



Seattle Public Utilities 2012-2014 Water Rate Study

Dec 2011

(Includes City Council Revisions)

**City Council changes are included in tables
Changes to text are noted in blue**

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1. EXECUTIVE SUMMARY

The water system is financed through an enterprise fund of the City of Seattle that is wholly supported by rate and fee revenues related to water service. In any given year, these rates and fees must be sufficient to pay the total costs of the water system and meet adopted financial targets. This total cost is known as the **water system revenue requirement**. The majority of the water system's revenues are from direct service ("rates") revenues from wholesale and retail customers. Wholesale contracts determine the amount that the City charges for wholesale service in any particular year. Thus, retail water rates and other revenues are the "balancing entries" that generate the difference between each year's total water system revenue requirement and wholesale revenues. For this reason, the retail rate study is performed subsequent to wholesale rate studies.

This study focuses on adopted retail water rates. **Chapter 1** provides an overview of adopted changes to the revenue requirement and their drivers, bill impacts, and projected financial performance assuming adopted rates. **Chapter 2** gives an overview of adopted financial policy targets used in the development of the revenue requirement. **Chapter 3** provides additional detail on the various components of the adopted revenue requirement, including a discussion of demand and the low-income rate assistance program. These last two elements generally do not impact the revenue requirement but do have an impact on rates. **Chapter 4** discusses how the adopted revenue requirement is allocated between different customer classes. **Chapter 5** presents adopted rates by customer class, as well as an overview of the rate design, or rate structure, for each class. The appendices present additional supporting data, including the 2012-2014 wholesale rate study (**Appendix B**).

The adopted retail rates support increases to the **retail rate revenue requirement** of **\$5.9** million in 2012, **\$12.2** million in 2013 and **\$13.9** million in 2014, for a combined total of **\$32.0** million over the three-year period. **Table 1-1** presents the change in the revenue requirement and the monthly impact of adopted rate increases on typical residential customers and a sampling of general service customers. The adopted rates will affect general service customers to varying degrees depending on the volume of water used.

Table 1-1
Adopted Water System Revenue Requirement and Bill Impacts

	2011*	2012 Adopted		2013 Adopted		2014 Adopted	
			Change from 2011		Change from 2012		Change from 2013
Retail Rate Revenue Requirement	\$153,661,563	\$159,588,579	\$5,927,016	\$171,795,773	\$12,207,194	\$185,740,521	\$13,944,748
Typical Monthly Water Bills							
Residential	\$31.70	\$33.95	\$2.25	\$36.38	\$2.43	\$38.93	\$2.55
Convenience Store	\$92.81	\$102.19	\$9.38	\$112.45	\$10.26	\$123.45	\$11.00
Apartment Building	\$253	\$280	\$27.65	\$310.74	\$30.27	\$343.30	\$32.56
Large Restaurant	\$1,099	\$1,221	\$122	\$1,358	\$137	\$1,510	\$152
Downtown Hotel	\$2,823	\$3,137	\$314	\$3,489	\$351	\$3,879	\$390
Large Industrial	\$16,160	\$17,987	\$1,827	\$19,988	\$2,001	\$22,139	\$2,151

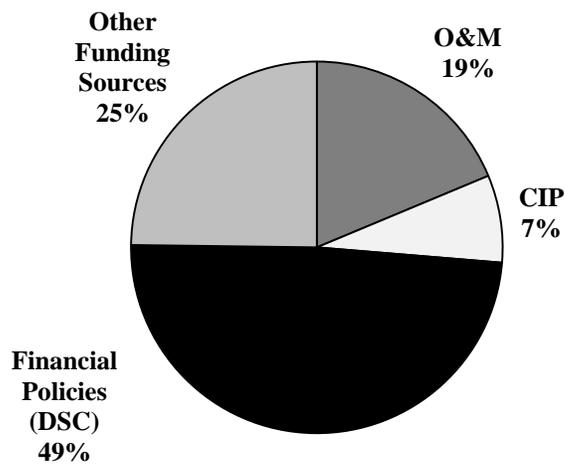
* 2011 amounts are based on the 2009-2011 rate study

Recent economic trends impact the adopted 2012-2014 rates as much or more than increases in operations and maintenance (O&M) and capital funding, which have actually been reduced in recent years.

- Prolonged economic downturn. 2009-2011 water rates were based on cost, revenue and demand assumptions from 2008. These assumptions did not account for the impacts of the economic downturn that ensued during the rate recovery period (2009-2011). The slowdown in the local economy significantly impacted both water demand (lower retail water revenues) and development (lower revenues from new tap fees which are paid by developers to connect to the water system). The need to “reset” rates to account for lower demand and tap revenues is a primary driver of the adopted water rate increase, particularly at the beginning of the rate period.
- Past capital financing decisions. A significant increase in revenues is required to meet the Water Fund’s debt service coverage (DSC) financial policy target by the end of 2014. This is the result two primary factors. This first is **debt service** associated with major capital projects that were built over the past 20 years to meet regulatory requirements and ensure an adequate supply of safe, clean water for generations to come. This included water treatment facilities on the Tolt and Cedar Rivers, coverings for five previously open reservoirs due to federal regulations, and the federally-mandated Habitat Conservation Program for river and shore ecosystems. The second is the late 2008 decision to replace Water Fund (WF) variable rate debt with fixed rate debt in response to financial market volatility. This change was an effective response to managing financial volatility, but also increased the amount of senior lien debt and thereby lowered actual debt service coverage below the policy target of 1.70.

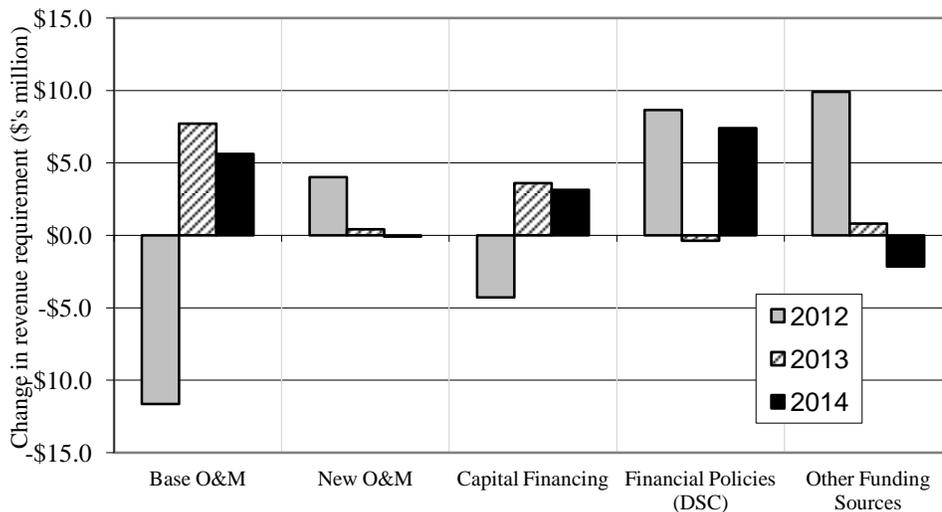
Increasing revenues to meet DSC requirements is the largest single driver of the \$32.0 million cumulative increase in the retail rates revenue requirement between 2011 and 2014. The second largest driver is a reduction in other (non-rate generated) funding sources, the largest component of this being the decline in water tap fee revenues noted above. These two factors account for over 60 percent of the total increase. Increases to O&M and CIP funding account for the balance of the increase. **Figure 1-1** illustrates the components driving the increase in the revenue requirement.

Figure 1-1
Components of 2012-2014 Increase in Retail Rates Revenue Requirement.



The composition of increases in the revenue requirements drivers vary from year to year. **Figure 1-2** breaks down, by year, the change in each funding source.

Figure 1-2
Water Fund Revenue Requirement Drivers by Year



The following section provides further description of the drivers presented in Figure 1-2.

O&M

SPU has significantly reduced O&M spending over the past three years in response to declining revenues. The 2012 base spending is **\$11.7** million lower than 2011 spending assumed in the prior rate study, more than offsetting **\$4.0** million in 2012 O&M adds. In 2012, O&M is added for a handful of important programs including watermain condition assessment and funding for deferred facilities maintenance, plus inflation impacts on salaries and wages, other labor benefits such as healthcare and retirement costs, and fuel costs. Inflation, technical adjustments to balance fleets and labor, and taxes account for the 2013 and 2014 increases to O&M.

Capital Financing

Figure 1-1 looks at the combined impact of *cash* and *debt financing* of the capital program on the revenue requirement. The primary driver of the increased capital financing requirements during this rate period is an **increase in 2014 debt service associated with a projected \$79 million debt issue in second quarter 2013.**

Cash financing of the CIP (included under Capital Financing) is based on meeting the adopted financial policy target of an average of 20 percent financing of the CIP over the rate period. Therefore, any fluctuations in cash financing are attributable to different levels of CIP spending, such as in 2012, where a reduction in capital spending reduces the cash contribution. In order to generate sufficient revenues to meet other financial policy requirements (i.e., DSC), cash financing of the CIP under this rate proposal actually exceeds the 20 percent targeted level. The revenue requirement impacts of this additional cash financing are presented under Financial Policies below.

Financial Policies

Over the three-year rate period, revenues are increased by **\$15.7** million to allow the Water Fund to meet its 1.7 DSC target. By generating enough revenues to meet the debt service coverage target, the cash financing of the CIP target will be exceeded, averaging **40** percent over the rate period¹. The amount of the revenue requirement increase attributable to Financial Policies is therefore the difference between CIP cash financing at target levels (20 percent) and adopted levels (**40** percent) (*Note: now 40 percent due to lower CIP in final rates*).

¹ This extra cash financing of the CIP also aids in reducing the size of the 2012 and 2014 revenue bond issues, allowing the DSC target to be achieved with less revenue than would have otherwise been required.

Other Funding Sources

Other funding sources are used to offset the amount of revenue that must be recovered through water rates. These funding sources include wholesale revenues, tap fees and other non-rates revenues, Revenue Stabilization Subfund (Subfund) withdrawals, and use of cash balances. In 2012, revenues from other sources are \$9 million lower than those projected for 2011 in the prior rate study, thereby increasing the amount of revenue that must be recovered through rates by this amount.

The primary driver of this change is a \$7 million reduction in assumed tap fee revenues due to the economic downturn. The cessation of withdrawals from the Subfund which was reduced to its minimum recommended level in 2011, and the policy requirement to build up, rather than draw down cash reserves also reduces the amount of funding from these sources during the rate period.

Effects of Changes in Demand

While generally not a *revenue requirement driver*, declining demand for water, primarily associated with the economic downturn, is a significant *rate driver*, particularly in 2012. Projected demand for 2012 is 7.4 percent lower than the demand levels used to set the 2011 rate. Smaller decreases in demand are projected for 2013 and 2014 relative to the new, lower 2012 base. **Table 1-2** shows the impact of demand on the overall *average rate* increase. This impact is the combination of declining water usage (demand unit for consumption based revenues) and a small increase in meter count (demand unit for base service charges).

Table 1-2
Impacts of Demand on Rate Increase

	2012	2013	2014
Revenue Requirement Increase	3.9%	7.7%	8.1%
Demand Impact	5.4%	0.9%	0.3%
Rate Assistance Impact	-0.6%	0.1%	0.1%
Average Rate Increase	8.7%	8.7%	8.5%

The 2012-2014 rate study meets all water system financial policy targets by the end of the rate period as shown in **Table 1-3**. Net income and cash financing of the CIP are projected to significantly exceed financial policy targets as a result of the increase to revenues required to meet the binding constraint of DSC. See Chapter 2 for further discussion of financial policy targets and their impact on rate setting.

Table 1-3
Water Fund Projected Financial Performance

(\$ in 000's)	Target	Projected 2011	Adopted 2012	Adopted 2013	Adopted 2014	Projected 2015	Projected 2016	Projected 2017
Net Income	positive	(\$2,579)	\$5,997	\$7,628	\$15,703	\$19,591	\$20,828	\$25,438
Debt Service Coverage	1.7x	1.45	1.58	1.62	1.70	1.70	1.70	1.70
Cash Financing of the Capital Program	20%*	16.1%	38.3%	35.2%	48.3%	45.3%	43.9%	37.6%
from Contributions in Aid of Construction		2.2%	3.9%	3.5%	3.5%	3.2%	3.2%	2.9%
from Rate Revenues		13.9%	34.4%	31.8%	44.8%	42.1%	40.8%	34.7%
Year-End Operating Cash	varies**	\$7,125	\$7,435	\$7,899	\$8,118	\$8,320	\$8,528	\$8,742
Revenue Stabilization Fund Deposit (Withdrawal)		(\$1,434)	\$0	\$0	\$0	\$0	\$0	\$0

* Current revenues should be used to finance no less than 15% of the CIP in any one year, and average not less than 20% over each rate proposal period

** Year-End Operating Cash Target is 1/12th of the current year's operating expenses

2. FINANCIAL POLICY OVERVIEW

Financial policies provide a guiding framework for the finances of the water utility. They represent a balance between the competing goals of fiscal conservatism through higher rates today and minimizing these same rates by spreading costs over time to future ratepayers. The direct effect of the policies is to determine the level at which water rates shall be set, given estimated costs and demand, and to define the general manner in which the capital improvement program is to be financed.

The indirect effects of the policies are to:

- Shape the financial profile the utility presents to the financial community;
- Establish the utility's exposure to financial risk; and
- Allocate the utility's costs between current and future ratepayers.

In 2005, City Council passed Resolution 30742, which adopted new water system financial policies that reflect changes and additions to the financial policies initially adopted in 1992. These updated financial policies are more appropriate for the current financial environment and capital financing requirements. This rate proposal is based on the 2005 policies which are as follows:

1. **Maintenance of Capital Assets.** For the benefit of both current and future ratepayers, the municipal water system will seek to maintain its assets in sound working condition. Future revenue requirement analyses will include provision for maintenance and rehabilitation of facilities at a level intended to minimize total cost while continuing to provide reliable, high quality service.
2. **Debt Service Coverage.** Debt service coverage on first-lien debt should be at least 1.7 times debt service cost in each year on a planning basis.
3. **Net Income.** Net income should generally be positive.
4. **Cash Funding of the Capital Improvement Program.** Current revenues should be used to finance no less than 15 percent of the municipal water system's adopted CIP in any year, and not less than 20 percent of the CIP over the period of each rate proposal. Cash in excess of working capital requirements may be used to help fund the CIP.
5. **Eligibility for debt financing.** Unless otherwise authorized by Council, the following criteria must be met before project expenditures are eligible for debt financing:
 - i) Project is included in the CIP.
 - ii) Total project cost exceeds \$50,000.

- iii) Project has expected useful life of more than two years (more than five years for information technology projects).
- iv) Resulting asset will be owned or controlled by Seattle Public Utilities (SPU), is part of the regional utility infrastructure, or represents a long-term investment for water conservation.
- v) Consistent with generally accepted accounting practices, project costs include those indirect costs, such as administrative overhead and program management, than can be reasonably attributed to the individual CIP project.

6. **Revenue Stabilization Subfund (Subfund).** Ordinance 121761 requires that a target balance of \$9 million be maintained in the Subfund, except when withdrawals below this level are needed to offset shortfalls in metered water sales revenues, or to meet financial policy requirements. Withdrawals of funds in excess of the minimum balance will be used to meet operating expenses, to pay CIP expenditures, or to meet financial policy requirements. Withdrawals from the Subfund must be authorized by ordinance, except that Bonneville Power Administration (BPA) Account funds may be withdrawn based on BPA spending.

SPU may also make discretionary deposits to the Subfund, provided that these discretionary deposits are in excess of the amounts required to meet the financial policy requirements. Should the Subfund balance fall below the target balance, SPU will submit a water rate proposal that rebuilds the balance in the Subfund within one year.

As part of the 2012-2014 rate study process, SPU completed an analysis to determine the recommended minimum balance for the Subfund. The analysis suggests that to fully respond to a drought situation severe enough to trigger mandatory water use restrictions, it is appropriate to gradually increase the balance in the Subfund beyond the \$9 million policy target articulated in 2005 by Ordinance 121761. In this rate period, SPU recommends increasing the balance in the Subfund by the interest earned. SPU will work with the Executive and the Council in the next rate study to evaluate the target balance in the Subfund.

- 7. **Cash Target.** The target for the year-end operating fund cash balance is one-twelfth of the current year's operating expenditures.
- 8. **Variable Rate Debt.** Variable rate debt should not exceed 15 percent of total outstanding debt. Annual principal payments shall be made on variable rate debt in a manner consistent with fixed rate debt.

In any future year, the optimum revenue requirement is the lowest amount of money necessary to simultaneously satisfy all financial policies in that year. At this level of revenues, some financial policies may be exceeded, but none will be missed – the financial target that is exactly met is known as the binding constraint. Debt service coverage is the binding constraint for the 2012-

2014 rate period. Thus, adopted rates will generate enough revenue to meet the debt service coverage target by 2014.² As a result, rates will generate more than enough revenue to meet or exceed the net income, cash funding of the capital improvement program, and cash targets.

²In order to avoid rate spikes, SPU does not propose to meet the debt service coverage target in the first or second years of the rate period.

3. RETAIL WATER REVENUE REQUIREMENT

The **water system revenue requirement** is the minimum amount of operating revenue required to fund the water system operating budget and meet financial policy targets for net income, cash balances, cash financing of the CIP, Revenue Stabilization Subfund balances, and debt service coverage. The component requiring the greatest amount of revenue generation (budgetary expenses or one of the financial policy requirements) is termed the “binding constraint.” The **retail water revenue requirement** is equal to the water system revenue requirement, less funding from sources other than retail rates including wholesale revenues, draw downs of cash balances, and other operating/non-operating revenues.

Rate increases are required to fund increases in the revenue requirement from one rate setting period to the next. Where demand is constant, the average rate increase will equal the increase in the revenue requirement. Increasing demand (i.e., customers buying more units of water) will reduce the required rate increase and declining demand will increase the rate increase relative to the change in the revenue requirement. In addition, changes in participation in the low-income rate assistance program 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.

Table 3-1 summarizes the components of change in the retail water revenue requirement during the adopted rate period. Current (2011) rates were set in 2008 based on planned expenditures, demand, and other funding sources during the rate setting period (2009-2011). Therefore, the change in the 2012 revenue requirement in Table 3-1 and throughout this section is relative to the 2011 plan assumed in the 2009-2011 rate study. Likewise, the 2013 and 2014 changes are relative to planned spending/income in the prior year.

Table 3-1
Components of the Change in the Retail Water Revenue Requirement

(\$1,000's)	2011	2012	\$ Change in Rev Req	% Change in Total Rev Req	2013	\$ Change in Rev Req	% Change in Total Rev Req	2014	\$ Change in Rev Req	% Change in Total Rev Req
Expense										
Operations and Maintenance Expense (O&M)										
Base O&M	95,949	85,198	(10,751)	-7.0%	90,368	5,170	3.2%	93,085	2,717	1.6%
Budget Adds		4,021	4,021	2.6%	4,426	405	0.3%	4,326	(100)	-0.1%
Taxes	34,490	33,591	(900)	-0.6%	36,133	2,542	1.6%	39,029	2,897	1.7%
Total	130,439	122,810	(7,629)	-5.0%	130,926	8,116	5.1%	136,440	5,514	3.2%
Capital Financing										
Cash financing (target)	13,793	9,436	(4,356)	-2.8%	10,872	1,436	0.9%	10,968	96	0.1%
Debt Service	80,629	80,703	74	0.0%	82,862	2,159	1.4%	85,894	3,032	1.8%
Total	94,422	90,139	(4,282)	-2.8%	93,734	3,595	2.3%	96,863	3,128	1.8%
Other Financial Policy Requirements										
	-	8,644	8,644	5.6%	8,274	(370)	-0.2%	15,683	7,409	4.3%
Total Revenue Requirement	224,861	221,593	(3,267)	-2.1%	232,935	11,341	7.1%	248,985	16,051	9.3%
Other Funding Sources										
Wholesale Revenues	(49,723)	(49,773)	(50)	0.0%	(49,467)	306	0.2%	(49,850)	(382)	-0.2%
Non-rate revenues	(19,043)	(12,702)	6,341	4.1%	(12,136)	566	0.4%	(13,613)	(1,477)	-0.9%
RSF withdrawal	(1,996)	-	1,996	1.3%	-	-	0.0%	-	-	0.0%
Change in Cash Balance	(437)	471	908	0.6%	465	(6)	0.0%	218	(246)	-0.1%
Total Other Funding Sources	(71,199)	(62,005)	9,195	6.0%	(61,139)	866	0.5%	(63,245)	(2,106)	-1.2%
Net Retail Rates Revenue Requirement	153,662	159,589	5,927	3.9%	171,796	12,207	7.6%	185,741	13,945	8.1%
Impact of Demand/Connections										
Change in Low Income Rate Assistance Program			(912)	-0.6%		200	0.1%		222	0.1%
Effective Increase in Retail Rates				8.7%					8.7%	8.5%

The **Expense** section of Table 3-1 presents the expenditure components that make up the water system revenue requirement. The **Other Funding Sources** section presents other sources of funding which reduce the amount of expense that must be recovered through retail rates. The final section of the table presents two items, “*Demand*” and “*Low-Income Rate Assistance Program*,” that do not affect the revenue requirement but do affect rates. For example, the total revenue requirement decreases by **2.1** percent from 2011 to 2012. However, decreases in other funding sources such as non-rate revenues and the Subfund increase the retail revenue requirement by **6.0** percent, resulting in a net increase of **3.9** percent in 2012 to the retail rates revenue requirement. The actual average rate increase of **8.7** percent is higher than the revenue requirement increase due to a projected decrease in demand which is slightly offset by a decrease in rate assistance participation.

Below is a more detailed description of the components of change in the revenue requirement.

3.1. Operations and Maintenance Expense (O&M)

The water system O&M revenue requirement includes expenses attributable to water operations, as well as a portion of administrative expense that water shares with the other SPU funds (i.e., finance, customer service, etc.). For rate study purposes, O&M includes taxes but does not include debt service, which is discussed under capital financing. O&M is broken into three categories: Base O&M, Taxes, and New O&M.

Under this proposal, O&M decreases from the 2011 amount as projected in the 2009-2011 rate study by **\$7.6** million in 2012. This includes an overall base O&M decrease of **\$10.9** million, and a reduction in taxes of **\$0.9** million, which are offset partially by budget additions (new O&M) of **\$4.0** million. This reduction decreases the revenue requirement by **5.0** percent in 2012.

For 2013 and 2014, the total O&M increase is **\$8.1** million and **\$5.5** million, respectively, adding **5.1** percent and **3.2** percent to the revenue requirement in those respective years. **Table 3-2** presents increases in O&M spending by source.

Table 3-2
Change in Operating and Maintenance Expenditures

(\$1,000's)	2011 *	2012	\$ Change	2013	\$ Change	2014	\$ Change
Base O&M							
Existing base (increases due to inflation, increased energy costs, salary adjustments, City central cost increases, and other fixed cost increases)	95,949	85,198	(10,751)	90,368	5,170	93,085	2,717
Taxes	34,490	33,591	(900)	36,133	2,542	39,029	2,897
Total Base O&M	130,439	118,789	(11,651)	126,500	7,712	132,114	5,614
New O&M							
BIP SPU-070 - WF Gen. Expense, Taxes, Debt Service & G&A Credit**		377	377	377	-	377	-
BIP SPU-073 - WF Technical		3,373	3,373	3,373	-	3,373	-
BIP SPU-100 Shared - Fleet Reductions		(7)	(7)	(7)	-	(7)	-
BIP SPU-101 WF - Deferred Maintenance		179	179	363	185	488	125
BIP SPU-102 WF - Watermain Condition Assessment		50	50	150	100	150	-
BIP SPU-104 General Fund		(55)	(55)	(55)	-	(55)	-
BIP SPU-301 WF - Hatchery Decommissioning		105	105	225	120	-	(225)
Total New O&M	-	4,021	4,021	4,426	405	4,326	(100)
Total O&M	130,439	122,810	(7,629)	130,926	8,116	136,440	5,514

* 2011 amounts are relative to 2011 assumptions used in 2009-2011 Rate Study

3.1.1.Base O&M Expense

The base O&M for 2012 equals the spending required to support operations and maintenance functions budgeted under the 2012 endorsed budget. Under this proposal, base 2012 O&M decreases from the 2011 amount projected in the 2009-2011 rate study by **\$10.8** million. The decrease is due primarily to reductions SPU made in 2010 and 2011 to control costs in the face of sharply slowing revenues. Water sales estimates in the 2009-2011 rate study were challenged almost immediately by the severe nationwide economic recession and, in 2010, poor weather. To respond to this changing economic climate, and in order to keep rate increases as low as possible and still meet regulatory requirements and financial policies, SPU abrogated or unfunded 85 FTE across the department in 2010 and 2011, reduced programmatic spending and deferred capital investments, and identified operational efficiencies leading to savings in overtime, fleets and other central costs.

Taxes generally increase or decrease relative to revenues. In 2012, taxes decrease **\$0.9** million, primarily due to a lower projected tax revenue base, which is primarily made up of rate revenues and tap fees.

The proposal assumes increases in the base O&M of **\$5.2** million in 2013 and \$2.7 million in 2014, in line with City Budget Office inflation, healthcare, retirement and other city central cost assumptions. Taxes are **\$2.5** million higher in 2013 and **\$2.9** million higher in 2014, commensurate with projected revenue increases.

3.1.2. New Operations and Maintenance Expense.

The 2012 adopted retail water rates support **\$4.0** million in spending on expanded and/or new programs. Details on these Budget Issue Papers (BIPs) can be found in the budget proposal. The impact of the BIPs is also reflected in 2013 and 2014.

In summary, they are:

- **WF Gen. Expense, Taxes, Debt Service & G&A Credit (BIP SPU-070)**
- WF Technical (BIP SPU-073)
- Shared - Fleet Reductions (BIP SPU-100)
- WF - Deferred Maintenance (BIP SPU-101)
- WF - Watermain Condition Assessment (BIP SPU-102)
- **General Fund (BIP SPU-104)**
- ~~Shared - Fuel Cost Increase (BIP SPU-106) - Deleted by Council~~
- ~~Shared - CCSS Purge & Archive (BIP SPU-300) - Deleted by Council~~
- WF - Hatchery Decommissioning (BIP SPU-301)
- ~~WF - Morse Lake Temporary Pump Plant (BIP SPU-302) - Deleted by Council~~
- ~~Shared - Customer Care Billing System (BIP SPU-402) - Deleted by Council~~

3.2. Capital Financing Expense

Financing of the capital program will decrease the revenue requirement by **2.8** percent in 2012, increase it by **2.3** percent in 2013, and increase it by **1.8** percent in 2014 as presented in Table 3-1. Major water capital programs to be funded during this period include:

- Morse Lake Pump Plant
- Continued reservoir covering
- Distribution System Improvements
- Service renewals and retirements
- Utility Customer Service Billing System
- Regional Conservation Programs

SPU funds water system capital projects through a combination of cash (from direct service and non-rates revenue) and debt financing (revenue bonds serviced by rates revenue). As discussed in Section 3.2.2, SPU will be issuing bonds in 2012 and 2014. This rate study forecasts CIP cash financing will exceed the financial target of 20 percent of the accomplished CIP³ over the three-year rate period. The remaining CIP will be funded with revenue bond proceeds. **Table 3-3** presents CIP spending and financing assumptions during the rate period.

Table 3-3
Capital Spending and Financing Assumptions

(\$1,000's)	2012	2013	2014	3 year average
CIP Spending Assumptions				
Budgeted CIP	55,506	63,954	64,519	
Accomplished CIP (85%)	47,180	54,361	54,841	
CIP Financing Breakdown				
Cash Financed	18,080	19,146	26,651	
Debt Financing				
<i>Low Interest Loan</i>	0	0	0	
<i>Bond Financing</i>	29,100	35,215	28,190	
Cash Financed Percentage	38.3%	35.2%	48.6%	40.8%
Bond Financed Percentage	61.7%	64.8%	51.4%	59.2%

3.2.1. Cash Financing (target only)

Water system financial policies require that a minimum average of 20 percent of the CIP be financed with current cash revenues (as opposed to debt proceeds) over the rate period. The sources of cash that assist in meeting this 20 percent target are operating revenues and contributions in aid of construction⁴.

Although CIP cash financing is projected to exceed the financial policy target, this section discusses only the cash necessary to just meet the 20 percent cash financing target. Since debt

³ For the purposes of rate-setting, SPU has assumed that 85 percent of the annual CIP budget will actually be spent in 2012-2014. A 90 percent accomplishment rate was assumed for 2009-2011 rates.

⁴ Customers often pay for water facilities when they connect to the water system or cause the relocation of water facilities. For example, a developer pays for installation of a water meter and service line when building a new house.

service coverage is the binding constraint (see Chapter 2), rates are set to generate enough revenue to meet the debt service coverage target, which is more than the revenue needed to meet the cash financing target. That excess amount of revenue over and above the cash financing target is discussed in section 3.2.3.

As presented in **Table 3-4**, targeted cash financing of the CIP decreases **\$4.3** million in 2012, lowering the revenue requirement by **2.8** percent. Higher CIP spending in 2013 results in higher cash financing and a **\$1.4** million increase in the revenue requirement. In 2014, an increase in CIP spending again increases the revenue requirement by **\$0.1** million.

Table 3-4
Change in Cash Financing

(\$1,000's)	2011 *	2012	\$ Change	2013	\$ Change	2014	\$ Change
Cash Financed	13,793	9,436	(4,356)	10,872	1,436	10,968	96

* 2011 assumptions used in 2009-2011 Rate Study

3.2.2. Debt Service

Table 3-5 presents projected Water Fund debt service, by source, during the rate period.

Table 3-5
Change in Water Fund Debt Service

(\$1,000's)	2011 *	2012	\$ Change	2013	\$ Change	2014	\$ Change
Debt Service Details							
Debt service for existing bond issues	79,526	79,529	3	79,504	(26)	79,493	(11)
2013 bond debt service**			-	1,983	1,983	5,159	3,177
Low interest loan debt service	1,103	1,174	71	1,376	202	1,242	(134)
Total debt service	80,629	80,703	74	82,862	2,159	85,894	3,032

* 2011 assumptions used in 2009-2011 Rate Study

** 2013 principal bond payments begin in 2014

SPU expects to issue approximately **\$79** million in new WF revenue bonds in **second quarter 2013**. This shows that even with the lower-than-planned cash available for CIP over 2009-2011, SPU has been able to hold off from issuing debt earlier-than-planned by making significant cuts to the CIP. Accordingly, the level of debt issued remained consistent with the previous rate study projections.

The **2013** bond proceeds are expected to fund projects through July **2015**, as well as provide \$5 million to fund a bond reserve account. Assuming this issue, WF debt service is expected to increase by **\$5.2** million beginning in **2014**.

In **mid-2015**, another bond issue is expected for **\$76** million to fund projects through June **2017**. This issue is anticipated to increase debt service by **\$5.0** million in **2016**.

3.2.3 Other Financial Policy Requirements (DSC)

As discussed in Chapter 2, the binding constraint in the 2012-2014 rate period is debt service coverage. For some time, long-term water system plan projections have shown that debt service coverage would eventually become the binding constraint. However, SPU refinanced \$93 million of variable rate debt into fixed rate debt in 2008 amidst the financial crisis. Variable rate debt is considered second lien debt and therefore is not factored into the debt service coverage ratio, while fixed rate debt is senior lien and does count in calculations of debt service coverage. As a result, the Water Fund's debt service coverage dropped considerably when the variable rate debt was converted to fixed rate. As such, debt service coverage became the binding constraint earlier than projected.

In order to avoid a very large rate increase in one year, SPU is planning to increase its debt service coverage gradually, eventually meeting the target in 2014. By generating enough revenues to meet the debt service coverage target, the cash financing of the CIP target will be exceeded. Meeting the debt service coverage target is important and benefits rate payers. Financial targets are used by bond holders to assess SPU's creditworthiness, and favorable ratings help SPU sell revenue bonds to fund infrastructure investments at the lowest costs possible. This benefits both the utilities and the rate payers they serve.

Over the three-year rate period, total cash financing of the CIP is projected to average 30 percent, with 30 percent cash financing in 2012, and 25 and 35 percent in 2013 and 2014, respectively. **Table 3-4** shows the portion of CIP cash financing that meets the 20 percent target. **Table 3-6** reflects the additional amount of cash financing in excess of 20 percent of CIP that enables the Water Fund to meet its planned debt service coverage for each year, resulting in attaining the 1.70x target in 2014.

Since debt service coverage is not planned to increase between 2012 and 2013 and there is an increase in the CIP (and therefore the minimum 20 percent), there is a drop in the additional revenue needed for debt service coverage. In contrast, in 2014, debt service coverage is projected to rise from **1.58** to 1.70, which increases the cash needed.

The high level of cash financing of the CIP will ultimately minimize the size of future debt issues and rate increases driven by debt service coverage.

Table 3-6
Change in Water Fund Debt Service

(\$1,000's)	2011 *	2012	\$ Change	2013	\$ Change	2014	\$ Change
Financial Polices (DSC)	-	8,644	8,644	8,274	(370)	15,683	7,409

* 2011 assumptions used in 2009-2011 Rate Study

3.3. Non-Rates Revenues (Other Funding Sources)

A significant portion of the total water system revenue requirement is funded through wholesale revenues, capital contributions, asset sales, and other operating and non-operating revenues. These other funding sources reduce the amount to be recovered through retail rates and therefore are reflected as reductions to the revenue requirement in each year. Non-rates revenues are projected to decrease from 2011 projections by **\$6.3** million in 2012.

3.3.1 Wholesale Revenues

Revenues from wholesale customers are expected to be at similar levels as the \$49.7 million originally assumed in 2011, as presented in **Table 3-7**. Former 1982 contract holders are now covered under the 2001 contracts. The resulting change in revenues is shown in Table 3-7.

Table 3-7
Change in Wholesale Revenues

(\$1,000's)	2011 *	2012	\$ Change in Rev Req	2013	\$ Change in Rev Req	2014	\$ Change in Rev Req
1982 Contract Revenue	(4,516)	-	(4,516)	-	-	-	-
2001 Contract Regional Revenue	(20,683)	(25,079)	4,396	(24,494)	585	(24,385)	109
2001 Contract Subregional Revenue	(298)	(399)	101	(432)	(33)	(414)	18
Cascade Block Revenue	(19,218)	(19,289)	71	(19,488)	(199)	(19,890)	(403)
Northshore Block Revenue	(5,008)	(5,006)	(2)	(5,053)	(47)	(5,160)	(107)
Total	(49,723)	(49,773)	50	(49,467)	306	(49,850)	(382)

* 2011 assumptions used in 2009-2011 Rate Study

Rates for wholesale customers are set in accordance with wholesale contracts. These contracts define cost of service methodologies that determine how much the water system charges for wholesale service. The wholesale rate studies apply these methodologies based on expenditure projections (budget). Wholesale rates may be affected by actions that raise or lower the water system O&M or CIP budget. Outside of budget changes, there is very little flexibility to alter wholesale rates and revenues.

For more information on wholesale rates see the wholesale rate study in Appendix B.

3.3.2 Non-rate Revenues

As presented in **Table 3-8**, other non-rate revenue (unmetered revenue) is projected to decrease from the \$19.0 million assumed for 2011 to **\$12.7** million in 2012. Total non-rate revenue is further projected to decrease to **\$12.1** million in 2013 and **increase to \$13.6** million in 2014.

Table 3-8
Change in Non-rate Revenues

(\$1,000's)	2011 *	2012	\$ Change	2013	\$ Change	2014	\$ Change
Unmetered Revenues							
Capital Contributions & Tap Fees	13,792	4,891	8,901	5,209	(317)	5,533	(324)
Operating Fund Interest Income	(237)	(12)	(225)	(10)	(2)	(8)	(2)
Unmetered revenue	107	103	5	105	(3)	108	(3)
Charges for shutoffs & others	2,587	1,886	701	1,933	(47)	1,981	(48)
Rentals & Others	2,659	3,234	(576)	3,298	(64)	3,363	(65)
Build America Bonds Reimbursement	-	2,135	(2,135)	2,135	-	2,135	-
Billing leads & lags	135	465	(330)	(534)	998	500	(1,034)
Total Unmetered Revenues	19,043	12,702	6,341	12,136	566	13,613	(1,477)

* 2011 assumptions used in 2009-2011 Rate Study

The largest category of other non-rate revenues is capital contributions and tap fees, which decreases significantly in 2012 due to a significant decline in new tap fee revenues. The decline is generally the result of the slow economy and drop in housing construction in particular.

Operating Fund interest income is calculated on the projected monthly balance for each year. The negative projections are due to the normal shape of the Water Fund cash balances, which are negative over part of the year. When cash balances are negative, the Water Fund pays interest to the General Fund. This interest paid offsets the interest earned on positive balances other times of the year.

Billing leads and lags are year-end cash effects that adjust for differences in when an expense (or revenue) is recorded in SPU financial systems⁵ versus when the associated cash is paid (or received). These lags/leads result in an impact on rates when their sum dollar amount changes from year to year. The leads/lags presented in Table 3-7 are primarily associated with changes in the timing of CIP billed to SPU from year to year.

⁵ In general, revenues are recorded when billed and expenses when invoiced.

In 2012, increases in the “Rentals and Others” category is primarily due to an increase in SDOT inventory purchases.

3.4 Revenue Stabilization Subfund Withdrawals (Other Funding Sources)

As discussed in Chapter 2, the minimum balance in the Subfund is \$9 million. The balance as of the last rate study was \$12.6 million and Council authorized SPU to make withdrawals during 2009-2011 to bring the balance down to \$9 million.

From a rates perspective, withdrawals from the Subfund are part of the other funding sources pool. Increases in withdrawal size add to this pool and therefore reduce the retail rate revenue requirement. Decreases in withdrawal size reduce the size of this alternative funding pool and increase the direct service funding requirement.

In this rate period, SPU recommends increasing the RSF balance each year by the amount of interest earned. This approach will help the Subfund balance keep pace with cost increases.

Table 3-9 presents projected Subfund balances. Since there was a planned withdrawal for 2011, the lack of a withdrawal becomes a rate driver in 2012 but not in 2013 or 2014.

**Table 3-9
Projected Water Rate Stabilization Fund Balances**

(\$1,000's)	2011 *	2012	\$ Change	2013	\$ Change	2014	\$ Change
Beginning RSF Cash Balance	10,699	9,000		9,072		9,162	
Interest	297	72		90		136	
Deposit (Withdrawal)	(1,996)	0		0		0	
Ending RSF Cash Balance	9,000	9,072		9,162		9,298	
Cash used to support revenue requirement	(1,996)	0	1,996	0	0	0	0

* 2011 assumptions used in 2009-2011 Rate Study

3.5 Use of Cash Balances (Other Funding Sources)

Revenue generated by rates is used to fund current operating expenses, maintain a cash balance as a safeguard against unexpected expense, and fund a portion of the current capital program. A rate may be set to increase, hold constant, or decrease the Water Fund’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 of funding in any one year, but the year-to-year change in funding from that source.

In most years, cash balances are not a large rate driver for the Water Fund as the year-end cash balance target (1/12th O&M budget) increases by less than \$0.5 million per year. For 2012, the change in cash funding from 2011 is \$0.9 million because in 2011 SPU planned to draw on its cash balances, but in 2012 plans to build up cash balances.

The change in cash requirement in **Table 3-10** below illustrates the amount that needs to be made up by rates.

Table 3-10
Change in Water Operating Fund Cash Balances

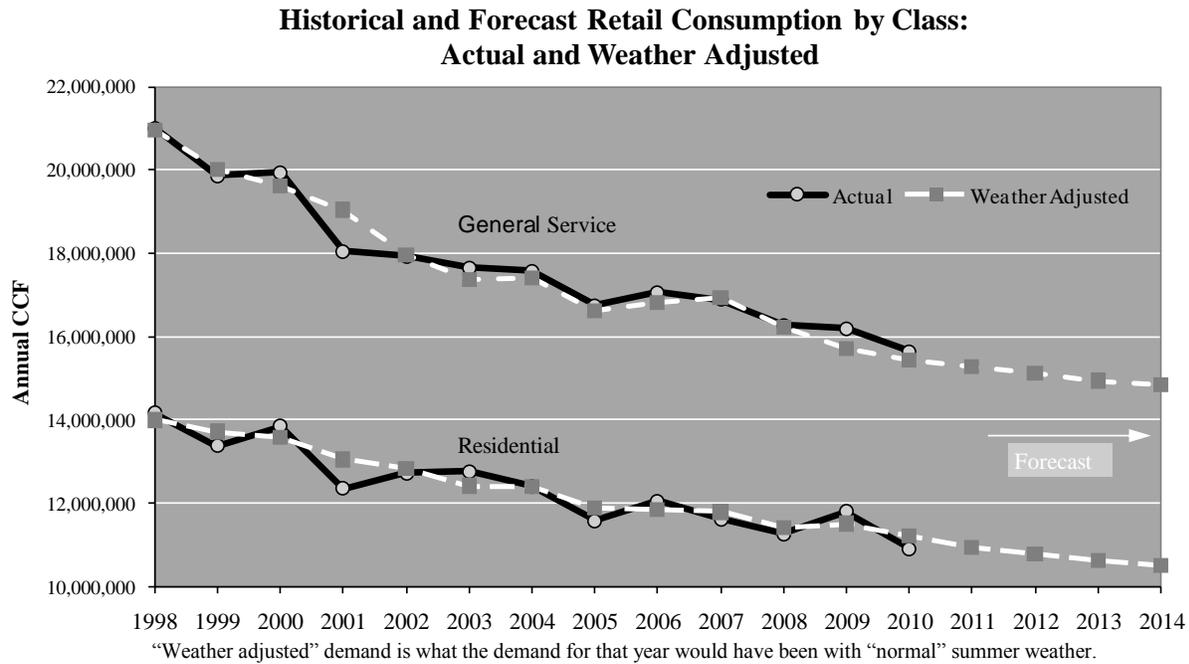
(\$1,000's)	2011 *	2012	\$ Change	2013	\$ Change	2014	\$ Change
Beginning Cash Balance	7,558	6,964		7,435		7,899	
Ending Cash Balance	7,121	7,435		7,899		8,118	
Cash used to support revenue requirement	(437)	471	908	465	(6)	218	(246)

* 2011 assumptions used in 2009-2011 Rate Study

3.6 Effect of Demand (Rate Adjustment)

The volume of water sold to retail customers is expected to decline about 1.2 percent in 2012 (from the current 2011 forecast), and 1.3 and 0.8 percent in 2013 and 2014, respectively. Sales to residential customers are generally declining faster (about 1.5 percent per year) than sales to commercial customers, which are declining about 1.2 percent per year. In order to maintain required revenues, water rates have to rise to offset the reduction of demand.

Figure 3-1



The overall downward trend in consumption shown in **Figure 3-1** increased during the early 2000’s as a result of the one percent conservation program, slowing population growth, and declining employment. Population and employment grew from 2004-2008, however the downward trend in consumption continued. A deep recession starting in December 2007 reduced employment, resulting in a continued downward slope in water consumption.

SPU’s forecast model was used to produce a forecast through 2014. The model is based on the following variables⁶:

- Households: Single family households assumed to grow at 70 percent of the population growth rate with multifamily households making up the difference.
- Employment: Employment is projected to grow 1.6 percent in 2011, 1.8 percent annually in each 2012 and 2013, and 2.1 percent in 2014. (Note: The proposed rates assumed 50% of these growth levels. The Council-approved rates adjusted this to 75%)
- Growth in household income: Household income is projected to decline until 2013 and begin to grow slowly in 2014.
- Growth in water and sewer rates: SPU projected rate increases through 2014.
- Estimates of conservation savings: Conservation will reduce retail consumption by about 0.35 million gallons per day (mgd) per year.

⁶ Economic variables from Conway’s 10-year economic forecast (June 2011).

Based on the variables above, consumption levels are expected to continue to decline despite the growth in households and employment. The results of the water demand model for residential and general service customers are shown in the Figure 3-1 and in **Table 3-11**.

Table 3-11
Short Term Water Consumption Forecasts (Annual ccf (hundred cubic feet))

Year	Residential		Commercial		Total (Res. + Comm.)	
	Consumption (ccf)	Consumption (ccf)	Consumption (ccf)	Percentage Change	Consumption (ccf)	Percentage Change
Actual/Projected						
2009	11,798,015		16,199,967		27,997,982	
2010	10,897,654		15,648,581		26,546,235	
Short-Term Demand Models						
2011	10,927,471	0.3%	15,262,115	-2.5%	26,189,586	-1.3%
2012	10,768,693	-1.5%	15,199,467	-0.4%	25,968,160	-0.8%
2013	10,606,574	-1.5%	15,066,168	-0.9%	25,672,742	-1.1%
2014	10,494,420	-1.1%	15,033,203	-0.2%	25,527,623	-0.6%

For the above analysis, 2010 consumption was adjusted for weather and used as a base year. As a significant quantity of water is used for irrigation purposes during the summer, water sales depend on summer weather. The forecast model assumes the weather of a “normal” year in which summer weather is not particularly wet, dry, hot or cool. Actual demand will vary from forecast because summer weather varies.

In terms of the impact of demand on water rates, the decrease in consumption is partially offset by an increase in the number of water meters. Water rates are made up of a fixed base service charge as well as a consumption charge. Water consumption is the unit of demand for the consumption charge while number of customers (measured by the number of meters) is the unit of demand for the base meter charge. When the number of meters increases, the customer base broadens. Residential meters are projected to increase by less than 1 percent annually, and commercial meters are projected to decrease by the same amount annually during the 2012-2014 rate period.

As mentioned above, these combined changes in consumption and meters are the reason for a portion of the difference between the increase in revenue requirement and the increase in the rate. The effect for 2012-2014 is contained in **Table 3-12**. The 2012 effect is significant because of the large decline in projected 2012 consumption relative to 2011 projected consumption in the 2009-2011 rate study. More modest decreases are projected in 2013 and 2014 relative to the reduced 2012 base.

Table 3-12
Effect of Demand on Rate Increase

	2011 *	2012	Change	2013	Change	2014	Change
Retail Demand (Annual CCF/1000)	27,800	25,968	(1,832)	25,673	(295)	25,528	(145)
Effect on Rate Increase			5.4%		0.9%		0.3%

* 2011 assumptions used in 2009-2011 Rate Study

3.7 Effect of Changes in the Low-Income Assistance Program (Rate Adjustment)

Similar to demand, changes in customer participation in the low-income rate assistance program do not affect the Water 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. In 2012, the projected number of households receiving assistance drops from 2011 projections because fewer households enrolled in the program than was planned for at that time. This rate study assumes a small increase in rate assistance in each year. The effect on rates is shown in **Table 3-13**.

Table 3-13
Effect of Changes to Rate Assistance Program on Rate Increase

(\$1,000's)	2011 *	2012	\$ Change	2013	\$ Change	2014	\$ Change
Total Discount	3,273	2,361	912	2,561	(200)	2,783	(222)
Effect on Rate Increase			-0.6%		0.1%		0.1%

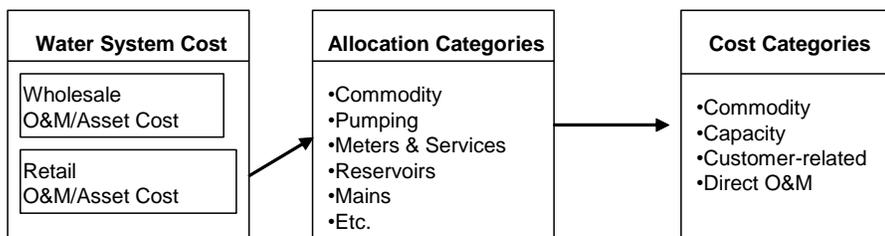
* 2011 assumptions used in 2009-2011 Rate Study

4. COST ALLOCATION

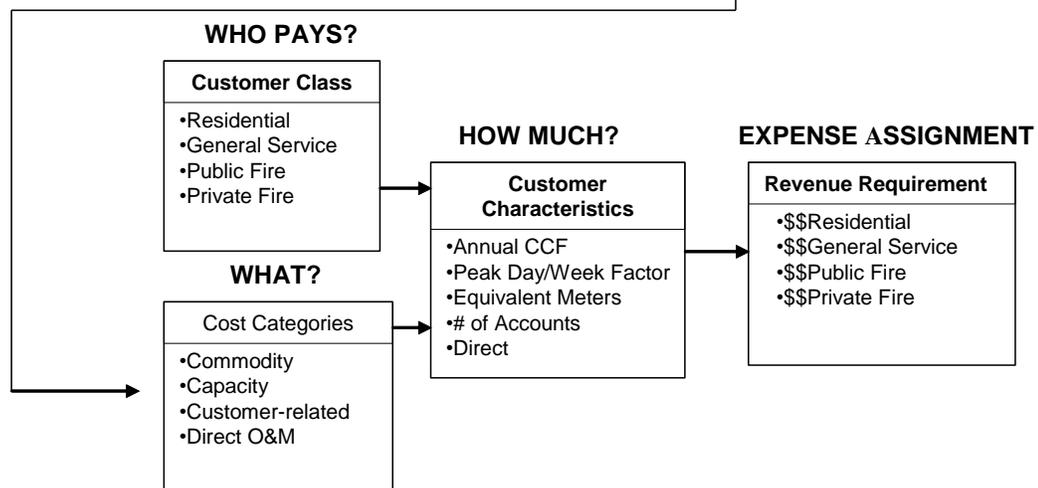
Once the **retail revenue requirement** is set, it must be assigned to different customer classes. A customer class is a group of customers that places a unique cost on the utility or is administratively easier to serve as a group. **Figure 4-1** presents the multiple steps (divided into two phases) required to allocate water expense to individual customer classes. In the first phase, the retail component of water system expense is allocated between cost categories which are groupings of cost items that are driven by similar factors. In the second phase, the cost assigned to each cost category is allocated between customer classes based on defined customer characteristics.

Figure 4-1
Cost Allocation Process

PHASE I – Allocation of expense between cost categories



PHASE II – Allocation of cost between customer classes



The cost allocation process presented above recognizes differences in the costs of providing service to different types of customers. For example a customer class with a higher than average peak rate of use requires larger capacity pumps, pipes, and other system facilities than a customer

class that uses the same total volume of water but at a uniform rate. Accordingly, the former class will account for a greater-than-average share of total system, peak period demand (customer characteristics) and therefore be assigned a greater than average share of capacity related cost.

The general framework for **Phase 1** of the cost allocation process is presented in this chapter with complete details provided in Appendix A. This chapter, which focuses on **Phase II** of the cost allocation process, is organized as follows:

- Overview - cost categories
- Framework for allocation of retail water expense between cost categories (Phase I)
- Identification of customer classes and quantification of cost allocation characteristics
- Calculation of total cost of service, or revenue requirement, for each customer class

The current rate study does not propose any fundamental changes to the cost allocation methodology used in the prior rates process.

4.1 Overview – Cost Categories

Retail water system costs are grouped into four main cost categories which can be allocated between customer classes based on customer characteristics: commodity, capacity, customer-related, and directly assigned. The costs assigned to the first three categories are shared among different customer classes based on characteristics such as total annual water volume and number of accounts. Costs included in the directly assigned category are assigned in their entirety to the applicable customer classes.

Commodity Costs. Commodity costs vary proportionately with the amount of water provided under average consumption conditions. These costs include items such as the Cedar and Tolt treatment plants, and chlorination at in-town reservoirs. They also include the cost of activities and assets that are shared with wholesale customers since the allocation between wholesale and retail is based on commodity.

Capacity Costs. Capacity costs are incurred to meet the maximum rate of use placed on the system by customers. For example, pumps and reservoirs are sized for maximum demands.

Customer-Related Costs. Customer-related costs encompass an umbrella of expenses associated with serving customers independent of the amount of water they use. These include the cost of meter maintenance and repair, meter reading, billing, customer accounting, and the call center.

Direct Assigned Costs. These are costs that are directly allocable to a single customer class. Examples of direct allocations are:

Residential - Residential customer service teams
 General Service - General Service customer service teams
 Public Fire - Hydrant repair and flow testing

4.2 Framework for Allocation of Retail Expense to Cost Categories (Phase I)

The cost allocation framework for retail water rates uses the distribution of embedded or average costs from a prior period (“test year”) to allocate future revenue requirements between different cost categories. Therefore, the 2012-2014 retail water system revenue requirements are assigned to customer classes based on the actual distribution of expense between those categories in 2010 (test year). The test year expense is defined according to a “utility basis” which is the sum of the following elements:

- Annual operations and maintenance (O&M) costs;
- depreciation expenses on assets paid for by rates; and
- a return on assets calculated on infrastructure in service.

Phase I of the cost allocation involves the distribution of prior year expense between cost categories, as further described in Appendix A, Section A1.2. Additional information on the “utility-basis” costing framework, can be found in Appendix A, Section A1.1 to this study.

Table 4-1 presents the breakdown of 2010 retail water system expense by cost component (see **Appendix A** for the detail behind this data). As noted below, almost three-quarters of retail water system expense is commodity based and driven by average annual water usage (flows).

**Table 4-1
 Water Cost Component Summary**

Component Cost Category	2010 Revenue	% of Total
Commodity		
Annual Flows	84,091,068	74.0%
Capacity		
Peak Day	310,114	0.3%
Peak Week	1,403,700	1.2%
Customer-related		
Account	3,165,423	2.8%
Meter Equiv	12,818,347	11.3%
Direct/Engineering basis		
Residential	5,869,627	5.2%
General Svc	585,049	0.5%
Public Fire	5,397,056	4.7%
Total	113,640,384	100%

4.3 Retail Customer Classes and Characteristics

Retail water customers are divided into four customer classes.

- **Residential.** Customers living in single family or duplex residences.
- **General Service.** Commercial, governmental, and industrial customers as well as multi-family residential structures.
- **Private Fire.** The separately metered connections for fire-protection sprinkler systems installed on the customer's property. These customers pay a separate rate for these services in addition to their General Service or Residential rates for their domestic services.
- **Public Fire.** The governmental agencies responsible for providing public fire protection (hydrants).

Costs are assigned to these customer classes based on how the characteristics of each class drive water system costs. **Table 4-2** summarizes the allocator (customer characteristics) used to assign cost to each component cost category.

Table 4-2
Allocators by Cost Category

Allocation Category	Customer Characteristics	Comments
Commodity Costs	Annual ccf	Actual 2010 total water consumption in hundreds of cubic feet (ccf).
Capacity Costs	Peak Day Factor Peak Week Factor	These factors are estimates derived from demand metering data in areas that are either primarily residential or primarily commercial.
Customer-related Costs	Equivalent Meters Number of Accounts	Equivalent Meters is a cost weighted count of different sized meters by class (See Appendix A1.5 for calculation details). The number of Accounts is 197,568 as of 12/31/2010.
Direct Assignment	Class specific expense assigned directly to applicable class	These are costs for activities or assets that are dedicated to one customer class only.

Table 4-3 quantifies the key characteristics (by class) that are used to allocate commodity, capacity and customer-related costs in the current rate study. The public fire class pays a share of directly assigned costs but is not allocated any expense from the other three cost categories and is therefore, not included in the table below.

**Table 4-3
Key Customer Characteristics**

Customer Class	Peak Day		Peak Week		Annual Flow		Equivalent Meters		Accounts	
	Factor	Percent	Factor	Percent	CCF	Percent	Count	Percent	Count	Percent
Residential	2.67	54%	2.25	51%	10,897,654	41%	163,136	70%	162,064	82%
General Service	1.27	26%	1.20	27%	15,648,581	59%	50,288	22%	29,129	15%
Private Fire	1.00	20%	1.00	22%	14,788	0%	18,985	8%	6,375	3%
Total	4.94	100%	4.45	100%	26,561,023	100%	232,409	100%	197,568	100%

As noted above, the residential class accounts for the majority of peak usage, number of meters, and number of accounts while the general service class accounts for the majority of average annual water usage. Private fire accounts for about one-fifth of peak usage.

4.4 Cost of Service and Revenue Requirement by Customer Class

The customer characteristic percentages in Table 4-3 are applied to the appropriate 2010 allocation categories in Table 4-1 to determine each customer class' actual 2010 cost of service. **Table 4-4** summarizes the results of this allocation process.

**Table 4-4
Retail Water Cost of Service Based on 2010 Actual Financial Data**

Customer Class	Commodity	Capacity	Customer Related	Direct	Total Cost of Service	Percentage of Total Cost of Service
Residential	34,501,509	978,850	15,655,861	918,225	52,054,444	45.8%
General Service	49,542,741	734,391	3,970,304	585,049	54,832,485	48.3%
Private Fire	46,818	573	1,309,007	-	1,356,398	1.2%
Public Fire	-	-	-	5,397,056	5,397,056	4.7%
Total	84,091,068	1,713,814	20,935,172	6,900,330	113,640,384	100.0%

The allocations to the general service and residential customer classes account for the bulk (94 percent) of the retail water cost of service. Public and private fire represents only about six percent of the total. The general service class is allocated the largest single share (48.3 percent).

This class accounts for 59 percent of annual flows, the characteristic used to allocate commodity costs which represent nearly three-quarters of the water system revenue requirement.

The rate revenue requirements for each rate class are calculated by applying each class' percent of total 2010 cost to the 2012-2013 retail rates revenue requirements, with results as presented in **Table 4-5**.

Table 4-5
2012-2014 Retail Revenue Requirement
By Customer Class

Customer Class	2012	2013	2014	Cost of Service Percentage
Residential	73,402,424	79,384,970	86,383,147	45.8%
General Service	77,319,764	83,621,586	90,993,242	48.3%
Private Fire	1,912,669	2,068,558	2,250,912	1.2%
Public Fire	7,610,436	8,230,712	8,956,290	4.7%
Total	160,245,292	173,305,826	188,583,590	100.0%

Using the same allocation framework as the 2009-2011 rate proposal, there is very little movement in the revenue shares by customer class. **Table 4-6** illustrates the small changes for the 2012-2014 rate study relative to the 2009-2011 rate study. See Appendix A for more information.

Table 4-6
Revenue Shares by Customer Class

Customer Class	2009-2011 Rate Study	2012-2014 Rate Study
Residential	45.7%	45.8%
Commercial	48.4%	48.3%
Private Fire Service	1.2%	1.2%
Public Fire	4.6%	4.7%

5. RATE DESIGN

Rate design is the last element of the rate study. Chapter 3 presented the amount of retail water revenue required to fund adopted 2012-2014 O&M and capital programs while meeting adopted financial targets. Chapter 4 discussed the allocation of the revenue requirement between customer classes. This chapter identifies the structure of individual rates and the 2012-2014 rates, which will satisfy the retail revenue requirement while meeting established rate design policy objectives.

The current rate study continues rate design practices implemented in the previous rate study and are as follows:

- Adopted rates maintain meter and commodity rate parity between residential and general service customers⁷.
- Commodity rates rise by more than base meter charges due to the impact of differing demand drivers⁸.
- Adopted changes to meter charges utilize the meter cost analysis from the 2009-2011 rate study in determining the differential (or progression) between rates for different size meters.

No changes were adopted to certain rates (larger meter charges and private fire rate) which are significantly higher than their cost of service at current levels. Holding these rates constant rather than decreasing them somewhat mitigates the impact of the revenue requirement increase on the residential and general service commodity rate, and provides rate stability.

The adopted rates increase the typical monthly residential bill by **\$2.25** in 2012, **\$2.43** in 2013, and **\$2.55** in 2014. The net increase over the three-year period is **\$7.23**. Typical residential consumption has fallen from 5.5 ccf per month in the 2009-2011 rate proposal to 5.0 ccf per month; typical bill totals reflect the decline in typical consumption. The exact increase in general service bills varies based on consumption and meter size. A typical convenience store would see increases of **\$9.34, \$10.26, and \$11.00** per month for 2012, 2013, and 2014, respectively. Likewise, a typical apartment building would see increases of **\$27.65, \$30.27, and \$32.56** per month. The increase in public fire larger main rates is **5.9 percent in 2012, 7.6 percent in 2013 and 8.1 percent in 2014**. There is no adopted change to 2011 private fire rates, as noted above.

⁷ Both customer classes pay the same base charge for comparatively-sized meters and the same single commodity rate for off-peak water use. The general service peak commodity rate is set at the second tier peak rate for residential customers.

⁸ Water use, the demand unit for the commodity rate, is projected to decline over the rate period while water meters, the demand unit for the base meter charge, are projected to slightly increase over the same period. See Section 3.6 for more details.

5.1 Rate Design Overview

A utility rate structure, or rate design, typically considers three elements: classification of customers served, billing frequency, and schedule of charges for each customer class. The schedule of charges or “rates” is designed to recover the utility’s costs, given projected customer demand⁹. In addition to cost recovery, a rate structure should support and optimize a blend of various utility objectives and should work as a public information tool in communicating these objectives to customers.

5.1.1 Retail Water Rate Structure

Seattle’s retail water customers are grouped into four broad customer classifications: Residential, General Service, Private Fire (i.e. building sprinklers), and Public Fire (municipal hydrants). SPU has developed rate structures for each of these customer classes which reflect the classes’ cost of service structure, demand patterns, and policy objectives. A given rate class may be further divided into sub-classes. While the rate structure for each sub-class (under the same primary class) will be similar or identical, the actual rate assigned to each sub-class will vary based on actual differences in cost of service or historical contractual requirements. **Table 5-1** provides a summary of Seattle’s retail water rate classes, subclasses, and associated rate structures.

Table 5-1
Retail Water Rate Structure Summary

Class	Sub-class	Rate Structure
Residential	<ul style="list-style-type: none"> • In-City • Out-of-City • Shoreline Franchise • Lake Forest Park Franchise • Master-Metered Developments 	<ul style="list-style-type: none"> • Base Service Charge (meter-size based) • Single Off-Peak Commodity Rate • Tiered Peak Commodity Rate • Low-Income Rates
General Service	<ul style="list-style-type: none"> • In-City • Out-of-City • Shoreline 	<ul style="list-style-type: none"> • Base Service Charge (meter-size based) • Single Off-Peak Commodity Rate

⁹ Section 3.6 discusses projected customer demand and its influence on rates during the rate period.

	Franchise <ul style="list-style-type: none"> • Lake Forest Park Franchise 	<ul style="list-style-type: none"> • Single Peak Commodity Rate
Private Fire	<ul style="list-style-type: none"> • In-City • Out-of City • Shoreline Franchise • Lake Forest Park Franchise 	<ul style="list-style-type: none"> • Base Service Charge (meter-size based) • Commodity Penalty Rate
Public Fire (hydrants)	N/A	<ul style="list-style-type: none"> • Charge for 4-inch mains • Charge for larger mains

Section 5.1.2 discusses the objectives that have been considered in the development of the rate structures outlined above. Sections 5.2 through 5.5 provide additional detail on the rate structures by customer class and subclass. Appendix D lists all 2012-2014 rate schedules by class and subclass.

5.1.2 Rate Objectives

SPU staff, with input from past Rate Advisory Committees, has identified the following policy objectives for the retail water rate design:

- Provide financial soundness;
- advance economic efficiency;
- promote customer equity;
- encourage customer conservation;
- contribute to transparency and customer understanding; and
- reduce impacts on low-income customers.

Certain of these objectives imply different directions in rate design than others. An appropriate rate design must strike the best overall balance among conflicting objectives. The first objective of financial soundness is overriding and should be met by all rate designs considered. The final objective of reducing impacts on low-income customers is partly met by a citywide program, in which SPU participates, to provide discounts to low-income and disabled customers. The remaining objectives are met to varying degrees by the individual rate structures, as further discussed in Sections 5.2 through 5.5.

5.2 Residential Rate Design

Residential accounts represent about 82 percent of total SPU retail water accounts. Residential customers are further broken into four subclasses: in-city customers, City of Shoreline/City of Lake Forest Park customers, other out-of-city customers, and master-metered customers. Low-income customers in any of these residential subclasses may qualify for a discount off their water utility bill. This section provides additional detail on the components of the residential rate design, the residential rate changes, residential rate subclasses and the low-income credit program.

Under the adopted rates, residential rates increase a typical single family residential bill by **\$2.25** per month in 2012, **\$2.43** per month in 2013 and **\$2.55** in 2014 (given constant consumption). These impacts can vary based on the amount of water used, as presented in **Table 5-2**.

Table 5-2
Monthly Residential Bills at Adopted Rates

CUSTOMER TYPE	MONTHLY CONSUMPTION	MONTHLY RESIDENTIAL BILLS							
		2011 Adopted	2012 Adopted	Change from 2011	2013 Adopted	Change from 2012	2014 Adopted	Change from 2013	
Low Volume User (15th %tile)	Winter	2.9	\$23.50	\$24.97	\$1.47	\$26.55	\$1.58	\$28.22	\$1.67
	Summer	3.8	\$28.12	\$29.74	\$1.62	\$31.47	\$1.73	\$33.24	\$1.77
	Average	3.2	\$25.04	\$26.56	\$1.52	\$28.19	\$1.63	\$29.90	\$1.70
Median User (50th %tile)	Winter	4.7	\$30.01	\$32.24	\$2.22	\$34.65	\$2.41	\$37.20	\$2.55
	Summer	5.5	\$35.08	\$37.37	\$2.29	\$39.84	\$2.47	\$42.38	\$2.54
	Average	5.0	\$31.70	\$33.95	\$2.25	\$36.38	\$2.43	\$38.93	\$2.55
High Volume User (85th %tile)	Winter	9.8	\$48.48	\$52.84	\$4.37	\$57.60	\$4.76	\$62.65	\$5.05
	Summer	13.4	\$71.79	\$78.21	\$6.42	\$85.20	\$6.99	\$92.66	\$7.46
	Average	11.0	\$56.25	\$61.30	\$5.05	\$66.80	\$5.50	\$72.65	\$5.85
Very High User	Winter	32.0	\$128.84	\$142.53	\$13.69	\$157.50	\$14.97	\$173.43	\$15.93
	Summer	50.0	\$470.69	\$479.50	\$8.81	\$489.11	\$9.61	\$499.42	\$10.31
	Average	38.0	\$242.79	\$254.85	\$12.06	\$268.04	\$13.18	\$282.09	\$14.06

Note: All bill impacts are for in-city customers and assume a 3/4" meter.

5.2.1 Residential Rate Structure

Residential customers pay a fixed base service charge plus a commodity rate which is a single rate in the off-peak season (September 16 – May 15) and a three-tiered rate structure in the peak season (May 16 – September 15).

Base Service Charge

The base service charge is a fixed monthly fee which varies by water meter size. This charge is structured to equitably distribute costs that are not related to the volume of water used (i.e. bill production, customer service, water service inspections, and meter reading, maintenance and replacement). The cost differential, or progression, between different meter sizes is based on 1) annualized costs, by meter size, for meter maintenance, testing, repair, replacement and service renewal; and 2) annual customer service costs. The progression used in this proposal is based on updated costing data.

Commodity Rate

Residential commodity rates consist of three tiers associated with differing usage volumes: 1) up to five ccf/month; 2) the next 13 ccf/month (six to 18 ccf); and 3) above 18 ccf/month. The third-tier water rates affect single-family residential (SFR) and duplex customers who use more than 36 ccf for a 60-day billing period (or more than 18 ccf for a 30-day billing period). Historically, one out of twelve residential customers has some consumption at the third-tier level. In the past, the City has implemented a third-tier on a temporary basis to discourage water use under drought conditions. This tier became a permanent feature of the water rate structure in 2002 in response to the legal requirement of initiative I-63¹⁰. This rate study holds constant third-tier rates through 2014.

5.2.2 Residential Increase

This study includes similar increases in residential commodity rates and the three-quarter-inch meter base service charge. Residential rate schedules by subclass are found in the following **Tables 5-3:**

¹⁰ In October, 2001, the Mayor and City Council adopted City of Seattle Ordinance No. 120532, otherwise known as I-63 Settlement Ordinance (I-63 SO). This ordinance established various measures designed to promote water conservation, including the creation of the "Everyone Can Conserve" program to fund water conservation in low-income housing. This ordinance also established the requirement for a residential summer peak use third block to be charged on residents and businesses that use extraordinary amounts of water.

Table 5-3
Adopted Residential Rates

<u>Commodity</u>	Current Rate	2012 Rate	2013 Rate	2014 Rate
Off-Peak (\$/ccf)	\$3.62	\$4.04	\$4.50	\$4.99
Peak (\$/ccf)				
Up to 5 ccf/mo	\$3.98	\$4.34	\$4.73	\$5.13
Next 12 ccf/mo	\$4.63	\$5.15	\$5.72	\$6.34
Above 18 ccf/mo	\$11.80	\$11.80	\$11.80	\$11.80
<u>Base Service Charge (\$/mo)</u>				
3/4 inch	\$13.00	\$13.25	\$13.50	\$13.75
1 inch	\$13.40	\$13.65	\$13.90	\$14.20
1 1/2 inch	\$20.70	\$21.05	\$21.45	\$21.85
2 inch	\$22.90	\$23.35	\$23.75	\$24.20
3 inch	\$84.70	\$86.35	\$88.00	\$89.65
4 inch	\$121.40	\$123.75	\$126.10	\$128.45

Note: All rates above are in-city.

For the rate period 2012-2014, residential meter charges will go up between 1.7 percent and 2.2 percent per year. Currently, rates are aligned in a cost progression based on meter size, with the exception of the three-inch meter. The current three-inch charge is below the cost progression; however the percentage increases are matched to that of the three-quarter inch meter for this rate period in order to limit customer impact.

5.2.3 Residential Sub-Classes

The majority of Seattle Public Utilities' residential customers live within City limits (about 149,330 accounts). However, SPU also directly provides water service to about 10,190 residential customers in the City of Shoreline and City of Lake Forest Park, and 4,360 other residential customers who reside outside of City of Seattle boundaries. Each of these residential customer groups, or sub-classes, pay a different rate due to differences in cost of service and/or historic agreements governing these relationships. In addition, master metered residential developments (MMRD) comprise another residential sub-class with its own distinct rates.

Outside City Residential Rates (except Shoreline and Lake Forest Park).

SPU sets the base meter and commodity rates for SPU customers residing outside of Seattle City Limits at 14 percent greater than in-city rates. Certain characteristics of these areas increase the cost of service, including lower-density development and topography which limits the use of gravity fed systems. Both factors cause higher capital and operating costs (longer water mains, more pumping) per unit of water delivered. In addition, field crews, meter readers, inspectors, and other employees, along with vehicles and equipment, must travel farther to work on parts of the system that serve outside city customers.

Outside-City residential rates are found in **Appendix D**.

City of Shoreline/City of Lake Forest Park Residential Rates.

SPU sets the base meter and commodity rates for SPU customers residing in Shoreline and Lake Forest Park approximately 21 percent higher than in-city rates. This rate surcharge is based on the 14 percent out-of-city surcharge (discussed above) plus an additional six percent to cover City of Shoreline and City of Lake Forest Park franchise fees. Since 1999 the City of Shoreline has charged SPU a franchise fee on the water service SPU provides to Shoreline residents. This fee is set at six percent of total Shoreline customer revenue. All of the revenues from this fee are paid to the City of Shoreline and neither Seattle nor any water customer outside of Shoreline receives a benefit from the associated revenues.

In November 2009, the City of Lake Forest Park negotiated with SPU a six percent franchise fee for water service to Lake Forest Park customers. All of the revenues from this fee are paid to the City of Lake Forest Park and neither Seattle nor any water customer outside of Lake Forest Park receives a benefit from the associated revenues.

Shoreline and Lake Forest Park residential rates are found in Appendix D.

Master-Metered Residential Development Rates

These rates apply to residential developments with master meters of one and a half-inch or larger which operate and maintain their own distribution systems on private property. The water service to these developments primarily serves single-family detached residences on at least two separate legal parcels.

A separate rate structure was established for MMRD customers in 1995, with residential rates applying in the peak season and an escalated general service rate applying in the off-peak season. This rate structure recognized the fact that MMRDs, although considered general service habitations, experienced peak irrigation demands similar to those of residential customers. The off-peak (and second-tier peak) commodity rates for residential and general service were brought in sync in 2008, and therefore, MMRD rates are currently identical to residential rates. At present, all MMRD customers reside in Shoreline and pay Shoreline residential rates.

MMRD rates are found in Appendix D.

5.2.4 Low-Income Credits

The City assists qualified low-income customers with their water bills by providing a 50 percent credit on their utility bills, which is one of the most generous assistance policies in the nation. Income guidelines vary based on the number in the household, monthly income and annual income. Income limits change every January but are currently based on 70 percent of the State median income for low-income seniors and disabled customers and on 200 percent of the federal poverty level for all other low-income customers.

Currently, about 12,200 water customers receive a 50 percent discount on their water rates. About 62 percent of these low-income assistance customers receive their credit on their SPU combined utility bill while the remainder receive their credit through their City Light bill. For customers billed by SPU, the discount cuts their water bill in half. The City Light bill is used as the credit mechanism for customers who do not directly receive a SPU bill, such as customers living in apartment complexes, who typically receive a City Light bill but their utility costs for water, sewer and solid waste are included in their rent. These customers receive a fixed dollar credit via their City Light bill, which approximates the 50 percent discount.

Table 5-4 presents the discounts for 2012 through 2014.

Table 5-4
Rate Assistance Discounts

Customer-type	2011	2012	2013	2014
SPU-billed customers	50% Discount	50% Discount	50% Discount	50% Discount
Non-SPU-billed customers				
Single-family (Residential)	\$17.02/month	\$16.97/month	\$18.19/month	\$19.46/month
Multi-family (Gen. Serv.)	\$9.32/month	\$10.14/month	\$11.22/month	\$12.38/month

*2011 based on typical monthly consumption of 5.5 ccf. 2012 based on typical monthly consumption of 5.0 ccf.

5.3 General Service Rate Design

General services accounts represent about 15 percent of total SPU retail water accounts. General Service customers are also broken into three subclasses: in-city customers, Shoreline/Lake Forest Park customers, and other outside-City customers. This section provides additional detail on the components of the general service rate design, the general service rate increase and general service rate subclasses.

The adopted rates will affect general service customers in varying degrees depending on the volume of water used. **Table 5-5** presents projected bill impacts for a sampling of general service customer types.

Table 5-5
Monthly General Service Bills at Adopted Rates

CUSTOMER TYPE	MONTHLY CONSUMPTION		MONTHLY GENERAL SERVICE BILLS						
			2011 Adopted	2012 Adopted	Change from 2011	2013 Adopted	Change from 2012	2014 Adopted	Change from 2013
Convenience Store (3/4" meter)	Winter	19	\$81.78	\$90.01	\$8.23	\$99.00	\$8.99	\$108.56	\$9.56
	Summer	22	\$114.86	\$126.55	\$11.69	\$139.34	\$12.79	\$153.23	\$13.89
	Average	20	\$92.81	\$102.19	\$9.38	\$112.45	\$10.26	\$123.45	\$11.00
Apartment Bldg (15 units) (1" meter)	Winter	57	\$219.74	\$243.93	\$24.19	\$270.40	\$26.47	\$298.63	\$28.23
	Summer	66	\$318.98	\$353.55	\$34.57	\$391.42	\$37.87	\$432.64	\$41.22
	Average	60	\$252.82	\$280.47	\$27.65	\$310.74	\$30.27	\$343.30	\$32.56
City Hall (4" meter)	Winter	750	\$2,836	\$3,154	\$317	\$3,501	\$347	\$3,871	\$370
	Summer	900	\$4,288	\$4,759	\$470	\$5,274	\$515	\$5,834	\$560
	Average	800	\$3,320	\$3,689	\$368	\$4,092	\$403	\$4,525	\$433
Large Industrial (8" meter)	Winter	3800	\$13,955	\$15,551	\$1,596	\$17,299	\$1,748	\$19,161	\$1,862
	Summer	4400	\$20,571	\$22,859	\$2,288	\$25,367	\$2,508	\$28,095	\$2,728
	Average	4000	\$16,160	\$17,987	\$1,827	\$19,988	\$2,001	\$22,139	\$2,151

Note: All bill impacts are for in-city customers.

5.3.1 General Service Rate Structure

The general service rate structure is nearly identical to that for residential customers with a base service charge that varies by meter size and peak and off-peak commodity rates. In general, the discussion in Section 5.2.1 on these two rate components is applicable to general service rates.

The primary difference between the two rate structures is that general service customers do not have tiered peak rates¹¹; all peak consumption is charged at a single rate. In addition, the general service base service charge progression includes several larger meter rates which are not applicable to residential customers.

¹¹ The residential first tier peak rate is intended as a “lifeline” rate and as such does not apply to general service. The third tier peak rate is intended to capture “excessive” or “wasteful” water consumption. Because each general service customer has a different level of consumption, SPU would not be able to set a threshold amount above which consumption is considered excessive.

SPU will continue to seek parity between residential and commercial rates as long as each customer class can roughly recover its allocated cost of service under these circumstances. In this rate proposal, we are able to maintain this parity. Adopted 2012-2014 commodity and base service charges for the two classes are virtually identical¹².

5.3.2 General Service Increase

This rates study maintains the parity between general service and residential rates described in 5.3.1, with the same increases for general service and residential meter and consumption rates (see 5.2.2 for further detail on adopted increases). With respect to larger meter rates not applicable to residential customers, rates for meter sizes eight-inch and larger remain at 2011 rate levels to recognize that these rates are already high relative to smaller meter rates. Six-inch meters will increase at the same proportion as three-quarter-inch meters.

General service rates shown in the following **Table 5-6**:

Table 5-6
General Service Rates

¹² The general service peak rate is equal to the second tier residential peak rate.

	Current Rate	2012 Rate	2013 Rate	2014 Rate
<u>Commodity</u>				
Off-Peak (\$/ccf)	\$3.62	\$4.04	\$4.50	\$4.99
Peak (\$/ccf)	\$4.63	\$5.15	\$5.72	\$6.34
<u>Base Service Charge (\$/mo)</u>				
3/4 inch	\$13.00	\$13.25	\$13.50	\$13.75
1 inch	\$13.40	\$13.65	\$13.90	\$14.20
1 1/2 inch	\$20.70	\$21.05	\$21.45	\$21.85
2 inch	\$22.90	\$23.35	\$23.75	\$24.20
3 inch	\$84.70	\$86.35	\$88.00	\$89.65
4 inch	\$121.40	\$123.75	\$126.10	\$128.45
6 inch	\$149.40	\$152.30	\$155.15	\$158.05
8 inch	\$199.00	\$199.00	\$199.00	\$199.00
10 inch	\$297.00	\$297.00	\$297.00	\$297.00
12 inch	\$402.00	\$402.00	\$402.00	\$402.00
16 inch	\$477.00	\$477.00	\$477.00	\$477.00
20 inch	\$614.00	\$614.00	\$614.00	\$614.00
24 inch	\$771.00	\$771.00	\$771.00	\$771.00

Note: All rates above are in-city.

5.3.3 General Service Sub-Classes

As with residential accounts, the majority of Seattle Public Utilities' general service customers are located within City limits (about 21,100 accounts). In addition, SPU directly provides water service to 550 general service customers in the City of Shoreline and City of Lake Forest Park, and 336 other general service customers outside of City boundaries. Similar to residential accounts, Shoreline and Lake Forest Park general service customers pay a 21.0 percent surcharge over the in-city general service meter and commodity rates and other outside-City customers pay a 14.0 percent surcharge. For further details, see Section 5.2.3.

5.4 Private Fire Rate Design

Private fire rates are charged for water service to fire sprinkler systems located on a customer's property. Private fire service customers pay a **flat monthly meter base charge** which varies with meter size. This base fee includes an allowance for water consumption for testing and pump cooling. The monthly allowance is five ccf for meters up to six inches and 10 ccf for meters eight inches and larger. A **penalty charge** (\$20.00/ccf) is assessed on non-fire related consumption in excess of the allowed amounts.

Since the percent of revenue generated from private fire service at current rates (2.1 percent) is greater than the cost share calculated by the current cost allocation process (1.9 percent), fire

service rates are held constant for 2012 through 2014. Fire service rates for inside city customers are presented in the **Table 5-7** below.

**Table 5-7
Private Fire Rates**

	Current Rate	2012 Rate	2013 Rate	2014 Rate
<u>Commodity</u>				
Penalty Charge (\$/ccf)	\$20.00	\$20.00	\$20.00	\$20.00
<u>Base Service Charge (\$/mo)</u>				
2 inch	\$15.40	\$15.40	\$15.40	\$15.40
3 inch	\$20.00	\$20.00	\$20.00	\$20.00
4 inch	\$37.00	\$37.00	\$37.00	\$37.00
6 inch	\$63.00	\$63.00	\$63.00	\$63.00
8 inch	\$100.00	\$100.00	\$100.00	\$100.00
10 inch	\$144.00	\$144.00	\$144.00	\$144.00
12 inch	\$210.00	\$210.00	\$210.00	\$210.00

Note: All rates above are in-city.

Private fire service rate schedules by subclass are found in Appendix D of this study.

Similar to other retail customers, Shoreline and Lake Forest Park private fire customers pay a 21percent surcharge over the in-city private fire rates and other outside-City customers pay a 14.0 percent surcharge. For further details, see Section 5.2.3.

5.5 Public Fire Rate Design (Hydrants)

Fire hydrants provide water used by public fire departments to fight fires. Most fire hydrants owned by SPU are located within the City of Seattle. The majority of other hydrants are in retail service areas just north or south of the city limits. In order to more closely associate the cost of providing water for fire fighting with the customers that use this water, SPU directly charges local governments an annual fee for public fire service. Charging local governments for the public fire service within their jurisdiction ensures that this portion of revenue requirement is not borne by Seattle’s retail customers.

5.5.1 Rate Structure

Public fire customers are charged *a flat annual fee* which varies based on the size of main attached to the hydrant. SPU has established two different flat rates for fire service to reflect both service level and cost differences between four-inch and larger mains¹³. Four-inch mains provide substantially lower fire flows than larger mains. In addition, four-inch mains, while sufficient for domestic service, generally do not meet current state installation standards for mains supporting hydrants. Consequently, all of the cost of over-sizing water mains to provide fire flow, about half of total hydrant service cost, is assigned to larger mains. The balance of costs are shared between the two rates based on the number of units, or hydrants. Hydrants connected to larger mains currently account for about 99 percent of all units within the SPU service area.

5.5.2 Public Fire Rate Increase

This study adopts a 2012 rate *increase* for both larger main rate and the four-inch main rate. Uniform rate increases are adopted for 2013 and 2014, respectively. **Table 5-8** presents the adopted 2012-2014 public fire rates.

Table 5-8
Public Fire Rates

	Current Rate	2012 Rate	2013 Rate	2014 Rate
Larger Mains	\$389.48	\$412.56	\$444.11	\$480.16
4-Inch Mains	\$194.80	\$198.03	\$213.17	\$230.48

The larger main rate increase (and four-inch main rate decrease) is due to two primary factors: a) an increase in watermain costs, which are allocated exclusively to larger main rates, and b) an increase in the number of larger main units relative to four-inch units since the last rate study, which increases the larger main allocation of non-main expense.

Table 5-9 presents projected annual bills for public fire customers at adopted rates.

¹³ State requirements for hydrant service have become progressively more stringent over the last century. Four-inch mains were once considered sufficient to provide fire flows when originally installed. Now, a minimum of six inches is required. Most areas with both domestic and fire flow demands require a minimum of eight-inch mains.

Table 5-9
Annual Public Fire Bills at Adopted Rates

	<u>Hydrant Count</u>			2012 Bill	2013 Bill	2014 Bill
	4-Inch Mains	Larger Mains	Total			
Seattle	135	16,893	17,028	\$6,996,072	\$7,531,213	\$8,142,525
Burien	42	115	157	\$55,761	\$60,027	\$64,899
	177	17,008	17,185	\$7,051,833	\$7,591,239	\$8,207,424

APPENDIX A: COST ALLOCATION DETAILS

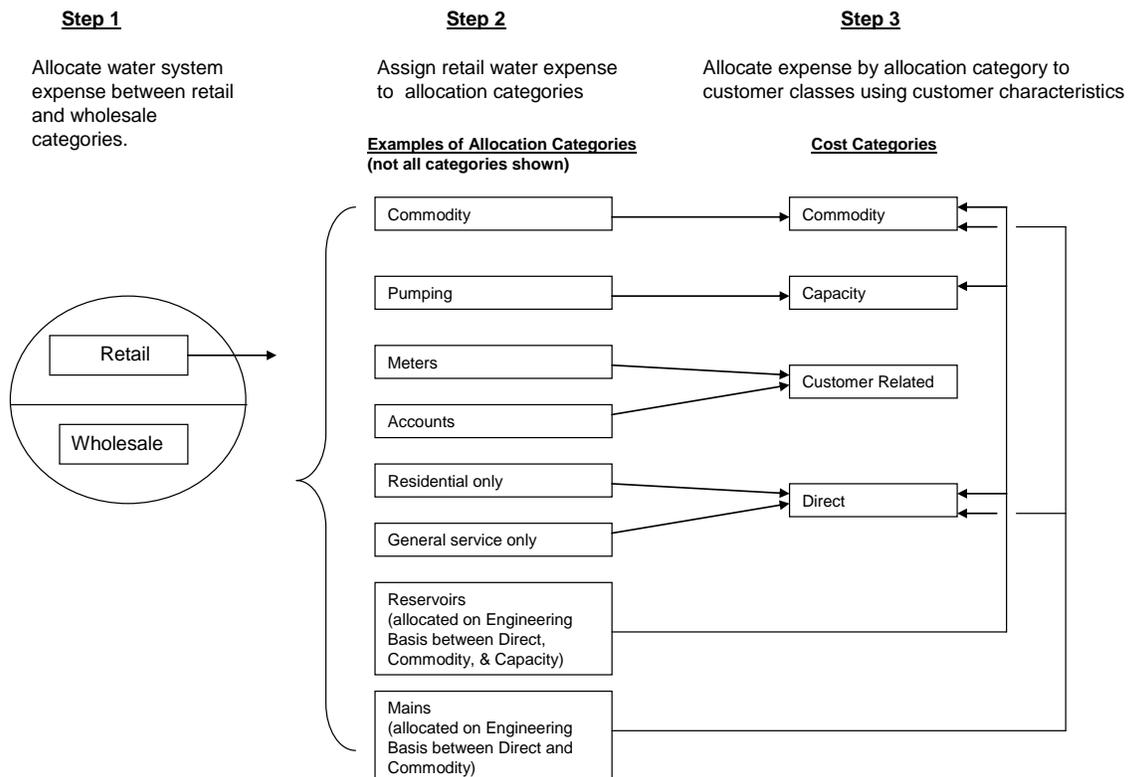
Chapter 4 contained an overview of how the 2012-2014 water revenue requirements were allocated to each cost category. This Appendix provides the detail behind those allocations.

SPU uses imbedded, or historical cost of service from a test year (2010 for this rate study), to determine the percentage of revenue to be assigned to each customer class in the rate-setting period. The costs from the test year are broken into service-based allocation categories that are then allocated to cost categories based on defined customer characteristics. The resulting percentages from the test year are then applied to the 2012-2014 revenue requirements.

Three steps are required to determine the revenue split between test year cost component categories:

1. Allocation of water system expense into retail and wholesale buckets.
2. Allocation of retail water expense between different allocation categories.
3. Allocation of the cost assigned to each allocation category between cost categories.

Figure A1-1
Assignment of Water System Expense to Cost Component Categories
Allocation Steps



Prior to launching into the details of the separate steps, however, it is important to provide some context.

A1.1. Cost Allocation Context

The test year cost of service is calculated using a utility-based cost method whereby test year revenue (or total cost) is the sum of three components: O&M expense, depreciation expense, and a return on plant in service. The cost allocation steps described in Sections A1.2 thru A1.4 are applied separately to each of the three cost components. Below is a description of each these components within the context of the current rate study.

O&M. Total O&M spending is equal to O&M presented in the test year (2010) Water Fund audited financial statements, excluding debt service, depreciation, and certain accrued expenses.

Depreciation (use of capital assets). Total depreciation is equal to the amount presented in the 2010 Water Fund audited financial statements, excluding depreciation on contributed assets (those assets, such as water meters, whose installation was paid for directly by individual customers).

Return on Assets. This is the result of applying an “interest rate” (rate-of-return or ROR) to the net book value of plant in service. Plant in service is equal to the amount presented in the 2010 audited financial statements, excluding contributed assets. Two rates of return are used in this cost allocation. “Regional” assets (assets that are shared with the wholesale customers and whose costs are allocated to wholesale – primarily watersheds and transmission assets) use the rate-of-return as defined in the wholesale contracts (6.2 percent in 2010). The rate-of-return on retail assets (i.e., everything that is not regional) is adjusted so that the total rate-of-return is equal to the difference between total retail service revenue and the sum of O&M and depreciation in the test year. Therefore,

$$\begin{aligned} & \text{(Retail portion of Regional assets*Regional ROR)} \\ & + \text{(Retail assets*Retail ROR)} \\ & + \text{Retail portion of Depreciation} \\ & + \text{Retail portion of O\&M}^{14} \\ & \text{Retail revenue} \end{aligned}$$

where all values are for the 2010 test year. The rate-of-return on only retail assets for 2010 is 0.3 percent, which results in an overall weighted direct service rate-of-return of 2.9 percent.

¹⁴For this rate study SPU made a change in its definition of O&M for purposes of cost allocation. O&M now includes taxes but does not include accounting accruals or expensed capital projects. In previous rate studies, O&M did not include taxes and included accruals and expensed capital. The change does not materially affect the cost allocations, but SPU believes the new methodology is a more rational cost basis for allocation.

A1.2. Step One: Water system expense allocation

The first step is to allocate test year expenses between wholesale and retail. This is similar to the split that is done to determine the wholesale revenue requirement for each year of the rate study, but it uses the test year data rather than 2012-2014 projections.

Both wholesale customers (suburban municipalities and water districts) and Seattle’s direct service retail customers share the cost of the “regional” portion Seattle’s water system, including facilities such as the watersheds and transmission pipelines. In addition, the system includes certain “subregional” assets, such as the West Seattle and Des Moines pipelines, which serve both Seattle retail customers and wholesale customers in the applicable subregions.

This step begins by assigning O&M and asset costs (depreciation and return on plant) to regional, subregional, and retail buckets. The regional O&M costs are then “grossed up” using various percentages specified in the contracts to reimburse the Water Fund for additional general and administrative overhead costs not directly included in the regional bucket. The mechanics of this are similar to the G&A allocation used for CIP, including the need to create a corresponding regional credit to avoid counting expenses twice.

The resulting regional costs, subregional costs, and regional credit are then split by average annual flows (as per contracts) between wholesale and retail customers. For 2010, 50 percent of regional costs went to wholesale and 50 percent to retail. The 2010 split of all subregional costs was 7 percent to wholesale and 93 percent to retail. The portion of the regional credit that retail receives is the amount wholesale would pay, so it is 50 percent.

Table **A1-1** presents Seattle’s share of combined O&M, depreciation, and return on asset expense in the 2010 test year.

Table A1-1
Seattle’s Share of Water System Utility-based Expense (2010)

	System Expense	Retail Share (%)	Retail Share (\$)
Regional Expense	79,569,648	50%	39,728,382
Regional Credit	(16,065,928)	50%	(8,044,360)
Sub-regional expense	3,519,881	93%	3,273,489
Retail Expense	78,682,873	100%	78,682,873
Total water system expense	145,706,474		113,640,384

A1.3. Step Two: Allocation of retail expense to allocation categories

In Step Two, the retail share of each O&M activity and water asset (for depreciation and return on plant allocation) during the test year is assigned to one of eleven allocation categories. This is an intermediate step which groups assets and services to then be allocated using customer characteristics (described in section A1.4). **Table A1-2** presents the distribution of actual 2010 retail expense between the various allocation categories.

Table A1-2
2010 Retail Water Expense by Allocation Category

	O&M	Depreciation	Return on Plant	Total Retail Expense
Commodity	14,893,489	18,006,091	21,083,311	53,982,891
Pumping	229,030	255,521	11,286	495,837
Meters & Services	3,417,207	5,266,330	350,694	9,034,230
Customer service/account-related	5,315,058	548,874	5,695	5,869,627
Residential	918,225	-	-	918,225
General Service	585,049	-	-	585,049
Public Fire	869,594	59,769	7,616	936,979
Reservoirs	1,192,954	2,016,503	243,205	3,452,662
Mains	2,056,556	2,381,515	264,953	4,703,024
Asset composite	1,127,637	6,924,864	124,334	8,176,835
Overall composite	25,485,025	-	-	25,485,025
Total retail water expense	56,089,824	35,459,467	22,091,094	113,640,384

A1.4. Step Three: Allocation of expense by allocation category to cost component categories

In Step Three, each allocation category from Step Two is distributed between the cost component categories. Some of these are fairly straightforward (Commodity is assigned to Average Annual Flow) and some are a little more complicated. The details of each assignment follow Table A1-3.

Table A1-3
Allocation Factors for Assignment of Retail Expense
To Cost Component Categories

ALLOCATION CATEGORIES	COST CATEGORIES							
	Commodity Average Annual Flow	Capacity		Customer-related		Direct Assignment		
		Peak Day Flow	Peak Week Flow	Meter Equiv	Accounts	Residential	General Service	Public Fire
Commodity	100.0%							
Pumping			100.0%					
Meters & Services				100.0%				
Customer Service & Account-Related					100.0%			
Residential						100%		
General Service							100%	
Public Fire								100%
Reservoirs	78%	6%	14%					2%
Mains	38%							62%
Asset composite	83%	0.3%	1%	11%	1%			3%
Overall composite	74%	0.3%	1%	11%	8%			5%

Commodity. This category is primarily made up of the regional and subregional costs identified in Step One above. These costs are assigned to the Commodity category because average annual flow is what drives the cost to retail ratepayers.

Pumping. Pumping costs are allocated to peak week flow because pump stations are primarily sized to meet peak week demands (shorter duration peaks such as daily swings are met by drawing down reservoir levels).

Meters and Services. This category contains costs such as service replacements and meter testing and repair. These costs tend to vary by meter size and are allocated using a factor called “Equivalent Meters” that assigns a higher weight to larger meters. Additional details on the Equivalent Meter are in Section A1.5.

Customer service & account-related. This category includes customer related expenses which do not vary with water usage or meter size. These costs are assigned to the Number of Accounts category. Included in this category are general customer service and account administration expense as well as the Water Fund’s share of the CCSS billing system, communication equipment (Interactive Voice Response) and other IT investments.

Residential, General Service, and Public Fire. These categories include expenses which are directly attributable to specific customer classes. Examples are:

- Residential - Residential customer service teams
- General Service - General Service customer service teams
- Public Fire - Hydrant repair and flow testing

Reservoirs. The storage capacity of reservoirs provides: a) several days of supply in the case of emergencies (e.g. earthquakes); b) a reserve of water for fighting fires; and c) a source of water for heavy demand periods (diurnal peaks and hot day peaks). The cost of reservoirs is allocated to these uses based on an engineering analysis of the proportion of capacity devoted to each use.

Mains. Watermains are sized to meet fire flow requirements and domestic demands for water. The cost for this allocation category is split between Public Fire and Average Annual categories based on the proportional share of total installed main cost attributed to fire uses and to domestic uses. Section A1.6 contains a detailed description of this calculation.

Asset Composite. This category includes items that support the Water Fund’s asset base, such as field crew scheduling and heavy equipment. The allocation among customer characteristics is the average allocation of all previously assigned asset costs.

Overall Composite. This category includes items that support the overall Water Fund, such as Finance and the Director’s Office. The allocation among customer characteristics is the average allocation of all costs.

The application of the allocation factors identified in **Table A1-2** to the test year (2010) expense by allocation category in **Table A1-3** gives us the distribution of actual test year costs between cost component categories, as presented in **Table A1-4** below.

Table A1-4
Retail Component Cost Allocation
2010 Cost of Service (O&M + Depreciation + Rate-of-Return)

ALLOCATION CATEGORIES	Total Retail Expense	COST CATEGORIES							
		Commodity Average Annual Flow	Capacity		Customer-related		Direct Assignment		
			Peak Day Flow	Peak Week Flow	Meter Equiv	Accounts	Residential	General Service	Public Fire
Commodity	53,982,891	53,982,891							
Pumping	495,837			495,837					
Meters & Services	9,034,230				9,034,230				
Customer Service & Account-Related	5,869,627					5,869,627			
Residential	918,225						918,225		
General Service	585,049							585,049	
Public Fire	936,979								936,979
Reservoirs	3,452,662	2,686,171	217,518	497,183					51,790
Mains	4,703,024	1,787,149							2,915,875
Asset composite	8,176,835	6,776,570	23,050	95,886	909,470	89,792			282,067
Overall composite	25,485,025	18,858,287	69,546	314,794	2,874,646	2,157,406			1,210,345
Total	113,640,384	84,091,068	310,114	1,403,700	12,818,347	8,116,825	918,225	585,049	5,397,056

These costs are then divided among customer classes based on the characteristics of each customer class. This step is discussed in detail in Sections 4.1 and 4.2.

A1.5. Calculation of Equivalent Meters Allocator

Section 4.3 in Chapter 4 discusses the use of the Equivalent Meters allocator to assign certain customer-service related expense between customer classes. Equivalent Meters are the number of meters by size (3/4 inch, 1 inch, 1.5 inch...) weighted by an equivalent factor, which is the sum of 1) annualized costs, by meter size, for meter maintenance, testing, repair, replacement and service renewal; and 2) annual customer service costs for each size meter. The progression is different for domestic versus fire service customers since a fire service typically consists of a large pipe but only a 3/4" "tattletale" meter. Table A1-5 presents the calculation basis for the equivalent meters allocator.

**Table A1-5
Equivalent Meters Allocation Percentage Basis**

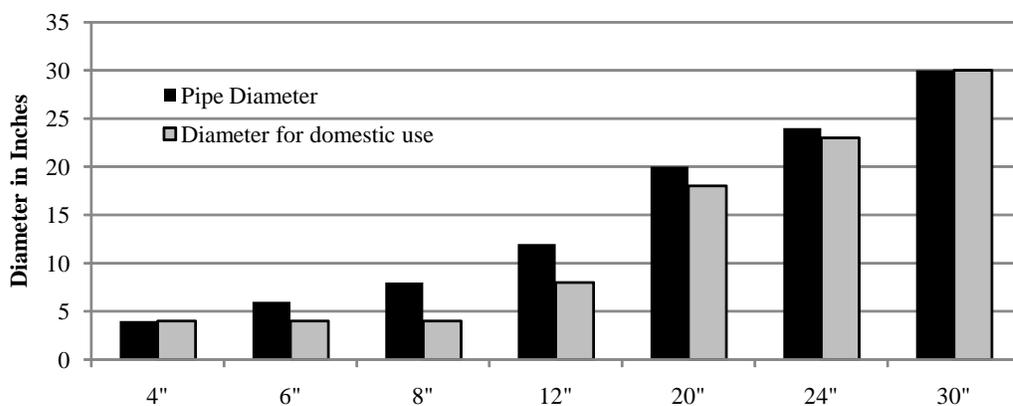
Meter Counts & Equivalencies								
		Residential		General Service		Fire Service		
Meter Size	Equip Factor	# of Meters	Equip Meters	# of Meters	Equip Meters	Fire Equip Factor	# of Meters	Equip Meters
0.75 inch	1.0	143,514	143,514	6,902	6,902	1.0	83	83
1 inch	1.0	16,751	16,751	5,244	5,244	1.0	1	1
1 1/2 inch	1.6	1,263	2,021	3,634	5,814	1.3	2	3
2 inch	1.8	439	790	4,578	8,240	1.5	610	915
3 inch	11.4	1	11	497	5,666	3.5	29	102
4 inch	13.2	1	13	725	9,570	4.3	1,526	6,562
6 inch	16.4	1	16	334	5,478	5.3	1,262	6,689
8 inch	19.4	1	19	115	2,231	6.0	728	4,368
10 inch	23.7	-	-	36	853	6.9	28	193
12 inch	34.2	-	-	6	205	7.8	9	70
16 inch	37.1	-	-	-	-	8.7	-	-
20 inch	42.0	-	-	2	84	9.5	-	-
24 inch	47.0	-	-	-	-	10.4	-	-
Total		163,136		50,288			18,985	
Percentage		70%		22%			8%	

A1.6. Calculation of Watermains Allocator

Watermains are sized to meet fire flow requirements and domestic demands for water. In sizing the watermain, the pipe must have sufficient capacity to meet two separate criteria; (i) peak hour domestic demand and (ii) peak day domestic demand + fire flow requirements. For medium and small-size pipes (8 inch diameter or less) the second criteria will be the binding constraint. For larger size pipe i.e., pipes that are serving very large areas or areas with very dense developments, the first criteria (peak hour demand) will be the binding constraint.

The most common size pipe in Seattle’s system is, by far, an 8 inch diameter pipe. In areas served by 8 inch mains, domestic peak hour flows, i.e., the first criteria, can typically be met with 4 inch mains. The oversizing from 4 inch to 8 inch is needed to meet the second criteria. Taking into account that hydraulic capacity grows exponentially with the diameter of the pipe, this means about 25 percent of the 8 inch pipe is serving domestic flows and 75 percent is providing fire protection. Pipes smaller than 8 inch were installed on the system when the fire flow requirements were lower than they are today. For this allocation exercise, the cost of 4 inch mains were assigned to domestic service and the cost of 6 inch mains were assigned to public fire protection. For pipes larger than 8 inch, the share of capacity needed for fire flows shrinks until we reach pipes with diameters of 30 inch or more. The graph below shows the relationship between pipe size and fire flow requirements expressed in diameters.

**Chart A1.1
Actual Pipe Diameters versus Diameter Required for Domestic Use**



Pipe Diameter	4	6	8	12	20	24	30
Diameter for domestic use	4	4	4	8	18	23	30
Capacity for domestic use	100%	44%	25%	44%	81%	92%	100%

The cost of watermains is split between fire protection and domestic uses based on each group’s proportionate share of total watermain asset value. The calculation of this asset value takes into account the shares of hydraulic capacity discussed above. The steps to determining the appropriate allocation for watermain assets are as follows:

1. Estimate net book value by pipe size for all the mains in the system. SPU financial systems track net book value for total water mains but not by pipe size. For the purposes of this allocation, net book value by pipe size is estimated by applying estimated accumulated depreciation to estimated replacement cost by pipe size. An adjustment factor is then applied in order to adjust each pipe size so that the total estimated net book value equals

actual total watermain net book value as of 12/31/09. Estimated replacement cost and by pipe size is determined as follows:

$$\text{Estimated Replacement Cost} = (\$ \text{Cost} / \text{LF}_d) \times (\text{LF}_d)$$

Where $\$ \text{Cost} / \text{LF}_d$ = the replacement cost per lineal feet of a pipe of diameter 'd,'
and

LF_d = the number of lineal feet in the system of pipe of diameter 'd' as of 2009.

Using cost indices by year installed, the replacement cost net book value is converted to an estimated original net book value by year installed.

2. Determine cost associated with fire protection service.

Fire Protection Net Book Value =

$$\sum (\text{Hydraulic Capacity for Fire}_d) \div (\text{Hydraulic Capacity of Pipe}_d) \times (\text{Net Book Value by Pipe Length})$$

3. Determine the proportion of the watermain net book value devoted to fire protection.

Proportion of costs for fire protection =

$$(\text{Fire Protection Net Book Value}) \div (\text{Total Net Book Value})$$

The percentage share determined in Step Three is then used to assign watermain costs to fire protection. Using the above methodology, the cost share assigned to fire protection for this rate period is 62 percent.

APPENDIX B: 2001 WHOLESALE CONTRACT RATE STUDY

Seattle Public Utilities 2012-2014 Wholesale Water Rate Study Full and Partial Requirements Contracts

Seattle adjusted regional wholesale water rates beginning January 1, 2012 as shown below.

Rates per ccf	2011		2012		2013		2014	
	Off-Peak	Peak	Off-Peak	Peak	Off-Peak	Peak	Off-Peak	Peak
System Baseline Rates	\$1.29	\$1.91	\$1.52	\$2.25	\$1.53	\$2.26	\$1.53	\$2.27
Change from Prior Year:			18%	18%	0%	0%	0%	0%
Transition Discount:	-\$0.13	-\$0.12	N/A	N/A	N/A	N/A	N/A	N/A
Adjusted Wholesale Rate:	\$1.16	\$1.79	\$1.52	\$2.26	\$1.53	\$2.26	\$1.53	\$2.27
Change from Prior Year:			31%	26%	0%	0%	0%	0%
Interim Growth Charge:	\$0.60		N/A		N/A		N/A	
Subregional Surcharge Rates								
Southwest Subregion:	\$0.05		\$0.06		\$0.07		\$0.07	
East Subregion, Segment 3:	\$0.05		\$0.15		\$0.16		\$0.16	
East Subregion, Segment 4:	\$0.07		\$0.18		\$0.19		\$0.19	
ERU Fee (\$/ERU):	\$783		\$783		\$783		\$TBD	

This document describes the calculation of rates for Full and Partial Requirements customers. It is organized to follow the steps involved in the rate study including the assumptions, allocating O&M and asset costs to develop the Regional Cost, allocating this Regional Cost between Block contracts and Full and Partial Requirements customers, incorporating true-up adjustments, and designing rates.

This rate study also develops rates for the Southwest and East subregions, Renton New Supply block, CWA and Northshore blocks, and North Bend treatment discount. A rate is also developed in the event that we do not have a signed Full Requirements contract with the City of Bothell by December 31, 2011.

B1.1. Overall Assumptions

1. Inflation is assumed to be 2.0 percent through the period of the rate study.
2. Effective in 2011, the Cities of Bothell, Duvall, and Renton, and Water Districts 49, 90, and 119 will have Full and Partial contracts substantially similar to the existing Full and Partial contracts.

3. Effective in 2011, the City of Edmonds and Lake Forest Park Water Districts will have emergency intertie agreements only, not wholesale contracts.
4. The effect of North Bend demand and revenue is excluded because it is unknown and minimal. The actual effect of any water sales will be captured through the true-up process.
5. Seattle's average cost of debt is assumed at 4.7 percent, which is the rate calculated for the 2010 Purveyor Statements.
6. A true-up is performed each year to compare the prior year's actual revenues and actual costs of service. A running balance of the excess or deficit in revenues is maintained. This rate study sets rates to amortize the projected 2011 year-end true-up balance over the 2013-2014 rate period.

B1.2. Significant Changes Since The Last Rate Study

1. Effective in 2011, the Cities of Bothell, Duvall, and Renton, and Water Districts 49, 90, and 119 will have Full and Partial contracts substantially similar to the existing Full and Partial contracts.
2. Effective in 2011, the City of Edmonds and Lake Forest Park Water Districts will have emergency intertie agreements only, not wholesale contracts.
3. Cascade's Declining Block Contract was amended in late 2008 to include a "Supplemental Block" of 3.0 MGD annually, priced at Full and Partial Commodity rates. This acts as 3.0 MGD of additional Full and Partial demand when setting the Full and Partial rates, regardless of actual Cascade consumption.
4. As per section IV.E.12.b of the contracts, the transition growth charge expires at the end of 2011, and these revenues are no longer available to hold down "base" rates in 2012 and beyond.
5. This rate study creates separate rates for Existing Supply, Existing Transmission, New Supply, and New Transmission.

B1.3. Total Regional O&M Costs

Yearly operations costs for each cost pool (e.g. Existing Supply) are calculated by applying an index to a base amount. The index is developed from the cost of certain O&M activities as

identified in the contract. The original base amount for each cost pool is identified in the contracts.

The starting point for this rate study was the 2009 base and index amounts developed during the 2009 true-up. Final (e.g. audited) 2010 costs were not available, so 2010 year end costs as of January 11, 2011 were used. For 2012, the O&M budget by activity was used. For 2012-2016, a general inflation rate of 2.0percent was used.

Regional O&M Costs

	2009 Actual	2010 Estimated	2011 Projected	2012 Projected	2013 Projected	2014 Projected	2015 Projected	2016 Projected
Existing Supply								
PY Base	26,674,018	27,279,519	27,623,053	28,295,113	28,861,015	29,438,236	30,027,001	30,627,541
PY Costs in identified activities	18,545,673	18,967,489	19,206,349	19,673,634	20,067,106	20,468,448	20,877,817	21,295,374
CY Costs in identified activities	18,967,489	19,206,349	19,673,634	20,067,106	20,468,448	20,877,817	21,295,374	21,721,281
Ratio of CY/PY	1.023	1.013	1.024	1.020	1.020	1.020	1.020	1.020
CY Operations Cost Base	27,279,519	27,623,053	28,295,113	28,861,015	29,438,236	30,027,001	30,627,541	31,240,091
Expensed CIP	2,772,725	855,958						
Total CY Cost	30,052,243	28,479,011	28,295,113	28,861,015	29,438,236	30,027,001	30,627,541	31,240,091
Existing Transmission								
PY Base	8,502,433	10,417,181	10,429,556	10,560,100	10,771,302	10,986,728	11,206,463	11,430,592
PY Costs in identified activities	2,232,207	2,734,888	2,738,137	2,772,409	2,827,858	2,884,415	2,942,103	3,000,945
CY Costs in identified activities	2,734,888	2,738,137	2,772,409	2,827,858	2,884,415	2,942,103	3,000,945	3,060,964
Ratio of CY/PY	1.225	1.0012	1.0125	1.0200	1.0200	1.0200	1.0200	1.0200
CY Operations Cost Base	10,417,181	10,429,556	10,560,100	10,771,302	10,986,728	11,206,463	11,430,592	11,659,204
Expensed CIP, gain on sale	(4,513,122)	528,984						
Total CY Cost	5,904,059	10,958,540	10,560,100	10,771,302	10,986,728	11,206,463	11,430,592	11,659,204
New Supply								
PY Base	866,066	705,844	635,077	979,548	999,139	1,019,121	1,039,504	1,060,294
PY Costs in identified activities	387,757	316,031	284,346	438,578	447,349	456,296	465,422	474,731
CY Costs in identified activities	316,031	284,346	438,578	447,349	456,296	465,422	474,731	484,225
Ratio of CY/PY	0.815	0.900	1.542	1.020	1.020	1.020	1.020	1.020
CY Operations Cost Base	705,844	635,077	979,548	999,139	1,019,121	1,039,504	1,060,294	1,081,500
New Transportation								
2009 Costs in identified activities	1,067							
Apply G&A as per CIP	2,059							
Total New Transmission Costs	2,059	0	0	0	0	0	0	0

B1.4. Total Regional Capital Costs

Yearly capital costs for the Existing Supply and Existing Transmission cost pools are calculated on the utility basis for assets assigned to those cost pool. Under the utility basis, the annual cost of an asset is depreciation plus the Net Book Value of the asset multiplied by a return on assets. The capital costs for the New Supply cost pool are calculated on the utility basis for assets created prior to 2011, and on a cash basis for assets added in 2011 and later.

The assets to be included in each cost pool are identified in the contract. Administratively, there are three categories of assets to be included in the rate study cost allocation: existing assets, future assets (in-construction or planned), and special assets.

Existing Assets

The basis for existing assets was the preliminary 2010 asset schedule available in February 2011. Depreciation and Net Book Value were calculated for each asset through 2016 and allocated to the appropriate cost pool.

In-Construction and Future Assets

Identification of future assets came from the 6-year Capital Improvement Plan for the Water Fund, which covers 2011-2016. The SPU financial system provided spending on these projects through year-end 2010.

For each project, an in-service year was determined – typically the last year of spending in the CIP budget. Exceptions were annual programs, such as Transmission Pipeline Rehabilitation, that are capitalized at the end of each year. Interest costs associated with assets in construction (“AFUDC”) were calculated for assets through June of the year they are to be placed in service, and depreciation was calculated for each project starting with the year after the asset is placed in service. All of these assumptions are consistent with SPU’s actual accounting practices.

Assets were assigned to cost pools per the lists in the contract exhibits. In a few cases, the CIP item consists of smaller projects (such as the Cathodic Protection Program), some included in the wholesale rate base and some not. These assets were categorized where the majority of the costs will be incurred. When the projects are executed, they will be disaggregated for tracking and allocating actual costs.

Special Assets

There are several assets that receive special treatment for rate making/cost allocation purposes.

1. Interest paid during construction on the Tolt Filtration Plant.

Wholesale customers agreed to pay a portion of interest costs during construction of the Tolt Filtration Plant. These payments reduce the rate-based cost of the Tolt Filtration Plant now that construction is complete. This appears as a contributed asset on the existing asset schedule.

2. Interest paid during construction on the Cedar Treatment Plant.

Wholesale customers agreed to pay a portion of the interest costs for the Cedar Treatment Plant during construction. These payments reduce the rate-based cost of the Cedar Treatment Plant now that construction is complete. This appears as a contributed asset on the existing asset schedule.

B1.5. Allocation of Total Regional Costs

The work above determines total regional costs, which are then allocated between wholesale customers. For cost allocation purposes, Seattle's retail service area is considered a wholesale customer of the water system. Each allocation described below is done in parallel for each cost pool, where applicable.

Allocation to Block Customers

Cascade Water Alliance (CWA) has a declining block contract with Seattle rather than a full or partial requirements contract. For its Base Block, CWA shares in the Regional Existing Supply and Existing Transmission cost pools but not New Supply or New Transmission. The allocation to Cascade's Base Block is done according to the CWA contract; CWA pays 18.1 percent of the regional existing supply and transmission costs. This allocation is 102 percent times the CWA block volume (30.3 MGD) divided by the system firm yield (171 MGD).

Northshore has a fixed block contract with Seattle. Northshore shares in the Regional Existing Supply and Existing Transmission cost pools, and the conservation related portions of the New Supply and Facilities Charge cost pools. The allocation of Existing Supply and Existing Transmission is 5.1 percent, which is 102 percent of Northshore's block volume (8.55 MGD) divided by the system firm yield (171 MGD). Northshore's allocation of conservation is 6.2 percent, which is 102 percent of Northshore's block volume (8.55 MGD) divided by the system firm yield minus the CWA block (171 MGD - 30.3 MGD). CWA's block is not included in conservation calculations since CWA does not participate in SPU's regional conservation programs.

Renton has a Partial Requirements Contract, but their allocation of New Supply costs is being handled as a block allocation. This is because their entire retail area will be participating in Regional Conservation while their purchases from Seattle are only a small portion of their

supply. They will be allocated 5.7 percent of New Supply O&M costs and New Supply asset costs for assets added in 2012 and later.

Remainder to Full and Partial Requirements Contract Holders

Full and Partial Requirements customers and the 3.0 MGD Cascade Supplemental Block pay the remaining costs in the new contract cost pool.

B1.6. True-Up Adjustments

Although regional cost development is done jointly for Full and Partial Requirements Customers and the CWA, Northshore, and Renton blocks, the true-ups and resulting excesses/deficiencies for these groups are maintained separately. As such, Seattle (rather than Full and Partial wholesale customers) funds any excesses or deficiencies in the CWA, Northshore, and Renton blocks.

For costs recovered through rates, the true-up balance is applied during rate studies to raise or lower future rates. For costs recovered through block payments, the excess or deficiency is applied to the following year's block payments; For example, the true-up covering 2010 will be calculated in 2011 and applied to 2012's block.

This rate study takes into account the actual Full and Partial Requirements Contracts true-up balances from the 2009 true-up and the current forecast for the 2010 and 2011 true-ups. Rates are set to amortize the projected 2011 balances plus interest over the period 2012-2014.

B1.7. Cost Allocation Summary

The following schedule presents the summary of Full and Partial Contract costs for 2009-2016.

	2009	2010	2011	2012	2013	2014	2015	2016
Existing Supply Cost Pool								
Asset cost		33,500,624	34,131,392	34,252,425	34,591,548	34,748,272	34,772,304	38,814,429
O&M cost		26,767,095	28,295,113	28,861,015	29,438,236	30,027,001	30,627,541	31,240,091
Regional Cost		60,267,719	62,426,505	63,113,441	64,029,784	64,775,273	65,399,845	70,054,520
Allocation to 1982 contract		(2,195,194)						
Allocation to CWA Base Block		(10,892,597)	(11,282,769)	(11,406,924)	(11,572,541)	(11,707,278)	(11,820,161)	(12,661,433)
Allocation to NUD Block		(3,073,654)	(3,183,752)	(3,218,785)	(3,265,519)	(3,303,539)	(3,335,392)	(3,572,781)
Remaining Costs to F&P rates		44,106,274	47,959,984	48,487,731	49,191,724	49,764,456	50,244,291	53,820,307
includes CWA supplemental block & Renton								
True Up balance applied		-	-	3,800,000	2,100,000	800,000	-	-
Amount to be collected through rates		44,106,274	47,959,984	52,287,731	51,291,724	50,564,456	50,244,291	53,820,307
Expected revenues, incl CWA suppl block		41,860,023	45,025,140	52,347,274	51,385,934	50,589,745	50,258,726	53,744,899
CY (under)/Over payment		(2,246,251)	(2,934,844)	3,859,542	2,194,210	825,289	14,435	(75,407)
Balance	(1,022,276)	(3,316,573)	(6,407,296)	(2,848,896)	(788,585)	(359)	14,059	(60,687)
Interest on above, affect following year	(48,047)	(155,879)	(301,143)	(133,898)	(37,063)	(17)	661	(2,852)
Existing Transmission Cost Pool								
Asset cost		17,727,969	17,477,844	17,329,624	17,220,237	18,445,610	18,575,665	18,495,287
O&M cost		10,865,874	10,560,100	10,771,302	10,986,728	11,206,463	11,430,592	11,659,204
Regional Cost		28,593,844	28,037,944	28,100,926	28,206,965	29,652,073	30,006,257	30,154,491
Allocation to 1982 contract		(1,041,504)						
Allocation to CWA Base Block		(5,167,961)	(5,067,489)	(5,078,873)	(5,098,038)	(5,359,222)	(5,423,236)	(5,450,027)
Allocation to NUD Block		(1,458,286)	(1,429,935)	(1,433,147)	(1,438,555)	(1,512,256)	(1,530,319)	(1,537,879)
Remaining Costs to F&P rates		20,926,093	21,540,519	21,588,906	21,670,372	22,780,595	23,052,701	23,166,584
includes CWA supplemental block & Renton								
True Up balance applied		-	-	1,900,000	1,450,000	-	-	-
Amount to be collected through rates		20,926,093	21,540,519	23,488,906	23,120,372	22,780,595	23,052,701	23,166,584
Expected revenues, incl CWA suppl block		19,860,366	20,222,377	23,305,336	23,122,132	22,689,578	22,978,703	22,922,092
CY (under)/Over payment		(1,065,727)	(1,318,142)	1,716,430	1,451,761	(91,017)	(73,999)	(244,492)
Balance	(441,611)	(1,528,094)	(2,918,056)	(1,338,775)	50,064	(38,600)	(114,413)	(364,283)
Interest on above, affect following year	(20,756)	(71,820)	(137,149)	(62,922)	2,353	(1,814)	(5,377)	(17,121)
New Supply Cost Pool - Rate Based								
Asset cost		N/A						
O&M cost		635,077	979,548	999,139	1,019,121	1,039,504	1,060,294	1,081,500
Regional Cost		635,077	979,548	999,139	1,019,121	1,039,504	1,060,294	1,081,500
Allocation to 1982 contract		(23,132)						
Allocation to NUD Block		(39,364)	(60,715)	(61,930)	(63,168)	(64,432)	(65,720)	(67,035)
Allocation to Renton Block		-	-	(56,951)	(58,090)	(59,252)	(60,437)	(61,645)
Remaining Costs to F&P rates		572,581	918,832	880,258	897,863	915,821	934,137	952,820
includes CWA supplemental block								
Transfer from/(to) FC cost pool		-	-	-	-	-	-	-
True Up balance applied		-	-	38,000	38,000	38,000	-	-
Amount to be collected through rates		572,581	918,832	918,258	935,863	953,821	934,137	952,820
Expected revenues, incl CWA suppl block		543,420	862,606	841,749	994,666	976,056	957,446	938,836
CY (under)/Over payment		(29,160)	(56,227)	(38,509)	96,802	60,235	23,309	(13,984)
Balance	(23,050)	(53,294)	(112,025)	(155,799)	(66,320)	(9,201)	13,675	334
Interest on above, affect following year	(1,083)	(2,505)	(5,265)	(7,323)	(3,117)	(432)	643	16
New Transmission Cost Pool								
Asset cost		N/A						
O&M cost		N/A						
Regional Cost		-						
Allocation to 1982 contract		-	-	-	-	-	-	-
Remaining Costs to F&P rates		-	-	-	-	-	-	-
includes CWA supplemental block & Renton								
True Up balance applied		-	-	-	-	-	-	-
Amount to be collected through rates		-						
Expected revenues, incl CWA suppl block		-						
CY (under)/Over payment		-	-	-	-	-	-	-
Balance	(14)	(15)	(16)	(16)	(17)	(18)	(19)	(20)
Interest on above, affect following year	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New Supply Cost Pool - FC Based								
Asset cost		3,071,429	4,819,213	4,714,107	4,609,740	4,506,129	2,698,031	2,708,690
Regional Cost		3,071,429	4,819,213	4,714,107	4,609,740	4,506,129	2,698,031	2,708,690
Allocation to 1982 contract		(111,874)						
Allocation to NUD Block		(190,376)	(298,709)	(292,194)	(285,725)	(279,303)	(167,232)	(167,893)
Allocation to Renton Block		-	-	(107,559)	(109,710)	(111,904)	(114,142)	(116,425)
Transfer from/(to) FC New Supply Rates Cost Pool		-	-	-	-	-	-	-
Remaining Costs to balance FCs		2,769,179	4,520,504	4,314,353	4,214,304	4,114,922	2,416,656	2,424,372
Expected revenues		1,186,432	1,300,563	2,199,447	2,199,447	2,747,010	2,747,010	2,747,010
CY (under)/Over payment		(1,582,747)	(3,219,941)	(2,114,906)	(2,014,857)	(1,367,912)	330,354	322,638
Balance	12,882,597	11,905,332	9,244,941	7,564,547	5,905,224	4,814,858	5,371,510	5,946,609
Interest on above, affect following year	605,482	559,551	434,512	355,534	277,546	226,298	252,461	279,491
New Supply Facility NBV								
	13,192,711	13,214,262	12,772,230	12,182,195	11,441,200	10,546,226	11,312,163	11,917,902

B1.8. Rate Making

The essence of rate making is to determine the unit price by dividing the revenues to be collected by the units of service. Water rates are set in whole penny amounts and are seasonally differentiated (i.e. there is a peak rate and an off-peak rate). Seasonal rate rounding was selected to generate revenues that were closest to the annual revenue requirement while maintaining the existing ratio of peak rate to off-peak rate of 1.45 to 1.5.

Transition Discount

Until January 1, 2012, wholesale customers paid a \$0.60 per ccf “Interim Growth Surcharge” on consumption above 1982 levels (ie. their “Old Water Allowance”). The revenue from this surcharge discounted the base rate charged to wholesale customers (for an example of this mechanism, see the “2011” column on page 1 of this rate study). Because this surcharge has expired, customers who have not been paying the surcharge will experience a significant rate increase, while those paying growth charges may experience a rate decrease.

Demand Volumes

Since the revenue generated by rates is dependent on the amount of water sold, the forecast of demand has an impact on rates. Historically, Seattle has underestimated the rate of decline in demand, resulting in significantly negative true-up balances. The overall forecast of demand used in this rate study is downward by 1.5 percent per year. This continues the trend in weather adjusted purchases seen over the last 10 years.

	ccf	2011	2012	2013	2014
Full and Partial					
	Peak	5,697,465	5,528,562	5,359,661	5,190,758
	Off-Peak	7,082,444	6,868,726	6,655,007	6,441,288
	Total	12,779,909	12,397,288	12,014,668	11,632,046
CWA					
	Base Block	14,785,428	14,785,428	14,785,428	14,785,428
	Supplemental Block	1,463,904	1,463,904	1,463,904	1,463,904
	Actual Demand: Peak	5,732,938	5,748,146	5,763,355	5,778,563
	Actual Demand: Off-Peak	6,710,986	6,728,789	6,746,592	6,764,394
	Actual Demand: Total	12,443,924	12,476,935	12,509,947	12,542,957
Northshore					
	Annual Block	4,172,126	4,172,126	4,172,126	4,172,126
	Actual Demand: Peak	1,013,685	990,777	967,869	944,961
	Actual Demand: Off-Peak	1,307,769	1,278,215	1,248,662	1,219,108
	Actual Demand: Total	2,321,454	2,268,992	2,216,531	2,164,069
Seattle as-if-wholesale					
	Peak	11,014,894	10,865,252	10,715,611	10,565,969
	Off-Peak	17,599,988	17,361,029	17,122,071	16,883,111
	Total	28,614,882	28,226,281	27,837,681	27,449,080

Cost Pools and Regional Rates

Full and partial contract customers technically have separate rates for each cost pool: Existing Supply, Existing Transmission, New Supply, and New Transmission. In the past, these rates were not published individually. This rate study establishes separate rates, since Renton pays for three of the cost pools through rates, and one through a block payment. Individual rates by cost pool are below.

Rates per ccf	2012		2013		2014	
	Off-Peak	Peak	Off-Peak	Peak	Off-Peak	Peak
Existing Supply	\$1.04	\$1.54	\$1.04	\$1.54	\$1.04	\$1.55
Existing Transmission	\$0.46	\$0.69	\$0.47	\$0.69	\$0.47	\$0.69
New Supply	\$0.02	\$0.02	\$0.02	\$0.03	\$0.02	\$0.03
New Transmission	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

For regional rates, underlying costs were actually not a factor in the large increase from 2011 to 2012. The rate drivers for 2012 are:

Regional cost	(0.4%)
Declines in demand	10.5 %
12/31/2011 true-up balance	8.1 %
<u>Growth charge expiration</u>	<u>10.5 %</u>
Total	28.6 %

B1.9. Southwest Subregion

Calculating rates for the Southwest Subregion uses data from the main rate study, but is done as a separate step. The Southwest Subregion is comprised of six “Facilities” as defined in the contract. For each Facility, total O&M and utility basis capital costs are determined. Then, for each of the six facilities, the percent used by all wholesale customers (as opposed to Seattle) is determined, and that percent is applied to the O&M and asset cost for the corresponding facility. These are combined to form the Southwest Subregion cost pool.

Capital Cost

During the main rate study, certain existing assets and future/planned assets were identified as Subregional. The utility basis cost was calculated using the same method as for the regional cost pools.

O&M

O&M cost tracking for subregions was done a little differently than for the regional cost pools. Location codes are pulled from the financial system, rather than using budgeted spending per activity code. For each Facility, the O&M costs from the preliminary 2010 true-up were carried forward.

Setting Rates

The procedures above produce a total Subregional cost for all wholesale customers served by the subregion. This total cost was divided by the total flow for all wholesale customers in the subregion, regardless of the exact location of their wholesale meter, to produce a rate per ccf.

	2009 true up allocators		2010 projected	2011	2012	2013	2014	2015	2016
		2009							
585 Zone Facilities									
Operations Costs			3,579	3,579	3,579	3,579	3,579	3,579	3,579
Asset Recovery Costs			455,365	538,823	528,249	517,303	506,357	495,411	484,283
Total			458,945	542,402	531,828	520,882	509,936	498,990	487,862
Allocation to Southwest Subregion Customers	18.9%		86,741	102,514	100,515	98,447	96,378	94,309	92,206
West Seattle Reservoir									
Operations Costs			2,569	2,569	2,569	2,569	2,569	2,569	2,569
Asset Recovery Costs			2,508,204	3,088,823	3,037,036	3,014,656	2,969,510	2,917,284	2,865,058
Total			2,510,774	3,091,393	3,039,606	3,017,226	2,972,079	2,919,853	2,867,628
Allocation to Southwest Subregion Customers	1.7%		42,683	52,554	51,673	51,293	50,525	49,638	48,750
West Seattle Pipeline									
Operations Costs			7,437	7,437	7,437	7,437	7,437	7,437	7,437
Asset Recovery Costs			160,727	157,319	153,911	150,503	147,094	143,686	140,278
Total			168,164	164,756	161,347	157,939	154,531	151,123	147,715
Allocation to Southwest Subregion Customers	8.0%		13,453	13,180	12,908	12,635	12,362	12,090	11,817
Des Moines Way Pipeline									
Operations Costs			2,357	2,357	2,357	2,357	2,357	2,357	2,357
Asset Recovery Costs			10,698	10,254	9,811	9,368	8,924	8,481	8,038
Total			13,054	12,611	12,167	11,724	11,281	10,837	10,394
Allocation to Southwest Subregion Customers (at 100%)	100.0%		13,054	12,611	12,167	11,724	11,281	10,837	10,394
Military Road Feeder									
Operations Costs			0	0	0	0	0	0	0
Asset Recovery Costs			0	0	0	0	0	0	0
Total			0	0	0	0	0	0	0
Allocation to Southwest Subregion Customers (at 100%)	100.0%		0	0	0	0	0	0	0
East Marginal Way Feeder									
Operations Costs			0	0	0	0	0	0	0
Asset Recovery Costs			0	0	0	0	0	0	0
Total			0	0	0	0	0	0	0
Allocation to Southwest Subregion Customers (at 100%)	100.0%		0	0	0	0	0	0	0
Total Cost Allocated to SW Subregion			155,931	180,859	177,264	174,099	170,547	166,874	163,167
True Up balance applied					90,000	100,000	100,702		
Amount to be collected through rates			155,931	180,859	267,264	274,099	271,249	166,874	163,167
Flow					4,197,000	4,010,000	3,824,000	3,638,000	3,451,000
Calculated Rates					0.064	0.068	0.071	0.046	0.047
Rounded rates, per ccf					\$ 0.06	\$ 0.07	\$ 0.07	\$ 0.05	\$ 0.05
Expected revenues			136,613	219,200	251,820	280,700	267,680	181,900	172,550
CY (under)/Over payment			(19,318)	38,341	74,556	106,601	97,133	15,026	9,383
True up Balance		(250,234)	(281,314)	(256,195)	(193,680)	(96,182)	(3,569)	11,290	21,204
Interest on above, affect following year		(11,761)	(13,222)	(12,041)	(9,103)	(4,521)	(168)	531	997

B1.10. East Subregion

The East subregion consists of four segments of the Mercer Island Pipeline, each serving different combinations of wholesale customers. Because the segments are in series (each segment feeds the next one) cost allocation is a sequential calculation based on flows.

Capital Cost and O&M

The utility basis cost of each segment of the existing pipeline was determined using length to divide the total cost. No CIP items were identified that affect the Mercer Island Pipeline. For each segment, the 2006 true-up O&M costs were carried forward.

Setting Rates

Consistent with the contract, a rate was calculated for each segment of the pipeline and the rate will be applied to flow through wholesale meters on that segment. These rates and the revenues they generate will be tracked and trued up separately for each segment. As a result, Mercer Island, who has meters on two different segments, will experience two different subregional surcharges on their monthly bills.

Split Cost to Segment by Flows								
	2010	2011	2012	2013	2014	2015	2016	
Segment 1								
Assets	15,788	15,401	15,013	14,626	14,238	13,850	13,463	
O&M	3,351	8,751	3,487	3,700	4,005	4,422	4,980	
Cost	19,140	24,151	18,500	18,326	18,243	18,272	18,443	
Bellevue Taps	2,297	2,899	2,220	2,200	2,190	2,193	2,214	
Downstream	16,843	21,253	16,280	16,126	16,054	16,079	16,229	
Segment 2								
Assets	21,968	21,443	20,919	20,394	19,870	19,345	18,821	
O&M	4,727	4,727	4,727	4,727	4,727	4,727	4,727	
Cost	43,537	47,423	41,925	41,247	40,650	40,151	39,777	
Bellevue Taps	7,887	8,591	7,595	7,472	7,364	7,274	7,206	
Downstream	35,650	38,832	34,330	33,775	33,286	32,878	32,571	
Segment 3								
Assets	29,520	28,795	28,070	27,345	26,621	25,896	25,171	
O&M	6,266	6,266	6,266	6,266	6,266	6,266	6,266	
Cost	71,436	73,893	68,666	67,387	66,173	65,040	64,008	
Mercer Island & Seattle Taps	16,914	17,496	16,258	15,955	15,668	15,400	15,155	
Downstream	54,522	56,397	52,408	51,431	50,505	49,640	48,853	
Segment 4								
Assets	15,634	15,250	14,866	14,483	14,099	13,715	13,331	
O&M	3,319	3,319	3,319	3,319	3,319	3,319	3,319	
Cost	73,475	74,966	70,593	69,233	67,922	66,674	65,503	
Mercer Island Taps	73,475	74,966	70,593	69,233	67,922	66,674	65,503	
Calculate Rates for each segment:								
	2009	2010	2011	2012	2013	2014	2015	2016
Segment 3 Rate Calc:								
Total Cost Allocated to Segment 3		16,914	17,496	16,258	15,955	15,668	15,400	15,155
True Up balance applied				15,000	17,000	15,000		
Amount to be collected through rates		16,914	17,496	31,258	32,955	30,668	15,400	15,155
Flow				206,757	201,017	195,494	189,768	184,259
Calculated Rates				0.151	0.164	0.157	0.081	0.082
Rounded rates				0.15	0.16	0.16	0.08	0.08
Expected revenues		10,119	10,615	31,014	32,163	31,279	15,181	14,741
CY (under)/Over payment		(6,795)	(6,881)	14,755	16,207	15,611	(218)	(415)
True up Balance	(26,035)	(34,054)	(42,535)	(29,779)	(14,971)	(64)	(285)	(713)
Interest on above, affect following year	(1,224)	(1,601)	(1,999)	(1,400)	(704)	(3)	(13)	(34)
	2009	2010	2011	2012	2013	2014	2015	2016
Segment 4 Rate Calc:								
Total Cost Allocated to Segment 4		73,475	74,966	70,593	69,233	67,922	66,674	65,503
True Up balance applied				45,000	50,000	50,000		
Amount to be collected through rates				115,593	119,233	117,922	66,674	65,503
Flow				646,220	626,470	607,510	587,760	568,800
Calculated Rates				0.179	0.190	0.194	0.113	0.115
Rounded rates				0.18	0.19	0.19	0.11	0.12
Expected revenues		82,713	58,940	116,320	119,029	115,427	64,654	68,256
CY (under)/Over payment		9,238	(16,026)	45,726	49,797	47,505	(2,020)	2,753
True up Balance	(115,522)	(111,713)	(132,990)	(93,514)	(48,112)	(2,869)	(5,024)	(2,507)
Interest on above, affect following year	(5,430)	(5,251)	(6,251)	(4,395)	(2,261)	(135)	(236)	(118)

Notes: Bellevue is part of Cascade, so their "rate" is a block payment
Numbers may not sum due to rounding

B1.11. ERU Fee

The current Facilities Charge rate of \$783/ERU became effective 1/1/2011. This charge recovers the cost of durable investments made as part of the one percent conservation plan. Per Operating Board guidance, this charge is expected to be updated effective 1/1/2014.

B1.12. North Bend Treatment Discount

North Bend's Contract is designed to use the published rates for Full and Partial Requirements (the "Basic Services Rate" defined in the contract) with a discount for untreated water. This discount is mentioned in Section IV.C.2 and detailed in Attachment 1, Exhibit C.

The table below shows the calculation of this discount for 2012-2016.

Treatment Costs	2012	2013	2014	2015	2016
Cedar Treatment NBV	79,598,131	77,084,446	74,569,602	72,206,801	69,842,886
Cedar Treatment Depreciation	2,614,715	2,617,806	2,620,961	2,471,047	2,547,827
Cedar Treatment Util Basis Cost	7,549,799	7,397,041	7,244,276	6,947,868	6,878,086
Tolt Treatment NBV	63,477,279	61,135,963	58,794,647	56,453,331	54,112,014
Tolt Treatment Depreciation	2,341,316	2,341,316	2,341,316	2,341,316	2,341,316
Tolt Treatment Util Basis Cost	6,276,908	6,131,746	5,986,584	5,841,423	5,696,261
Landsburg Chlorination NBV	-	-	-	2,425,515	2,352,015
Landsburg Chlorination Depreciation	-	-	-	-	73,500
Landsburg Chlorination Util Basis Cost	-	-	-	150,382	219,325
O&MBudget Items (including overhead)					
N050302 TOLT DBO CONTRACT PAYMENTS	3,909,859	3,988,057	4,067,818	4,149,174	4,232,158
N050303 CEDAR DBO CONTRACT PAYMENTS	3,102,559	3,164,610	3,227,903	3,292,461	3,358,310
N750705 TOLT DBO MANAGEMENT COSTS	433,205	441,869	450,707	459,721	468,915
N750707 CEDAR DBO MANAGEMENT COSTS	936,460	955,189	974,293	993,779	1,013,654
N654003 (CEDAR) CHOLRINATION FAC O&M	841,300	858,126	875,288	892,794	910,650
N654004 FLUORIDATION PROGRAM O&M	521,469	531,898	542,536	553,387	564,455
N790301 SWTR MONITORING,REPRTING & ADM	194,170	198,054	202,015	206,055	210,176
N790302 TCR MONITORING, REPRTING & ADM	1,002,456	1,022,505	1,042,955	1,063,814	1,085,091
N790303 LCR MONITORING, REPRTING & ADM	48,259	49,224	50,208	51,213	52,237
N790304 DBP MONITORING, REPRTING & ADM	87,058	88,800	90,576	92,387	94,235
N790306 REGULATORY SUPPORT	116,793	119,129	121,512	123,942	126,421
O&M Cost	11,193,590	11,417,462	11,645,811	11,878,727	12,116,302
Total Regional Cost related to treatment	25,020,296	24,946,249	24,876,672	24,668,018	24,690,649
CWA Base Block and NUD Allocation	5,798,124	5,780,965	5,764,841	5,716,489	5,721,733
Portion of regional cost to full and partial contract	19,222,172	19,165,284	19,111,830	18,951,530	18,968,916
Flow under full and partial contracts	42,072,436	41,299,970	40,529,549	39,758,129	38,986,662
Treatment discount per ccf	\$ 0.46	\$ 0.46	\$ 0.47	\$ 0.48	\$ 0.49

B1.13. Renton New Supply Cost Pool

Renton's Partial Supply Contract has an alternative cost recovery mechanism for the New Supply Cost Pool since their entire retail area will participate in conservation yet only a small portion of the area is served by Seattle water. Beginning in 2012, Renton will be allocated 5.7 percent of the Renton New Supply cost pool, which differs from the regional New Supply cost pool in that it does not include the costs for conservation assets created prior to 2012. The resulting costs for Renton are shown below.

	2012	2013	2014	2015	2016
Renton New Supply Block, starts in 2012					
Asset cost	1,887,000	1,924,739	1,963,235	2,002,499	2,042,550
Allocation to Renton New Supply Block	107,559	109,710	111,904	114,142	116,425
O&M cost	999,139	1,019,121	1,039,504	1,060,294	1,081,500
Allocation to Renton New Supply Block	56,951	58,090	59,252	60,437	61,645
Total Renton New Supply Block	164,510	167,800	171,156	174,579	178,071

B1.14. Northshore Fixed Block

Northshore is allocated a portion of the Existing Supply and Existing Transmission cost pools. This allocation is 5.1 percent, which is 102 percent of Northshore's block volume (8.55 MGD) divided by the system firm yield (171 MGD).

Northshore also participates in the 1 percent conservation program and shares in the conservation portion of the New Supply and Facilities Charge cost pools. These costs have been combined into a "Conservation" cost pool and allocated to Northshore at 6.2 percent, which is 102 percent of Northshore's block volume (8.55 MGD) divided by the system firm yield minus the CWA block (171 MGD - 30.3 MGD).

Northshore's allocation of each year's costs is shown below. The surpluses shown in 2010 and 2011 are projections only.

	2010	2011	2012	2013	2014	2015	2016
Existing Supply Cost Pool							
Asset cost	33,500,624	34,131,392	34,252,425	34,591,548	34,748,272	34,772,304	38,814,429
O&M cost	26,767,095	28,295,113	28,861,015	29,438,236	30,027,001	30,627,541	31,240,091
Regional Cost	60,267,719	62,426,505	63,113,441	64,029,784	64,775,273	65,399,845	70,054,520
Allocation to NUD Block	3,073,654	3,183,752	3,218,785	3,265,519	3,303,539	3,335,392	3,572,781
Existing Transmission Cost Pool							
Asset cost	17,727,969	17,477,844	17,329,624	17,220,237	18,445,610	18,575,665	18,495,287
O&M cost	10,865,874	10,560,100	10,771,302	10,986,728	11,206,463	11,430,592	11,659,204
Regional Cost	28,593,844	28,037,944	28,100,926	28,206,965	29,652,073	30,006,257	30,154,491
Allocation to NUD Block	1,458,286	1,429,935	1,433,147	1,438,555	1,512,256	1,530,319	1,537,879
Conservation Block							
Asset cost	3,071,429	4,819,213	4,714,107	4,609,740	4,506,129	2,698,031	2,708,690
Allocation to NUD Conservation Block	190,376	298,709	292,194	285,725	279,303	167,232	167,893
O&M cost	635,077	979,548	999,139	1,019,121	1,039,504	1,060,294	1,081,500
Allocation to NUD Conservation Block	39,364	60,715	61,930	63,168	64,432	65,720	67,035
Total Conservation Block	229,740	359,424	354,124	348,893	343,735	232,952	234,927
Revenue for CY expenses, set during 2009-2011 rate study	4,964,616	5,008,133					
Expected CY expenses	4,761,680	4,973,111	5,006,056	5,052,968	5,159,529	5,098,663	5,345,587
Projected (Under)/Over Payment	202,936	35,022					
Amount due for CY Block expenses			5,006,056	5,052,968	5,159,529	5,098,663	5,345,587
Projected amount due for PY (under)/over payment, plus interest			(217,243)	(37,491)			

B1.15. Cascade Water Alliance Declining Water Block

Cascade's Base Block is allocated a portion of the Existing Supply and Existing Transmission cost pools. This allocation is 18.1 percent, which is 102 percent of Cascade's Base block volume (30.3 MGD) divided by the system firm yield (171 MGD).

Cascade is also allocated subregional costs for the facilities that serve only Cascade or that Cascade shares with a few neighboring utilities (i.e., the Cascade Subregion). Subregion A is the Bellevue Feeders, which are used solely by Cascade (NE 8th St., Bellevue Redmond Road, and NE 24th St). Segments 1 and 2 are the same as East Subregion 1 and 2, and the costs below were developed under that section. Segment 3 is specific to the CWA contract; the costs are currently zero because the West Marginal Way feeder is not yet identified separately in the asset schedule.

Cascade's Supplemental Block is a 3.0MGD block priced at the Full and Partial Commodity rates developed above. The cost for each component is below.

	2010	2011	2012	2013	2014	2015	2016
BASEBLOCK							
Existing Supply Cost Pool							
Asset cost	33,500,624	34,131,392	34,252,425	34,591,548	34,748,272	34,772,304	38,814,429
O&M cost	26,767,095	28,295,113	28,861,015	29,438,236	30,027,001	30,627,541	31,240,091
Regional Cost	60,267,719	62,426,505	63,113,441	64,029,784	64,775,273	65,399,845	70,054,520
Allocation to CWA Base Block	10,892,597	11,282,769	11,406,924	11,572,541	11,707,278	11,820,161	12,661,433
Existing Transmission Cost Pool							
Asset cost	17,727,969	17,477,844	17,329,624	17,220,237	18,445,610	18,575,665	18,495,287
O&M cost	10,865,874	10,560,100	10,771,302	10,986,728	11,206,463	11,430,592	11,659,204
Regional Cost	28,593,844	28,037,944	28,100,926	28,206,965	29,652,073	30,006,257	30,154,491
Allocation to CWA Base Block	5,167,961	5,067,489	5,078,873	5,098,038	5,359,222	5,423,236	5,450,027
Total Base Block	16,060,558	16,350,259	16,485,797	16,670,579	17,066,500	17,243,397	18,111,460
CWA SUBREGIONAL COST							
Cascade Subregion A							
Operations Costs	N/A						
Asset Recovery Costs	15,803	15,137	14,471	13,805	13,139	12,473	11,807
Cascade Subregion B - Segment 1 calculated on East tab	2,297	2,899	2,220	2,200	2,190	2,193	2,214
Cascade Subregion B - Segment 2 calculated on East tab	7,887	8,591	7,595	7,472	7,364	7,274	7,206
Cascade Subregion B - Segment 3							
Operations Costs	N/A						
Asset Recovery Costs	N/A						
Total Subregional	25,988	26,627	24,287	23,477	22,693	21,940	21,227
SUPPLEMENTAL BLOCK							
Calculated Supplemental Block Cost	2,153,939	2,176,166	2,779,050	2,793,690	2,801,277	2,852,782	3,052,288
Revenue for CY expenses, set during 2009-2011 rate study	18,619,492	18,737,467					
Expected CY expenses	18,240,485	18,553,052	19,289,134	19,487,745	19,890,471	20,118,120	21,184,975
Projected (Under)/Over Payment	379,007	184,415					
Amount due for CY Block expenses			19,289,134	19,487,745	19,890,471	20,118,120	21,184,975
Amount due for PY (over)/under payment, plus interest			(405,727)	(197,416)			
Total CWA cost			18,883,407	19,290,329	19,890,471	20,118,120	21,184,975

B1.16. City of Bothell

1982 Contract Rate

The possibility exists that the last remaining 1982 contract holder (City of Bothell) will not have signed a Full Requirements contract as of January 1, 2012. Therefore rates need to be established in the SMC that would apply to Bothell without a contract. If Bothell does sign before December 31, 2011, then the rate established below would simply be applicable to no one.

The rate developed below is based on the Full and Partial contract rate, with adders to recover certain costs that are being recovered through different mechanisms in the Full and Partial Contracts.

New Supply Asset Costs

For Full and Partial contract holders, the costs of new supply assets are recovered through Facilities Charges (FC), not rates. Because Bothell would not be subject to FCs if they do not sign the contract, the new supply asset costs were turned into a rate. This rate is based on the regional asset costs allocated to Full and Partial customers divided by Full and Partial demand; in other words, it is what the increase in the regional rate would be without FCs. This calculation is shown below and adds \$0.11/ccf to the Full and Partial rates.

1982 Contract Purveyor Balance Account Settlement

The 1982 contract true-up balances are called the Purveyor Balance Accounts (PBAs) and, since their function is to avoid over or under payments in the long run, they should be settled to zero as of the end of the 1982 contract. The recently signed Full and Partial contracts dictate that these balances be settled through direct payments to/from SPU, and that the balances as of 12/31/2010 are to be used because the signees transitioned to the Full and Partial rates as of 12/31/2010. Without a contract, the easiest way to collect Bothell's share of the PBA is through rates, and the balance to be used should be as of 12/31/2011. Bothell's portion of the projected new water and old water balances as of 12/31/2011 net to \$365,084 due to Seattle, which is a portion of the \$405,000 shown as Bothell specific costs in 2011 below.

Cost for Auditors to Review 2011 Purveyor Balance Account calculations

One of the justifications for SPU to allow an adjustment in the Full and Partial contracts as if the Full and Partial rates had been effective 1/1/2010 was that we would not need to do the Purveyor Balance Account calculations for 2011 since it would have been settled out by all remaining utilities and we would have saved the cost for financial auditors to review them. If Bothell does not sign the contract in 2011, then the auditors would have to do an additional review at an estimated \$40k. This \$40k is the other portion of the \$405k shown as Bothell specific costs in 2011 below.

The sum of the PBA settlement and the additional auditing costs add \$0.22-0.23/ccf to the Full and Partial rates.

	2010	2011	2012	2013	2014
Full and Partial Rate that includes costs for Existing Supply, Existing Transmission, and New Supply O&M					
Peak			2.25	2.26	2.27
Off-peak			1.52	1.53	1.53
Adder to include what New Supply Asset costs would be if recovered through rates					
Regional New Supply Asset costs			4,314,353	4,214,304	4,114,922
Regional consumption, not including Renton and CWA supp. block:			40,563,665	39,792,445	39,021,222
Rate Adder			0.11	0.11	0.11
Adder to recover Bothell specific costs (PBA settlement, auditor costs)					
Bothell specific costs		405,084			
True Up balance			136,000	136,000	136,000
Amount to be collected through rates		405,084	136,000	136,000	136,000
Bothell consumption		640,359	627,552	615,001	602,701
Rate Adder			0.22	0.22	0.23
Expected revenues		-	138,061	135,300	138,621
CY (under)/Over payment		(405,084)	138,061	135,300	138,621
Balance		(405,084)	(286,062)	(144,272)	708
Interest on above, affect following year		(19,039)	6,489	6,359	6,515
<u>Total Rate for Bothell</u>					
Peak			2.58	2.59	2.61
Off-peak			1.85	1.86	1.87

APPENDIX C: INFORMATIONAL TABLES

C1.1. Residential Rate History

Effective Date:	1/1/04	1/1/05	6/1/06	1/1/07	1/1/08	1/1/09	3/31/09*	1/1/10*	1/1/11
Residential - Inside Seattle									
<u>Commodity Rate (per ccf)</u>									
Off-Peak	\$2.53	\$2.53	\$2.53	\$2.53	\$2.62	\$2.95	\$3.25	\$3.50	\$3.62
Peak 1st Block	\$2.88	\$2.88	\$2.88	\$2.88	\$2.88	\$3.25	\$3.58	\$3.86	\$3.98
Peak 2nd Block	\$3.35	\$3.35	\$3.35	\$3.35	\$3.35	\$3.78	\$4.17	\$4.49	\$4.63
Peak 3rd Block	\$8.55	\$8.55	\$8.55	\$8.55	\$8.55	\$9.64	\$10.62	\$11.44	\$11.80
<u>Meter Charge (\$s/mtr/mo)</u>									
3/4 inch	\$6.90	\$6.90	\$7.45	\$8.05	\$9.40	\$10.60	\$11.68	\$12.56	\$13.00
1 inch	\$8.75	\$8.75	\$8.30	\$8.60	\$10.00	\$10.90	\$12.01	\$13.00	\$13.40
1 1/2 inch	\$14.30	\$14.30	\$13.50	\$13.60	\$14.50	\$16.90	\$18.62	\$19.95	\$20.70
2 inch	\$22.00	\$22.00	\$20.70	\$21.00	\$21.70	\$22.50	\$24.80	\$25.57	\$22.90
3 inch	\$42.00	\$42.00	\$43.90	\$47.30	\$55.30	\$69.10	\$76.15	\$81.88	\$84.70
4 inch	\$65.00	\$65.00	\$73.10	\$79.00	\$92.20	\$99.00	\$109.10	\$117.36	\$121.40
<u>Utility Credit</u>									
Fixed Credit (per month)	\$11.90	\$11.90	\$12.20	\$12.50	\$13.35	\$13.88	\$15.30	\$16.46	\$17.02
<u>Commodity Rate (per ccf)</u>									
Off-Peak	\$1.27	\$1.27	\$1.27	\$1.27	\$1.31	\$1.48	\$1.63	\$1.75	\$1.81
Peak 1st Block	\$1.44	\$1.44	\$1.44	\$1.44	\$1.44	\$1.63	\$1.79	\$1.93	\$1.99
Peak 2nd Block	\$1.68	\$1.68	\$1.68	\$1.68	\$1.68	\$1.89	\$2.08	\$2.25	\$2.32
Peak 3rd Block	\$4.28	\$4.28	\$4.28	\$4.28	\$4.28	\$4.82	\$5.31	\$5.72	\$5.90
Meter Charges (Discount)	50%	50%	50%	50%	50%	50%	50%	50%	50%
<u>Eligible Projects</u>									
<u>Commodity Rate (per ccf)</u>									
Off-Peak	\$3.16	\$3.16	\$4.40	\$4.40	\$4.49	\$4.20	\$4.50	\$4.75	\$4.87
Peak 1st Block	\$3.80	\$3.80	\$4.75	\$4.75	\$4.75	\$4.50	\$4.83	\$5.11	\$5.23
Peak 2nd Block	\$4.27	\$4.27	\$5.22	\$5.22	\$5.22	\$5.03	\$5.42	\$5.74	\$5.88
Peak 3rd Block	\$8.55	\$8.55	\$8.55	\$8.55	\$8.55	\$9.64	\$10.62	\$11.44	\$11.80
Meter Charges (see above)									

* Includes 10.2% Surcharge

Effective Date:	1/1/04	1/1/05	6/1/06	1/1/07	1/1/08	1/1/09	3/31/09*	1/1/10*	1/1/11
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Residential - Outside Seattle

Commodity Rate (per ccf)

Off-Peak	\$2.88	\$2.88	\$2.88	\$2.88	\$2.99	\$3.36	\$3.70	\$4.00	\$4.13
Peak 1st Block	\$3.28	\$3.28	\$3.28	\$3.28	\$3.28	\$3.71	\$4.09	\$4.40	\$4.54
Peak 2nd Block	\$3.82	\$3.82	\$3.82	\$3.82	\$3.82	\$4.31	\$4.75	\$5.11	\$5.28
Peak 3rd Block	\$9.75	\$9.75	\$9.75	\$9.75	\$9.75	\$10.99	\$12.11	\$13.04	\$13.45

Meter Charge (\$s/mtr/mo)

3/4 inch	\$7.90	\$7.90	\$8.50	\$9.20	\$10.70	\$12.10	\$13.33	\$14.33	\$14.80
1 inch	\$10.00	\$10.00	\$9.50	\$9.80	\$11.40	\$12.40	\$13.66	\$14.88	\$15.30
1 1/2 inch	\$16.30	\$16.30	\$15.40	\$15.50	\$16.50	\$19.30	\$21.27	\$22.70	\$23.60
2 inch	\$25.10	\$25.10	\$23.60	\$23.90	\$24.70	\$25.70	\$28.32	\$29.09	\$26.10
3 inch	\$48.00	\$48.00	\$50.00	\$53.90	\$63.00	\$79.00	\$87.06	\$93.34	\$96.60
4 inch	\$74.00	\$74.00	\$83.30	\$90.10	\$105.10	\$113.00	\$124.53	\$133.78	\$138.40

Utility Credit

Fixed Credit (per month)	\$11.90	\$11.90	\$12.20	\$12.50	\$13.35	\$13.88	\$15.30	\$16.46	\$17.02
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Commodity Rate (per ccf)

Off-Peak	\$1.44	\$1.44	\$1.44	\$1.44	\$1.50	\$1.68	\$1.85	\$2.00	\$2.07
Peak 1st Block	\$1.64	\$1.64	\$1.64	\$1.64	\$1.64	\$1.86	\$2.04	\$2.20	\$2.27
Peak 2nd Block	\$1.91	\$1.91	\$1.91	\$1.91	\$1.91	\$2.16	\$2.37	\$2.56	\$2.64
Peak 3rd Block	\$4.88	\$4.88	\$4.88	\$4.88	\$4.88	\$5.50	\$6.06	\$6.52	\$6.73
Meter Charges (Discount)	50%	50%	50%	50%	50%	50%	50%	50%	50%

* Includes 10.2% Surcharge

Residential - Shoreline, Lake Forest Park**

Commodity Rate (per ccf)

Off-Peak	\$2.88	\$2.88	\$3.07	\$3.07	\$3.18	\$3.58	\$3.95	\$4.25	\$4.39
Peak 1st Block	\$3.28	\$3.28	\$3.49	\$3.49	\$3.49	\$3.94	\$4.34	\$4.67	\$4.83
Peak 2nd Block	\$3.82	\$3.82	\$4.06	\$4.06	\$4.06	\$4.58	\$5.05	\$5.44	\$5.62
Peak 3rd Block	\$9.75	\$9.75	\$10.37	\$10.37	\$10.37	\$11.69	\$12.88	\$13.87	\$14.31
Franchise Charge	\$1.35	\$1.75	N/A						

Meter Charge (\$s/mtr/mo)

3/4 inch	\$7.90	\$7.90	\$9.00	\$9.80	\$11.40	\$12.90	\$14.22	\$15.21	\$15.80
1 inch	\$10.00	\$10.00	\$10.10	\$10.40	\$12.10	\$13.20	\$14.55	\$15.76	\$16.30
1 1/2 inch	\$16.30	\$16.30	\$16.40	\$16.50	\$17.60	\$20.50	\$22.59	\$24.24	\$25.10
2 inch	\$25.10	\$25.10	\$25.10	\$25.50	\$26.30	\$27.30	\$30.08	\$30.97	\$27.80
3 inch	\$48.00	\$48.00	\$53.20	\$57.40	\$67.10	\$83.80	\$92.35	\$99.29	\$102.70
4 inch	\$74.00	\$74.00	\$88.70	\$95.80	\$112.00	\$120.10	\$132.35	\$142.38	\$147.20

Utility Credit

Fixed Credit (per month)	\$11.90	\$11.90	\$12.20	\$12.50	\$13.35	\$13.88	\$15.30	\$16.46	\$17.02
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Commodity Rate (per ccf)

Off-Peak	\$1.44	\$1.44	\$1.54	\$1.54	\$1.59	\$1.79	\$1.97	\$2.13	\$2.20
Peak 1st Block	\$1.64	\$1.64	\$1.75	\$1.75	\$1.75	\$1.97	\$2.17	\$2.34	\$2.42
Peak 2nd Block	\$1.91	\$1.91	\$2.03	\$2.03	\$2.03	\$2.29	\$2.52	\$2.72	\$2.81
Peak 3rd Block	\$4.88	\$4.88	\$5.19	\$5.19	\$5.19	\$5.85	\$6.44	\$6.94	\$7.16
Meter Charges (Discount)	50%	50%	50%	50%	50%	50%	50%	50%	50%

Master Metered Residential Development

Commodity Rate (per ccf)

Off-Peak	\$2.55	\$2.55	\$3.07	\$3.07	\$3.18	\$3.58	\$3.95	\$4.25	\$4.39
Peak 1st Block	\$3.28	\$3.28	\$3.49	\$3.49	\$3.49	\$3.94	\$4.34	\$4.67	\$4.83
Peak 2nd Block	\$3.82	\$3.82	\$4.06	\$4.06	\$4.06	\$4.58	\$5.05	\$5.44	\$5.62
Peak 3rd Block	\$9.75	\$9.75	\$10.37	\$10.37	\$10.37	\$11.69	\$12.88	\$13.87	\$14.31

Meter Charges (See above)

Franchise Charge	\$135.13	\$1,093.75	N/A						
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* Includes 10.2% Surcharge

** Lake Forest Park rates begin 3/31/09

C1.2. General Service Rate History

Effective Date:	1/1/04	1/1/05	6/1/06	1/1/07	1/1/08	1/1/09	3/31/09*	1/1/10*	1/1/11	
General Service - Inside Seattle										
<u>Commodity Rate (per ccf)</u>										
Off-Peak	\$2.00	\$2.00	\$2.33	\$2.29	\$2.62	\$2.95	\$3.25	\$3.50	\$3.62	
Peak	\$3.35	\$3.35	\$3.35	\$3.35	\$3.35	\$3.78	\$4.17	\$4.49	\$4.63	
<u>Meter Charge (\$s/mtr/mo)</u>										
3/4 inch	\$6.90	\$6.90	\$7.45	\$8.05	\$9.40	\$10.60	\$11.68	\$12.56	\$13.00	
1 inch	\$8.75	\$8.75	\$8.30	\$8.60	\$10.00	\$10.90	\$12.01	\$13.00	\$13.40	
1 1/2 inch	\$14.30	\$14.30	\$13.50	\$13.60	\$14.50	\$16.90	\$18.62	\$19.95	\$20.70	
2 inch	\$22.00	\$22.00	\$20.70	\$21.00	\$21.70	\$22.50	\$24.80	\$25.57	\$22.90	
3 inch	\$42.00	\$42.00	\$43.90	\$47.30	\$55.30	\$69.10	\$76.15	\$81.88	\$84.70	
4 inch	\$65.00	\$65.00	\$73.10	\$79.00	\$92.20	\$99.00	\$109.10	\$117.36	\$121.40	
6 inch	\$127.00	\$127.00	\$119.80	\$121.00	\$125.00	\$121.80	\$134.22	\$144.36	\$149.40	
8 inch	\$202.00	\$202.00	\$190.00	\$192.00	\$199.00	\$199.00	\$219.30	\$219.30	\$199.00	
10 inch	\$302.00	\$302.00	\$285.00	\$288.00	\$297.00	\$297.00	\$327.29	\$327.29	\$297.00	
12 inch	\$428.00	\$428.00	\$402.00	\$402.00	\$402.00	\$402.00	\$443.00	\$443.00	\$402.00	
16 inch	\$716.00	\$716.00	\$477.00	\$477.00	\$477.00	\$477.00	\$525.65	\$525.65	\$477.00	
20 inch	\$1,042.00	\$1,042.00	\$614.00	\$614.00	\$614.00	\$614.00	\$676.63	\$676.63	\$614.00	
24 inch	\$1,668.00	\$1,668.00	\$771.00	\$771.00	\$771.00	\$771.00	\$849.64	\$849.64	\$771.00	
Utility Credit - Inside & Outside (Fixed Credit per month)										
Commercial (Multifamily)	\$5.30	\$5.30	\$5.70	\$5.65	\$6.10	\$7.60	\$8.38	\$9.03	\$9.32	

* Includes 10.2% Surcharge

Effective Date:	1/1/04	1/1/05	6/1/06	1/1/07	1/1/08	1/1/09	3/31/09*	1/1/10*	1/1/11
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General Service - Outside Seattle

Commodity Rate (per ccf)

Off-Peak	\$2.28	\$2.28	\$2.66	\$2.61	\$2.99	\$3.36	\$3.70	\$4.00	\$4.13
Peak	\$3.82	\$3.82	\$3.82	\$3.82	\$3.82	\$4.31	\$4.75	\$5.11	\$5.28

Meter Charge (\$s/mtr/mo)

3/4 inch	\$7.90	\$7.90	\$8.50	\$9.20	\$10.70	\$12.10	\$13.33	\$14.33	\$14.80
1 inch	\$10.00	\$10.00	\$9.50	\$9.80	\$11.40	\$12.40	\$13.66	\$14.88	\$15.30
1 1/2 inch	\$16.30	\$16.30	\$15.40	\$15.50	\$16.50	\$19.30	\$21.27	\$22.70	\$23.60
2 inch	\$25.10	\$25.10	\$23.60	\$23.90	\$24.70	\$25.70	\$28.32	\$29.09	\$26.10
3 inch	\$48.00	\$48.00	\$50.00	\$53.90	\$63.00	\$79.00	\$87.06	\$93.34	\$96.60
4 inch	\$74.00	\$74.00	\$83.30	\$90.10	\$105.10	\$113.00	\$124.53	\$133.78	\$138.40
6 inch	\$145.00	\$145.00	\$137.00	\$138.00	\$143.00	\$139.00	\$153.18	\$164.20	\$170.00
8 inch	\$230.00	\$230.00	\$217.00	\$219.00	\$227.00	\$227.00	\$250.15	\$250.15	\$227.00
10 inch	\$344.00	\$344.00	\$325.00	\$328.00	\$339.00	\$339.00	\$373.58	\$373.58	\$339.00
12 inch	\$488.00	\$488.00	\$458.00	\$458.00	\$458.00	\$458.00	\$504.72	\$504.72	\$458.00
16 inch	\$816.00	\$816.00	\$544.00	\$544.00	\$544.00	\$544.00	\$599.49	\$599.49	\$544.00
20 inch	\$1,188.00	\$1,188.00	\$700.00	\$700.00	\$700.00	\$700.00	\$771.40	\$771.40	\$700.00
24 inch	\$1,902.00	\$1,902.00	\$879.00	\$879.00	\$879.00	\$879.00	\$968.66	\$968.66	\$879.00

Utility Credit - Inside & Outside (Fixed Credit per month)

Commercial (Multifamily)	\$5.30	\$5.30	\$5.70	\$5.65	\$6.10	\$7.60	\$8.38	\$9.03	\$9.32
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* Includes 10.2% Surcharge

Effective Date:	1/1/04	1/1/05	6/1/06	1/1/07	1/1/08	1/1/09	3/31/09*	1/1/10*	1/1/11
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General Service - Shoreline, City of Lake Forest Park**

Commodity Rate (per ccf)

Off-Peak	\$2.28	\$2.28	\$2.83	\$2.78	\$3.18	\$3.58	\$3.95	\$4.25	\$4.39
Peak	\$3.82	\$3.82	\$4.06	\$4.06	\$4.06	\$4.58	\$5.05	\$5.44	\$5.62
Franchise Charge	\$13.51	\$13.60	N/A						

Meter Charge (\$s/mtr/mo)

3/4 inch	\$7.90	\$7.90	\$9.00	\$9.80	\$11.40	\$12.90	\$14.22	\$15.21	\$15.80
1 inch	\$10.00	\$10.00	\$1.10	\$10.40	\$12.10	\$13.20	\$14.55	\$15.76	\$16.30
1 1/2 inch	\$16.30	\$16.30	\$16.40	\$16.50	\$17.60	\$20.50	\$22.59	\$24.24	\$25.10
2 inch	\$25.10	\$25.10	\$25.10	\$25.50	\$26.30	\$27.30	\$30.08	\$30.97	\$27.80
3 inch	\$48.00	\$48.00	\$53.20	\$57.40	\$67.10	\$83.80	\$92.35	\$99.29	\$102.70
4 inch	\$74.00	\$74.00	\$88.70	\$95.80	\$112.00	\$120.10	\$132.35	\$142.38	\$147.20
6 inch	\$145.00	\$145.00	\$145.00	\$147.00	\$152.00	\$148.00	\$163.10	\$175.22	\$181.00
8 inch	\$230.00	\$230.00	\$230.00	\$233.00	\$241.00	\$241.00	\$265.58	\$265.58	\$241.00
10 inch	\$344.00	\$344.00	\$346.00	\$349.00	\$360.00	\$360.00	\$396.72	\$396.72	\$360.00
12 inch	\$488.00	\$488.00	\$488.00	\$488.00	\$488.00	\$488.00	\$537.78	\$537.78	\$488.00
16 inch	\$816.00	\$816.00	\$579.00	\$579.00	\$579.00	\$578.00	\$636.96	\$636.96	\$579.00
20 inch	\$1,188.00	\$1,188.00	\$745.00	\$745.00	\$745.00	\$745.00	\$820.99	\$820.99	\$745.00
24 inch	\$1,902.00	\$1,902.00	\$935.00	\$935.00	\$935.00	\$935.00	\$1,030.37	\$1,030.37	\$935.00

Utility Credit - Inside & Outside (Fixed Credit per month)

Commercial (Multifamily)	\$5.30	\$5.30	\$5.70	\$5.65	\$6.10	\$7.60	\$8.38	\$9.03	\$9.32
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* Includes 10.2% Surcharge

** Lake Forest Part Rates begin 3/31/09

C1.3. Wholesale Rate History

Effective Date:	1/1/04	1/1/05	1/1/06	6/1/06	1/1/07	1/1/08	1/1/09	1/1/10	1/1/11
1982 Contract									
Commodity Rate (per ccf)									
Off-Peak	\$0.97	\$0.96	\$0.96	\$0.96	\$1.02	\$1.08	\$1.19	\$1.29	\$1.40
Peak	\$1.48	\$1.48	\$1.48	\$1.48	\$1.57	\$1.67	\$1.83	\$1.98	\$2.15
Growth Charge	\$0.82	\$0.40	\$0.40	\$0.94	\$0.81	\$0.91	\$0.31	\$0.31	\$0.31
Demand Charge									
(\$/1000 gals of deficient storage)	\$22.00	\$22.00	\$22.00	\$22.00	\$22.00	\$22.00	\$22.00	\$22.00	\$22.00
Meter Charge (\$s/mtr/mo)									
1 inch	\$54.00	\$54.00	\$54.00	\$54.00	\$54.00	\$54.00	\$54.00	\$54.00	\$54.00
1 1/2 inch	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00	\$60.00
2 inch	\$66.00	\$66.00	\$66.00	\$66.00	\$66.00	\$66.00	\$66.00	\$66.00	\$66.00
3 inch	\$78.00	\$78.00	\$78.00	\$78.00	\$78.00	\$78.00	\$78.00	\$78.00	\$78.00
4 inch	\$108.00	\$108.00	\$108.00	\$108.00	\$108.00	\$108.00	\$108.00	\$108.00	\$108.00
6 inch	\$192.00	\$192.00	\$192.00	\$192.00	\$192.00	\$192.00	\$192.00	\$192.00	\$192.00
8 inch	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00
10 inch	\$450.00	\$450.00	\$450.00	\$450.00	\$450.00	\$450.00	\$450.00	\$450.00	\$450.00
12 inch	\$528.00	\$528.00	\$528.00	\$528.00	\$528.00	\$528.00	\$528.00	\$528.00	\$528.00
16 inch	\$696.00	\$696.00	\$696.00	\$696.00	\$696.00	\$696.00	\$696.00	\$696.00	\$696.00
20 inch	\$948.00	\$948.00	\$948.00	\$948.00	\$948.00	\$948.00	\$948.00	\$948.00	\$948.00
24 inch	\$1,236.00	\$1,236.00	\$1,236.00	\$1,236.00	\$1,236.00	\$1,236.00	\$1,236.00	\$1,236.00	\$1,236.00

Effective Date:	1/1/04	1/1/05	1/1/06	6/1/06	1/1/07	1/1/08	1/1/09	1/1/10	1/1/11
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2001 Contracts

Commodity Rate (per ccf)

Off-Peak	\$0.94	\$1.01	\$1.07	\$1.02	\$1.03	\$1.04	\$1.14	\$1.15	\$1.16
Peak	\$1.42	\$1.53	\$1.61	\$1.57	\$1.59	\$1.60	\$1.77	\$1.77	\$1.79
Growth Charge	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60

Demand Charge

(\$/1000 gals of deficient storage)

\$22.00	\$22.00	\$22.00	\$22.00	\$22.00	\$22.00	\$22.00	\$22.00	\$22.00	\$22.00
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One Time New Service Fee (\$s/mtr)

3/4 inch	\$713	\$713	\$713	\$713	\$713	\$713	\$713	\$713	\$713
1 inch	\$1,426	\$1,426	\$1,426	\$1,426	\$1,426	\$1,426	\$1,426	\$1,426	\$1,426
1 1/2 inch	\$3,565	\$3,565	\$3,565	\$3,565	\$3,565	\$3,565	\$3,565	\$3,565	\$3,565
2 inch	\$5,704	\$5,704	\$5,704	\$5,704	\$5,704	\$5,704	\$5,704	\$5,704	\$5,704
3 inch	\$15,686	\$15,686	\$15,686	\$15,686	\$15,686	\$15,686	\$15,686	\$15,686	\$15,686
4 inch	\$22,103	\$22,103	\$22,103	\$22,103	\$22,103	\$22,103	\$22,103	\$22,103	\$22,103
6 inch	\$47,058	\$47,058	\$47,058	\$47,058	\$47,058	\$47,058	\$47,058	\$47,058	\$47,058
8 inch	\$79,856	\$79,856	\$79,856	\$79,856	\$79,856	\$79,856	\$79,856	\$79,856	\$79,856
10 inch	\$120,497	\$120,497	\$120,497	\$120,497	\$120,497	\$120,497	\$120,497	\$120,497	\$120,497
12 inch	\$169,694	\$169,694	\$169,694	\$169,694	\$169,694	\$169,694	\$169,694	\$169,694	\$169,694
16 inch	\$169,694	\$169,694	\$169,694	\$169,694	\$169,694	\$169,694	\$169,694	\$169,694	\$169,694
20 inch	\$169,694	\$169,694	\$169,694	\$169,694	\$169,694	\$169,694	\$169,694	\$169,694	\$169,694
24 inch	\$169,694	\$169,694	\$169,694	\$169,694	\$169,694	\$169,694	\$169,694	\$169,694	\$169,694

C1.4. Private Fire Rate History

Effective Date:	1/1/04	6/1/06	1/1/07	1/1/08	1/1/09	1/1/10	1/1/11
Volume (Penalty) Rate per ccf							
Inside	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00
Outside	\$22.80	\$22.80	\$22.80	\$22.80	\$22.80	\$22.80	\$22.80
Shoreline	\$22.80	\$24.30	\$24.30	\$24.30	\$24.30	\$24.30	\$24.30
Meter Charge (\$s/mtr/mo)							
Inside Seattle							
2 inch	\$15.40	\$15.40	\$15.40	\$15.40	\$15.40	\$15.40	\$15.40
3 inch	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00
4 inch	\$37.00	\$37.00	\$37.00	\$37.00	\$37.00	\$37.00	\$37.00
6 inch	\$63.00	\$63.00	\$63.00	\$63.00	\$63.00	\$63.00	\$63.00
8 inch	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00
10 inch	\$144.00	\$144.00	\$144.00	\$144.00	\$144.00	\$144.00	\$144.00
12 inch	\$210.00	\$210.00	\$210.00	\$210.00	\$210.00	\$210.00	\$210.00
Outside Seattle							
2 inch	\$18.00	\$18.00	\$18.00	\$18.00	\$18.00	\$18.00	\$18.00
3 inch	\$23.00	\$23.00	\$23.00	\$23.00	\$23.00	\$23.00	\$23.00
4 inch	\$42.00	\$42.00	\$42.00	\$42.00	\$42.00	\$42.00	\$42.00
6 inch	\$72.00	\$72.00	\$72.00	\$72.00	\$72.00	\$72.00	\$72.00
8 inch	\$114.00	\$114.00	\$114.00	\$114.00	\$114.00	\$114.00	\$114.00
10 inch	\$164.00	\$164.00	\$164.00	\$164.00	\$164.00	\$164.00	\$164.00
12 inch	\$239.00	\$239.00	\$239.00	\$239.00	\$239.00	\$239.00	\$239.00
Shoreline							
2 inch	\$18.00	\$19.00	\$19.00	\$19.00	\$19.00	\$19.00	\$19.00
3 inch	\$23.00	\$24.00	\$24.00	\$24.00	\$24.00	\$24.00	\$24.00
4 inch	\$42.00	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00
6 inch	\$72.00	\$76.00	\$76.00	\$76.00	\$76.00	\$76.00	\$76.00
8 inch	\$114.00	\$121.00	\$121.00	\$121.00	\$121.00	\$121.00	\$121.00
10 inch	\$164.00	\$175.00	\$175.00	\$175.00	\$175.00	\$175.00	\$175.00
12 inch	\$239.00	\$255.00	\$255.00	\$255.00	\$255.00	\$255.00	\$255.00

C1.5. Public Fire Rate History

Effective Date:	1/1/06	6/1/06	1/1/07	1/1/08	1/1/09	1/1/10	1/1/11
Hydrants on 4 inch Mains	\$114.08	\$182.28	\$163.67	\$172.81	\$162.55	\$173.12	\$194.80
Hydrants on 6 inch and larger mains	\$227.02	\$334.20	\$300.43	\$317.21	\$325.00	\$346.12	\$389.48

C1.6. Average System Rate Increase History

Effective Date	Rate Increase
May 16, 2001	5.9%
July 16, 2001	3rd Tier Adopted
January 1, 2002	5.6%
September 16, 2002	14.5%
January 1, 2004	10.6%
January 1, 2005	0.2%
June 1, 2006	0.8%
January 1, 2007	4.6%
January 1, 2008	5.9%
January 1, 2009	11.7%
March 31, 2009 ¹	6.9%
January 1, 2010	9.3%
January 1, 2011	2.6%

¹ Temporary surcharge to cover costs related to *Lane v. City of Seattle, 2008*.

C1.7. Historical Financial Performance

(\$ in 000's)	Target	Actual	Actual	Actual	Actual	Actual	Projected	Adopted	Adopted	Adopted
		2006	2007	2008	2009	2010	2011	2012	2013	2014
Net Income	positive	\$558	\$1,178	\$500	\$5,871	\$709	(\$2,579)	\$5,997	\$7,628	\$15,703
Debt Service Coverage	1.7x	1.73	1.78	1.47	1.64	1.59	1.45	1.58	1.62	1.70
Cash Financing of the Capital Program	20%*	21.9%	28.3%	16.9%	16.2%	21.8%	16.1%	38.3%	35.2%	48.3%
from Contributions in Aid of Construction		14.5%	20.1%	31.5%	10.0%	18.3%	2.2%	3.9%	3.5%	3.5%
from Rate Revenues		5.3%	7.8%	-15.3%	6.1%	3.2%	13.9%	34.4%	31.8%	44.8%
from Bonneville Power Administration Account		2.1%	0.4%	0.8%	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%
Year-End Operating Cash	varies**	\$11,788	\$6,711	\$7,211	\$8,194	\$8,434	\$7,125	\$7,435	\$7,899	\$8,118
Revenue Stabilization Fund Deposit (Withdrawal)		\$0	\$0	\$0	\$0	(\$3,000)	(\$1,434)	\$0	\$0	\$0

* Current revenues should be used to finance no less than 15% of the CIP in any one year, and average not less than 20% over each rate proposal period

** Year-End Operating Cash Target is 1/12th of the current year's operating expenses

C1.8. Actual, Projected and Adopted Revenues

Revenue Source	Actual 2006	Actual 2007	Actual 2008	Actual 2009	Actual 2010	Projected 2011	Adopted 2012	Adopted 2013	Adopted 2014
Retail Water Sales	101,122,145	102,333,620	106,689,261	130,272,378	136,442,800	141,552,669	152,537,022	164,204,792	177,533,327
Wholesale Water Sales	40,004,830	41,054,371	42,453,498	48,280,764	44,830,234	44,382,498	47,573,986	47,267,682	47,102,577
Facilities Charges	821,376	504,014	430,652	173,259	242,420	242,420	2,199,447	2,199,447	2,747,010
Water Service for Fire Protection	5,466,562	5,581,911	4,813,320	5,670,084	5,958,484	6,635,300	7,051,833	7,591,239	8,207,424
Tap Fees	6,141,225	8,970,410	8,081,757	5,263,816	2,854,564	3,000,000	3,037,500	3,325,469	3,617,037
Other Operating Revenues	1,618,871	1,716,981	1,936,542	1,709,287	1,874,959	1,939,760	1,988,254	2,037,961	2,088,910
Build America Bond Interest Income	0	0	0	0	2,194,649	2,135,334	2,135,334	2,135,334	2,135,334
Rentals--Non-City	410,468	354,644	431,326	429,576	394,820	404,691	414,808	425,178	435,807
Other Non-Operating Revenue	182,396	826,586	300,439	3,719,589	385,003	374,702	379,386	384,128	388,930
Capital Grants and Contributions	6,798,323	5,037,140	4,805,242	3,154,167	1,605,384	1,808,958	1,853,935	1,883,211	1,915,958
Operating Grants	282,136	695,123	167,476	2,001,339	539,643	0	0	0	0
Transfers from Construction Fund	71,185,300	65,890,020	59,161,168	67,705,678	45,366,885	60,361,365	29,100,135	35,214,709	28,189,717
Withdrawal from Redemption Fund	0	0	0	93,000,000	0	0	0	0	0
Investment Income (See Construction Fund)	0	0	0	0	0	0	0	0	0
Public Works Loan Proceeds	0	0	8,000,000	3,000,000	9,000,000	0	0	0	0
Proceeds on sale of capital assets	0	4,656,714	2,992,000	4,726,259	0	0	0	0	0
Inventory Purchased by SDOT		361,925	914,729	732,191	708,330	740,540	755,351	770,458	785,867
Op Transfer In - Rev Stab Subfund	0	0	0	0	3,000,000	1,433,700	0	0	0
Op Transfer In - Rev Stab Subfund - BPA Acct	0	413,024	607,063	1,099,162	680,000	80,761	0	0	0
Call Center Reimbursement from SCL	1,330,843	1,176,009	1,188,042	1,653,722	1,637,727	1,722,082	1,684,812	1,718,508	1,752,879
GF Reimb Abandoned Vehicles	0	0	0	48,893	52,940	53,999	0	56,181	57,304
Reimbursement for NS activities	204,482	867,608	914,729	734,409	39,136	40,114	41,117	42,145	43,199
GF Lane Related Payments	0	0	4,150,000	10,246,113	0	0	0	0	0

C1.9. Actual and Projected Operations Expenditures

	Actual 2006	Actual 2007	Actual 2008	Actual 2009	Actual 2010	Projected 2011	Adopted 2012	Proposed 2013	Proposed 2014
General Expense									
Taxes	23,405,338	24,176,968	25,354,576	34,326,595	36,834,240	32,310,845	34,181,388	36,134,384	39,032,668
Other	9,901,193	20,689,218	24,763,835	35,565,181	19,555,540	22,141,567	21,665,710	24,945,339	25,374,801
Administration	9,228,204	7,655,637	12,738,780	14,286,477	13,991,221	14,043,468	16,243,248	16,462,914	17,147,540
Customer Service	9,201,591	8,638,878	9,286,767	FALSE	9,062,012	10,221,542	10,010,462	10,535,877	10,804,083
Project Delivery	2,978,668	2,853,880	3,899,502	4,355,383	4,459,397	5,522,707	5,169,506	5,690,152	5,836,154
Pre-Capital Plng & Devlpmnt		10,156,665	112,857	1,233,643	1,856,873	2,276,203	2,350,479	2,217,931	2,273,438
Field Operations	14,991,084	15,589,735	21,137,361	21,683,133	20,706,735	23,038,803	23,863,626	23,441,167	24,038,275
Utility Systems Management	12,216,800	8,143,796	18,041,750	15,512,308	14,811,687	16,230,741	16,370,110	17,283,987	17,227,397
G&A Credits	(8,781,614)	(8,342,479)	(11,309,289)	(9,479,308)	(7,045,240)	(9,906,163)	(7,499,766)	(6,504,377)	(6,091,900)
Debt Service									
Interest	34,993,077	38,945,221	39,044,605	42,083,605	47,676,183	49,973,924	48,419,819	51,116,307	49,582,317
Principal	24,212,945	20,003,217	21,503,217	122,209,766	27,414,766	30,345,476	32,283,292	35,209,559	36,599,353

APPENDIX D: ADOPTED RATES

Effective January 1, 2012

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
Direct Service													Wholesale
RATE SCHEDULES	Inside City				Outside City				City of Shoreline / City of Lake Forest Park				Full and Partial
	Residential	MMRD*	Gen Svc	Fire Service	Residential	MMRD*	Gen Svc	Fire Service	Residential	MMRD*	Gen Svc	Fire Service	
Commodity Charge (\$/100 Cubic Feet)													
Offpeak Usage (Sept 16-May 15)	\$4.04	\$4.04	\$4.04		\$4.61	\$4.61	\$4.61		\$4.90	\$4.90	\$4.90		\$1.52
Peak Usage (May 16-Sept 15)													
Up to 5 ccf**	\$4.34	\$4.34	\$5.15		\$4.95	\$4.95	\$5.87		\$5.26	\$5.26	\$6.25		\$2.26
Next 13 ccf**	\$5.15	\$5.15	\$5.15		\$5.87	\$5.87	\$5.87		\$6.25	\$6.25	\$6.25		\$2.26
Over 18 ccf**	\$11.80	\$11.80	\$5.15		\$13.45	\$13.45	\$5.87		\$14.31	\$14.31	\$6.25		\$2.26
Usage over base allowance				\$20.00				\$22.80				\$24.30	
Utility Credit (\$/month)	\$16.97		\$10.14		\$16.97		\$10.14		\$16.97		\$10.14		
Demand Charge (\$/1000 gallons of deficient storage)													\$22.00
Base Service Charge (\$/month/meter)													New Srvc Fee
3/4 inch and less	\$13.25		\$13.25		\$15.10		\$15.10		\$16.05		\$16.05		(One Time) \$783
1 inch	\$13.65		\$13.65		\$15.55		\$15.55		\$16.55		\$16.55		\$1,566
1-1/2 inch	\$21.05	\$21.05	\$21.05		\$24.00	\$24.00	\$24.00		\$25.55	\$25.55	\$25.55		\$3,915
2 inch	\$23.35	\$23.35	\$23.35	\$15.40	\$26.60	\$26.60	\$26.60	\$18.00	\$28.30	\$28.30	\$28.30	\$19.00	\$6,264
3 inch	\$86.35	\$86.35	\$86.35	\$20.00	\$98.45	\$98.45	\$98.45	\$23.00	\$104.70	\$104.70	\$104.70	\$24.00	\$17,226
4 inch	\$123.75	\$123.75	\$123.75	\$37.00	\$141.10	\$141.10	\$141.10	\$42.00	\$150.10	\$150.10	\$150.10	\$45.00	\$24,273
6 inch		\$152.30	\$152.30	\$63.00		\$173.60	\$173.60	\$72.00		\$184.70	\$184.70	\$76.00	\$51,678
8 inch		\$199.00	\$199.00	\$100.00		\$227.00	\$227.00	\$114.00		\$241.00	\$241.00	\$121.00	\$87,696
10 inch		\$297.00	\$297.00	\$144.00		\$339.00	\$339.00	\$164.00		\$360.00	\$360.00	\$175.00	\$132,327
12 inch		\$402.00	\$402.00	\$210.00		\$458.00	\$458.00	\$239.00		\$488.00	\$488.00	\$255.00	\$186,354
16 inch		\$477.00	\$477.00			\$544.00	\$544.00			\$579.00	\$579.00		\$186,354
20 inch		\$614.00	\$614.00			\$700.00	\$700.00			\$745.00	\$745.00		\$186,354
24 inch		\$771.00	\$771.00			\$879.00	\$879.00			\$935.00	\$935.00		\$186,354

Effective January 1, 2013

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
	Direct Service												Wholesale	
RATE SCHEDULES	Inside City				Outside City				City of Shoreline / City of Lake Forest Park				Full and Partial	
	Residential	MMRD*	Gen Svc	Fire Service	Residential	MMRD*	Gen Svc	Fire Service	Residential	MMRD*	Gen Svc	Fire Service		
Commodity Charge (\$/100 Cubic Feet)														
Offpeak Usage (Sept 16-May 15)	\$4.50	\$4.50	\$4.50		\$5.13	\$5.13	\$5.13		\$5.46	\$5.46	\$5.46			\$1.53
Peak Usage (May 16-Sept 15)														
Up to 5 ccf**	\$4.73	\$4.73	\$5.72		\$5.39	\$5.39	\$6.52		\$5.74	\$5.74	\$6.94			\$2.26
Next 13 ccf**	\$5.72	\$5.72	\$5.72		\$6.52	\$6.52	\$6.52		\$6.94	\$6.94	\$6.94			\$2.26
Over 18 ccf**	\$11.80	\$11.80	\$5.72		\$13.45	\$13.45	\$6.52		\$14.31	\$14.31	\$6.94			\$2.26
Usage over base allowance				\$20.00				\$22.80					\$24.30	
Utility Credit (\$/month)	\$18.19		\$11.22		\$18.19		\$11.22		\$18.19		\$11.22			
Demand Charge (\$/1000 gallons of deficient storage)														\$22.00
Base Service Charge (\$/month/meter)														New Srvc Fee
3/4 inch and less	\$13.50		\$13.50		\$15.40		\$15.40		\$16.35		\$16.35			(One Time) \$783
1 inch	\$13.90		\$13.90		\$15.85		\$15.85		\$16.85		\$16.85			\$1,566
1-1/2 inch	\$21.45	\$21.45	\$21.45		\$24.45	\$24.45	\$24.45		\$26.00	\$26.00	\$26.00			\$3,915
2 inch	\$23.75	\$23.75	\$23.75	\$15.40	\$27.10	\$27.10	\$27.10	\$18.00	\$28.80	\$28.80	\$28.80	\$19.00		\$6,264
3 inch	\$88.00	\$88.00	\$88.00	\$20.00	\$100.30	\$100.30	\$100.30	\$23.00	\$106.70	\$106.70	\$106.70	\$24.00		\$17,226
4 inch	\$126.10	\$126.10	\$126.10	\$37.00	\$143.75	\$143.75	\$143.75	\$42.00	\$152.95	\$152.95	\$152.95	\$45.00		\$24,273
6 inch		\$155.15	\$155.15	\$63.00		\$176.85	\$176.85	\$72.00		\$188.15	\$188.15	\$76.00		\$51,678
8 inch		\$199.00	\$199.00	\$100.00		\$227.00	\$227.00	\$114.00		\$241.00	\$241.00	\$121.00		\$87,696
10 inch		\$297.00	\$297.00	\$144.00		\$339.00	\$339.00	\$164.00		\$360.00	\$360.00	\$175.00		\$132,327
12 inch		\$402.00	\$402.00	\$210.00		\$458.00	\$458.00	\$239.00		\$488.00	\$488.00	\$255.00		\$186,354
16 inch		\$477.00	\$477.00			\$544.00	\$544.00			\$579.00	\$579.00			\$186,354
20 inch		\$614.00	\$614.00			\$700.00	\$700.00			\$745.00	\$745.00			\$186,354
24 inch		\$771.00	\$771.00			\$879.00	\$879.00			\$935.00	\$935.00			\$186,354

Effective January 1, 2014

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
Direct Service													Wholesale
RATE SCHEDULES	Inside City				Outside City				City of Shoreline / City of Lake Forest Park				Full and Partial
	Residential	MMRD*	Gen Svc	Fire Service	Residential	MMRD*	Gen Svc	Fire Service	Residential	MMRD*	Gen Svc	Fire Service	
Commodity Charge (\$/100 Cubic Feet)													
Offpeak Usage (Sept 16-May 15)	\$4.99	\$4.99	\$4.99		\$5.69	\$5.69	\$5.69		\$6.05	\$6.05	\$6.05		\$1.53
Peak Usage (May 16-Sept 15)													
Up to 5 ccf**	\$5.13	\$5.13	\$6.34		\$5.85	\$5.85	\$7.23		\$6.22	\$6.22	\$7.69		\$2.27
Next 13 ccf**	\$6.34	\$6.34	\$6.34		\$7.23	\$7.23	\$7.23		\$7.69	\$7.69	\$7.69		\$2.27
Over 18 ccf**	\$11.80	\$11.80	\$6.34		\$13.45	\$13.45	\$7.23		\$14.31	\$14.31	\$7.69		\$2.27
Usage over base allowance				\$20.00				\$22.80					\$24.30
Utility Credit (\$/month)	\$19.46		\$12.38		\$19.46		\$12.38		\$19.46		\$12.38		
Demand Charge (\$/1000 gallons of deficient storage)													\$22.00
Base Service Charge (\$/month/meter)													New Srvc Fee
													(One Time)
3/4 inch and less	\$13.75		\$13.75		\$15.70		\$15.70		\$16.70		\$16.70		\$783
1 inch	\$14.20		\$14.20		\$16.20		\$16.20		\$17.20		\$17.20		\$1,566
1-1/2 inch	\$21.85	\$21.85	\$21.85		\$24.90	\$24.90	\$24.90		\$26.50	\$26.50	\$26.50		\$3,915
2 inch	\$24.20	\$24.20	\$24.20	\$15.40	\$27.60	\$27.60	\$27.60	\$18.00	\$29.35	\$29.35	\$29.35	\$19.00	\$6,264
3 inch	\$89.65	\$89.65	\$89.65	\$20.00	\$102.20	\$102.20	\$102.20	\$23.00	\$108.70	\$108.70	\$108.70	\$24.00	\$17,226
4 inch	\$128.45	\$128.45	\$128.45	\$37.00	\$146.45	\$146.45	\$146.45	\$42.00	\$155.80	\$155.80	\$155.80	\$45.00	\$24,273
6 inch		\$158.05	\$158.05	\$63.00		\$180.20	\$180.20	\$72.00		\$191.70	\$191.70	\$76.00	\$51,678
8 inch		\$199.00	\$199.00	\$100.00		\$227.00	\$227.00	\$114.00		\$241.00	\$241.00	\$121.00	\$87,696
10 inch		\$297.00	\$297.00	\$144.00		\$339.00	\$339.00	\$164.00		\$360.00	\$360.00	\$175.00	\$132,327
12 inch		\$402.00	\$402.00	\$210.00		\$458.00	\$458.00	\$239.00		\$488.00	\$488.00	\$255.00	\$186,354
16 inch		\$477.00	\$477.00			\$544.00	\$544.00			\$579.00	\$579.00		\$186,354
20 inch		\$614.00	\$614.00			\$700.00	\$700.00			\$745.00	\$745.00		\$186,354
24 inch		\$771.00	\$771.00			\$879.00	\$879.00			\$935.00	\$935.00		\$186,354