



**City of Port Orchard
 Water & Sewer Financial Gap Analysis
 Final Report – November 20, 2015**

Summary

In 2016, the City’s Comprehensive Plan is required to be updated and financially constrained, pursuant to the Growth Management Act. Individual Plan Elements (water, sanitary sewer, etc.) need to be updated, including adjustments to the Capital Improvement Plans (CIP) and associated fee structures. This Water & Sewer Gap Analysis provides the basis for discussion of this issue. The City contracted with Katy Isaksen & Associates (KI&A) to prepare the financial gap analysis with water and sewer rates necessary to fund a balanced and financially constrained CIP over the next six years.

KI&A worked with the City’s engineering consultants preparing the water and sewer updated capital improvement plans (BHC Consultants for Sewer and PACE Engineers for Water). These were reviewed with Public Works and Finance to identify those that were already included in the operating budget. KI&A developed funding plan alternatives for the improvements along with a six-year rate outlook for each scenario. These scenarios were discussed with the Utilities Committee at five meetings along with other water usage and rate adjustment issues. KI&A presented the Gap Analysis and preferred scenario six-year rate outlook to the City Council for consideration at three work study sessions.

Rate Outlook. The water and sewer gap analysis and recommended six-year rates were presented at a Public Hearing on October 27, 2015. The rates shown in Tables 1 and 2 will allow the City to fund the six-year CIP projects and have financially constrained comprehensive plans.

TABLE 1: WATER GAP ANALYSIS & RATE OUTLOOK

WATER RATE OUTLOOK						
SMOOTH RATES THIS SCENARIO	2015	2016	2017	2018	2019	2020
BASE RATE						
Increase in Bimonthly Base Rate		\$7.00	\$7.00	\$7.00	\$7.00	\$7.00
Recommended Bimonthly Base Rates	\$46.50	\$53.50	\$60.50	\$67.50	\$74.50	\$81.50
AVERAGE 2-MONTH BILL @ 7,000 gallons						
Average Bimonthly Bill	\$50.70	\$58.40	\$66.00	\$73.60	\$81.20	\$88.80
Water usage rates and larger meter sizes to also be adjusted relative to the residential base rate.						

TABLE 2: SEWER GAP ANALYSIS & RATE OUTLOOK

SEWER RATE OUTLOOK						
SMOOTH RATES THIS SCENARIO	2015	2016	2017	2018	2019	2020
Increase in Bimonthly Rate		\$13.00	\$13.00	\$13.00	\$13.00	\$13.00
Recommended Bimonthly Rate	\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00
Residential rates by unit, commercial rates assigned by class will be adjusted an equivlent amount.						

Capital Improvement Program (CIP). The water utility has received a loan from the Department of Health Drinking Water State Revolving Fund for the Well 10 project currently underway. Full loan payments are estimated to begin in 2018 with a partial payment for interest only in 2017. The other CIP projects will be funded by rates and connection charges and the projects scheduled will be reviewed each year during the budget process. These include completing well and treatment projects required by Department of Health, and beginning high priority water main replacement projects. Well 10 will allow



the City to become water independent and end the need to purchase water from the City of Bremerton. The current water contract ends in 2018.

TABLE 3: WATER CIP PROGRAM

SCENARIO A - EXISTING DWSRF LOAN + OTHER CIP BY RATES	
SIX-YEAR WATER CIP	Estimated Cost (\$2014)
2014 DWSRF Loan	\$6,000,000
Well 10—Pump, Generator, and Building	
Wells 6 and 10 Treatment Improvements	
Well 10 12-inch Transmission Main	
Highest Priority	\$3,193,200
Well 11 Treatment & Connection	\$800,000
Abandon Wells 4 & 5	\$100,000
Water System Plan Update	\$60,000
PRVs High to Low Zone: Mitchell & Dwight, Melcher/Pottery & Eaglecrest, Kendall & Maple	\$195,000
Watermain Repl Ph1A: Seattle Avenue, 4" CI to 8", 842 lf	\$252,600
Watermain Repl Ph1A: Division Street, 4" CI to 8", 859 lf	\$257,700
Watermain Repl Ph1A: Hull Avenue, 4" CI to 8", 3,524 lf	\$1,057,200
Watermain Repl Ph1A: Melcher-Tacoma-Cline, 4" CI to 8", 1,542 lf	\$470,700
Telemetry Upgrades (medium priority)	\$25,000
Beyond six-years: \$3+million in medium priority projects to years 7-10 and begins setting aside \$45,000 per year for future upsizing	

The sewer utility has four high priority pump station upgrade projects that must be completed in the next six years. There are not sufficient funds to pay for these costly projects in the short term. In order to reduce the impact on sewer rates, the financial plan calls for borrowing using low-interest loans from the Department of Ecology to complete the projects within six-years and have rates set to make the loan payments for the next 20 years.

TABLE 4: SEWER CIP PROGRAM

SCENARIO 1 - What if NO Grant and all SRF Loans for 4 Pump Stations?		
Six-Year Sewer CIP	Cost Est in \$2014	Funding Source
2015 Sewer Plan Update, map & model	\$120,000	pay-as-go
Marina PS Improvements	\$3,800,000	SRF 2016-17
McCormick PS1 - Design & Construction	\$1,280,000	SRF 2018-19
McCormick PS2 - Design & Construction	\$1,290,000	SRF 2018-19
Bay St PS Improvement	\$1,100,000	SRF 2020
Total Sewer CIP (\$2014)	\$7,590,000	
This summary shows cost estimates in 2014 dollars.		
Model escalates construction costs by 4% per year.		

The City continues to seek grants to assist with the utility projects but grants are uncertain and difficult to obtain. For example, the City applied for a Hazard Mitigation Grant for the Marina Pump Station Upgrade (approximately \$4 million). They were told to reduce the request to include only the seawall portion (approximately \$1 million) and come up with the local match and other funding on their own. It



is uncertain at this time whether the City will be successful in receiving a grant and when that may occur. The sewer outlook assumes that an Ecology SRF loan will be the funding source.

The City has a couple of sewer programs that are included in the annual budget and not duplicated in the CIP. An annual pipe rehabilitation program provides a level of funding for the crew to make repairs and rehabilitation as necessary throughout the year. The City also has a 10-year STEP conversion program that allows the owners of STEP systems to convert to sewer at their option. The program is scheduled for 2012-2021 for an average of 60 conversions per year. The 2015 budget of \$380,000 will be available for other capital improvements after 2021.

Rate Structures. In addition to developing the six-year rate outlooks, the water and sewer rate structures were reviewed to be sure that sufficient revenue would be generated fairly from the customers to meet the needs of each utility. A detailed water consumption analysis was also completed to determine the current average usage levels of residential customers and whether the water usage tiers were a good fit.

A typical residence uses an average of 7,000 gallons (938 cubic feet) per two month billing period. The base rate includes up to 5,000 gallons and then customers pay for water by usage tier. The first tier was 5,001 to 30,000 gallons. Based on the average usage and the goal of water conservation, the tiers needed to be adjusted so customers would see lower bills for conserving. The 5,000-30,000 tier is recommended to be broken into three tiers, 5,001-10,000, 10,001-20,000 and 20,001-30,000 gallons. The rate differential was \$0.10 between the tiers and is recommended to be increased.

TABLE 5: CHANGES TO WATER USAGE TIERS

Water Usage Tiers per Bimonthly Period	
Existing	Proposed
5,001-30,000 gal	5,001-10,000 gal
	10,001-20,000 gal
	20,001-30,000 gal
30,001-50,000 gal	30,001-50,000 gal
50,001-100,000 gal	50,001+ gal
100,001-150,000 gal	
150,001+ gal	

The City offers a low use discount to residences using up to 3,000 gallons on a bimonthly bill. This is recommended to continue.

Water usage rates should increase relative to the increase in base rate so that all customers are fairly sharing in the needed increase. For other customers, the larger meter sizes should pay a higher meter differential to reflect the higher demand on the water system. This is incrementally increased over the six years in the recommended rates.

The City jointly owns the wastewater treatment facilities with West Sound Utility District. This is considered a separate operation in the Gap Analysis as they jointly manage and set treatment rates. The treatment services are included as a line item within the operating expenses. The sewer treatment rates have been quite stable and are assumed to remain the same. The City's sewer rates to customers include the treatment services. Any changes in treatment rates would need to be passed along to the customers.



The wastewater treatment costs are based on an equivalent residential unit (ERU) basis. The City's current sewer rate schedule includes 20 classes of customers with definitions and charges based on ERU's or portions thereof. This rate structure works well with the costs and only minor adjustments are recommended, such as adjusting definitions to match the zoning code. Council discussions resulted in a new customer class for public markets that is also included.

Recommended Rates. The recommended six-year water and sewer rates are shown in Tables 6 and 7.

TABLE 6: GAP ANALYSIS RECOMMENDED WATER RATES

Water Rates - Bimonthly		2015	2016	2017	2018	2019	2020
a) Single Connections							
3/4" Meter, 0-3,000 gal	Base	\$30.50	\$35.10	\$39.70	\$44.30	\$48.90	\$53.50
3/4" Meter, 3,001-5,000 gal	Base	\$46.50	\$53.50	\$60.50	\$67.50	\$74.50	\$81.50
5,001-10,000 gal	per 1000g	\$2.10	\$2.45	\$2.75	\$3.05	\$3.35	\$3.65
10,001-20,000 gal	per 1000g	\$2.10	\$2.55	\$2.90	\$3.20	\$3.50	\$3.85
20,001-30,000 gal	per 1000g	\$2.10	\$2.65	\$3.00	\$3.35	\$3.70	\$4.05
30,001-50,000 gal	per 1000g	\$2.20	\$2.80	\$3.20	\$3.55	\$3.90	\$4.30
50,001+ gal	per 1000g	\$2.30	\$3.00	\$3.40	\$3.80	\$4.20	\$4.60
b) Multiple Connections/Larger Meters							
3/4" Meter, 0-5,000 gal	Base	\$46.50	\$53.50	\$60.50	\$67.50	\$74.50	\$81.50
3/4" Meter Base plus the following meter size differentials:							
1" Meter, 0-5,000 gal	Base+Diff.	\$1.00	\$2.00	\$3.00	\$4.00	\$5.00	\$6.00
1-1/2" Meter, 0-5,000 gal	Base+Diff.	\$4.00	\$8.00	\$12.00	\$16.00	\$20.00	\$24.00
2" Meter, 0-5,000 gal	Base+Diff.	\$7.00	\$14.00	\$21.00	\$28.00	\$35.00	\$42.00
3" Meter, 0-5,000 gal	Base+Diff.	\$13.00	\$26.00	\$39.00	\$52.00	\$65.00	\$78.00
4" Meter, 0-5,000 gal	Base+Diff.	\$25.00	\$50.00	\$75.00	\$100.00	\$125.00	\$150.00
6" Meter, 0-5,000 gal	Base+Diff.	\$46.00	\$92.00	\$138.00	\$184.00	\$230.00	\$276.00
8" Meter, 0-5,000 gal	Base+Diff.	\$67.00	\$134.00	\$201.00	\$268.00	\$335.00	\$402.00
10" Meter, 0-5,000 gal	Base+Diff.	\$91.00	\$182.00	\$273.00	\$364.00	\$455.00	\$546.00
c) Plus Consumption charge in excess of 5,000 gallons							
5,001-10,000 gal	per 1000g	\$2.10	\$2.45	\$2.75	\$3.05	\$3.35	\$3.65
10,001-20,000 gal	per 1000g	\$2.10	\$2.55	\$2.90	\$3.20	\$3.50	\$3.85
20,001-30,000 gal	per 1000g	\$2.10	\$2.65	\$3.00	\$3.35	\$3.70	\$4.05
30,001-50,000 gal	per 1000g	\$2.20	\$2.80	\$3.20	\$3.55	\$3.90	\$4.30
50,001+ gal	per 1000g	\$2.30	\$3.00	\$3.40	\$3.80	\$4.20	\$4.60
d) Multiple Connections - where more than one customer is served through one meter							
Base rate per unit, 0-5,000 gal	Base	\$46.50	\$53.50	\$60.50	\$67.50	\$74.50	\$81.50
Plus meter differential for actual meter	as shown in b) above						
Plus consumption charge in excess of 5,000 gal	as shown in c) above						
e) Outside City Limits							
	50% surcharge						
f) Fire Hydrant Service							
Schools	per hydrant	\$12.00	\$13.80	\$15.60	\$17.40	\$19.20	\$21.00
Private Service	per hydrant	\$22.00	\$25.30	\$28.60	\$31.90	\$35.20	\$38.50
g) Temporary Service							
Greater of flat rate or as metered							
One-day Service	Flat rate	\$46.50	\$53.50	\$60.50	\$67.50	\$74.50	\$81.50
	per 1000g	\$2.20	\$2.80	\$3.20	\$3.55	\$3.90	\$4.30
Construction Account	Flat rate	\$46.50	\$53.50	\$60.50	\$67.50	\$74.50	\$81.50
0-50,000 gal	per 1000g	\$2.20	\$2.80	\$3.20	\$3.55	\$3.90	\$4.30
50,001+ gal	per 1000g	\$2.30	\$3.00	\$3.40	\$3.80	\$4.20	\$4.60
h) Hydrant Meter Rentals							
Refundable deposit for meter rental; sales tax added to 30-day rental fees							
First 60 days	rental + tax	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Next 120 days	rental + tax	\$250.00	\$260.00	\$270.00	\$280.00	\$290.00	\$300.00
In excess of 180 days	rental + tax	\$500.00	\$520.00	\$540.00	\$560.00	\$580.00	\$600.00



TABLE 7: GAP ANALYSIS RECOMMENDED SEWER RATES

Class No.	Class Description	Description	Water/Sewer Gap Analysis Recommended Rates							
			Bimonthly Rate	2015 \$98.00	2016 \$111.00	2017 \$124.00	2018 \$137.00	2019 \$150.00	2020 \$163.00	
1	Single-family residences and mobile home on single parcel	for each dwelling unit		\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00	
2	Business and professional	for each business with a fixture		\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00	
		for each business with an employee present, without a fixture		\$19.90	\$22.20	\$24.80	\$27.40	\$30.00	\$32.60	
		for each floor of an office building or retail complex that has a public or community bathroom		\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00	
		Plus the following surcharge, based on the store/office interior area:		\$0.00						
		Small, less than 15,000 sf, or		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
		Medium, 15,000 to 30,000 sf, or		\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00	
		Large, More than 30,000 sf		\$196.00	\$222.00	\$248.00	\$274.00	\$300.00	\$326.00	
3	Churches	for the church, plus *		\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00	
		for the rectory, plus *		\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00	
		for the annex		\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00	
		*Class 6 for educational parochial schools								
4	Hotels & motels, rest homes & care centers, and Kitsap County jail	base fee, plus		\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00	
		per unit		\$19.90	\$22.20	\$24.80	\$27.40	\$30.00	\$32.60	
5	Apartments and mobile home parks	per dwelling unit		\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00	
6	Schools	for each pupil, teacher, maintenance and administrative personnel		\$3.00	\$3.30	\$3.70	\$4.10	\$4.50	\$4.90	
7	Kitsap County courthouse (main complex)			\$3,822.00	\$4,329.00	\$4,836.00	\$5,343.00	\$5,850.00	\$6,357.00	
8	Restaurants	Based on the seating capacity as determined by the building official								
		Espresso Bar	Seating not applicable. Classification includes similar food preparation businesses which do not require the cooking of food or the maintenance of kitchen equipment.		\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00
		Deli	No seating		\$147.00	\$166.50	\$186.00	\$205.50	\$225.00	\$244.50
		Small	Seating for 1 to 50		\$294.00	\$333.00	\$372.00	\$411.00	\$450.00	\$489.00
		Medium	Seating for 51 to 150		\$441.00	\$499.50	\$558.00	\$616.50	\$675.00	\$733.50
		Large	Seating for more than 150		\$588.00	\$666.00	\$744.00	\$822.00	\$900.00	\$978.00
9	Laundromats	base fee, plus		\$49.00	\$55.50	\$62.00	\$68.50	\$75.00	\$81.50	
		per washing machine		\$19.90	\$22.20	\$24.80	\$27.40	\$30.00	\$32.60	
		Laundromats with less than four washing machines are considered Class 2. Dry Cleaners without washing machines are Class 2.								
10	Taverns			\$245.00	\$277.50	\$310.00	\$342.50	\$375.00	\$407.50	
11	Car dealerships	for sales and administrative office, plus		\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00	
		for service department, plus		\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00	
		for car washing when the water is used to determine cost sharing for the sewer treatment plant.		\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00	
12	Post office			\$343.00	\$388.50	\$434.00	\$479.50	\$525.00	\$570.50	
13	Grocery stores	Basic fee, plus the following surcharges		\$49.00	\$55.50	\$62.00	\$68.50	\$75.00	\$81.50	
		Basic Store		\$49.00	\$55.50	\$62.00	\$68.50	\$75.00	\$81.50	
		Bakery		\$49.00	\$55.50	\$62.00	\$68.50	\$75.00	\$81.50	
		Wetted-Down Produce		\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00	
		Food Disposal		\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00	
		Meat Cutting Area		\$196.00	\$222.00	\$248.00	\$274.00	\$300.00	\$326.00	
14	Bowling alley, boat marina, health maintenance organizations and work release & juvenile facilities	base fee, plus		\$49.00	\$55.50	\$62.00	\$68.50	\$75.00	\$81.50	
		for each equivalent residential unit (ERU) as determined for the cost-sharing formula for the sewer treatment plant		\$49.00	\$55.50	\$62.00	\$68.50	\$75.00	\$81.50	
15	Car washes	base fee, plus		\$49.00	\$55.50	\$62.00	\$68.50	\$75.00	\$81.50	
		per car washing bay		\$147.00	\$166.50	\$186.00	\$205.50	\$225.00	\$244.50	



Recommended Sewer Rates		Bimonthly Rate:	Water/Sewer Gap Analysis Recommended Rates					
			2015	2016	2017	2018	2019	2020
16	Beauty shops and barber shops		\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00
17	Day care	Basic fee, plus	\$196.00	\$222.00	\$248.00	\$274.00	\$300.00	\$326.00
		for less than or equal to 5 6 children	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
		for 7 to 25 children	\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00
		for more than 25 children, use Class 6 rates						
18	Gas stations	for gasoline retail, which could include service bay	\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00
		for non-automotive retail	\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00
19	Assisted living units	base fee, plus	\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00
		per unit with private kitchen	\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00
		per unit without private kitchen or studio apartment	\$19.90	\$22.20	\$24.80	\$27.40	\$30.00	\$32.60
20	Bed and breakfasts	base fee, plus	\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00
		per rentable bedroom	\$7.95	\$8.90	\$9.90	\$11.00	\$12.00	\$13.00
21	Public Market (proposed new class)	basic fee, plus the following surcharges	\$196.00	\$222.00	\$248.00	\$274.00	\$300.00	\$326.00
		Nonfood retail	\$24.50	\$27.80	\$31.00	\$34.30	\$37.50	\$40.80
		Nonfood service business	\$24.50	\$27.80	\$31.00	\$34.30	\$37.50	\$40.80
		Juice/Soda/Ice Cream/Espresso Bar	\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00
		Restaurant (consume and buy on premises)	\$196.00	\$222.00	\$248.00	\$274.00	\$300.00	\$326.00
		Delicatessen (counter sales takeout ready-to-eat food products)	\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00
		Retail Meat/Seafood	\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00
		Retail Bakery	\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00
	Special notes:	a) Home occupations will not be charged additional sewer fees.						
		b) For a combination of classes in one business, the highest rate will be selected						
		c) In the event that an established rate class does not accurately reflect the impact on the sewer system, the city engineer may determine the specific monthly rate.						
		d) Water accounts which serve a marina pier and do not have a connection to the sewer shall not be charged a sewer bill. A sewer bill will be charged and based on winter consumption if the water meter serves both the marina pier and any facility or pump station that is connected to the sewer system. For billing purposes, live-aboards will not be considered as a dwelling unit.						
		e) Properties served which are outside the city limits shall have a 50 percent surcharge on the bimonthly rates.						

Impact on Sample Customers. The impact on a low-use residence and an average residence are shown in Table 8. Water and sewer combined would increase \$17.60 per two month bill for a low-use residence and \$20.70 for an average residence.

TABLE 8: BIMONTHLY IMPACT ON LOW-USE AND AVERAGE RESIDENCES

LOW USE RESIDENCE @ 3,000 gallons		2015	2016	2017	2018	2019	2020
WATER ONLY	Low Use	\$30.50	\$35.10	\$39.70	\$44.30	\$48.90	\$53.50
Increase per Bimonthly Bill		W	\$4.60	\$4.60	\$4.60	\$4.60	\$4.60
WATER + SEWER	Low Use	\$128.50	\$146.10	\$163.70	\$181.30	\$198.90	\$216.50
Increase per Bimonthly Bill		W+S	\$17.60	\$17.60	\$17.60	\$17.60	\$17.60
AVERAGE RESIDENCE @ 7,000 gallons		2015	2016	2017	2018	2019	2020
WATER ONLY	Average	\$50.70	\$58.40	\$66.00	\$73.60	\$81.20	\$88.80
Increase per Bimonthly Bill		W	\$7.70	\$7.60	\$7.60	\$7.60	\$7.60
WATER + SEWER	Average	\$148.70	\$169.40	\$190.00	\$210.60	\$231.20	\$251.80
Increase per Bimonthly Bill		W+S	\$20.70	\$20.60	\$20.60	\$20.60	\$20.60

Comparable Local Rates. Utilities are required to be self-sufficient. Each jurisdiction has its own facilities, infrastructure and customer base to pay for the system. The local utilities include the cities of Bremerton, Gig Harbor and Poulsbo, Kitsap PUD, and Kitsap County wastewater. The comparison includes 2015 bimonthly bills, except for Port Orchard proposed 2016 rates and Gig Harbor previously



adopted 2016 rates. A typical residence using 7,000 gallons per two month bill is compared in Charts 1 and 2.

CHART 1: COMPARABLE RESIDENTIAL WATER BILLS

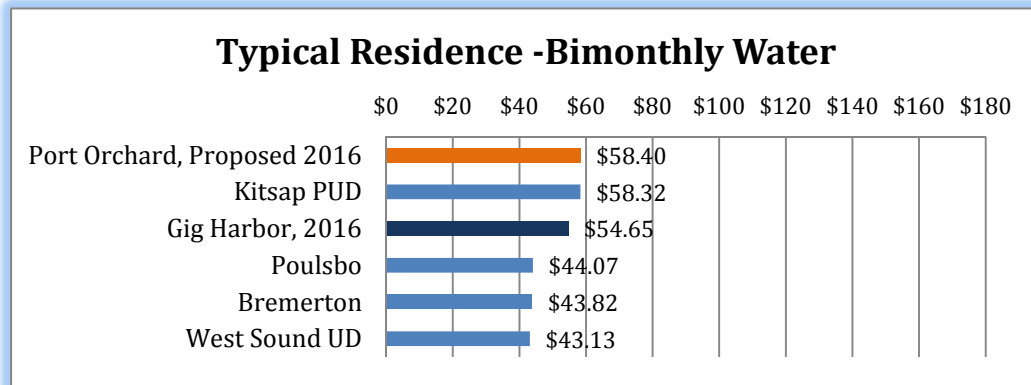


Chart 1 reflects a residence with a ¾” meter using 7,000 gallons (938 cubic feet) per bimonthly bill. All communities increased rates for 2015. Gig Harbor has adopted annual rate increases for 2015-2020.

CHART 2: COMPARABLE RESIDENTIAL SEWER BILLS

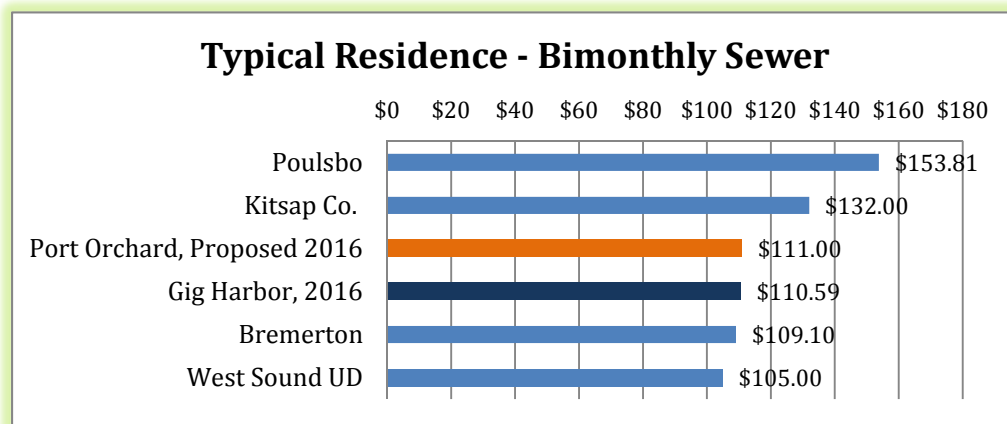


Chart 2 reflects a residence with a ¾” meter using 7,000 gallons (938 cubic feet) per bimonthly bill. All communities except Port Orchard increased rates in 2015. Gig Harbor has adopted annual rate increases for 2015-2020.

While it is nice to know what others charge for comparable service, it is important to understand that each utility must set rates and charges to fund its own system.

Connection Fees. New development pays capital facilities and connection charges for water and sewer upon connecting to each system. These will be updated when the water and sewer comprehensive plans are adopted to be sure all are paying a fair share of the existing and planned improvements.

For water, all new connections pay a capital facilities charge based on meter size. Depending on the circumstance, new water customers pay for the water meter, installation, distribution system and inspection as required by city code. Table 9 shows the new water connection fees as of 11/1/15.



TABLE 9: WATER CONNECTION FEES

Water Capital Facilities Charge per ERU based on meter size	11/1/2015
3/4" Meter	\$5,011.81
1" Meter	\$8,358.58
1-1/2" Meter	\$16,667.04
2" Meter	\$26,677.31
3" Meter	\$53,354.59
4" Meter	\$84,499.10
Irrigation Meter	\$0.00
<i>+ Inspection fees, connection fees and in-lieu-of assessment fees as required by city code.</i>	

For sewer, all new connections pay a wastewater treatment facility fee for the joint wastewater plant, a general facilities charge for city sewer general facilities and inspection and other fees as required by city code. Table 10 shows the new sewer connection charges as of 11/1/15.

TABLE 10: SEWER CONNECTION FEES

Sewer Wastewater Treatment Facility Fee	11/1/2015
Per ERU	\$3,597.37
McCormick Land Co. Div. 1-10	\$881.25
Sewer General Facility Fee	
Per ERU	\$3,085.04
<i>+ Inspection & other fees as required by city code.</i>	

Six-Year Summary Outlook. The six-year water and sewer outlooks are summarized in Tables 11 and 12. This provides a summary of the anticipated revenue with existing 2015 rates, projected operating expenses based on 2015 budget, existing and planned debt payments, and capital program funding and expenditures. The yellow line, Annual Increase/ (Use) of Reserves indicates the difference between existing rate revenue and expenditures for each year. If this line is positive, it means that the system is increasing reserves or savings for future years. If this line is negative (), it means that the reserves will need to be used to meet the planned expenditures in each year. Other alternatives include adjusting expenditures or increasing rates or other revenue. The cumulative impact on the base rate and average customer is calculated in the shaded area.

In order to lessen the impact on customers, the recommended rates were set to be the same level each year. This will require the City to manage the CIP program by funding the highest priority projects in each year as can be afforded with the available funding. A large project may take more than one year to accumulate enough funds to proceed.

Appendices. The appendices include the water and sewer CIP programs with funding sources and operating details such as model assumptions, operating revenue and expense details.



TABLE 11: SIX-YEAR OUTLOOK SUMMARY – WATER

The recommend rates have level increases over the six years, therefore the capital improvements will need to be reviewed each year during the budget process to balance the highest priorities with the funding available. Capital facilities charge revenue should also be used for the CIP.

WATER UTILITY SIX-YR OUTLOOK	Base Year	2015	2016	2017	2018	2019	2020	Comments
SCENARIO 1: SIX-YEAR OUTLOOK with Capital Facilities Charges toward CIP- 20 new customers per year - Pay-As-You-Go for Highest Priority Projects, medium deferred to years 7-10								
Operating Revenue								
W Sales to Customers, Muni, Public Auth		1,600,000	1,606,000	1,612,000	1,618,000	1,624,000	1,630,000	add new cust
Other Operating Revenue		50,750	50,750	50,750	50,750	50,750	50,750	flat
Subtotal W Revenue		1,650,750	1,656,750	1,662,750	1,668,750	1,674,750	1,680,750	
Expenses								
Subtotal Operations		1,536,813	1,547,600	1,611,400	1,665,600	1,672,000	1,730,400	
Water Debt								
W City Hall Debt (p+i)		30,592	30,592	30,592	30,592	30,592	-	thru 2019
Existing DWSRF Loan - Well 10		-	-	90,000	406,000	406,000	406,000	
Future DWSRF Loan(s)		-	-	-	-	-	-	
Subtotal Debt		30,592	30,592	120,592	436,592	436,592	406,000	
Net Available for Capital		83,345	78,558	(69,242)	(433,442)	(433,842)	(455,650)	
Other Revenue for Capital								
Transfer from Cum Res 403 for CIP		-	95,380	95,380	95,380	95,380	95,380	Capital Facil Chg = \$4,769 x 20
DWSRF Proceeds		1,000,000	4,700,000	300,000	-	-	-	this scenario
Available for Capital		1,083,345	4,873,938	326,138	(338,062)	(338,462)	(360,270)	
Capital Program								
Equipment Replacement		9,500	9,500	9,500	9,500	9,500	9,500	carry forward
Water CIP - Six-Year		1,060,000	5,468,000	1,122,000	611,600	715,600	785,800	by constr cost escal
Subtotal Capital		1,069,500	5,477,500	1,131,500	621,100	725,100	795,300	
W Annual Increase/(Use) of Reserves		13,845	(603,562)	(805,362)	(959,162)	(1,063,562)	(1,155,570)	
Percentage Impact on W Rates - cumulative			38%	50%	59%	65%	71%	over existing rates
Percentage Impact on W Rates - annual		0%	38%	12%	9%	6%	5%	
Base Rate - 3/4" Meter, 3001-5000gal		\$46.50						
Base Rate - if Balanced		\$46.50	\$63.98	\$69.73	\$74.07	\$76.95	\$79.47	
Existing Ordinance (Average Residence @ 7000gal)		\$50.70						
Scen 1: Rates & CFC Pay CIP		\$50.70	\$69.75	\$78.39	\$85.69	\$91.02	\$95.93	If Use of Reserves = 0
Average increase in 2-mo bill (per year)			\$19.05	\$8.63	\$7.31	\$5.32	\$4.92	
DOH Affordability @ 1.5% of MHI		\$140.64	\$140.64	\$140.64	\$140.64	\$140.64	\$140.64	
RECOMMENDED RATE SCENARIO								
For Smooth Rates								
		2015	2016	2017	2018	2019	2020	
Base needs to increase about \$7.00 per year	Bimonthly	\$46.50	\$53.50	\$60.50	\$67.50	\$74.50	\$81.50	
Average 2-month water bill @ 7,000g	Bimonthly	\$50.70	\$58.40	\$66.00	\$73.60	\$81.20	\$88.80	



TABLE 12: SIX-YEAR OUTLOOK SUMMARY - SEWER

The recommend rates have level increases over the six years, therefore the capital improvements will need to be reviewed each year during the budget process to balance the highest priorities with the funding available. Capital facilities charge revenue should also be used for the CIP.

SEWER UTILITY SIX-YR OUTLOOK	Base Year	2015	2016	2017	2018	2019	2020	Comments
SCENARIO 1 - What if NO Grant and all SRF Loans for 4 Pump Stations? With Capital Facilities Charges toward CIP. Loans at 2.7% Interest.								
Operating Revenue								
Sewer Services to Customers, Muni, Pub Auth		3,070,000	3,099,000	3,128,000	3,157,000	3,186,000	3,215,000	add 50 new cust per yr
Other Sewer Operating Revenue		89,250	89,250	89,250	89,250	89,250	89,250	flat
Subtotal S Revenue		3,159,250	3,188,250	3,217,250	3,246,250	3,275,250	3,304,250	
Operating Expenses								
		3,195,161	3,316,500	3,442,600	3,573,800	3,710,400	3,852,600	
Sewer Debt								
S City Hall Debt (p+i)		30,592	30,592	30,592	30,592	30,592	-	thru 2019
Potential New Loan for CIP		-	-	-	242,000	242,000	437,000	
Subtotal Debt		30,592	30,592	30,592	272,592	272,592	437,000	
Net Available for S Capital		(66,503)	(158,842)	(255,942)	(600,142)	(707,742)	(985,350)	
Other Revenue for Capital								
Transfer Facil. Charges from Cum Res 403		120,000	150,000	150,000	-	-	-	Local match grants & comp plan
Grant Proceeds - Hazard Mitigation		-	-	-	-	-	-	Marina
Future DOE SRF Loan Proceeds		-	1,850,000	1,850,000	416,000	2,574,000	1,338,000	-
Available for S Capital		53,497	1,841,158	1,744,058	(184,142)	1,866,258	352,650	
Capital Program								
Equipment Replacement		9,500	9,500	9,500	9,500	9,500	9,500	carry forward
Sewer CIP		120,000	2,000,000	2,000,000	416,000	2,574,000	1,338,000	
Subtotal S Capital		129,500	2,009,500	2,009,500	425,500	2,583,500	1,347,500	
S Annual Increase/(Use) of Reserves		(76,003)	(168,342)	(265,442)	(609,642)	(717,242)	(994,850)	
Percentage Impact on S Rates - Cumulative		2.5%	5.4%	8.5%	19.3%	22.5%	30.9%	
Percentage Impact on S Rates - annual		11%	5%	56%	20%	16%	0%	
Average Residence - if Balanced	\$98.00	\$100.43	\$105.75	\$114.07	\$132.99	\$155.05	\$185.38	If Use of Reserves = 0
<i>Estimated Bimonthly Impact</i>		\$2.43	\$5.32	\$8.32	\$18.92	\$22.06	\$30.33	
DOE says sewer is affordable at 2.0% of median household income (\$56,257). At 2.0% of MHI, sewer rates would be considered affordable at \$93.76 per month.								
RECOMMENDED RATE SCENARIO								
For Smooth Rates		2015	2016	2017	2018	2019	2020	
Bimonthly Rates with Level Increases	\$98.00	\$98.00	\$111.00	\$124.00	\$137.00	\$150.00	\$163.00	\$13.00



APPENDIX A. SIX-YEAR WATER CIP

SCENARIO A - EXISTING SRF LOAN + OTHER CIP BY RATES									
		Estimated Cost (\$2014)	Total by Category	2015	2016	2017	2018	2019	2020
TEN-YEAR WATER CIP (focus on six-year)									
2014 DWSRF Loan									
			6,000,000	1,000,000	4,700,000	300,000			
Highest Priority									
2	Well 11 Treatment & Connection	\$800,000	High	-	416,000	416,000	-	-	-
7a	Abandon Wells 4 & 5	\$100,000	High	-	104,000	-	-	-	-
14	Water System Plan Update	\$60,000	High	60,000	-	-	-	-	-
6	PRVs High to Low Zone: Mitchell & Dwight, Melcher/Pottery & Eaglecrest, Kendall & Maple	\$195,000	High	-	-	211,000	-	-	-
15a	Watermain Repl Ph1A: Seattle Avenue, 4" CI to 8", 842 lf	\$252,600	High	-	203,000	60,000	-	-	-
15a	Watermain Repl Ph1A: Division Street, 4" CI to 8", 859 lf	\$257,700	High	-	-	90,000	91,000	95,000	-
15a	Watermain Repl Ph1A: Hull Avenue, 4" CI to 8", 3,524 lf	\$1,057,200	High	-	-	-	475,600	475,600	237,800
15a	Watermain Repl Ph1A: Melcher-Tacoma-Cline, 4" CI to 8", 1,542 lf	\$470,700	High	-	-	-	-	100,000	473,000
				-	-	-	-	-	-
	Subtotal Highest Priority		\$3,193,200	-	-	-	-	-	-
Medium Priority									
1	Telemetry Upgrades	\$25,000	Medium	-	-	-	-	-	30,000
7b	City Hall PS Elimination: Phase 2 New Well 7	\$1,000,000	Medium	-	-	-	-	-	-
12	Melcher Street Pump Station Upgrade	\$300,000	Medium	-	-	-	-	-	-
13	390 Zone Storage Improvements (Impounded Water)	\$500,000	Medium	-	-	-	-	-	-
15b	Watermain Repl Ph1B: Dwight Street, 4" CI to 8", 896 lf	\$268,800	High-Medium	-	-	-	-	-	-
15b	Watermain Repl Ph1B: Harrison Ave, 4" CI to 8", 629 lf	\$188,700	High-Medium	-	-	-	-	-	-
15b	Watermain Repl Ph1B: Prospect Street, 6" CI to 8", 940 lf	\$282,000	High-Medium	-	-	-	-	-	-
15b	Watermain Repl Ph1B: Dekalb Street, 4" CI to 8", 861 lf	\$258,300	High-Medium	-	-	-	-	-	-
15b	Watermain Repl Ph1B: Ada-Taylor Street, 4" CI to 8", 713 lf	\$213,900	High-Medium	-	-	-	-	-	-
				-	-	-	-	-	-
	Subtotal Medium Priority		\$3,036,700	-	-	-	-	-	-
Deferred to Future									
10b	390 to 580 12-inch Tr Main Oversizing (build reserve over time)	\$450,000	As Req by Dev	-	45,000	45,000	45,000	45,000	45,000
	Subtotal Deferred to Future		\$4,147,050	-	-	-	-	-	-
	Subtotal City-funded 6-Yr		10,179,600	1,060,000	5,468,000	1,122,000	611,600	715,600	785,800
	Less: Existing DWSRF Funding		(6,000,000)	(1,000,000)	(4,700,000)	(300,000)	-	-	-
	Less: Future DWSRF Funding		-	-	-	-	-	-	-
	Funding from Water Rates 6-Yr		4,179,600	60,000	768,000	822,000	611,600	715,600	785,800
CIP Impact to Water Rates									
	CIP Funded by Rates			60,000	768,000	822,000	611,600	715,600	785,800
	Less: Anticipated Connection Charges for CIP			-	-	90,000	406,000	406,000	406,000
	Existing DWSRF Debt Repayment			-	-	-	-	-	-
	Total CIP Impact to Water Rates			60,000	768,000	912,000	1,017,600	1,121,600	1,191,800



APPENDIX B. WATER OPERATING DETAIL (ASSUMPTIONS, REVENUE, EXPENSES)

City of Port Orchard Gap Analysis Water/Sewer							
Prepared by Katy Isaksen & Associates							
	Budget 2015	2016	2017	2018	2019	2020	Comments
WATER UTILITY SIX-YR OUTLOOK							
Assumptions:							
New Customer ERU's per year	20	20	20	20	20	20	
General Cost Escalation	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	
Pumping/Purchased Water Cost Escalation	9.0%	9.0%	9.0%	3.5%	3.5%	3.5%	back to general in 2018
Construction Cost Escalation	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	
Bimonthly Single Family Base Rate	\$46.50	\$46.50	\$46.50	\$46.50	\$46.50	\$46.50	Current City Code
Operating Revenue							
W Sales - General Customers	1,518,000	1,524,000	1,530,000	1,536,000	1,542,000	1,548,000	add new cust
W Sales - Public Municipalities	5,000	5,000	5,000	5,000	5,000	5,000	flat
W Sales - Public Authorities	77,000	77,000	77,000	77,000	77,000	77,000	flat
Late Payment/Penalties/Shut-off	21,000	21,000	21,000	21,000	21,000	21,000	flat
Rent - Utility Properties	26,800	26,800	26,800	26,800	26,800	26,800	flat
Other Revenue (unmetered,fire,other)	450	450	450	450	450	450	flat
Concurrency Fees (inspection)	-	-	-	-	-	-	flat
Connection Fees (inspection)	2,500	2,500	2,500	2,500	2,500	2,500	flat
Subtotal W Revenue	1,650,750	1,656,750	1,662,750	1,668,750	1,674,750	1,680,750	
Expenses							
Purchased Water	56,000	56,000	56,000	56,000	6,000	6,200	min. 50k thru 2018
Maintenance - Structures & Wells	22,153	22,900	23,700	24,500	25,400	26,300	by gen'l escal.
Water Treatment	139,531	144,400	149,500	154,700	160,100	165,700	by gen'l escal.
Supply Mains	94,260	97,600	101,000	104,500	108,200	112,000	by gen'l escal.
Services	39,977	41,400	42,800	44,300	45,900	47,500	by gen'l escal.
Pumping	193,107	210,500	229,400	237,400	245,700	254,300	by pump/purch wtr escal.
Distribution System	29,650	30,700	31,800	32,900	34,100	35,300	by gen'l escal.
Reservoir painting	50,000						
Meters	51,844	53,700	55,600	57,500	59,500	61,600	by gen'l escal.
Hydrants	5,518	5,700	5,900	6,100	6,300	6,500	by gen'l escal.
Customer Svcs - Meter Read/Billing	139,018	143,900	148,900	154,100	159,500	165,100	by gen'l escal.
Customer Service - Info	500	500	500	500	500	500	by gen'l escal.
General Admin Salaries & Benes	155,297	160,700	166,300	172,100	178,100	184,300	by gen'l escal.
Admin Clerical Salaries & Benes	160,463	166,100	171,900	177,900	184,100	190,500	by gen'l escal.
Supplies - General Admin	100	100	100	100	100	100	by gen'l escal.
Othr Srv&Chg - General Admin	10,350	10,700	11,100	11,500	11,900	12,300	by gen'l escal.
Insurance - Property & Liability	126,000	130,400	135,000	139,700	144,600	149,700	by gen'l escal.
Supplies - Gen Ops	2,000	2,100	2,200	2,300	2,400	2,500	by gen'l escal.
Fuel Consumed - Gen Ops	10,000	10,400	10,800	11,200	11,600	12,000	by gen'l escal.
Transportation Equip.	11,195	11,600	12,000	12,400	12,800	13,200	by gen'l escal.
Othr Srv&Chg - General Ops	15,700	16,200	16,800	17,400	18,000	18,600	by gen'l escal.
Utility Tax State	95,000	98,300	101,700	105,300	109,000	112,800	by gen'l escal.
Utility Tax City	80,000	82,800	85,700	88,700	91,800	95,000	by gen'l escal.
Other Admin (kpud,emer,gen,rights,well4)	49,150	50,900	52,700	54,500	56,400	58,400	by gen'l escal.
Subtotal Operations	1,536,813	1,547,600	1,611,400	1,665,600	1,672,000	1,730,400	



APPENDIX C. SIX-YEAR SEWER CIP

SCENARIO 1 - What if NO Grant and all SRF Loans for 4 Pump Stations?								SRF Interest	2.7%
No.	Six-Year Sewer CIP - Escalated	Cost Est in \$2014	2015	2016	2017	2018	2019	2020	Total
1	2015 Sewer Plan Update, map & model	\$120,000	\$120,000						\$120,000
2	Marina PS Improvements	\$3,800,000		\$2,000,000	\$2,000,000				\$4,000,000
3	Bay St PS Improvement	\$1,100,000						\$1,338,000	\$1,338,000
4	McCormick PS2 - Design	\$190,000				\$214,000			\$214,000
5	McCormick PS2 - Construction	\$1,100,000					\$1,287,000		\$1,287,000
6	McCormick PS1 - Design	\$180,000				\$202,000			\$202,000
7	McCormick PS1 - Construction	\$1,100,000					\$1,287,000		\$1,287,000
Total Sewer CIP - Escalated		\$7,590,000	\$120,000	\$2,000,000	\$2,000,000	\$416,000	\$2,574,000	\$1,338,000	\$8,448,000
Sewer CIP Funding Sources									
	Transfer Facil Charges fr 403		\$120,000	\$150,000	\$150,000				
	Haz Mitigation Grant (87.5%)								
	Future SRF Loan Proceeds			\$1,850,000	\$1,850,000	\$416,000	\$2,574,000	\$1,338,000	
	Rate Funded		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Sewer CIP Funding			\$120,000	\$2,000,000	\$2,000,000	\$416,000	\$2,574,000	\$1,338,000	\$0
						2018	2019	2020	2021
	SRF Debt Payments					\$242,000	\$242,000	\$242,000	\$242,000
								\$195,000	\$195,000
									\$87,000
Total SRF Debt Payments						\$0	\$242,000	\$242,000	\$437,000
Total Rate-Funded + Debt			\$0	\$0	\$0	\$242,000	\$242,000	\$437,000	

The Department of Ecology combined water quality funding assistance program is the target loan source that includes the Clean Water State Revolving Fund loan program. There is an annual application cycle for competitive applications that meet the prerequisites. The interest rate will change each year. This study assumes the City would be applying for 20-year loans.



APPENDIX D: SEWER OPERATING DETAIL (ASSUMPTIONS, REVENUE, EXPENSES)

City of Port Orchard Gap Analysis Water/Sewer							
Prepared by Katy Isaksen & Associates							
		with 2015 BUDGET					
	Budget 2015	2016	2017	2018	2019	2020	Comments
SEWER UTILITY SIX-YR OUTLOOK							
Assumptions:							
New Customer ERU's per year	50	50	50	50	50	50	Stetson/W McC/Rush
General Cost Escalation	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	
Pumping Cost Escalation	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	
Construction Cost Escalation	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	
Bimonthly Single Family Flat Rate	\$98.00	\$98.00	\$98.00	\$98.00	\$98.00	\$98.00	
Operating Revenue							
S Services - Flat Rate	2,947,000	2,976,000	3,005,000	3,034,000	3,063,000	3,092,000	add new cust
S Services - Public Municipalities	9,000	9,000	9,000	9,000	9,000	9,000	flat
S Services - Public Authorities	114,000	114,000	114,000	114,000	114,000	114,000	flat
Late Payment/Penalties/Shut-off	55,000	55,000	55,000	55,000	55,000	55,000	flat
Rent - Utility Properties	26,800	26,800	26,800	26,800	26,800	26,800	flat
Other S Revenue (other, misc, leachate)	450	450	450	450	450	450	flat
Concurrency Fees (inspection)	2,000	2,000	2,000	2,000	2,000	2,000	flat
Connection Fees (inspection)	5,000	5,000	5,000	5,000	5,000	5,000	flat
Subtotal S Revenue	3,159,250	3,188,250	3,217,250	3,246,250	3,275,250	3,304,250	
Expenses							
Sewer Treatment	1,441,145	1,491,600	1,543,800	1,597,800	1,653,700	1,711,600	by gen'l escal.
Structures	17,893	18,500	19,100	19,800	20,500	21,200	by gen'l escal.
Pumping	269,930	288,800	309,000	330,600	353,700	378,500	by pumping escal.
Annual Programs (STEP conversion,telemetry)	420,000	434,700	449,900	465,600	481,900	498,800	by gen'l escal.
Maintenance of Mains	190,025	196,700	203,600	210,700	218,100	225,700	by gen'l escal.
Services	88,123	91,200	94,400	97,700	101,100	104,600	by gen'l escal.
Customer Svcs - Meter Read/Billing	68,673	71,100	73,600	76,200	78,900	81,700	by gen'l escal.
General Admin Salaries & Benes	155,425	160,900	166,500	172,300	178,300	184,500	by gen'l escal.
Admin Clerical Salaries & Benes	160,463	166,100	171,900	177,900	184,100	190,500	by gen'l escal.
Supplies - General Admin	200	200	200	200	200	200	by gen'l escal.
Othr Srv&Chg - General Admin	8,900	9,200	9,500	9,800	10,100	10,500	by gen'l escal.
Insurance - Property & Liability	120,000	124,200	128,500	133,000	137,700	142,500	by gen'l escal.
Supplies - General Operations	2,000	2,100	2,200	2,300	2,400	2,500	by gen'l escal.
Fuel Consumed - Gen Ops	10,000	10,400	10,800	11,200	11,600	12,000	by gen'l escal.
Transportation Equip.	12,084	12,500	12,900	13,400	13,900	14,400	by gen'l escal.
Othr Srv&Chg - General Ops	15,300	15,800	16,400	17,000	17,600	18,200	by gen'l escal.
Utility Tax State	54,000	55,900	57,900	59,900	62,000	64,200	by gen'l escal.
Utility Tax City	160,000	165,600	171,400	177,400	183,600	190,000	by gen'l escal.
Other Admin (safety train)	1,000	1,000	1,000	1,000	1,000	1,000	by gen'l escal.
Subtotal Operations	3,195,161	3,316,500	3,442,600	3,573,800	3,710,400	3,852,600	