaning, per Drop Box	\$2.60/CY, \$19.65 minimum	\$37.00	\$41.45
Can/Cart Pressure Washing		\$7.40	\$8.30
Compactor/Drop Box Special Services			
Compactor Disconnect/Reconnect Cycle	\$26.25	\$31.45	\$35.20
Dry Run	\$40.39	\$64.75	\$72.50
Other Ancillary Services			
Hourly Paid Special, Truck and Driver		\$166.50	\$186.50
Hourly Paid Special, Swamper		\$55.50	\$62.15

DUMPSTER-FREE ALLEY SERVICE

Residential and Commercial dumpster customers that are located within areas designated by SPU, and whose dumpsters are located in the right-of-way, will be required to subscribe to the dumpster-free alley bag service in lieu of dumpster service. The service is modeled off of the successful pilot program that was primarily based in Pioneer Square. Rates for the service are expected to cover approximately 50% of its cost. The remaining cost will be spread across the whole customer base. Rates are shown in Table VI-17.

**Table VI-17
Dumpster-Free Alley Bag Rates**

Bag Size	2009	2010
15 gallons	\$3.50	\$3.50
30 gallons	\$5.00	\$5.00

APPENDIX 1 -- ACTUAL AND PROJECTED RESULTS OF OPERATIONS

Operating Revenue	2006	2007	2008	2009	2010	2011	2012	2013	2014
Residential Garbage	\$50,227,310	\$50,182,028	\$55,534,111	\$68,284,121	\$79,376,488	\$80,106,441	\$84,647,462	\$90,814,384	\$97,399,713
Yard Waste	\$5,384,801	\$6,533,697	\$6,651,064	\$7,971,919	\$8,735,167	\$8,846,242	\$9,394,595	\$10,171,279	\$10,997,828
Commercial Services	\$38,641,744	\$41,038,215	\$43,486,662	\$52,596,783	\$58,164,006	\$58,933,452	\$62,794,093	\$67,112,496	\$70,906,726
Disposal Revenue	\$968,193	\$797,538	\$862,887	\$953,093	\$1,116,948	\$1,143,911	\$1,229,521	\$1,334,006	\$1,447,370
Recycling and Disposal Station	\$10,981,511	\$12,950,844	\$14,210,210	\$15,003,049	\$16,613,624	\$17,069,278	\$17,830,122	\$19,207,939	\$16,405,087
Taxes	\$8,869,056	\$10,206,862	\$10,002,120	\$10,039,392	\$5,719,578	\$5,738,111	\$5,737,992	\$5,745,879	\$5,500,576
Other	\$140,569	\$221,467	\$129,701	\$132,684	\$135,868	\$139,265	\$142,747	\$146,315	\$149,973
Total Operating Revenue	\$115,213,184	\$121,930,651	\$130,876,755	\$154,981,041	\$169,861,681	\$171,976,701	\$181,776,532	\$194,532,298	\$202,807,274
Operating Expenses									
Contracted Collection Services	\$60,093,260	\$59,450,064	\$63,547,841	\$81,287,096	\$91,619,989	\$94,781,287	\$97,924,222	\$101,134,234	\$102,916,366
Branch Operating Expenses	\$23,196,838	\$24,291,810	\$25,756,832	\$30,057,988	\$29,957,526	\$30,121,516	\$31,265,827	\$32,453,666	\$33,686,696
General and Administrative	\$4,744,769	\$7,464,995	\$8,798,455	\$7,439,863	\$8,173,051	\$8,459,108	\$8,776,325	\$9,105,437	\$9,446,891
City Taxes	\$15,498,431	\$17,291,929	\$17,644,253	\$19,797,486	\$17,497,769	\$17,666,399	\$18,500,421	\$19,557,928	\$20,357,034
Other Taxes	\$4,258,879	\$1,641,680	\$5,059,961	\$6,177,014	\$7,028,319	\$7,104,939	\$7,534,263	\$8,070,064	\$8,600,459
Depreciation and Amortization	\$4,041,655	\$3,897,910	\$5,071,093	\$5,444,532	\$7,135,053	\$6,403,845	\$6,917,719	\$13,429,628	\$14,718,810
Amortization of Landfill Costs	\$3,175,117	\$3,194,992	\$3,369,740	\$2,979,152	\$2,979,152	\$1,742,894	\$1,742,894	\$1,608,894	\$1,608,894
Total Operating Expenses	\$115,008,949	\$117,233,380	\$129,248,175	\$153,183,131	\$164,390,859	\$166,279,987	\$172,661,671	\$185,359,849	\$191,335,149
Net Operating Revenue	\$204,235	\$4,697,271	\$1,628,580	\$1,797,910	\$5,470,821	\$5,696,714	\$9,114,861	\$9,172,449	\$11,472,124
Other Revenue (Expenses)									
Operating Grants and Interest Income	\$826,724	\$1,265,192	\$1,664,695	\$2,235,142	\$2,101,338	\$2,136,195	\$2,425,752	\$2,453,611	\$1,800,820
Interest Expense	(\$1,569,081)	(\$1,537,956)	(\$2,536,362)	(\$3,526,756)	(\$6,751,488)	(\$7,344,426)	(\$10,920,387)	(\$10,790,044)	(\$12,038,914)
Other	(\$673,645)	(\$1,002,094)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Other Revenue (Expenses)	(\$1,416,002)	(\$1,274,858)	(\$871,667)	(\$1,291,614)	(\$4,650,151)	(\$5,208,231)	(\$8,494,635)	(\$8,336,434)	(\$10,238,094)
Net Income	(\$1,211,767)	\$3,422,413	\$756,912	\$506,296	\$820,670	\$488,483	\$620,226	\$836,015	\$1,234,031

APPENDIX 2 -- ACTUAL AND PROJECTED OPERATING CASH

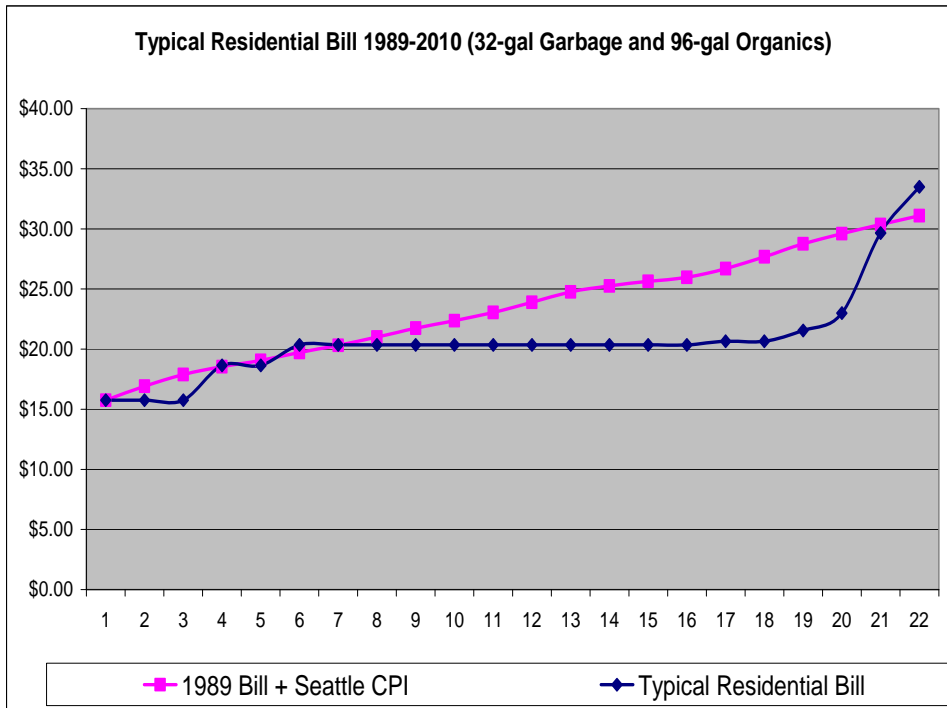
	2006	2007	2008	2009	2010	2011	2012	2013	2014
Beginning Cash Balance	\$8,467,777	\$5,432,000	\$8,027,000	\$49,555,067	\$23,657,673	\$48,128,726	\$25,128,439	\$60,346,322	\$26,303,913
Add: Net income	(\$1,211,767)	\$3,157,557	\$756,912	\$506,296	\$820,670	\$488,483	\$620,226	\$836,015	\$1,234,031
Add: Expenses not an outlay of cash									
Depreciation and Amortization	\$7,216,772	\$7,614,958	\$8,440,833	\$8,423,684	\$10,114,204	\$8,146,739	\$8,660,613	\$15,038,522	\$16,327,704
Add: Other cash revenues or deferrals									
Long Term Debt proceeds	\$0	\$0	\$82,175,000	\$0	\$75,355,000	\$0	\$81,797,000	\$0	\$20,545,000
Account payable lag adjustment	\$0	\$665,992	\$1,059,961	\$2,492,535	\$1,443,246	\$248,207	\$995,765	\$1,256,784	\$722,417
Line of Credit Draw No. 1	\$5,200,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Line of Credit Draw No. 2	\$3,700,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Line of Credit Draw No. 3	\$2,700,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Additions to Cash	\$17,605,005	\$11,438,508	\$92,432,707	\$11,422,515	\$87,733,121	\$8,883,428	\$92,073,603	\$17,131,321	\$38,829,151
Deduct: Other cash disbursements or deferrals									
Principal payments	\$4,170,000	\$4,390,000	\$4,690,000	\$6,535,000	\$3,183,288	\$3,350,410	\$5,365,951	\$5,647,663	\$6,406,229
Capital improvements	\$15,011,426	\$5,973,833	\$20,457,581	\$27,144,155	\$57,172,961	\$26,770,553	\$48,469,975	\$42,415,161	\$23,744,801
Other non-current expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Account receivable lag adjustment	\$0	\$0	\$737,907	\$2,220,726	\$1,327,215	\$193,489	\$908,045	\$1,150,526	\$685,997
Accounting and Technical Adjustments	\$541,068	(\$2,476,452)	\$24,149,688	\$511,440	\$678,604	\$669,264	\$1,211,749	\$1,060,379	\$593,620
Accounting and Technical Adjustments	\$541,068	\$870,394	\$869,463	\$908,589	\$900,000	\$900,000	\$900,000	\$900,000	\$900,000
Cash-Funded LFC Depreciation	\$918,792	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Deductions from Cash	\$20,641,286	\$8,757,776	\$50,904,639	\$37,319,909	\$63,262,068	\$31,883,716	\$56,855,720	\$51,173,730	\$32,330,647
Change in Cash Balance	(\$3,036,281)	\$2,680,732	\$41,528,067	(\$25,897,394)	\$24,471,053	(\$23,000,288)	\$35,217,883	(\$34,042,409)	\$6,498,504
Ending Cash Balance	\$5,431,496	\$8,112,732	\$49,555,067	\$23,657,673	\$48,128,726	\$25,128,439	\$60,346,322	\$26,303,913	\$32,802,417
Remaining Bond Funds	\$0	\$0	\$40,671,455	\$16,287,502	\$40,186,837	\$16,287,998	\$54,462,020	\$16,288,376	\$16,288,786
Operating Cash Balance	\$5,431,496	\$8,112,732	\$8,883,613	\$7,370,171	\$7,941,890	\$8,840,441	\$5,884,301	\$10,015,537	\$16,513,631

APPENDIX 3 — SOLID WASTE RATE HISTORY

Typical Bill Changes 1989-2010 (32-gal Garbage and 96-gal YW)

1/1989 - 6/1992	7/1992 - 8/1994	9/1994 - 3/2005	4/2005 - 12/2006	1/2007 - 12/2007	1/2008 - 3/2009	4/2009 - 12/2009	1/2010 -
\$15.75	\$18.65	\$20.35	\$20.65	\$21.55	\$23.00	\$29.65	\$33.50

	1/1989 - 6/1992	7/1992 - 8/1994	9/1994 - 12/1999	1/2000 - 3/2005	4/2005 - 12/2006	1/2007 - 12/2007	1/2008 - 3/2009	4/2009 - 12/2009	1/2010 -
Vacancy Rate	\$5.95	\$5.05	\$6.25	\$6.25	\$6.35	\$6.40	\$6.85	\$6.85	\$6.85
Micro Can		\$9.37	\$10.05	\$10.05	\$10.20	\$10.35	\$11.05	\$14.20	\$15.90
Mini Can	\$10.70	\$11.40	\$12.35	\$12.35	\$12.55	\$12.70	\$13.55	\$17.40	\$19.50
One Can	\$13.75	\$15.65	\$16.10	\$16.10	\$16.35	\$16.55	\$17.65	\$22.65	\$25.40
Two Cans	\$22.75	\$28.15	\$32.15	\$32.20	\$32.70	\$33.10	\$35.30	\$45.30	\$50.80
Three Cans	\$31.75	\$40.65	\$48.25	\$48.30	\$49.05	\$49.65	\$52.95	\$67.95	\$76.20
Yard Waste (96-gal)	\$2.00	\$3.00	\$4.25	\$4.25	\$4.30	\$5.00	\$5.35	\$7.00	\$8.10



APPENDIX 4 — RATE DESIGN SUMMARY OF RECOMMENDATIONS

This section provides a summary of the Mayor's rate design and cost allocation recommendations. More extensive issue papers related to each recommendation are included in Sections V-XIV of the Solid Waste Rate Design document. The recommendations are broken into several groupings of issues: Organics, Can Rates, Dumpster Rates, Transfer Station Rates, Tonnage Taxes and Cost Allocation. Each section provides some background, then discusses the individual issues, the Executive's recommendations and other options considered.

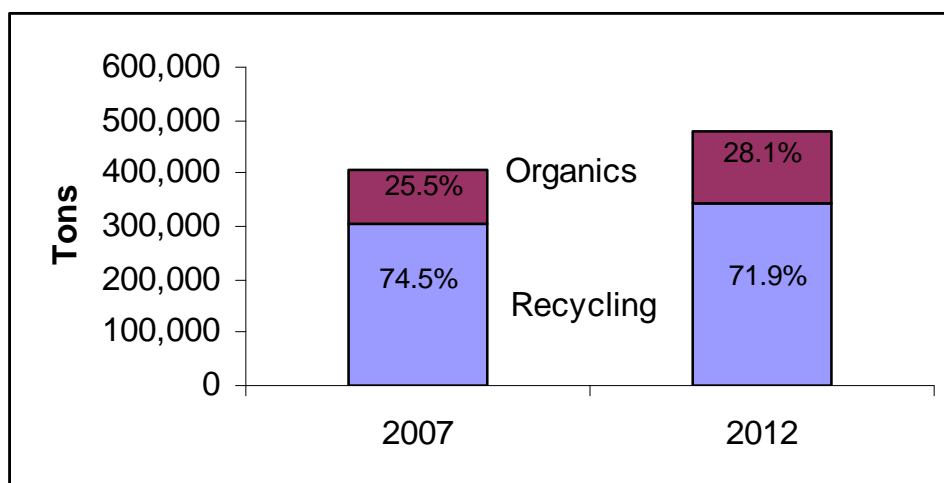
Organics

BACKGROUND

A large portion of Seattle's disposed garbage consists of organic material. However, most of this material is food waste since yard waste has been banned from garbage since 1989. Disposal of food waste in the garbage raises both economic and environmental issues. Food waste tends to be heavier than most typical garbage and therefore contributes disproportionately to garbage tonnage. In addition, food waste may be recycled as compost rather than dumped in a landfill.

The 2004 Solid Waste Comprehensive Plan amendment recognized that one of the strategies with the greatest potential impact was decreasing the amount of organic material going to the landfill. The Waste Reduction and Recycling Study conducted in 2007 confirmed that both commercial and residential organics diversion would be effective strategies to reach the 60% goal. Consequently, the projections showing how we will achieve the 60% recycling goal by 2012 show a large increase in tons of organics material being diverted from the waste stream. Figure IV-1 shows the current composition of recycled tons against the projected composition once the 60% target is reached. Organics material accounts for most of the difference between the current and desired situation.

**Figure IV-1
Current and Projected Recycling and Organics Tons**



Following on the Waste Reduction and Recycling Study recommendations, Resolution 30990 identified actions to be implemented related to organics:

- A. The City will continue to build a commercial organics program through 2007 and beyond by working with customers and collection companies to provide incentives and design programs to facilitate, promote, and increase the cost-effectiveness of commercial organics collections. Among the incentives to be evaluated will be designing rates to encourage organics recycling, including decreasing the per-unit organics charge as quantities of organics increase (2007).
- B. The City will further develop its residential organics program in negotiations and contract discussions in fall 2007 (2007).
- C. The City will implement a new organics program on April 1, 2009, including:
 - All single-family customers will have organics collection unless the customer is actively composting food in the yard (an exemption process will be developed).
 - A tiered can rate will be established for organics.
 - All food waste will be included in organics collections.
 - A future ban of all organics from single family garbage will be considered once the collection system has been fully established.
- D. Multi-family organics collection will be expanded to be a voluntary service available to all customers no later than April, 2009. SPU will review and propose incentives and education programs that will encourage participation by property owners and residents (2009).
- E. Collection frequencies for garbage, recycling and organics will be determined in fall 2007 as part of negotiations with service providers. The evaluation criteria for different collection alternatives (and costs, benefits and operational impacts associated with collection frequencies) will be determined in time for implementation in the 2009 collection contract. If weekly organics and every other week garbage are not part of the baseline 2009 collection contract, then pilots on these frequencies will be performed in 2010-2011 (2009-2011).
- F. SPU will conduct a study by the end of 2010, to be done with an advisory group, to determine the costs, benefits, operational impacts and effectiveness of a potential mandatory multi-family organics collection program which could be implemented by the end of 2011. The scope of work for the study will include a requirement to develop evaluation criteria (2010-2011).

SPU developed its options and resulting recommendations for organics rates based on this action list. It explored the options recommended in the resolution as well as others. While not all of the required actions are directly rate-related, SPU evaluated the various rate options within the programmatic context of each action. This section provides a summary of the options and

recommendations for residential, multifamily and commercial organics rates.

RESIDENTIAL ORGANICS

Issue Statement

SPU currently offers an optional bi-weekly organics (food/yard waste) collection service to residential customers, allowing one 96 gallon bin and one additional 32 gallon for a flat monthly rate. Customers may also put out extra containers for a nominal additional charge. About 70% of residential solid waste customers currently subscribe to this service. Customers not participating in this program likely compost at home, self-haul, or generate minimal amounts of organics which can be accommodated in their normal garbage service.

The introduction of a mandatory organics program provides the impetus for customers to stop disposing of food waste in the garbage. However, the design of this new program should also consider: a) service enhancements to better meet subscriber requirements, and b) incentives to generally encourage food waste reduction. Some service enhancements were developed through negotiations for the new contracts that take effect on March 30, 2009. Most significantly, residential organics containers will now be collected weekly. The increased collection frequency will serve as an incentive for more single family customers to utilize the service for food waste.

Recommendation

Offer three organics can sizes: mini-can (15-20 gallons), 32 gallon and 96 gallon¹⁶. The can sizes were determined based on the weekly amount of food waste generated by a typical household and the maximum capacity of the various cans, taking into account yard waste material goes into the bins as well. An organics service exemption will be provided for those customers who home compost. A survey of customers revealed that approximately one third of current organics customers would switch to a mini-can service level if it was offered every week. Another third of customers said that they would switch to a 32 gallon can service if it was offered every week. Therefore, while it does increase initial costs to change customer subscriptions and cans, offering three can sizes best fulfills customers' needs.

In addition, organics extras should also be priced to discourage customers from minimizing their can size and over utilizing the extras service. Therefore, the charge for organics extras will be increased as necessary to provide this price incentive.

Other Options Considered

A two-size option was also considered. The life-cycle costs for this option were approximately \$2 million less than the recommended three-size option because there would be fewer customers switching their subscriptions levels and cans. However, since the majority of the additional cost is the capital cost to purchase carts, the immediate rate impact for two versus three sizes would be minimal. Overall, it was determined that the benefit to customers who generate moderate amounts of yard waste to be able to reduce their service level outweighed any additional costs of implementing the additional can-size option.

¹⁶ The current service level is one 96 gallon can plus one 32 gallon container.

COMMERCIAL ORGANICS

Issue Statement

The City's commercial compostable waste program began in July, 2005 and grew to a peak of about 380 accounts in late 2006. Since that time the number of SPU accounts and tons has declined as private compost haulers (mainly Cedar Grove) have increased their market share. The total number of accounts (SPU and private haulers) has grown to 670, and the 2007 volume is forecast to be approximately 3.8 times the 2005 volume. While this growth in private tonnage is significant, it is still lower than what is needed to reach the 60% recycling goal. There is still room for growth in this market, but there is also concern that smaller, less profitable customers will not be served by the private sector alone. Any rate incentives should encourage targeted customers to utilize compost hauling services without undercutting any private sector initiatives.

Recommendations

The following are recommended courses of action on commercial composting:

1. **Allow commercial customers who generate small amounts of organics material to obtain residential subscriptions:** Most commercial customers require weekly compost service. Since residential service will now be on a weekly basis, it may be more cost-effective both for the customer and for SPU if smaller commercial customers obtain the 96 gallon residential service. Generally, smaller generators of food waste would see an overall cost increase from adding compost service, even with reducing their garbage container size. However, the cost increase would likely be smaller if the customer is able to obtain residential service.
2. **Assess the feasibility of heavy garbage rates or food waste bans for large quantity commercial food waste generators.** A potentially cost-effective way of increasing food waste volumes may be to target large producers of organics by setting garbage rates high enough to encourage them to obtain compost service. There would be an exemption for smaller customers or those that have other qualifying circumstances. These "heavy" rates may be ready for 2010 implementation. A key element will be to identify eligible customers by SIC code, which the contractors will provide to SPU during contract implementation in 2009.
3. **Continue to provide training and free organics bags or program credit to new compost subscribers and continue to provide outreach to large generators of organics in an effort to get more customers involved in the program.** Anecdotal evidence suggests that some commercial customers do not participate because of the costs associated with educating employees to manage another waste stream. Free training is currently offered through Cedar Grove and free organics bags or program credits tend to reduce the additional costs.

Other Options Considered

1. **Create rate structure characterized by decreasing incremental cost as organics dumpster size increases.** Although this might encourage composting by reducing the average cost of composting as the size of the container increases, it would only provide

customers with savings if garbage service could be reduced through reduced pick-up frequency or a smaller volume container. In other words, there are minimum food waste volume percentages that have to be present in order for customers to get an overall solid waste disposal price reduction. An analysis of this shows that there are few service-level combinations of dumpster/organics container sizes that would yield savings for the customer. Even where there are savings, the amount is usually small.

2. **Increase existing discount for commercial organics customers.** Organics customers already receive a 32% discount over garbage rates. Increasing this discount might attract more organics customers but, as in the previous option, only if they could reduce their overall costs by reducing frequency of pick-up or downsizing their garbage container. Few customers would receive this benefit and for those customers that did the savings would be minimal.

For options 1 and 2, any financial incentive on organics rates means that they would be set lower than their cost of service. This "discount" translates into a higher subsidy from garbage customers while providing a very small price incentive to organics customers. Furthermore, space constraints more often dictate a customer's level of service more than financial incentives. Therefore, we do not recommend either options 1 or 2.

3. **Eliminate SPU program.** In light of the increase in private markets for commercial compost hauling SPU considered ending the existing program. However, if private composting collectors are focusing on large generators because they are more profitable, smaller generators might be under-served or not at all. Therefore, SPU will continue to monitor the program and reexamine this issue at a later date.

MULTIFAMILY ORGANICS

Issue Statement

Multifamily organics collection is already offered to customers on a voluntary basis. Customers can choose either the residential or commercial program depending on volumes, food waste types and desired frequency of service. SPU currently encourages multi-family dry recycling by offering training and a \$100 lump sum credit on the customer's bill. In 2007, SPU recruited a small number of multifamily buildings for a pilot organics program consisting of several months of free service, training, educational materials, and free liner bags. This pilot program will continue into 2008 with approximately 35 additional buildings. Providing incentives to multifamily customers is challenging because there is often a disconnect between financial incentives for owners and the behavior change required of the tenants. In order to increase multifamily organics subscriptions, SPU must reduce the transaction cost of the customer of learning about the program, reduce the potential for odors/vectors by more frequent service or bag requirements, or reduce monthly service costs.

Recommendations

1. **Multifamily customers can continue choose a level of commercial or residential service that best fits their needs.** Since they can choose either residential or commercial service, the recommendations presented above for those customer groups

apply here as well. The recommendation for heavy garbage rates may apply to certain multifamily customers such as group or dependent care homes. The analysis of which customers would be charged the heavy rates will be conducted later this year.

2. Encourage multifamily customers to subscribe to multiple residential organics carts when it provides an effective way to reduce garbage container size.
3. Continue and expand the advertising, outreach and training to encourage multifamily customers to subscribe to the service. Eventually provide bill credits similar to the dry recycling program.

Dumpster Rates

RESIDENTIAL AND COMMERCIAL DUMPSTER RATES

Issue Statement

SPU provides dumpster services to both commercial and multifamily residential customers. The City of Seattle has provided solid waste services (through contracts) to residential customers for many years, but it has only been responsible for commercial collection since 2001. As a result of the historical differences in residential and commercial dumpster service provision, their rate structures have evolved differently as well. On March 30, 2009 SPU will enter into new contracts with haulers that will include both commercial and residential collection. There will be no distinction between SPU's contract costs for residential and commercial dumpsters. As a result of this change, we took the opportunity to review and restructure our dumpster rates so that they are: i) more reflective of our costs, ii) more transparent, and iii) relatively easy to administer and explain.

Recommendation

We recommend creating a new rate design for residential and commercial dumpsters that is reflective of their cost structure. The rates would reflect contract payments per dumpster pick up that vary with container size. While the rate *design* would be the same for residential and commercial customers, the actual rate *amounts* would vary as non-contract costs vary between the two customer groups. The new rate structure will provide consistency and equity between commercial and residential rates. The structure is also flexible enough to build in incentives for waste reduction. While some customers may initially see more change in rates than others due to the new structure, the rates will be more transparent and easier to explain to customers in the long run.

Other Options Considered

1. **Continue with the status quo of separate rate structures for commercial and residential dumpsters.** While this will help rate structures stay more stable in the short run, the rates will not necessarily represent our cost structure and will be less transparent to customers.
2. **Create a rate structure for commercial customers that is similar to the current residential dumpster structure with variables for number and size of containers,**

as well as frequency of pick-up. This option was not selected because it is not reflective of our new cost structure, it is complicated and difficult to explain and administer, and it is unclear if the resulting fine variation in rates provides any incentive for customers to reduce waste. Space constraints rather than rates often drive choices in frequency of pickup and dumpster size and number.

DUMPSTER-FREE ALLEY PROGRAM

Issue Statement

SPU has participated in a pilot dumpster-free-alley (DFA) program, primarily based in Pioneer Square, since 1999. Customers, on a voluntary basis, replaced their dumpsters with a pre-paid bag system with much more frequent collection service. Alleys that went dumpster-free are much cleaner, no longer provide cover for uncivil and illegal behaviors and are reclaimed as safe public space. In addition, many DFA customers have significantly reduced their volume of waste. While results have been very positive, there are limits to a voluntary system. The new garbage contracts that will begin in April, 2009 provide an opportunity to impose a mandatory system. Several areas have been identified that are likely to benefit significantly from a mandatory program.

Recommendation

The Executive recommends implementing a mandatory DFA program in a phased approach, starting with central City neighborhoods in 2009, with costs evenly split between DFA customers and the general rate base to reflect the public benefits of DFA service.

Other Options Considered

1. **Voluntary programs only.** While this option may help keep costs down, it foregoes some of the collective benefits that accrue when all customers in a given area participate. Also, opportunities for significant waste reduction would be missed.
2. **Implement a mandatory DFA program in all identified neighborhoods in 2009.** This option provides the most benefit, but at the highest cost and operational risk. In addition, much outreach to client businesses remains to be done, and a broad mandatory approach may generate business opposition.

Residential Can Rates

BACKGROUND

With the implementation of the new collection contracts on March 30, 2009, services offered to residential can customers will change. While basic garbage can service will not be significantly altered, changes to organics service raise questions about the way can rates are structured. In addition, a full review of can rate structure has not been conducted in some time. As such, SPU conducted a review of residential can rate design to ensure that it continues to reflect the rate-

setting principles shown in Section III. We identified several areas where potential changes could be made, which are discussed in the following sections.

"PACKAGING" OF RATES FOR GARBAGE, RECYCLING AND ORGANICS

Issue Definition

Residential can customers are currently charged a variable rate based on the size of their garbage can that includes recycling services. Customers can also sign up for a separate organics service. Recycling services were originally shown as "free" on customers' bills in order to encourage participation in the program. Organics service was priced separately because it was an optional service, but rates were set at half their cost of service to encourage customers to sign up. Now, recyclables are banned from the garbage and customers are used to recycling but they do not have a price incentive to reduce the amount in their recycling bin. Also, all customers will receive organics service starting in 2009 and do not need a price incentive to sign up for the service. Given these changes SPU evaluated different ways to "package" the rates for these services to further encourage waste reduction.

Recommendation

Retain the status quo of a variable rate that includes recycling and maintain a separate variable organics rate. This option would have the least impact to current business processes, billing systems, or customer service staff training requirements. The idea is to minimize the impacts on customers of the contract changes where possible, be relatively transparent in what customers pay for and be able to provide excellent customer service in the midst of a major transition.

Other Options Considered

1. **"Bundle" garbage, recycling and organics into one variable rate based on the combination of garbage and organics can size.** All customers would continue to have a 96 gallon recycling cart. Given the mandatory¹⁷ nature of all three services it would be an opportune time to make this change. However, with three organics can sizes, pricing the different combinations of garbage and organics service levels results in at least 15 rate combinations, potentially causing confusion for the customer. While other jurisdictions that require organics service bundle their rates together, these jurisdictions generally maintain one recycling and organics cart size. Portland is the only other jurisdiction that offers more than one organics can size, and it maintains a separate organics rate.
2. **Charge separate rates for garbage, organics and recycling.** This could potentially send a price signal to customers that recycling is not "free", and that reducing waste overall would reduce cost. However, this option was not chosen because the incentive to reduce waste is not as strong when customers are required to sign up for recycling service and they cannot reduce their recycling can size (and cost). Also, the rate structure would become more difficult to explain, particularly in a period when many other changes are happening.

¹⁷ At this time, customers will be required to sign up for organics service, but will not be banned from disposing of organics material in the garbage.

VARIABLE GARBAGE CAN RATES

Issue Statement

The Solid Waste Utility established its variable can rate structure in 1981. The mini-can option was introduced around 1989, and the micro-can was introduced around 1992; both cans are priced about 20% lower than the next larger can. No significant changes have been made to the garbage can rates since 1992, and subscription levels have remained fairly constant, with 67% of customers currently subscribing to the 32 gallon can service, 21% to the mini-can, and 4% to the micro-can. SPU examined what changes could be made to the can rate structure to further encourage waste reduction and simplify billing.

Recommendations

The overall recommendation is to leave the basic can rate structure in place, but make two minor changes to clean up billing system issues.

1. **Create a minimum rate to be charged specifically to customers in multiplex dwellings that have consolidated can service.** With the increased construction of multiplex dwellings (condominiums, etc.), there are larger numbers of customers in these dwellings who request to consolidate their can service. (For example, two town homes request one 32 gallon can). Since all units are imposed some charge for garbage service it is difficult to structure a subscription for customers with consolidated service. In the example given above, the two town homes would each be charged for a micro-can. Consequently, customers become discouraged that they cannot realize significant savings from reducing waste. A minimum rate would allow customers to be charged for their appropriate service level. (In the previous example, the minimum rate would be charged to one unit and the 32 gallon rate would be charged to the other). The customers must have a combined utility bill (on one water meter) and a homeowners association to be eligible for the rate.
2. **Do away with the rate for 2 times per week can service.** SMC 21.40.050 B states how customers with can pick up more than one time per week should be charged. There have been no customers on this type of service for some time. Therefore, in efforts to clean up the municipal code we propose eliminating this service level.

Other Options Considered

1. **Increasing the “discount” for mini and micro cans relative to the 32-gallon can.** This option is not recommended because the 32-gallon rate would need to increase if we decreased the mini and micro can rates. Since most of our customers subscribe to the 32-gallon rate, they would see an additional rate increase on top of the significant rate change anticipated in 2009. In addition, we would like to observe how many subscription changes result from the additional organics service and rate increase first, and then consider changing the “discount” to further encourage can downsizing in the future.

2. **Increase the rate for a second garbage can.** This service is already priced above the cost of service to discourage additional garbage. This change would also require significant modifications to the billing system.
3. **Change the zero can rate.** The zero can or “vacancy” rate is what is charged to dwellings that are not being used as residences. It is meant to cover landfill closure costs, billing, collection, Low Income Rate Assistance, and hazardous waste costs. SPU conducted an analysis of what the level of this rate should be, and determined that the current rate is appropriate.
4. **Eliminate backyard service for customers who do not qualify for an exemption** (Approximately 600 customers). While the national trend is moving toward eliminating the backyard service option in favor of automated curbside collection, this service has not presented any problems for SPU and we do not recommend cutting it at this time.

Transfer Station Rates

Issue Statement

Transfer station garbage rates were raised to their allocated cost of service in 2008. However, the structure of transfer station rates has not been looked at for some time. With policy direction from the Resolution 30990 and service level changes from the new collection contracts, SPU undertook a review of the transfer station rates to ensure that they are in line with the other changes taking place in the solid waste system.

Recommendations

1. **Make yard waste and wood waste rates the same.** Costs for the two commodities are approximately the same and for the North Transfer Station they are even collected and hauled from the same bin. Making these rates the same will eliminate the incentive for customers to “cheat” by sneaking in yard waste under wood waste.

Other Options Considered

1. **Increase the rate for disposal of “white” goods (appliances, etc).** The rate should be maintained at the same level as the rate for curbside pickup. More public education should be provided to customers that the curbside pickup service is available to encourage more people to use this service.
2. **Do away with the charitable organizations rate.** While the rate should be increased by the same percentage as other self-haul garbage rates, this rate should remain in place for organizations that receive a large volume of items that cannot be resold or reused. We will evaluate the maximum tonnage limitation that is currently in place.

Tonnage Taxes

Issue Statement

The City currently levies two solid waste tonnage taxes, which finance the City's landfill closure work and Clean Cities programs. They are:

1. Collection Tax (aka the Landfill Closure Tax): This tax of \$13.65 per ton is imposed on all collectors of non-recycled solid waste tons collected within Seattle; and
2. Transfer Tax: This tax of \$7.50 per ton is imposed on owners or operators of transfer stations for non-recycled solid waste tons transferred within the City for disposal.

The taxes were established to ensure a more equitable recovery of certain solid waste system costs (e.g., landfill closure, litter collection) than could be achieved through solid waste rates alone.¹⁸ In the 2003 Rate Study, there was a brief discussion of eliminating the tonnage taxes. The reasons for considering their elimination rested primarily on the fact that their elimination would simplify the city's tax structure and more importantly, the City then had begun to set the rates for the commercial sector and could recover solid waste system costs from that large customer base through rates rather than taxes. Eliminating the taxes at that point would have resulted in a rate increase for solid waste rate payers as there was still \$2M of tax receipts being generated from not rate paying customers. The desire to keep those entities contributing to the cost of landfill closure eventually outweighed the benefits of simplifying the taxes. The City is now at another important juncture in the solid waste system. The final debt service payment on the Kent and Midway landfills will be made in 2009. These costs were the primary reason for the initial creation of the taxes so it seems prudent to reexamine the taxes.

Recommendations

1. **Eliminate the Collection Tax in 2010 when the landfill debt expires and continue the Transfer Tax at a level to finance ongoing landfill work and Clean Cities programs:** The last debt service payment on the bonds issued for the Kent and Midway landfills will be made in 2009. About half of the tonnage tax receipts were used to pay this debt service. Eliminating the Collection Tax, while maintaining the Transfer Tax, simplifies the tax structure, maintains a viable funding source for the Clean City programs, and maintains a financial incentive to recycle.

Other Options Considered

1. **Status Quo:** A status quo option would leave both taxes in place while lowering the tax rates in 2010 to generate only \$5M to pay for Clean City Programs and on-going landfill closure and post closure costs. This is the simplest approach but leaves a rather complex tax structure in place when it is no longer necessary.
2. **Eliminate both tonnage taxes:** With the initial reason for the creation of the taxes being eliminated (i.e., the final debt service payment on Kent and Midway being paid), SPU considered eliminating both taxes. This option isn't feasible because a portion of the tax receipts are now also used to fund Clean City programs, which are general city

¹⁸ At the time, the City did not set solid waste rates for the commercial sector and had no rate mechanism through which to recover solid waste related costs from commercial sector.

programs and should not be paid for with rate revenue. Eliminating both taxes would require a different source of revenue from the General Fund to pay for Clean City programs.

APPENDIX 5 — COST ALLOCATION DETAILS

Introduction

Cost allocation is the process by which the costs that need to be collected through rates (revenue requirement) are assigned to different groups of customers (customer classes). The process of cost allocation allows us to estimate the true cost of serving customer classes and ultimately helps determine what rates would be if set at their cost of service. Cost allocation provides a foundation for rate design, but actual rates often vary from the assigned cost allocations because of the other (often competing) ratemaking considerations as described in Section III.

This section was prepared pursuant to City Council's request to review the cost allocation in detail earlier than the 2009/2010 rate study as a whole. SPU conducted a thorough review of all of the methodological assumptions and inputs to its cost allocation. This section outlines that process and contains an expanded explanation of cost allocation methodology, methodological changes, and detailed appendices of data.

COST ALLOCATION HISTORY

Historically, changes to the cost allocation have been driven by the introduction of new services or the expansion of existing service levels. Rate studies in 1988 and 1999 made significant changes to cost allocation.

1988 changes:

- Charge for curbside yardwaste was introduced at subsidized levels.
- Some costs began to be allocated based on factors other than tonnage (i.e. accounts)

1999 changes:

- A correction was made to the allocation of costs to residential dumpster customers, resulting in a higher rate increase for those customers in 2000 and subsequently in 2003.
- New commercial contracts resulted in a new customer class to which costs would be allocated.

The only significant change to cost allocation since 2000 is that transfer station rates were gradually brought up to their cost of service through rate increases in 2007 and 2008.

Cost Allocation Process

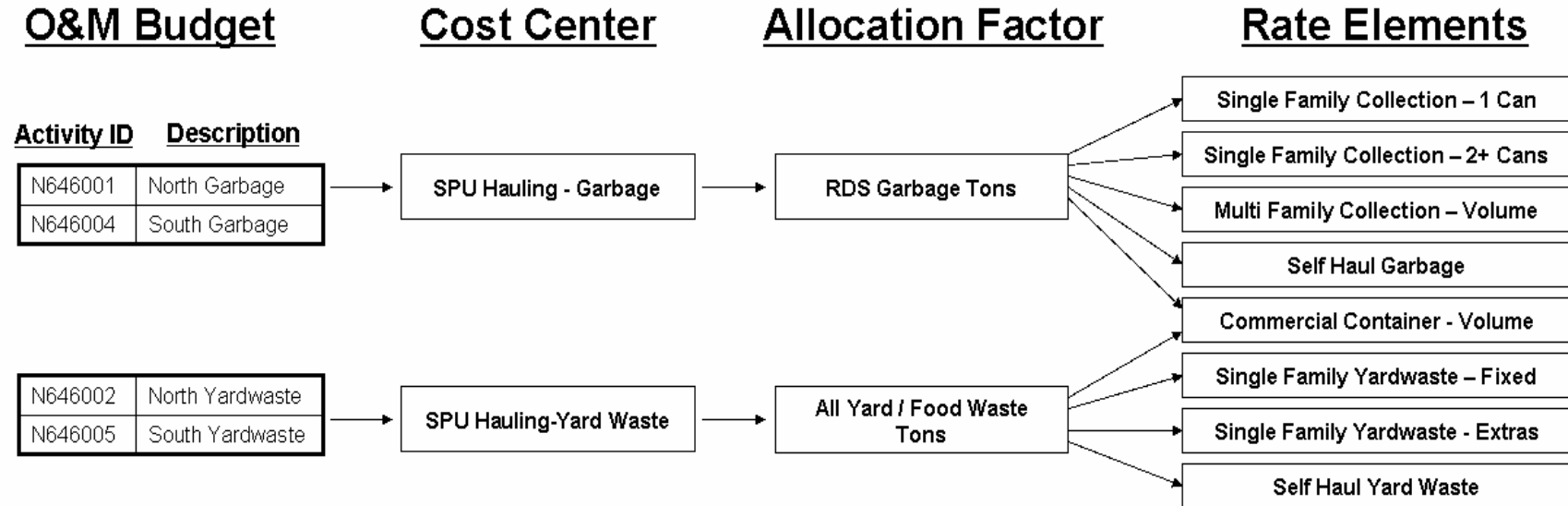
The cost allocation exercise began with a comprehensive review of cost allocation methodology. An SPU working group consisting of representatives from all aspects of the Solid Waste line of business analyzed how costs were grouped and assigned to different customer classes and ultimately, rates. The group reviewed and approved any changes together.

The cost allocation process can be broken into four basic steps:

- 5. Group Activities into Cost Centers**
- 6. Determine Allocation Factors**
- 7. Allocate Costs to Rate Elements**
- 8. Analyze Impacts to Customer Classes and Cost of Service Rates**

Figure XIV-1 provides an illustrative example of these steps for two cost centers. Detailed explanation of each of these steps follows. Changes made to cost centers, allocation factors, and rate elements are highlighted.

**Figure XIV-1
Cost Allocation Steps**



1. Group Activities into Cost Centers. A cost center is a group of budgeted activities which represent SPU's cost of providing a specific service. Currently there are more than 40 cost centers.

Example of a grouping of activities into cost centers: The Transfer Station Operations cost center is a group of 83 budgeted activities that support delivery of service to all transfer station customers. This includes the costs of operating the scalehouse, the tipping floor, and maintenance of station facilities and equipment.

Table XIV-1 describes the cost centers. For a complete list of the individual activities contained in the cost centers, see Table XIV-6 in the Appendix. For a list of 2008 costs in each cost center, see Table XIV-7.

**Table XIV-1
Cost Center Description**

Cost Center	Description
1. Residential Can Garbage Collection	Payments to residential garbage collection contractors
2. Can/Cart Recycling Collection	Payments to recycling collectors
3. Organics Cart Collection	Payments to organics collection contractors
4. Commercial / Multi Family Garbage Collection, Fixed	Fixed payment to contractors for commercial and multi family garbage collection
5. Multi Family Garbage Collection, Variable	Variable payment to contractors for multi family garbage collection
6. Commercial Garbage Collection, Variable	Variable payment to contractors for commercial garbage collection
7. Dumpster Free Alleys Collection	Payment to contractor for dumpster free alleys collection
8. Multi Family Recycling Collection, Fixed	Fixed payment to contractors for multi family recycling collection
9. Multi Family Recycling Collection, Variable	Variable payment to contractors for multi family recycling collection
10. Commercial Organics Collection, Fixed	Fixed payment for commercial organics collection
11. Commercial Organics Collection, Variable	Variable payment for commercial organics collection
12. Litter & Public Place Recycling Collection, Fixed	Fixed payment to contractor for public place collection
13. Litter & Public Place Recycling Collection, Variable	Variable payment to contractor for public place collection
14. Contract Commercial Compost Hauling	Cost of hauling commercial compost from the transfer stations to Cedar Grove
15. Unused Cost Center	Reserved for future use
16. Organics Processing	Payments to organics processor
17. Contracts Management	Costs of managing the city's collection, processing, and disposal contracts
18. Contract Implementation	Costs associated with implementing new programs under existing contracts (such as new recycling initiatives)
19. Collection Inspection	Costs of solid waste inspection program, which monitors both garbage and organics setouts and collections

Cost Center	Description
20. RDS Material Loading	Costs associated with loading materials (including garbage, organics and other recyclables) into containers (for short haul to the rail yard or processors)
21. RDS Operations	Costs associated with city's two recycling and disposal stations (excludes hazardous waste sites), including costs of the stations' grounds, facilities, tipping floors and scale houses as well as branch and division administration costs.
22. SPU Garbage Hauling	Costs associated with short haul of garbage from recycling and disposal stations to railhead
23. Recycling Hauling	Cost to haul self-haul recycling from stations to processors
24. Organics (Yard Waste and Food Waste) Hauling	Cost to short haul organics from the recycling and disposal station to the organics processor
25. Equipment Maintenance	Cost of maintenance on hauling equipment
26. Disposal	Payments to Washington Waste Systems for rail hauling and disposal of residential, self-haul and commercial garbage
27. MRW General	Local hazardous waste management (LHWMP) costs including community programs and LHWMP administrative costs, as well as costs associated with maintaining hazardous waste sheds at north and south transfer stations and costs associated with reuse store
28. MRW	Cost of SPU's green gardens and natural lawns programs
29. Landfill O&M	Site maintenance costs, including equipment costs, for the Midway and Kent landfills
30. Customer Service and Billing	Costs associated with the call center, CCSS billing, auditing and the utility service teams total costs are net of the City Light reimbursement
31. TSBS	Cost to bill the private transfer stations for disposal of non-contract commercial garbage
32. Communications	Internal communications, community relations, public information, media relations, and communication program management
33, 34, 35. G&A General	Costs of the director's office, strategic policy, SEPA, human resources, information technology, finance, and city central costs
36. Planning and Procurement	Solid waste planning costs (e.g., data reporting and analysis, forecasting, inter and intra governmental liaison work, and long term solid waste planning)
37. Waste Prevention and Recycling - General	Waste prevention efforts such as sustainable building and general solid waste reduction efforts
38. Waste Prevention and Recycling - Residential Program	Costs of the residential waste prevention and recycling program costs as well as costs associated with SPU's backyard composting and natural lawn care efforts
39. Waste Prevention and Recycling - Industrial Programs	Costs of the commercial waste prevention and recycling programs
40. Clean City Programs	Cost associated with community cleanup, graffiti control, illegal dumping and litter pickup
41. Landfill Bond Interest Expense	Interest payments on the landfill closure debt
42. City and State Taxes	Payments of city B&O and state taxes

Cost Center	Description
43. 1999B Bond Interest	Interest expense on \$55m bond issue used to finance station repair and improvement projects as well as technology projects
44. Interest Expense (New Issues)	Interest expense for bonds issued in conjunction with facilities master plan and other cip projects including technology projects
45. Interest Income	Interest income (interest earnings on the SWF's cash balances) reduces the amount of revenue that must be generated through rates
46. Low Income Rate Assistance (LIRA)	Cost of low-income rate assistance
47. Operating Grants	Grants help to offset program costs and, as a result, the total amount of revenue needed to be recovered through rates
48. Other Revenues	Cost center includes revenue from miscellaneous charges and fees such as extra garbage charges, bulky item pick-ups, and transfer station recycling revenue
49. Depreciation and Amortization Expense	All depreciable assets (including buildings and equipment) and all amortized items are associated to one of the cost centers described above
50. Financial Requirements	Cash that must be raised to meet the SWF's financial performance targets

The following changes have resulted from our review of cost centers:

- \$1.7M of costs formerly included in the Contracts Single/Multi Family Garbage Collection cost center was moved into the Contracts Single/Multi Family Organics Collection cost center in order to more accurately represent the payments to contractors for providing these services.
- Improved division of costs between Residential Organics, Commercial Organics, and Commercial Garbage Collection cost centers. Division based on actual 2007 spending numbers from Solid Waste Contracts Management division.
- The Contract Recycling Processing cost center is no longer needed and its costs have been rolled into the Contract Single/Multi Family Recycling Collection cost center.
- The Contract Yard Waste Hauling cost center is no longer needed and its costs have been rolled into the Single/Multi Family Organics Cart Collection cost center.
- New cost centers added to more accurately allocate costs of the new contracts and new programs such as Dumpster Free Alleys Collection.

When analyzing the impact of changes to the cost allocation, it is often helpful to examine aggregate impacts to a customer class. A customer class is a broad category of customers who receive similar services. For example, residential customers may have a subscription for a micro can, 32 gallon can, or 2 cans, but no matter what subscription level they choose, they will be part of the Residential Can Customer Class.

Examining the impacts of cost allocation decisions on customer classes is important when considering equity, subsidy issues, and rate gradualism.

The customer classes to which costs are assigned include:

1. Residential Variable Can Customers
2. Residential Dumpster Customers
3. Residential Organics Customers
4. Self-Haul Garbage Customers
5. Self-Haul Organics Customers
6. Long Haul Customers (Customers Who Haul Directly To The Argo Rail Yard)
7. Commercial Garbage and Organics Customers, including
 - Commercial Container Customers, and
 - Commercial Drop Box Customers.
 - Commercial Dumpster Free Alley Customers

Making changes to the way in which activities are grouped into cost centers, adding new cost centers, and consolidating cost centers impacts the allocation of costs among customer classes. Holding total cost equal, Table XIV-2 isolates the impact of the changes discussed above. The “% Change” column represents the increase or decrease in costs allocated to a customer class relative to the structure used for the previous rate study (2007-2008).

**Table XIV-2
Impact of Cost Center Adjustment to Customer Classes**

Customer Class	% Change
Variable Can Class	-6.26%
Dumpster Class	-6.85%
Yard Waste Class	19.91%
Self Haul Garbage	0.00%
Self Haul Yard Waste	1.21%
Commercial Sector	0.74%
Argo Direct	0.74%
Tonnage Taxes	0.00%

2. Determine Allocation Factors: Each cost center is assigned an allocation factor. Allocation factors break apart the total cost in a cost center and allocate the costs among different rate elements within a customer class. A rate element represents a component of a service. For example, an account fee, a fee per pickup, and a fee based on volume collected are all components if the cost of a commercial dumpster, therefore each of these is a separate rate element. The basis for allocating costs among rate elements differs by cost center, but always seeks to logically assign each rate element its fair share of the cost of providing a service. Allocation factors are based on known data such as tonnages and accounts are used whenever possible. There are currently 32 distinct allocation factors used for solid waste rates.

There were six primary bases for allocating cost centers among the customer classes:

1. **Tonnage:** Many of the solid waste costs are directly related to tons collected or disposed, such as contractor payments for non-recyclable solid waste (garbage). When this method is used, costs are allocated based on the tons collected or disposed by each class. Tons may also be used to allocate certain costs even though there is not a direct relationship between the given cost and tons collected or disposed.
2. **Accounts/Premises:** This allocation method is used when the cost of service is related to the number of households or accounts, such as billing expenses, rather than tonnage or another measure of how much service a customer receives.
3. **Management Estimates:** Some allocations are based on management estimates of time spent serving different customer classes. Such estimates help determine the full cost of service for the class. Workload estimates are used to allocate inspection costs and in conjunction with tons to allocate transfer station costs.
4. **Direct Assignment:** Certain solid waste costs benefit only one customer class. Direct assignment to that class of such costs is appropriate.
5. **Proportional Assignment (Revenue Requirement Shares):** This method assigns costs in proportion to the sum of other allocated costs. The rate proposal uses this allocation method to assign costs such as taxes and “financial requirements”.
6. **Ad Hoc:** Often no one method is appropriate for allocating costs so a combination of other allocation factors is formulated to best fit the type of costs.

Example of the application of an ad-hoc allocation factor: The Transfer Station Operations cost center has an allocation factor which allocates costs to rate elements based on their share of tonnage moved through the stations, their proportion of vehicle trips to the stations, as well as the effort required to process each type of customer. The result is that single-family can, multifamily dumpster, commercial dumpster, commercial drop box, self-haul garbage, and self-haul organics rate elements all have a portion of costs allocated to them. However, self-haul customers receive a proportionally higher share of costs due to the high number of vehicle trips involved, and the higher costs associated with processing self-haul trips.

For a complete list of how allocation factors are used to allocate cost centers to rate elements, see Table XIV-7 in the Appendix.

Updates to allocation factors resulting from this year’s review include:

- **Direct Commercial Collection.** Commercial rate elements will be changed to reflect the new rate structure. Costs will be allocated to fixed and variable rate elements of the customer class.
- **Ad Hoc Contract Implementation.** Adjusted allocation to evenly split costs among variable can, multi family dumpsters, and commercial customer classes. Previously 25% variable can, 25% multi family dumpsters, and 50% commercial. Adjustment based on discussions with Contracts Management group.

- **Ad Hoc Inspection.** This allocation factor was updated to reflect likely staffing levels over the rate period. Inspection managers were interviewed to determine percentage of staff time spent on each customer class. Based on management estimates, costs were allocated to commercial, single family, and multifamily garbage customers, as well as residential organics customers. Previously costs were allocated to single and multifamily garbage customers only.
- **SPU Recycling Hauling.** Originally 25% of costs were allocated to Multi Family Dumpster class, 75% to Self Haul Garbage. Discussion with staff confirmed that Multi Family customers do not frequently self haul recycling to the transfer stations, and self haul users of the stations should pay this cost. Now 100% allocated to Self Haul Garbage customers.
- **Billing Specific.** Allocation has been based on proportion of total accounts represented by each customer class, except Multi-Family was receiving 4x its proportional share. This seemed unreasonably high. Based on a more current Customer Service management best estimate multi family is now allocated only 2x its proportional share of accounts due to the higher level of effort required to administer multi family accounts compared to single family.
- **Dumpster Free.** Many allocation factors have been adjusted to allocate a portion of costs to Dumpster Free Alley customers. In these cases the basis for the factor remained the same (generally tonnages) but the projected share of Dumpster Free Customers was broken out from other customer classes.

Changing which allocation factors are used for each cost center, updating the data on which an allocation factor is based, or changing the basis for an allocation factor impacts the allocation of costs among customer classes. Holding all else equal, Table XIII-3 isolates the impact of the changes discussed above. The “% Change” column represents the increase or decrease in costs allocated to a customer class relative to the structure used for the previous rate study (2007-2008). This table does not incorporate the changes made to cost center structure in Step 1.

**Table XIV-3
Impact of Adjustment to Allocation Factors**

Customer Class	% Change
Variable Can Class	1.09%
Dumpster Class	-4.12%
Yard Waste Class	1.82%
Self Haul Garbage	0.54%
Self Haul Yard Waste	-0.87%
Commercial Sector	0.22%
Argo Direct	0.22%
Tonnage Taxes	0.00%

3. Allocate Costs to Rate Elements: The cost allocation process establishes a baseline for “true cost of service” rates. Each rate element, or in many cases group of rate elements, represents the cost of providing a specific solid waste service. There are

currently 24 rate elements. The ratemaking process takes into account the following rate-making principles, which are described in Section III. These principles are often in competition and lead to deviation from “true cost of service” rates:

- Customer Payment of Cost of Service
- Equity
- Conservation
- Rate Stability
- Rate Impact Mitigation

Example of how costs are allocated to rate elements: Commercial dumpster rates are made up of three rate elements: fixed fee, a pick-up fee, and a fee per unit of volume. Fixed account-related costs are allocated to the fixed fee by number of accounts, contract pick-up costs are allocated to the pick-up fee by direct assignment, and volume-related costs such as disposal are allocated by tonnage to the unit volume rate element.

Table XIV-4 provides a summary of cost centers, to which customer groups they are allocated, and on which factor they are based. For a complete list of rate elements see Table XIV-8 in the Appendix. For a summary of allocated costs see Table XIV-9.

**Table XIV-4
Summary of Cost Allocation Methods**

Cost Center	Allocated to: (see legend below)	Based on:
1. Residential Can Garbage Collection	RVC	Tonnage
2. Can/Cart Recycling Collection	RVC, RD, CD, DFA-C	Tonnage
3. Organics Cart Collection	RO	Direct Assignment
4. Commercial / Multi Family Garbage Collection, Fixed	RD, CD, DFA-M, DFA-C	Direct Assignment
5. Multi Family Garbage Collection, Variable	RD	Direct Assignment
6. Commercial Garbage Collection, Variable	CD	Direct Assignment
7. Dumpster Free Alleys Collection	DFA-M, DFA-C, ALL	Direct Assignment / Revenue Requirement
8. Multi Family Recycling Collection, Fixed	RD	Direct Assignment
9. Multi Family Recycling Collection, Variable	RD	Direct Assignment
10. Commercial Organics Collection, Fixed	CD	Direct Assignment
11. Commercial Organics Collection, Variable	CD	Direct Assignment
12. Litter & Public Place Recycling Collection, Fixed	RVC, RD, SHG, CD, DFA-M, DFA-C	Tonnage
13. Litter & Public Place Recycling Collection, Variable	RVC, RD, SHG, CD, DFA-M, DFA-C	Tonnage

Cost Center	Allocated to: (see legend below)	Based on:
14. Contract Commercial Compost Hauling	CO	Direct Assignment
16. Organics Processing	RO, CO, SHO, DFA-C	Tonnage
17. Contracts Management	RVC, RD, RO, CD, DFA-M, DFA-C	Management Estimates
18. Contract Implementation	RVC, RD, CD, DFA-M, DFA-C	Management Estimates
19. Collection Inspection	RVC, RD, RO, CD	Management Estimates
20. RDS Material Loading	RVC, RD, RO, SHG, SHO, CD, DFA-M, DFA-C	Tonnage / Management Estimates
21. RDS Operations	RVC, RD, RO, SHG, SHO, CD, DFA-M, DFA-C	Tonnage / Management Estimates
22. SPU Garbage Hauling	RVC, RD, SHG, CD, DFA-M, DFA-C	Tonnage
23. Recycling Hauling	SHG (Note –SPU does not charge a fee for recyclable materials so other customers must cover these costs.	Direct Assignment
24. Organics (Yard Waste and Food Waste) Hauling	RO, CO, SHO, DFA-C	Tonnage
25. Equipment Maintenance	RVC, RD, SHG, CD, DFA-M, DFA-C	Tonnage
26. Disposal	RVC, RD, SHG, CD, DFA-M, DFA-C	Tonnage
27. MRW General	RVC, RD, SHG, CD	Ad Hoc
28. MRW	ALL	Revenue Requirement Shares
29. Landfill O&M	RVC, RD, SHG, CD, DFA-M, DFA-C	Direct Assignment
Landfill Bond Interest Expense	RVC, RD, SHG, CD	Direct Assignment
30. Customer Service and Billing	RVC, RD, RO	Accounts/Premises
31. TSBS	RVC, RD, RO, SHG, SHO, CD, DFA-M, DFA-C	Direct Assignment
32. Communications	RCV, RD	Accounts/Premises
33, 34, 35. G&A General	ALL	Revenue Requirement Shares
36. Planning and Procurement	RCV, RD, RO, SHG, SHO, CD, DFA-M, DFA-C	Tonnage
37. Waste Prevention and Recycling - General	RCV, RD, RO, SHG, SHO, CD, DFA-M, DFA-C	Tonnage
38. Waste Prevention and Recycling - Residential Program	RVC, RD, RO, DFA=M	Tonnage
39. Waste Prevention and Recycling - Industrial Programs	CD	Direct Assignment
40. Clean City Programs	RVC, RD, SHG, CD, DFA-M, DFA-C	Direct Assignment
City and State Taxes	ALL	Revenue Requirement Shares
1999B Bond Interest	RVC, RD, SHG, CD, DFA-M, DFA-C	Tonnage
Interest Expense (New Issues)	ALL	Revenue Requirement Shares
Interest Income	ALL	Revenue Requirement Shares
Low Income Rate Assistance (LIRA)	ALL	Revenue Requirement Shares

Cost Center	Allocated to: (see legend below)	Based on:
Operating Grants	ALL	Revenue Requirement Shares
Other Revenues	RVC, RD, SHG, CD, DFA-M, DFA-C	Direct Assignment -- to class/classes that paid charge/fee so as to offset costs and reduce amount of revenue need to be recovered through rates
Depreciation and Amortization Expense	ALL	The depreciation and amortization costs associated with depreciable assets and deferred items are included in the costs center above
Financial Requirements	ALL	Revenue Requirement Shares

Customer Group Abbreviations	
RVC	Residential Variable Can
RD	Residential Dumpster
RO	Residential Organics
DFA-M	Dumpster Free Alleys Multi-Family
DFA-C	Dumpster Free Alleys Commercial
CD	Commercial Dumpster
CO	Commercial Organics
SHG	Self-Haul Garbage
SHO	Self-Haul Organics
ALL	All Customer Groups

To accommodate rate design changes proposed in Sections V-XII changes to several rate elements were made:

- **Multifamily and Commercial *Number of Containers* elements** have been eliminated.
- **Multifamily and Commercial *Frequency* elements** have been converted to Pickups, which will capture both number of containers collected and frequency of collection rather than having two separate components.
- **Commercial *Container Rental* element** has been eliminated.
- **Elements for Commercial and Multifamily *Dumpster Free Alleys Collections*** have been added.

4. Analyze Impacts to Customer Classes and Cost of Service Rates. Several approaches are useful when analyzing the effects of changes to the cost allocation and rate model. Impacts of changes to the *structure* of the model can be isolated and assessed. These are the changes made in Steps 1 and 2. Further, the impact of changes to model *inputs* must also be examined within the new model's structure. These inputs include O&M budget and actuals, CIP budget and actuals, and subscription level actuals and forecasts.

Holding all else equal, the Table XIV-5 illustrates the combined impact of changes to cost centers discussed in Step 1 and the changes to allocation factors discussed in Step

2. The “% Change” column represents the increase or decrease in costs allocated to a customer class relative to the structure used for the previous rate study (2007-2008).

**Table XIV-5
Combined Impacts of Changes to CC and AF**

Customer Class	% Change
Variable Can Class	-5.03%
Dumpster Class	-11.56%
Yard Waste Class	21.08%
Self Haul Garbage	0.54%
Self Haul Yard Waste	0.37%
Commercial Sector	0.95%
Argo Direct	0.96%
Tonnage Taxes	0.00%
