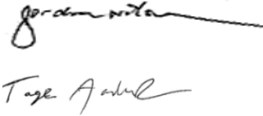


To: Fred Buckenmeyer
 Public Works Director
 City of Anacortes

Date: August 15, 2015

From: Gordon Wilson, Project Manager
 Tage Aaker, Project Consultant



RE: Retail Water Rate Study

A. INTRODUCTION

In February of 2015, the City of Anacortes contracted with FCS GROUP to perform a water rate study for its retail system. The purpose of this study is to forecast the annual revenue requirement of the retail system, evaluate offsetting revenue from wholesale partners, provide a capital funding strategy, and recommend a multi-year rate increase strategy. We will first discuss assumptions and policies, followed by the financial forecast, which covers years 2015 through 2021.

Due to the magnitude and timing of needed capital projects, rate increases are unavoidable. The largest project is the renovation of a 3 million-gallon reservoir, costing \$5 million from 2016-2018. The pipeline replacement program also needs over \$1 million per year. The City is entering a season of capital reinvestment in its water system, and the current level of rates is not sustainable.

Given the level of capital spending needed, the key question addressed in this study is: how much and when should rates be increased? We developed two scenarios to show different rate strategies.

Scenario A – Gradual Rate Increases

- Rate increases would be gradual, but water utility would take on more debt
- Total net borrowing of \$11.1 million with \$913,000 in new annual debt service by 2021
- Cumulative rate increase of 97% from 2016 – 2021
- Much of the pipe replacement program must be debt-funded

Scenario B – Front-loaded Rate Increases

- Front-loaded rate increases to cash-fund more capital projects
- Total net borrowing of \$7.05 million with \$580,000 in new annual debt service by 2021
- Cumulative rate increase of 99% from 2016 – 2021
- Pipe replacement program can be mostly cash-funded

Exhibit A-1: Summary Statistics for Each Scenario

Rate Increase Scenarios	2015 [a]	2016	2017	2018	2019	2020	2021
Scenario A							
Annual Increase		12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
Cumulative Increase through 2021							97.4%
Average Single Family Bill (6 ccf)	\$ 17.28	\$ 19.35	\$ 21.68	\$ 24.28	\$ 27.19	\$ 30.45	\$ 34.11
Net Debt Proceeds	\$ -	\$ -	\$ 7,100,000	\$ -	\$ 4,000,000	\$ -	\$ -
New Debt Service since 2015		\$ -	\$ 584,000	\$ 584,000	\$ 913,000	\$ 913,000	\$ 913,000
Annual Rate Funded System Reinvestment	\$ -	\$ 97,000	\$ 199,000	\$ 324,000	\$ 563,000	\$ 793,000	\$1,060,000
Ending Capital Reserves 2021							\$1,616,000
Scenario B							
Annual Increase		36.0%	18.0%	7.0%	7.0%	4.0%	4.0%
Cumulative Increase through 2021							98.7%
Average Single Family Bill (6 ccf)	\$ 17.28	\$ 23.50	\$ 27.73	\$ 29.67	\$ 31.75	\$ 33.02	\$ 34.34
Net Debt Proceeds	\$ -	\$ -	\$ 6,000,000	\$ -	\$ 1,050,000	\$ -	\$ -
New Debt Service since 2015		\$ -	\$ 493,000	\$ 493,000	\$ 580,000	\$ 580,000	\$ 580,000
Annual Rate Funded System Reinvestment	\$ -	\$ 967,000	\$1,093,000	\$1,298,000	\$1,463,000	\$1,586,000	\$1,648,000
Ending Capital Reserves 2021							\$1,901,000

[a] Water rates increased by roughly 2% from 2014 to 2015 at beginning of year

Both scenarios end up at approximately the same place by 2021, with a single family bill averaging just over \$34 per month. Scenario A does it through gradual rate increases of 12% per year over the next six years. Scenario B does it through large rate increases in 2016 and 2017—36% and 18%, respectively—followed by smaller increases in the following years.

We usually recommend that rate increases follow a smooth pattern, similar to Scenario A. However, in this case, the “right-sizing” or “true-up” approach represented in Scenario B actually fits the City’s circumstances better. Anacortes currently has the advantage of extremely low water rates. When the starting point is small, even a high percentage increase can result in an actual dollar impact that is more moderate. This gives the City an opportunity to front-load the rate increases, which would avoid over \$4 million in debt. While the 2021 rates would be about the same in either scenario, with Scenario A the system would be responsible in 2021 for an extra \$333,000 in debt service each year, which would push up future rates. In addition, a smooth pattern of rate increases is not quite so customer-friendly when those increases are double-digit increases. When the need for rate increases is so great and the current level of rates is so low, steep increases compressed into a two-year period can be less disruptive to customers than six years in a row of 12% increases.

B. FINANCIAL POLICIES

This section outlines financial policies that the City should consider in the context of its utility management responsibilities. These policies help guide financial planning and ratemaking decisions.

The following policies are described and evaluated for the City’s water utility.

- Operating and Capital Cash Reserves
- Planned Rate-Funded Capital Reinvestment
- Debt Management

B1. OPERATING RESERVES

When evaluating fund reserve levels and objectives, it is important to recognize that the value of reserves lies in their potential use. A reserve strategy that deliberately avoids any use of reserves negates their purpose. Fluctuation of reserve levels merely indicates that the system is working, while lack of variation over many years strongly suggests that the reserves are, in fact, unnecessary.

An operating reserve is designed to provide a liquidity cushion; it protects the utility from the risk of short-term variation in the timing of revenue collection or payment of expenses. Like other types of reserves, operating reserves also serve another purpose: they can help smooth rate increases over time. Target funding levels for an operating reserve are generally expressed as a certain number of days of operating and maintenance (O&M) expenses, with the minimum requirement varying with the expected revenue volatility.

Industry practice for utility operating reserves ranges from 30 days (8%) to 120 days (33%) of O&M expenses, with the lower end more appropriate for utilities with stable revenue streams and the higher end of the range more appropriate for utilities with significant seasonal or consumption-based fluctuations. The most common operating reserve targets for water utilities are 60-90 days. This study assumes the following operating reserve target:

Recommended Policy: Achieve a year-end target of between 60 and 90 days (16-25%) of total annual operating expenditures for both retail and regional systems. This equates to between \$1.1 and \$1.6 million in 2015.

Current Achievement: At the beginning of 2015, operating cash balances were enough to provide 46 days of O&M. Going forward, the water utility remains at or above 83 days of O&M throughout the 6-year forecast period in either scenario.

In our forecast, the operating reserve target is based on December 31 of each calendar year, with the balance expected to vary during the course of the year. In any year where operating reserves exceed 90 days of O&M expenses at year-end, we assume that the excess cash is “swept” into the capital account to help pay for capital projects. This can be accomplished by calculating the target balance at year end and comparing it against the actual ending cash balance. If the actual balance is greater than the target, the difference can be designated as a capital resource.

B2. CAPITAL RESERVES (CAPITAL CONTINGENCY)

In addition to protecting against variations in the timing of operating costs and revenues, it is prudent to maintain a capital contingency reserve to meet unexpected emergency capital outlays. There are several methods used in the industry to set the level of these types of reserves, including:

- Most costly piece of equipment or infrastructure: A utility may predict the cost of replacing its most expensive piece of equipment or infrastructure, such as a large reservoir, vital transmission main, or a key pump station.
- Average annual cost of capital program: A utility may use a percentage of its projected capital program, or set the reserve equal to the average annual cost of its capital program.
- Percentage of utility plant: The most common method is for a capital contingency be a percentage of the cost of fixed assets, usually 1-2% of the original cost of total assets. Alternatively, a percentage of replacement value can also be used, with the percentage adjusted downward to reflect the fact that replacement value is higher than original cost.

In this study, data was available for original cost of assets less depreciation, but not the original cost by itself. So we based the target capital contingency on the total asset cost net of depreciation.

Recommended Policy: We assumed a target capital contingency consisting of 1% of the original cost of estimated retail fixed assets, net of accumulated depreciation, which was about \$650,000 at the beginning of 2015 and is projected to average \$750,000 throughout the forecast.

The retail system’s share of fixed assets was estimated to be 56% of the net fixed assets identified in the draft 2014 statement of net position. This percentage is based on data provided for the wholesale reconciliation process, which included an estimated breakdown of the replacement cost of piping and valves between retail and regional purposes.

Current Achievement: In the beginning of 2015, the water utility had no retail-specific capital reserves and \$693,000 in regional-specific capital reserves. The recommended policy is intended for the retail-specific capital reserve. In this forecast, the water utility’s retail-specific capital reserve builds up to and eventually exceeds the target balance in most years of the forecast.

B3. PLANNED RATE-FUNDED SYSTEM REINVESTMENT

In order to avoid excessive reliance on debt, it is prudent to have a policy that commits a certain amount of current rate revenue to the replacement of system assets. A common approach is to establish a planning target for rate-funded capital funding. This planning target, in combination with excess operating reserves swept into the capital account, constrains the system’s reliance on debt.

The level of planned rate-funded capital reinvestment is often set as a percentage of depreciation expense each year, where depreciation data is available. Conceptually, basing rate-funded capital funding on total depreciation expense addresses more than one criterion for reasonable rates:

- Financial integrity: Funding depreciation expense from current rates avoids a decline in system asset value; and
- Adequacy of capital funding: Funding depreciation expense from current rates provides a stable funding source for capital expenditures, especially those related to repair and replacement of existing infrastructure.

Recommended Policy: We assumed the following targets for rate-funded capital reinvestment, characterized as a percentage of depreciation on the estimated cost of retail assets.

Scenario A begins at 5% of depreciation (\$97k) in 2016 and increases to 45% (\$1.1 m) by 2021.

Scenario B begins at 50% of depreciation (\$967k) in 2016 and increases to 70% (\$1.65 m) by 2021.

Current Achievement: The City currently does not set aside a portion of annual rate revenues for projects identified in the capital improvement plan (CIP).

B4. DEBT MANAGEMENT

Debt financing is one appropriate tool for capital funding. Compared with pay-as-you-go funding, debt smoothes out the rate impact of a capital program by spreading costs over time. It also creates intergenerational equity—it is sometimes called “pay-as-you-use” because future customers who use the assets are the ones paying for them. However, debt cannot be relied on too much because it carries the risk of default. Debt also reduces budget flexibility—pay-as-you-go capital projects can be delayed if there is a revenue shortfall, but once the utility has sold debt, the debt service needs to be paid in good times or bad. So while debt is a useful part of the toolbox, it needs to be monitored to ensure that the system does not become too heavily dependent on it. To evaluate the City’s debt level, we will discuss a measurement called debt service coverage.

a) Debt Service Coverage

Debt service coverage is typically a requirement associated with revenue bonds and some State loans, and it is an important benchmark to measure the riskiness of the utility’s capital funding plans.

Debt service coverage is most easily understood by focusing on its reciprocal: the amount of debt service as a percentage of the utility’s net revenue. (“Net revenue” is analogous to the operating profit of a private business; it refers to the total operating income minus operating expenses.) For example, if net revenue were \$200,000 and debt service were \$100,000, then debt service as a percentage of net revenue would be 50% (or \$100,000 divided by \$200,000). If you take the reciprocal of that percentage (in other words, \$200,000 divided by \$100,000), you get 2.0. This is “coverage,” as the term is used in debt agreements. Occasionally, State loans will have coverage requirements, but usually this requirement comes from the sale of revenue bonds, in which case the calculation only includes bonded debt service. A typical minimum coverage requirement for utility revenue bonds is 1.25. In the simple illustration above, if annual bonded debt service were \$100,000, then net revenue each year would have to be at least \$125,000 in order to comply with bond covenants. A bond coverage requirement of 1.25 is equivalent to saying that bonded debt service can be no higher than 80% of net revenue (\$100,000 divided by \$125,000).

Because of the coverage requirement, if it sells bonds, the City agrees to collect enough revenue to meet operating expenses and not only pay debt service, but collect an additional 25% increment above bonded debt service. The extra revenue is a cushion that makes bondholders more confident that debt service will be paid on time. The extra revenue can be used for capital expenditures, to build system reinvestment reserves, or for debt service on subordinate debt. Achieving a bonded debt service coverage level greater than the minimum required level is a positive signal that bond rating agencies notice, and it can result in more favorable terms if the City goes to the market for revenue bonds.

Recommended Policy: Our model assumes a minimum debt service coverage ratio of 1.25 that is covered solely by the water utility. This is a conservative assumption, because in actual practice, the water utility's debt is cross pledged with the City's sewer utility, which currently does not have any debt.

Current Achievement: The City's debt service coverage ratio on bonded debt remains at or above 1.45 for Scenario A or 1.52 for Scenario B.

b) Capital Structure

Another useful measurement in assessing the debt burden of a utility is the capital structure: the outstanding debt as a percentage of net capital assets (original cost net of depreciation). This calculation includes both retail and regional assets as well as the outstanding regional debt.

A target capital structure of no more than 60% debt is considered appropriately conservative. A debt percentage lower than this suggests that the utility has the financial capacity to issue more debt if needed.

Recommended Policy: Our model assumes a target capital structure with no more than 60% debt.

Current Achievement (2015): The City's capital structure is approximately 54% debt / 46% equity. The regional system is the primary source of debt, with over \$60 million in outstanding debt.

Future Achievement (2021): Water's projected capital structure in 2021 is 39% debt / 61% equity under Scenario A and 37% debt / 63% equity under Scenario B, both well below the target maximum debt percentage.

B5. CUMULATIVE IMPACT OF FISCAL POLICIES

Many fiscal policies overlap, resulting in the simultaneous achievement of several objectives within the same level of rates. For example, the policy for system reinvestment funding through rates serves several beneficial purposes:

- It helps build capital contingency reserves,
- It contributes to the cash funding of capital projects,
- It helps maintain a healthy capital structure
- It contributes annual revenue towards debt service coverage.

System reinvestment funding can also help mitigate rate spikes during periods of significant capital needs. Each policy helps determine how much revenue is appropriate, and satisfying them all generally reduces financial risk and increases financial stability.

C. STUDY ASSUMPTIONS

C1. ECONOMIC ASSUMPTIONS

The following major assumptions were used in this rate forecast:

- General Cost Inflation – assumed to be 2.50% per year based on historical data from the Consumer Price Index Urban Consumers - Seattle / Tacoma / Bremerton (CPI - U).
- Construction Cost Inflation – assumed to be 3.25% per year based on historical data from the ENR Construction Cost Index (CCI) - 20 City Average index.
- Taxes:
 - ◆ Water State Excise Tax: 5.029%
 - ◆ State B&O Tax: 1.50%
 - ◆ City Utility Tax: 7.00%
- Personnel Cost Inflation – Estimates confirmed by City staff:
 - ◆ Labor Cost Inflation: assumed to be 2.50% per year.
 - ◆ Benefits Cost Inflation: assumed to be 5.00% per year.
- Fund Earnings – 0.12% per year based on the current Local Government Investment Pool (LGIP) rate, gradually increasing to 0.25% per year.
- Customer Growth – Based on a review of projected growth within the service area as well as evaluating several years of historical data, the following was assumed:
 - ◆ Customer Account Growth: 0.5%
 - ◆ Total Retail System Volume Growth: 0.5%
 - Implies no change in usage per account
- Revenue Bonds: 20 year maturity, 4.25% interest, 1% issuance cost, 1.25 legal minimum for debt service coverage. The interest rate assumption is based upon relevant Bond Buyer Indices.

C2. FUND BALANCE ASSUMPTIONS

Operating Balance

For modeling purposes, we combined several City accounts to create a single “operating” reserve.

Exhibit C-1: Assumed Operating Beginning Balance

Beginning Balance Assumptions - Operating Reserve			
	Acct #	Account Description	Amount
	111.10	Cash	\$ 985,077
Less:	155.45.55	Capital Reserve - Oak Harbor	(827,895)
		Cash less Oak Harbor Reserve	\$ 157,182
Plus:	111.30	Restricted Emergency Cash	662,079
Equals:		Beginning Operating Balance	\$ 819,261

Per discussions with City staff, the Capital Reserve for the Oak Harbor System should be netted out of the starting cash balance in account 111.10. The amount within the Oak Harbor account is the result of an accounting error several years ago and it is not certain whether or not the City will collect this amount. The “Cash less Oak Harbor Capital Reserve” total of \$157,182 is then combined with the restricted emergency cash to create a combined operating account totaling \$819,262. The Restricted Emergency Cash requires council approval before being accessed, but it is available to the City in the event of an emergency funding need, so we counted it toward our minimum operating reserve.

Capital Reserve

The City currently has \$693,474 in the regional capital balance and no balance in the retail capital reserve. It is assumed that the regional capital balance is committed to paying for regional capital projects in the capital plan. After the regional reserves are used for regional capital in the first year, we assume same-year capital cost recovery from the jurisdictional partners, and for simplicity's sake, no separate regional reserve is modeled. Any balance that accumulates in our capital reserve forecast is assumed to fund retail capital projects along with the City's share of the regional projects.

C3. ASSUMPTIONS ABOUT WHOLESALE REVENUE FROM REGIONAL SYSTEM

We made several important assumptions about wholesale operating and capital revenues:

Wholesale Operating Revenue

- The City will no longer see a year-long time lag in operating cost recovery after council adopted rates in June of 2015 that incorporate updated financial data. This should create a minimal end-of-year reconciliation process compared to previous years. In the past, rates charged throughout the year were based on 2012 financial data, which led to significant year-end reconciliations.
- Nearly \$1.4 million in one-time, true-up revenue from the 2014 operating-rate reconciliation is assumed to be received throughout 2015.
- Projected operating costs throughout the 2015 – 2021 forecast are allocated on 2012-2014 average actual usage. This incorporates the recommended adjustment in the operating cost allocation method, per FCS GROUP's March 2015 presentation to City Council.
- The forecast maintains the existing allocation of City budget categories between retail and regional systems, as shown below:

Exhibit C-2: 2014 Retail and Regional Allocation of Operating Budget Categories

Component	Code	Regional Share
Admin Overhead	Per Ser	87.8%
Direct Regional Costs	RCC	100.0%
Distribution Labor	NPS1	48.8%
Maint. Admin / Inventory Mgmt.	NPS	54.2%
Variable (Chem + Elec)	Variable	100.0%

Wholesale Capital Revenue

- Assume contractual planned capital and debt service payments for 2015 and 2016 based on 2014-2016 committed volume estimates.
- For the sake of simplicity, assume same-year cost recovery in 2017 and beyond.
- Future planned capital is also allocated based on current committed volume levels.
- Debt service is allocated based on 10-year average historical usage, with 175 MG assumed for Skagit PUD, per FCS GROUP's March 2015 presentation to City Council.
- Assumes that going forward, City will bill for capital for system lines shared with Oak Harbor and the refineries. This is allowed under current contracts, but it is not currently happening. During discussions with City staff, they expressed the intent to begin charging for these costs.
- The forecast does not assume revenue from the \$828,000 Oak Harbor error adjustment. If revenue is received from this, it can provide cash for future capital projects.

D. SCENARIO A – GRADUAL RATE INCREASES

We propose two rate increase strategies in this document: Scenario A and Scenario B. This section presents Scenario A which has the following characteristics:

- Gradual rate increases, but water utility would take on more debt
- Total net borrowing of \$11.1 million, with \$913,000 in new annual debt service by 2021
- Cumulative rate increase of 97% from 2016 – 2021

The projected rate increase strategy is summarized in **Exhibit D-1**.

Exhibit D-1: Scenario A Rate Increase Strategy

Scenario A	2015 [a]	2016	2017	2018	2019	2020	2021
Annual Increase		12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
Cumulative Increase		12.0%	25.4%	40.5%	57.4%	76.2%	97.4%
Average Single Family Bill (6 ccf)	\$ 17.28	\$19.35	\$21.68	\$24.28	\$27.19	\$30.45	\$34.11

[a] Water rates increased by roughly 2% from 2014 to 2015 at beginning of year

D2. CAPITAL FUNDING STRATEGY FOR SCENARIO A

The proposed rate increases in Scenario A allow for the funding strategy shown in **Exhibit D-2**. About \$11.1 million in net debt proceeds will be needed to fund projects not covered by other capital revenues. Over the course of this forecast, capital funding sources are projected to be approximately 43% net debt proceeds, 34% wholesale revenue, and 23% cash, which includes sources from rate funded system reinvestment, transfers of operating surpluses, and general facilities charge revenue.

The largest capital project for the retail system is the 3 million-gallon reservoir that is projected to cost just under \$5 million (inflated dollars) from 2016 to 2018. Because Scenario A’s rate increases are gradual, the rate-funded system reinvestment funding starts out at only 5% of depreciation in 2016 and phases into 45% by 2021. This equates to nearly \$100,000 in 2016 and reaches nearly \$1.1 million per year by 2021. This is compared to an average annual pipeline repair and replacement cost of nearly \$1.2 million (inflated dollars). As a result, by 2021, rate-funded system reinvestment is expected to cover roughly one year’s worth of the average annual pipeline repair and replacement cost. While this policy is ramping up, however, most of the pipeline repair and replacement program will need to be funded from other sources, including debt. The total rate-funded system reinvestment is projected to generate just over \$3 million from 2016 to 2021, compared to the pipeline repair and replacement projects totaling \$7.2 million over the same time period.

Exhibit D-2: Capital Funding Strategy in Scenario A

Capital Funding Strategy	2015	2016	2017	2018	2019	2020	2021
Total Capital Expenditures (Escalated Dollars)	\$ 2,006,090	\$ 2,179,594	\$ 6,390,811	\$ 4,882,602	\$ 2,549,826	\$ 3,875,114	\$ 3,185,434
Subset / Info Only: Pipeline Repair & Replacement	\$ 1,014,500	\$ 1,065,278	\$ 1,118,598	\$ 1,174,587	\$ 1,233,378	\$ 1,295,111	\$ 1,359,935
Capital Funding Strategy:							
Beginning Fund Balance	\$ 693,474	\$ 861,590	\$ 557,003	\$ 3,754,212	\$ 603,063	\$ 3,426,743	\$ 1,792,221
plus: Grants / Outside Sources	-	-	-	-	-	-	-
plus: Wholesale Capital Revenue	1,136,095	1,136,095	2,121,072	1,149,009	629,769	1,234,051	1,456,047
plus: Annual GFC Revenue	154,977	160,814	166,871	173,155	179,677	186,444	193,466
plus: Rate Funded System Reinvestment	-	96,690	198,684	324,419	562,553	792,937	1,059,703
plus: Direct Rate Funding	176,521	181,909	-	-	-	-	-
plus: Transfer of Surplus from Operating Fund	705,780	298,207	-	75,484	-	18,594	295,931
plus: Interest Earnings	832	1,292	1,393	9,386	1,508	8,567	4,481
plus: Net Debt Proceeds Available for Projects	-	-	7,100,000	-	4,000,000	-	-
Total Capital Resources	\$ 2,867,680	\$ 2,736,597	\$ 10,145,023	\$ 5,485,665	\$ 5,976,569	\$ 5,667,336	\$ 4,801,849
less: Capital Expenditures	2,006,090	2,179,594	6,390,811	4,882,602	2,549,826	3,875,114	3,185,434
Ending Fund Balance	\$ 861,590	\$ 557,003	\$ 3,754,212	\$ 603,063	\$ 3,426,743	\$ 1,792,221	\$ 1,616,415

D3. ANNUAL FINANCIAL FORECAST FOR SCENARIO A

Exhibit D-3 shows the annual financial forecast defined under Scenario A. This forecast assumes 12% rate increases each year from 2016 through 2021. The cumulative impact of annual rate increases totals 97% by 2021. The operating balance ends at 90 days of operating expense; the capital balance exceeds the minimum contingency target; and the debt reserve's starting balance has increased by an amount equal to one year's worth of annual debt service on projected new revenue bonds.

Exhibit D-3: Financial Forecast under Scenario A

Revenue Requirements	2015	2016	2017	2018	2019	2020	2021
Assuming Existing Rates:							
Revenue							
Retail Rate Revenues	\$ 2,367,515	\$ 2,379,353	\$ 2,391,250	\$ 2,403,206	\$ 2,415,222	\$ 2,427,298	\$ 2,439,435
Non-Retail Rate Revenues	14,405,190	13,146,661	13,267,431	13,374,283	13,474,246	13,574,468	12,107,939
Total Revenue	\$ 16,772,706	\$ 15,526,014	\$ 15,658,681	\$ 15,777,489	\$ 15,889,468	\$ 16,001,766	\$ 14,547,374
Expenses							
Cash Operating Expenses	\$ 8,832,314	\$ 8,948,001	\$ 9,235,376	\$ 9,411,977	\$ 9,577,842	\$ 9,765,289	\$ 8,385,117
Existing Debt Service	6,262,991	6,247,327	6,225,161	6,198,948	6,180,496	6,139,589	6,102,183
New Debt Service	-	-	583,813	583,813	912,722	912,722	912,722
Direct Rate Funded CIP	176,521	181,909	-	-	-	-	-
Planned Rate-Funded System Reinvestment	-	96,690	198,684	324,419	562,553	792,937	1,059,703
Additions to Operating Reserve	-	-	-	-	-	-	-
Total Expenses	\$ 15,271,826	\$ 15,473,928	\$ 16,243,034	\$ 16,519,157	\$ 17,233,614	\$ 17,610,537	\$ 16,459,725
Cash Surplus / (Deficiency)	\$ 1,500,880	\$ 52,086	\$ (584,353)	\$ (741,669)	\$ (1,344,146)	\$ (1,608,771)	\$ (1,912,352)
Annual Rate Adjustment	0.00%	12.00%	12.00%	12.00%	12.00%	12.00%	12.00%
Cumulative Annual Rate Adjustment	0.00%	12.00%	25.44%	40.49%	57.35%	76.23%	97.38%
After Rate Increases:							
Rate Revenues	\$ 2,367,515	\$ 2,664,875	\$ 2,999,584	\$ 3,376,331	\$ 3,800,399	\$ 4,277,729	\$ 4,815,011
Net Cash Flow	1,500,900	322,200	(8,800)	179,100	(33,500)	142,100	335,400
Debt Service Coverage - Revenue Bonds	1.80	1.62	1.51	1.56	1.54	1.60	1.44
Debt Service Coverage - All Debt	1.63	1.46	1.38	1.43	1.41	1.47	1.32

Ending Fund Balances	2015	2016	2017	2018	2019	2020	2021
Operating Reserve	\$ 1,614,362	\$ 1,638,399	\$ 1,629,645	\$ 1,733,254	\$ 1,699,748	\$ 1,823,241	\$ 1,862,705
Capital Reserve	861,590	557,003	3,754,212	603,063	3,426,743	1,792,221	1,616,415
Debt Reserve	4,563,610	4,563,610	5,147,423	5,147,423	5,476,332	5,476,332	5,476,332
Total	\$ 7,039,561	\$ 6,759,012	\$ 10,531,280	\$ 7,483,739	\$ 10,602,823	\$ 9,091,795	\$ 8,955,453
Operating Reserve (Days of O&M Expense)	90 days	90 days	87 days	90 days	86 days	90 days	90 days
Target Capital Contingency	\$ 664,185	\$ 681,414	\$ 722,710	\$ 758,889	\$ 777,230	\$ 801,501	\$ 815,714
Capital Contingency Deficit (if any)	\$ -	\$ (124,410)	\$ -	\$ (155,826)	\$ -	\$ -	\$ -
Capital Structure: % Debt	54%	51%	52%	48%	48%	44%	40%
Capital Structure: % Equity	46%	49%	48%	52%	52%	56%	60%

D4. PROJECTED RATE SCHEDULE – SCENARIO A

Exhibit D-4 summarizes the projected rates resulting from the rate increases for Scenario 1. This rate schedule assumes that the recommended annual increases are applied across-the-board to the existing rate structure, basing them on the adopted 2015 rates. “Across-the-board” means that all stated rates will increase by the same percentage which maintains the existing rate structure and corresponding revenue stability. It was not within the scope of this study to review the existing cost recovery between various groups of customers such as residential versus commercial, inside-city versus outside-city, or even between small and large meter sizes.

Exhibit D-4: Projected Rate Schedule for Scenario A

Projected Rate Schedule		2015	2016	2017	2018	2019	2020	2021
		Existing [a]	Projected	Projected	Projected	Projected	Projected	Projected
Annual Rate Increase			12.00%	12.00%	12.00%	12.00%	12.00%	12.00%
Cumulative Rate Increase			12.00%	25.44%	40.49%	57.35%	76.23%	97.38%
[a] Water rates increased by roughly 2% from 2014 to 2015 at beginning of year								
		<u>Meter</u>						
Residential	5/8 X 3/4	\$ 9.79	\$ 10.96	\$ 12.28	\$ 13.75	\$ 15.40	\$ 17.25	\$ 19.32
Residential	3/4	\$ 9.79	\$ 10.96	\$ 12.28	\$ 13.75	\$ 15.40	\$ 17.25	\$ 19.32
Residential	1	\$ 16.36	\$ 18.32	\$ 20.52	\$ 22.98	\$ 25.74	\$ 28.83	\$ 32.29
Residential	1.5	\$ 32.63	\$ 36.55	\$ 40.93	\$ 45.84	\$ 51.34	\$ 57.51	\$ 64.41
Residential	2	\$ 52.22	\$ 58.49	\$ 65.50	\$ 73.37	\$ 82.17	\$ 92.03	\$ 103.07
Residential	Volume	\$ 1.06	\$ 1.19	\$ 1.33	\$ 1.49	\$ 1.67	\$ 1.87	\$ 2.09
Commercial	5/8 X 3/4	\$ 14.70	\$ 16.46	\$ 18.44	\$ 20.65	\$ 23.13	\$ 25.91	\$ 29.02
Commercial	3/4	\$ 14.70	\$ 16.46	\$ 18.44	\$ 20.65	\$ 23.13	\$ 25.91	\$ 29.02
Commercial	1	\$ 24.55	\$ 27.50	\$ 30.80	\$ 34.49	\$ 38.63	\$ 43.27	\$ 48.46
Commercial	1.5	\$ 48.94	\$ 54.81	\$ 61.39	\$ 68.76	\$ 77.01	\$ 86.25	\$ 96.60
Commercial	2	\$ 78.33	\$ 87.73	\$ 98.26	\$ 110.05	\$ 123.25	\$ 138.04	\$ 154.61
Commercial	3	\$ 156.67	\$ 175.47	\$ 196.53	\$ 220.11	\$ 246.52	\$ 276.11	\$ 309.24
Commercial	4	\$ 244.84	\$ 274.22	\$ 307.13	\$ 343.98	\$ 385.26	\$ 431.49	\$ 483.27
Commercial	Volume	\$ 1.59	\$ 1.78	\$ 1.99	\$ 2.23	\$ 2.50	\$ 2.80	\$ 3.14

Note: Outside city customers' rates are 1.50 times the stated inside city rates.

Exhibit D-5 calculates the monthly impact to an average single family customer's bill assuming water usage of 6 ccf per month, which is based on actual customer data. The bill projection includes the City utility tax which adds an additional 7% per month.

Exhibit D-5: Impact to Single Family Bill under Scenario A

Single Family Bill	2015	2016	2017	2018	2019	2020	2021
	Existing	Projected	Projected	Projected	Projected	Projected	Projected
Monthly Bill, Assuming 6 ccf	\$ 17.28	\$ 19.35	\$ 21.68	\$ 24.28	\$ 27.19	\$ 30.45	\$ 34.11
Incremental Dollar Difference per Month		\$ 2.07	\$ 2.32	\$ 2.60	\$ 2.91	\$ 3.26	\$ 3.65

D5. COMPARATIVE RATE SURVEY – SCENARIO A

The following exhibit compares the City's monthly rate (including the 7% City utility tax) with the 2015 rates of other jurisdictions throughout Western Washington. The comparison assumes single family residential customers. Rates for the other jurisdictions are based on the stated rates found on their websites and may or may not contain city utility taxes. Note that each jurisdiction has a unique set of geographic traits, customers, and system characteristics, each of which can have a significant impact on rates.

The City currently has the lowest rates of the comparison group. The City would still have the lowest rates even with a 12% rate increase in 2016. By 2021, the projected rate increases under Scenario A would total 97%, but the City’s 2021 rates would still be lower than the 2015 rates of six other utilities. Of course, most of these jurisdictions could also be facing rate increases in 2016 and beyond.

Exhibit D-6: Rate Comparison with Scenario A Rates

Single Family Residence - Water			
#	Jurisdiction	Charge	Graph
1	Anacortes (Existing 2015)	\$ 17.28	
2	Anacortes (Proj 2016)	\$ 19.35	
3	Marysville	\$ 20.54	
4	Everett	\$ 22.74	
5	Bellingham	\$ 25.44	
6	Stanwood	\$ 25.69	
7	Lynden	\$ 34.08	
8	Anacortes (Proj. 2021)	\$ 34.11	
9	Skagit PUD	\$ 39.07	
10	Arlington	\$ 40.97	
11	Seattle (Winter)	\$ 43.69	
12	Oak Harbor	\$ 44.55	
13	La Conner	\$ 44.64	
14	Lake Whatcom WSD	\$ 48.78	

Assumes 6 ccf per month.

E. SCENARIO B – FRONT-LOADED RATE INCREASES

This section presents Scenario B, which has the following characteristics:

- Large, upfront rate increases, which minimize reliance on debt over the study period and beyond.
- Total net borrowing of \$7.1 million, with nearly \$580,000 in annual debt service by 2021.
- Cumulative rate increase of 99% from 2016 – 2021, which is about the same as Scenario A.

The projected rate increase strategy is summarized in **Exhibit E-1**. The first-year increase would be 36%, or about \$6.22 per month for a single family customer using 6 ccf/month. The second year increase would also be steep: 18%, or another \$4.23 per month. After that the increases would be more moderate—7% per year for two years, and then 4% per year for the last two years of the study period. The 2021 rates would be close to the same under Scenario B as under Scenario A

Exhibit E-1: Scenario B Rate Increase Strategy

Scenario B	2015 [a]	2016	2017	2018	2019	2020	2021
Annual Increase		36.0%	18.0%	7.0%	7.0%	4.0%	4.0%
Cumulative Increase		36.0%	60.5%	71.7%	83.7%	91.1%	98.7%
Average Single Family Bill (6 ccf)	\$ 17.28	\$23.50	\$27.73	\$29.67	\$31.75	\$33.02	\$34.34

[a] Water rates increased by roughly 2% from 2014 to 2015 at beginning of year

E2. CAPITAL FUNDING STRATEGY FOR SCENARIO B

Scenario B includes the capital funding strategy shown in **Exhibit E-2**. In this scenario, about \$7.1 million in borrowing is needed. Capital funding over the forecast period consists of 27% debt, 34% wholesale revenue, and 39% rate-funded system reinvestment, operating surpluses, and GFC income. Because this scenario emphasizes raising rates earlier rather than later, the rate-funded system reinvestment can be more aggressive, starting at 50% of depreciation in 2016 and growing to 70% by 2021. This equals nearly \$970,000 in 2016 and about \$1.65 million per year by 2021. From 2016 to 2021, rate-funded capital is nearly \$8.1 million, compared to \$7.2 million of pipe replacements.

Exhibit E-2: Capital Funding Strategy in Scenario B

Capital Funding Strategy	2015	2016	2017	2018	2019	2020	2021
Total Capital Expenditures (Escalated Dollars)	\$ 2,006,090	\$ 2,179,594	\$ 6,390,811	\$ 4,882,602	\$ 2,549,826	\$ 3,875,114	\$ 3,185,434
Subset / Info Only: Pipeline Repair & Replacement	\$ 1,014,500	\$ 1,065,278	\$ 1,118,598	\$ 1,174,587	\$ 1,233,378	\$ 1,295,111	\$ 1,359,935
Capital Funding Strategy:							
Beginning Fund Balance	\$ 693,474	\$ 861,590	\$ 1,129,008	\$ 4,121,726	\$ 1,869,270	\$ 2,646,202	\$ 1,784,072
plus: Grants / Outside Sources	-	-	-	-	-	-	-
plus: Wholesale Capital Revenue	1,136,095	1,136,095	2,121,072	1,149,009	629,769	1,234,051	1,456,047
plus: Annual GFC Revenue	154,977	160,814	166,871	173,155	179,677	186,444	193,466
plus: Rate Funded System Reinvestment	-	966,901	1,092,764	1,297,678	1,462,639	1,585,874	1,648,427
plus: Direct Rate Funding	176,521	181,909	-	-	-	-	-
plus: Transfer of Surplus from Operating Fund	705,780	-	-	-	-	-	-
plus: Interest Earnings	832	1,292	2,823	10,304	4,673	6,616	4,460
plus: Net Debt Proceeds Available for Projects	-	-	6,000,000	-	1,050,000	-	-
Total Capital Resources	\$ 2,867,680	\$ 3,308,601	\$ 10,512,538	\$ 6,751,872	\$ 5,196,028	\$ 5,659,186	\$ 5,086,472
less: Capital Expenditures	2,006,090	2,179,594	6,390,811	4,882,602	2,549,826	3,875,114	3,185,434
Ending Fund Balance	\$ 861,590	\$ 1,129,008	\$ 4,121,726	\$ 1,869,270	\$ 2,646,202	\$ 1,784,072	\$ 1,901,038

E3. ANNUAL FINANCIAL FORECAST FOR SCENARIO B

Exhibit E-3 shows the annual financial forecast under Scenario B. Again, this forecast assumes increases of 36% in 2016, 18% in 2017, 7% in 2018 and 2019, and 4% in 2020 and 2021. The cumulative increase through 2021 is 99%. The operating balance ends at 83 days, right in the middle of the recommended range; the capital balance exceeds the minimum target; and the debt reserve's starting balance has increased by an amount equal to one year's worth of annual debt service on new revenue bonds. In addition, the ending capital fund balance in Scenario B exceeds that of Scenario A by about \$285,000, due to the more aggressive policy on rate-funded system reinvestment.

Exhibit E-3: Financial Forecast under Scenario B

Revenue Requirements	2015	2016	2017	2018	2019	2020	2021
Assuming Existing Rates:							
Revenue							
Retail Rate Revenues	\$ 2,367,515	\$ 2,379,353	\$ 2,391,250	\$ 2,403,206	\$ 2,415,222	\$ 2,427,298	\$ 2,439,435
Non-Retail Rate Revenues	14,405,190	13,146,661	13,267,352	13,373,950	13,473,670	13,573,373	12,106,591
Total Revenue	\$ 16,772,706	\$ 15,526,014	\$ 15,658,602	\$ 15,777,156	\$ 15,888,892	\$ 16,000,671	\$ 14,546,025
Expenses							
Cash Operating Expenses	\$ 8,832,314	\$ 8,948,001	\$ 9,235,376	\$ 9,411,977	\$ 9,577,842	\$ 9,765,289	\$ 8,385,117
Existing Debt Service	6,262,991	6,247,327	6,225,161	6,198,948	6,180,496	6,139,589	6,102,183
New Debt Service	-	-	493,363	493,363	579,702	579,702	579,702
Direct Rate-Funded CIP	176,521	181,909	-	-	-	-	-
Rate-Funded System Reinvestment	-	966,901	1,092,764	1,297,678	1,462,639	1,585,874	1,648,427
Additions to Operating Reserve	-	-	-	-	-	-	-
Total Expenses	\$ 15,271,826	\$ 16,344,139	\$ 17,046,664	\$ 17,401,966	\$ 17,800,679	\$ 18,070,454	\$ 16,715,429
Cash Surplus / (Deficiency)	\$ 1,500,880	\$ (818,126)	\$ (1,388,062)	\$ (1,624,809)	\$ (1,911,788)	\$ (2,069,783)	\$ (2,169,404)
Annual Rate Adjustment	0.00%	36.00%	18.00%	7.00%	7.00%	4.00%	4.00%
Cumulative Annual Rate Adjustment	0.00%	36.00%	60.48%	71.71%	83.73%	91.08%	98.73%
After Rate Increases:							
Rate Revenues	\$ 2,367,515	\$ 3,235,920	\$ 3,837,478	\$ 4,126,632	\$ 4,437,573	\$ 4,638,152	\$ 4,847,796
Net Cash Flow	1,500,900	(7,700)	(19,700)	5,900	1,700	22,100	109,400
Debt Service Coverage - Revenue Bonds	1.80	1.71	1.66	1.70	1.72	1.74	1.52
Debt Service Coverage - All Debt	1.63	1.55	1.51	1.55	1.57	1.59	1.39
Ending Fund Balances							
Operating Reserve	\$ 1,614,362	\$ 1,606,711	\$ 1,587,054	\$ 1,592,932	\$ 1,594,672	\$ 1,616,776	\$ 1,726,139
Capital Reserve	861,590	1,129,008	4,121,726	1,869,270	2,646,202	1,784,072	1,901,038
Debt Reserve	4,563,610	4,563,610	5,056,973	5,056,973	5,143,312	5,143,312	5,143,312
Total	\$ 7,039,561	\$ 7,299,329	\$ 10,765,754	\$ 8,519,176	\$ 9,384,186	\$ 8,544,160	\$ 8,770,489
Operating Reserve (Days of O&M Expense)	90 days	88 days	85 days	83 days	81 days	80 days	83 days
Target Capital Contingency	\$ 664,185	\$ 681,414	\$ 722,710	\$ 758,889	\$ 777,230	\$ 801,501	\$ 815,714
Capital Contingency Deficit (if any)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Structure: % Debt	54%	51%	51%	47%	44%	40%	37%
Capital Structure: % Equity	46%	49%	49%	53%	56%	60%	63%

E4. PROJECTED RATE SCHEDULE – SCENARIO B

Exhibit E-4 shows the projected rates resulting from the Scenario B across-the-board rate increases.

Exhibit E-4: Projected Rate Schedule for Scenario B

Projected Rate Schedule	2015		2016	2017	2018	2019	2020	2021
	Existing [a]	Projected	Projected	Projected	Projected	Projected	Projected	Projected
Annual Rate Increase			36.00%	18.00%	7.00%	7.00%	4.00%	4.00%
Cumulative Rate Increase			36.00%	60.48%	71.71%	83.73%	91.08%	98.73%
[a] Water rates increased by roughly 2% from 2014 to 2015 at beginning of year								
Meter								
Residential	5/8 X 3/4	\$ 9.79	\$ 13.31	\$ 15.71	\$ 16.81	\$ 17.99	\$ 18.71	\$ 19.46
Residential	3/4	\$ 9.79	\$ 13.31	\$ 15.71	\$ 16.81	\$ 17.99	\$ 18.71	\$ 19.46
Residential	1	\$ 16.36	\$ 22.25	\$ 26.25	\$ 28.09	\$ 30.06	\$ 31.26	\$ 32.51
Residential	1.5	\$ 32.63	\$ 44.38	\$ 52.36	\$ 56.03	\$ 59.95	\$ 62.35	\$ 64.84
Residential	2	\$ 52.22	\$ 71.02	\$ 83.80	\$ 89.67	\$ 95.95	\$ 99.78	\$ 103.77
Residential	Volume	\$ 1.06	\$ 1.44	\$ 1.70	\$ 1.82	\$ 1.95	\$ 2.03	\$ 2.11
Commercial	5/8 X 3/4	\$ 14.70	\$ 19.99	\$ 23.59	\$ 25.24	\$ 27.01	\$ 28.09	\$ 29.21
Commercial	3/4	\$ 14.70	\$ 19.99	\$ 23.59	\$ 25.24	\$ 27.01	\$ 28.09	\$ 29.21
Commercial	1	\$ 24.55	\$ 33.39	\$ 39.40	\$ 42.16	\$ 45.11	\$ 46.91	\$ 48.79
Commercial	1.5	\$ 48.94	\$ 66.56	\$ 78.54	\$ 84.04	\$ 89.92	\$ 93.52	\$ 97.26
Commercial	2	\$ 78.33	\$ 106.53	\$ 125.70	\$ 134.50	\$ 143.92	\$ 149.68	\$ 155.66
Commercial	3	\$ 156.67	\$ 213.07	\$ 251.42	\$ 269.02	\$ 287.86	\$ 299.37	\$ 311.34
Commercial	4	\$ 244.84	\$ 332.98	\$ 392.92	\$ 420.42	\$ 449.85	\$ 467.85	\$ 486.56
Commercial	Volume	\$ 1.59	\$ 2.16	\$ 2.55	\$ 2.73	\$ 2.92	\$ 3.04	\$ 3.16

Note: Outside city customers' rates are 1.5 times the stated inside city rates.

Exhibit E-5 calculates the monthly impact to an average single family bill assuming water usage of 6 ccf per month, which is based on actual customer data. These figures include the 7% City utility tax.

Exhibit E-5: Impact to Single Family Bill under Scenario B

Single Family Bill	2015	2016	2017	2018	2019	2020	2021
	Existing	Projected	Projected	Projected	Projected	Projected	Projected
Monthly Bill, Assuming 6 ccf	\$ 17.28	\$ 23.50	\$ 27.73	\$ 29.67	\$ 31.75	\$ 33.02	\$ 34.34
Incremental Dollar Difference per Month		\$ 6.22	\$ 4.23	\$ 1.94	\$ 2.08	\$ 1.27	\$ 1.32

E5. COMPARATIVE RATE SURVEY – SCENARIO B

The following exhibit compares the City's monthly rate (including the 7% City utility tax) with the 2015 rates of other jurisdictions throughout Western Washington. The results are similar to those in **Section D5**. Not only does the City have the lowest rates of the comparison group, they would still be the third lowest even with a 36% rate increase in 2016, even if no one else increased their rates.

Exhibit E-6: Rate Comparison with Scenario B Rates

Single Family Residence - Water			
#	Jurisdiction	Charge	Graph
1	Anacortes (Existing 2015)	\$ 17.28	
2	Marysville	\$ 20.54	
3	Everett	\$ 22.74	
4	Anacortes (Proj 2016)	\$ 23.50	
5	Bellingham	\$ 25.44	
6	Stanwood	\$ 25.69	
7	Lynden	\$ 34.08	
8	Anacortes (Proj. 2021)	\$ 34.34	
9	Skagit PUD	\$ 39.07	
10	Arlington	\$ 40.97	
11	Seattle (Winter)	\$ 43.69	
12	Oak Harbor	\$ 44.55	
13	La Conner	\$ 44.64	
14	Lake Whatcom WSD	\$ 48.78	

Assumes 6 ccf per month.

Exhibit E-7: Comparison of Water Rates in 112 Washington Cities with Anacortes Rates, Scenario B

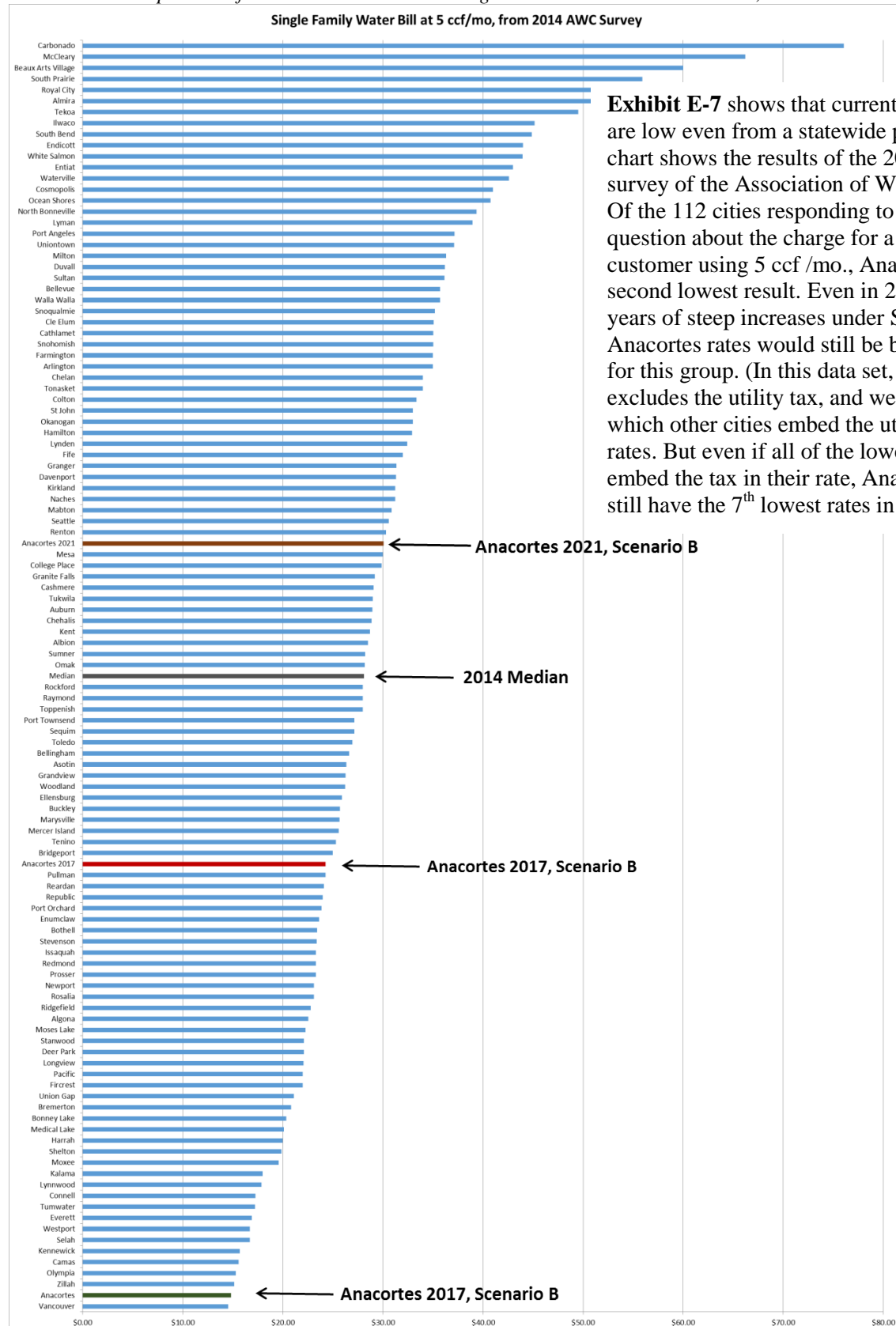


Exhibit E-7 shows that current City water rates are low even from a statewide perspective. This chart shows the results of the 2014 utility rate survey of the Association of Washington Cities. Of the 112 cities responding to the survey question about the charge for a single family customer using 5 ccf /mo., Anacortes had the second lowest result. Even in 2017, after two years of steep increases under Scenario B, Anacortes rates would still be below the median for this group. (In this data set, the City’s rate excludes the utility tax, and we do not know which other cities embed the utility tax in their rates. But even if all of the lowest-cost cities embed the tax in their rate, Anacortes would still have the 7th lowest rates in the survey.)

F. CONCLUSION

F1. SUMMARY

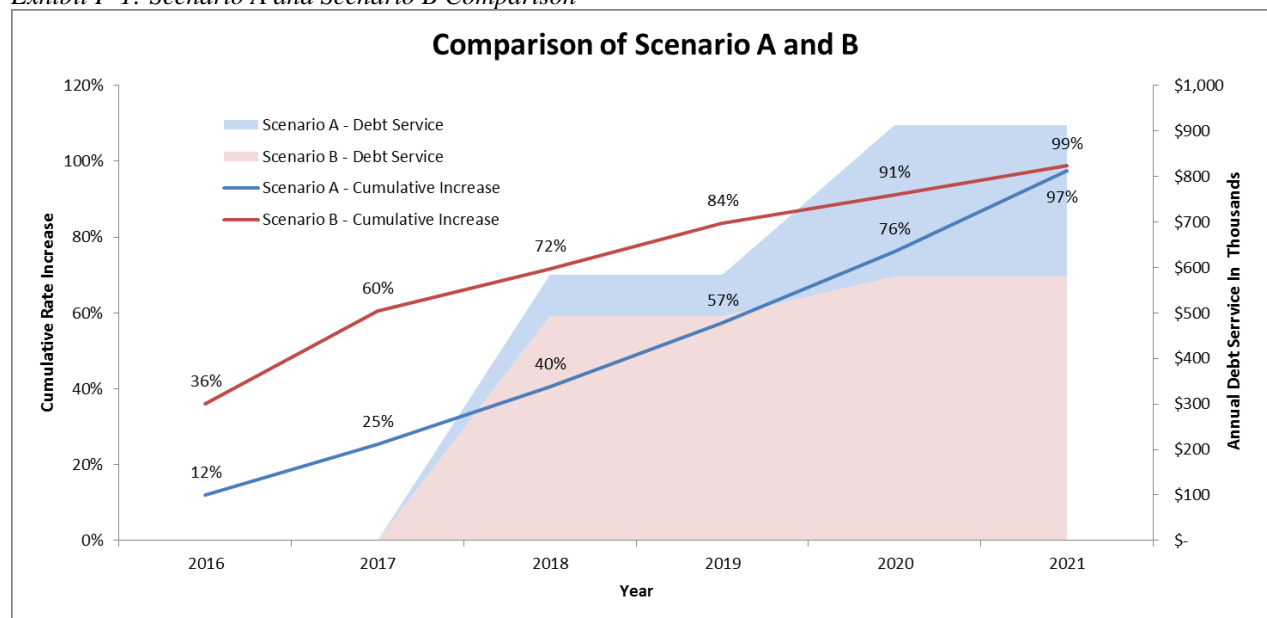
This document describes two different rate increase strategies that both arrive at roughly the same cumulative rate increase by 2021. Scenario A incorporates smoothed rate increases and Scenario B incorporates front-loaded rate increases.

Scenario A contains smoothed rate increases of 12% per year (97% cumulative by 2021), which lessens the immediate rate impact but also forces the utility to take on more debt, including debt-funding a portion of the annual pipeline repair and replacement projects.

Scenario B has front-loaded rate increases, with a 36% increase in 2016 and an 18% increase in 2017 (99% cumulative by 2021). However, this strategy allows the utility to cash-fund more capital, which reduces the retail system’s overall reliance on debt. Under this scenario, the utility can essentially cash-fund all of the pipeline repair and replacement projects.

Exhibit F-1 graphically represents the cumulative annual rate increases and corresponding annual debt service payments under each scenario. The lower line represents Scenario A’s gradual annual rate increases, and the upper line represents Scenario B’s front-loaded rate increases. The higher area chart shows the new debt service under Scenario A (\$913,000 per year by 2021) when compared to the lower area chart, which is Scenario B (\$580,000 per year by 2021). Both scenarios have roughly the same cumulative rate increase, but Scenario A results in 57% more in new annual debt service by the end of the forecast period.

Exhibit F-1: Scenario A and Scenario B Comparison



F2. RECOMMENDATION

In rate studies, we typically recommend that rate increases follow a smooth pattern, similar to Scenario A. However, in this case, the “right-sizing” or “true-up” approach represented in Scenario B actually fits the City’s circumstances better, in two ways.

- Anacortes currently has the advantage of extremely low water rates. As we saw in **Exhibit E-7**, the City’s rates are not only low from a regional perspective, they are low from a statewide

perspective. When the starting point is small, even a high percentage increase can result in an actual dollar impact that is more moderate. For instance, we saw previously on **Exhibit E-6** that in 2015, the typical single family customer in Anacortes was paying \$17.28 per month, while a similar customer in Skagit PUD was paying \$39.07 per month, more than twice the Anacortes amount. Therefore, a 10% increase to a Skagit PUD customer would cost the customer an additional \$3.91 per month, but a 20% increase to an Anacortes customer would cost the customer only \$3.46 per month—less in actual dollars even though the *percentage* is double.

The fact that existing rates are so low gives the City an opportunity to front-load the needed rate increases, which would avoid over \$3 million in debt. For a typical single-family ratepayer, the first two years of increases would add \$6.22 and \$4.23, respectively, to the monthly bill. This is not easy, but the City would still end up with below-average rates compared with other utilities. And while the 2021 rates would be about the same in either scenario, with Scenario A the system would be responsible in 2021 for an extra \$333,000 in debt service each year, which would push up future rates.

- In addition, a smooth pattern of rate increases is not as customer-friendly when the increases are in double digits. When the needed overall rate increase is so great and the current level of rates is so low, steep increases compressed into a two-year period can be less disruptive to customers than six years in a row of 12% increases. Once people understand the need and can see that higher rates are unavoidable, it can actually be preferable to “get it over with.”

Based on those two considerations, we recommend that the City adopt Scenario B, the front-loaded increases. At first this will require a stronger communications effort in order to re-orient customer expectations, but the City and its customers will be able to get through the worst of it in only two years, with much more moderate increases after that and a lighter debt load at the end of the forecast period.

The fact that existing rates are so low is partly due to the economies of scale that come from serving two large oil refineries and several other municipal water systems from the same basic water supply infrastructure. However, there is a degree to which current rates are *too* low; they are low because the City has not been reinvesting in its infrastructure. The upcoming season of capital reinvestment will not make the City a high-cost utility, because the economies of scale are still there. However, these rate increases will create a more sustainable financial footing and a stronger asset reinvestment program for the retail system.

F3. ITEMS TO CONSIDER DURING FUTURE STUDIES

This study’s scope of services was limited to a basic revenue requirement and across-the-board rate increase, but we wanted to note a few items that the City may want to consider during future rate studies:

- Evaluate potential debt service coverage impacts as the refinery customers begin to finish their ten-year accelerated debt service payment plans. The first loan’s final accelerated payment is projected to occur in 2020, with the last loan’s projected accelerated payment projected to occur in 2023.
- Review the rationale for the 1.5 multiplier for inside-city commercial rates. The rate relationship between various customer classes (e.g. single family, multi-family, commercial, etc.) is often established through a cost of service study which evaluates how various customer classes place demands on the system. It is uncommon to have commercial rates be strictly determined through a rate multiplier.

- Review the rationale and legal defensibility of the 1.5 outside city multiplier on the General Facilities Charge. While it is common to have an outside city multiplier for monthly service rates, it is uncommon to have an outside city multiplier on a general facilities charge.
- City staff indicated that the City Council wants to consider the potential for tiered / increasing block residential usage rates. There are a few reasons why now may not be the best time to explore such a policy:
 - ◆ First, the City has ample water supply and infrastructure to deliver water – the utility does not need to conserve water from an infrastructure or water rights standpoint.
 - ◆ Second, the utility’s retail customers are already facing significant percentage rate increases under either scenario, and changing the rate structure may affect revenue stability, as usage may decline in response to higher rates plus a new rate structure. Under tiered rates, the second or third block may be as high as 1.25 to 2.00 times the first block’s rate.
 - ◆ Third, changes to the rate structure inevitably create “winners and losers”—some people pay more while others pay less. This does not mean that the rate structure should never be changed, but it is harder to do it when the overall rate increases are already significant.

However, block residential rates might well be worth considering at the next rate study, along with the other items we have noted above.