

ORDINANCE NO. 2019-14

AN ORDINANCE of the City of Bainbridge Island, Washington, updating the City's Water and Sewer Utility Fees – Monthly Rates, amending Bainbridge Island Municipal Code Section 13.16.060, and amending Section 11.B. of the City's Fee Schedule relating to water and sewer utility fees – monthly rates.

WHEREAS, on June 7, 1982, the City Council adopted Ordinance No. 1982-20, setting water and sewer monthly rates; and

WHEREAS, on December 14, 2011, the City Council adopted Ordinance No. 2011-26, reducing the City's monthly water rates; and

WHEREAS, studies of the rates, charges, and fees of utility systems are generally conducted on periodic intervals to insure they provide adequate revenue for the utilities, and to insure the rates, charges, and fees are, and continue to be, in conformance with state law; and

WHEREAS, in March 2018, the City contracted with Financial Consulting Solutions Group (FCS Group) to evaluate and provide a recommendation to the City concerning water and sewer monthly rates; and

WHEREAS, the FCS Group worked closely with both City staff and the Utility Advisory Committee for several months in reviewing the data and proposed rate adjustments; and

WHEREAS, the FCS Group prepared a Water and Sewer Rate Study dated March 7, 2019, which was approved by the Utility Advisory Committee recommending revisions to the City's monthly water and sewer rates; and

WHEREAS, at the March 19, 2019 City Council Study Session, the FCS Group presented the March 7, 2019 Water and Sewer Rate Study to the Council recommending revisions to the City's water and sewer monthly rates, and the Council made some minor revisions and directed staff to develop utility bill inserts and schedule a public hearing at a future business meeting; and

WHEREAS, at the April 16, 2019 City Council Study Session, the FCS Group presented a revised Water and Sewer Rate Study dated April 16, 2019 to the Council; and

WHEREAS, at the April 16, 2019 City Council Study Session, the Council concurred with the revised recommendations and directed staff to return in May with an ordinance adopting the proposed revisions based on the April 16, 2019 Water and Sewer Rate Study; and

WHEREAS, beyond 2021, rate revenue increases of 2% per year are recommended by the April 16, 2019 Rate Study until the next rate review.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF BAINBRIDGE ISLAND, WASHINGTON, DOES ORDAIN AS FOLLOWS:

Section 1. Section 13.16.060.A. of the Bainbridge Island Municipal Code is hereby amended as follows:

A. All water and sewer rates shall be subject to an adjustment beginning with the first full billing period of 2022 and each year thereafter through 2024 equal to 2% annually. ~~each year equal to the annual percentage increase in the United States Consumer Price Index, All Urban Consumers (CPI-U) for November of the preceding year as shown in the release from the Bureau of Labor Statistics plus two percent unless the city council determines by December 31st of any year that the adjustment shall be another amount or shall not occur for the next year.~~

Section 2. The rates in Section 11.B. of the City’s Fee Schedule are hereby amended as follows:

WATER RATES

WATER RATES FOR THE WINSLOW WATER SYSTEM AND CASEY STREET WATER SYSTEM (Ordinance Nos. 2011-26 and 2012-21, Resolution 2018-12)				
	Current	2019	2020	2021
CATEGORY 1 (SINGLE FAMILY) shall pay a monthly fixed base rate based on size of water meter as follows:				
Up to ¾-inch	\$10.77	\$11.59	\$12.02	\$12.45
1-inch	\$21.24	\$22.85	\$23.70	\$24.55
1.5-inch	\$38.72	\$41.65	\$43.20	\$44.75
2-inch	\$59.71			
3-inch	\$115.70			
4-inch	\$178.65			
6-inch	\$353.94			
Plus, a charge for consumption on an incremental basis as follows:				
For the first 500 cubic feet (cf)	\$1.09 per 100 cf	\$1.17 per 100 cf	\$1.22 per 100 cf	\$1.26 per 100 cf
For the next 700 cubic feet (cf)	\$1.76 per 100 cf	\$1.89 per 100 cf	\$1.96 per 100 cf	\$2.03 per 100 cf
For the next 1,800 cubic feet (cf)	\$2.49 per 100 cf	\$2.68 per 100 cf	\$2.78 per 100 cf	\$2.88 per 100 cf
For amounts over 3,000 cubic feet (cf)	\$3.39 per 100 cf	\$3.65 per 100 cf	\$3.78 per 100 cf	\$3.92 per 100 cf

	Current	2019	2020	2021
CATEGORY 2 (MULTIPLE DWELLINGS) Base Rate per Living Unit	\$5.37	\$5.37	\$5.37	\$5.38
Consumption Charge per 100 cf	0-	\$1.11	\$1.11	\$1.11
Plus, a charge for consumption on an incremental basis as follows:				
For the first 500 cubic feet (cf)	\$1.09 per 100 cf per unit			
For the next 700 cubic feet (cf)	\$1.76 per 100 cf per unit			
For the next 1,800 cubic feet (cf)	\$2.49 per 100 cf per unit			
For amounts over 3,000 cubic feet (cf)	\$3.39 per 100 cf per unit			

	Current	2019	2020	2021
CATEGORY 3 (COMMERCIAL) shall pay a monthly fixed base rate based on size of water meter as follows:				
Up to ¾-inch	\$16.45	\$16.33	\$16.33	\$16.33
1-inch	\$36.40	\$36.12	\$36.12	\$36.12
1.5-inch	\$69.78	\$69.25	\$69.25	\$69.25
2-inch	\$109.52	\$108.69	\$108.69	\$108.69
3-inch	\$215.89	\$214.25	\$214.25	\$214.25
4-inch	\$335.55	\$333.00	\$333.00	\$333.00
6-inch	\$667.94	\$662.87	\$662.87	\$662.87
Consumption Charge per 100 cf		\$1.54	\$1.54	\$1.54
Plus, a charge for consumption as follows:				
For water billed November to April	\$1.43 per 100 cf			
For water billed May to October	\$1.65 per 100 cf			

	Current	2019	2020	2021
CATEGORY 4 (OTHER) , other than irrigation systems or construction projects, shall pay a monthly fixed base rate based on size of water meter as follows:				
Up to ¾-inch	\$24.04			
1-inch	\$55.37			
1.5-inch	\$107.58			
2-inch	\$170.23			
3-inch	\$337.28			
4-inch	\$525.22			
6-inch	\$1,047.31			
Plus, a charge for consumption as follows:				
For water billed November to April	\$1.43 per 100 cf	\$0.00 per 100 cf	\$0.00 per 100 cf	\$0.00 per 100 cf
For water billed May to October	\$1.65 per 100 cf	\$0.00 per 100 cf	\$0.00 per 100 cf	\$0.00 per 100 cf

CATEGORY 4 (INDUSTRIAL), shall pay rates as set by individual contract, which contract shall not provide rates less than any of the categories 1 through 3.

	Current	2019	2020	2021
IRRIGATION SYSTEMS shall pay a monthly base rate on size of water meter as follows:				
Up to ¾-inch	\$4.73	\$4.09	\$4.09	\$4.09
1-inch	\$6.22	\$5.38	\$5.38	\$5.38
1.5-inch	\$8.70	\$7.53	\$7.53	\$7.53
2-inch	\$11.70	\$10.12	\$10.12	\$10.13
3-inch	\$19.64	\$16.99	\$16.99	\$17.00
4-inch	\$28.59	\$24.74	\$24.74	\$24.75
6-inch	\$53.47	\$46.26	\$46.26	\$46.28
Plus, a charge for consumption of:	\$3.89 per 100 cf	\$3.37 per 100 cf	\$3.37 per 100 cf	\$3.37 per 100 cf

	Current	2019	2020	2021
WATER FOR CONSUMPTION ON PROJECTS AT CITY LOCATION (Ordinance No. 2003-42)				
	\$3.89 per 100 cf	\$3.89 per 100 cf	\$3.89 per 100 cf	\$3.89 per 100 cf
Plus, 125% of direct cost to city for connection setup and delivery. plus a billing charge of \$19.19 per bill sent.				
Through single family residential meter/flat rate	\$55.96 per 90-	\$00.00 per 90-	\$00.00 per 90-	\$00.00 per 90-

	days	days	days	days
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WATER RATES FOR THE ROCKAWAY BEACH AREA

	Current	2019	2020	2021
CATEGORY 1 (SINGLE FAMILY) shall pay a monthly fixed base rate based on size of water meter as follows:				
Up to ¾-inch	\$11.64	\$11.64	\$12.02	\$12.45
1-inch	\$22.94	\$22.94	\$23.70	\$24.55
1.5-inch	\$41.85	\$41.85	\$43.20	\$44.75
2-inch	\$64.53			
Plus, a charge for consumption on an incremental basis as follows:				
For the first 500 cubic feet (cf)	\$1.18 per 100 cf	\$1.18 per 100 cf	\$1.22 per 100 cf	\$1.26 per 100 cf
For the next 700 cubic feet (cf)	\$1.90 per 100 cf	\$1.90 per 100 cf	\$1.96 per 100 cf	\$2.03 per 100 cf
For the next 1,800 cubic feet (cf)	\$2.69 per 100 cf	\$2.69 per 100 cf	\$2.78 per 100 cf	\$2.88 per 100 cf
For amounts over 3,000 cubic feet (cf)	\$3.66 per 100 cf	\$3.66 per 100 cf	\$3.78 per 100 cf	\$3.92 per 100 cf

	Current	2019	2020	2021
CATEGORY 4 (OTHER) , other than irrigation systems or construction projects, shall pay a monthly fixed base rate based on size of water meter as follows:				
Up to ¾ inch	\$24.04			
1-inch	\$55.37			
1.5-inch	\$107.58			
2-inch	\$170.23			
Plus, a charge for consumption as follows:				
For water billed November to April	\$1.43 per 100 cf	\$0.00 per 100 cf	\$0.00 per 100 cf	\$0.00 per 100 cf
For water billed May to October	\$1.65 per 100 cf	\$0.00 per 100 cf	\$0.00 per 100 cf	\$0.00 per 100 cf

SEWER RATES

SEWER RATES FOR USERS OF BOTH WATER AND SEWER

(Ordinance Nos. 2009-39, 2011-25 and 2012-22)

	Current	2019	2020	2021
CATEGORY 1 *(SINGLE FAMILY)	\$42.69 per month/unit + \$7.28 per 100 cf of wtr,	\$42.69 per month + \$7.28 per 100 cf of wtr,	\$42.69 per month + \$7.28 per 100 cf of wtr	\$42.69 per month + \$7.28 per 100 cf of wtr
CATEGORY 2 *(MULTI-FAMILY)	\$37.39 per month/unit + \$7.28 per 100 cf of wtr.	\$37.39 per month/unit + \$7.28 per 100 cf of wtr.	\$37.39 per month/unit + \$7.28 per 100 cf of wtr.	\$37.39 per month/unit + \$7.28 per 100 cf of wtr.
CATEGORY 3 (COMMERCIAL)	\$123.69 per month/unit + \$7.28 per 100 cf of wtr.	\$126.16 per month + \$7.28 per 100 cf of wtr,	\$128.69 per month + \$8.99 per 100 cf of wtr,	\$131.26 per month + \$9.90 per 100 cf of wtr
CATEGORY 4 (MIXED USE)	\$123.69 per month/unit + \$7.28 per 100 cf of wtr.	\$00.00 per month + \$0.00 per 100 cf of wtr,	\$00.00 per month + \$0.00 per 100 cf of wtr,	\$00.00 per month + \$0.00 per 100 cf of wtr
CATEGORY 4 (INDUSTRIAL)	Set by individual contract	Set by individual contract	Set by individual contract	Set by individual contract
CATEGORY 6 (SENIOR/LOW INCOME)	\$21.35 per month + \$3.65 per 100 cf of wtr.	\$00.00 per month + \$0.00 per 100 cf of wtr,	\$00.00 per month + \$0.00 per 100 cf of wtr,	\$00.00 per month + \$0.00 per 100 cf of wtr

*Sewer billings for the three summer months of mid-June through mid-September for all customers in Categories 1 and 2 shall be set at the average of each property's billing for the prior months of mid-December through mid-May.

SEWER RATES FOR USERS WITHOUT WATER SERVICE				
	Current	2019	2020	2021
The following monthly sewer rates shall apply to billings for users who do not contract with the City for the provision of water services. For Users served by the City's Sewer Treatment Plant, the following rates apply:				
CATEGORY 1 *(SINGLE FAMILY)	\$119.80 per month/unit Without meter,	\$119.80 per month/unit Without meter,	\$119.80 per month/unit Without meter	\$119.80 per month/unit Without meter
CATEGORY 3 (COMMERCIAL)	\$129.43 per ERU	\$139.53 per ERU	\$149.99 per ERU	\$160.89 per ERU
CATEGORY 6 (SENIOR/LOW INCOME)	\$59.90 per month without meter.	\$00.00 per month without meter.	\$00.00 per month without meter	\$00.00 per month without meter

SEWER RATES FOR CUSTOMERS SERVED BY THE SEWER DISTRICT NO. 7 TREATMENT PLANT (Ordinance No. 2009-39)				
	Current	2019	2020	2021
Property that contributes sewage to the Kitsap County District No. 7 Treatment Plant shall pay a monthly rate equal to the monthly rate applied to the City by Kitsap County Sewer District No. 7 per ERU (presently \$58.71) for treatment plus:				
Properties with Grinder Pumps	\$23.59 per ERU	\$25.00 per ERU	\$26.58 per ERU	\$28.22 per ERU
Properties without Grinder Pumps	\$19.42 per ERU	\$20.58 per ERU	\$21.88 per ERU	\$23.23 per ERU
SEWER LATECOMER CHARGE (SEWER DISTRICT #7) (Kitsap County Sewer District No. 7 Resolution No. 2017-01)				
(1) Residential Single Family	\$10,330.00 (Flat Fee)	\$10,330.00 (Flat Fee)	\$10,330.00 (Flat Fee)	\$10,330.00 (Flat Fee)
(2) Commercial	\$10,330.00 per ERU	\$10,330.00 per ERU	\$10,330.00 per ERU	\$10,330.00 per ERU
Where "ERU" is defined as each set of 20-fixture units as shown on the schedule of fixture units in file with the City Clerk.				

Section 3. This ordinance shall govern over any provisions of any previously enacted ordinances or resolutions of the City of Bainbridge Island which relate to sewer or water system rates and charges to the extent that any such ordinances or resolutions are inconsistent with or conflict with this ordinance including, but not exclusive to, Ordinance Nos. 1982-20, 2011-26, and 2012-21, Resolution No. 2018-12, Ordinance Nos. 2003-42, 2009-39, 2011-25, and 2012-22, and Resolution No. 2017-01.

Section 4. This ordinance shall take effect and be in force on July 15, 2019.

PASSED by the City Council this 28th day of May, 2019.

APPROVED by the Mayor this 28th day of May, 2019.



Kol Medina, Mayor

ATTEST/AUTHENTICATE:



Christine Brown, CMC, City Clerk

FILED WITH THE CITY CLERK:	May 2, 2019
PASSED BY THE CITY COUNCIL:	May 28, 2019
PUBLISHED:	May 31, 2019
EFFECTIVE DATE:	July 15, 2019



City of Bainbridge Island

Water and Sewer Rate Study

DRAFT REPORT
May 2019

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TABLE OF CONTENTS

Table of Contents	0
Section I. Executive Summary	1
I.A. Revenue Requirement Analysis	1
I.B. Cost-Of-Service Analysis	2
Section II. Introduction.....	4
II.A. Background	4
II.B. Methodology	4
Section III. Policy Framework	5
III.A. Fiscal Policies	5
III.A.1. Reserves	5
III.A.2. System Reinvestment Funding	5
III.A.3. Financial Performance Standards	6
Section IV. Revenue Requirement	7
IV.A. Background & General Methodology	7
IV.B. Operating Forecast.....	7
IV.B.1. Operating Revenue.....	7
IV.B.2. Operating Expenses	8
IV.B.3. Debt Service	8
IV.C. Capital Forecast	9
IV.C.1. Water Capital Funding Plan	9
IV.C.2. Sewer Capital Funding Plan	9
IV.D. Evaluation of Revenue Sufficiency	10
IV.D.1. Water Revenue Requirement	10
IV.D.2. Sewer Revenue Requirement	11
Section V. Cost-of-Service Analysis	12
V.A. Background & General Methodology	12
V.B. Functional Cost Allocation	12
V.B.1. Water Functional Cost Allocation	12
V.B.2. Sewer Functional Cost Allocation	14
V.C. Customer Class Cost Allocation	16
V.C.1. Water Customer Class Allocation	16
V.C.2. Sewer Customer Class Allocation	18
V.D. Recommended 2019 – 2021 Rates	20
Appendix A: Water Rate Analysis	
Appendix B: Sewer Rate Analysis	

Section I. EXECUTIVE SUMMARY

The City of Bainbridge Island contracted with FCS GROUP in 2018 to update its water and sewer rates. The project included revenue requirement and cost-of-service analyses for both utilities, as well as an update to their System Participation Fees (SPFs). Because the SPF update was documented in a separate report, this report focuses on the utility rate analyses.

I.A. REVENUE REQUIREMENT ANALYSIS

Exhibit 1.1 provides the six-year rate revenue adjustment forecast for both utilities:

Exhibit 1.1: Summary of Projected Utility Rate Revenue Adjustments

Annual Rate Revenue Increases	Proposed			Projected		
	2019	2020	2021	2022	2023	2024
Water	2.0%*	2.0%	2.0%	2.0%	2.0%	2.0%
Sewer	2.0%*	2.0%	2.0%	2.0%	2.0%	2.0%

*The 2019 rate increase is assumed to be a mid-year increase effective for six months of 2019.

Key drivers behind the increases shown in **Exhibit 1.1** include:

- **Increased Repair and Replacement Expenses for 2019 - 2021.** The City’s operating costs vary significantly from normal levels in 2019 and 2020, when meter replacements, supervisory control and data acquisition (SCADA) upgrades, and substantial repairs are funded from operations. From 2018 to 2019, water and sewer operating expenses are expected to increase by 19.2% and 13.4% respectively. Expenses are forecast to return to normal levels in 2021 for water and 2022 for sewer.
- **Inflationary Operating Cost Increases.** In addition to the repair and replacement costs, the City’s budgeted annual operating costs are projected to increase at a rate averaging 2.25% per year for the water utility and 2.19% per year for the sewer utility. These increases are generally attributable to assumed cost inflation.
- **Capital Requirements.** Unless they can defer key capital projects, both utilities will require external financing to support their capital plans. The analysis projects revenue bond issuance of \$1.7 million in 2021 for the water utility and \$3.5 million in 2024 for the sewer utility – these bond issues are expected to result in annual payments of about \$117,000 and \$234,000 for the water and sewer utilities, respectively. In addition, the sewer financial plan includes generating approximately \$218,000 for capital projects through rates during the latter part of the six-year study period. The Utility Advisory Committee (UAC) has recommended that the sewer utility increase rate funding for capital as its existing debt payments drop off beginning in the mid-2020s.

I.B. COST-OF-SERVICE ANALYSIS

Exhibit 1.2 summarizes the findings of the water cost-of-service analysis:

Exhibit 1.2: Summary of Water Cost-of-Service Analysis

Class	% of Cost Recovery Under Existing Rates	% of Allocated Cost of Service (2019)
Single-Family–Winslow	49.8%	54.1%
Single-Family–Rockaway	2.3%	2.1%
Multi-Family	14.7%	14.0%
Commercial	21.9%	20.7%
Irrigation	10.4%	8.5%
Other (Mixed Use)	0.9%	0.5%
Total	100.0%	100.0%

Water Rate Increases (Phased COS)	2019	2020	2021
Single-Family – Winslow	+7.6%	+3.7%	+3.6%
Single-Family – Rockaway	0.0%	+3.3%	+3.6%
Multi-Family	0.0%	0.0%	+0.2%
Commercial	-0.8%	0.0%	0.0%
Irrigation	-13.5%	0.0%	0.0%
Other (Mixed Use)	-23.7%	0.0%	0.0%

Exhibit 1.2 indicates that relative to their allocated cost of service, single-family residences in Winslow have been underpaying while the City’s other customers have been overpaying. The recommended rate strategy envisions implementing the findings of the cost-of-service analysis over a three-year period through a series of class-specific rate adjustments.

Exhibit 1.3 summarizes the findings of the sewer cost-of-service analysis:

Exhibit 1.3: Summary of Sewer Cost-of-Service Analysis

Class	% of Cost Recovery Under Existing Rates	% of Allocated Cost of Service (2019)
Single-Family	43.4%	37.1%
Multi-Family	30.6%	22.0%
Commercial	24.4%	38.9%
South Island Sewer	1.7%	2.1%
Total	100.0%	100.0%

Exhibit 1.3 (Continued): Summary of Sewer Cost-of-Service Analysis

Sewer Rate Increases	Phased COS		
	2019	2020	2021
Single-Family	0.0%	0.0%	0.0%
Multi-Family	0.0%	0.0%	0.0%
Commercial	+7.8%	+7.5%	+7.3%
South Island Sewer	+6.0%	+6.3%	+6.2%

Exhibit 1.3 suggests that residential users in Winslow have been overpaying relative to their allocated cost of service while commercial users and South Island residents have been underpaying. The proposed phasing strategy holds Winslow single-family and multi-family rates at their current levels while adjusting the rates for other customers to improve inter-class equity. Recognizing that full implementation of the findings of the cost-of-service analysis would adversely impact commercial rates, this strategy reflects a policy decision to make some progress toward implementing the cost shifts over the next three years. Any further rate increases would be applied “across-the-board,” or proportionately to all customer classes until the next rate review. In addition, we recommend several rate structure revisions:

- **Consolidate single-family water rates.** Recognizing that the cost-of-service analysis did not find a meaningful difference in the cost of serving single-family homes in Winslow versus those in Rockaway Beach, the proposed rate strategy consolidates the City’s single-family users into a single class by 2020.
- **Consolidate commercial and other (mixed-use) water rates.** The “other” customer class currently only contains five customers, which pay the same volume rate as the commercial class but pay a higher base rate. The results of the cost-of-service analysis do not seem to justify the higher base rate, and with the small size of the “other” class (and the fact that City Ordinance No. 98-24 has not allowed any new connections in this class since October 1998) the proposed rate structure combines them into the commercial class.
- **Adopt uniform water volume rates for multi-family and commercial customers.** Under the City’s existing rate structure, multi-family users are subject to the same four-tiered volume rate as the City’s single-family users (per dwelling unit). The cost-of-service analysis found that the highest three tiers represent only 2.5% of the revenue that the City receives from the multi-family class. Recognizing this (and the fact that conservation pricing signals often do not reach tenants because they are not billed directly for utility service), the proposed multi-family rate structure eliminates the existing tiered volume rate and moves to a uniform volume rate. For consistency, the commercial/other volume rates are also simplified to a uniform rate, eliminating the existing winter/summer differential.
- **Focus commercial sewer rate increase on the volume charge.** Based on the recommendation of the Utility Advisory Committee (UAC), the base rate is increased by 2.0% per year and the remainder of the increase is factored into the volume charge.

The supporting analyses are included as appendices to this report.

Section II. INTRODUCTION

II.A. BACKGROUND

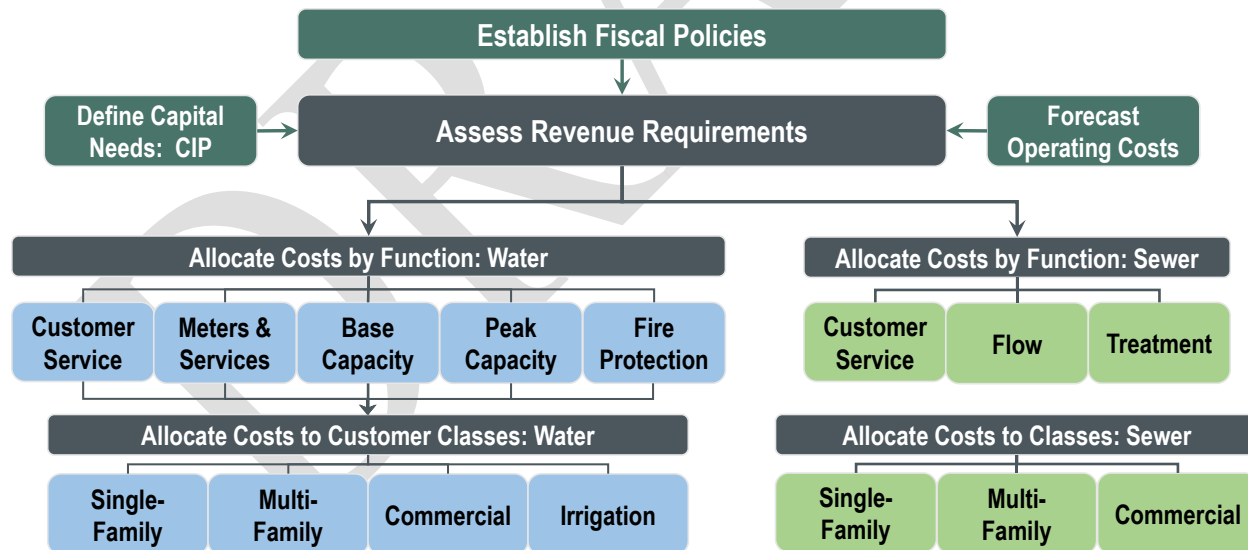
In 2018, the City of Bainbridge Island (City) engaged FCS GROUP to update the City’s water and sewer rates. The project included the following analytical elements:

- Forecast the total amount of rate revenue needed to cover each utility’s capital investment needs, operating costs, debt service, and policy-driven commitments over a six-year planning period.
- Develop cost-of-service analyses for the water and sewer utilities, allocating current cost estimates to customer classes based on their relative demands and service characteristics.

II.B. METHODOLOGY

Exhibit 2.1 summarizes the general methodology used in this analysis, which is consistent with industry-standard ratemaking principles.

Exhibit 2.1: Rate Study Methodology



Section III. POLICY FRAMEWORK

III.A. FISCAL POLICIES

The utility financial plans are based on a framework of fiscal policies that promote the financial integrity and stability of each utility as a standalone enterprise. The ensuing discussion provides a brief summary of the key policies incorporated in this analysis.

III.A.1. Reserves

Like any business, a municipal utility requires certain minimum levels of cash reserves to operate. These reserves address the variability and timing of revenues and expenses as well as occasional disturbances in activities. Given the City's responsibility to provide essential services to its customers at a certain standard, protection against financial disruption is even more important than it would be for private-sector or non-essential counterparts. In addition, a defined reserve structure serves to maintain appropriate segregation of funds and promote the use of resources for their intended purposes. This analysis assumes the following structure of funds for the City's utilities:

- **Operating Reserve.** This reserve provides an unrestricted fund balance to accommodate short-term revenue and expense cycles, addressing unanticipated expenses or revenue shortfalls. The City's fiscal policies establish a target balance of 60 – 90 days (16 – 25%) of operating expenses for both the water and sewer utilities.
- **Capital Contingency Reserve.** Maintaining an appropriate segregation of operating and capital resources, this reserve includes funds explicitly designated for capital purposes such as system participation fees (SPFs), grants received, debt proceeds, and capital funding generated through rates. By City policy, the target balance for this reserve is equal to 1.0% of the net book value of each utility's capital assets.
- **Restricted Bond Reserve.** Revenue bond covenants typically require a restricted reserve as a security measure for the bondholders. The covenants specify the minimum balance, which is generally based on annual debt service or a percentage of the amount issued. The City's utilities do not currently have any outstanding debt that requires this type of reserve.

III.A.2. System Reinvestment Funding

“System reinvestment” is the practice of setting aside cash from rates each year to provide for the replacement of aging system facilities, ensuring the sustainability of the system for ongoing operations. A common practice for utilities is to fund system reinvestment based on a percentage of annual depreciation expense. The sewer utility begins funding system reinvestment in 2023, while system reinvestment is not explicitly funded for the water utility during the 2019 – 2024 study period because the City has already included significant funding for annual repairs in the budget.

III.A.3. Financial Performance Standards

This analysis evaluates the sufficiency of the utilities' revenues to meet their respective financial obligations including operation and maintenance (O&M) expenses, debt repayment, rate-funded capital needs, and any other policy-based needs. It determines the amount of revenue needed in a given year to meet that year's expected financial obligations, in the context of two revenue sufficiency tests:

- **Cash Flow Sufficiency Test.** The cash flow test determines whether or not annual revenues are sufficient to cover the known cash requirements for each year of the planning period. These cash requirements typically include O&M expenses, debt service payments, rate-funded capital outlays, and any additions to reserve balances.
- **Coverage Test.** The coverage test evaluates the utilities' ability to meet applicable bond coverage requirements, as specified by the City's bond covenants and internal debt policies. The coverage test evaluates revenues and expenses somewhat differently than under the cash test. For the coverage test, obligations include operating expenses, revenue bond debt service, and the incremental debt service coverage policy. In addition to rate revenues included in the cash test, the coverage test allows for the inclusion of non-operating interest earnings from all utility reserves and might also allow for annual system participation fee revenues depending on bond covenants. This test generally does not allow for the use of fund balances in meeting annual coverage obligations.

In determining the annual revenue requirement, the test with the greatest deficiency generally drives the rate increase in any given year. It is worth noting that the City can temporarily waive the requirements of the cash flow test as part of a conscious decision to phase in rate increases, as long as its reserve balances are sufficient to absorb the resulting cash flow deficit. The coverage test, however, must always be met as failure to do so may result in a downgrading of the City's bond rating. Because the City does not currently have any outstanding debt that requires coverage, cash-flow needs define the utilities' revenue requirements.

Section IV. REVENUE REQUIREMENT

IV.A. BACKGROUND & GENERAL METHODOLOGY

The revenue requirement is the amount of revenue that a utility’s rates must generate in order to meet its various financial obligations. This analysis serves as a means of evaluating the utility’s fiscal health and adequacy of current rate levels, also setting the revenue basis for near-term and long-term rate planning. The rate revenue requirement is defined as the net difference between total revenue needs and the revenue generated through non-rate sources – hence, the revenue requirement analysis involves defining and forecasting both needs and resources.

IV.B. OPERATING FORECAST

The operating forecast focuses on annual expenses incurred to operate, maintain, and manage the City’s utilities. The forecast used in this study is largely based on the 2018 – 2020 budgets, with adjustments provided by City staff to incorporate known or estimated future revenues and expenditures for some specific line items. The key assumptions and inputs used to develop the operating expense forecasts are described in further detail below:

IV.B.1. Operating Revenue

- **Customer Growth.** This analysis uses an average of actual growth in the City’s water and sewer accounts from 2013 – 2018 as the basis for future growth projections. **Exhibit 4.1** summarizes the growth assumptions used in this analysis:

Exhibit 4.1: Water & Sewer Customer Growth Assumptions

Annual Growth Rates	Water	Sewer
Single-Family Residential	1.75%	1.73%
Multi-Family Residential	1.68%	1.74%
Commercial	0.38%	0.27%
Irrigation	4.56%	N/A
Rockaway Beach	0.29%	N/A
South Island Sewer	N/A	1.27%

- **Rate Revenue.** The forecast of rate revenue is derived by applying the adopted rate structures to projected customer counts and water usage (based on billing statistics from 2017 and the assumed growth rates shown in **Exhibit 4.1**).
- **Non-Rate Revenue.** The forecast of other operating revenues is generally based on the 2019 – 2020 Budget, with no escalation assumed in this forecast to mirror the City’s budget projections.

- **Investment Income:** The forecast of investment income applies projected Local Government Investment Pool (LGIP) investment yields to the utilities' projected fund balances.
- **Kitsap County Sewer District #7 Processing:** This revenue represents the City's pass-through of charges from Kitsap County Sewer District No. 7 (KCSD #7) to South Island Sewer customers. This analysis assumes that the revenue from KCSD #7's pass-through charges is equal to the projected payments to KCSD #7.

IV.B.2. Operating Expenses

The forecast of operating expenses is generally based on the 2020 budget, with adjustments for future cost escalation:

- **Labor:** Assumed to grow by 2.0% per year based on projections from the City's budget.
- **Benefits:** Assumed to grow by 4.0% per year based on projections from the City's budget.
- **Non-escalated Costs:** Several line items that are budgeted at the same level from 2018 – 2020 are assumed not to change over the forecast period.
- **Taxes:** Computed based on projected revenues and prevailing tax rates.
 - State Excise Tax: 5.029% for water, 3.852% for sewer
 - Business & Occupation Tax: 1.5%
 - City Utility Tax: 6.0%
- **Other Costs:** Assumed to grow by 2.0% per year based on projections from the City's budget.

In addition to the operating expenses being projected to grow at a standard annual inflation rate, there are a number of short term (2019 – 2021) operating expenses that are budgeted higher than usual before returning to more "regular" levels thereafter. For water, these include additional repairs in 2019 and 2020, as well as SCADA upgrades and meter replacements in 2020. The sewer budget includes additional repairs in 2019 and 2020, as well as SCADA upgrades in 2020 and 2021.

IV.B.3. Debt Service

- The sewer utility has seven existing loans; an LTGO bond with payments averaging \$363,000 per year and six PWTF loans with total combined payments averaging \$954,000 per year. None of these loans have formal coverage requirements.
- The water utility has no outstanding debt.

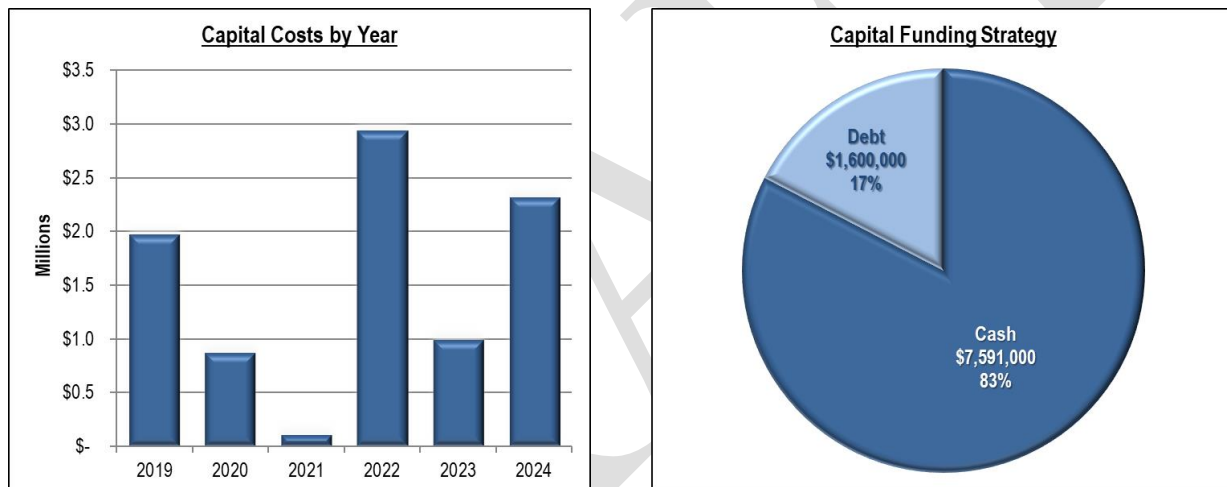
IV.C. CAPITAL FORECAST

The capital forecast involves projecting annual capital project expenditures and developing a strategy to fund those expenditures. The City’s 2019 – 2024 Capital Improvement Program (CIP) serves as the primary source of information for these projections, along with equipment replacement schedules covering the same time period. The cost estimates were provided in 2018 dollars and are escalated to the year of construction based on anticipated construction cost inflation of 3.0% per year. The capital funding strategy considers available cash from system reinvestment, System Participation Fee (SPF) revenues, available cash balances in the capital reserves, and if necessary, debt.

IV.C.1. Water Capital Funding Plan

Exhibit 4.2 summarizes the projected baseline capital funding plan for the water utility.

Exhibit 4.2: Summary of Water Capital Funding Plan (2019 – 2024)

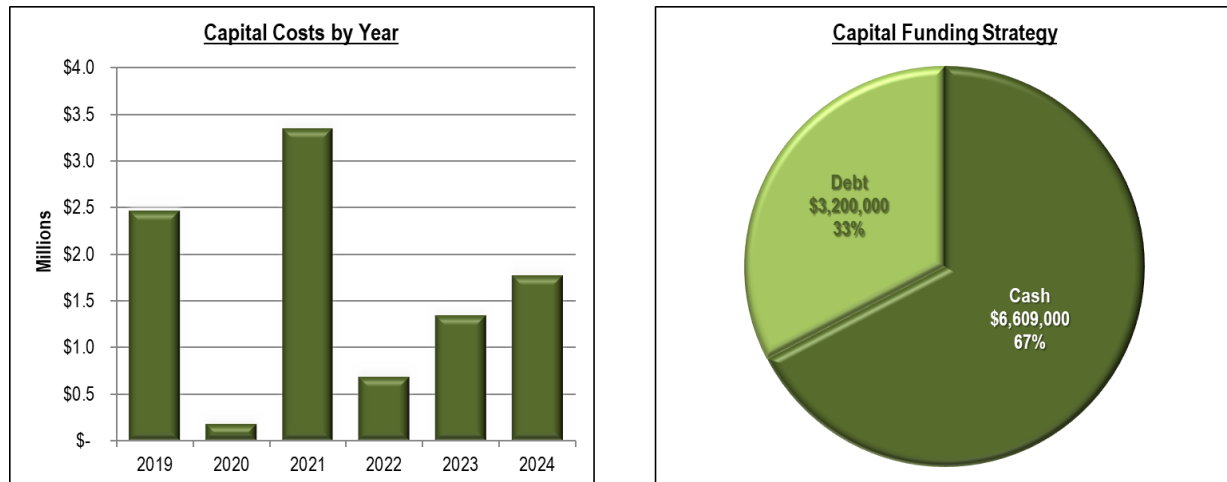


The City expects to spend \$9.2 million on capital projects from 2019 – 2024. This includes \$3.6 million for a new storage tank, \$3.2 million in supply and treatment improvements, \$2.0 million in distribution system improvements, and \$0.4 million in vehicles and miscellaneous projects. The water utility’s cash resources are expected to be sufficient to cover the capital plan until 2024, when this forecast projects \$1.6 million in revenue bond proceeds to support the water treatment improvements. Considering issuance costs and reserve requirements, the total projected bond issue is \$1.7 million; the projected annual payment on this bond is approximately \$117,000.

IV.C.2. Sewer Capital Funding Plan

Exhibit 4.3 summarizes the projected baseline capital funding plan for the sewer utility.

Exhibit 4.3: Summary of Sewer Capital Funding Plan (2019 – 2024)



The City expects to spend \$9.8 million on capital projects from 2019 – 2024. This includes \$7.0 million in pump and force main improvements, \$1.3 million in WWTP outfall improvements, \$0.8 million in gravity main projects, and \$0.7 million in vehicles. The sewer utility’s cash resources are expected to be sufficient to cover the CIP until 2021, when this forecast projects \$3.2 million in revenue bond financing. Considering issuance costs and reserve requirements, the total projected bond issue is \$3.5 million; the projected annual payment on this bond is approximately \$234,000.

IV.D. EVALUATION OF REVENUE SUFFICIENCY

IV.D.1. Water Revenue Requirement

Exhibit 4.4 summarizes the water utility’s revenue requirement.

Exhibit 4.4: Water Revenue Requirement Summary (\$000s)

	2019	2020	2021	2022	2023	2024
Rate Revenue	\$1,100	\$1,119	\$1,138	\$1,157	\$1,177	\$1,198
Other Revenue	204	196	190	192	194	196
Total Revenue	\$1,304	\$1,315	\$1,328	\$1,349	\$1,371	\$1,393
Operating Expenses	\$1,658	\$2,023	\$1,392	\$1,423	\$1,455	\$1,488
Debt Service	-	-	-	-	-	117
Total Expenses	\$1,658	\$2,023	\$1,392	\$1,423	\$1,455	\$1,605
Net Cash Flow @ Current Rates	(\$353)	(\$708)	(\$63)	(\$73)	(\$84)	(\$211)
Annual Rate Increase	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Rate Revenue After Increases	\$1,122	\$1,164	\$1,208	\$1,253	\$1,300	\$1,349
Net Cash Flow After Increases	(\$334)	(\$668)	(\$1)	\$11	\$25	(\$77)
Ending Water Fund Balance	\$5,379	\$4,190	\$4,445	\$1,894	\$1,278	\$828
Target Water Fund Balance	\$418	\$487	\$384	\$419	\$434	\$462

Exhibit 4.4 indicates that the water utility’s revenues at current rates are insufficient to fully cover the utility’s annual expenses. The proposed financial plan contemplates annual water rate increases of 2.0% to cover this deficit and keep up with rising costs. The water utility is projected to end 2024 with a fund balance of approximately \$828,000, which equates to about 204 days of operating expenses. Particularly with the assumed use of new debt to support the capital plan, this analysis incorporates general recommendations from major bond rating agencies to maintain a combined operating/capital fund balance of at least 180 days of operating expenses.

In collaboration with the UAC, FCS GROUP developed a cash-only scenario which set water rates as needed to fund the capital plan without the use of debt financing – this scenario resulted in projected water rate revenue increases of 6.0 – 6.5% per year. The UAC opted to recommend allowing the use of debt financing to support completion of the capital plan while moderating the related rate impacts.

IV.D.2. Sewer Revenue Requirement

Exhibit 4.5 summarizes the sewer utility’s baseline revenue requirement.

Exhibit 4.5: Sewer Revenue Requirement Summary (\$000s)

	2019	2020	2021	2022	2023	2024
Rate Revenue	\$3,557	\$3,605	\$3,655	\$3,705	\$3,756	\$3,808
Other Revenue	264	266	273	266	271	277
Total Revenue	\$3,820	\$3,871	\$3,928	\$3,971	\$4,027	\$4,085
Operating Expenses	\$3,132	\$3,067	\$3,009	\$3,001	\$3,067	\$3,134
Debt Service	1,026	1,019	1,250	1,247	1,244	1,240
System Reinvestment	-	-	-	-	70	148
Total Expenses	\$4,158	\$4,086	\$4,259	\$4,248	\$4,380	\$4,522
Net Cash Flow @ Current Rates	(\$337)	(\$215)	(\$331)	(\$278)	(\$353)	(\$438)
Annual Rate Increase	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Rate Revenue After Increases	\$3,628	\$3,751	\$3,878	\$4,010	\$4,147	\$4,288
Net Cash Flow After Increases	(\$271)	(\$80)	(\$125)	\$5	\$8	\$6
Ending Sewer Fund Balance	\$3,071	\$3,260	\$3,441	\$3,247	\$2,483	\$1,606
Target Sewer Fund Balance	\$760	\$752	\$776	\$781	\$805	\$834

Exhibit 4.5 indicates that the sewer utility’s revenues at current rates are insufficient to fully cover the utility’s annual expenses. The proposed financial plan contemplates annual sewer rate increases of 2.0% per year to cover this deficit, keep up with rising costs, and generate cash funding for capital projects toward later in the study period. The sewer utility is projected to end 2024 with a fund balance of approximately \$1,606,000, which equates to about 188 days of operating expenses – this is slightly above the 180 days of operating expenses recommended by the bond rating agencies.

In collaboration with the UAC, FCS GROUP developed a cash-only scenario which set sewer rates as needed to fund the capital plan without the use of debt financing – this scenario resulted in projected sewer rate revenue increases of 4.0 – 4.5% per year. The UAC opted to recommend allowing the use of debt financing to support completion of the capital plan while moderating the related rate impacts.

Section V. COST-OF-SERVICE ANALYSIS

V.A. BACKGROUND & GENERAL METHODOLOGY

The cost-of-service analysis (COSA) provides the analytical basis for equitably recovering the forecasted revenue requirement from customers. Both the American Water Works Association (AWWA) and Water Environment Federation (WEF) recommend a two-tiered approach that involves first allocating costs to functions of service, and then to customers based on their demand characteristics and service requirements.

V.B. FUNCTIONAL COST ALLOCATION

The functional cost allocation involves allocating the detailed line items that comprise each utility's revenue requirement to functions of service. While certain line items may be directly attributable to a specific service function, many are not and must be allocated to functions based on an allocation of system assets or some other metric. Each utility's allocation is discussed in further detail below.

V.B.1. Water Functional Cost Allocation

The water utility's revenue requirements were allocated to the following functions:

- **Customer:** These are the costs associated with establishing, maintaining, and serving water customer accounts. These costs generally do not depend on meter size or water usage.
- **Meters & Services:** These costs are associated with the installation and maintenance of meters and services.
- **Base Capacity:** These costs relate to providing capacity to meet "base" or average water demands.
- **Peak Capacity:** These costs relate to providing additional capacity to meet incremental water demand during peak demand periods, which usually occur during the summer months.
- **Fire Protection:** These are the costs associated with operating and maintaining facilities that are used to provide fire protection service. This includes both facilities that are directly related to fire protection (e.g. hydrants) and facilities that are oversized to accommodate fire flow (e.g. mains, reservoirs, pump stations).

Given that many of the water utility's cost accounts are not readily separable between these functions, a significant portion of the water utility's operating costs are allocated based on an allocation of the water utility's assets.

Exhibit 5.1 summarizes the functional allocation of water system assets:

Exhibit 5.1: Allocation of Water System Assets

Assets as of 12/31/17	Cost	Customer	Meters & Services	Base Capacity	Peak Capacity	Fire Protection
Supply & Treatment	\$4,757,716	0.00%	0.00%	45.45%	54.55%	0.00%
Pumping	8,993	0.00%	0.00%	42.28%	50.73%	6.99%
Storage	1,317,453	0.00%	0.00%	31.70%	10.05%	58.25%
Water Mains	11,776,651	0.00%	0.74%	42.16%	50.60%	6.50%
Meters & Services	-	0.00%	100.00%	0.00%	0.00%	0.00%
Hydrants	54,862	0.00%	0.00%	0.00%	0.00%	100.00%
General Plant	1,525,914	0.00%	0.49%	42.14%	48.51%	8.87%
Total	\$19,441,589	\$0	\$94,484	\$8,192,385	\$9,430,696	\$1,724,024
% of Total		0.00%	0.49%	42.14%	48.51%	8.87%

Exhibit 5.1 shows that pumping, storage, and water mains are allocated between base capacity, peak capacity, and fire protection. The percentages shown are derived in a more detailed allocation of the related assets to functions of service, and reflect the following assumptions:

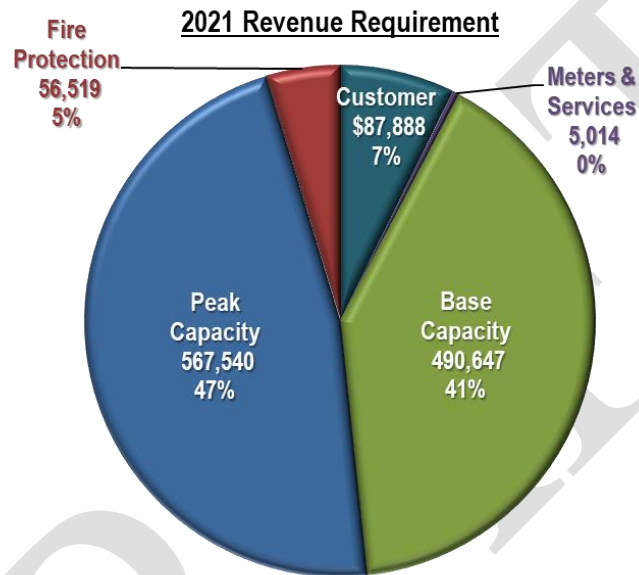
- Table 3.5 of the 2017 Water System Plan indicates that the City’s water system exhibits a peak-day demand that is 2.20 times its average-day demand. Consequently, $1 / 2.20 = 45.45\%$ of the water system’s supply and treatment capacity is attributed to meeting “base” demands; the remaining 54.55% is attributable to meeting incremental peak demands.
- Per Table 5.5 of the 2017 Water System Plan, 130 gpm of the City’s total pumping capacity of 1,860 gpm is for fire flow. The remaining 1,730 gpm is allocated between the base and peak capacity functions using the “base/peak” split listed above (45.45% to base, 54.55% to peak).
- Reservoir capacity is allocated between functions based on the allocation of existing storage capacity shown in Chapter 6 of the 2017 Water System Plan. The 0.23 million gallons (MG) of operational storage capacity is allocated to base capacity; the 0.02 MG of equalizing storage capacity is allocated to peak capacity. The 0.13 MG of standby storage capacity is split between base capacity and peak capacity using the “base/peak” split. The 0.54 MG of fire-related storage is assumed to be nested in the City’s standby capacity, as allowed under Section 246-290-235 (4) of the Washington Administrative Code (WAC).
- Most of the costs associated with mains are split between base and peak capacity using the “base/peak” split. Mains between 8” and 12” in diameter are assumed to be oversized by one size increment to accommodate fire flow (e.g. an 8” main could be a 6” main absent fire flow requirements). Based on estimated replacement costs provided in Table 9.1 of the 2017 Water System Plan, the portion of costs attributable to the oversizing of these mains is allocated to fire protection. Because the City does not explicitly list hydrants (100% to fire) and water meters (100% to meters & services) in their asset register, the estimated cost of these assets is included in the water mains allocation.

To the extent that water utility costs are not attributable to a specific function of service, they are split between functions using the asset allocations in **Exhibit 5.1**. For example, a budget line item for

general repairs is allocated 0.49% to meters & services, 42.14% to base capacity, 48.51% to peak capacity, and 8.87% to fire protection based on the allocation of total plant-in-service.

The UAC requested that any findings from the cost-of-service analysis be phased in over a three-year period, so the cost-of-service analysis considered the projected 2021 revenue requirement as the basis for a three-year rate plan. **Exhibit 5.2** summarizes the functional allocation of the 2021 rate revenue requirement.

Exhibit 5.2: Water Utility Functional Cost Allocation Summary



The water utility cost allocation shown in **Exhibit 5.2** indicates that the majority of costs are associated with providing capacity to meet base and peak demands.

Appendix A provides the detailed cost allocations supporting the results presented in **Exhibit 5.2**.

V.B.2. Sewer Functional Cost Allocation

The sewer utility's revenue requirements were allocated to the following functions:

- **Customer:** These are the costs associated with establishing, maintaining, and serving sewer customer accounts. These costs generally do not depend on sewer flow contributions.
- **Flow – Collection:** These costs relate to providing capacity to convey sewer flows generated by both the Winslow and South Island Sewer (SIS) service areas. Typically, these costs include variable commodity costs such as electricity for pumping and a portion of other operating costs based on an allocation of sewer utility assets.

- **Flow – WWTP:** These costs relate to providing capacity to convey sewer flows generated only by the Winslow service area, which are treated at the City’s Wastewater Treatment Plant (WWTP). SIS flows are treated by KCSD #7.
- **Strength:** These costs are attributable to treating wastewater of varying strength at the Winslow WWTP. For the purpose of this analysis, “strength” is measured in terms of biochemical oxygen demand (BOD) and total suspended solids (TSS).
- **SIS Only:** These costs are directly attributable to the SIS service area.

Exhibit 5.3 summarizes the functional allocation of the sewer utility’s assets.

Exhibit 5.3: Allocation of Sewer System Assets

Assets as of 12/31/17	Cost	Customer	Flow - Collection	Flow - WWTP	BOD	TSS
Collection	\$11,405,264	0.00%	100.00%	0.00%	0.00%	0.00%
Treatment	20,299,140	0.00%	0.00%	50.00%	25.00%	25.00%
Pumping	1,084,160	0.00%	100.00%	0.00%	0.00%	0.00%
General Plant	1,556,316	0.00%	38.09%	30.95%	15.48%	15.48%
Total	\$34,344,880	\$0	\$13,082,237	\$10,631,321	\$5,315,661	\$5,315,661
% of Total		0.00%	38.09%	30.95%	15.48%	15.48%

Exhibit 5.3 shows the allocation of assets, with mains and pumping-related assets being allocated fully to flow – collection, treatment being allocated based on an industry standard split of 50.0% flow – WWTP, 25.0% BOD, and 25.0% TSS, and general plant being allocated proportionately based on the allocation of other sewer assets. Exhibit 5.4 summarizes the functional allocation of the 2021 revenue requirement:

Exhibit 5.4: Sewer Utility Functional Cost Allocation Summary

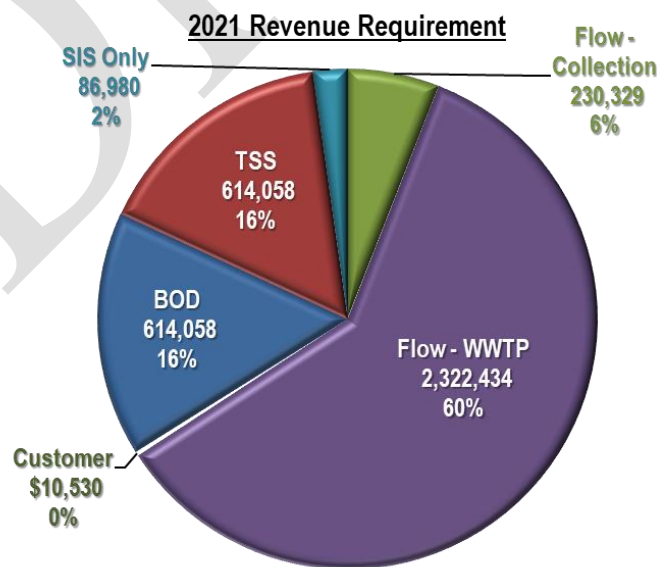


Exhibit 5.4 shows that the sewer utility's costs are generally allocated to either flow – WWTP or the two treatment functions (BOD/TSS), with the remaining allocations primarily to flow – collection and SIS only, the two functions with costs generated by the SIS service area. **Appendix B** provides the detailed cost allocations supporting the results presented in **Exhibit 5.4**.

V.C. CUSTOMER CLASS COST ALLOCATION

Once the revenue requirement is split into functions of service, the next step is to allocate it to customer classes based on their relative demands and service characteristics. The ensuing sections discuss the key allocation principles used in this analysis to determine each class' equitable share of costs, as well as the resulting outcomes.

V.C.1. Water Customer Class Allocation

The following principles guided the allocation of the water rate revenue requirement to the City's customer classes:

- **Customer Costs:** Because these costs do not vary based on meter size or water usage, they are allocated to classes based on the number of customer accounts.
- **Meters & Services Costs:** To reflect the fact that meters of larger sizes are more costly to install and maintain than smaller meters, these costs are allocated to classes based on the number of meter service equivalents (MSEs). The American Water Works Association has established a scale of MSEs based on factors such as service pipe and materials used for each meter size.
- **Base Capacity Costs:** These costs are allocated based on total annual water use.
- **Peak Capacity Costs:** These costs are allocated to customer classes based on their water usage during the summer months (May – October).
- **Fire Protection Costs:** These costs are allocated based on the number of accounts weighted by fire flow requirements for each class.

This analysis uses projected customer counts and usage statistics to allocate the water utility's costs to classes as described above. These statistics are based on 2017 billing data, which is adjusted for anticipated growth to project statistics for each year that rates are designed for. Based on growth experienced by the City during the 2013 – 2018 period, this analysis assumes an annual growth rate of 0.38% – 4.56% in customer accounts, depending on the class.

Exhibit 5.5 summarizes the findings of the water cost-of-service analysis for 2021, showing cost recovery under the existing rate structure for comparative purposes. **Appendix A** provides supporting detail of the underlying calculations.

Exhibit 5.5: Summary of 2021 Water Rate Revenue Requirement Allocations

Class	2021 Revenue Under COS Rates		% of Revenue Under Existing Rates
	Amount ¹	% of Total	
Single-Family – Winslow	\$ 658,011	54.5%	49.9%
Single-Family – Rockaway	25,141	2.1%	2.2%
Multi-Family	167,720	13.9%	14.7%
Commercial	242,181	20.1%	21.4%
Irrigation	108,352	9.0%	11.0%
Other	6,203	0.5%	0.8%
Total	\$1,207,608	100.0%	100.0%

¹ Reflects projected 2019, 2020, and 2021 rate revenue increases of 2.0% per **Exhibit 4.4**.

Exhibit 5.5 shows that interclass adjustments are warranted. In particular, the COSA suggests that single-family customers in Winslow are underpaying relative to their allocated cost of service while the City’s other customers have been overpaying. To facilitate a logical progression of charges over time, the proposed three-year phasing strategy contemplates holding multi-family and commercial rates near their current levels while adjusting the rates for other customers to improve inter-class equity. **Exhibit 5.6** summarizes the phasing strategy developed in this analysis:

Exhibit 5.6: Water Rate Phase-in Strategy

Annual Water Rate Increases	2019	2020	2021
Single-Family – Winslow	+7.6%	+3.7%	+3.6%
Single-Family – Rockaway	0.0%	+3.3%	+3.6%
Multi-Family	0.0%	0.0%	+0.2%
Commercial	-0.8%	0.0%	0.0%
Irrigation	-13.5%	0.0%	0.0%
Other (Mixed Use)	-23.7%	0.0%	0.0%

At the completion of the three-year phasing strategy shown in **Exhibit 5.6**, all customer classes will have reached their allocated cost of service. Any further rate increases would be applied “across-the-board”, or equally to all customer classes until the next rate review.

In addition to the overall rate adjustments summarized above, rate structure revisions were identified:

- **Consolidate single-family water rates.** Recognizing that the cost-of-service analysis did not find a meaningful difference in the cost of serving single-family homes in Winslow versus those in Rockaway Beach, the proposed rate strategy consolidates the City’s single-family users into a single class by 2020.
- **Consolidate commercial and other (mixed-use) water rates.** The “other” customer class currently only contains five customers, which pay the same volume rate as the commercial class but pay a higher base rate. The results of the cost-of-service analysis do not seem to justify the higher base rate, and with the small size of the “other” class (and the fact that City

Ordinance No. 98-24 has not allowed any new connections in this class since October 1998) the proposed rate structure combines them into the commercial class.

- **Adopt uniform water volume rates for multi-family and commercial customers.** Under the City's existing rate structure, multi-family users are subject to the same four-tiered volume rate as the City's single-family users (per dwelling unit). The cost-of-service analysis found that the highest three tiers represent only 2.5% of the revenue that the City receives from the multi-family class. Recognizing this (and the fact that conservation pricing signals often do not reach tenants because they are not billed directly for utility service), the proposed multi-family rate structure eliminates the existing tiered volume rate and moves to a uniform volume rate. For consistency, the commercial/other volume rates are also simplified to a uniform rate, eliminating the existing winter/summer differential.

V.C.2. Sewer Customer Class Allocation

The following principles guided the allocation of the sewer rate revenue requirement to the City's customer classes:

- **Customer Costs:** Because these costs do not vary based on meter size or sewer flow, they are allocated to classes based on the number of customer accounts.
- **Flow – Collection:** These costs are allocated to classes based on estimated sewer flow, defined as winter-average water use for single-family and multi-family residences and actual water use for other customers. South Island Sewer customers, whose water usage is not tracked by the City, are assigned a flow per account equal to that of Winslow customers.
- **Flow – WWTP:** These costs are allocated to classes based on estimated sewer flow received at the Winslow WWTP (excluding SIS flows, which go to KCSD #7 for treatment).
- **BOD:** These costs are allocated based on estimated BOD loadings for each customer class, using an assumed average BOD concentration of 250 mg/L for single-family and multi-family customers and an estimated concentration of 502 mg/L for commercial customers based on the difference between 2017 loads received at the WWTP and the assumed residential loadings. SIS customers do not receive a share of BOD costs.
- **TSS:** These costs are allocated based on estimated TSS loadings for each customer class, using an assumed average TSS concentration of 250 mg/L for single-family and multi-family customers and an estimated concentration of 432 mg/L for commercial customers based on the difference between 2017 loads received at the WWTP and the assumed residential loadings. SIS customers do not receive a share of TSS costs.
- **SIS Only:** These costs, which support only SIS customers and are tracked separately by the City, are allocated directly to the SIS class.

This analysis uses projected customer counts and usage statistics to allocate the sewer utility's costs to classes as described above. These statistics are based on 2017 billing data, which is adjusted for anticipated growth to project statistics for each year that rates are designed for. Based on growth

experienced by the City during the 2013 – 2018 period, this analysis assumes an annual growth rate of 0.27% – 1.74% in customer accounts, depending on the class.

Exhibit 5.7 summarizes the findings of the sewer cost-of-service analysis for 2021, showing cost recovery under the existing sewer rate structure for comparative purposes. **Appendix B** provides supporting detail of the underlying calculations.

Exhibit 5.7: Summary of 2021 Sewer Rate Revenue Requirement Allocations

Class	2021 Revenue Under COS Rates		% of Revenue Under Existing Rates
	Amount ¹	% of Total	
Single-Family	\$1,448,468	37.3%	43.7%
Multi-Family	860,413	22.2%	30.8%
Commercial	1,470,241	37.9%	23.8%
SIS	99,267	2.6%	1.7%
Total	\$3,878,389	100.0%	100.0%

¹ Reflects planned 2019, 2020, and 2021 rate increases of 2.0% per **Exhibit 4.5**.

Exhibit 5.7 suggests that compared to their allocated cost of service, single-family and multi-family customers are overpaying while commercial and SIS customers are underpaying. The proposed phasing strategy holds Winslow single-family and multi-family rates at their current levels while adjusting the rates for other customers to improve inter-class equity. Recognizing that full implementation of the findings of the cost-of-service analysis would adversely impact commercial rates, this strategy reflects a policy decision to make some progress toward implementing the cost shifts over the next three years. Any further rate increases would be applied “across-the-board,” or proportionately to all customer classes until the next rate review.

Exhibit 5.8 summarizes the phased COS rate strategy developed in this analysis:

Exhibit 5.8: Sewer Rate Phase-in Strategy

Annual Sewer Rate Increases	2019	2020	2021	Allocation of 2021 Rev. Req.	Phased COS	
					Amount	%
Single-Family	0.0%	0.0%	0.0%	Single-Family	\$1,596,149	41.2%
Multi-Family	0.0%	0.0%	0.0%	Multi-Family	1,126,401	29.0%
Commercial	+7.8%	+7.5%	+7.3%	Commercial	1,082,735	27.9%
South Island Sewer	+6.0%	+6.3%	+6.2%	SIS	73,104	1.9%
				Total	\$3,878,389	100.0%

Exhibit 5.8 shows the relative progress in moving from the cost recovery under the existing rate structure to each class’ allocated cost of service. It suggests that a multi-year period will be needed in order to fully implement the findings of the cost-of-service analysis – during this period, the City will be able to revisit this analysis and verify that the results continue to hold over time.

Based on the recommendation of the UAC, the increase to commercial rates is focused on the volume charge – the proposed rates reflect a 2.0% annual increase to the commercial base rate, with the volume charge increasing as needed to generate the amount allocated to the commercial class.

V.D. RECOMMENDED 2019 – 2021 RATES

Exhibit 5.9 summarizes the recommended water rates by customer class:

Exhibit 5.9: Recommended 2019 – 2021 Water Rates

Monthly Water Rates: Single-Family	Winslow				Rockaway Beach			
	Existing	2019	2020	2021	Existing	2019	2020	2021
Base Rate								
Up to 3/4" Meter	\$10.77	\$11.59	\$12.02	\$12.45	\$11.64	\$11.64	\$12.02	\$12.45
1" Meter	\$21.24	\$22.85	\$23.70	\$24.55	\$22.94	\$22.94	\$23.70	\$24.55
1-1/2" Meter	\$38.72	\$41.65	\$43.20	\$44.75	\$41.85	\$41.85	\$43.20	\$44.75
Consumption Charge per ccf								
First 5 ccf (0 – 5 ccf)	\$1.09	\$1.17	\$1.22	\$1.26	\$1.18	\$1.18	\$1.22	\$1.26
Next 7 ccf (6 – 12 ccf)	\$1.76	\$1.89	\$1.96	\$2.03	\$1.90	\$1.90	\$1.96	\$2.03
Next 18 ccf (13 – 30 ccf)	\$2.49	\$2.68	\$2.78	\$2.88	\$2.69	\$2.69	\$2.78	\$2.88
Over 30 ccf	\$3.39	\$3.65	\$3.78	\$3.92	\$3.66	\$3.66	\$3.78	\$3.92

Monthly Water Rates: Multi-Family	Existing	2019	2020	2021
Base Rate per Living Unit	\$5.37	\$5.37	\$5.37	\$5.38
Consumption Charge per ccf		\$1.11	\$1.11	\$1.11
First 5 ccf (0 – 5 ccf)	\$1.09			
Next 7 ccf (6 – 12 ccf)	\$1.76			
Next 18 ccf (13 – 30 ccf)	\$2.49			
Over 30 ccf	\$3.39			

Monthly Water Rates: Commercial/Other	Commercial				Other (Mixed-Use)			
	Existing	2019	2020	2021	Existing	2019	2020	2021
Base Rate								
Up to 3/4" Meter	\$16.45	\$16.33	\$16.33	\$16.33	\$24.04	\$16.33	\$16.33	\$16.33
1" Meter	\$36.40	\$36.12	\$36.12	\$36.12	\$55.37	\$36.12	\$36.12	\$36.12
1-1/2" Meter	\$69.78	\$69.25	\$69.25	\$69.25	\$107.58	\$69.25	\$69.25	\$69.25
2" Meter	\$109.52	\$108.69	\$108.69	\$108.69	\$170.23	\$108.69	\$108.69	\$108.69
3" Meter	\$215.89	\$214.25	\$214.25	\$214.25	\$337.28	\$214.25	\$214.25	\$214.25
4" Meter	\$335.55	\$333.00	\$333.00	\$333.00	\$525.22	\$333.00	\$333.00	\$333.00
6" Meter	\$667.94	\$662.87	\$662.87	\$662.87	\$1,047.31	\$662.87	\$662.87	\$662.87
Consumption Charge per ccf		\$1.54	\$1.54	\$1.54		\$1.54	\$1.54	\$1.54
Winter (November – April)	\$1.43				\$1.43			
Summer (May – October)	\$1.65				\$1.65			

Exhibit 5.9 (Continued): Recommended 2019 – 2021 Water Rates

Monthly Water Rates: Irrigation	Existing	2019	2020	2021
Base Rate				
Up to 3/4" Meter	\$4.73	\$4.09	\$4.09	\$4.09
1" Meter	\$6.22	\$5.38	\$5.38	\$5.38
1-1/2" Meter	\$8.70	\$7.53	\$7.53	\$7.53
2" Meter	\$11.70	\$10.12	\$10.12	\$10.13
3" Meter	\$19.64	\$16.99	\$16.99	\$17.00
4" Meter	\$28.59	\$24.74	\$24.74	\$24.75
6" Meter	\$53.47	\$46.26	\$46.26	\$46.28
Consumption Charge per ccf	\$3.89	\$3.37	\$3.37	\$3.37

Exhibit 5.10 summarizes the recommended sewer rates by customer class:

Exhibit 5.10: Recommended 2019 – 2021 Sewer Rates

Monthly Sewer Rates – Winslow ¹	Existing	2019	2020	2021
Single-Family				
Monthly Base Charge per Unit	\$42.69	\$42.69	\$42.69	\$42.69
Volume Charge per ccf	\$7.28	\$7.28	\$7.28	\$7.28
Sewer-Only Base Charge per ERU	\$119.80	\$119.80	\$119.80	\$119.80
Multi-Family				
Monthly Base Charge per Unit	\$37.39	\$37.39	\$37.39	\$37.39
Volume Charge per ccf	\$7.28	\$7.28	\$7.28	\$7.28
Commercial				
Monthly Base Charge per Unit	\$123.69	\$126.16	\$128.69	\$131.26
Volume Charge per ccf	\$7.28	\$8.12	\$8.99	\$9.90
Sewer-Only Base Charge per ERU	\$129.43	\$139.53	\$149.99	\$160.89

Monthly Sewer Rates – SIS ²	Existing	2019	2020	2021
With Grinder Pump	\$23.59	\$25.00	\$26.58	\$28.22
No Grinder Pump	\$19.42	\$20.58	\$21.88	\$23.23

¹ From mid-Jun – mid-Sep, single-family and multi-family users are billed for their average water usage from mid-Dec – mid-May.

² South Island Sewer customers also pay \$58.71 per ERU per month for KCSD #7 treatment service.

Appendix A

Bainbridge Island Water Rate Model



City of Bainbridge Island

Water Rate Study and COSA

Summary

Revenue Requirement	2018	2019	2020	2021	2022	2023	2024
Revenues							
Rate Revenues Under Existing Rates	\$ 1,082,268	\$ 1,100,384	\$ 1,118,941	\$ 1,137,956	\$ 1,157,442	\$ 1,177,414	\$ 1,197,888
Non-Rate Revenues	189,250	203,941	195,604	190,403	191,866	193,543	195,552
Total Revenues	\$ 1,271,518	\$ 1,304,324	\$ 1,314,546	\$ 1,328,359	\$ 1,349,307	\$ 1,370,957	\$ 1,393,440
Expenses							
Cash Operating Expenses	\$ 1,390,228	\$ 1,657,572	\$ 2,022,937	\$ 1,391,528	\$ 1,422,776	\$ 1,454,848	\$ 1,487,774
Existing Debt Service	-	-	-	-	-	-	-
New Debt Service	-	-	-	-	-	-	116,960
Rate Funded System Reinvestment	-	-	-	-	-	-	-
Total Expenses	\$ 1,390,228	\$ 1,657,572	\$ 2,022,937	\$ 1,391,528	\$ 1,422,776	\$ 1,454,848	\$ 1,604,733
Net Surplus (Deficiency)	\$ (118,709)	\$ (353,248)	\$ (708,392)	\$ (63,169)	\$ (73,469)	\$ (83,891)	\$ (211,293)
Additions to Meet Coverage	-	-	-	-	-	-	-
Total Surplus (Deficiency)	\$ (118,709)	\$ (353,248)	\$ (708,392)	\$ (63,169)	\$ (73,469)	\$ (83,891)	\$ (211,293)
% of Rate Revenue	10.97%	32.10%	63.31%	5.55%	6.35%	7.13%	17.64%
Annual Rate Adjustment	0.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Cumulative Annual Rate Adjustment	0.00%	2.00%	4.04%	6.12%	8.24%	10.41%	12.62%
Rate Revenues After Rate Increase	\$ 1,082,268	\$ 1,122,391	\$ 1,164,147	\$ 1,207,608	\$ 1,252,852	\$ 1,299,960	\$ 1,349,017
Additional In-Lieu of Taxes from Rate Increase	\$ -	\$ 2,427	\$ 4,986	\$ 7,682	\$ 10,523	\$ 13,516	\$ 16,668
Net Cash Flow After Rate Increase	\$ (118,709)	\$ (333,667)	\$ (668,172)	\$ (1,199)	\$ 11,419	\$ 25,140	\$ (76,832)
Coverage After Rate Increases	n/a	n/a	n/a	n/a	n/a	n/a	1.34
Sample Residential Monthly Bill (3/4" Meter, 7 ccf monthly)	\$19.74	\$ 20.14	\$ 20.54	\$ 20.94	\$ 21.35	\$ 21.76	\$ 22.18
Monthly Average Increase (\$)		\$ 0.40	\$ 0.40	\$ 0.40	\$ 0.41	\$ 0.41	\$ 0.42



City of Bainbridge Island

Water Rate Study and COSA

Summary

Fund Balance	2018	2019	2020	2021	2022	2023	2024
OPERATING FUND							
Beginning Balance	\$ 1,712,796	\$ 1,594,087	\$ 1,260,420	\$ 592,248	\$ 591,049	\$ 602,468	\$ 627,607
plus: Net Cash Flow after Rate Increase	(118,709)	(333,667)	(668,172)	(1,199)	11,419	25,140	(76,832)
less: Transfer of Surplus to Capital Fund	-	-	-	-	-	-	-
Ending Balance	\$ 1,594,087	\$ 1,260,420	\$ 592,248	\$ 591,049	\$ 602,468	\$ 627,607	\$ 550,775
<i>O&M Target Balance</i>	\$ 228,531	\$ 272,478	\$ 332,538	\$ 228,744	\$ 233,881	\$ 239,153	\$ 244,566
<i>Days</i>	419	278	107	155	155	157	135
CAPITAL							
Beginning Balance	\$ 5,611,704	\$ 5,733,583	\$ 4,118,479	\$ 3,597,785	\$ 3,853,711	\$ 1,291,364	\$ 650,721
plus: Rate Funded System Reinvestment	-	-	-	-	-	-	-
plus: Transfers from Operating Fund	-	-	-	-	-	-	-
plus: Grants/ Donations/ CIAC	-	-	-	-	-	-	-
plus: Additional Proceeds (Costs)	-	-	-	-	-	-	-
plus: System Participation Fee Revenue	143,000	300,832	306,796	312,908	319,170	325,585	332,158
less: System Participation Fee Revenue Towards Debt	-	-	-	-	-	-	-
plus: Revenue Bond Proceeds	-	-	-	-	-	-	1,600,000
plus: PWTF Loans Proceeds	-	-	-	-	-	-	-
plus: Other Loan Proceeds	-	-	-	-	-	-	-
plus: Interest Earnings	56,117	57,336	41,185	44,972	57,806	22,599	13,014
Total Funding Sources	\$ 5,810,821	\$ 6,091,751	\$ 4,466,460	\$ 3,955,666	\$ 4,230,687	\$ 1,639,548	\$ 2,595,894
less: Capital Expenditures	(77,238)	(1,973,271)	(868,675)	(101,955)	(2,939,323)	(988,827)	(2,318,521)
Ending Working Capital Balance	\$ 5,733,583	\$ 4,118,479	\$ 3,597,785	\$ 3,853,711	\$ 1,291,364	\$ 650,721	\$ 277,373
<i>Minimum Target Balance</i>	\$ 125,856	\$ 145,588	\$ 154,275	\$ 155,295	\$ 184,688	\$ 194,576	\$ 217,761
COMBINED BEGINNING FUND BALANCE	\$ 7,324,500	\$ 7,327,670	\$ 5,378,899	\$ 4,190,033	\$ 4,444,760	\$ 1,893,832	\$ 1,278,329
COMBINED ENDING FUND BALANCE	\$ 7,327,670	\$ 5,378,899	\$ 4,190,033	\$ 4,444,760	\$ 1,893,832	\$ 1,278,329	\$ 828,148
<i>Combined Days</i>	1,924	1,184	758	1,166	486	321	204
<i>Total Combined Ending Fund Balance Target</i>	\$ 354,386	\$ 418,066	\$ 486,813	\$ 384,039	\$ 418,569	\$ 433,729	\$ 462,327



City of Bainbridge Island Water Rate Study and COSA Assumptions

Economic & Financial Factors	2018	2019	2020	2021	2022	2023	2024
General Cost Inflation	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Construction Cost Inflation	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Labor Cost Inflation	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Benefit Cost Inflation	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
General Inflation plus Composite Growth	3.69%	3.69%	3.69%	3.69%	3.70%	3.70%	3.71%
Customer Growth	1.65%	1.66%	1.66%	1.67%	1.67%	1.67%	1.68%
<i>Single Family Account Growth</i>	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%
<i>Multi-Family Account Growth</i>	1.68%	1.68%	1.68%	1.68%	1.68%	1.68%	1.68%
<i>Commercial Account Growth</i>	0.38%	0.38%	0.38%	0.38%	0.38%	0.38%	0.38%
<i>Irrigation Account Growth</i>	4.56%	4.56%	4.56%	4.56%	4.56%	4.56%	4.56%
<i>Other Account Growth</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Rockaway Account Growth</i>	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%
Demand Growth							
<i>Single Family Demand Growth</i>	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%
<i>Multi-Family Demand Growth</i>	1.68%	1.68%	1.68%	1.68%	1.68%	1.68%	1.68%
<i>Commercial Demand Growth</i>	0.38%	0.38%	0.38%	0.38%	0.38%	0.38%	0.38%
<i>Irrigation Demand Growth</i>	4.56%	4.56%	4.56%	4.56%	4.56%	4.56%	4.56%
<i>Other Demand Growth</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Rockaway Demand Growth</i>	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%
No Escalation	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Investment Interest	1.00%	1.00%	1.00%	1.25%	1.50%	1.75%	2.00%
Excise Taxes	5.029%	5.029%	5.029%	5.029%	5.029%	5.029%	5.029%
B&O Taxes	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
City Taxes	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%



City of Bainbridge Island Water Rate Study and COSA Assumptions

Accounting Assumptions		2018	2019	2020	2021	2022	2023	2024
FISCAL POLICY RESTRICTIONS								
Min. Op. Fund Balance Target (days of O&M expense)		60	60	60	60	60	60	60
Max. Op. Fund Balance (days of O&M expense)		90	90	90	90	90	90	90
Minimum Capital Fund Balance Target								
Select Minimum Capital Fund Balance Target	1	Defined as % of Plant Net Book Value						
1 - Defined as % of Plant Net Book Value	Estimated Assets							
Plant Net Book Value in 2017	\$ 12,508,313	\$ 125,099	\$ 125,493	\$ 125,667	\$ 125,687	\$ 126,275	\$ 126,473	\$ 126,937
Minimum Capital Fund Balance - % of plant assets		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2 - Amount at Right ==>		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
RATE FUNDED SYSTEM REINVESTMENT								
Select Reinvestment Funding Strategy	3	User Input						
Amount of Annual Cash Funding from Rates								
1 - Equal to Annual Depreciation Expense		\$ 274,744	\$ 276,289	\$ 315,754	\$ 333,128	\$ 335,167	\$ 393,953	\$ 413,730
2 - Equal to Annual Depreciation Expense less Annual Debt Principal Paymen		274,744	276,289	315,754	333,128	335,167	393,953	374,814
3 - Equal to Amount at Right ==>		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	% Phase-In	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
4 - Do Not Fund System Reinvestment			\$ (333,667)	\$ (668,172)	\$ (1,199)	\$ 11,419	\$ 25,140	\$ (76,832)



City of Bainbridge Island Water Rate Study and COSA Assumptions

Capital Financing Assumptions		2018	2019	2020	2021	2022	2023	2024
System Participation Fees								
System Participation Fees	\$ 2,754	\$ 2,754	\$ 3,795	\$ 3,795	\$ 3,795	\$ 3,795	\$ 3,795	\$ 3,795
Total Meter Customer Equivalents (MCEs)	3,240	3,292	3,345	3,399	3,454	3,510	3,568	3,626
Additional MCEs Per Year		52	53	54	55	56	57	59
System Participation Fee Revenues	\$ 343,870	\$ 143,000	\$ 300,832	\$ 306,796	\$ 312,908	\$ 319,170	\$ 325,585	\$ 332,158
REVENUE BONDS								
Term (years)		25	25	25	25	25	25	25
Interest Only Payments		0	0	0	0	0	0	0
Interest Rate		4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%
Issuance Cost		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Revenue Bond Coverage Requirement	1.25							
Use Reserves to Pay for Last Payment	No							
PWTF LOANS								
Term		20	20	20	20	20	20	20
Interest Rate		2.55%	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%
OTHER LOANS								
Term (years)		20	20	20	20	20	20	20
Interest Rate		1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Issuance Cost		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%



City of Bainbridge Island Water Rate Study and COSA Operating Revenue and Expenditure Forecast

			Actual	Budget	Budget	Budget	Forecast	Forecast	Forecast	Forecast
Revenues			2017	2018	2019	2020	2021	2022	2023	2024
Acct. #	Rate Revenue	Forecast Basis								
	Single-Family	Single Family Account Growth	\$ 529,685	\$ 538,974	\$ 548,427	\$ 558,044	\$ 567,831	\$ 577,789	\$ 587,922	\$ 598,232
	Multi-Family	Multi-Family Account Growth	156,587	159,220	161,897	164,620	167,388	170,203	173,065	175,975
	Commercial	Commercial Account Growth	230,309	240,287	241,204	242,125	243,049	243,977	244,908	245,843
	Irrigation	Irrigation Account Growth	104,709	109,488	114,485	119,710	125,173	130,886	136,859	143,106
	Other	Other Account Growth	9,207	9,436	9,436	9,436	9,436	9,436	9,436	9,436
	Rockaway	Rockaway Account Growth	24,791	24,863	24,935	25,006	25,079	25,151	25,223	25,296
	Total Rate Revenue		\$ 1,055,289	\$ 1,082,268	\$ 1,100,384	\$ 1,118,941	\$ 1,137,956	\$ 1,157,442	\$ 1,177,414	\$ 1,197,888
	Non Rate Revenue									
343411	Water Sales-Other Misc Rev	No Escalation	116,037	115,000	115,000	115,000	115,000	115,000	115,000	115,000
343420	Water Sales-Conn/Inspect Fees	No Escalation	30,924	25,500	30,000	25,000	25,000	25,000	25,000	25,000
343458	Backflow Testing Revenue	No Escalation	27,383	-	-	-	-	-	-	-
343200	Engineering Fees	No Escalation	1,901	-	-	-	-	-	-	-
362500	Facilities Rental-Long Term	No Escalation	10,125	8,000	8,000	8,000	8,000	8,000	8,000	8,000
369840	Inventory Markup	No Escalation	(25,840)	-	-	-	-	-	-	-
361110	Investment Income	Calculated	67,488	32,000	15,941	12,604	7,403	8,866	10,543	12,552
	Operating Transfer In [Extra]	No Escalation	-	8,750	35,000	35,000	35,000	35,000	35,000	35,000
		General Cost Inflation	-	-	-	-	-	-	-	-
	Total Non Rate Revenue		\$ 228,019	\$ 189,250	\$ 203,941	\$ 195,604	\$ 190,403	\$ 191,866	\$ 193,543	\$ 195,552
TOTAL REVENUES			\$ 1,283,308	\$ 1,271,518	\$ 1,304,324	\$ 1,314,546	\$ 1,328,359	\$ 1,349,307	\$ 1,370,957	\$ 1,393,440



City of Bainbridge Island Water Rate Study and COSA Operating Revenue and Expenditure Forecast

			Actual	Budget	Budget	Budget	Forecast	Forecast	Forecast	Forecast
Expenses	Forecast Basis		2017	2018	2019	2020	2021	2022	2023	2024
State Excise Taxes	<i>Calculated</i>		\$ 25,421	\$ 76,095	\$ 62,146	\$ 63,094	\$ 64,141	\$ 65,215	\$ 66,316	\$ 67,444
City Taxes	<i>Calculated</i>		96,719	75,930	96,309	97,280	98,476	100,109	101,793	103,536
443410 Training	Labor Cost Inflation		\$ 4,763	\$ 5,184	\$ 8,000	\$ 8,150	\$ 8,313	\$ 8,479	\$ 8,649	\$ 8,822
Salary										
510000 Ex - Water - Admin - Salary	Labor Cost Inflation		9,838	8,414	8,627	8,837	9,014	9,194	9,378	9,566
510000 Legal - Water Fund	Labor Cost Inflation		4,822	10,381	11,572	12,102	12,344	12,591	12,842	13,099
510000 HR - Water Salary	Labor Cost Inflation		4,570	4,881	5,400	5,626	5,739	5,854	5,971	6,090
510000 Exec - Clerk - Water Salary	Labor Cost Inflation		5,202	3,349	2,620	2,684	2,738	2,792	2,848	2,905
510000 Salary	Labor Cost Inflation		54,502	67,007	80,744	89,428	91,216	93,041	94,902	96,800
510000 BLD - Water - Admin - Salary	Labor Cost Inflation		2,147	2,521	1,979	2,028	2,068	2,109	2,152	2,195
510000 PW - Water Salary	Labor Cost Inflation		28,189	25,226	19,856	14,976	15,275	15,581	15,892	16,210
510000 ENG - Water Admin Salary	Labor Cost Inflation		-	-	27,399	28,562	29,133	29,716	30,310	30,916
510000 Salary	Labor Cost Inflation		44,780	53,311	42,418	43,266	44,131	45,014	45,914	46,832
510000 ENG - Water Ops Salary	Labor Cost Inflation		-	-	2,455	2,587	2,638	2,691	2,745	2,800
510000 O&M Water Maintenance	Labor Cost Inflation		171,380	201,387	222,288	229,785	234,381	239,068	243,850	248,727
510000 O&M Rockaway Maintenance	Labor Cost Inflation		25,447	15,000	17,244	17,840	18,197	18,561	18,932	19,311
510000 IT Water Salary	Labor Cost Inflation		21,040	21,845	27,367	28,072	28,633	29,206	29,790	30,386
Benefits										
520000 Ex - Water - Admin - Benefits	Benefit Cost Inflation		3,236	2,808	2,622	2,670	2,777	2,888	3,004	3,124
520000 Legal - Water Benefits	Benefit Cost Inflation		1,461	4,485	4,258	4,359	4,534	4,715	4,904	5,100
520000 HR - Water Benefits	Benefit Cost Inflation		1,863	2,140	2,171	2,248	2,338	2,431	2,528	2,630
520000 Exec - Clerk - Water Benefits	Benefit Cost Inflation		2,352	1,635	1,272	1,313	1,366	1,420	1,477	1,536
520000 Benefits	Benefit Cost Inflation		20,700	29,852	30,496	33,285	34,616	36,001	37,441	38,939
520000 BLD - Water - Admin - Benefi	Benefit Cost Inflation		843	1,000	789	817	849	883	919	955
520000 ENG - Water - Admin - Benefi	Benefit Cost Inflation		-	-	12,472	13,016	13,536	14,078	14,641	15,226
520000 PW - Water Benefits	Benefit Cost Inflation		11,665	10,535	7,605	6,726	6,995	7,275	7,566	7,868
520000 Benefits	Benefit Cost Inflation		18,314	23,510	16,529	17,190	17,877	18,593	19,336	20,110
520000 ENG - Water - Ops - Benefits	Benefit Cost Inflation		-	-	1,305	1,362	1,417	1,473	1,532	1,594
520000 Benefits	Benefit Cost Inflation		86,279	86,550	101,388	105,443	109,661	114,047	118,609	123,354
520000 Benefits	Benefit Cost Inflation		10,653	5,800	7,392	7,688	7,996	8,315	8,648	8,994
520000 IT Water Benefits	Benefit Cost Inflation		8,494	9,410	13,392	13,796	14,348	14,922	15,519	16,140
520000 GG Water Works Com	Benefit Cost Inflation		384	500	-	-	-	-	-	-
520000 GG Water Unemployment	Benefit Cost Inflation		-	2,600	-	-	-	-	-	-



City of Bainbridge Island

Water Rate Study and COSA

Operating Revenue and Expenditure Forecast

Expenses (Continued)		Forecast Basis	Actual 2017	Budget 2018	Budget 2019	Budget 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
511000	Salary - Overtime	Labor Cost Inflation	11,813	10,173	22,479	23,208	23,672	24,146	24,629	25,121
515000	Salary - Temporary Employees	No Escalation	11,389	8,000	8,000	8,000	8,000	8,000	8,000	8,000
529000	Staff Separation Buyouts	No Escalation	-	6,000	3,000	3,000	3,000	3,000	3,000	3,000
531100	Supplies	General Cost Inflation	48,378	43,320	50,796	52,285	53,329	54,393	55,478	56,586
531100	Supplies - Meter Replacement	General Cost Inflation	-	-	-	300,000	-	-	-	-
532000	Fuel Consumed	General Cost Inflation	6,210	9,984	12,226	15,283	15,588	15,899	16,216	16,540
541100	Professional Services	General Cost Inflation	62,517	191,368	112,597	106,672	38,801	39,575	40,365	41,171
541110	Outisde Attorney - Legal Advice	General Cost Inflation	-	-	-	-	-	-	-	-
542100	Telephone/Fax	General Cost Inflation	11,618	11,350	12,000	12,600	12,851	13,108	13,370	13,636
542440	Community Information Ads	General Cost Inflation	-	2,430	1,339	1,379	1,407	1,435	1,463	1,492
542450	Community Outreach/Participat	No Escalation	1,000	-	3,500	3,500	3,500	3,500	3,500	3,500
542500	Postage	No Escalation	3,853	4,100	4,200	4,200	4,200	4,200	4,200	4,200
543100	Travel Expense	No Escalation	-	150	250	250	250	250	250	250
544000	Advertising	General Cost Inflation	44	-	-	-	-	-	-	-
545000	Rents & Leases - Operating	General Cost Inflation	352	1,440	979	993	1,013	1,033	1,054	1,075
545500	Rents - Interfund	General Cost Inflation	36,623	37,530	49,300	50,600	51,610	52,640	53,691	54,762
546000	Insurance	General Cost Inflation	17,347	15,296	18,000	20,000	20,399	20,806	21,222	21,645
547100	Utilities - Electric	General Cost Inflation	104,955	97,100	101,100	103,100	105,158	107,256	109,397	111,581
547400	Utilities - SSWM Fees	General Cost Inflation	342	150	400	420	428	437	446	455
547500	Utilities - BI Water/Sewer	General Cost Inflation	122	314	126	129	132	134	137	140
548100	Repairs	General Cost Inflation	75,394	185,684	409,256	442,841	152,994	156,047	159,162	162,338
548500	Computer Support Maintenance	General Cost Inflation	1,207	-	1,300	1,400	1,428	1,456	1,486	1,515
549100	Dues, Subscriptions & Members	General Cost Inflation	3,200	3,158	3,703	3,800	3,876	3,953	4,032	4,113
549800	Permits - Cobi or Outside Agenc	General Cost Inflation	4,274	6,126	4,707	4,849	4,946	5,044	5,145	5,248
551000	Intergovernmental Prof Svcs	No Escalation	2,103	5,200	200	200	200	200	200	200
Total Cash O&M Expenditures			\$ 1,067,807	\$ 1,390,228	\$ 1,657,572	\$ 2,022,937	\$ 1,391,528	\$ 1,422,776	\$ 1,454,848	\$ 1,487,774



City of Bainbridge Island Water Rate Study and COSA Capital Improvement Program

PROJECT COSTS (\$ 2018)

No	Function	Description	2018	2019	2020	2021	2022	2023	2024
1		3a Water Prj 2019 CIP							
2	Transmission & Distribution	SR 305 Olympic Drive Non-Motorized Improvements		164,215					
3	Supply & Treatment	Rockaway Intertie		285,000					
4	Transmission & Distribution	Wyatt Way Reconstruction	2,666	136,000					
5	Transmission & Distribution	High Zone Improvements			750,000				
6	General	SCADA Upgrades							
7	Meters & Services	Meter Replacements							
8	Supply & Treatment	Chlorine Generator Upgrades		250,000					
9	Storage	New Storage Tank		1,000,000			2,250,000		
10	Transmission & Distribution	Fire Flow Improvements				75,000	350,000		
11	Supply & Treatment	Well Development/Rehab						200,000	
12	Transmission & Distribution	Pipeline Improvements						50,000	300,000
13									
14		Water and Sewer Capital Update as of July 25							
15	Storage	Tank Storage Improvements	17,625						
16	Supply & Treatment	Emergency Generator						40,000	130,000
17	Supply & Treatment	Water Treatment Improvements						500,000	1,500,000
18	Transmission & Distribution	Cave Avenue Pressure Reducing Station	56,947						
19									
20		3c Fleet 2019 CIP							
21	General	Van		49,000					
22	General	Light Duty Pick Up		11,000					
23	General	SUV		23,000					
24	General	Van			14,000				
25	General	Medium Duty Pick Up			59,000				
26	General	Medium Duty Pick Up				20,000			
27	General	Light Duty Pick Up					13,000		
28	General	Heavy Duty Pick Up						59,000	
29	General	Light Duty Pick Up						14,000	
30	General	Light Duty Pick Up							14,000
		Total Capital Projects	\$ 77,238	\$ 1,918,215	\$ 823,000	\$ 95,000	\$ 2,613,000	\$ 863,000	\$ 1,944,000
		Total Upgrade/Expansion Projects	65,463	1,512,573	780,637	39,871	2,402,347	362,192	815,877
		Total R&R Projects	11,775	405,642	42,363	55,129	210,653	500,808	1,128,123
		Projects by Grants / Developer Donations	-	-	-	-	-	-	-
		Projects by Enterprise Fund	77,238	1,918,215	823,000	95,000	2,613,000	863,000	1,944,000



City of Bainbridge Island
Water Rate Study and COSA
Capital Improvement Program

ESCALATED PROJECT COSTS

No	Function	Description	2018	2019	2020	2021	2022	2023	2024
1		3a Water Prj 2019 CIP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	Transmission & Distribution	SR 305 Olympic Drive Non-Motorized Improvements	-	169,141	-	-	-	-	-
3	Supply & Treatment	Rockaway Intertie	-	293,550	-	-	-	-	-
4	Transmission & Distribution	Wyatt Way Reconstruction	2,666	140,080	-	-	-	-	-
5	Transmission & Distribution	High Zone Improvements	-	-	795,675	-	-	-	-
6	General	SCADA Upgrades	-	-	-	-	-	-	-
7	Meters & Services	Meter Replacements	-	-	-	-	-	-	-
8	Supply & Treatment	Chlorine Generator Upgrades	-	257,500	-	-	-	-	-
9	Storage	New Storage Tank	-	1,030,000	-	-	2,532,395	-	-
10	Transmission & Distribution	Fire Flow Improvements	-	-	-	81,955	393,928	-	-
11	Supply & Treatment	Well Development/Rehab	-	-	-	-	-	231,855	-
12	Transmission & Distribution	Pipeline Improvements	-	-	-	-	-	57,964	358,216
13			-	-	-	-	-	-	-
14		Water and Sewer Capital Update as of July 25	-	-	-	-	-	-	-
15	Storage	Tank Storage Improvements	17,625	-	-	-	-	-	-
16	Supply & Treatment	Emergency Generator	-	-	-	-	-	46,371	155,227
17	Supply & Treatment	Water Treatment Improvements	-	-	-	-	-	579,637	1,791,078
18	Transmission & Distribution	Cave Avenue Pressure Reducing Station	56,947	-	-	-	-	-	-
19			-	-	-	-	-	-	-
20		3c Fleet 2019 CIP	-	-	-	-	-	-	-
21	General	Van	-	49,000	-	-	-	-	-
22	General	Light Duty Pick Up	-	11,000	-	-	-	-	-
23	General	SUV	-	23,000	-	-	-	-	-
24	General	Van	-	-	14,000	-	-	-	-
25	General	Medium Duty Pick Up	-	-	59,000	-	-	-	-
26	General	Medium Duty Pick Up	-	-	-	20,000	-	-	-
27	General	Light Duty Pick Up	-	-	-	-	13,000	-	-
28	General	Heavy Duty Pick Up	-	-	-	-	-	59,000	-
29	General	Light Duty Pick Up	-	-	-	-	-	14,000	-
30	General	Light Duty Pick Up	-	-	-	-	-	-	14,000
Total Capital Projects			\$ 77,238	\$ 1,973,271	\$ 868,675	\$ 101,955	\$ 2,939,323	\$ 988,827	\$ 2,318,521
Total Upgrade/Expansion Projects			65,463	1,556,905	826,312	42,789	2,703,178	415,000	973,060
Total R&R Projects			11,775	416,366	42,363	59,165	236,145	573,826	1,345,461
Projects by Grants / Developer Donations			-	-	-	-	-	-	-
Projects by Enterprise Fund			77,238	1,973,271	868,675	101,955	2,939,323	988,827	2,318,521



City of Bainbridge Island
Water Rate Study and COSA
Capital Funding Analysis

Summary of Expenditures	2018	2019	2020	2021	2022	2023	2024
CAPITAL PROJECTS							
Improvement Upgrades & Expansions	\$ 65,463	\$ 1,556,905	\$ 826,312	\$ 42,789	\$ 2,703,178	\$ 415,000	\$ 973,060
Repairs and Replacements	11,775	416,366	42,363	59,165	236,145	573,826	1,345,461
TOTAL CAPITAL EXPENDITURES	\$ 77,238	\$ 1,973,271	\$ 868,675	\$ 101,955	\$ 2,939,323	\$ 988,827	\$ 2,318,521
Capital Financing Plan	2018	2019	2020	2021	2022	2023	2024
Additional Proceeds (Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Project Specific CIAC	-	-	-	-	-	-	-
Project to be Funded	\$ 77,238	\$ 1,973,271	\$ 868,675	\$ 101,955	\$ 2,939,323	\$ 988,827	\$ 2,318,521
OTHER FUNDING SOURCES							
Other Sources	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rate Funded System Reinvestment	-	-	-	-	-	-	-
Other Loans	-	-	-	-	-	-	-
Other Loans	-	-	-	-	-	-	-
Revenue Bond Proceeds	-	-	-	-	-	-	1,600,000
TOTAL CAPITAL RESOURCES	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,600,000
<i>Info: Working Capital Contingency Deficit</i>	-	-	-	-	-	-	-



City of Bainbridge Island
Water Rate Study and COSA
 Capital Funding Analysis

New Debt Computations	2018	2019	2020	2021	2022	2023	2024
REVENUE BONDS							
Amount to Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,600,000
Issuance Costs	-	-	-	-	-	-	17,343
Reserve Required	-	-	-	-	-	-	<u>116,960</u>
Amount of Debt Issue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,734,303
PWTF LOANS							
Amount to Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
OTHER LOANS							
Amount to Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-
Issuance Costs	-	-	-	-	-	-	-
Amount of Debt Issue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	-

Debt Service Summary	2018	2019	2020	2021	2022	2023	2024
EXISTING DEBT SERVICE							
Annual Interest Payments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Annual Principal Payments	-	-	-	-	-	-	-
Total Debt Service Payments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Revenue Bond Payments Only	-	-	-	-	-	-	-
NEW DEBT SERVICE							
Annual Interest Payments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 78,044
Annual Principal Payments	-	-	-	-	-	-	<u>38,916</u>
Total Debt Service Payments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 116,960
Revenue Bond Payments Only	-	-	-	-	-	-	116,960
TOTAL DEBT SERVICE PAYMENTS							
Total Interest Payments	-	-	-	-	-	-	78,044
Total Principal Payments	-	-	-	-	-	-	38,916
Total Revenue Bond Payments Only	-	-	-	-	-	-	116,960



City of Bainbridge Island

Water Rate Study and COSA

Revenue Requirements Analysis

Test 1: Cash Flow Sufficiency Test	2018	2019	2020	2021	2022	2023	2024
EXPENSES							
Cash Operating Expenses	\$ 1,390,228	\$ 1,657,572	\$ 2,022,937	\$ 1,391,528	\$ 1,422,776	\$ 1,454,848	\$ 1,487,774
Existing Debt Service	-	-	-	-	-	-	-
New Debt Service	-	-	-	-	-	-	116,960
Rate Funded System Reinvestment	-	-	-	-	-	-	-
Additions to Meet Minimum Reserve	-	-	-	-	-	-	-
Total Expenses	\$ 1,390,228	\$ 1,657,572	\$ 2,022,937	\$ 1,391,528	\$ 1,422,776	\$ 1,454,848	\$ 1,604,733
REVENUES							
Rate Revenue	\$ 1,082,268	\$ 1,100,384	\$ 1,118,941	\$ 1,137,956	\$ 1,157,442	\$ 1,177,414	\$ 1,197,888
Other Non Rate Revenue	157,250	188,000	183,000	183,000	183,000	183,000	183,000
System Participation Fee Revenue Towards Debt	-	-	-	-	-	-	-
Operating Fund & Debt Reserve Fund Interest Earnings	32,000	15,941	12,604	7,403	8,866	10,543	12,552
Total Revenue	\$ 1,271,518	\$ 1,304,324	\$ 1,314,546	\$ 1,328,359	\$ 1,349,307	\$ 1,370,957	\$ 1,393,440
NET CASH FLOW (DEFICIENCY)	\$ (118,709)	\$ (353,248)	\$ (708,392)	\$ (63,169)	\$ (73,469)	\$ (83,891)	\$ (211,293)
% of Rate Revenue	10.97%	32.10%	63.31%	5.55%	6.35%	7.13%	17.64%
Test 2: Coverage Sufficiency Test	2018	2019	2020	2021	2022	2023	2024
EXPENSES							
Cash Operating Expenses (Less City Taxes & Capital Outlays)	\$ 1,314,298	\$ 1,561,263	\$ 1,925,657	\$ 1,293,052	\$ 1,322,668	\$ 1,353,055	\$ 1,384,238
Revenue Bond Debt Service	-	-	-	-	-	-	116,960
Revenue Bond Coverage Requirement at 1.25	-	-	-	-	-	-	29,240
Total Expenses	\$ 1,314,298	\$ 1,561,263	\$ 1,925,657	\$ 1,293,052	\$ 1,322,668	\$ 1,353,055	\$ 1,530,437
ALLOWABLE REVENUES							
Rate Revenue	\$ 1,082,268	\$ 1,100,384	\$ 1,118,941	\$ 1,137,956	\$ 1,157,442	\$ 1,177,414	\$ 1,197,888
Other Revenue	157,250	188,000	183,000	183,000	183,000	183,000	183,000
Interest Earnings - All Funds	88,117	73,277	53,789	52,375	66,671	33,142	25,567
Total Revenue	\$ 1,327,635	\$ 1,361,660	\$ 1,355,730	\$ 1,373,331	\$ 1,407,113	\$ 1,393,556	\$ 1,406,455
Coverage Realized (Existing Rates)	n/a	n/a	n/a	n/a	n/a	n/a	0.19
COVERAGE SURPLUS (DEFICIENCY)	\$ 13,338	\$ (199,602)	\$ (569,926)	\$ 80,280	\$ 84,446	\$ 40,501	\$ (123,983)



City of Bainbridge Island

Water Rate Study and COSA

Revenue Requirements Analysis

Rate Increases	2018	2019	2020	2021	2022	2023	2024
Rate Revenue with no Increase	\$ 1,082,268	\$ 1,100,384	\$ 1,118,941	\$ 1,137,956	\$ 1,157,442	\$ 1,177,414	\$ 1,197,888
Revenues from Prior Rate Increases	-	-	22,379	45,973	70,845	97,057	124,677
Rate Revenue Before Rate Increase (Incl. previous increases)	1,082,268	1,100,384	1,141,320	1,183,929	1,228,286	1,274,471	1,322,565
Required Annual Rate Increase (Full Year)	12.33%	36.08%	67.80%	2.11%	0.96%	-0.22%	8.53%
Number of Months New Rates Will Be In Effect	12	12	12	12	12	12	12
<i>Info: Percentage Increase to Generate Required Revenue</i>	12.33%	36.08%	67.80%	2.11%	0.96%	-0.22%	8.53%
Policy Induced Rate Increases	0.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
ANNUAL RATE INCREASE	0.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
CUMULATIVE RATE INCREASE	0.00%	2.00%	4.04%	6.12%	8.24%	10.41%	12.62%

Impacts of Rate Increases	2018	2019	2020	2021	2022	2023	2024
Rate Revenues After Rate Increase	\$ 1,082,268	\$ 1,122,391	\$ 1,164,147	\$ 1,207,608	\$ 1,252,852	\$ 1,299,960	\$ 1,349,017
Full Year Rate Revenues After Rate Increase	1,082,268	1,122,391	1,164,147	1,207,608	1,252,852	1,299,960	1,349,017
<i>Partial Year Adjustment</i>	-	-	-	-	-	-	-
Additional (Reduction of) Taxes Due to Rate Increases	-	2,427	4,986	7,682	10,523	13,516	16,668
Net Cash Flow After Rate Increase	\$ (118,709)	\$ (333,667)	\$ (668,172)	\$ (1,199)	\$ 11,419	\$ 25,140	\$ (76,832)
Coverage After Rate Increase	n/a	n/a	n/a	n/a	n/a	n/a	1.34
Coverage After Rate Increase (Total Debt)	n/a	n/a	n/a	n/a	n/a	n/a	1.34


New Debt Assumptions	2018	2019	2020	2021	2022	2023	2024
Revenue Bond Proceeds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,600,000
PWTF Loan Proceeds	-	-	-	-	-	-	-
Other Loan Proceeds	-	-	-	-	-	-	-

Fund Balance Impacts	2018	2019	2020	2021	2022	2023	2024
Ending Fund Balance - Operating Fund	\$ 1,594,087	\$ 1,260,420	\$ 592,248	\$ 591,049	\$ 602,468	\$ 627,607	\$ 550,775
Minimum Target - Operating Fund	228,531	272,478	332,538	228,744	233,881	239,153	244,566
Ending Fund Balance - Capital Fund	\$ 5,733,583	\$ 4,118,479	\$ 3,597,785	\$ 3,853,711	\$ 1,291,364	\$ 650,721	\$ 277,373
Minimum Target - Capital Fund	125,856	145,588	154,275	155,295	184,688	194,576	217,761
Annual CIP (Inflated)	\$ 77,238	\$ 1,973,271	\$ 868,675	\$ 101,955	\$ 2,939,323	\$ 988,827	\$ 2,318,521



City of Bainbridge Island
Water Rate Study and COSA
Fund Activity

Funds	2018	2019	2020	2021	2022	2023	2024
OPERATING							
Beginning Balance	\$ 1,712,796	\$ 1,594,087	\$ 1,260,420	\$ 592,248	\$ 591,049	\$ 602,468	\$ 627,607
plus: Net Cash Flow after Rate Increase	(118,709)	(333,667)	(668,172)	(1,199)	11,419	25,140	(76,832)
less: Transfer of Surplus to Capital Fund (If No Manual Entry)	-	-	-	-	-	-	-
Ending Balance	\$ 1,594,087	\$ 1,260,420	\$ 592,248	\$ 591,049	\$ 602,468	\$ 627,607	\$ 550,775
<i>Minimum Target Balance: 60 days</i>	\$ 228,531	\$ 272,478	\$ 332,538	\$ 228,744	\$ 233,881	\$ 239,153	\$ 244,566
<i>Maximum Target Balance: 90 days</i>	\$ 342,796	\$ 408,716	\$ 498,806	\$ 343,116	\$ 350,822	\$ 358,730	\$ 366,848
<i>Info: No of Days of Cash Operating Expenses</i>	419	278	107	155	155	157	135
Difference over or (under) target funds	\$ 1,365,556	\$ 987,942	\$ 259,710	\$ 362,305	\$ 368,587	\$ 388,454	\$ 306,209
Manual Entry for Transfer to Capital Fund	-	-	-	-	-	-	-
CAPITAL							
Beginning Balance	\$ 5,611,704	\$ 5,733,583	\$ 4,118,479	\$ 3,597,785	\$ 3,853,711	\$ 1,291,364	\$ 650,721
plus: Rate Funded System Reinvestment	-	-	-	-	-	-	-
plus: Transfers from Operating Fund	-	-	-	-	-	-	-
plus: Grants/ Donations/ CIAC	-	-	-	-	-	-	-
plus: Additional Proceeds (Costs)	-	-	-	-	-	-	-
plus: System Participation Fee Revenue	143,000	300,832	306,796	312,908	319,170	325,585	332,158
less: System Participation Fee Revenue Towards Debt	-	-	-	-	-	-	-
plus: Revenue Bond Proceeds	-	-	-	-	-	-	1,600,000
plus: PWTf Loans Proceeds	-	-	-	-	-	-	-
plus: Other Loan Proceeds	-	-	-	-	-	-	-
plus: Interest Earnings	56,117	57,336	41,185	44,972	57,806	22,599	13,014
Total Funding Sources	\$ 5,810,821	\$ 6,091,751	\$ 4,466,460	\$ 3,955,666	\$ 4,230,687	\$ 1,639,548	\$ 2,595,894
less: Capital Expenditures	(77,238)	(1,973,271)	(868,675)	(101,955)	(2,939,323)	(988,827)	(2,318,521)
Ending Capital Fund Balance	\$ 5,733,583	\$ 4,118,479	\$ 3,597,785	\$ 3,853,711	\$ 1,291,364	\$ 650,721	\$ 277,373
<i>Minimum Target Balance</i>	\$ 125,856	\$ 145,588	\$ 154,275	\$ 155,295	\$ 184,688	\$ 194,576	\$ 217,761
COMBINED BEGINNING FUND BALANCE	\$ 7,324,500	\$ 7,327,670	\$ 5,378,899	\$ 4,190,033	\$ 4,444,760	\$ 1,893,832	\$ 1,278,329
COMBINED ENDING FUND BALANCE	\$ 7,327,670	\$ 5,378,899	\$ 4,190,033	\$ 4,444,760	\$ 1,893,832	\$ 1,278,329	\$ 828,148



City of Bainbridge Island
Water Rate Study and COSA
Price Out of Customer Data

		Winter	Winter	Winter	Winter	Summer	Summer	Summer	Summer	Summer	Summer	Summer	Summer	Winter	Winter	
Accounts & Billed Consumption - Winslow																
Single-Family	Accounts	Units	Billed Consumption (Bi-Monthly ccf)												Total	
			January	February	March	April	May	June	July	August	September	October	November	December		
Discount																0 ccf
5/8" x 3/4"	54		368 ccf	71 ccf	330 ccf	60 ccf	302 ccf	69 ccf	615 ccf	278 ccf	933 ccf	318 ccf	749 ccf	90 ccf		4,183 ccf
3/4" x 3/4"	2,017		8,185 ccf	8,549 ccf	8,915 ccf	7,234 ccf	7,606 ccf	8,216 ccf	12,543 ccf	21,717 ccf	20,107 ccf	22,325 ccf	16,620 ccf	11,713 ccf		153,730 ccf
1"	51		182 ccf	243 ccf	199 ccf	181 ccf	189 ccf	218 ccf	250 ccf	504 ccf	313 ccf	528 ccf	283 ccf	299 ccf		3,389 ccf
1 1/2"	7		40 ccf	0 ccf	68 ccf	144 ccf	41 ccf	152 ccf	81 ccf	250 ccf	256 ccf	223 ccf	305 ccf	253 ccf		1,813 ccf
2"																0 ccf
3"																0 ccf
4"																0 ccf
6"																0 ccf
Total	2,129	0	8,775 ccf	8,863 ccf	9,512 ccf	7,619 ccf	8,138 ccf	8,655 ccf	13,489 ccf	22,749 ccf	21,609 ccf	23,394 ccf	17,957 ccf	12,355 ccf		163,115 ccf

Block Usage				
Block 1 0-5 ccf	Block 2 5-12 ccf	Block 3 12-30 ccf	Block 4 30+ ccf	Total
				0 ccf
2,332 ccf	905 ccf	712 ccf	234 ccf	4,183 ccf
90,023 ccf	36,631 ccf	19,236 ccf	7,840 ccf	153,730 ccf
2,266 ccf	801 ccf	306 ccf	16 ccf	3,389 ccf
321 ccf	394 ccf	664 ccf	434 ccf	1,813 ccf
				0 ccf
				0 ccf
				0 ccf
				0 ccf
94,942 ccf	38,731 ccf	20,918 ccf	8,524 ccf	163,115 ccf

		Winter	Winter	Winter	Winter	Summer	Summer	Summer	Summer	Summer	Summer	Summer	Summer	Winter	Winter	
Accounts & Billed Consumption - Winslow																
Multi-Family	Accounts	Units	Billed Consumption (Bi-Monthly ccf)												Total	
			January	February	March	April	May	June	July	August	September	October	November	December		
5/8" x 3/4"																0 ccf
3/4" x 3/4"	18	51	123 ccf	232 ccf	130 ccf	214 ccf	104 ccf	232 ccf	208 ccf	287 ccf	230 ccf	258 ccf	199 ccf	256 ccf		2,473 ccf
1"	16	204	527 ccf	293 ccf	606 ccf	258 ccf	448 ccf	275 ccf	638 ccf	345 ccf	652 ccf	268 ccf	705 ccf	314 ccf		5,329 ccf
1 1/2"	24	233	356 ccf	1,181 ccf	316 ccf	933 ccf	288 ccf	941 ccf	375 ccf	1,181 ccf	318 ccf	954 ccf	374 ccf	1,150 ccf		8,367 ccf
2"	38	795	2,187 ccf	2,491 ccf	2,145 ccf	2,049 ccf	1,832 ccf	2,297 ccf	2,511 ccf	3,055 ccf	2,172 ccf	3,037 ccf	2,505 ccf	2,600 ccf		28,881 ccf
3"	3	96	0 ccf	509 ccf	0 ccf	419 ccf	0 ccf	498 ccf	0 ccf	601 ccf	0 ccf	647 ccf	0 ccf	507 ccf		3,181 ccf
4"	1	165	0 ccf	840 ccf	0 ccf	785 ccf	0 ccf	773 ccf	0 ccf	974 ccf	0 ccf	797 ccf	0 ccf	882 ccf		5,051 ccf
																0 ccf
Total	100	1,544	3,193 ccf	5,546 ccf	3,197 ccf	4,658 ccf	2,672 ccf	5,016 ccf	3,732 ccf	6,443 ccf	3,372 ccf	5,961 ccf	3,783 ccf	5,709 ccf		53,282 ccf

Block 1 0-5 ccf	Block 2 5-12 ccf	Block 3 12-30 ccf	Block 4 30+ ccf	Total
				0 ccf
2,053 ccf	418 ccf	2 ccf	0 ccf	2,473 ccf
4,838 ccf	491 ccf	0 ccf	0 ccf	5,329 ccf
8,184 ccf	183 ccf	0 ccf	0 ccf	8,367 ccf
28,423 ccf	458 ccf	0 ccf	0 ccf	28,881 ccf
3,181 ccf	0 ccf	0 ccf	0 ccf	3,181 ccf
5,051 ccf	0 ccf	0 ccf	0 ccf	5,051 ccf
				0 ccf
51,730 ccf	1,550 ccf	2 ccf	0 ccf	53,282 ccf

		Winter	Winter	Winter	Winter	Summer	Summer	Summer	Summer	Summer	Summer	Summer	Summer	Winter	Winter	
Accounts & Billed Consumption - Winslow																
Commercial	Accounts	Units	Billed Consumption (Bi-Monthly ccf)												Total	
			January	February	March	April	May	June	July	August	September	October	November	December		
5/8" x 3/4"	21		26 ccf	843 ccf	25 ccf	723 ccf	28 ccf	919 ccf	42 ccf	885 ccf	59 ccf	746 ccf	108 ccf	835 ccf		5,239 ccf
3/4" x 3/4"	110		874 ccf	1,501 ccf	766 ccf	1,003 ccf	675 ccf	1,021 ccf	1,110 ccf	1,877 ccf	1,141 ccf	2,037 ccf	1,074 ccf	1,357 ccf		14,436 ccf
1"	52		294 ccf	1,220 ccf	334 ccf	1,068 ccf	398 ccf	1,183 ccf	487 ccf	2,130 ccf	458 ccf	2,285 ccf	417 ccf	1,522 ccf		11,796 ccf
1 1/2"	23		99 ccf	388 ccf	113 ccf	413 ccf	99 ccf	429 ccf	186 ccf	1,047 ccf	109 ccf	1,180 ccf	202 ccf	733 ccf		4,998 ccf
2"	34		549 ccf	4,816 ccf	756 ccf	4,071 ccf	517 ccf	4,527 ccf	728 ccf	6,520 ccf	392 ccf	6,501 ccf	504 ccf	6,265 ccf		36,146 ccf
3"	3		145 ccf	49 ccf	112 ccf	29 ccf	129 ccf	61 ccf	177 ccf	132 ccf	178 ccf	121 ccf	194 ccf	90 ccf		1,417 ccf
4"	1		305 ccf	0 ccf	250 ccf	0 ccf	280 ccf	0 ccf	370 ccf	0 ccf	570 ccf	0 ccf	400 ccf	0 ccf		2,175 ccf
																0 ccf
Total	244	0	2,292 ccf	8,817 ccf	2,356 ccf	7,307 ccf	2,126 ccf	8,140 ccf	3,100 ccf	12,591 ccf	2,907 ccf	12,870 ccf	2,899 ccf	10,802 ccf		76,207 ccf

Block 1 0-5 ccf	Block 2 5-12 ccf	Block 3 12-30 ccf	Block 4 30+ ccf	Total
				0 ccf
				0 ccf
				0 ccf
				0 ccf
				0 ccf
				0 ccf
				0 ccf
				0 ccf
0 ccf	0 ccf	0 ccf	0 ccf	0 ccf

B City of Bainbridge Island
Water Rate Study and COSA
Price Out of Customer Data

		Winter	Winter	Winter	Winter	Summer	Summer	Summer	Summer	Summer	Summer	Summer	Summer	Winter	Winter
Accounts & Billed Consumption - Winslow (Continued)															
Irrigation	Accounts	Units	Billed Consumption (Bi-Monthly ccf)												Total
			January	February	March	April	May	June	July	August	September	October	November	December	
5/8" x 3/4"	1		0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	17 ccf	0 ccf	46 ccf	0 ccf	19 ccf		82 ccf
3/4" x 3/4"	38		0 ccf	229 ccf	0 ccf	113 ccf	2 ccf	459 ccf	271 ccf	2,258 ccf	1,142 ccf	2,838 ccf	904 ccf	1,506 ccf	9,722 ccf
1"	11		6 ccf	1 ccf	0 ccf	3 ccf	12 ccf	14 ccf	114 ccf	517 ccf	267 ccf	959 ccf	316 ccf	370 ccf	2,579 ccf
1 1/2"	9		25 ccf	0 ccf	35 ccf	9 ccf	26 ccf	39 ccf	310 ccf	786 ccf	381 ccf	1,181 ccf	301 ccf	255 ccf	3,348 ccf
2"	7		0 ccf	0 ccf	1 ccf	0 ccf	1 ccf	20 ccf	852 ccf	389 ccf	2,657 ccf	912 ccf	2,451 ccf	342 ccf	7,625 ccf
3"	1		0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	191 ccf	0 ccf	2,017 ccf	0 ccf	367 ccf	0 ccf	2,575 ccf
4"															0 ccf
6"															0 ccf
Total	67	0	31 ccf	230 ccf	36 ccf	125 ccf	41 ccf	532 ccf	1,738 ccf	3,967 ccf	6,464 ccf	5,936 ccf	4,339 ccf	2,492 ccf	25,931 ccf

Block Usage				
Block 1 0-5 ccf	Block 2 5-12 ccf	Block 3 12-30 ccf	Block 4 30+ ccf	Total
				0 ccf
				0 ccf
				0 ccf
				0 ccf
				0 ccf
				0 ccf
				0 ccf
				0 ccf
0 ccf	0 ccf	0 ccf	0 ccf	0 ccf

Other															
Other	Accounts	Units	Billed Consumption (Bi-Monthly ccf)												Total
			January	February	March	April	May	June	July	August	September	October	November	December	
5/8" x 3/4"															0 ccf
3/4" x 3/4"	1		21 ccf	0 ccf	30 ccf	0 ccf	11 ccf	0 ccf	5 ccf	0 ccf	32 ccf	0 ccf	67 ccf	0 ccf	166 ccf
1"	3		0 ccf	50 ccf	0 ccf	42 ccf	0 ccf	46 ccf	0 ccf	51 ccf	0 ccf	46 ccf	0 ccf	49 ccf	284 ccf
1 1/2"															0 ccf
2"															0 ccf
3"	1		0 ccf	241 ccf	0 ccf	194 ccf	0 ccf	227 ccf	0 ccf	264 ccf	0 ccf	372 ccf	0 ccf	348 ccf	1,646 ccf
4"															0 ccf
6"															0 ccf
Total	5	0	21 ccf	291 ccf	30 ccf	236 ccf	11 ccf	273 ccf	5 ccf	315 ccf	32 ccf	418 ccf	67 ccf	397 ccf	2,096 ccf

Block 1 0-5 ccf	Block 2 5-12 ccf	Block 3 12-30 ccf	Block 4 30+ ccf	Total
				0 ccf
				0 ccf
				0 ccf
				0 ccf
				0 ccf
				0 ccf
				0 ccf
				0 ccf
				0 ccf
0 ccf	0 ccf	0 ccf	0 ccf	0 ccf

Winslow Total	2,545	1,544	14,312 ccf	23,747 ccf	15,131 ccf	19,945 ccf	12,988 ccf	22,616 ccf	22,064 ccf	46,065 ccf	34,384 ccf	48,579 ccf	29,045 ccf	31,755 ccf	320,631 ccf
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216,397 ccf

Accounts & Billed Consumption - Rockaway															
Single Family	Accounts	Units	Billed Consumption (Bi-Monthly ccf)												Total
			January	February	March	April	May	June	July	August	September	October	November	December	
5/8" x 3/4"															0 ccf
3/4" x 3/4"	67		713 ccf	0 ccf	547 ccf	8 ccf	438 ccf	7 ccf	1,152 ccf	9 ccf	2,001 ccf	0 ccf	1,841 ccf	0 ccf	6,716 ccf
1"	2		12 ccf	0 ccf	26 ccf	0 ccf	19 ccf	0 ccf	96 ccf	0 ccf	218 ccf	0 ccf	164 ccf	0 ccf	535 ccf
1 1/2"															0 ccf
2"	1		2 ccf	0 ccf	2 ccf	0 ccf	1 ccf	0 ccf	3 ccf	0 ccf	0 ccf	0 ccf	2 ccf	0 ccf	10 ccf
3"															0 ccf
4"															0 ccf
6"															0 ccf
Total	70	0	727 ccf	0 ccf	575 ccf	8 ccf	458 ccf	7 ccf	1,251 ccf	9 ccf	2,219 ccf	0 ccf	2,007 ccf	0 ccf	7,261 ccf

Block Usage				
Block 1 0-5 ccf	Block 2 5-12 ccf	Block 3 12-30 ccf	Block 4 30+ ccf	Total
				0 ccf
2,810 ccf	1,797 ccf	1,592 ccf	517 ccf	6,716 ccf
102 ccf	50 ccf	108 ccf	275 ccf	535 ccf
				0 ccf
10 ccf	0 ccf	0 ccf	0 ccf	10 ccf
				0 ccf
				0 ccf
				0 ccf
				0 ccf
2,922 ccf	1,847 ccf	1,700 ccf	792 ccf	7,261 ccf

Rockaway Total	70	-	727 ccf	0 ccf	575 ccf	8 ccf	458 ccf	7 ccf	1,251 ccf	9 ccf	2,219 ccf	0 ccf	2,007 ccf	0 ccf	7,261 ccf
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7,261 ccf

System Total	2,615	1,544	15,039 ccf	23,747 ccf	15,706 ccf	19,953 ccf	13,446 ccf	22,623 ccf	23,315 ccf	46,074 ccf	36,603 ccf	48,579 ccf	31,052 ccf	31,755 ccf	327,892 ccf
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223,658 ccf



City of Bainbridge Island
Water Rate Study and COSA
Price Out of Customer Data

Single-Family

Discount
 5/8" x 3/4"
 3/4" x 3/4"
 1"
 1 1/2"
 2"
 3"
 4"
 6"

2017 Winslow Rate Structure: Monthly					
Meter Charge	Volume Charge (per ccf)				
	Monthly	Block 1	Block 2	Block 3	Block 4
\$5.39	\$0.55	\$0.88	\$1.25	\$1.70	
\$10.77	\$1.09	\$1.76	\$2.49	\$3.39	
\$10.77	\$1.09	\$1.76	\$2.49	\$3.39	
\$21.24	\$1.09	\$1.76	\$2.49	\$3.39	
\$38.72	\$1.09	\$1.76	\$2.49	\$3.39	
\$59.71	\$1.09	\$1.76	\$2.49	\$3.39	
\$115.70	\$1.09	\$1.76	\$2.49	\$3.39	
\$178.65	\$1.09	\$1.76	\$2.49	\$3.39	
\$353.94	\$1.09	\$1.76	\$2.49	\$3.39	

Multi-Family

5/8" x 3/4"
 3/4" x 3/4"
 1"
 1 1/2"
 2"
 3"
 4"
 6"

Meter Charge	Volume Charge (per ccf)				
	per Unit	Block 1	Block 2	Block 3	Block 4
\$5.37	\$1.09	\$1.76	\$2.49	\$3.39	
\$5.37	\$1.09	\$1.76	\$2.49	\$3.39	
\$5.37	\$1.09	\$1.76	\$2.49	\$3.39	
\$5.37	\$1.09	\$1.76	\$2.49	\$3.39	
\$5.37	\$1.09	\$1.76	\$2.49	\$3.39	
\$5.37	\$1.09	\$1.76	\$2.49	\$3.39	
\$5.37	\$1.09	\$1.76	\$2.49	\$3.39	
\$5.37	\$1.09	\$1.76	\$2.49	\$3.39	

Commercial

5/8" x 3/4"
 3/4" x 3/4"
 1"
 1 1/2"
 2"
 3"
 4"
 6"

Meter Charge	Volume Charge (per ccf)	
	per Account	
	Winter	Summer
\$16.45	\$1.43	\$1.43
\$16.45	\$1.43	\$1.43
\$36.40	\$1.43	\$1.43
\$69.78	\$1.43	\$1.43
\$109.52	\$1.43	\$1.43
\$215.89	\$1.43	\$1.43
\$335.55	\$1.43	\$1.43
\$667.94	\$1.43	\$1.43

Annual Charges - Winslow						
Meter Size	Meter Revenue	Volume Revenue				Total
		Block 1	Block 2	Block 3	Block 4	
Discount	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5/8" x 3/4"	6,979	2,542	1,593	1,773	793	13,680
3/4" x 3/4"	260,677	98,125	64,471	47,898	26,578	497,748
1"	12,999	2,470	1,410	762	54	17,695
1 1/2"	3,252	350	693	1,653	1,471	7,420
2"	-	-	-	-	-	-
3"	-	-	-	-	-	-
5"	-	-	-	-	-	-
8"	-	-	-	-	-	-
Total	\$ 283,907	\$ 103,487	\$ 68,167	\$ 52,086	\$ 28,896	\$ 536,543

Meter Size	Meter Revenue	Volume Revenue				Total
		Block 1	Block 2	Block 3	Block 4	
5/8" x 3/4"	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3/4" x 3/4"	3,286	2,238	736	5	-	6,265
1"	13,146	5,273	864	-	-	19,283
1 1/2"	15,015	8,921	322	-	-	24,257
2"	51,230	30,981	806	-	-	83,017
3"	6,186	3,467	-	-	-	9,654
4"	10,633	5,506	-	-	-	16,138
6"	-	-	-	-	-	-
Total	\$ 99,495	\$ 56,386	\$ 2,728	\$ 5		\$ 158,614

Meter Size	Meter Revenue	Volume Revenue		Total
		per Account		
		Winter	Summer	
5/8" x 3/4"	\$ 4,145	\$ 3,661	\$ 3,831	\$ 11,637
3/4" x 3/4"	21,714	9,402	11,241	42,357
1"	22,714	6,943	9,926	39,582
1 1/2"	19,259	2,786	4,362	26,406
2"	44,684	24,254	27,435	96,373
3"	7,772	885	1,141	9,798
4"	4,027	1,366	1,745	7,137
6"	-	-	-	-
Total	\$ 124,315	\$ 49,296	\$ 59,680	\$ 233,291



City of Bainbridge Island
Water Rate Study and COSA
Price Out of Customer Data

Irrigation

5/8" x 3/4"
 3/4" x 3/4"
 1"
 1 1/2"
 2"
 3"
 4"
 6"

Meter Charge per Account	Volume Charge (per ccf)	
	Winter	Summer
\$4.73	\$3.89	\$3.89
\$4.73	\$3.89	\$3.89
\$6.22	\$3.89	\$3.89
\$8.70	\$3.89	\$3.89
\$11.70	\$3.89	\$3.89
\$19.64	\$3.89	\$3.89
\$28.59	\$3.89	\$3.89
\$53.47	\$3.89	\$3.89

Other

5/8" x 3/4"
 3/4" x 3/4"
 1"
 1 1/2"
 2"
 3"
 4"
 6"

Meter Charge per Account	Volume Charge (per ccf)	
	Winter	Summer
\$24.04	\$1.43	\$1.43
\$24.04	\$1.43	\$1.43
\$55.37	\$1.43	\$1.43
\$107.58	\$1.43	\$1.43
\$170.23	\$1.43	\$1.43
\$337.28	\$1.43	\$1.43
\$525.22	\$1.43	\$1.43
\$1,047.31	\$1.43	\$1.43

Single Family

5/8" x 3/4"
 3/4" x 3/4"
 1"
 1 1/2"
 2"
 3"
 4"
 6"


2017 Rockaway Rate Structure: Monthly					
Meter Charge per Account	Volume Charge (per ccf)				
	Block 1	Block 2	Block 3	Block 4	
\$11.64	\$1.18	\$1.90	\$2.69	\$3.66	
\$11.64	\$1.18	\$1.90	\$2.69	\$3.66	
\$22.94	\$1.18	\$1.90	\$2.69	\$3.66	
\$41.85	\$1.18	\$1.90	\$2.69	\$3.66	
\$64.53	\$1.18	\$1.90	\$2.69	\$3.66	
\$0.00	\$1.18	\$1.90	\$2.69	\$3.66	
\$0.00	\$1.18	\$1.90	\$2.69	\$3.66	
\$0.00	\$1.18	\$1.90	\$2.69	\$3.66	

Meter Size	Meter Revenue	Volume Revenue		Total
		Winter	Summer	
5/8" x 3/4"	\$ 57	\$ 74	\$ 245	\$ 376
3/4" x 3/4"	2,157	10,705	27,113	39,975
1"	821	2,707	7,325	10,853
1 1/2"	940	2,431	10,592	13,963
2"	983	10,869	18,793	30,644
3"	236	1,428	8,589	10,252
4"	-	-	-	-
6"	-	-	-	-
Total	\$ 5,193	\$ 28,214	\$ 72,657	\$ 106,064

Meter Size	Meter Revenue	Volume Revenue		Total
		Winter	Summer	
5/8" x 3/4"	\$ -	\$ -	\$ -	\$ -
3/4" x 3/4"	288	169	69	526
1"	1,993	202	204	2,399
1 1/2"	-	-	-	-
2"	-	-	-	-
3"	4,047	1,120	1,234	6,401
4"	-	-	-	-
6"	-	-	-	-
Total	\$ 6,329	\$ 1,490	\$ 1,507	\$ 9,326

Annual Charges - Rockaway						
Meter Size	Meter Revenue	Volume Revenue				Total
		Block 1	Block 2	Block 3	Block 4	
5/8" x 3/4"	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3/4" x 3/4"	9,359	3,316	3,414	4,282	1,892	22,263
1"	551	120	95	291	1,007	2,063
1 1/2"	-	-	-	-	-	-
2"	774	12	-	-	-	786
3"	-	-	-	-	-	-
4"	-	-	-	-	-	-
6"	-	-	-	-	-	-
Total	\$ 10,683	\$ 3,448	\$ 3,509	\$ 4,573		\$ 25,112

Price Out of 2017 Customer Data	
Estimated Revenue	\$ 1,068,951
2017 Reported Revenue	\$ 1,055,289
Percent Difference	-1.28%



City of Bainbridge Island
Water Rate Study and COSA
Forecast of Customer Data


Growth Assumptions ^[1]	2017	2018	2019	2020	2021	2022	2023	2024
Single Family Account Growth		1.75%	1.75%	1.75%	1.75%	1.75%	1.75%	1.75%
Multi-Family Account Growth		1.68%	1.68%	1.68%	1.68%	1.68%	1.68%	1.68%
Commercial Account Growth		0.38%	0.38%	0.38%	0.38%	0.38%	0.38%	0.38%
Other Account Growth		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Irrigation Account Growth		4.56%	4.56%	4.56%	4.56%	4.56%	4.56%	4.56%
Rockaway Account Growth		0.29%	0.29%	0.29%	0.29%	0.29%	0.29%	0.29%

^[1] Growth Based on Actual Water Accounts	2013-2018
Single-Family	1.75%
Multi-Family	1.68%
Commercial	0.38%
Irrigation	4.56%
Other	0.00%
Rockaway	0.29%

Single-Family Customer Data Forecast			2017	2018	2019	2020	2021	2022	2023	2024
Customer Counts	No. of MSEs	No. of MCEs	Growth Assumption							
Discount	1.00	0.67	Single Family Account Growth	0	0	0	0	0	0	0
5/8" x 3/4" Meter	1.00	0.67	Single Family Account Growth	53	54	55	56	57	58	59
3/4" x 3/4" Meter	1.00	1.00	Single Family Account Growth	1,991	2,026	2,062	2,098	2,135	2,172	2,210
1" Meter	1.27	1.67	Single Family Account Growth	50	51	52	53	54	55	56
1-1/2" Meter	1.64	3.33	Single Family Account Growth	7	7	7	7	8	8	8
2" Meter	2.64	5.33	Single Family Account Growth	0	0	0	0	0	0	0
3" Meter	10.00	10.67	Single Family Account Growth	0	0	0	0	0	0	0
4" Meter	12.73	16.67	Single Family Account Growth	0	0	0	0	0	0	0
6" Meter	19.09	33.33	Single Family Account Growth	0	0	0	0	0	0	0
Total Number of Meters				2,102	2,139	2,176	2,214	2,253	2,293	2,333
Total Number of MSEs				2,120	2,157	2,195	2,233	2,273	2,312	2,353
Total Number of MCEs				2,134	2,171	2,209	2,248	2,287	2,327	2,368
Billed Water Consumption	Single Family Demand Growth									
Block 1 (0 - 5 ccf)				93,729 ccf	95,372 ccf	97,045 ccf	98,747 ccf	100,478 ccf	102,241 ccf	104,034 ccf
Block 2 (5 - 12 ccf)				38,236 ccf	38,907 ccf	39,589 ccf	40,283 ccf	40,990 ccf	41,708 ccf	42,440 ccf
Block 3 (12 - 30 ccf)				20,651 ccf	21,013 ccf	21,381 ccf	21,756 ccf	22,138 ccf	22,526 ccf	22,921 ccf
Block 4 (30 ccf +)				8,415 ccf	8,563 ccf	8,713 ccf	8,866 ccf	9,021 ccf	9,179 ccf	9,340 ccf
Total				161,030 ccf	163,854 ccf	166,728 ccf	169,652 ccf	172,627 ccf	175,654 ccf	178,735 ccf
Winter Consumption				64,249 ccf	65,376 ccf	66,522 ccf	67,689 ccf	68,876 ccf	70,084 ccf	71,313 ccf
Summer Consumption				96,781 ccf	98,478 ccf	100,205 ccf	101,963 ccf	103,751 ccf	105,570 ccf	107,422 ccf
Adopted Monthly Fixed Charges				\$5.39	\$5.39	\$5.39	\$5.39	\$5.39	\$5.39	\$5.39
Discount				\$10.77	\$10.77	\$10.77	\$10.77	\$10.77	\$10.77	\$10.77
5/8" x 3/4" Meter				\$10.77	\$10.77	\$10.77	\$10.77	\$10.77	\$10.77	\$10.77
3/4" x 3/4" Meter				\$21.24	\$21.24	\$21.24	\$21.24	\$21.24	\$21.24	\$21.24
1" Meter				\$38.72	\$38.72	\$38.72	\$38.72	\$38.72	\$38.72	\$38.72
1-1/2" Meter				\$59.71	\$59.71	\$59.71	\$59.71	\$59.71	\$59.71	\$59.71
2" Meter				\$115.70	\$115.70	\$115.70	\$115.70	\$115.70	\$115.70	\$115.70
3" Meter				\$178.65	\$178.65	\$178.65	\$178.65	\$178.65	\$178.65	\$178.65
4" Meter				\$353.94	\$353.94	\$353.94	\$353.94	\$353.94	\$353.94	\$353.94
6" Meter										
Adopted Volume Charges				\$1.09	\$1.09	\$1.09	\$1.09	\$1.09	\$1.09	\$1.09
Block 1 (0 - 5 ccf)				\$1.76	\$1.76	\$1.76	\$1.76	\$1.76	\$1.76	\$1.76
Block 2 (5 - 12 ccf)				\$2.49	\$2.49	\$2.49	\$2.49	\$2.49	\$2.49	\$2.49
Block 3 (12 - 30 ccf)				\$3.39	\$3.39	\$3.39	\$3.39	\$3.39	\$3.39	\$3.39
Block 4 (30 ccf +)										
Estimated Revenue At Adopted Rates:				\$ 280,279	\$ 285,194	\$ 290,196	\$ 295,285	\$ 300,463	\$ 305,732	\$ 311,094
Base Charges				249,407	253,780	258,231	262,760	267,368	272,057	276,828
Consumption Charges				\$ 529,685	\$ 538,974	\$ 548,427	\$ 558,044	\$ 567,831	\$ 577,789	\$ 587,922
Total										\$ 598,232

B City of Bainbridge Island
Water Rate Study and COSA
Forecast of Customer Data

Multi-Family Customer Data Forecast			2017	2018	2019	2020	2021	2022	2023	2024
Customer Counts - Meters										
	No. of MSEs	No. of MCEs	Growth Assumption							
5/8" x 3/4" Meter	1.00	0.67	0	0	0	0	0	0	0	0
3/4" x 3/4" Meter	1.00	1.00	18	18	18	19	19	19	20	20
1" Meter	1.27	1.67	16	16	16	17	17	17	17	18
1-1/2" Meter	1.64	3.33	24	24	24	25	25	26	26	27
2" Meter	2.64	5.33	38	38	39	39	40	41	41	42
3" Meter	10.00	10.67	3	3	3	3	3	3	3	3
4" Meter	12.73	16.67	1	1	1	1	1	1	1	1
6" Meter	19.09	33.33	0	0	0	0	0	0	0	0
Total Number of Meters			99	100	102	104	106	107	109	111
Total Number of MSEs			218	221	225	229	233	237	241	245
Total Number of MCEs			371	377	384	390	397	403	410	417
Customer Counts - Units										
			Growth Assumption							
5/8" x 3/4" Meter			0	0	0	0	0	0	0	0
3/4" x 3/4" Meter			50	51	52	53	54	55	56	57
1" Meter			201	205	208	212	215	219	223	226
1-1/2" Meter			230	234	238	242	246	250	254	259
2" Meter			785	798	811	825	839	853	867	882
3" Meter			95	96	98	100	101	103	105	107
4" Meter			163	166	168	171	174	177	180	183
6" Meter			0	0	0	0	0	0	0	0
Total Number of Units			1,524	1,550	1,576	1,602	1,629	1,657	1,685	1,713
Billed Water Consumption			Multi-Family Demand Growth							
Block 1 (0 - 5 ccf)			51,069 ccf	51,928 ccf	52,801 ccf	53,689 ccf	54,592 ccf	55,510 ccf	56,443 ccf	57,392 ccf
Block 2 (5 - 12 ccf)			1,530 ccf	1,556 ccf	1,582 ccf	1,609 ccf	1,636 ccf	1,663 ccf	1,691 ccf	1,720 ccf
Block 3 (12 - 30 ccf)			2 ccf	2 ccf	2 ccf	2 ccf	2 ccf	2 ccf	2 ccf	2 ccf
Block 4 (30 ccf +)			0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf
Total			52,601 ccf	53,486 ccf	54,385 ccf	55,300 ccf	56,229 ccf	57,175 ccf	58,136 ccf	59,114 ccf
Winter Consumption			25,753 ccf	26,186 ccf	26,626 ccf	27,074 ccf	27,529 ccf	27,992 ccf	28,463 ccf	28,941 ccf
Summer Consumption			26,848 ccf	27,300 ccf	27,759 ccf	28,226 ccf	28,700 ccf	29,183 ccf	29,674 ccf	30,173 ccf
Adopted Monthly Fixed Charges										
5/8" x 3/4" Meter			\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37
3/4" x 3/4" Meter			\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37
1" Meter			\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37
1-1/2" Meter			\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37
2" Meter			\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37
3" Meter			\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37
4" Meter			\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37
6" Meter			\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37	\$5.37
Adopted Volume Charges										
Block 1 (0 - 5 ccf)			\$1.09	\$1.09	\$1.09	\$1.09	\$1.09	\$1.09	\$1.09	\$1.09
Block 2 (5 - 12 ccf)			\$1.76	\$1.76	\$1.76	\$1.76	\$1.76	\$1.76	\$1.76	\$1.76
Block 3 (12 - 30 ccf)			\$2.49	\$2.49	\$2.49	\$2.49	\$2.49	\$2.49	\$2.49	\$2.49
Block 4 (30 ccf +)			\$3.39	\$3.39	\$3.39	\$3.39	\$3.39	\$3.39	\$3.39	\$3.39
Estimated Revenue At Adopted Rates:										
Base Charges			\$ 98,224	\$ 99,875	\$ 101,555	\$ 103,263	\$ 104,999	\$ 106,765	\$ 108,560	\$ 110,386
Consumption Charges			58,363	59,345	60,342	61,357	62,389	63,438	64,505	65,590
Total			\$ 156,587	\$ 159,220	\$ 161,897	\$ 164,620	\$ 167,388	\$ 170,203	\$ 173,065	\$ 175,975




City of Bainbridge Island
Water Rate Study and COSA
Forecast of Customer Data

Commercial Customer Data Forecast			2017	2018	2019	2020	2021	2022	2023	2024
Customer Counts	No. of MSEs	No. of MCEs	Growth Assumption							
5/8" x 3/4" Meter	1.00	0.67	21	21	21	21	21	21	21	21
3/4" x 3/4" Meter	1.00	1.00	109	109	109	110	110	111	111	112
1" Meter	1.27	1.67	51	52	52	52	52	52	53	53
1-1/2" Meter	1.64	3.33	23	23	23	23	23	23	23	23
2" Meter	2.64	5.33	34	34	34	34	34	34	34	34
3" Meter	10.00	10.67	3	3	3	3	3	3	3	3
4" Meter	12.73	16.67	1	1	1	1	1	1	1	1
6" Meter	19.09	33.33	0	0	0	0	0	0	0	0
Total Number of Meters			241	242	243	244	245	246	246	247
Total Number of MSEs			362	364	365	367	368	369	371	372
Total Number of MCEs			511	513	515	517	519	521	523	525
Billed Water Consumption			Commercial Demand Growth							
Winter Consumption			34,032 ccf	34,162 ccf	34,293 ccf	34,424 ccf	34,555 ccf	34,687 ccf	34,819 ccf	34,952 ccf
Summer Consumption			41,201 ccf	41,358 ccf	41,516 ccf	41,674 ccf	41,833 ccf	41,993 ccf	42,153 ccf	42,314 ccf
Total			75,233 ccf	75,520 ccf	75,808 ccf	76,098 ccf	76,388 ccf	76,680 ccf	76,972 ccf	77,266 ccf
Adopted Monthly Fixed Charges										
5/8" x 3/4" Meter			\$16.45	\$16.45	\$16.45	\$16.45	\$16.45	\$16.45	\$16.45	\$16.45
3/4" x 3/4" Meter			\$16.45	\$16.45	\$16.45	\$16.45	\$16.45	\$16.45	\$16.45	\$16.45
1" Meter			\$36.40	\$36.40	\$36.40	\$36.40	\$36.40	\$36.40	\$36.40	\$36.40
1-1/2" Meter			\$69.78	\$69.78	\$69.78	\$69.78	\$69.78	\$69.78	\$69.78	\$69.78
2" Meter			\$109.52	\$109.52	\$109.52	\$109.52	\$109.52	\$109.52	\$109.52	\$109.52
3" Meter			\$215.89	\$215.89	\$215.89	\$215.89	\$215.89	\$215.89	\$215.89	\$215.89
4" Meter			\$335.55	\$335.55	\$335.55	\$335.55	\$335.55	\$335.55	\$335.55	\$335.55
6" Meter			\$667.94	\$667.94	\$667.94	\$667.94	\$667.94	\$667.94	\$667.94	\$667.94
Adopted Volume Charges										
Winter Consumption			\$1.43	\$1.43	\$1.43	\$1.43	\$1.43	\$1.43	\$1.43	\$1.43
Summer Consumption			\$1.43	\$1.65	\$1.65	\$1.65	\$1.65	\$1.65	\$1.65	\$1.65
Estimated Revenue At Adopted Rates:										
Base Charges			\$ 122,726	\$ 123,195	\$ 123,665	\$ 124,137	\$ 124,611	\$ 125,086	\$ 125,564	\$ 126,043
Consumption Charges			107,583	117,093	117,539	117,988	118,438	118,891	119,344	119,800
Total			\$ 230,309	\$ 240,287	\$ 241,204	\$ 242,125	\$ 243,049	\$ 243,977	\$ 244,908	\$ 245,843

B City of Bainbridge Island
Water Rate Study and COSA
Forecast of Customer Data

Irrigation Customer Data Forecast			2017	2018	2019	2020	2021	2022	2023	2024
Customer Counts	No. of MSEs	No. of MCEs	Growth Assumption							
5/8" x 3/4" Meter	1.00	0.67	Irrigation Account Growth	1	1	1	1	1	1	1
3/4" x 3/4" Meter	1.00	1.00	Irrigation Account Growth	38	39	41	43	45	47	49
1" Meter	1.27	1.67	Irrigation Account Growth	11	11	12	12	13	14	14
1-1/2" Meter	1.64	3.33	Irrigation Account Growth	9	9	10	10	11	11	12
2" Meter	2.64	5.33	Irrigation Account Growth	7	7	8	8	8	9	9
3" Meter	10.00	10.67	Irrigation Account Growth	1	1	1	1	1	1	1
4" Meter	12.73	16.67	Irrigation Account Growth	0	0	0	0	0	0	0
6" Meter	19.09	33.33	Irrigation Account Growth	0	0	0	0	0	0	0
Total Number of Meters				66	69	72	76	79	83	86
Total Number of MSEs				95	99	104	109	114	119	124
Total Number of MCEs				133	139	146	152	159	167	174
Billed Water Consumption			Irrigation Demand Growth							
Winter Consumption				7,160 ccf	7,487 ccf	7,829 ccf	8,186 ccf	8,560 ccf	8,950 ccf	9,359 ccf
Summer Consumption				18,439 ccf	19,281 ccf	20,161 ccf	21,081 ccf	22,043 ccf	23,049 ccf	24,101 ccf
Total				25,600 ccf	26,768 ccf	27,990 ccf	29,267 ccf	30,603 ccf	31,999 ccf	34,987 ccf
Adopted Monthly Fixed Charges										
5/8" x 3/4" Meter				\$4.73	\$4.73	\$4.73	\$4.73	\$4.73	\$4.73	\$4.73
3/4" x 3/4" Meter				\$4.73	\$4.73	\$4.73	\$4.73	\$4.73	\$4.73	\$4.73
1" Meter				\$6.22	\$6.22	\$6.22	\$6.22	\$6.22	\$6.22	\$6.22
1-1/2" Meter				\$8.70	\$8.70	\$8.70	\$8.70	\$8.70	\$8.70	\$8.70
2" Meter				\$11.70	\$11.70	\$11.70	\$11.70	\$11.70	\$11.70	\$11.70
3" Meter				\$19.64	\$19.64	\$19.64	\$19.64	\$19.64	\$19.64	\$19.64
4" Meter				\$28.59	\$28.59	\$28.59	\$28.59	\$28.59	\$28.59	\$28.59
6" Meter				\$53.47	\$53.47	\$53.47	\$53.47	\$53.47	\$53.47	\$53.47
Adopted Volume Charges										
Winter Consumption				\$3.89	\$3.89	\$3.89	\$3.89	\$3.89	\$3.89	\$3.89
Summer Consumption				\$3.89	\$3.89	\$3.89	\$3.89	\$3.89	\$3.89	\$3.89
Estimated Revenue At Adopted Rates:										
Base Charges				\$ 5,126	\$ 5,360	\$ 5,605	\$ 5,861	\$ 6,128	\$ 6,408	\$ 6,700
Consumption Charges				99,582	104,127	108,880	113,849	119,045	124,478	130,099
Total				\$ 104,709	\$ 109,488	\$ 114,485	\$ 119,710	\$ 125,173	\$ 130,886	\$ 136,859



City of Bainbridge Island
Water Rate Study and COSA
Forecast of Customer Data

Other Customer Data Forecast			2017	2018	2019	2020	2021	2022	2023	2024
Customer Counts										
	No. of MSEs	No. of MCEs	Growth Assumption							
5/8" x 3/4" Meter	1.00	0.67	0	0	0	0	0	0	0	0
3/4" x 3/4" Meter	1.00	1.00	1	1	1	1	1	1	1	1
1" Meter	1.27	1.67	3	3	3	3	3	3	3	3
1-1/2" Meter	1.64	3.33	0	0	0	0	0	0	0	0
2" Meter	2.64	5.33	0	0	0	0	0	0	0	0
3" Meter	10.00	10.67	1	1	1	1	1	1	1	1
4" Meter	12.73	16.67	0	0	0	0	0	0	0	0
6" Meter	19.09	33.33	0	0	0	0	0	0	0	0
Total Number of Meters			5	5	5	5	5	5	5	5
Total Number of MSEs			15	15	15	15	15	15	15	15
Total Number of MCEs			16	16	16	16	16	16	16	16
Billed Water Consumption			Other Demand Growth							
Winter Consumption			1,029 ccf	1,029 ccf	1,029 ccf	1,029 ccf	1,029 ccf	1,029 ccf	1,029 ccf	1,029 ccf
Summer Consumption			1,041 ccf	1,041 ccf	1,041 ccf	1,041 ccf	1,041 ccf	1,041 ccf	1,041 ccf	1,041 ccf
Total			2,069 ccf	2,069 ccf	2,069 ccf	2,069 ccf	2,069 ccf	2,069 ccf	2,069 ccf	2,069 ccf
Adopted Monthly Fixed Charges										
5/8" x 3/4" Meter			\$24.04	\$24.04	\$24.04	\$24.04	\$24.04	\$24.04	\$24.04	\$24.04
3/4" x 3/4" Meter			\$24.04	\$24.04	\$24.04	\$24.04	\$24.04	\$24.04	\$24.04	\$24.04
1" Meter			\$55.37	\$55.37	\$55.37	\$55.37	\$55.37	\$55.37	\$55.37	\$55.37
1-1/2" Meter			\$107.58	\$107.58	\$107.58	\$107.58	\$107.58	\$107.58	\$107.58	\$107.58
2" Meter			\$170.23	\$170.23	\$170.23	\$170.23	\$170.23	\$170.23	\$170.23	\$170.23
3" Meter			\$337.28	\$337.28	\$337.28	\$337.28	\$337.28	\$337.28	\$337.28	\$337.28
4" Meter			\$525.22	\$525.22	\$525.22	\$525.22	\$525.22	\$525.22	\$525.22	\$525.22
6" Meter			\$1,047.31	\$1,047.31	\$1,047.31	\$1,047.31	\$1,047.31	\$1,047.31	\$1,047.31	\$1,047.31
Adopted Volume Charges										
Winter Consumption			\$1.43	\$1.43	\$1.43	\$1.43	\$1.43	\$1.43	\$1.43	\$1.43
Summer Consumption			\$1.43	\$1.65	\$1.65	\$1.65	\$1.65	\$1.65	\$1.65	\$1.65
Estimated Revenue At Adopted Rates:										
Base Charges			\$ 6,248	\$ 6,248	\$ 6,248	\$ 6,248	\$ 6,248	\$ 6,248	\$ 6,248	\$ 6,248
Consumption Charges			2,959	3,188	3,188	3,188	3,188	3,188	3,188	3,188
Total			\$ 9,207	\$ 9,436	\$ 9,436	\$ 9,436	\$ 9,436	\$ 9,436	\$ 9,436	\$ 9,436

B City of Bainbridge Island
Water Rate Study and COSA
Forecast of Customer Data

Rockaway Customer Data Forecast			2017	2018	2019	2020	2021	2022	2023	2024
Customer Counts										
	No. of MSEs	No. of MCEs	Growth Assumption							
5/8" x 3/4" Meter	1.00	0.67	0	0	0	0	0	0	0	0
3/4" x 3/4" Meter	1.00	1.00	66	66	67	67	67	67	67	67
1" Meter	1.27	1.67	2	2	2	2	2	2	2	2
1-1/2" Meter	1.64	3.33	0	0	0	0	0	0	0	0
2" Meter	2.64	5.33	1	1	1	1	1	1	1	1
3" Meter	10.00	10.67	0	0	0	0	0	0	0	0
4" Meter	12.73	16.67	0	0	0	0	0	0	0	0
6" Meter	19.09	33.33	0	0	0	0	0	0	0	0
Total Number of Meters			69	69	70	70	70	70	70	71
Total Number of MSEs			71	71	72	72	72	72	73	73
Total Number of MCEs			75	75	75	75	76	76	76	76
Billed Water Consumption			Rockaway Demand Growth							
Block 1 (0 - 5 ccf)			2,885 ccf	2,893 ccf	2,901 ccf	2,910 ccf	2,918 ccf	2,926 ccf	2,935 ccf	2,943 ccf
Block 2 (5 - 12 ccf)			1,823 ccf	1,829 ccf	1,834 ccf	1,839 ccf	1,845 ccf	1,850 ccf	1,855 ccf	1,860 ccf
Block 3 (12 - 30 ccf)			1,678 ccf	1,683 ccf	1,688 ccf	1,693 ccf	1,698 ccf	1,703 ccf	1,708 ccf	1,712 ccf
Block 4 (30 ccf +)			782 ccf	784 ccf	786 ccf	789 ccf	791 ccf	793 ccf	795 ccf	798 ccf
Total			7,168 ccf	7,189 ccf	7,210 ccf	7,230 ccf	7,251 ccf	7,272 ccf	7,293 ccf	7,314 ccf
Winter Consumption			3,275 ccf	3,284 ccf	3,294 ccf	3,303 ccf	3,313 ccf	3,322 ccf	3,332 ccf	3,341 ccf
Summer Consumption			3,894 ccf	3,905 ccf	3,916 ccf	3,927 ccf	3,939 ccf	3,950 ccf	3,961 ccf	3,973 ccf
Adopted Monthly Fixed Charges										
5/8" x 3/4" Meter			\$11.64	\$11.64	\$11.64	\$11.64	\$11.64	\$11.64	\$11.64	\$11.64
3/4" x 3/4" Meter			\$11.64	\$11.64	\$11.64	\$11.64	\$11.64	\$11.64	\$11.64	\$11.64
1" Meter			\$22.94	\$22.94	\$22.94	\$22.94	\$22.94	\$22.94	\$22.94	\$22.94
1-1/2" Meter			\$41.85	\$41.85	\$41.85	\$41.85	\$41.85	\$41.85	\$41.85	\$41.85
2" Meter			\$64.53	\$64.53	\$64.53	\$64.53	\$64.53	\$64.53	\$64.53	\$64.53
3" Meter			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
4" Meter			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
6" Meter			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Adopted Volume Charges										
Block 1 (0 - 5 ccf)			\$1.18	\$1.18	\$1.18	\$1.18	\$1.18	\$1.18	\$1.18	\$1.18
Block 2 (5 - 12 ccf)			\$1.90	\$1.90	\$1.90	\$1.90	\$1.90	\$1.90	\$1.90	\$1.90
Block 3 (12 - 30 ccf)			\$2.69	\$2.69	\$2.69	\$2.69	\$2.69	\$2.69	\$2.69	\$2.69
Block 4 (30 ccf +)			\$3.66	\$3.66	\$3.66	\$3.66	\$3.66	\$3.66	\$3.66	\$3.66
Estimated Revenue At Adopted Rates:										
Base Charges			\$ 10,547	\$ 10,577	\$ 10,608	\$ 10,638	\$ 10,669	\$ 10,700	\$ 10,731	\$ 10,762
Consumption Charges			14,245	14,286	14,327	14,368	14,409	14,451	14,493	14,534
Total			\$ 24,791	\$ 24,863	\$ 24,935	\$ 25,006	\$ 25,079	\$ 25,151	\$ 25,223	\$ 25,296
Estimated Revenue At Adopted Rates - All Customers:										
Base Charges			\$ 523,150	\$ 530,450	\$ 537,876	\$ 545,432	\$ 553,119	\$ 560,940	\$ 568,897	\$ 576,995
Consumption Charges			532,139	551,818	562,507	573,510	584,837	596,502	608,516	620,894
Total			\$ 1,055,289	\$ 1,082,268	\$ 1,100,384	\$ 1,118,941	\$ 1,137,956	\$ 1,157,442	\$ 1,177,414	\$ 1,197,888



City of Bainbridge Island
Water Rate Study and COSA
Functional Allocation

Allocation of Plant in Service

Plant in Service	Total Costs	FUNCTIONS OF WATER SERVICE					As All Others	TOTAL	ALLOCATION BASIS
		Customer	Meters & Services	Base Capacity	Peak Capacity	Fire Protection			
Supply & Treatment	\$ 4,757,716	0.00%	0.00%	45.45%	54.55%	0.00%	0.00%	100.00%	Peak Demand Ratio Per Pumping Allocation Per Storage Allocation Per Main Allocation Meters & Services Hydrants As All Others
Pumping	8,993	0.00%	0.00%	42.28%	50.73%	6.99%	0.00%	100.00%	
Storage	1,317,453	0.00%	0.00%	31.70%	10.05%	58.25%	0.00%	100.00%	
Transmission & Distribution	11,776,651	0.00%	0.74%	42.16%	50.60%	6.50%	0.00%	100.00%	
Meters & Services	-	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
Hydrants	54,862	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	
General	1,525,914	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	
Total Utility Plant	\$ 19,441,589	\$ -	\$ 87,068	\$ 7,549,388	\$ 8,690,508	\$ 1,588,710	\$ 1,525,914	\$ 19,441,589	
Water Service Functions		0.00%	0.49%	42.14%	48.51%	8.87%		100.00%	
Allocation of "As All Others"		\$ -	\$ 7,416	\$ 642,997	\$ 740,188	\$ 135,314	\$ (1,525,914)	\$ -	
TOTAL	\$ 19,441,589	\$ -	\$ 94,484	\$ 8,192,385	\$ 9,430,696	\$ 1,724,024	\$ -	\$ 19,441,589	
Total Allocation Percentages		0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	
General Water Service - Plant Allocation		0.00%	0.53%	46.24%	53.23%	0.00%	0.00%	100.00%	

Allocation of Pumping

Pumps [a]	Pumping Capacity (gpm)	FUNCTIONS OF WATER SERVICE					As All Others	TOTAL	ALLOCATION BASIS
		Customer	Meters & Services	Base Capacity	Peak Capacity	Fire Protection			
Head of the Bay	600 gpm	0.00%	0.00%	42.28%	50.73%	6.99%	0.00%	100.00%	130 gpm Fire, Rest as Supply
Fletcher Bay	590 gpm	0.00%	0.00%	42.28%	50.73%	6.99%	0.00%	100.00%	130 gpm Fire, Rest as Supply
Sands	620 gpm	0.00%	0.00%	42.28%	50.73%	6.99%	0.00%	100.00%	130 gpm Fire, Rest as Supply
Commodore	50 gpm	0.00%	0.00%	42.28%	50.73%	6.99%	0.00%	100.00%	130 gpm Fire, Rest as Supply
TOTAL PUMPING	1,860 gpm	0.00%	0.00%	42.28%	50.73%	6.99%	0.00%	100.00%	

[a] 2017 Water System Plan Table 5.5 (Firm, Reliable Booster Pump Capacity)

Allocation of Storage

Function	Million Gallons of Storage	FUNCTIONS OF WATER SERVICE					As All Others	TOTAL	ALLOCATION BASIS
		Customer	Meters & Services	Base Capacity	Peak Capacity	Fire Protection			
Operational Storage [b]	0.2332	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	All Base
Equalizing Storage	0.0204	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	All Peak
Standby Storage [c]	0.1335	0.00%	0.00%	45.45%	54.55%	0.00%	0.00%	100.00%	Peak Demand Ratio
Fire Suppression Storage [d]	0.5400	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	All Fire
Total Storage: "As all Others" seperated	0.9271	0.00%	0.00%	31.70%	10.05%	58.25%	0.00%	100.00%	
TOTAL STORAGE		0.00%	0.00%	31.70%	10.05%	58.25%	-	100.00%	

[b] 2017 Water System Plan Plan: Table 6.3

[c] 2017 Water System Plan Plan: Table 6.8

[d] Specified as .54 MG in Section 6.2.1.3 of the 2017 Water System Plan; WAC 246-290-235 (4) allows fire and standby storage volumes to be nested.



City of Bainbridge Island
Water Rate Study and COSA
Functional Allocation

Allocation of Transmission & Distribution

Main Size	Length (ft.) [e]	Replacement Cost per lf. [f]	Estimated Cost	Incremental Fire Cost [g]	FUNCTIONS OF WATER SERVICE				As All Others	TOTAL	ALLOCATION BASIS
					Meters & Services	Base Capacity	Peak Capacity	Fire Protection			
Less than 4-in	5,753	236	\$ 1,357,684		0.00%	45.45%	54.55%	0.00%	0.00%	100.00%	Peak Demand Ratio
4-in	25,683	256	6,574,848		0.00%	45.45%	54.55%	0.00%	0.00%	100.00%	Peak Demand Ratio
6-in	35,482	276	9,793,032		0.00%	45.45%	54.55%	0.00%	0.00%	100.00%	Peak Demand Ratio
8-in	144,335	296	40,994,599	2,886,700	0.00%	42.25%	50.70%	7.04%	0.00%	100.00%	Fire Increment
10-in	8,458	316	2,672,728	169,160	0.00%	42.58%	51.09%	6.33%	0.00%	100.00%	Fire Increment
12-in	40,450	335	13,550,750	768,550	0.00%	42.88%	51.45%	5.67%	0.00%	100.00%	Fire Increment
Hydrants			1,161,702		0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	All Fire
Meters & Services			566,859		100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	Meters & Services
TOTAL T&D	260,161		\$ 76,672,202	\$ 3,824,410	0.74%	42.16%	50.60%	6.50%	0.00%	100.00%	

[e] Table 4.9 and Section 4.3 of the 2017 Water System Plan.

[f] Table 9.1 of the 2017 Water System Plan

[g] Incremental unit cost times linear feet of pipe at each size

Allocation of Operating Expenses

OPERATING EXPENSE	Test Year ⇨			FUNCTIONS OF WATER SERVICE					As All Others	TOTAL	ALLOCATION BASIS
	2019	2020	2021	Customer	Meters & Services	Base Capacity	Peak Capacity	Fire Protection			
Taxes											
State Excise Taxes	\$ 62,146	\$ 63,094	\$ 64,141	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other
City Taxes	96,309	97,280	98,476	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other
Training	\$ 8,000	\$ 8,150	\$ 8,313	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other
Salary											
Ex - Water - Admin - Salary	8,627	8,837	9,014	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other
Legal - Water Fund	11,572	12,102	12,344	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other
HR - Water Salary	5,400	5,626	5,739	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other
Exec - Clerk - Water Salary	2,620	2,684	2,738	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service
Salary	80,744	89,428	91,216	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service
BLD - Water - Admin - Salary	1,979	2,028	2,068	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other
PW - Water Salary	19,856	14,976	15,275	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service
ENG - Water Admin Salary	27,399	28,562	29,133	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service
Salary	42,418	43,266	44,131	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	All Customer
ENG - Water Ops Salary	2,455	2,587	2,638	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	As Total Plant-In-Service
O&M Water Maintenance	222,288	229,785	234,381	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service
O&M Rockaway Maintenance	17,244	17,840	18,197	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service
IT Water Salary	27,367	28,072	28,633	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other
Benefits											
Ex - Water - Admin - Benefits	2,622	2,670	2,777	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other
Legal - Water Benefits	4,258	4,359	4,534	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other
HR - Water Benefits	2,171	2,248	2,338	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other
Exec - Clerk - Water Benefits	1,272	1,313	1,366	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service
Benefits	30,496	33,285	34,616	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service
BLD - Water - Admin - Benefits	789	817	849	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other
ENG - Water - Admin - Benefits	12,472	13,016	13,536	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As Total Plant-In-Service
PW - Water Benefits	7,605	6,726	6,995	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service
Benefits	16,529	17,190	17,877	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	All Customer
ENG - Water - Ops - Benefits	1,305	1,362	1,417	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	As Total Plant-In-Service
Benefits	101,388	105,443	109,661	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service
Benefits	7,392	7,688	7,996	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service



City of Bainbridge Island
Water Rate Study and COSA
Functional Allocation

Allocation of Operating Expenses (Continued)

OPERATING EXPENSE	Test Year ⇨	2019	2020	2021	FUNCTIONS OF WATER SERVICE					As All Others	TOTAL	ALLOCATION BASIS
	TOTAL COSTS	TOTAL COSTS	TOTAL COSTS	Customer	Meters & Services	Base Capacity	Peak Capacity	Fire Protection				
	Benefits	101,388	105,443	109,661	0.00%	0.49%	42.14%	48.51%	8.87%			
Benefits	7,392	7,688	7,996	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service	
IT Water Benefits	13,392	13,796	14,348	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service	
GG Water Works Com	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other	
GG Water Unemployment	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other	
Salary - Overtime	22,479	23,208	23,672	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other	
Salary - Temporary Employees	8,000	8,000	8,000	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service	
Staff Separation Buyouts	3,000	3,000	3,000	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service	
Supplies	50,796	52,285	53,329	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service	
Supplies - Meter Replacement	-	300,000	-	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	All Meters & Services	
Fuel Consumed	12,226	15,283	15,588	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service	
Professional Services	112,597	106,672	38,801	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service	
Outside Attorney - Legal Advice	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other	
Telephone/Fax	12,000	12,600	12,851	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other	
Community Information Ads	1,339	1,379	1,407	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	All Customer	
Community Outreach/Participation	3,500	3,500	3,500	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	All Customer	
Postage	4,200	4,200	4,200	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	All Customer	
Travel Expense	250	250	250	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other	
Advertising	-	-	-	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	All Customer	
Rents & Leases - Operating	979	993	1,013	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service	
Rents - Interfund	49,300	50,600	51,610	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service	
Insurance	18,000	20,000	20,399	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service	
Utilities - Electric	101,100	103,100	105,158	0.00%	0.00%	45.45%	54.55%	0.00%	0.00%	100.00%	To Base / Peak	
Utilities - SSWM Fees	400	420	428	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other	
Utilities - BI Water/Sewer	126	129	132	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other	
Repairs	409,256	442,841	152,994	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service	
Computer Support Maintenance	1,300	1,400	1,428	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other	
Dues, Subscriptions & Memberships	3,703	3,800	3,876	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other	
Permits - Cobi or Outside Agency	4,707	4,849	4,946	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other	
Intergovernmental Prof Svcs	200	200	200	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other	
Total 2019 Operating Expenses				\$ 71,746	\$ 5,812	\$ 549,867	\$ 635,226	\$ 106,044	\$ 288,878	\$ 1,657,572		
Allocation of "As All Others"				15,143	1,227	116,055	134,071	22,382	(288,878)	-		
Reallocated 2019 Operating Expenses				\$ 86,888	\$ 7,038	\$ 665,922	\$ 769,297	\$ 128,426	\$ -	\$ 1,657,572		
Percent of Total				5.24%	0.42%	40.17%	46.41%	7.75%	0.00%	100.00%		
Total 2020 Operating Expenses				\$ 73,484	\$ 306,081	\$ 574,100	\$ 663,167	\$ 110,953	\$ 295,154	\$ 2,022,937		
Allocation of "As All Others"				12,553	52,287	98,072	113,287	18,954	(295,154)	-		
Reallocated 2020 Operating Expenses				\$ 86,037	\$ 358,368	\$ 672,172	\$ 776,454	\$ 129,907	\$ -	\$ 2,022,937		
Percent of Total				4.25%	17.72%	33.23%	38.38%	6.42%	0.00%	100.00%		
Total 2021 Operating Expenses				\$ 75,170	\$ 4,426	\$ 431,535	\$ 499,098	\$ 80,754	\$ 300,545	\$ 1,391,528		
Allocation of "As All Others"				20,708	1,219	118,880	137,492	22,246	(300,545)	-		
Reallocated 2021 Operating Expenses				\$ 95,878	\$ 5,645	\$ 550,414	\$ 636,590	\$ 103,000	\$ -	\$ 1,391,528		
Percent of Total				6.89%	0.41%	39.55%	45.75%	7.40%	0.00%	100.00%		



City of Bainbridge Island
Water Rate Study and COSA
Functional Allocation

Allocation of Revenue Requirement

Design Rates For =>				FUNCTIONS OF WATER SERVICE					As All Others	TOTAL	ALLOCATION BASIS
2019	2020	2021	Customer	Meters & Services	Base Capacity	Peak Capacity	Fire Protection				
REVENUE REQUIREMENT	TOTAL COSTS	TOTAL COSTS	TOTAL COSTS								
Rate-Funded Operating & Capital Expenses											
Cash Operating Expenses	\$ 1,657,572	\$ 2,022,937	\$ 1,391,528							As O&M Expenses	
Debt Service	-	-	-	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service
Rate Funded System Reinvestment	-	-	-	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service
OTHER REVENUES AND ADJUSTMENTS											
Less:											
Water Sales-Other Misc Rev	(115,000)	(115,000)	(115,000)							As O&M Expenses	
Water Sales-Conn/Inspect Fees	(30,000)	(25,000)	(25,000)	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service
Backflow Testing Revenue	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other
Engineering Fees	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other
Facilities Rental-Long Term	(8,000)	(8,000)	(8,000)	0.00%	0.49%	42.14%	48.51%	8.87%	0.00%	100.00%	As Total Plant-In-Service
Inventory Markup	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other
Investment Income	(15,941)	(12,604)	(7,403)	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other
Operating Transfer In	(35,000)	(35,000)	(35,000)	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	As All Other
Plus:											
Net Cash Flow After Rate Increase	(333,667)	(668,172)	(1,199)	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other
Incremental Taxes from Rate Increase	2,427	4,986	7,682	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other
Adjustment for Partial Year Increase	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other
Total 2019 Revenue Requirement				\$ 80,860	\$ 6,365	\$ 603,709	\$ 697,492	\$ 81,146	\$ (347,181)	\$ 1,122,391	
Allocation of "As All Others"				(19,103)	(1,504)	(142,624)	(164,780)	(19,171)	347,181	-	
Reallocated 2019 Revenue Requirement				\$ 61,757	\$ 4,862	\$ 461,085	\$ 532,712	\$ 61,976	\$ -	\$ 1,122,391	
Percent of Total				5.50%	0.43%	41.08%	47.46%	5.52%	0.00%	100.00%	
Total 2020 Revenue Requirement				\$ 81,146	\$ 337,835	\$ 620,055	\$ 716,306	\$ 84,595	\$ (675,791)	\$ 1,164,147	
Allocation of "As All Others"				(29,804)	(124,083)	(227,740)	(263,092)	(31,071)	675,791	-	
Reallocated 2020 Revenue Requirement				\$ 51,342	\$ 213,752	\$ 392,315	\$ 453,214	\$ 53,524	\$ -	\$ 1,164,147	
Percent of Total				4.41%	18.36%	33.70%	38.93%	4.60%	0.00%	100.00%	
Total 2021 Revenue Requirement				\$ 87,955	\$ 5,018	\$ 491,021	\$ 567,972	\$ 56,562	\$ (920)	\$ 1,207,608	
Allocation of "As All Others"				(67)	(4)	(374)	(432)	(43)	920	-	
Reallocated 2021 Revenue Requirement				\$ 87,888	\$ 5,014	\$ 490,647	\$ 567,540	\$ 56,519	\$ -	\$ 1,207,608	
Percent of Total				7.28%	0.42%	40.63%	47.00%	4.68%	0.00%	100.00%	



City of Bainbridge Island Water Rate Study and COSA Customer Class Cost Allocation

Accounts
MSEs
MCEs
Summer Use
Winter Use
Total Use
Incremental Summer Use
Fire-Weighted Accounts
Fire Flow Requirement
Fire Flow Rate
Duration

Projected 2019 Statistics						
Single-Family	Multi-Family	Commercial	Irrigation	Other	Rockaway	Total
2,176	102	243	72	5	70	2,668
2,195	225	365	104	15	72	2,975
2,209	384	515	146	16	75	3,345
100,205 ccf	27,759 ccf	41,516 ccf	20,161 ccf	1,041 ccf	3,916 ccf	194,597
66,522 ccf	26,626 ccf	34,293 ccf	7,829 ccf	1,029 ccf	3,294 ccf	139,592
166,728 ccf	54,385 ccf	75,808 ccf	27,990 ccf	2,069 ccf	7,210 ccf	334,190
33,683 ccf	1,133 ccf	7,223 ccf	12,332 ccf	12 ccf	623 ccf	55,005
2,176	153	364	0	7	70	2,770
60,000 gal	90,000 gal	90,000 gal	0 gal	90,000 gal	60,000 gal	390,000 gal
<i>1,000 gpm</i>	<i>1,500 gpm</i>	<i>1,500 gpm</i>		<i>1,500 gpm</i>	<i>1,000 gpm</i>	
<i>60 Minutes</i>	<i>60 Minutes</i>	<i>60 Minutes</i>		<i>60 Minutes</i>	<i>60 Minutes</i>	

Discount Base Rate Multiplier

0.50

Customer
Meters & Services
Base Capacity
Peak Capacity
Fire Protection

Allocation Basis
Accounts
MSEs
Total Use
Summer Use
Fire-Weighted Accounts

Allocation of 2019 Revenue Requirement							
Single-Family	Multi-Family	Commercial	Irrigation	Other	Rockaway	Total	
\$ 50,378	\$ 2,363	\$ 5,619	\$ 1,674	\$ 114	\$ 1,609	\$	\$ 61,757
3,586	368	597	170	24	117		4,862
230,036	75,036	104,594	38,618	2,855	9,947		461,085
274,313	75,990	113,650	55,190	2,848	10,720		532,712
48,685	3,425	8,145	-	166	1,555		61,976
\$ 606,998	\$ 157,182	\$ 232,604	\$ 95,652	\$ 6,007	\$ 23,948	\$	\$ 1,122,391

Cost Allocation Summary							
Class	EXISTING STRUCTURE		FULL COST OF SERVICE		DIFFERENCE		Rate Adj. Needed to Cover Variance
	2019 Revenue at Existing Rates	Percent of Total	COSA 2019 Revenue	Percent of Total	\$ Difference		
Single-Family	\$ 548,427	49.8%	\$ 606,998	54.1%	\$ 58,571		10.7%
Multi-Family	161,897	14.7%	157,182	14.0%	(4,716)		-2.9%
Commercial	241,204	21.9%	232,604	20.7%	(8,600)		-3.6%
Irrigation	114,485	10.4%	95,652	8.5%	(18,833)		-16.5%
Other	9,436	0.9%	6,007	0.5%	(3,429)		-36.3%
Rockaway	24,935	2.3%	23,948	2.1%	(986)		-4.0%
Total	\$ 1,100,384	100.0%	\$ 1,122,391	100.0%	\$ 22,008		2.0%

Class	EXISTING STRUCTURE		COST-OF-SERVICE ALTERNATIVE		DIFFERENCE		Rate Adj. Needed to Cover Variance
	2019 Revenue at Existing Rates	Percent of Total	COSA 2019 Revenue	Percent of Total	\$ Difference		
Single-Family	\$ 548,427	49.8%	\$ 589,954	52.6%	\$ 41,527		7.6%
Multi-Family	161,897	14.7%	161,897	14.4%	-		0.0%
Commercial	241,204	21.9%	239,355	21.3%	(1,850)		-0.8%
Irrigation	114,485	10.4%	99,052	8.8%	(15,432)		-13.5%
Other	9,436	0.9%	7,199	0.6%	(2,237)		-23.7%
Rockaway	24,935	2.3%	24,935	2.2%	-		0.0%
Total	\$ 1,100,384	100.0%	\$ 1,122,391	100.0%	\$ 22,008		2.0%



City of Bainbridge Island Water Rate Study and COSA Customer Class Cost Allocation

Accounts
MSEs
MCEs
Summer Use
Winter Use
Total Use
Incremental Summer Use
Fire-Weighted Accounts
Fire Flow Requirement
Fire Flow Rate
Duration

Projected 2020 Statistics						
Single-Family	Multi-Family	Commercial	Irrigation	Other	Rockaway	Total
2,214	104	244	76	5	70	2,712
2,233	229	367	109	15	72	3,024
2,248	390	517	152	16	75	3,399
101,963 ccf	28,226 ccf	41,674 ccf	21,081 ccf	1,041 ccf	3,927 ccf	197,911
67,689 ccf	27,074 ccf	34,424 ccf	8,186 ccf	1,029 ccf	3,303 ccf	141,704
169,652 ccf	55,300 ccf	76,098 ccf	29,267 ccf	2,069 ccf	7,230 ccf	339,616
34,274 ccf	1,152 ccf	7,251 ccf	12,895 ccf	12 ccf	624 ccf	56,207
2,214	156	365	0	7	70	2,813
60,000 gal	90,000 gal	90,000 gal	0 gal	90,000 gal	60,000 gal	390,000 gal
<i>1,000 gpm</i>	<i>1,500 gpm</i>	<i>1,500 gpm</i>		<i>1,500 gpm</i>	<i>1,000 gpm</i>	
<i>60 Minutes</i>	<i>60 Minutes</i>	<i>60 Minutes</i>		<i>60 Minutes</i>	<i>60 Minutes</i>	

Discount Base Rate Multiplier

0.50

Customer
Meters & Services
Base Capacity
Peak Capacity
Fire Protection

Allocation Basis
Accounts
MSEs
Total Use
Summer Use
Fire-Weighted Accounts

Allocation of 2020 Revenue Requirement							
Single-Family	Multi-Family	Commercial	Irrigation	Other	Rockaway	Total	
\$ 41,920	\$ 1,965	\$ 4,613	\$ 1,432	\$ 93	\$ 1,320	\$ 51,342	
157,868	16,179	25,917	7,673	1,034	5,081	213,752	
195,977	63,881	87,906	33,809	2,390	8,352	392,315	
233,493	64,637	95,433	48,275	2,383	8,994	453,214	
42,139	2,963	6,955	-	141	1,326	53,524	
\$ 671,396	\$ 149,624	\$ 220,824	\$ 91,188	\$ 6,041	\$ 25,073	\$ 1,164,147	

Cost Allocation Summary									
		2019 FULL COS RATES				2020 FULL COS RATES		DIFFERENCE	
Class	2020 Revenue at 2019 Rates	Percent of Total	COSA 2020 Revenue	Percent of Total	\$ Difference	Rate Adj. Needed to Cover Variance			
Single-Family	\$ 617,643	54.1%	\$ 671,396	57.7%	\$ 53,754	8.7%			
Multi-Family	159,825	14.0%	149,624	12.9%	(10,201)	-6.4%			
Commercial	233,492	20.5%	220,824	19.0%	(12,668)	-5.4%			
Irrigation	100,017	8.8%	91,188	7.8%	(8,829)	-8.8%			
Other	6,007	0.5%	6,041	0.5%	34	0.6%			
Rockaway	24,017	2.1%	25,073	2.2%	1,055	4.4%			
Total	\$ 1,141,002	100.0%	\$ 1,164,147	100.0%	\$ 23,145	2.0%			
		2019 COS ALT RATES				2020 COS ALT RATES		DIFFERENCE	
Class	2020 Revenue at 2019 Rates	Percent of Total	COSA 2020 Revenue	Percent of Total	\$ Difference	Rate Adj. Needed to Cover Variance			
Single-Family	\$ 600,300	52.6%	\$ 622,666	53.5%	\$ 22,367	3.7%			
Multi-Family	164,620	14.4%	164,620	14.1%	-	0.0%			
Commercial	240,268	21.1%	240,268	20.6%	-	0.0%			
Irrigation	103,573	9.1%	103,573	8.9%	-	0.0%			
Other	7,199	0.6%	7,199	0.6%	-	0.0%			
Rockaway	25,006	2.2%	25,821	2.2%	814	3.3%			
Total	\$ 1,140,966	100.0%	\$ 1,164,147	100.0%	\$ 23,181	2.0%			



City of Bainbridge Island Water Rate Study and COSA Customer Class Cost Allocation

Accounts
MSEs
MCEs
Summer Use
Winter Use
Total Use
Incremental Summer Use
Fire-Weighted Accounts
Fire Flow Requirement
 Fire Flow Rate
 Duration

Projected 2021 Statistics						
Single-Family	Multi-Family	Commercial	Irrigation	Other	Rockaway	Total
2,253	106	245	79	5	70	2,757
2,273	233	368	114	15	72	3,074
2,287	397	519	159	16	76	3,454
103,751 ccf	28,700 ccf	41,833 ccf	22,043 ccf	1,041 ccf	3,939 ccf	201,307
68,876 ccf	27,529 ccf	34,555 ccf	8,560 ccf	1,029 ccf	3,313 ccf	143,861
172,627 ccf	56,229 ccf	76,388 ccf	30,603 ccf	2,069 ccf	7,251 ccf	345,168
34,875 ccf	1,171 ccf	7,278 ccf	13,483 ccf	12 ccf	626 ccf	57,446
2,253	158	367	0	7	70	2,856
60,000 gal	90,000 gal	90,000 gal	0 gal	90,000 gal	60,000 gal	390,000 gal
1,000 gpm	1,500 gpm	1,500 gpm		1,500 gpm	1,000 gpm	
60 Minutes	60 Minutes	60 Minutes		60 Minutes	60 Minutes	

Discount Base Rate Multiplier


0.50

Customer
Meters & Services
Base Capacity
Peak Capacity
Fire Protection

Allocation Basis
Accounts
MSEs
Total Use
Summer Use
Fire-Weighted Accounts

Allocation of 2021 Revenue Requirement							
Single-Family	Multi-Family	Commercial	Irrigation	Other	Rockaway	Total	
\$ 71,821	\$ 3,364	\$ 7,796	\$ 2,520	\$ 157	\$ 2,228	\$	\$ 87,888
3,707	380	600	185	23.86	117.60		5,014
245,385	79,929	108,584	43,501	2,941	10,307		490,647
292,503	80,915	117,940	62,146	2,934	11,104		567,540
44,595	3,133	7,261	-	147	1,384		56,519
\$ 658,011	\$ 167,720	\$ 242,181	\$ 108,352	\$ 6,203	\$ 25,141	\$	\$ 1,207,608

Cost Allocation Summary									
				2020 FULL COS RATES		2021 FULL COS RATES		DIFFERENCE	
Class	2021 Revenue at 2020 Rates	Percent of Total		COSA 2021 Revenue	Percent of Total	\$ Difference	Rate Adj. Needed to Cover Variance		
Single-Family	\$ 683,171	57.7%		\$ 658,011	54.5%	\$ (25,160)	-3.7%		
Multi-Family	152,140	12.9%		167,720	13.9%	15,580	10.2%		
Commercial	221,667	18.7%		242,181	20.1%	20,515	9.3%		
Irrigation	95,350	8.1%		108,352	9.0%	13,002	13.6%		
Other	6,041	0.5%		6,203	0.5%	161	2.7%		
Rockaway	25,145	2.1%		25,141	2.1%	(4)	0.0%		
Total	\$ 1,183,514	100.0%		\$ 1,207,608	100.0%	\$ 24,094	2.0%		
				2020 COS ALT RATES		2021 COS ALT RATES		DIFFERENCE	
Class	2021 Revenue at 2020 Rates	Percent of Total		COSA 2021 Revenue	Percent of Total	\$ Difference	Rate Adj. Needed to Cover Variance		
Single-Family	\$ 633,586	53.5%		\$ 656,327	54.3%	\$ 22,741	3.6%		
Multi-Family	167,388	14.1%		167,720	13.9%	332	0.2%		
Commercial	241,185	20.4%		241,185	20.0%	0	0.0%		
Irrigation	108,300	9.2%		108,352	9.0%	52	0.0%		
Other	7,199	0.6%		7,199	0.6%	0	0.0%		
Rockaway	25,895	2.2%		26,824	2.2%	929	3.6%		
Total	\$ 1,183,553	100.0%		\$ 1,207,608	100.0%	\$ 24,055	2.0%		



City of Bainbridge Island
Water Rate Study and COSA
Rate Table

	Adopted		With ATB Rate Increases			COS Rates			COS Alternative		
	2017	2018	2019	2020	2021	2019	2020	2021	2019	2020	2021
Single-Family Residential Rates											
Monthly Fixed Charge											
5/8" x 3/4"	\$10.77	\$10.77	\$10.99	\$11.21	\$11.43	\$11.92	\$12.96	\$12.48	\$11.59	\$12.02	\$12.45
3/4" x 3/4"	\$10.77	\$10.77	\$10.99	\$11.21	\$11.43	\$11.92	\$12.96	\$12.48	\$11.59	\$12.02	\$12.45
1"	\$21.24	\$21.24	\$21.66	\$22.10	\$22.54	\$23.51	\$25.55	\$24.61	\$22.85	\$23.70	\$24.55
1-1/2"	\$38.72	\$38.72	\$39.49	\$40.28	\$41.09	\$42.86	\$46.58	\$44.87	\$41.65	\$43.20	\$44.75
2"	\$59.71	\$59.71	\$60.90	\$62.12	\$63.36	\$66.09	\$71.84	\$69.19	\$64.23	\$66.62	\$69.02
3"	\$115.70	\$115.70	\$118.01	\$120.37	\$122.78	\$128.06	\$139.20	\$134.07	\$124.46	\$129.10	\$133.73
4"	\$178.65	\$178.65	\$182.22	\$185.87	\$189.58	\$197.73	\$214.94	\$207.02	\$192.18	\$199.34	\$206.49
6"	\$353.94	\$353.94	\$361.02	\$368.24	\$375.60	\$391.74	\$425.83	\$410.15	\$380.74	\$394.93	\$409.10
Water Consumption Charge per 100 Cubic Feet											
Block 1 (0 - 5 ccf)	\$1.09	\$1.09	\$1.11	\$1.13	\$1.16	\$1.21	\$1.31	\$1.26	\$1.17	\$1.22	\$1.26
Block 2 (5 - 12 ccf)	\$1.76	\$1.76	\$1.80	\$1.83	\$1.87	\$1.95	\$2.12	\$2.04	\$1.89	\$1.96	\$2.03
Block 3 (12 - 30 ccf)	\$2.49	\$2.49	\$2.54	\$2.59	\$2.64	\$2.76	\$3.00	\$2.89	\$2.68	\$2.78	\$2.88
Block 4 (30 ccf +)	\$3.39	\$3.39	\$3.46	\$3.53	\$3.60	\$3.75	\$4.08	\$3.93	\$3.65	\$3.78	\$3.92
Multi-Family Residential Rates											
Monthly Fixed Charge											
5/8" x 3/4"	\$5.37	\$5.37	\$5.48	\$5.59	\$5.70	\$5.21	\$4.88	\$5.38	\$5.37	\$5.37	\$5.38
3/4" x 3/4"	\$5.37	\$5.37	\$5.48	\$5.59	\$5.70	\$5.21	\$4.88	\$5.38	\$5.37	\$5.37	\$5.38
1"	\$5.37	\$5.37	\$5.48	\$5.59	\$5.70	\$5.21	\$4.88	\$5.38	\$5.37	\$5.37	\$5.38
1-1/2"	\$5.37	\$5.37	\$5.48	\$5.59	\$5.70	\$5.21	\$4.88	\$5.38	\$5.37	\$5.37	\$5.38
2"	\$5.37	\$5.37	\$5.48	\$5.59	\$5.70	\$5.21	\$4.88	\$5.38	\$5.37	\$5.37	\$5.38
3"	\$5.37	\$5.37	\$5.48	\$5.59	\$5.70	\$5.21	\$4.88	\$5.38	\$5.37	\$5.37	\$5.38
4"	\$5.37	\$5.37	\$5.48	\$5.59	\$5.70	\$5.21	\$4.88	\$5.38	\$5.37	\$5.37	\$5.38
6"	\$5.37	\$5.37	\$5.48	\$5.59	\$5.70	\$5.21	\$4.88	\$5.38	\$5.37	\$5.37	\$5.38
Water Consumption Charge per 100 Cubic Feet											
Block 1 (0 - 5 ccf)	\$1.09	\$1.09	\$1.11	\$1.13	\$1.16	\$1.06	\$0.99	\$1.09	\$1.11	\$1.11	\$1.11
Block 2 (5 - 12 ccf)	\$1.76	\$1.76	\$1.80	\$1.83	\$1.87	\$1.71	\$1.60	\$1.76	\$1.11	\$1.11	\$1.11
Block 3 (12 - 30 ccf)	\$2.49	\$2.49	\$2.54	\$2.59	\$2.64	\$2.42	\$2.26	\$2.49			
Block 4 (30 ccf +)	\$3.39	\$3.39	\$3.46	\$3.53	\$3.60	\$3.29	\$3.08	\$3.40	\$1.11	\$1.11	\$1.11
											Winter Summer Uniform
Commercial Rates											
Monthly Fixed Charge											
5/8" x 3/4"	\$16.45	\$16.45	\$16.78	\$17.11	\$17.46	\$15.86	\$15.00	\$16.39	\$16.32	\$16.32	\$16.32
3/4" x 3/4"	\$16.45	\$16.45	\$16.78	\$17.11	\$17.46	\$15.86	\$15.00	\$16.39	\$16.32	\$16.32	\$16.32
1"	\$36.40	\$36.40	\$37.13	\$37.87	\$38.63	\$35.10	\$33.20	\$36.27	\$36.12	\$36.12	\$36.12
1-1/2"	\$69.78	\$69.78	\$71.18	\$72.60	\$74.05	\$67.29	\$63.64	\$69.53	\$69.24	\$69.24	\$69.24
2"	\$109.52	\$109.52	\$111.71	\$113.94	\$116.22	\$105.62	\$99.88	\$109.13	\$108.68	\$108.68	\$108.68
3"	\$215.89	\$215.89	\$220.21	\$224.61	\$229.10	\$208.19	\$196.90	\$215.12	\$214.23	\$214.23	\$214.23
4"	\$335.55	\$335.55	\$342.26	\$349.11	\$356.09	\$323.59	\$306.03	\$334.35	\$332.98	\$332.98	\$332.98
6"	\$667.94	\$667.94	\$681.30	\$694.92	\$708.82	\$644.13	\$609.18	\$665.56	\$662.82	\$662.82	\$662.82
Water Consumption Charge per 100 Cubic Feet											
Winter Consumption	\$1.43	\$1.43	\$1.46	\$1.49	\$1.52	\$1.38	\$1.30	\$1.42	\$1.54	\$1.54	\$1.54
Summer Consumption	\$1.43	\$1.65	\$1.68	\$1.72	\$1.75	\$1.59	\$1.50	\$1.64	\$1.54	\$1.54	\$1.54
All Consumption									\$1.54	\$1.54	\$1.54

B City of Bainbridge Island

Water Rate Study and COSA

Rate Table

Irrigation Rates	Adopted		With ATB Rate Increases			COS Rates			COS Alternative		
	2017	2018	2019	2020	2021	2019	2020	2021	2019	2020	2021
Monthly Fixed Charge											
5/8" x 3/4"	\$4.73	\$4.73	\$4.82	\$4.92	\$5.02	\$3.95	\$3.60	\$4.09	\$4.09	\$4.09	\$4.09
3/4" x 3/4"	\$4.73	\$4.73	\$4.82	\$4.92	\$5.02	\$3.95	\$3.60	\$4.09	\$4.09	\$4.09	\$4.09
1"	\$6.22	\$6.22	\$6.34	\$6.47	\$6.60	\$5.20	\$4.74	\$5.38	\$5.38	\$5.38	\$5.38
1-1/2"	\$8.70	\$8.70	\$8.87	\$9.05	\$9.23	\$7.27	\$6.63	\$7.53	\$7.53	\$7.53	\$7.53
2"	\$11.70	\$11.70	\$11.93	\$12.17	\$12.42	\$9.78	\$8.91	\$10.13	\$10.12	\$10.12	\$10.13
3"	\$19.64	\$19.64	\$20.03	\$20.43	\$20.84	\$16.41	\$14.96	\$17.00	\$16.99	\$16.99	\$17.00
4"	\$28.59	\$28.59	\$29.16	\$29.75	\$30.34	\$23.89	\$21.78	\$24.75	\$24.74	\$24.74	\$24.75
6"	\$53.47	\$53.47	\$54.54	\$55.63	\$56.74	\$44.67	\$40.73	\$46.28	\$46.26	\$46.26	\$46.28
Water Consumption Charge per 100 Cubic Feet											
Winter Consumption	\$3.89	\$3.89	\$3.97	\$4.05	\$4.13	\$3.25	\$2.96	\$3.37	\$3.37	\$3.37	\$3.37
Summer Consumption	\$3.89	\$3.89	\$3.97	\$4.05	\$4.13	\$3.25	\$2.96	\$3.37	\$3.37	\$3.37	\$3.37

Other Rates	Adopted		With ATB Rate Increases			COS Rates			COS Alternative		
	2017	2018	2019	2020	2021	2019	2020	2021	2019	2020	2021
Monthly Fixed Charge											
5/8" x 3/4"	\$24.04	\$24.04	\$24.52	\$25.01	\$25.51	\$15.30	\$15.39	\$15.80	\$16.32	\$16.32	\$16.32
3/4" x 3/4"	\$24.04	\$24.04	\$24.52	\$25.01	\$25.51	\$15.30	\$15.39	\$15.80	\$16.32	\$16.32	\$16.32
1"	\$55.37	\$55.37	\$56.48	\$57.61	\$58.76	\$35.25	\$35.45	\$36.40	\$36.12	\$36.12	\$36.12
1-1/2"	\$107.58	\$107.58	\$109.73	\$111.93	\$114.16	\$68.49	\$68.88	\$70.72	\$69.24	\$69.24	\$69.24
2"	\$170.23	\$170.23	\$173.63	\$177.11	\$180.65	\$108.37	\$108.99	\$111.90	\$108.68	\$108.68	\$108.68
3"	\$337.28	\$337.28	\$344.03	\$350.91	\$357.92	\$214.72	\$215.94	\$221.70	\$214.23	\$214.23	\$214.23
4"	\$525.22	\$525.22	\$535.72	\$546.44	\$557.37	\$334.36	\$336.27	\$345.24	\$332.98	\$332.98	\$332.98
6"	\$1,047.31	\$1,047.31	\$1,068.26	\$1,089.62	\$1,111.41	\$666.73	\$670.54	\$688.42	\$662.82	\$662.82	\$662.82
Water Consumption Charge per 100 Cubic Feet											
Winter Consumption	\$1.43	\$1.43	\$1.46	\$1.49	\$1.52	\$0.91	\$0.92	\$0.94	\$1.54	\$1.54	\$1.54
Summer Consumption	\$1.43	\$1.65	\$1.68	\$1.72	\$1.75	\$1.05	\$1.06	\$1.08	\$1.54	\$1.54	\$1.54
All Consumption									\$1.54	\$1.54	\$1.54

Rockaway Rates	Adopted		With ATB Rate Increases			COS Rates			COS Alternative		
	2017	2018	2019	2020	2021	2019	2020	2021	2019	2020	2021
Monthly Fixed Charge											
5/8" x 3/4"	\$11.64	\$11.64	\$11.87	\$12.11	\$12.35	\$11.18	\$11.67	\$11.67	\$11.64	\$12.02	\$12.45
3/4" x 3/4"	\$11.64	\$11.64	\$11.87	\$12.11	\$12.35	\$11.18	\$11.67	\$11.67	\$11.64	\$12.02	\$12.45
1"	\$22.94	\$22.94	\$23.40	\$23.87	\$24.34	\$22.03	\$23.00	\$23.00	\$22.94	\$23.70	\$24.55
1-1/2"	\$41.85	\$41.85	\$42.69	\$43.54	\$44.41	\$40.19	\$41.96	\$41.95	\$41.85	\$43.20	\$44.75
2"	\$64.53	\$64.53	\$65.82	\$67.14	\$68.48	\$61.98	\$64.70	\$64.69	\$64.53	\$66.62	\$69.02
3"	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$129.10	\$133.73
4"	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$199.34	\$206.49
6"	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$394.93	\$409.10
Water Consumption Charge per 100 Cubic Feet											
Block 1 (0 - 5 ccf)	\$1.18	\$1.18	\$1.20	\$1.23	\$1.25	\$1.13	\$1.18	\$1.18	\$1.18	\$1.22	\$1.26
Block 2 (5 - 12 ccf)	\$1.90	\$1.90	\$1.94	\$1.98	\$2.02	\$1.82	\$1.91	\$1.90	\$1.90	\$1.96	\$2.03
Block 3 (12 - 30 ccf)	\$2.69	\$2.69	\$2.74	\$2.80	\$2.85	\$2.58	\$2.70	\$2.70	\$2.69	\$2.78	\$2.88
Block 4 (30 ccf +)	\$3.66	\$3.66	\$3.73	\$3.81	\$3.88	\$3.52	\$3.67	\$3.67	\$3.66	\$3.78	\$3.92

Projected Revenue	2019	2020	2021	2019	2020	2021	2019	2020	2021	2019	2020	2021
Single-Family	\$ 559,395	\$ 580,589	\$ 602,587	\$ 606,998	\$ 671,396	\$ 658,011	\$ 589,954	\$ 622,666	\$ 656,327	\$ 589,954	\$ 622,666	\$ 656,327
Multi-Family	165,135	171,271	177,634	157,182	149,624	167,720	161,897	164,620	167,720	161,897	164,620	167,720
Commercial	246,028	251,907	257,926	232,604	220,824	242,181	239,355	240,268	241,185	239,355	240,268	241,185
Irrigation	116,774	124,546	132,835	95,652	91,188	108,352	99,052	103,573	108,352	99,052	103,573	108,352
Other	9,625	9,817	10,014	6,007	6,041	6,203	7,199	7,199	7,199	7,199	7,199	7,199
Rockaway	25,433	26,017	26,614	23,948	25,073	25,141	24,935	25,821	26,824	24,935	25,821	26,824
Total	\$ 1,122,391	\$ 1,164,147	\$ 1,207,608	\$ 1,122,391	\$ 1,164,147	\$ 1,207,608	\$ 1,122,391	\$ 1,164,147	\$ 1,207,608	\$ 1,122,391	\$ 1,164,147	\$ 1,207,608
Check: Revenue Requirement	\$ 1,122,391	\$ 1,164,147	\$ 1,207,608	\$ 1,122,391	\$ 1,164,147	\$ 1,207,608	\$ 1,122,391	\$ 1,164,147	\$ 1,207,608	\$ 1,122,391	\$ 1,164,147	\$ 1,207,608
Difference	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Appendix B

Bainbridge Island Sewer Rate Model



City of Bainbridge Island

Sewer Rate Study and COSA

Summary

Revenue Requirement	2018	2019	2020	2021	2022	2023	2024
Revenues							
Rate Revenues Under Existing Rates	\$ 3,508,963	\$ 3,556,746	\$ 3,605,318	\$ 3,654,693	\$ 3,704,885	\$ 3,755,908	\$ 3,807,777
Non-Rate Revenues	229,875	263,704	265,990	273,226	265,654	271,123	276,827
Total Revenues	\$ 3,738,838	\$ 3,820,450	\$ 3,871,307	\$ 3,927,919	\$ 3,970,539	\$ 4,027,031	\$ 4,084,604
Expenses							
Cash Operating Expenses	\$ 2,761,379	\$ 3,131,635	\$ 3,067,167	\$ 3,009,311	\$ 3,001,094	\$ 3,066,667	\$ 3,133,906
Existing Debt Service	1,027,943	1,025,993	1,018,644	1,016,094	1,013,145	1,009,795	1,006,045
New Debt Service	-	-	-	233,919	233,919	233,919	233,919
Rate Funded System Reinvestment	-	-	-	-	-	69,565	148,285
Total Expenses	\$ 3,789,322	\$ 4,157,629	\$ 4,085,811	\$ 4,259,325	\$ 4,248,158	\$ 4,379,947	\$ 4,522,156
Net Surplus (Deficiency)	\$ (50,484)	\$ (337,179)	\$ (214,504)	\$ (331,406)	\$ (277,619)	\$ (352,916)	\$ (437,552)
Additions to Meet Coverage	-	-	-	-	-	-	-
Total Surplus (Deficiency)	\$ (50,484)	\$ (337,179)	\$ (214,504)	\$ (331,406)	\$ (277,619)	\$ (352,916)	\$ (437,552)
% of Rate Revenue	1.44%	9.48%	5.95%	9.07%	7.49%	9.40%	11.49%
Annual Rate Adjustment	0.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Cumulative Annual Rate Adjustment	0.00%	2.00%	4.04%	6.12%	8.24%	10.41%	12.62%
Rate Revenues After Rate Increase	\$ 3,508,963	\$ 3,627,880	\$ 3,750,972	\$ 3,878,389	\$ 4,010,287	\$ 4,146,826	\$ 4,288,175
Additional In-Lieu of Taxes from Rate Increase	\$ -	\$ 5,410	\$ 11,077	\$ 17,011	\$ 23,225	\$ 29,728	\$ 36,533
Net Cash Flow After Rate Increase	\$ (50,484)	\$ (271,454)	\$ (79,926)	\$ (124,721)	\$ 4,558	\$ 8,274	\$ 6,314
Coverage After Rate Increases	3.49	2.84	3.33	2.35	2.61	2.74	2.85
Sample Residential Monthly Bill (Single Family, 4 ccf)	\$ 71.81	\$ 73.25	\$ 74.71	\$ 76.21	\$ 77.73	\$ 79.28	\$ 80.87
Monthly Average Increase (\$)		\$ 1.44	\$ 1.46	\$ 1.49	\$ 1.52	\$ 1.55	\$ 1.59



City of Bainbridge Island

Sewer Rate Study and COSA

Summary

Fund Balance	2018	2019	2020	2021	2022	2023	2024
OPERATING FUND							
Beginning Balance	\$ 2,420,888	\$ 2,370,404	\$ 2,098,950	\$ 2,019,025	\$ 742,022	\$ 739,996	\$ 748,270
plus: Net Cash Flow after Rate Increase	(50,484)	(271,454)	(79,926)	(124,721)	4,558	8,274	6,314
less: Transfer of Surplus to Capital Fund	-	-	-	(1,152,282)	(6,584)	-	-
Ending Balance	\$ 2,370,404	\$ 2,098,950	\$ 2,019,025	\$ 742,022	\$ 739,996	\$ 748,270	\$ 754,584
<i>O&M Target Balance</i>	\$ 453,925	\$ 514,789	\$ 504,192	\$ 494,681	\$ 493,330	\$ 504,110	\$ 515,163
<i>Days</i>	313	245	241	90	90	89	88
CAPITAL							
Beginning Balance	\$ 3,298,734	\$ 2,983,456	\$ 972,287	\$ 1,240,796	\$ 2,698,662	\$ 2,507,447	\$ 1,734,719
plus: Rate Funded System Reinvestment	-	-	-	-	-	69,565	148,285
plus: Transfers from Operating Fund	-	-	-	1,152,282	6,584	-	-
plus: Grants/ Donations/ CIAC	-	-	-	-	-	-	-
plus: Additional Proceeds (Costs)	-	-	-	-	-	-	-
plus: System Participation Fee Revenue	336,600	428,978	435,876	442,891	450,026	457,282	464,662
less: System Participation Fee Revenue Towards Debt	-	-	-	-	-	-	-
plus: Revenue Bond Proceeds	-	-	-	3,200,000	-	-	-
plus: PWTF Loans Proceeds	-	-	-	-	-	-	-
plus: Other Loan Proceeds	-	-	-	-	-	-	-
plus: Interest Earnings	32,987	29,835	9,723	15,510	40,480	43,880	34,694
Total Funding Sources	\$ 3,668,322	\$ 3,442,268	\$ 1,417,886	\$ 6,051,480	\$ 3,195,752	\$ 3,078,175	\$ 2,628,856
less: Capital Expenditures	(684,866)	(2,469,981)	(177,090)	(3,352,817)	(688,305)	(1,343,456)	(1,777,673)
Ending Working Capital Balance	\$ 2,983,456	\$ 972,287	\$ 1,240,796	\$ 2,698,662	\$ 2,507,447	\$ 1,734,719	\$ 851,183
<i>Minimum Target Balance</i>	\$ 220,849	\$ 245,548	\$ 247,319	\$ 280,847	\$ 287,731	\$ 301,165	\$ 318,942
COMBINED BEGINNING FUND BALANCE	\$ 5,719,622	\$ 5,353,860	\$ 3,071,238	\$ 3,259,821	\$ 3,440,684	\$ 3,247,443	\$ 2,482,989
COMBINED ENDING FUND BALANCE	\$ 5,353,860	\$ 3,071,238	\$ 3,259,821	\$ 3,440,684	\$ 3,247,443	\$ 2,482,989	\$ 1,605,766
<i>Combined Days</i>	708	358	389	417	395	296	188
<i>Total Combined Ending Fund Balance Target</i>	\$ 674,774	\$ 760,338	\$ 751,511	\$ 775,529	\$ 781,061	\$ 805,275	\$ 834,104



City of Bainbridge Island Sewer Rate Study and COSA Assumptions

Economic & Financial Factors	2018	2019	2020	2021	2022	2023	2024
General Cost Inflation	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Construction Cost Inflation	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Labor Cost Inflation	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Benefit Cost Inflation	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
General Inflation plus Composite Growth	4.29%	3.64%	3.64%	3.65%	3.65%	3.65%	3.65%
Customer Growth	2.24%	1.61%	1.62%	1.62%	1.62%	1.62%	1.62%
<i>Single-Family Account Growth</i>	1.73%	1.73%	1.73%	1.73%	1.73%	1.73%	1.73%
<i>Multi-Family Account Growth</i>	1.74%	1.74%	1.74%	1.74%	1.74%	1.74%	1.74%
<i>Commercial Account Growth</i>	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%
<i>SIS Account Growth</i>	1.27%	1.27%	1.27%	1.27%	1.27%	1.27%	1.27%
Inflow Growth							
<i>Single-Family Inflow Growth</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Multi-Family Inflow Growth</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Commercial Inflow Growth</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>SIS Inflow Growth</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
No Escalation	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Investment Interest	1.00%	1.00%	1.00%	1.25%	1.50%	1.75%	2.00%
Excise Taxes	3.852%	3.852%	3.852%	3.852%	3.852%	3.852%	3.852%
Treatment/Transmission Share	95.55%	95.55%	95.55%	95.55%	95.55%	95.55%	95.55%
Net Sewer Tax	1.60%	1.60%	1.60%	1.60%	1.60%	1.60%	1.60%
B&O Taxes	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
City Taxes	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%



City of Bainbridge Island Sewer Rate Study and COSA Assumptions

Accounting Assumptions		2018	2019	2020	2021	2022	2023	2024
FISCAL POLICY RESTRICTIONS								
Min. Op. Fund Balance Target (days of O&M expense)		60	60	60	60	60	60	60
Max. Op. Fund Balance (days of O&M expense)		90	90	90	90	90	90	90
Minimum Capital Fund Balance Target								
Select Minimum Capital Fund Balance Target	1	Defined as % of Plant Net Book Value						
1 - Defined as % of Plant		Estimated Assets						
Plant Net Book Value in 2017	\$ 21,399,992	\$ 214,137	\$ 214,631	\$ 214,666	\$ 215,337	\$ 215,475	\$ 215,743	\$ 216,099
Minimum Capital Fund Balance - % of plant assets		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
2 - Amount at Right ==>		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
RATE FUNDED SYSTEM REINVESTMENT								
Select Reinvestment Funding Strategy	3	User Input						
Amount of Annual Cash Funding from Rates								
1 - Equal to Annual Depreciation Expense		\$ 924,141	\$ 937,838	\$ 987,238	\$ 990,780	\$ 1,057,836	\$ 1,071,602	\$ 1,098,471
2 - Equal to Annual Depreciation Expense less Annual Debt Principal Paymer		-	-	-	-	-	-	-
3 - Equal to Amount at Right ==>		\$ -	\$ -	\$ -	\$ -	\$ -	\$ 69,565	\$ 148,285
	% Phase-In	0.00%	0.00%	0.00%	0.00%	0.00%	8.00%	15.00%
4 - Do Not Fund System Reinvestment				\$ (79,926)	\$ (124,721)	\$ 4,558	\$ 8,274	\$ 6,314



City of Bainbridge Island Sewer Rate Study and COSA Assumptions

Capital Financing Assumptions		2018	2019	2020	2021	2022	2023	2024
System Participation Fees								
Residential	\$ 5,123	\$ 5,123	\$ 8,187	\$ 8,187	\$ 8,187	\$ 8,187	\$ 8,187	\$ 8,187
Multi Family per Dwelling Unit	3,178	3,178	5,079	5,079	5,079	5,079	5,079	5,079
Commercial per ERU	5,123	5,123	8,187	8,187	8,187	8,187	8,187	8,187
SIS	-	-	3,751	3,751	3,751	3,751	3,751	3,751
Residential Customers		1,751	1,781	1,812	1,843	1,875	1,907	1,940
Annual New Connections			30	31	31	32	32	33
Multi-Family Dwelling Units		1,573	1,600	1,628	1,656	1,685	1,714	1,744
Annual New Connections			27	28	28	29	29	30
Commercial ERUs		1,488	1,492	1,496	1,500	1,504	1,508	1,512
Annual New Connections			4	4	4	4	4	4
SIS ERUs		222	225	228	231	233	236	239
Annual New Connections			3	3	3	3	3	3
1 - System Participation Fee Revenues - Calculated		\$ 336,600	\$ 428,978	\$ 435,876	\$ 442,891	\$ 450,026	\$ 457,282	\$ 464,662
2 - System Participation Fee Revenues - Forecasted from Budget		\$ 336,600	\$ 300,000	\$ 300,000	\$ 304,852	\$ 309,787	\$ 314,805	\$ 319,909
Select System Participation Fee Forecast Option			1					
System Participation Fee Revenues		\$ 636,399	\$ 336,600	\$ 428,978	\$ 435,876	\$ 442,891	\$ 450,026	\$ 457,282
REVENUE BONDS								
Term (years)		25	25	25	25	25	25	25
Interest Only Payments		0	0	0	0	0	0	0
Interest Rate		4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%
Issuance Cost		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Revenue Bond Coverage Requirement		1.25						
Use Reserves to Pay for Last Payment		No						
PWTF LOANS								
Term		20	20	20	20	20	20	20
Interest Rate		2.55%	2.55%	2.55%	2.55%	2.55%	2.55%	2.55%
OTHER LOANS								
Term (years)		20	20	20	20	20	20	20
Interest Rate		1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Issuance Cost		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%



City of Bainbridge Island Sewer Rate Study and COSA

Operating Revenue and Expenditure Forecast

Revenues		Forecast Basis	Actuals 2017	Budget 2018	Budget 2019	Budget 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
Acct. #	Rate Revenue									
	Single-Family Service Charges	Customer Growth	\$ 1,490,560	\$ 1,516,283	\$ 1,542,451	\$ 1,569,070	\$ 1,596,149	\$ 1,623,695	\$ 1,651,717	\$ 1,680,222
	Multi-Family Service Charges	Customer Growth	1,051,448	1,069,705	1,088,279	1,107,176	1,126,401	1,145,960	1,165,858	1,186,102
	Non-Residential Service Charges	Customer Growth	861,861	864,147	866,439	868,737	871,042	873,352	875,669	877,992
	South Island Service Charges	Customer Growth	52,747	58,828	59,576	60,334	61,101	61,878	62,665	63,461
	Total Rate Revenue		\$ 3,456,615	\$ 3,508,963	\$ 3,556,746	\$ 3,605,318	\$ 3,654,693	\$ 3,704,885	\$ 3,755,908	\$ 3,807,777
	Non Rate Revenue									
343200	Engineering Fees	No Escalation	\$ 1,579	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
343420	Water Sales - Conn/Inspect Fees	No Escalation	6,297	10,000	10,000	10,000	10,000	10,000	10,000	10,000
343590	Sewer Misc Revenue	No Escalation	17,040	-	-	-	-	-	-	-
361510	Penalties on Cap Assessments	No Escalation	683	-	-	-	-	-	-	-
361550	Interest on Cap Assessments	No Escalation	78,445	-	-	-	-	-	-	-
368100	Spec Assess Prin Captial	No Escalation	99,540	-	-	-	-	-	-	-
361110	Investment Interest	Calculated	62,934	20,000	23,704	20,990	25,238	14,639	17,044	19,644
369840	Inventory Markup	No Escalation	(556)	-	-	-	-	-	-	-
379001	System Participation-Lynnwood	No Escalation	867	-	-	-	-	-	-	-
	KCSD #7 Pass-Through Revenue	SIS Account Growth	197,070	199,875	230,000	235,000	237,988	241,014	244,079	247,183
	[Extra]	No Escalation	-	-	-	-	-	-	-	-
	Total Non Rate Revenue		\$ 463,899	\$ 229,875	\$ 263,704	\$ 265,990	\$ 273,226	\$ 265,654	\$ 271,123	\$ 276,827
TOTAL REVENUES			\$ 3,920,514	\$ 3,738,838	\$ 3,820,450	\$ 3,871,307	\$ 3,927,919	\$ 3,970,539	\$ 4,027,031	\$ 4,084,604



City of Bainbridge Island

Sewer Rate Study and COSA

Operating Revenue and Expenditure Forecast

Expenses		Forecast Basis	Actuals 2017	Budget 2018	Budget 2019	Budget 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
553000	State Excise Tax	<i>Calculated</i>	\$ 59,298	\$ 81,986	\$ 63,658	\$ 64,541	\$ 65,439	\$ 66,351	\$ 67,279	\$ 68,222
554000	City Tax	<i>Calculated</i>	259,638	264,317	254,966	258,431	262,249	265,234	269,059	272,956
443410	Training		\$ 5,341							
443410	ENG - Sewer Training	No Escalation		2,000	3,000	3,000	3,000	3,000	3,000	3,000
443410	Winslow Collection Training	Labor Cost Inflation		3,184	5,000	5,150	5,253	5,358	5,465	5,575
510000	Salary		709,942							
510000	Ex - Sewer - Admin - Salary	Labor Cost Inflation		16,170	18,398	18,847	19,224	19,608	20,001	20,401
510000	Legal - Sewer Fund	Labor Cost Inflation		15,752	19,444	20,326	20,732	21,147	21,570	22,001
510000	HR - Sewer Salary	Labor Cost Inflation		9,429	12,151	12,781	13,037	13,297	13,563	13,835
510000	Exec - Clerk - Sewer Salary	Labor Cost Inflation		3,293	2,411	2,469	2,519	2,569	2,620	2,673
510000	Salary	Labor Cost Inflation		95,836	199,584	208,140	212,303	216,549	220,880	225,298
510000	ENG - SIS - Admin - Salary	Labor Cost Inflation		-	3,802	3,894	3,972	4,052	4,133	4,215
510000	ENG - Sewer - Ops - Salary	Labor Cost Inflation		-	5,439	5,619	5,731	5,846	5,963	6,082
510000	BLD - Sewer - Admin - Salary	Labor Cost Inflation		2,521	1,979	2,028	2,068	2,109	2,152	2,195
510000	PW - Sewer Salary	Labor Cost Inflation		33,020	37,388	29,951	30,550	31,161	31,784	32,420
510000	ENG- Sewer Admin	Labor Cost Inflation		120,522	28,202	29,447	30,036	30,636	31,249	31,874
510000	Winslow Collection Salary	Labor Cost Inflation		258,314	230,433	238,373	243,141	248,003	252,963	258,023
510000	WWTP Salary	Labor Cost Inflation		223,465	319,367	327,281	333,827	340,503	347,313	354,260
510000	SIS Salary	Labor Cost Inflation		49,660	23,645	24,396	24,884	25,382	25,890	26,407
510000	IT - Sewer Salary	Labor Cost Inflation		29,520	32,323	33,153	33,816	34,492	35,182	35,886
511000	Salary Overtime	Labor Cost Inflation	36,078	39,079	-	-	-	-	-	-
511000	FIN - Sewer Salary OT	Labor Cost Inflation		-	1,200	1,236	1,261	1,286	1,312	1,338
511000	IT- Sewer - Salary - OT	No Escalation		-	425	425	425	425	425	425
511000	Winslow Collection Salary OT	Labor Cost Inflation		-	76,865	79,071	80,652	82,265	83,911	85,589
515000	Salary Temp	Labor Cost Inflation	7,821	8,000	-	-	-	-	-	-
515000	O&M - WWTP - Salary Temp	No Escalation		-	8,000	8,000	8,000	8,000	8,000	8,000
515000	Winslow Collection Salary Temp	No Escalation		-	8,000	8,000	8,000	8,000	8,000	8,000
519000	Staff Separation Buyouts - GG	Labor Cost Inflation	-	3,600	3,000	5,000	5,100	5,202	5,306	5,412
520000	Benefits		310,454							
520000	Ex - Sewer - Admin - Benefits	Benefit Cost Inflation		5,484	5,646	5,757	5,987	6,227	6,476	6,735
520000	Legal - Sewer Benefits	Benefit Cost Inflation		6,160	7,026	7,313	7,605	7,909	8,226	8,555
520000	HR - Sewer Benefits	Benefit Cost Inflation		4,130	4,815	4,995	5,195	5,403	5,619	5,844
520000	Exec - Clerk - Sewer Benefits	Benefit Cost Inflation		1,606	1,170	1,208	1,257	1,307	1,359	1,413
520000	Benefits	Benefit Cost Inflation		41,116	83,111	86,334	89,788	93,379	97,114	100,999
520000	BLD - Sewer - Admin - Benefits	Benefit Cost Inflation		1,000	789	817	849	883	919	955
520000	PW - Sewer Benefits	Benefit Cost Inflation		13,745	14,370	12,937	13,454	13,992	14,552	15,134
520000	ENG - SIS - Admin - Benefits	Benefit Cost Inflation		-	1,555	1,609	1,673	1,740	1,810	1,882
520000	ENG - Sewer - Ops - Benefits	Benefit Cost Inflation		-	2,425	2,517	2,618	2,722	2,831	2,945
520000	ENG - Sewer Admin	Benefit Cost Inflation		52,694	13,077	13,650	14,196	14,764	15,355	15,969
520000	Winslow Collection Benefits	Benefit Cost Inflation		120,887	111,230	115,241	119,850	124,644	129,630	134,815
520000	WWTP Benefits	Benefit Cost Inflation		106,947	160,472	165,492	172,111	178,996	186,156	193,602
520000	SIS Benefits	Benefit Cost Inflation		23,766	11,124	11,529	11,990	12,470	12,969	13,488
520000	IT - Sewer Benefits	Benefit Cost Inflation		12,546	14,390	14,825	15,418	16,034	16,676	17,343
520000	GG Sewer Works Com	Benefit Cost Inflation		500	-	-	-	-	-	-
520000	GG Sewer Unemployment	Benefit Cost Inflation		3,000	-	-	-	-	-	-



City of Bainbridge Island Sewer Rate Study and COSA Operating Revenue and Expenditure Forecast

Expenses (Continued)		Forecast Basis	Actuals 2017	Budget 2018	Budget 2019	Budget 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
529000	Staff Separation Buyouts - GG	Benefit Cost Inflation	-	5,000	-	-	-	-	-	-
531100	Supplies		94,422							
531100	ENG - Sewer Admin	General Cost Inflation		430	450	450	459	468	477	487
531100	Winslow Collection Supplies	General Cost Inflation		18,180	30,900	31,827	32,462	33,110	33,771	34,445
531100	PW - Sewer Supplies	General Cost Inflation		-	100	100	102	104	106	108
531100	O&M WWTP Supplies	General Cost Inflation		63,630	66,950	68,959	70,335	71,739	73,171	74,631
531100	O&M SIS Supplies	General Cost Inflation		3,091	2,060	2,122	2,164	2,208	2,252	2,297
532000	Fuel Consumed		9,561							
532000	Winslow Collection Fuel	General Cost Inflation		11,825	4,742	5,928	6,046	6,167	6,290	6,416
532000	O&M WWTP Fuel	General Cost Inflation		7,927	4,232	5,290	5,396	5,503	5,613	5,725
532000	O&M SIS Fuel	General Cost Inflation		2,272	2,495	3,118	3,180	3,244	3,308	3,374
541100	Professional Services	General Cost Inflation	20,344	141,923	45,419	116,360	118,682	48,223	49,186	50,167
541100	One-Time WWTP Study	General Cost Inflation			100,000	-	-	-	-	-
541110	Outside Attorney - Legal Advice	General Cost Inflation	-	-	-	-	-	-	-	-
541111	Outside Attorney - Litigation	General Cost Inflation	450	-	-	-	-	-	-	-
542100	Telephone/Fax	General Cost Inflation	19,783	1,000	-	-	-	-	-	-
542100	GG Sewer Fac Phone	General Cost Inflation		-	1,000	1,100	1,122	1,144	1,167	1,190
542100	WWTP Telephone/Fax	General Cost Inflation		-	21,000	22,000	22,439	22,887	23,344	23,810
542450	Eng - Sewer - Admin - Outreach	General Cost Inflation	-	-	2,500	2,500	2,550	2,601	2,653	2,706
542500	Postage	General Cost Inflation	3,136	22,500	-	-	-	-	-	-
542500	FIN-SIS-POSTAGE	General Cost Inflation			500	500	510	520	531	541
542500	GG-Sewer - Fac - Postage	General Cost Inflation			4,000	4,000	4,080	4,161	4,244	4,329
542500	GG-WWTP- Postage/Shipping	General Cost Inflation			4,100	-	-	-	-	-
543100	Travel Expense - ENG Sewer Adm	General Cost Inflation	35	150	250	250	255	260	265	271
544000	Advertising	General Cost Inflation	-	-	-	-	-	-	-	-
545000	Rents & Leases - Operating		746							
545000	ENG - Sewer Admin	General Cost Inflation		600	600	600	612	624	637	649
545000	Winslow Collection - Rents	General Cost Inflation		699	309	318	324	331	337	344
545000	O&M WWTP Rents	General Cost Inflation		1,032	618	637	650	663	676	689
545000	O&M SIS Rents	General Cost Inflation		109	62	64	65	67	68	69
545500	Rents - Interfund	General Cost Inflation	75,040	73,771	68,900	67,700	69,051	70,429	71,835	73,269
546000	Insurance		44,181							
546000	GG - Sewer - Insurance	General Cost Inflation		32,271	55,000	52,000	53,038	54,096	55,176	56,277
546000	GG - SIS - Insurance	General Cost Inflation		1,902	5,000	5,000	5,100	5,202	5,305	5,411
547100	Utilities - Electric		98,287							
547100	GG - Sewer Electric	General Cost Inflation		27,000	27,000	27,000	27,539	28,089	28,649	29,221
547100	GG - WWTP Electric	General Cost Inflation		75,000	75,000	75,000	76,497	78,024	79,581	81,169
547400	Utilities - SSWM Fees		3,217							
547400	GG - Sewer COBI SSWM	General Cost Inflation		500	400	420	428	437	446	455
547400	GG - WWTP - SSWM	General Cost Inflation		2,600	3,300	3,400	3,468	3,537	3,608	3,680



City of Bainbridge Island Sewer Rate Study and COSA Operating Revenue and Expenditure Forecast

Expenses (Continued)		Forecast Basis	Actuals 2017	Budget 2018	Budget 2019	Budget 2020	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024
547500	Utilities - BI Water/Sewer		58,807							
547500	O&M Sewer City Water/Sewer	General Cost Inflation		1,010	1,185	1,220	1,244	1,269	1,295	1,320
547500	O&M SIS City Water/Sewer	General Cost Inflation		202	206	212	216	221	225	229
547500	O&M WWTP Water/Sewer	General Cost Inflation		15,000	40,000	40,000	40,798	41,613	42,443	43,290
547900	Utilities - WWTP Garbage	General Cost Inflation	4,160	4,500	4,500	4,500	4,590	4,681	4,775	4,870
547901	Biosolids Waste Disposal	General Cost Inflation	86,689	117,000	120,510	124,125	126,602	129,129	131,706	134,335
548100	Repairs	General Cost Inflation	34,494							
548100	Annual Swr Coll Upgrade-R&M	General Cost Inflation		148,463	50,000	50,998	52,016	53,054	54,113	55,193
548100	Bldg Svcs Contr-Wwtp-Maint	General Cost Inflation		667	701	722	736	751	766	781
548100	Grinder Pump Maint Contract	General Cost Inflation		17,750	32,960	33,949	34,627	35,318	36,023	36,741
548100	Lovell Beach Mains-Repairs	General Cost Inflation		35,000	36,050	37,132	37,873	38,629	39,400	40,186
548100	O&M - Sewer Opns Repairs	General Cost Inflation			229,000	137,000	15,537	15,847	16,163	16,485
548100	O&M-Sis-Repairs	General Cost Inflation		4,121	5,150	5,305	5,411	5,519	5,629	5,741
548100	O&M-Swr-Gen Load Test-R&M	General Cost Inflation		2,525	-	-	-	-	-	-
548100	O&M-WWTP-Gen Load Test-R	General Cost Inflation		758	-	-	-	-	-	-
548100	O&M-WWTP-Repairs	General Cost Inflation		25,250	25,750	26,523	27,052	27,592	28,143	28,705
548100	Win Coll-R&M	General Cost Inflation		25,250	25,750	26,523	27,052	27,592	28,143	28,705
548500	Computer Support Maintenance	General Cost Inflation	1,207	-	1,300	1,400	1,428	1,456	1,486	1,515
549100	Dues, Subscriptions & Memberships		981							
549100	ENG- Sewer Miscellaneous	General Cost Inflation		300	500	500	510	520	531	541
549100	Winslow Collection Dues/Subs	General Cost Inflation		222	410	422	430	439	448	457
549100	O&M WWTP Dues/Subscriptio	General Cost Inflation		1,507	920	948	967	986	1,006	1,026
549100	O&M SIS Dues/Subscriptions	General Cost Inflation		45	75	77	79	80	82	83
549800	WWTP Permits - Cobi or Outside	General Cost Inflation	8,060	7,873	9,500	9,785	9,980	10,179	10,383	10,590
551000	Intergovernmental Prof Svcs									
551000	Clerk Sewer Record	General Cost Inflation		200	200	200	204	208	212	216
551000	Clerk SIS Record	General Cost Inflation		200	200	200	204	208	212	216
551000	SIS - SD #7 Processing	SIS Account Growth	197,070	199,875	230,000	235,000	237,988	241,014	244,079	247,183
551000	Intergovernmental Prof Svcs	General Cost Inflation	6,382	7,000	-	-	-	-	-	-
Total Cash O&M Expenditures			\$ 2,155,623	\$ 2,761,379	\$ 3,131,635	\$ 3,067,167	\$ 3,009,311	\$ 3,001,094	\$ 3,066,667	\$ 3,133,906



City of Bainbridge Island

Sewer Rate Study and COSA

Existing Debt Input

Existing Debt Service - Revenue Bonds	2018	2019	2020	2021	2022	2023	2024
2011 WWTP LTGO Bond							
Annual Interest Payment	\$ 145,400	\$ 136,600	\$ 127,400	\$ 118,000	\$ 108,200	\$ 98,000	\$ 87,400
Annual Principal Payment	<u>220,000</u>	<u>230,000</u>	<u>235,000</u>	<u>245,000</u>	<u>255,000</u>	<u>265,000</u>	<u>275,000</u>
Total Annual Payment	\$ 365,400	\$ 366,600	\$ 362,400	\$ 363,000	\$ 363,200	\$ 363,000	\$ 362,400
Use of Debt reserve for Debt Service	-	-	-	-	-	-	-
TOTAL REVENUE BONDS							
Annual Interest Payment	\$ 145,400	\$ 136,600	\$ 127,400	\$ 118,000	\$ 108,200	\$ 98,000	\$ 87,400
Annual Principal Payment	<u>220,000</u>	<u>230,000</u>	<u>235,000</u>	<u>245,000</u>	<u>255,000</u>	<u>265,000</u>	<u>275,000</u>
Total Annual Payment	\$ 365,400	\$ 366,600	\$ 362,400	\$ 363,000	\$ 363,200	\$ 363,000	\$ 362,400
Use of Debt reserve for Debt Service	-	-	-	-	-	-	-
Annual Debt Reserve Target on Existing Revenue Bo	366,600	366,600	366,400	366,400	366,400	366,400	366,400

Existing Debt Service - PWTF Loans	2018	2019	2020	2021	2022	2023	2024
SIS constr loan PW-04-691-002							
Annual Interest Payment	\$ 10,413	\$ 8,925	\$ 7,438	\$ 5,950	\$ 4,463	\$ 2,975	\$ 1,488
Annual Principal Payment	<u>297,500</u>	<u>297,500</u>	<u>297,500</u>	<u>297,500</u>	<u>297,500</u>	<u>297,500</u>	<u>297,500</u>
Total Annual Payment	\$ 307,913	\$ 306,425	\$ 304,938	\$ 303,450	\$ 301,963	\$ 300,475	\$ 298,988
WWTP Constr loan #1 PW-05-691-002							
Annual Interest Payment	\$ 8,425	\$ 7,372	\$ 6,319	\$ 5,266	\$ 4,212	\$ 3,159	\$ 2,106
Annual Principal Payment	<u>210,623</u>	<u>210,623</u>	<u>210,623</u>	<u>210,623</u>	<u>210,623</u>	<u>210,623</u>	<u>210,623</u>
Total Annual Payment	\$ 219,048	\$ 217,995	\$ 216,942	\$ 215,889	\$ 214,836	\$ 213,783	\$ 212,730
WWTP Constr loan #2 PW-06-962-004							
Annual Interest Payment	\$ 9,000	\$ 8,000	\$ 7,000	\$ 6,000	\$ 5,000	\$ 4,000	\$ 3,000
Annual Principal Payment	<u>200,008</u>	<u>200,008</u>	<u>200,008</u>	<u>200,008</u>	<u>200,008</u>	<u>200,008</u>	<u>200,008</u>
Total Annual Payment	\$ 209,008	\$ 208,008	\$ 207,008	\$ 206,008	\$ 205,008	\$ 204,008	\$ 203,008
WWTP design PW-04-691-PRE-108							
Annual Interest Payment	\$ 738	\$ 633	\$ 527	\$ 422	\$ 316	\$ 211	\$ 105
Annual Principal Payment	<u>21,088</u>	<u>21,088</u>	<u>21,088</u>	<u>21,088</u>	<u>21,088</u>	<u>21,088</u>	<u>21,088</u>
Total Annual Payment	\$ 21,826	\$ 21,720	\$ 21,615	\$ 21,509	\$ 21,404	\$ 21,298	\$ 21,193
TOTAL PWTF LOANS							
Annual Interest Payment	\$ 28,576	\$ 24,930	\$ 21,284	\$ 17,638	\$ 13,991	\$ 10,345	\$ 6,699
Annual Principal Payment	<u>729,219</u>	<u>729,219</u>	<u>729,219</u>	<u>729,219</u>	<u>729,219</u>	<u>729,219</u>	<u>729,219</u>
Total Annual Payment	\$ 757,795	\$ 754,149	\$ 750,503	\$ 746,856	\$ 743,210	\$ 739,564	\$ 735,918



City of Bainbridge Island
Sewer Rate Study and COSA
Existing Debt Input

Existing Debt Service - Other Loans	2018	2019	2020	2021	2022	2023	2024
EHBM Construction PC13-961-046							
Annual Interest Payment	\$ 13,333	\$ 12,444	\$ 11,555	\$ 10,666	\$ 9,777	\$ 8,889	\$ 8,000
Annual Principal Payment	<u>177,770</u>	<u>177,770</u>	<u>177,770</u>	<u>177,770</u>	<u>177,770</u>	<u>177,770</u>	<u>177,770</u>
Total Annual Payment	\$ 191,103	\$ 190,214	\$ 189,325	\$ 188,436	\$ 187,548	\$ 186,659	\$ 185,770
EHBM Des PR08-951-104							
Annual Interest Payment	\$ 1,124	\$ 1,022	\$ 920	\$ 817	\$ 715	\$ 613	\$ 511
Annual Principal Payment	<u>20,434</u>	<u>20,434</u>	<u>20,434</u>	<u>20,434</u>	<u>20,434</u>	<u>20,434</u>	<u>20,434</u>
Total Annual Payment	\$ 21,558	\$ 21,456	\$ 21,354	\$ 21,251	\$ 21,149	\$ 21,047	\$ 20,945
TOTAL OTHER LOANS							
Annual Interest Payment	\$ 14,457	\$ 13,466	\$ 12,475	\$ 11,484	\$ 10,493	\$ 9,502	\$ 8,511
Annual Principal Payment	<u>198,204</u>	<u>198,204</u>	<u>198,204</u>	<u>198,204</u>	<u>198,204</u>	<u>198,204</u>	<u>198,204</u>
Total Annual Payment	\$ 212,661	\$ 211,670	\$ 210,679	\$ 209,688	\$ 208,697	\$ 207,706	\$ 206,715

Total Existing Debt Service	2018	2019	2020	2021	2022	2023	2024
TOTAL SEWER LOANS							
Total Annual Interest Payment	\$ 188,432	\$ 174,995	\$ 161,158	\$ 147,121	\$ 132,684	\$ 117,847	\$ 102,610
Total Principal Payment	<u>1,147,423</u>	<u>1,157,423</u>	<u>1,162,423</u>	<u>1,172,423</u>	<u>1,182,423</u>	<u>1,192,423</u>	<u>1,202,423</u>
Total Annual Payment	\$ 1,335,856	\$ 1,332,418	\$ 1,323,581	\$ 1,319,544	\$ 1,315,107	\$ 1,310,270	\$ 1,305,033



City of Bainbridge Island
Sewer Rate Study and COSA
Capital Improvement Program

PROJECT COSTS (\$ 2018)

No	Function	Description	2018	2019	2020	2021	2022	2023	2024
1		3b Sewer Prj 2019 CIP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	Pumping	Rehabilitate Pump Station (Village)	464,157	332,932	-	-	-	-	-
3	Pumping	Pump Station/Force Main Upgrade (NTW/New Brooklyn)	181,203	518,797	-	-	-	-	-
4	Treatment	Rehabilitate Pump Station (Old Treatment Plant)	1,015	450,000	-	-	-	-	-
5	Pumping	Rehabilitate Pumps (Sunday Cove)	-	150,000	-	-	-	-	-
6	Pumping	Lift Station SCADA Upgrades	-	140,000	-	-	-	-	-
7	Pumping	Pump Station & Force Main (Wood Ave)	-	750,000	-	2,500,000	-	-	-
8	Pumping	Rehabilitate Pump Station (Wing Point)	-	-	100,000	450,000	-	-	-
9	Pumping	Rehabilitate Pump Station (Island Terrace)	-	-	-	100,000	400,000	-	-
10	Collection	Install Gravity Sewers (Sunday Cove)	-	-	-	-	200,000	450,000	-
11	Pumping	Rehabilitate Pump Station (Lower Lovell)	-	-	-	-	-	100,000	500,000
12	Treatment	Extend WWTP Outfall (Wing Point)	-	-	-	-	-	200,000	900,000
13			-	-	-	-	-	-	-
14		Water and Sewer Capital Update as of July 25	-	-	-	-	-	-	-
15	Pumping	Replace Beach Sewer Force Main	-	-	-	-	-	-	-
16	Collection	Madrona Townhomes/Henshaw	38,491	-	-	-	-	-	-
17			-	-	-	-	-	-	-
18		Fleet and Equipment Contributions	-	-	-	-	-	-	-
19	General	Van	-	12,000	-	-	-	-	-
20	General	Light Duty Pick Up	-	11,000	-	-	-	-	-
21	General	Video Inspection Camera	-	35,000	-	-	-	-	-
22	General	Van	-	-	56,000	-	-	-	-
23	General	Medium Duty Pick Up	-	-	15,000	-	-	-	-
24	General	Medium Duty Pick Up	-	-	-	20,000	-	-	-
25	General	Light Duty Pick Up	-	-	-	-	13,000	-	-
26	General	Vactor Truck	-	-	-	-	-	460,000	-
27	General	Light Duty Pick Up	-	-	-	-	-	14,000	-
28	General	Light Duty Pick Up	-	-	-	-	-	-	14,000
29	General	Van	-	-	-	-	-	-	92,000



City of Bainbridge Island
Sewer Rate Study and COSA
Capital Improvement Program

ESCALATED PROJECT COSTS

No	Function	Description	2018	2019	2020	2021	2022	2023	2024
1		3b Sewer Prj 2019 CIP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	Pumping	Rehabilitate Pump Station (Village)	464,157	342,920	-	-	-	-	-
3	Pumping	Pump Station/Force Main Upgrade (NTW/New Brooklyn)	181,203	534,361	-	-	-	-	-
4	Treatment	Rehabilitate Pump Station (Old Treatment Plant)	1,015	463,500	-	-	-	-	-
5	Pumping	Rehabilitate Pumps (Sunday Cove)	-	154,500	-	-	-	-	-
6	Pumping	Lift Station SCADA Upgrades	-	144,200	-	-	-	-	-
7	Pumping	Pump Station & Force Main (Wood Ave)	-	772,500	-	2,731,818	-	-	-
8	Pumping	Rehabilitate Pump Station (Wing Point)	-	-	106,090	491,727	-	-	-
9	Pumping	Rehabilitate Pump Station (Island Terrace)	-	-	-	109,273	450,204	-	-
10	Collection	Install Gravity Sewers (Sunday Cove)	-	-	-	-	225,102	521,673	-
11	Pumping	Rehabilitate Pump Station (Lower Lovell)	-	-	-	-	-	115,927	597,026
12	Treatment	Extend WWTP Outfall (Wing Point)	-	-	-	-	-	231,855	1,074,647
13			-	-	-	-	-	-	-
14		Water and Sewer Capital Update as of July 25	-	-	-	-	-	-	-
15	Pumping	Replace Beach Sewer Force Main	-	-	-	-	-	-	-
16	Collection	Madrona Townhomes/Henshaw	38,491	-	-	-	-	-	-
17			-	-	-	-	-	-	-
18		Fleet and Equipment Contributions	-	-	-	-	-	-	-
19	General	Van	-	12,000	-	-	-	-	-
20	General	Light Duty Pick Up	-	11,000	-	-	-	-	-
21	General	Video Inspection Camera	-	35,000	-	-	-	-	-
22	General	Van	-	-	56,000	-	-	-	-
23	General	Medium Duty Pick Up	-	-	15,000	-	-	-	-
24	General	Medium Duty Pick Up	-	-	-	20,000	-	-	-
25	General	Light Duty Pick Up	-	-	-	-	13,000	-	-
26	General	Vactor Truck	-	-	-	-	-	460,000	-
27	General	Light Duty Pick Up	-	-	-	-	-	14,000	-
28	General	Light Duty Pick Up	-	-	-	-	-	-	14,000
29	General	Van	-	-	-	-	-	-	92,000



City of Bainbridge Island
Sewer Rate Study and COSA
Capital Funding Analysis

Summary of Expenditures	2018	2019	2020	2021	2022	2023	2024
CAPITAL PROJECTS							
Improvement Upgrades & Expansions	\$ 94,571	\$ 206,008	\$ 15,118	\$ 169,405	\$ 35,562	\$ 108,988	\$ 98,235
Repairs and Replacements	590,295	2,263,973	161,972	3,183,412	652,743	1,234,467	1,679,438
TOTAL CAPITAL EXPENDITURES	\$ 684,866	\$ 2,469,981	\$ 177,090	\$ 3,352,817	\$ 688,305	\$ 1,343,456	\$ 1,777,673
Capital Financing Plan	2018	2019	2020	2021	2022	2023	2024
Additional Proceeds (Costs)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Project Specific CIAC	-	-	-	-	-	-	-
Project to be Funded	\$ 684,866	\$ 2,469,981	\$ 177,090	\$ 3,352,817	\$ 688,305	\$ 1,343,456	\$ 1,777,673
OTHER FUNDING SOURCES							
Other Sources	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rate Funded System Reinvestment	-	-	-	-	-	69,565	148,285
Other Loans	-	-	-	-	-	-	-
Other Loans	-	-	-	-	-	-	-
Revenue Bond Proceeds	-	-	-	3,200,000	-	-	-
TOTAL CAPITAL RESOURCES	\$ -	\$ -	\$ -	\$ 3,200,000	\$ -	\$ 69,565	\$ 148,285
<i>Info: Working Capital Contingency Deficit</i>	-	-	-	-	-	-	-



City of Bainbridge Island
Sewer Rate Study and COSA
Capital Funding Analysis

New Debt Computations	2018	2019	2020	2021	2022	2023	2024
REVENUE BONDS							
Amount to Fund	\$ -	\$ -	\$ -	\$ 3,200,000	\$ -	\$ -	\$ -
Issuance Costs	-	-	-	34,686	-	-	-
Reserve Required	-	-	-	233,919	-	-	-
Amount of Debt Issue	\$ -	\$ -	\$ -	\$ 3,468,605	\$ -	\$ -	\$ -
PWTF LOANS							
Amount to Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
OTHER LOANS							
Amount to Fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Issuance Costs	-	-	-	-	-	-	-
Amount of Debt Issue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Debt Service Summary	2018	2019	2020	2021	2022	2023	2024
EXISTING DEBT SERVICE							
Annual Interest Payments	\$ 188,432	\$ 174,995	\$ 161,158	\$ 147,121	\$ 132,684	\$ 117,847	\$ 102,610
Annual Principal Payments	<u>1,147,423</u>	<u>1,157,423</u>	<u>1,162,423</u>	<u>1,172,423</u>	<u>1,182,423</u>	<u>1,192,423</u>	<u>1,202,423</u>
Total Debt Service Payments	\$ 1,335,856	\$ 1,332,418	\$ 1,323,581	\$ 1,319,544	\$ 1,315,107	\$ 1,310,270	\$ 1,305,033
Revenue Bond Payments Only	365,400	366,600	362,400	363,000	363,200	363,000	362,400
NEW DEBT SERVICE							
Annual Interest Payments	\$ -	\$ -	\$ -	\$ 156,087	\$ 152,585	\$ 148,925	\$ 145,100
Annual Principal Payments	-	-	-	<u>77,832</u>	<u>81,335</u>	<u>84,995</u>	<u>88,819</u>
Total Debt Service Payments	\$ -	\$ -	\$ -	\$ 233,919	\$ 233,919	\$ 233,919	\$ 233,919
Revenue Bond Payments Only	-	-	-	233,919	233,919	233,919	233,919
TOTAL DEBT SERVICE PAYMENTS	\$ 1,335,856	\$ 1,332,418	\$ 1,323,581	\$ 1,553,464	\$ 1,549,026	\$ 1,544,189	\$ 1,538,952
Total Interest Payments	188,432	174,995	161,158	303,208	285,269	266,772	247,710
Total Principal Payments	1,147,423	1,157,423	1,162,423	1,250,255	1,263,758	1,277,418	1,291,242
Total Revenue Bond Payments Only	365,400	366,600	362,400	596,919	597,119	596,919	596,319



City of Bainbridge Island
Sewer Rate Study and COSA
Revenue Requirements Analysis

Test 1: Cash Flow Sufficiency Test	2018	2019	2020	2021	2022	2023	2024
EXPENSES							
Cash Operating Expenses	\$ 2,761,379	\$ 3,131,635	\$ 3,067,167	\$ 3,009,311	\$ 3,001,094	\$ 3,066,667	\$ 3,133,906
Existing Debt Service (Excluding SIS Loan)	1,027,943	1,025,993	1,018,644	1,016,094	1,013,145	1,009,795	1,006,045
New Debt Service	-	-	-	233,919	233,919	233,919	233,919
Rate Funded System Reinvestment	-	-	-	-	-	69,565	148,285
Additions Required to Meet Minimum Reserve	-	-	-	-	-	-	-
Total Expenses	\$ 3,789,322	\$ 4,157,629	\$ 4,085,811	\$ 4,259,325	\$ 4,248,158	\$ 4,379,947	\$ 4,522,156
REVENUES							
Rate Revenue	\$ 3,508,963	\$ 3,556,746	\$ 3,605,318	\$ 3,654,693	\$ 3,704,885	\$ 3,755,908	\$ 3,807,777
Other Non Rate Revenue	209,875	240,000	245,000	247,988	251,014	254,079	257,183
System Participation Fee Revenue Towards Debt	-	-	-	-	-	-	-
Operating Fund & Debt Reserve Fund Interest Earnings	<u>20,000</u>	<u>23,704</u>	<u>20,990</u>	<u>25,238</u>	<u>14,639</u>	<u>17,044</u>	<u>19,644</u>
Total Revenue	\$ 3,738,838	\$ 3,820,450	\$ 3,871,307	\$ 3,927,919	\$ 3,970,539	\$ 4,027,031	\$ 4,084,604
NET CASH FLOW (DEFICIENCY)	\$ (50,484)	\$ (337,179)	\$ (214,504)	\$ (331,406)	\$ (277,619)	\$ (352,916)	\$ (437,552)
% of Rate Revenue	1.44%	9.48%	5.95%	9.07%	7.49%	9.40%	11.49%
Test 2: Coverage Sufficiency Test	2018	2019	2020	2021	2022	2023	2024
EXPENSES							
Cash Operating Expenses (Less City Taxes & Capital Outlays)	\$ 2,497,062	\$ 2,876,670	\$ 2,808,736	\$ 2,747,062	\$ 2,735,860	\$ 2,797,608	\$ 2,860,950
Revenue Bond Debt Service	365,400	366,600	362,400	596,919	597,119	596,919	596,319
Revenue Bond Coverage Requirement at 1.25	<u>91,350</u>	<u>91,650</u>	<u>90,600</u>	<u>149,230</u>	<u>149,280</u>	<u>149,230</u>	<u>149,080</u>
Total Expenses	\$ 2,953,812	\$ 3,334,920	\$ 3,261,736	\$ 3,493,212	\$ 3,482,259	\$ 3,543,757	\$ 3,606,349
ALLOWABLE REVENUES							
Rate Revenue	\$ 3,508,963	\$ 3,556,746	\$ 3,605,318	\$ 3,654,693	\$ 3,704,885	\$ 3,755,908	\$ 3,807,777
Other Revenue	209,875	240,000	245,000	247,988	251,014	254,079	257,183
Interest Earnings - All Funds	<u>52,987</u>	<u>53,539</u>	<u>30,712</u>	<u>40,748</u>	<u>55,119</u>	<u>60,924</u>	<u>54,338</u>
Total Revenue	\$ 3,771,826	\$ 3,850,284	\$ 3,881,030	\$ 3,943,429	\$ 4,011,019	\$ 4,070,911	\$ 4,119,298
Coverage Realized (Existing Rates)	3.49	2.66	2.96	2.00	2.14	2.13	2.11
COVERAGE SURPLUS (DEFICIENCY)	\$ 818,014	\$ 515,364	\$ 619,294	\$ 450,217	\$ 528,759	\$ 527,154	\$ 512,949



City of Bainbridge Island

Sewer Rate Study and COSA

Revenue Requirements Analysis

Rate Increases	2018	2019	2020	2021	2022	2023	2024
Rate Revenue with no Increase	\$ 3,508,963	\$ 3,556,746	\$ 3,605,318	\$ 3,654,693	\$ 3,704,885	\$ 3,755,908	\$ 3,807,777
Revenues from Prior Rate Increases	-	-	72,106	147,650	226,769	309,608	396,316
Rate Revenue Before Rate Increase (Incl. previous increases)	3,508,963	3,556,746	3,677,424	3,802,342	3,931,654	4,065,516	4,204,093
Required Annual Rate Increase (Full Year)	1.56%	10.26%	4.35%	5.55%	1.87%	1.78%	1.84%
Number of Months New Rates Will Be In Effect	12	12	12	12	12	12	12
<i>Info: Percentage Increase to Generate Required Revenue</i>	1.56%	10.26%	4.35%	5.55%	1.87%	1.78%	1.84%
Policy Induced Rate Increases	0.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
ANNUAL RATE INCREASE	0.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
CUMULATIVE RATE INCREASE	0.00%	2.00%	4.04%	6.12%	8.24%	10.41%	12.62%

Impacts of Rate Increases	2018	2019	2020	2021	2022	2023	2024
Rate Revenues After Rate Increase	\$ 3,508,963	\$ 3,627,880	\$ 3,750,972	\$ 3,878,389	\$ 4,010,287	\$ 4,146,826	\$ 4,288,175
Full Year Rate Revenues After Rate Increase	3,508,963	3,627,880	3,750,972	3,878,389	4,010,287	4,146,826	4,288,175
<i>Partial Year Adjustment</i>	-	-	-	-	-	-	-
Additional (Reduction of) Taxes Due to Rate Increases	-	5,410	11,077	17,011	23,225	29,728	36,533
Net Cash Flow After Rate Increase	\$ (50,484)	\$ (271,454)	\$ (79,926)	\$ (124,721)	\$ 4,558	\$ 8,274	\$ 6,314
Coverage After Rate Increase	3.49	2.84	3.33	2.35	2.61	2.74	2.85
Coverage After Rate Increase (Total Debt)	1.24	1.01	1.18	1.12	1.25	1.31	1.37

New Dept Assumptions	2018	2019	2020	2021	2022	2023	2024
Revenue Bond Proceeds	\$ -	\$ -	\$ -	\$ 3,200,000	\$ -	\$ -	\$ -
PWTF Loan Proceeds	-	-	-	-	-	-	-
Other Loan Proceeds	-	-	-	-	-	-	-

Fund Balance Impacts	2018	2019	2020	2021	2022	2023	2024
Ending Fund Balance - Operating Fund	\$ 2,370,404	\$ 2,098,950	\$ 2,019,025	\$ 742,022	\$ 739,996	\$ 748,270	\$ 754,584
Minimum Target - Operating Fund	453,925	514,789	504,192	494,681	493,330	504,110	515,163
Ending Fund Balance - Capital Fund	\$ 2,983,456	\$ 972,287	\$ 1,240,796	\$ 2,698,662	\$ 2,507,447	\$ 1,734,719	\$ 851,183
Minimum Target - Capital Fund	220,849	245,548	247,319	280,847	287,731	301,165	318,942
Annual CIP (Inflated)	\$ 684,866	\$ 2,469,981	\$ 177,090	\$ 3,352,817	\$ 688,305	\$ 1,343,456	\$ 1,777,673



City of Bainbridge Island Sewer Rate Study and COSA Fund Activity

Funds	2018	2019	2020	2021	2022	2023	2024
OPERATING							
Beginning Balance	\$ 2,420,888	\$ 2,370,404	\$ 2,098,950	\$ 2,019,025	\$ 742,022	\$ 739,996	\$ 748,270
plus: Net Cash Flow after Rate Increase	(50,484)	(271,454)	(79,926)	(124,721)	4,558	8,274	6,314
less: Transfer of Surplus to Capital Fund (If No Manual Entry)	-	-	-	(1,152,282)	(6,584)	-	-
Ending Balance	\$ 2,370,404	\$ 2,098,950	\$ 2,019,025	\$ 742,022	\$ 739,996	\$ 748,270	\$ 754,584
Minimum Target Balance: 60 Days	\$ 453,925	\$ 514,789	\$ 504,192	\$ 494,681	\$ 493,330	\$ 504,110	\$ 515,163
Maximum Target Balance: 90 Days	\$ 680,888	\$ 772,184	\$ 756,288	\$ 742,022	\$ 739,996	\$ 756,164	\$ 772,744
Info: No of Days of Cash Operating Expenses	313	245	241	90	90	89	88
Difference over or (under) target funds	\$ 1,689,516	\$ 1,326,766	\$ 1,262,737	\$ -	\$ -	\$ (7,894)	\$ (18,160)
Manual Entry for Transfer to Capital Fund	-	-	-	-	-	-	-
CAPITAL							
Beginning Balance	\$ 3,298,734	\$ 2,983,456	\$ 972,287	\$ 1,240,796	\$ 2,698,662	\$ 2,507,447	\$ 1,734,719
plus: Rate Funded System Reinvestment	-	-	-	-	-	69,565	148,285
plus: Transfers from Operating Fund	-	-	-	1,152,282	6,584	-	-
plus: Grants/ Donations/ CIAC	-	-	-	-	-	-	-
plus: Additional Proceeds (Costs)	-	-	-	-	-	-	-
plus: System Participation Fee Revenue	336,600	428,978	435,876	442,891	450,026	457,282	464,662
less: System Participation Fee Revenue Towards Debt	-	-	-	-	-	-	-
plus: Revenue Bond Proceeds	-	-	-	3,200,000	-	-	-
plus: PWTF Loans Proceeds	-	-	-	-	-	-	-
plus: Other Loan Proceeds	-	-	-	-	-	-	-
plus: Transfer from LID Assesment Reserve	-	-	-	-	-	-	246,494
plus: Interest Earnings	32,987	29,835	9,723	15,510	40,480	43,880	34,694
Total Funding Sources	\$ 3,668,322	\$ 3,442,268	\$ 1,417,886	\$ 6,051,480	\$ 3,195,752	\$ 3,078,175	\$ 2,628,856
less: Capital Expenditures	(684,866)	(2,469,981)	(177,090)	(3,352,817)	(688,305)	(1,343,456)	(1,777,673)
Ending Capital Fund Balance	\$ 2,983,456	\$ 972,287	\$ 1,240,796	\$ 2,698,662	\$ 2,507,447	\$ 1,734,719	\$ 851,183
Minimum Target Balance	\$ 220,849	\$ 245,548	\$ 247,319	\$ 280,847	\$ 287,731	\$ 301,165	\$ 318,942
COMBINED BEGINNING FUND BALANCE	\$ 5,719,622	\$ 5,353,860	\$ 3,071,238	\$ 3,259,821	\$ 3,440,684	\$ 3,247,443	\$ 2,482,989
COMBINED ENDING FUND BALANCE	\$ 5,353,860	\$ 3,071,238	\$ 3,259,821	\$ 3,440,684	\$ 3,247,443	\$ 2,482,989	\$ 1,605,766
Info: No of Days of Cash Operating Expenses	708	358	389	417	395	296	188
DEBT RESERVE							
Beginning Balance	\$ -	\$ -	\$ -	\$ -	\$ 233,919	\$ 233,919	\$ 233,919
plus: Reserve Funding from New Debt	-	-	-	233,919	-	-	-
less: Use of Reserves for Debt Service	-	-	-	-	-	-	-
Ending Balance	\$ -	\$ -	\$ -	\$ 233,919	\$ 233,919	\$ 233,919	\$ 233,919
Minimum Target Balance	\$ 366,600	\$ 366,600	\$ 366,400	\$ 600,319	\$ 600,319	\$ 600,319	\$ 600,319
LID ASSESMENT RESERVE							
Beginning Balance	\$ 1,696,042	\$ 1,487,197	\$ 1,278,947	\$ 1,071,283	\$ 864,206	\$ 657,716	\$ 451,812
plus: Reserve Funding from LID Assesment	99,067	98,175	97,274	96,373	95,472	94,571	93,670
less: Use of Reserves for Debt Service	(307,913)	(306,425)	(304,938)	(303,450)	(301,963)	(300,475)	(298,988)
less: Transfer of Remaining Funds to Capital	-	-	-	-	-	-	(246,494)
Ending Balance	\$ 1,487,197	\$ 1,278,947	\$ 1,071,283	\$ 864,206	\$ 657,716	\$ 451,812	\$ -



City of Bainbridge Island
Sewer Rate Study and COSA
Price Out of Customer Data

				Winter	Winter	Winter	Winter	Winter	Winter	Summer	Summer	Summer	Summer	Summer	Summer	Winter	
Accounts & Billed Consumption																	
Single-Family	Accounts	Units	Annual Usage	Billed Consumption (Bi-Monthly ccf)												Total	
				January	February	March	April	May	June	July	August	September	October	November	December		
SFR	1,703	0	81,498 ccf	6,527 ccf	6,592 ccf	7,075 ccf	5,667 ccf	6,053 ccf	6,437 ccf	6,791 ccf	6,791 ccf	6,791 ccf	6,791 ccf	6,791 ccf	6,791 ccf	9,189 ccf	81,498 ccf
Flat	16	0	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf
Total	1,719	0	81,498 ccf	6,527 ccf	6,592 ccf	7,075 ccf	5,667 ccf	6,053 ccf	6,437 ccf	6,791 ccf	6,791 ccf	6,791 ccf	6,791 ccf	6,791 ccf	6,791 ccf	9,189 ccf	81,498 ccf

Multi-Family	Accounts	Units	Annual Usage	Billed Consumption (Bi-Monthly ccf)												Total	
				January	February	March	April	May	June	July	August	September	October	November	December		
All	100	1,544	49,092 ccf	3,049 ccf	5,296 ccf	3,053 ccf	4,448 ccf	2,551 ccf	4,789 ccf	4,091 ccf	4,091 ccf	4,091 ccf	4,091 ccf	4,091 ccf	4,091 ccf	5,451 ccf	49,092 ccf
Total	100	1,544	49,092 ccf	3,049 ccf	5,296 ccf	3,053 ccf	4,448 ccf	2,551 ccf	4,789 ccf	4,091 ccf	4,091 ccf	4,091 ccf	4,091 ccf	4,091 ccf	4,091 ccf	5,451 ccf	49,092 ccf

Non-Residential	Accounts	Units	Annual Usage	Billed Consumption (Bi-Monthly ccf)												Total
				January	February	March	April	May	June	July	August	September	October	November	December	
Commercial	200	0	53,376 ccf	1,605 ccf	6,175 ccf	1,650 ccf	5,118 ccf	1,489 ccf	5,701 ccf	2,171 ccf	8,819 ccf	2,036 ccf	9,014 ccf	2,030 ccf	7,566 ccf	53,376 ccf
Commercial Flat	1	0	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf
Other	5	0	2,075 ccf	21 ccf	288 ccf	30 ccf	234 ccf	11 ccf	270 ccf	5 ccf	312 ccf	32 ccf	414 ccf	66 ccf	393 ccf	2,075 ccf
Government	22	0	16,295 ccf	490 ccf	1,885 ccf	504 ccf	1,562 ccf	455 ccf	1,741 ccf	663 ccf	2,692 ccf	622 ccf	2,752 ccf	620 ccf	2,310 ccf	16,295 ccf
Total	228	0	71,746 ccf	2,116 ccf	8,349 ccf	2,184 ccf	6,914 ccf	1,955 ccf	7,712 ccf	2,839 ccf	11,823 ccf	2,689 ccf	12,180 ccf	2,717 ccf	10,269 ccf	71,746 ccf

SIS	Accounts	Units	Annual Usage	Billed Consumption (Bi-Monthly ccf)												Total
				January	February	March	April	May	June	July	August	September	October	November	December	
With Grinder Pump	140	0	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf
No Pump	56	0	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf
Total	196	0	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf

System Total	2,243	1,544	202,335 ccf	11,692 ccf	20,237 ccf	12,311 ccf	17,028 ccf	10,559 ccf	18,939 ccf	13,722 ccf	22,705 ccf	13,572 ccf	23,062 ccf	13,599 ccf	24,909 ccf	202,335 ccf
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Rates		
	Meter Charge	Volume Charge
	Monthly	Per ccf
Single-Family		
SFR	\$42.69	\$7.28
Flat	\$119.80	\$0.00
Multi-Family		
All	\$37.39	\$7.28
Non-Residential		
Commercial	\$123.69	\$7.28
Commercial Flat	\$129.43	\$0.00
Other	\$123.69	\$7.28
Government	\$123.69	\$7.28

Rates - SIS		
	Meter Charge	Volume Charge
	Monthly	Per ccf
SIS		
With Grinder Pump	\$23.59	\$0.00
No Pump	\$19.42	\$0.00

Calculated Revenue		
Base Revenue	Volume Revenue	Total Revenue
\$ 872,413	\$ 593,303	\$ 1,465,716
23,002	-	23,002
\$ 692,762	\$ 357,386	\$ 1,050,148
\$ 296,856	\$ 388,577	\$ 685,433
1,553	-	1,553
7,421	15,106	22,527
32,654	118,628	151,282
\$ 1,926,661	\$ 1,473,000	\$ 3,399,661

Calculated Revenue - SIS		
Base Revenue	Volume Revenue	Total Revenue
\$ 39,631	\$ -	\$ 39,631
13,050	-	13,050
\$ 52,681	\$ -	\$ 52,681

Price Out of 2017 Customer Data	
Estimated Revenue	\$ 3,452,343
Reported Revenue	\$ 3,456,615
Percent Difference	0.12%



City of Bainbridge Island
Sewer Rate Study and COSA
Forecast of Customer Data

Growth Assumptions ^[1]	2017	2018	2019	2020	2021	2022	2023	2024
Single-Family Account Growth		1.73%	1.73%	1.73%	1.73%	1.73%	1.73%	1.73%
Multi-Family Account Growth		1.74%	1.74%	1.74%	1.74%	1.74%	1.74%	1.74%
Non-Residential Account Growth		0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%
SIS Account Growth		1.27%	1.27%	1.27%	1.27%	1.27%	1.27%	1.27%

^[1] Growth Based on Actual Sewer Accounts	2013-2018
Single-Family	1.73%
Multi-Family	1.74%
Non-Residential	0.27%
SIS	1.27%

Single-Family Customer Data Forecast	2017	2018	2019	2020	2021	2022	2023	2024
Customer Counts								
	Growth Assumption							
SFR	Single-Family Account Growth							
Flat	Single-Family Account Growth							
Total Number of Customers	1,705	1,735	1,764	1,795	1,826	1,857	1,889	1,922
	16	16	17	17	17	17	18	18
	1,721	1,751	1,781	1,812	1,843	1,875	1,907	1,940
ERUs								
SFR	1,705	1,735	1,764	1,795	1,826	1,857	1,889	1,922
Flat	20	20	21	21	21	22	22	23
Total ERUs	1,725	1,755	1,785	1,816	1,847	1,879	1,912	1,945
Total Flow								
	Single-Family Demand Growth							
SFR	121,472 ccf	123,568 ccf	125,701 ccf	127,870 ccf	130,077 ccf	132,322 ccf	134,605 ccf	136,928 ccf
Flat	767 ccf	780 ccf	793 ccf	807 ccf	821 ccf	835 ccf	850 ccf	864 ccf
Total	122,239 ccf	124,348 ccf	126,494 ccf	128,677 ccf	130,898 ccf	133,157 ccf	135,455 ccf	137,793 ccf
Billed Flow								
	Single-Family Demand Growth							
SFR	81,599 ccf	83,007 ccf	84,439 ccf	85,896 ccf	87,379 ccf	88,887 ccf	90,421 ccf	91,981 ccf
Flat	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf
Total	81,599 ccf	83,007 ccf	84,439 ccf	85,896 ccf	87,379 ccf	88,887 ccf	90,421 ccf	91,981 ccf
Adopted Monthly Fixed Charges								
SFR	\$42.69	\$42.69	\$42.69	\$42.69	\$42.69	\$42.69	\$42.69	\$42.69
Flat	\$119.80	\$119.80	\$119.80	\$119.80	\$119.80	\$119.80	\$119.80	\$119.80
Adopted Volume Charges								
SFR	\$7.28	\$7.28	\$7.28	\$7.28	\$7.28	\$7.28	\$7.28	\$7.28
Flat	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Estimated Revenue At Adopted Rates:								
Base Charges	\$ 896,522	\$ 911,994	\$ 927,733	\$ 943,744	\$ 960,031	\$ 976,599	\$ 993,453	\$ 1,010,598
Consumption Charges	594,037	604,289	614,718	625,326	636,118	647,096	658,264	669,624
Total	\$ 1,490,560	\$ 1,516,283	\$ 1,542,451	\$ 1,569,070	\$ 1,596,149	\$ 1,623,695	\$ 1,651,717	\$ 1,680,222



City of Bainbridge Island
Sewer Rate Study and COSA
Forecast of Customer Data

Multi-Family Customer Data Forecast		2017	2018	2019	2020	2021	2022	2023	2024
Customer Counts		Growth Assumption							
All	Multi-Family Account Growth	100	102	104	105	107	109	111	113
Total Number of Accounts		100	102	104	105	107	109	111	113
Unit Counts		Growth Assumption							
All	Multi-Family Account Growth	1,546	1,573	1,600	1,628	1,656	1,685	1,714	1,744
Total Number of Units		1,546	1,573	1,600	1,628	1,656	1,685	1,714	1,744
ERUs		Growth Assumption							
All		1,546	1,573	1,600	1,628	1,656	1,685	1,714	1,744
Total ERUs		1,546	1,573	1,600	1,628	1,656	1,685	1,714	1,744
Total Flow		Multi-Family Demand Growth							
All		50,939 ccf	51,823 ccf	52,723 ccf	53,639 ccf	54,570 ccf	55,518 ccf	56,482 ccf	57,462 ccf
Total		50,939 ccf	51,823 ccf	52,723 ccf	53,639 ccf	54,570 ccf	55,518 ccf	56,482 ccf	57,462 ccf
Billed Flow		Multi-Family Demand Growth							
All		49,152 ccf	50,006 ccf	50,874 ccf	51,757 ccf	52,656 ccf	53,570 ccf	54,501 ccf	55,447 ccf
Total		49,152 ccf	50,006 ccf	50,874 ccf	51,757 ccf	52,656 ccf	53,570 ccf	54,501 ccf	55,447 ccf
Adopted Monthly Fixed Charges									
All		\$37.39	\$37.39	\$37.39	\$37.39	\$37.39	\$37.39	\$37.39	\$37.39
Adopted Volume Charges									
All		\$7.28	\$7.28	\$7.28	\$7.28	\$7.28	\$7.28	\$7.28	\$7.28
Estimated Revenue At Adopted Rates:									
Base Charges		\$ 693,619	\$ 705,663	\$ 717,916	\$ 730,382	\$ 743,064	\$ 755,967	\$ 769,093	\$ 782,448
Consumption Charges		357,829	364,042	370,363	376,794	383,337	389,993	396,765	403,654
Total		\$ 1,051,448	\$ 1,069,705	\$ 1,088,279	\$ 1,107,176	\$ 1,126,401	\$ 1,145,960	\$ 1,165,858	\$ 1,186,102



City of Bainbridge Island

Sewer Rate Study and COSA

Forecast of Customer Data

Non-Residential Customer Data Forecast		2017	2018	2019	2020	2021	2022	2023	2024
Customer Counts		Growth Assumption							
Commercial	Non-Residential Account Growth	200	201	201	202	202	203	203	204
Commercial Flat	Non-Residential Account Growth	1	1	1	1	1	1	1	1
Other	Non-Residential Account Growth	5	5	5	5	5	5	5	5
Government	Non-Residential Account Growth	22	22	22	22	22	22	22	22
Total Number of Customers		228	229	229	230	231	231	232	233
ERUs									
Commercial		1,335	1,339	1,342	1,346	1,349	1,353	1,356	1,360
Commercial Flat		7	7	7	7	7	7	7	7
Other		26	26	27	27	27	27	27	27
Government		116	116	117	117	117	118	118	118
Total ERUs		1,484	1,488	1,492	1,496	1,500	1,504	1,508	1,512
Total Flow		Non-Residential Demand Growth							
Commercial		53,442 ccf	53,584 ccf	53,726 ccf	53,868 ccf	54,011 ccf	54,155 ccf	54,298 ccf	54,442 ccf
Commercial Flat		267 ccf	268 ccf	269 ccf	269 ccf	270 ccf	271 ccf	271 ccf	272 ccf
Other		2,078 ccf	2,083 ccf	2,089 ccf	2,094 ccf	2,100 ccf	2,105 ccf	2,111 ccf	2,116 ccf
Government		16,315 ccf	16,358 ccf	16,402 ccf	16,445 ccf	16,489 ccf	16,533 ccf	16,577 ccf	16,621 ccf
Total		72,102 ccf	72,293 ccf	72,485 ccf	72,677 ccf	72,870 ccf	73,063 ccf	73,257 ccf	73,451 ccf
Billed Flow		Non-Residential Demand Growth							
Commercial		53,442 ccf	53,584 ccf	53,726 ccf	53,868 ccf	54,011 ccf	54,155 ccf	54,298 ccf	54,442 ccf
Commercial Flat		0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf	0 ccf
Other		2,078 ccf	2,083 ccf	2,089 ccf	2,094 ccf	2,100 ccf	2,105 ccf	2,111 ccf	2,116 ccf
Government		16,315 ccf	16,358 ccf	16,402 ccf	16,445 ccf	16,489 ccf	16,533 ccf	16,577 ccf	16,621 ccf
Total		71,835 ccf	72,025 ccf	72,216 ccf	72,408 ccf	72,600 ccf	72,793 ccf	72,986 ccf	73,179 ccf
Adopted Monthly Fixed Charges									
Commercial		\$123.69	\$123.69	\$123.69	\$123.69	\$123.69	\$123.69	\$123.69	\$123.69
Commercial Flat		\$129.43	\$129.43	\$129.43	\$129.43	\$129.43	\$129.43	\$129.43	\$129.43
Other		\$123.69	\$123.69	\$123.69	\$123.69	\$123.69	\$123.69	\$123.69	\$123.69
Government		\$123.69	\$123.69	\$123.69	\$123.69	\$123.69	\$123.69	\$123.69	\$123.69
Adopted Volume Charges									
Commercial		\$7.28	\$7.28	\$7.28	\$7.28	\$7.28	\$7.28	\$7.28	\$7.28
Commercial Flat		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other		\$7.28	\$7.28	\$7.28	\$7.28	\$7.28	\$7.28	\$7.28	\$7.28
Government		\$7.28	\$7.28	\$7.28	\$7.28	\$7.28	\$7.28	\$7.28	\$7.28
Estimated Revenue At Adopted Rates:									
Base Charges		\$ 338,904	\$ 339,803	\$ 340,704	\$ 341,608	\$ 342,514	\$ 343,422	\$ 344,333	\$ 345,247
Consumption Charges		522,957	524,344	525,735	527,130	528,528	529,930	531,336	532,745
Total		\$ 861,861	\$ 864,147	\$ 866,439	\$ 868,737	\$ 871,042	\$ 873,352	\$ 875,669	\$ 877,992
Estimated Revenue At Adopted Rates - Winslow									
Base Charges		\$ 1,929,045	\$ 1,957,460	\$ 1,986,353	\$ 2,015,734	\$ 2,045,609	\$ 2,075,988	\$ 2,106,880	\$ 2,138,292
Consumption Charges		1,474,823	1,492,675	1,510,816	1,529,250	1,547,983	1,567,019	1,586,364	1,606,023
Total		\$ 3,403,868	\$ 3,450,135	\$ 3,497,170	\$ 3,544,984	\$ 3,593,592	\$ 3,643,007	\$ 3,693,244	\$ 3,744,315



City of Bainbridge Island
Sewer Rate Study and COSA
Forecast of Customer Data

SIS Customer Data Forecast		2017	2018	2019	2020	2021	2022	2023	2024
Customer Counts		Growth Assumption							
With Grinder Pump	SIS Account Growth	140	142	144	146	147	149	151	153
No Pump	SIS Account Growth	56	80	81	82	83	84	85	86
Total Number of Customers		196	222	225	228	231	233	236	239
ERUs									
With Grinder Pump		140	142	144	146	147	149	151	153
No Pump		56	80	81	82	83	84	85	86
Total Number of ERUs		196	222	225	228	231	233	236	239
Adopted Monthly Fixed Charges									
With Grinder Pump		\$23.59	\$23.59	\$23.59	\$23.59	\$23.59	\$23.59	\$23.59	\$23.59
No Pump		\$19.42	\$19.42	\$19.42	\$19.42	\$19.42	\$19.42	\$19.42	\$19.42
Adopted Volume Charges									
With Grinder Pump		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
No Pump		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Estimated Revenue At Adopted Rates:									
Base Charges		\$ 52,747	\$ 58,828	\$ 59,576	\$ 60,334	\$ 61,101	\$ 61,878	\$ 62,665	\$ 63,461
Consumption Charges		-	-	-	-	-	-	-	-
Total		\$ 52,747	\$ 58,828	\$ 59,576	\$ 60,334	\$ 61,101	\$ 61,878	\$ 62,665	\$ 63,461
Estimated Revenue At Adopted Rates - Total System									
Base Charges		\$ 1,981,792	\$ 2,016,288	\$ 2,045,930	\$ 2,076,067	\$ 2,106,710	\$ 2,137,866	\$ 2,169,544	\$ 2,201,754
Consumption Charges		1,474,823	1,492,675	1,510,816	1,529,250	1,547,983	1,567,019	1,586,364	1,606,023
Total		\$ 3,456,615	\$ 3,508,963	\$ 3,556,746	\$ 3,605,318	\$ 3,654,693	\$ 3,704,885	\$ 3,755,908	\$ 3,807,777



City of Bainbridge Island
Sewer Rate Study and COSA
Functional Allocation

Allocation of Plant in Service										
Plant in Service	Total Costs	FUNCTIONS OF SEWER SERVICE						As All Others	TOTAL	ALLOCATION BASIS
		Customer	Flow - Collection	Flow - WWTP	BOD	TSS	SIS Only			
Collection	\$ 11,405,264	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	All to Flow - Collection Flow-WWTP/BOD/TSS All to Flow As All Others
Treatment	20,299,140	0.00%	0.00%	50.00%	25.00%	25.00%	0.00%	0.00%	100.00%	
Pumping	1,084,160	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	
General	1,556,316	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	
Total Utility Plant	\$ 34,344,880	\$ -	\$ 12,489,424	\$ 10,149,570	\$ 5,074,785	\$ 5,074,785	\$ -	\$ 1,556,316	\$ 34,344,880	-
Sewer Service Functions		0.00%	38.09%	30.95%	15.48%	15.48%	0.00%	-	100.00%	
Allocation of "As All Others"		\$ -	\$ 592,813	\$ 481,751	\$ 240,876	\$ 240,876	\$ -	\$ (1,556,316)	\$ -	
TOTAL	\$ 34,344,880	\$ -	\$ 13,082,237	\$ 10,631,321	\$ 5,315,661	\$ 5,315,661	\$ -	\$ -	\$ 34,344,880	
Allocation Percentages		0.00%	38.09%	30.95%	15.48%	15.48%	0.00%	0.00%	100.00%	

Allocation of Operating Expenses												
OPERATING EXPENSE	Test Year →			FUNCTIONS OF SEWER SERVICE						As All Others	TOTAL	ALLOCATION BASIS
	2019	2020	2021	Customer	Flow - Collection	Flow - WWTP	BOD	TSS	SIS Only			
Taxes												
State Excise Tax	\$ 63,658	\$ 64,541	\$ 65,439	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
City Tax	254,966	258,431	262,249	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Training												
ENG - Sewer Training	3,000	3,000	3,000	0.00%	38.09%	30.95%	15.48%	15.48%	0.00%	0.00%	100.00%	As Plant-In-Service
Winslow Collection Training	5,000	5,150	5,253	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	As Flow - WWTP
Salary												
Ex - Sewer - Admin - Salary	18,398	18,847	19,224	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Legal - Sewer Fund	19,444	20,326	20,732	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
HR - Sewer Salary	12,151	12,781	13,037	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Exec - Clerk - Sewer Salary	2,411	2,469	2,519	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Salary	199,584	208,140	212,303	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
ENG - SIS - Admin - Salary	3,802	3,894	3,972	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	All SIS
ENG - Sewer - Ops - Salary	5,439	5,619	5,731	0.00%	38.09%	30.95%	15.48%	15.48%	0.00%	0.00%	100.00%	As Plant-In-Service
BLD - Sewer - Admin - Salary	1,979	2,028	2,068	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
PW - Sewer Salary	37,388	29,951	30,550	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
ENG - Sewer Admin	28,202	29,447	30,036	0.00%	38.09%	30.95%	15.48%	15.48%	0.00%	0.00%	100.00%	As Plant-In-Service
Winslow Collection Salary	230,433	238,373	243,141	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	As Flow - WWTP
WWTP Salary	319,367	327,281	333,827	0.00%	0.00%	50.00%	25.00%	25.00%	0.00%	0.00%	100.00%	As Treatment
SIS Salary	23,645	24,396	24,884	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	All SIS
IT - Sewer Salary	32,323	33,153	33,816	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Salary Overtime												
FIN - Sewer Salary OT	1,200	1,236	1,261	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
IT - Sewer - Salary - OT	425	425	425	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Winslow Collection Salary OT	76,865	79,071	80,652	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	As Flow - WWTP
Salary Temp												
O&M - WWTP - Salary Temp	8,000	8,000	8,000	0.00%	0.00%	50.00%	25.00%	25.00%	0.00%	0.00%	100.00%	As Treatment
Winslow Collection Salary Temp	8,000	8,000	8,000	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	As Flow - WWTP
Staff Separation Buyouts - GG	3,000	5,000	5,100	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses



City of Bainbridge Island
Sewer Rate Study and COSA
Functional Allocation

Allocation of Operating Expenses (Continued)													
OPERATING EXPENSE	Test Year 0	2019	2020	2021	FUNCTIONS OF SEWER SERVICE						As All Others	TOTAL	ALLOCATION BASIS
	TOTAL COSTS	TOTAL COSTS	TOTAL COSTS	Customer	Flow - Collection	Flow - WWTP	BOD	TSS	SIS Only				
Benefits													
Ex - Sewer - Admin - Benefits	5,646	5,757	5,987	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Legal - Sewer Benefits	7,026	7,313	7,605	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
HR - Sewer Benefits	4,815	4,995	5,195	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Exec - Clerk - Sewer Benefits	1,170	1,208	1,257	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Benefits	83,111	86,334	89,788	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
BLD - Sewer - Admin - Benefits	789	817	849	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
PW - Sewer Benefits	14,370	12,937	13,454	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
ENG - SIS - Admin - Benefits	1,555	1,609	1,673	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	100.00%	All SIS
ENG - Sewer - Ops - Benefits	2,425	2,517	2,618	0.00%	38.09%	30.95%	15.48%	15.48%	0.00%	0.00%	0.00%	100.00%	As Plant-In-Service
ENG - Sewer Admin	13,077	13,650	14,196	0.00%	38.09%	30.95%	15.48%	15.48%	0.00%	0.00%	0.00%	100.00%	As Plant-In-Service
Winslow Collection Benefits	111,230	115,241	119,850	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	As Flow - WWTP
WWTP Benefits	160,472	165,492	172,111	0.00%	0.00%	50.00%	25.00%	25.00%	0.00%	0.00%	0.00%	100.00%	As Treatment
SIS Benefits	11,124	11,529	11,990	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	100.00%	All SIS
IT - Sewer Benefits	14,390	14,825	15,418	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
GG Sewer Works Com	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
GG Sewer Unemployment	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Staff Separation Buyouts - GG	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Supplies													
ENG - Sewer Admin	450	450	459	0.00%	38.09%	30.95%	15.48%	15.48%	0.00%	0.00%	0.00%	100.00%	As Plant-In-Service
Winslow Collection Supplies	30,900	31,827	32,462	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	As Flow - WWTP
PW - Sewer Supplies	100	100	102	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	As All Other Direct Expenses
O&M WWTP Supplies	66,950	68,959	70,335	0.00%	0.00%	50.00%	25.00%	25.00%	0.00%	0.00%	0.00%	100.00%	As Treatment
O&M SIS Supplies	2,060	2,122	2,164	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	100.00%	All SIS
Fuel Consumed													
Winslow Collection Fuel	4,742	5,928	6,046	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	As Flow - WWTP
O&M WWTP Fuel	4,232	5,290	5,396	0.00%	0.00%	50.00%	25.00%	25.00%	0.00%	0.00%	0.00%	100.00%	As Treatment
O&M SIS Fuel	2,495	3,118	3,180	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	100.00%	All SIS
Professional Services	45,419	116,360	118,682	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
One-Time WWTP Study	100,000	-	-	0.00%	0.00%	50.00%	25.00%	25.00%	0.00%	0.00%	0.00%	100.00%	As Treatment
Outside Attorney - Legal Advice	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Outside Attorney - Litigation	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Telephone/Fax													
GG Sewer Fac Phone	1,000	1,100	1,122	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
WWTP Telephone/Fax	21,000	22,000	22,439	0.00%	0.00%	50.00%	25.00%	25.00%	0.00%	0.00%	0.00%	100.00%	As Treatment
Eng - Sewer - Admin - Outreach	2,500	2,500	2,550	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	All Customer
Postage													
FIN-SIS-POSTAGE	500	500	510	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	100.00%	All SIS
GG-Sewer - Fac - Postage	4,000	4,000	4,080	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	All Customer
GG-WWTP- Postage/Shipping	4,100	-	-	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	All Customer
Travel Expense - ENG Sewer Admin	250	250	255	0.00%	38.09%	30.95%	15.48%	15.48%	0.00%	0.00%	0.00%	100.00%	As Plant-In-Service
Advertising	-	-	-	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	All Customer
Rents & Leases - Operating													
ENG - Sewer Admin	600	600	612	0.00%	38.09%	30.95%	15.48%	15.48%	0.00%	0.00%	0.00%	100.00%	As Plant-In-Service
Winslow Collection - Rents	309	318	324	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	As Flow - WWTP
O&M WWTP Rents	618	637	650	0.00%	0.00%	50.00%	25.00%	25.00%	0.00%	0.00%	0.00%	100.00%	As Treatment
O&M SIS Rents	62	64	65	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	100.00%	All SIS
Rents - Interfund	68,900	67,700	69,051	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Insurance													
GG - Sewer - Insurance	55,000	52,000	53,038	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
GG - SIS - Insurance	5,000	5,000	5,100	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	100.00%	All SIS
Utilities - Electric													
GG - Sewer Electric	27,000	27,000	27,539	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
GG - WWTP Electric	75,000	75,000	76,497	0.00%	0.00%	50.00%	25.00%	25.00%	0.00%	0.00%	0.00%	100.00%	As Treatment



City of Bainbridge Island
Sewer Rate Study and COSA
Functional Allocation

Allocation of Operating Expenses (Continued)													
OPERATING EXPENSE	Test Year 0	2019	2020	2021	FUNCTIONS OF SEWER SERVICE						As All Others	TOTAL	ALLOCATION BASIS
	TOTAL COSTS	TOTAL COSTS	TOTAL COSTS	Customer	Flow - Collection	Flow - WWTP	BOD	TSS	SIS Only				
Utilities - SSWM Fees													
GG - Sewer COBI SSWM	400	420	428	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses	
GG - WWTP - SSWM	3,300	3,400	3,468	0.00%	0.00%	50.00%	25.00%	25.00%	0.00%	0.00%	100.00%	As Treatment	
Utilities - BI Water/Sewer													
O&M Sewer City Water/Sewer	1,185	1,220	1,244	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses	
O&M SIS City Water/Sewer	206	212	216	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	All SIS	
O&M WWTP Water/Sewer	40,000	40,000	40,798	0.00%	0.00%	50.00%	25.00%	25.00%	0.00%	0.00%	100.00%	As Treatment	
Utilities - WWTP Garbage	4,500	4,500	4,590	0.00%	0.00%	50.00%	25.00%	25.00%	0.00%	0.00%	100.00%	As Treatment	
Biosolids Waste Disposal	120,510	124,125	126,602	0.00%	0.00%	50.00%	25.00%	25.00%	0.00%	0.00%	100.00%	As Treatment	
Repairs													
Annual Swr Coll Upgrade-R&M	50,000	50,998	52,016	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	As Flow - Collection	
Bldg Svcs Contr-Wwtp-Maint	701	722	736	0.00%	0.00%	50.00%	25.00%	25.00%	0.00%	0.00%	100.00%	As Treatment	
Grinder Pump Maint Contract	32,960	33,949	34,627	0.00%	38.09%	30.95%	15.48%	15.48%	0.00%	0.00%	100.00%	As Plant-In-Service	
Lovell Beach Mains-Repairs	36,050	37,132	37,873	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	As Flow - WWTP	
O&M - Sewer Opns Repairs	229,000	137,000	15,537	0.00%	38.09%	30.95%	15.48%	15.48%	0.00%	0.00%	100.00%	As Plant-In-Service	
O&M-Sis-Repairs	5,150	5,305	5,411	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	All SIS	
O&M-Swr-Gen Load Test-R&M	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses	
O&M-WWTP-Gen Load Test-R&M	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses	
O&M-WWTP-Repairs	25,750	26,523	27,052	0.00%	0.00%	50.00%	25.00%	25.00%	0.00%	0.00%	100.00%	As Treatment	
Win Coll-R&M	25,750	26,523	27,052	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	As Flow - WWTP	
Computer Support Maintenance	1,300	1,400	1,428	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses	
Dues, Subscriptions & Memberships													
ENG - Sewer Miscellaneous	500	500	510	0.00%	38.09%	30.95%	15.48%	15.48%	0.00%	0.00%	100.00%	As Plant-In-Service	
Winslow Collection Dues/Subscriptions	410	422	430	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	As Flow - WWTP	
O&M WWTP Dues/Subscriptions	920	948	967	0.00%	0.00%	50.00%	25.00%	25.00%	0.00%	0.00%	100.00%	As Treatment	
O&M SIS Dues/Subscriptions	75	77	79	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	All SIS	
WWTP Permits - Cobi or Outside Agency	9,500	9,785	9,980	0.00%	0.00%	50.00%	25.00%	25.00%	0.00%	0.00%	100.00%	As Treatment	
Intergovernmental Prof Svcs													
Clerk Sewer Record	200	200	204	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses	
Clerk SIS Record	200	200	204	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	All SIS	
SIS - SD #7 Processing	230,000	235,000	237,988	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	All SIS	
Intergovernmental Prof Svcs	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses	
Total 2019 Operating Expenses				\$ 10,600	\$ 170,330	\$ 1,107,886	\$ 289,098	\$ 289,098	\$ 285,874	\$ 978,749	\$ 3,131,635		
Allocation of "As All Others"				5,395	86,698	563,914	147,151	147,151	28,440	(978,749)	-		
Reallocated 2019 Operating Expenses				\$ 15,995	\$ 257,028	\$ 1,671,800	\$ 436,249	\$ 436,249	\$ 314,314	\$ -	\$ 3,131,635		
Percent of Total				0.51%	8.21%	53.38%	13.93%	13.93%	10.04%	0.00%	100.00%		
Total 2020 Operating Expenses				\$ 6,500	\$ 137,457	\$ 1,059,577	\$ 255,796	\$ 255,796	\$ 293,027	\$ 1,059,014	\$ 3,067,167		
Allocation of "As All Others"				3,882	82,096	632,831	152,774	152,774	34,656	(1,059,014)	-		
Reallocated 2020 Operating Expenses				\$ 10,382	\$ 219,553	\$ 1,692,408	\$ 408,570	\$ 408,570	\$ 327,683	\$ -	\$ 3,067,167		
Percent of Total				0.34%	7.16%	55.18%	13.32%	13.32%	10.68%	0.00%	100.00%		
Total 2021 Operating Expenses				\$ 6,630	\$ 92,994	\$ 1,046,111	\$ 242,513	\$ 242,513	\$ 297,438	\$ 1,081,114	\$ 3,009,311		
Allocation of "As All Others"				4,241	59,482	669,127	155,119	155,119	38,026	(1,081,114)	-		
Reallocated 2021 Operating Expenses				\$ 10,870	\$ 152,476	\$ 1,715,238	\$ 397,632	\$ 397,632	\$ 335,463	\$ -	\$ 3,009,311		
Percent of Total				0.35%	4.97%	55.92%	12.96%	12.96%	10.94%	0.00%	100.00%		



City of Bainbridge Island
Sewer Rate Study and COSA
Functional Allocation

Allocation of Revenue Requirement												
REVENUE REQUIREMENT	Design Rates For =>			FUNCTIONS OF SEWER SERVICE						As All Others	TOTAL	ALLOCATION BASIS
	2019	2020	2021	Customer	Flow - Collection	Flow - WWTP	BOD	TSS	SIS Only			
	TOTAL COSTS	TOTAL COSTS	TOTAL COSTS									
Rate-Funded Operating & Capital Expenses												
Cash Operating Expenses	\$ 3,131,635	\$ 3,067,167	\$ 3,009,311									
Debt Service - Treatment	814,324	807,965	806,406	0.00%	0.00%	50.00%	25.00%	25.00%	0.00%	0.00%	100.00%	As O&M Expenses As Treatment
Debt Service - Winslow Collection	211,670	210,679	209,688	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	As Flow - WWTP
New Debt Service - General	-	-	233,919	0.00%	38.09%	30.95%	15.48%	15.48%	0.00%	0.00%	100.00%	As Plant-In-Service
Rate Funded System Reinvestment	-	-	-	0.00%	38.09%	30.95%	15.48%	15.48%	0.00%	0.00%	100.00%	As Plant in Service
OTHER REVENUES AND ADJUSTMENTS												
Less:												
Engineering Fees	\$ -	\$ -	\$ -	0.00%	38.09%	30.95%	15.48%	15.48%	0.00%	0.00%	100.00%	As Plant in Service
Water Sales - Conn/Inspect Fees	(10,000)	(10,000)	(10,000)	0.00%	38.09%	30.95%	15.48%	15.48%	0.00%	0.00%	100.00%	As Plant in Service
Sewer Misc Revenue	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Penalties on Cap Assessments	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Interest on Cap Assessments	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Spec Assess Prin Capital	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Investment Interest	(23,704)	(20,990)	(25,238)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Inventory Markup	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
System Participation-Lynnwood	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	All KCSD #7
KCSD #7 Pass-Through Revenue	(230,000)	(235,000)	(237,988)	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	All KCSD #7
Plus:												
Net Cash Flow After Rate Increase	(271,454)	(79,926)	(124,721)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Incremental Taxes from Rate Increase	5,410	11,077	17,011	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Adjustment for Partial Year Increase	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	As All Other Direct Expenses
Total 2019 Revenue Requirement				\$ 15,995	\$ 253,219	\$ 2,287,537	\$ 638,282	\$ 638,282	\$ 84,314	\$ (289,748)	\$ 3,627,880	
Allocation of "As All Others"				\$ (1,117)	\$ (17,690)	\$ (159,805)	\$ (44,590)	\$ (44,590)	\$ (21,958)	\$ 289,748	\$ -	
Reallocated 2019 Rate Revenue Requirement				\$ 14,878	\$ 235,529	\$ 2,127,732	\$ 593,693	\$ 593,693	\$ 62,356	\$ -	\$ 3,627,880	
Percent of Total				0.41%	6.49%	58.65%	16.36%	16.36%	1.72%	0.00%	100.00%	
Total 2020 Revenue Requirement				\$ 10,382	\$ 215,744	\$ 2,303,974	\$ 609,014	\$ 609,014	\$ 92,683	\$ (89,839)	\$ 3,750,972	
Allocation of "As All Others"				\$ (229)	\$ (4,755)	\$ (50,784)	\$ (13,424)	\$ (13,424)	\$ (7,223)	\$ 89,839	\$ -	
Reallocated 2020 Rate Revenue Requirement				\$ 10,153	\$ 210,989	\$ 2,253,190	\$ 595,590	\$ 595,590	\$ 85,460	\$ -	\$ 3,750,972	
Percent of Total				0.27%	5.62%	60.07%	15.88%	15.88%	2.28%	0.00%	100.00%	
Total 2021 Revenue Requirement				\$ 10,870	\$ 237,768	\$ 2,397,442	\$ 633,890	\$ 633,890	\$ 97,475	\$ (132,947)	\$ 3,878,389	
Allocation of "As All Others"				\$ (340)	\$ (7,439)	\$ (75,008)	\$ (19,832)	\$ (19,832)	\$ (10,496)	\$ 132,947	\$ -	
Reallocated 2021 Rate Revenue Requirement				\$ 10,530	\$ 230,329	\$ 2,322,434	\$ 614,058	\$ 614,058	\$ 86,980	\$ -	\$ 3,878,389	
Percent of Total				0.27%	5.94%	59.88%	15.83%	15.83%	2.24%	0.00%	100.00%	



City of Bainbridge Island Sewer Rate Study and COSA Customer Class Cost Allocation

Accounts
Flow
Flow - Winslow
BOD
TSS
ERUs

Projected 2019 Statistics					
	Single-Family	Multi-Family	Non-Residential	SIS	Total
Accounts	1,781	104	229	225	2,339
Flow	85,233 ccf	50,874 ccf	72,485 ccf	10,732 ccf	219,323 ccf
Flow - Winslow	85,233 ccf	50,874 ccf	72,485 ccf	0 ccf	208,592 ccf
BOD	133,007 lbs	79,390 lbs	227,133 lbs	0 lbs	439,529 lbs
TSS	133,007 lbs	79,390 lbs	195,461 lbs	0 lbs	407,857 lbs
ERUs	1,785	1,600	1,492	225	5,102
BOD Strength	250 mg/L	250 mg/L	502 mg/L	0 mg/L	
TSS Strength	250 mg/L	250 mg/L	432 mg/L	0 mg/L	

Customer
Flow - Collection
Flow - WWTP
BOD
TSS
SIS Only

Allocation Basis
Accounts
Flow
Flow - WWTP
BOD
TSS
All to SIS

Allocation of 2019 Revenue Requirement					
	Single-Family	Multi-Family	Non-Residential	SIS	Total
Customer	\$ 11,329	\$ 659	\$ 1,460	\$ 1,430	\$ 14,878
Flow - Collection	91,530	54,633	77,841	11,525	235,529
Flow - WWTP	869,412	518,939	739,381	-	2,127,732
BOD	179,658	107,235	306,799	-	593,693
TSS	193,610	115,563	284,520	-	593,693
SIS Only	-	-	-	62,356	62,356
Total	\$ 1,345,540	\$ 797,030	\$ 1,410,001	\$ 75,311	\$ 3,627,880

Cost Allocation Summary					
	EXISTING STRUCTURE		FULL COST OF SERVICE		DIFFERENCE
Class	2019 Revenue at Existing Rates	Percent of Total	COSA 2019 Revenue	Percent of Total	\$ Difference / Rate Adjustment
Single-Family	\$ 1,542,451	43.4%	\$ 1,345,540	37.1%	\$ (196,912) / -12.8%
Multi-Family	1,088,279	30.6%	797,030	22.0%	(291,250) / -26.8%
Non-Residential	866,439	24.4%	1,410,001	38.9%	543,562 / 62.7%
SIS	59,576	1.7%	75,311	2.1%	15,735 / 26.4%
Total	\$ 3,556,746	100.0%	\$ 3,627,880	100.0%	\$ 71,135 / 2.0%
	EXISTING STRUCTURE		COST-OF-SERVICE ALTERNATIVE		DIFFERENCE
Class	2019 Revenue at Existing Rates	Percent of Total	COSA 2019 Revenue	Percent of Total	\$ Difference / Rate Adjustment
Single-Family	\$ 1,542,451	43.4%	\$ 1,542,451	42.5%	\$ (49,358) / 0.0%
Multi-Family	1,088,279	30.6%	1,088,279	30.0%	(81,621) / 0.0%
Non-Residential	866,439	24.4%	934,021	25.7%	188,884 / 7.8%
SIS	59,576	1.7%	63,129	1.7%	13,231 / 6.0%
Total	\$ 3,556,746	100.0%	\$ 3,627,880	100.0%	\$ 71,135 / 2.0%



City of Bainbridge Island Sewer Rate Study and COSA Customer Class Cost Allocation

Accounts
Flow
Flow - Winslow
BOD
TSS
ERUS

Projected 2020 Statistics				
Single-Family	Multi-Family	Non-Residential	SIS	Total
1,812	105	230	228	2,375
86,703 ccf	51,757 ccf	72,677 ccf	10,868 ccf	222,007 ccf
86,703 ccf	51,757 ccf	72,677 ccf	0 ccf	211,138 ccf
135,302 lbs	80,768 lbs	227,735 lbs	0 lbs	443,806 lbs
135,302 lbs	80,768 lbs	195,979 lbs	0 lbs	412,050 lbs
1,816	1,628	1,496	228	5,167
BOD Strength 250 mg/L	250 mg/L	502 mg/L	0 mg/L	
TSS Strength 250 mg/L	250 mg/L	432 mg/L	0 mg/L	

BOD Strength
TSS Strength

Customer
Flow - Collection
Flow - WWTP
BOD
TSS
SIS Only

Allocation Basis
Accounts
Flow
Flow - Winslow
BOD
TSS
All to SIS

Allocation of 2020 Revenue Requirement				
Single-Family	Multi-Family	Non-Residential	SIS	Total
\$ 7,746	\$ 451	\$ 984	\$ 973	\$ 10,153
82,401	49,189	69,070	10,329	210,989
925,268	552,337	775,586	-	2,253,190
181,576	108,391	305,622	-	595,590
195,570	116,745	283,275	-	595,590
-	-	-	85,460	85,460
\$ 1,392,561	\$ 827,112	\$ 1,434,537	\$ 96,763	\$ 3,750,972

Cost Allocation Summary						
Class	2019 FULL COS RATES		2020 FULL COS RATES		DIFFERENCE	
	2020 Revenue at 2019 Rates	Percent of Total	COSA 2020 Revenue	Percent of Total	\$ Difference	Rate Adjustment
Single-Family	\$ 1,368,761	37.3%	\$ 1,392,561	37.1%	\$ 23,800	1.7%
Multi-Family	810,869	22.1%	827,112	22.1%	16,243	2.0%
Non-Residential	1,413,741	38.5%	1,434,537	38.2%	20,796	1.5%
SIS	76,268	2.1%	96,763	2.6%	20,494	26.9%
Total	\$ 3,669,639	100.0%	\$ 3,750,972	100.0%	\$ 81,334	2.2%
Class	2019 COS ALT RATES		2020 COS ALT RATES		DIFFERENCE	
	2020 Revenue at 2019 Rates	Percent of Total	COSA 2020 Revenue	Percent of Total	\$ Difference	Rate Adjustment
Single-Family	\$ 1,569,070	42.7%	\$ 1,569,070	41.8%	\$ -	0.0%
Multi-Family	1,107,176	30.1%	1,107,176	29.5%	-	0.0%
Non-Residential	936,499	25.5%	1,006,736	26.8%	70,237	7.5%
SIS	63,931	1.7%	67,990	1.8%	4,058	6.3%
Total	\$ 3,676,677	100.0%	\$ 3,750,972	100.0%	\$ 74,295	2.0%



City of Bainbridge Island Sewer Rate Study and COSA Customer Class Cost Allocation

Accounts
Flow
Flow - Winslow
BOD
TSS
ERUs

Projected 2021 Statistics					
	Single-Family	Multi-Family	Non-Residential	SIS	Total
Accounts	1,843	107	231	231	2,412
Flow	88,200 ccf	52,656 ccf	72,870 ccf	11,007 ccf	224,733 ccf
Flow - Winslow	88,200 ccf	52,656 ccf	72,870 ccf	0 ccf	213,726 ccf
BOD	137,637 lbs	82,171 lbs	228,339 lbs	0 lbs	448,147 lbs
TSS	137,637 lbs	82,171 lbs	196,499 lbs	0 lbs	416,307 lbs
ERUs	1,847	1,656	1,500	231	5,234
BOD Strength	250 mg/L	250 mg/L	502 mg/L	0 mg/L	
TSS Strength	250 mg/L	250 mg/L	432 mg/L	0 mg/L	

Customer
Flow - Collection
Flow - WWTP
BOD
TSS
SIS Only

Allocation Basis
Accounts
Flow
Flow - Winslow
BOD
TSS
All to SIS

Allocation of 2021 Revenue Requirement					
	Single-Family	Multi-Family	Non-Residential	SIS	Total
Accounts	\$ 8,047.81	\$ 468	\$ 1,007	\$ 1,007	\$ 10,530
Flow - Collection	90,396	53,968	74,685	11,281	230,329
Flow - WWTP	958,415	572,183	791,836	-	2,322,434
BOD	188,592	112,592	312,874	-	614,058
TSS	203,016	121,203	289,839	-	614,058
SIS Only	-	-	-	86,980	86,980
Total	\$ 1,448,468	\$ 860,413	\$ 1,470,241	\$ 99,267	\$ 3,878,389

Cost Allocation Summary									
		2020 FULL COS RATES				2021 FULL COS RATES		DIFFERENCE	
Class	2021 Revenue at 2020 Rates	Percent of Total	COSA 2021 Revenue	Percent of Total	\$ Difference	Rate Adjustment			
Single-Family	\$ 1,416,593	37.3%	\$ 1,448,468	37.3%	\$ 31,875	2.3%			
Multi-Family	841,474	22.2%	860,413	22.2%	18,939	2.3%			
Non-Residential	1,438,342	37.9%	1,470,241	37.9%	31,899	2.2%			
SIS	97,993	2.6%	99,267	2.6%	1,274	1.3%			
Total	\$ 3,794,402	100.0%	\$ 3,878,389	100.0%	\$ 83,987	2.2%			
		2020 FULL COS RATES				2021 COS ALT RATES		DIFFERENCE	
Class	2021 Revenue at 2020 Rates	Percent of Total	COSA 2021 Revenue	Percent of Total	\$ Difference	Rate Adjustment			
Single-Family	\$ 1,596,149	42.0%	1,596,149	41.2%	\$ -	0.0%			
Multi-Family	1,126,401	29.6%	1,126,401	29.0%	-	0.0%			
Non-Residential	1,009,407	26.6%	1,082,735	27.9%	73,329	7.3%			
SIS	68,854	1.8%	73,104	1.9%	4,249	6.2%			
Total	\$ 3,800,811	100.0%	\$ 3,878,389	100.0%	\$ 77,578	2.0%			



City of Bainbridge Island
Sewer Rate Study and COSA
Rate Table

	Adopted		With ATB Rate Increases			Full COS Rates			COS Alternative		
	2017	2018	2019	2020	2021	2019	2020	2021	2019	2020	2021
Single-Family Residential Rates											
Meter Charge	\$42.69	\$42.69	\$43.54	\$44.41	\$45.30	\$37.24	\$37.89	\$38.74	\$42.69	\$42.69	\$42.69
Volume Charge per 100 Cubic Feet	\$7.28	\$7.28	\$7.43	\$7.57	\$7.73	\$6.35	\$6.46	\$6.61	\$7.28	\$7.28	\$7.28
Flat Rate	\$119.80	\$119.80	\$122.20	\$124.64	\$127.13	\$104.51	\$106.32	\$108.72	\$119.80	\$119.80	\$119.80
Multi-Family Residential Rates											
Meter Charge	\$37.39	\$37.39	\$38.14	\$38.90	\$39.68	\$27.38	\$27.93	\$28.56	\$37.39	\$37.39	\$37.39
Volume Charge per 100 Cubic Feet	\$7.28	\$7.28	\$7.43	\$7.57	\$7.73	\$5.33	\$5.44	\$5.56	\$7.28	\$7.28	\$7.28
Non-Residential Rates											
Meter Charge	\$123.69	\$123.69	\$126.16	\$128.69	\$131.26	\$201.29	\$204.25	\$208.78	\$126.16	\$128.69	\$131.26
Volume Charge per 100 Cubic Feet	\$7.28	\$7.28	\$7.43	\$7.57	\$7.73	\$11.85	\$12.02	\$12.29	\$8.12	\$8.99	\$9.90
Flat Rate	\$129.43	\$129.43	\$132.02	\$134.66	\$137.35	\$210.63	\$213.73	\$218.47	\$139.53	\$149.99	\$160.89
South Island Rates											
With Grinder Pump	\$23.59	\$23.59	\$24.06	\$24.54	\$25.03	\$29.82	\$37.83	\$38.33	\$25.00	\$26.58	\$28.22
No Pump	\$19.42	\$19.42	\$19.81	\$20.20	\$20.61	\$24.55	\$31.15	\$31.55	\$20.58	\$21.88	\$23.23
Projected Revenue											
Single-Family			\$ 1,573,300	\$ 1,632,461	\$ 1,693,846	\$ 1,345,540	\$ 1,392,561	\$ 1,448,468	\$ 1,542,451	\$ 1,569,070	\$ 1,596,149
Multi-Family			1,110,045	1,151,906	1,195,346	797,030	827,112	860,413	1,088,279	1,107,176	1,126,401
Non-Residential			883,768	903,834	924,356	1,410,001	1,434,537	1,470,241	934,021	1,006,736	1,082,735
SIS			60,768	62,771	64,841	75,311	96,763	99,267	63,129	67,990	73,104
Total			\$ 3,627,880	\$ 3,750,972	\$ 3,878,389	\$ 3,627,880	\$ 3,750,972	\$ 3,878,389	\$ 3,627,880	\$ 3,750,972	\$ 3,878,389
Check: Revenue Requirement			\$ 3,627,880	\$ 3,750,972	\$ 3,878,389	\$ 3,627,880	\$ 3,750,972	\$ 3,878,389	\$ 3,627,880	\$ 3,750,972	\$ 3,878,389