Chapter 8

Financial Plan

Chapter 8 – Financial Plan

8.1 Introduction

This chapter was prepared by FCS GROUP to provide a financial program that allows the sewer utility to remain financially viable during the planning period. This financial viability analysis considers the historical financial condition, current and recommended financial and policy obligations, operation and maintenance needs, and the financial impact of completing the capital projects identified in this General Sewer Plan (GSP) Update. Furthermore, this chapter provides a review of the utility's current rate structure with respect to rate adequacy and customer affordability.

8.2 Past Financial Performance

This section includes an historical summary of financial performance as reported by the City on the fund resources and uses arising from cash transactions, as well as an historical summary of comparative statements of net position.

8.2.1 Comparative Financial Statements

Financial operations of the sewer utility are managed within Fund 403, the Wastewater Utility Fund. **Table 8-1** shows a summary of fund resources and uses arising from cash transactions for the previous 6 years (2008 through 2013). **Table 8-2** shows a summary of assets and liabilities, with the difference between the two reported as "net position". Increases or decreases in net position are useful indicators of the financial position of the City's utility fund. Noteworthy findings and trends are discussed to demonstrate the historical performance and condition of the City's utility fund.

Table 8-1 – Summary of Historical Fund Resources and Uses Arising from Cash Transactions

	2008	2009	2010	2011	2012	2013
OPERATING REVENUES						
Charges for services:						
Sewer	$ 7,481,709	$ 7,929,743	$ 8,333,342	$ 8,582,408	$ 8,574,149	$ 8,777,356
Other operating revenues	-	-	182,445	-	-	-
Total operating revenues	7,481,709	7,929,743	8,515,787	8,582,408	8,574,149	8,777,356
OPERATING EXPENSES						
Maintenance and operations	3,021,477	3,260,519	3,378,611	4,051,372	3,509,728	3,596,509
Administrative and general	1,123,676	1,256,281	1,229,288	1,206,980	1,233,823	1,275,978
Taxes	875,640	922,798	1,024,946	1,032,075	1,027,269	1,043,607
Depreciation	1,305,060	1,369,951	1,373,424	1,431,552	1,606,031	1,605,507
Total operating expenses	6,325,853	6,809,549	7,006,269	7,721,979	7,376,851	7,521,601

Operating income (loss)	1,155,856	1,120,194	1,509,518	860,429	1,197,298	1,255,755
NONOPERATING REVENUES/(EXPENSES)						
Investment earnings	241,703	49,168	35,906	241,004	233,860	(36,231)
	2008	**2009**	**2010**	**2011**	**2012**	**2013**
Interest expense	(896,096)	(841,406)	(815,001)	(778,249)	(778,844)	(739,289)
Other interest earnings	29,411	7,220	-	31,814	5,089	685
Debt costs	(208,664)	(190,513)	(193,920)	(193,920)	(188,291)	(31,131)
Misc. nonoperating rev/(exp)	16,404	53,587	1,313,155	321,850	3,415	(86,325)
Total nonoperating rev (exp)	(817,242)	(921,944)	340,140	(377,501)	(724,771)	(892,291)
Net income before contributions and transfers	338,614	198,250	1,849,658	482,928	472,527	363,464
Capital contributions	330,484	479,859	1,095,437	954,386	1,885,014	1,351,619
Transfers in	-	10,629	-	300,000	25,597	-
Transfers out	-	(52,722)	-	(8,073)	(55,295)	(101,000)
Change in net position	669,098	636,016	2,945,095	1,729,241	2,327,843	1,614,083
Net position – beginning	35,981,807	36,629,518	37,014,375	41,743,937	43,498,602	45,723,919
Prior period adjustments	(21,387)	(251,159)	1,784,467	25,424	(21,297)	42,862
Net position – ending	$36,629,518	$37,014,375	$41,743,937	$43,498,602	$45,805,148	$47,380,864
O&M Coverage Ratio	118.3%	116.5%	121.5%	111.1%	116.2%	116.7%
Net Operating Income as % of Operating Revenue	15.4%	14.1%	17.7%	10.0%	14.0%	14.3%
Debt Service Coverage Ratio	2.75	2.34	2.62	2.01	2.36	2.34

8.2.2 Findings and Trends

- The City's sewer sales increased by 11.4 percent from 2008 to 2011, and an additional 2.3 percent from 2011 to 2013. The lower increases in later years were likely due to the depressed economy. Total expenses increased each year through 2011; in 2012, lower maintenance and operations expenses assisted with net operating income increasing again.
- The O&M Coverage Ratio (total operating revenue divided by total operating expenses) began 2008 at 118.3 percent, declined to 111.1 percent in 2011 and ended 2013 at 116.7 percent. A ratio of 100 percent or greater shows that revenue will successfully cover expenses and the City has remained above this for the past six years.
- Net Operating Income as a percent of Operating Revenue in 2008 was 15.4 percent, increasing to a high of 17.7 percent in 2010, then lowering to 14.3 percent in 2013. Similar to the O&M Coverage Ratio, these trends help to show how successfully operating revenue actually covered operating expenses, with higher positive numbers being the best and negative numbers showing need for improvement.

- The Debt Service Coverage Ratio is required by bond covenants to remain above 1.25 during the life of the loans. This ratio is calculated by dividing cash operating income (revenue less expenses before depreciation) by annual revenue bond expenses. This ratio remains above the target, beginning 2008 at a high of 2.75, decreasing to 2.01 in 2011 and climbing again to 2.34 in 2013.

Table 8-2 – Summary of Historical Comparative Statement of Net Position

	2008	2009	2010	2011	2012	2013
ASSETS						
Current:						
Cash and cash equivalents	$1,678,177	$1,470,480	$2,462,350	$ 616,151	$ 340,373	$ 326,778
Deposits with third parties	-	2,650	2,650	2,650	2,650	2,650
Investments	730,550	1,663,517	454,738	1,973,661	4,119,215	3,872,216
Receivables:						
Customer accounts (net)	449,863	436,378	442,395	481,943	497,462	638,253
Due from other funds	-	2,790	-	-	-	-
Due from other governments	-	101,163	493,100	942,608	-	-
Interfund loans	600,000	65,871	65,871	65,871	141,153	-
Prepaid items	-	-	-	252	-	3,196
Inventory	4,303	4,285	4,342	1,113	1,113	1,113
Total current assets	3,462,893	3,747,134	3,925,446	4,084,249	5,101,966	4,844,206
Noncurrent:						
Restricted cash and cash equivalents	2,103,159	2,571,144	4,819,944	85,477	4,845,982	578,181
Restricted investments	1,339,450	3,342,993	1,346,929	4,751,072	-	2,599,878
Receivables:						
Interfund loans	327,200	329,356	272,895	216,434	-	-
Deferred charges	267,348	168,850	157,055	145,260	81,229	-
Capital:						
Depreciated assets (net)	11,145,641	10,795,986	10,475,539	13,165,616	12,797,345	12,535,229
Infrastructure	34,140,777	34,324,834	36,067,858	40,343,437	41,393,170	44,433,011
Construction in progress	2,028,916	1,184,396	4,760,372	140,508	132,129	56,210
Total capital assets (net)	47,315,334	46,305,216	51,303,769	53,649,561	54,322,644	57,024,450

Total noncurrent assets	51,352,491	52,717,559	57,900,592	58,847,804	59,249,855	60,202,509
Total assets	54,815,384	56,464,693	61,826,038	62,932,053	64,351,821	65,046,715
DEFERRED OUTFLOWS OF RESOURCES						
Deferred amount on debt funding	-	-	-	-	-	362,237
Total deferred outflows of resources	-	-	-	-	-	362,237
LIABILITIES						
Current liabilities:						
Accounts payable and accrued expenses	264,512	212,292	336,888	398,730	586,050	904,189
Payable to other governments	13,828	16,055	19,039	(304)	7,102	102
Due to other funds	-	28,032	-	-	4,501	-
Deposits payable	11,083	4,623	11,215	13,480	9,280	4,440
Compensated absences-current	86,665	107,507	118,270	105,004	102,698	119,073
Notes and contracts payable-current	-	-	7,827	38,219	60,551	62,330
Revenue bonds payable-current	893,965	1,062,390	1,100,321	1,142,371	1,185,952	1,222,281
Total current liabilities	1,270,053	1,430,899	1,593,560	1,697,500	1,956,134	2,312,415
Noncurrent liabilities:						
Compensated absences	86,665	107,507	118,270	105,004	102,697	119,073
Notes and contracts payable	-	50,582	1,271,137	1,491,209	1,400,039	1,337,709
Revenue bonds payable	16,829,148	17,861,330	16,943,134	15,983,738	14,931,803	14,102,891
Unearned revenue	-	-	156,000	156,000	156,000	156,000
Total noncurrent liabilities	16,915,813	18,019,419	18,488,541	17,735,951	16,590,539	15,715,673
Total Liabilities	18,185,866	19,450,318	20,082,101	19,433,451	18,546,673	18,028,088

NET POSITION						
Net investment in capital assets	29,592,221	27,381,496	33,658,557	34,994,024	36,656,660	40,488,015
Restricted for:						
Debt service	1,339,450	1,342,993	1,346,929	4,751,072	1,276,076	999,878
Capital improvements	2,103,159	4,335,487	4,663,944	3,246,906	3,413,906	2,022,181
Unrestricted	3,594,688	3,954,399	2,074,507	506,600	4,458,506	3,870,790
Total Net Position	$36,629,518	$37,014,375	$41,743,937	$43,498,602	$45,805,148	$47,380,864
Current Ratio	2.73	2.62	2.46	2.41	2.61	2.09
Debt to Net Position Ratio	0.48	0.51	0.43	0.39	0.35	0.32
Debt to Noncurrent Capital Assets Ratio	0.37	0.41	0.35	0.32	0.30	0.27

8.2.3 Findings and Trends

- The Current Ratio is calculated by dividing unrestricted current assets by current liabilities and measures a company's ability to pay short-term obligations. This ratio ranges from a high of 2.7 in 2008 to a low of 2.1 in 2013. Anything above 2.0 for this liquidity ratio is good.
- The Debt to Net Position Ratio compares total debt to total net position, which is the difference between current assets and liabilities. This ratio begins at 0.48 or 48 percent debt in 2008, increases to 0.51 in 2009 and decreases to end 2013 at 0.32. For City utilities, 50 to 60 percent is within an industry target range..
- The Debt to Noncurrent Capital Asset Ratio compares total debt to noncurrent assets, which are also known as property, plant and equipment. This ratio begins at 0.37 or 37 percent debt to 63 percent noncurrent assets in 2008. Noncurrent capital assets increase $9.7 million throughout the six year history while debt decreases $2.4 million and the ratio lowers to 0.27 in 2013. A ratio of 60 percent debt to 40 percent equity is a general industry target.

8.3 Current Financial Structure

This section summarizes the current financial structure used as the baseline for the capital financing strategy and financial forecast developed for this GSP.

8.3.1 Financial Plan

The sewer utility is an enterprise fund, meaning it is self-sufficient and rates and fees collected for sewer service support the financial obligations of the utility. The primary source of funding is derived from ongoing monthly charges for service, with additional revenues coming from annual permits, late fees, and other miscellaneous revenue. The City controls the level of user charges and, subject to statutory authority, can adjust user charges as needed to meet financial objectives.

The financial plan can only provide a qualified assurance of financial feasibility if it considers the total system costs of providing sewer services, both operating and capital. To meet these objectives, the following elements have been completed:

1. **Capital Funding Plan.** Identifies funding sources for the total capital improvement plan (CIP) obligations during the planning period. The plan defines a strategy for funding annual CIP costs based on an analysis of available resources from rate revenues, existing reserves, connection charges, debt financing, and any special resources that may be readily available (e.g. grants, developer contributions, etc.). The capital funding plan impacts the financial plan based on use of debt financing (resulting in annual debt service) and the level of cash-funding of capital costs from annual rate revenues.

2. **Financial Forecast.** Combines the total annual capital impact with operating, maintenance and administration of the sewer system. Included in the financial plan is a reserve analysis that forecasts cash flow and fund balance activity along with testing for satisfaction of minimum fund balance policies. The financial plan ultimately evaluates the sufficiency of utility revenues in meeting all obligations, including cash uses such as operating expenses, debt service, capital outlays, and reserve contributions, as well as any coverage requirements associated with long-term debt. Based on the total annual revenue requirement to support the utility, the financial plan identifies the adjustment to rates required to complete the financial plan.

8.3.2 Capital Funding Plan

The CIP developed for this GSP identifies $15.1 million in project costs over the 6-year planning horizon, escalated to year of spending. The 10-year period totals $30.3 million.

A summary of the ten-year CIP is shown in Table 8-3. As shown, each year has varied capital cost obligations depending on construction schedules and infrastructure planning needs. Approximately 50 percent of the capital costs are within the 6-year planning period. Table 8-4 provides more detail for the 6-year CIP.

Table 8-3 – 10-Year CIP

Year	Inflated
2015	$1,585,000
2016	$1,083,000
2017	$4,852,000
2018	$2,313,000
2019	$2,387,000
2020	$2,876,000
6-Year Total	**$15,096,000**
2021-2024	$15,242,000
10-Year Total	**$30,338,000**

Table 8-4 – Six-Year Detailed CIP (inflated $)

Project	2015	2016	2017	2018	2019	2020
Leslie Rd Trunk Replacement						*future*
Keene Rd Collector Replacement						*future*
Upper North Interceptor Improvements						*future*
Bellerive LS Pump Upgrade and Downstream Improvements						*future*
Leslie Interceptor Extension	800,000					
Montana Lift Station Standby Generator	40,000					
Columbia Lift Station Standby Generator	25,000					
Waterfront Lift Station Replacement			608,000			
Renewals and Replacement	250,000	258,000	1,599,000	1,652,000	1,705,000	1,761,000
Annual Street Overlay Areas	100,000	103,000	107,000	110,000	114,000	117,000
Infiltration and Inflow Study						*future*
Influent Upgrades			2,133,000			
Engineering Report						411,000
WWTP Renewals and Replacements				551,000	568,000	587,000
Plant-wide HVAC Improvements	290,000					
Digester Building MCC	80,000					
Primary Clarifier #2 Coating		165,000				
Digester #1 Tank Coating		330,000				
Secondary Clarifier #2 Coating		227,000				
Clarifier Gear Drive Replacements			325,000			
Plant Pump and Piping Replacement			80,000			
Total Annual CIP Costs	**$ 1,585,000**	**$ 1,083,000**	**$ 4,852,000**	**$ 2,313,000**	**$ 2,387,000**	**$ 2,876,000**

8.3.3 Capital Financing Strategy

An ideal capital financing strategy would include the use of grants and low-cost loans when debt issuance is required. However, these resources are very limited and competitive in nature and do not provide a reliable source of funding for planning purposes. It is recommended that the City pursue these funding avenues but assume bond financing to meet needs for which the City's available cash resources are insufficient. Revenue bonds are the debt funding instrument used should debt proceeds be required in this analysis. The capital financing strategy developed to fund the CIP identified in this GSP assumes the following funding resources:

- Facility Fee reserves for identified growth projects
- Other accumulated cash reserves
- Transfers of excess cash (over minimum balance targets) from the Operating Fund

- Annual cash from rates earmarked for system reinvestment funding
- Interest earned on Capital Fund balances and other miscellaneous capital resources
- Revenue bond financing

Based on information provided by the City, the sewer utility began 2014 with $3.91 million in the Operating Fund and $2.02 million in the Facilities Fee Fund. Additional funds beyond the Operating Fund target of forty five days of cash operating expenses are transferred to the Capital Fund. Table 8-5 presents the corresponding 10-year capital financing strategy.

Table 8-5 – 10-Year Capital Financing Strategy

Year	Capital Expenditures Inflated	Revenue Bond Financing	Cash Funding	Total Financial Resources
2015	$1,585,000	-	$1,585,000	$1,585,000
2016	1,083,000	-	1,083,000	1,083,000
2017	4,852,000	-	4,852,000	4,852,000
2018	2,313,000	469,585	1,843,415	2,313,000
2019	2,387,000	1,129,594	1,257,406	2,387,000
2020	2,876,000	1,251,527	1,624,473	2,876,000
Subtotal	**$15,096,000**	**$2,850,705**	**$12,245,295**	**$15,096,000**
2021-2024	15,242,000	-	15,242,000	15,242,000
Total	**$30,338,000**	**$2,850,705**	**$27,487,295**	**$30,338,000**

The 10-year capital funding plan indicates the City's cash reserves are sufficient to meet 91% of the total capital funding need. Revenue bond proceeds of $2,850,000 complete the funding plan for both the 6 and 10 year planning periods.

The capital funding plan assumes a consistent growth rate among financial and system capacity planning. It is assumed that if growth is not occurring at the planned rate, the timing of capital projects would be adjusted accordingly and revenue impacts evaluated.

8.4 Available Funding Assistance and Financing Resources

Feasible long-term capital funding strategies must be defined to ensure that adequate resources are available to fund the CIP identified in this GSP. In addition to the City's resources such as accumulated cash reserves, capital revenues, and rate revenues designated for capital purposes, capital needs can be met from outside sources such as grants, low-interest loans, and bond financing. The following is a summary of the City's internal and external resources.

8.4.1 City Resources

Resources appropriate for funding capital needs include accumulated cash in the construction fund, rate revenues designated for capital spending purposes, and capital-related charges such as the Connection Fee. The first two resources will be discussed in the Fiscal Policies section (8.5.2) of the Financial Forecast. Capital-related charges are discussed below.

8.4.1.1 Connection Fees (Facility Fees)

A connection fee refers to a one-time charge imposed on new customers as a condition of connecting to the sewer system. The City refers to this charge as a facility fee. The purpose of the connection fee is to promote equity between new and existing customers. Revenue can only be used to fund utility capital projects or to pay debt service incurred to finance those projects. The City currently charges all new customers a Connection Fee based on water meter size, with a base rate of $1,995 for a 3/4" meter.

8.4.1.2 Local Facilities Charges

While a connection charge is the manner in which new customers pay their share of general facilities costs, local facilities funding is used to pay the costs of local facilities that connect each property to the system's infrastructure. Local facilities funding is often overlooked in rate forecasting because it is funded up-front by either connecting customers, developers, or through an assessment to properties, but never from rates.

A number of mechanisms can be considered toward funding local facilities. One of the following scenarios typically occurs: (a) the utility charges a connection fee based on the cost of the local facilities (under the same authority as the Connection Fee); (b) a developer funds extension of the system to its development and turns those facilities over to the utility (contributed capital); or (c) a local assessment is set up called a Utility Local Improvement City (ULID/LID) or a Local Utility District (LUD) which collects tax revenue from benefited properties.

A local facilities charge (LFC) is a variation of the connection charge. It is a City-imposed charge to recover the cost related to service extension to local properties. Often called a front-footage charge and imposed on the basis of footage of the main "fronting" a particular property, it is usually implemented as a reimbursement mechanism to a City for the cost of a local facility that directly serves a property. It is a form of connection charge and thus can accumulate up to 10 years of interest. It typically applies in instances when no developer-installed facilities are needed through developer extension due to the prior existence of available mains already serving the developing property.

The developer extension is a requirement that a developer install onsite and sometimes offsite improvements as a condition of extending service. These are in addition to the connection charge required and must be built to City standards. Part of the agreement between the City and the developer planning to extend service might include a late-comer agreement, resulting in a late-comer charge to new connections to the developer extension.

Latecomer charges are a variation of developer extensions whereby new customers connecting to a developer-installed improvement make a payment to the City based on their share of the developer's cost (RCW 35.91.020). The City passes this charge on to the developer who installed the facilities. As part of the developer extension process, a later comer agreement between the City and developer defines the allocation of costs and records

latecomer obligations on the title of affected properties. No interest is allowed, and the reimbursement agreement cannot exceed 20 years in duration, except under special circumstances.

LID/ULID is another mechanism for funding infrastructure that assesses benefited properties based on the special benefit received by the construction of specific facilities. Most often used for local facilities, some ULIDs also recover related general facilities costs. Substantial legal and procedural requirements can make this a relatively expensive process, and there are mechanisms by which a ULID can be rejected.

8.4.2 Outside Resources

This section outlines various grant, loan and bond opportunities available to the City through federal and state agencies to fund the CIP identified in the GSP.

8.4.2.1 Grants and Low Cost Loans

Historically, federal and state grant programs were available to local utilities for capital funding assistance. However, these assistance programs have been mostly eliminated, substantially reduced in scope and amount, or replaced by loan programs. Remaining miscellaneous grant programs are generally lightly funded and heavily subscribed. Nonetheless, even the benefit of low-interest loans makes the effort of applying worthwhile. Grants and low-cost loans for Washington State utilities are available from the Department of Commerce including two assistance programs that the City may be eligible for.

Public Works Trust Fund (PWTF) – Cities, counties, special purpose districts, public utility districts, and quasi-municipal governments are eligible to receive loans from the PWTF. Eligible projects include repair, replacement, and construction of infrastructure for domestic water, sanitary wastewater, stormwater, solid waste, road, and bridge projects that improve public health and safety, respond to environmental issues, promote economic development, or upgrade system performance. Currently the Public Works Board has suspended the non-Construction Programs and significantly reduced funding to the construction loan program. The Public Works Board website notes that the next funding cycle is to be determined by funding levels in early 2016-17.

When the program is funded and available, PWTF loans are available at interest rates ranging from 1.28 percent to 2.55 percent depending on the repayment term, with reduced interest rates available for all projects located in "distressed" communities. The standard loan offer is 2.55 percent interest repaid over a 5 to 20 year term. All loan terms are subject to negotiation and Board approval. Currently no local match is required and the maximum loan amount is $7 million per jurisdiction per biennium.

Information regarding the application process as well as rates and terms are posted on the PWTF website in early spring. The next application cycle is planned for the spring of 2016.

Further detail is available at http://www.pwb.wa.gov.

8.4.2.2 Bond Financing

General Obligation Bonds – General Obligation (G.O.) bonds are bonds secured by the full faith and credit of the issuing agency, committing all available tax and revenue resources to debt repayment. With this high level of commitment, G.O. bonds have relatively low interest rates and few financial restrictions. However, the authority to

issue G.O. bonds is restricted in terms of the amount and use of the funds, as defined by Washington constitution and statute. Specifically, the amount of debt that can be issued is linked to assessed valuation.

RCW 39.36.020 states:

> *"(ii) Counties, cities, and towns are limited to an indebtedness amount not exceeding one and one-half percent of the value of the taxable property in such counties, cities, or towns without the assent of three-fifths of the voters therein voting at an election held for that purpose.*
>
> *(b) In cases requiring such assent counties, cities, towns, and public hospital districts are limited to a total indebtedness of two and one-half percent of the value of the taxable property therein."*

While bonding capacity can limit availability of G.O. bonds for utility purposes, these can sometimes play a valuable role in project financing. A rate savings may be realized through two avenues: the lower interest rate and related bond costs; and the extension of repayment obligation to all tax-paying properties (not just developed properties) through the authorization of an ad valorem property tax levy.

Revenue Bonds – Revenue bonds are commonly used to fund utility capital improvements. The debt is secured by the revenues of the issuing utility. With this limited commitment, revenue bonds typically bear higher interest rates than G.O. bonds and also require security conditions related to the maintenance of dedicated reserves (a bond reserve) and financial performance (added bond debt service coverage). The City agrees to satisfy these requirements by resolution as a condition of bond sale.

Revenue bonds can be issued in Washington without a public vote. There is no bonding limit, except perhaps the practical limit of the utility's ability to generate sufficient revenue to repay the debt and provide coverage. In some cases, poor credit might make issuing bonds problematic.

8.5 Financial Forecast

The financial forecast, or revenue requirement analysis, forecasts the amount of annual revenue that needs to be generated by user rates. The analysis incorporates operating revenues, O&M expenses, debt service payments, rate-funded capital needs, and any other identified revenues or expenses related to operations. In addition to annual operating costs, the revenue needs also include debt covenant requirements and specific fiscal policies and financial goals of the City. The objective of the financial forecast is to evaluate the sufficiency of the current level of rates.

The analysis determines the amount of revenue needed in a given year to meet that year's expected financial obligations. For this analysis, two revenue sufficiency tests have been applied to reflect the financial goals and constraints of the City: cash needs must be met, and debt coverage requirements must be realized. In order to operate successfully with respect to these goals, both tests of revenue sufficiency must be met.

Cash Test – The cash flow test identifies all known cash requirements for the City in each year of the planning period. Typically these include O&M expenses, debt service payments, depreciation funding or directly funded capital outlays, and any additions to specified reserve balances. The total annual cash needs of the City are then compared

to projected cash revenues using the current rate structure. Any projected revenue shortfalls are identified and the rate increases necessary to make up the shortfalls are established.

Coverage Test – The coverage test is based on a commitment made by the City when issuing revenue bonds and some other forms of long-term debt. As a security condition of issuance, the City would be required per covenant to agree that the revenue bond debt would have a higher priority for payment (a senior lien) compared to most other expenditures; the only outlays with a higher lien are O&M expenses. Debt service coverage is expressed as a multiplier of the annual revenue bond debt service payment. For example, a 1.0 coverage factor would imply that no additional cushion is required. A 1.25 coverage factor means revenue must be sufficient to pay O&M expenses, annual revenue bond debt service payments, plus an additional 25 percent of annual revenue bond debt service payments. The excess cash flow derived from the added coverage, if any, can be used for any purpose, including funding capital projects. Targeting a higher coverage factor can help the City achieve a better credit rating and provide lower interest rates for future debt issues.

In determining the annual revenue requirement, both the cash and coverage sufficiency test must be met and the test with the greatest deficiency drives the level of needed rate increase in any given year.

8.5.1 Current Financial Structure

The City maintains a fund structure and implements financial policies that target management of a financially viable and fiscally responsible sewer system.

8.5.2 Fiscal Policies

A brief summary of the key financial policies employed by the City, as well as those recommended and incorporated in the financial program are discussed below.

Operating Fund – Operating reserves are designed to provide a liquidity cushion to ensure that adequate cash working capital will be maintained to deal with significant cash balance fluctuations such as seasonal fluctuations in billings and receipts, unanticipated cash expenses, or lower than expected revenue collections. The City's current policy is to maintain a minimum balance in the Operating Fund equal to 45 days of O&M expenses.

Capital Fund – A capital contingency reserve is an amount of cash set aside in case of an emergency should a piece of equipment or a portion of the utility's infrastructure fail unexpectedly. The reserve also could be used for other unanticipated capital needs including capital project cost overruns. Industry practices range from maintaining a balance equal to 1 to 2 percent of fixed assets, an amount equal to a 5-year rolling average of CIP costs, or an amount determined sufficient to fund equipment failure (other than catastrophic failure). The final target level should balance industry standards with the risk level of the City. The City's does not currently maintain a capital contingency reserve. It is recommended for consideration in future policy review and rate planning.

System Reinvestment – System reinvestment funding promotes system integrity. Target system reinvestment funding levels are commonly linked to annual depreciation expense as a measure of the decline in asset value associated with routine use of the system. Particularly for utilities that do not already have an explicit system reinvestment policy in place, implementing a funding level based on full depreciation expense could significantly impact rates. A common alternative benchmark is annual depreciation expense net of debt principal payments on

outstanding debt. This approach recognizes that customers are still paying for certain assets through the debt component of their rate, and intends to avoid simultaneously charging customers for an asset and its future replacement. The specific benchmark used to set system reinvestment funding targets is a matter of policy that must balance various objectives including managing rate impacts, keeping long-term costs down, and promoting "generational equity" (i.e. not excessively burdening current customers with paying for facilities that will serve a larger group of customers in the future).

The City's Utility Financial Operating Policy states that "traditional convention is to rate-finance a portion of capital additions at a level equal to annual depreciation expense". In this analysis, the routine capital expense for system reinvestment is funded based on the existing policy. These monies are put directly into the Capital Fund and are made available for capital project costs. A phase-in approach is applied to this policy in 2017 through 2019 to bring the utility up to a fully funded level.

Debt Management – It is prudent to consider policies related to debt management as part of broader utility financial policy structure. Debt management policies should be evaluated and formalized including the level of acceptable outstanding debt, debt repayment, bond coverage and total debt coverage targets. The City's existing bond covenants require a 1.25 debt coverage test, which is met throughout the forecast.

8.5.2.1 Financial Forecast

The financial forecast is developed from 2014 budget documents along with other key factors and assumptions to develop a complete portrayal of the City's annual financial obligations. The following is a list of the key revenue and expense factors and assumptions used to develop the financial forecast:

- **Revenue** – The City has two general revenue sources: revenue from charges for service (rate revenue) and miscellaneous (non-rate) revenue. In the event of a forecasted annual shortfall, rate revenue can be increased to meet the annual revenue requirement. Non-rate revenues are forecast to escalate based on the nature of the revenue.
- **Connection Fee Revenue** – The current connection fee of $1,995 is expected to increase based on the connection fee update, however connection fee revenue has been forecast in the rate study based on the current connection fee to be more conservative. The current connection fee is expected to generate between $597,000 in 2015 and just under $985,000 in 2024, collected from 300 to 500 new annual residential equivalent connections. This money is used to fund growth related capital projects.
- **Growth** – Rate revenue is escalated based on an annual growth rate of 1.85% beginning in 2017, provided in **Section 2.11** of this GSP. Revenue projections in 2015 and 2016 are based on the actual 2014 growth rate of 1.3%.
- **Expenses** – O&M expense projections are based on the 2014 budget and are forecast to increase with general cost inflation of 2.29 percent, construction cost inflation of 3.26 percent, labor cost inflation of 2.22 percent, and benefit cost inflation of 4.26 percent. Budget figures were used for 2014 taxes; future taxes are calculated based on forecasted revenues and prevailing tax rates.
- **Existing Debt** – The City currently has a total of six outstanding sewer debt issues, including five revenue bonds and one American Recovery and Reinvestment Act (ARRA) loan. Revenue bond annual payments range from $1.88 million decreasing to $240,000 when two revenue bond issues are eliminated. ARRA annual payments are about $103,000 per year and expire in 2031.

- **Future Debt** – The capital financing strategy developed for this GSP indicates that borrowing will be required in years 2018 through 2020 to complete the CIP, resulting in new debt service repayment obligations beginning in 2018.
- **Transfer to Capital** – Any Operating Fund balance above the minimum requirement is assumed to be available to fund capital projects and is projected to be transferred to the Capital Fund each year. The 2014 Operating Fund balance is expected to end the year at 62 days of O&M expenses, which includes cushion above the minimum target for the rate-smoothing strategy. The Capital Fund balance is expected to end the year at approximately $3.6 million.

Although the financial plan is completed for the 10-year time horizon of this GSP, the revenue requirement forecast focuses on the shorter term planning period 2015 through 2020. It is important that the City revisit the forecast every 2 to 3 years to ensure that the rate projections developed remain adequate. Any significant changes should be incorporated into the financial plan and future rates should be adjusted as needed.

Table 8-6 summarizes the annual revenue requirements based on the forecast of revenues, expenditures, fund balances and fiscal policies.

Table 8-6 – 6-Year Financial Forecast

Revenue Requirement	2015	2016	2017	2018	2019	2020
Revenues						
Rate Revenues Under Existing Rates	$ 8,809,133	$ 8,924,538	$ 9,089,641	$ 9,257,800	$ 9,429,069	$ 9,603,507
Non-Rate Revenues	274,116	274,030	273,870	273,833	273,935	274,131
Total Revenues	**$ 9,083,249**	**$ 9,198,568**	**$ 9,363,512**	**$ 9,531,633**	**$ 9,703,005**	**$ 9,877,638**
Expenses						
Cash Operating Expenses	$ 6,560,926	$ 6,722,825	$ 6,899,246	$ 7,076,872	$ 7,259,531	$ 7,447,382
Existing Debt Service	1,974,153	1,972,424	1,982,185	1,965,750	1,958,470	1,956,064
New Debt Service	-	-	-	39,752	135,377	241,323
Rate Funded System Reinvestment	600,000	600,000	731,348	1,124,777	1,537,895	1,979,889
Total Expenses	**$ 9,135,079**	**$ 9,295,249**	**$ 9,612,779**	**$ 10,207,152**	**$10,891,273**	**$ 11,624,658**
Net Surplus (Deficiency)	**$ (51,830)**	**$ (96,681)**	**$ (249,267)**	**$ (675,518)**	**$ (1,188,268)**	**$ (1,747,020)**
Additions to Meet Coverage	-	-	-	-	-	-
Total Surplus (Deficiency)	**$ (51,830)**	**$ (96.681)**	**$ (249,267)**	**$ (675,518)**	**$ (1,188,268)**	**$ (1,747,020)**

The financial forecast indicates that there is an existing deficiency at current rate levels, and that sewer rates will need to increase to meet the total annual financial requirement in all years. Rates would need to increase a total of 21.5 percent by 2020 to achieve revenue sufficiency. The City is currently in the process of completing a rate study to

adopt a near-term rate plan that will establish annual rate increases. The remaining summaries are based on 5 percent annual rate increases in 2017 through 2020 to achieve the cumulative 21.5 percent increase.

8.5.3 City Funds and Reserves

Table 8-7 shows a summary of the projected Operating Fund, Capital Fund, and Facilities Fee Fund ending balances through 2020 based on the rate forecasts presented above. The operating fund is maintained at a minimum of 45 days of operating expenses, the capital fund balance is depleted through funding the CIP, and the Facilities Fee Fund is used only for qualifying CIP projects, dipping in 2015, then building up as Facilities Fee revenue exceeds annual qualified CIP project spending.

Table 8-7 – 6-Year Financial Forecast

Ending Fund Balance	2015	2016	2017	2018	2019	2020
Operating Fund	$ 969,404	$ 872,723	$ 850,592	$ 872,491	$ 895,011	$ 918,170
Capital Fund	2,926,237	2,449,072	1,112,068	132,629	86,578	36,196
Facilities Fee Fund	1,793,343	2,401,871	531,194	1,414,448	2,315,488	3,234,645
Total	**$ 5,688,984**	**$ 5,723,667**	**$ 2,493,853**	**$ 2,419,568**	**$ 3,297,076**	**$ 4,189,011**

8.6 Existing and Projected Rates

8.6.1 Existing (2015) Rates

The City's current rate structure consists of two rate components, a fixed monthly charge based on rate class, which is charged to all customers, and a monthly usage charge per hundred cubic feet (ccf) that is charged to multifamily and commercial customers. **Table 8-8** shows the existing rate structure.

Table 8-8 – 2015 Existing Rate Structure

	Existing
Residential	$ 25.60
Multifamily	
Base Charge	$ 12.40
Usage Charge (per ccf)	$ 2.15
Commercial	
Base Charge	$ 61.50
Usage Charge (per ccf)	$ 2.15

8.6.2 Projected Rates

While the City' annual rate strategy to achieve revenue sufficiency is being addressed in the rate study currently underway, the cumulative adjustment by 2020 of 21.5 percent is applied to the existing rate structure to project rates

in 2020. **Table 8-9** shows the projected rates as applied uniformly to all rate components in all classes. A cost of service analysis is a part of the rates study and changes to the rates might result from those findings as well.

Table 8-9 – 6-Year Projected Rates

	Existing	2020
Residential	$ 25.60	$ 31.10
Multifamily		
Base Charge	$ 12.40	$ 15.07
Usage Charge (per ccf)	$ 2.15	$ 2.61
Commercial		
Base Charge	$ 61.50	$ 74.72
Usage Charge (per ccf)	$ 2.15	$ 2.61

Table 8-10 shows the residential monthly bill impact.

Table 8-10 – Monthly Bill Comparisons

Single-Family	Monthly Bill
Existing Monthly Bill	$ 25.60
Projected to 2020	$ 31.10
$ Difference	$ 5.50
Total Rate Increase	21.5%

8.7 Connection Fee

The Connection Fee, or Facilities Fee, is imposed as a condition of service on new customers connecting to the system. In addition to any other costs related to physically connecting a customer to the system, the connection fee is typically based on a blend of historical and planned future capital investments in system infrastructure.

The purpose of the connection fee is two-fold: 1) to provide a source for capital financing and 2) to equitably recover a proportionate share of utility plant-in-service costs from new customers. In the absence of connection fees, growth-related costs would be borne in large part by existing customers. The cost of the system to be recovered by connection fees can be defined in two parts: an existing cost portion based on historical investments in existing infrastructure, and a future cost portion that recovers costs related to planned capital projects. Revenues generated from the connection fees can be used to fund capital projects or debt service incurred to finance capital projects, but should not be used to pay for operating and maintenance costs.

The existing cost basis is intended to recognize the current ratepayers' net investment in the original cost of system assets. The total cost of the sewer system reflects:

- ***Utility Plant-In-Service:*** The majority of the existing cost basis is composed of the original cost of plant-in-service, as documented in the City's 2013 fixed asset schedule. 2014 asset additions were available before completion of this analysis and were added in lieu of 2013 Construction Work in Progress.

- ***Less: Contributed Capital:*** Assets funded by developers or grants are excluded from the cost basis on the premise that the connection fee should only recover costs actually incurred by the City. Assets funded by special assessments are also excluded from the cost basis to avoid double charging customers for assets that were funded through those assessments. City staff provided records of historical annual capital contributions since 2010. Data on contributions in previous years was not available.

- ***Plus: Interest on Utility-Funded Assets***: RCW 35.92.025 and subsequent legal interpretations provide a guideline for connection charges which suggests that such charges can include interest on an asset at the rate applicable during the time of construction. Using the historical Bond Buyer Index for 20-year term bonds, interest can accumulate for a maximum of ten years from the date of construction for any particular asset, and cannot exceed an interest earnings rate above 10% in any given year. Conceptually, this interest provision attempts to account for opportunity costs that the City's customers incurred by supporting investments in infrastructure rather than having it available for investment or other uses.

- ***Less: Net Debt Principal Outstanding:*** Another adjustment to the existing system cost basis is to deduct the net liability of outstanding utility debt, recognizing that new customers will bear a proportionate share of this debt related to existing assets through their utility rates. Therefore, the cost of those assets charged to new development is offset to some degree by the remaining debt liability. Since the utility typically has cash resources that are not included in the system cost basis, the net debt load is defined as total debt minus outstanding cash and investments.

Development of the existing system cost basis is shown in **Table 8-11.**

Table 8-11 – Existing Cost Basis – Connection Fee

Existing System Cost Basis	$
Sewer Capital Assets	$86,501,954
Contributed Assets	(4,434,612)
Interest Accrued on Assets	42,783,253
Net Outstanding Debt Calculation::	
Outstanding Debt Principal	(5,341,640)
Cash Balances Y-E 2013	3,909,616
Net Outstanding Debt	(1,432,024)
Net Existing System Cost Basis	**$123,418,571**

The future cost basis can include utility capital projects planned for construction and identified in the comprehensive system planning documents. Each project in the 2015 – 2024 capital improvement program was allocated as either "upgrade/expansion" or "repair/replacement." Totals for each utility are listed below:

- ***Repair and Replacement Projects:*** Projects costs allocated to the repair/replacement category are excluded from the cost basis. The cost of the utility asset being replaced is included in the existing cost basis. Excluding

repair/replacements avoids double-counting the cost of a utility asset by including it in both existing and future cost totals.

- ***Upgrade and Expansion Projects:*** Projects that are planned to serve system growth by expanding system capacity, or are planned to improve existing service levels and/or meet new regulations are included in the upgrade/expansion allocation.

- ***Less: Outside Funding Sources:*** Projects directly funded by developers or special property assessments are not included in the calculation.

The future system cost allocation results are summarized in **Table 8-12.**

Table 8-12 – Future Cost Basis – Connection Fee

Future System Cost Basis	$
Total Capital Improvement Program (2015$)	$25,520,000
Less: Repair and Replacement Projects	(21,164,500)
Net Future System Cost Basis	**$4,355,500**

In order to calculate an equitable share of the system costs for new connections, the connection fee cost basis is divided by the number of Meter Capacity Equivalents (MCEs) the system can serve when the CIP is complete. Total connection fee cost basis, divided by total capacity served by the system, determines the equitable unit cost of system buy-in as a basis for setting the connection fee. Projected 2024 ERUs of 42,500 is the maximum capacity the system can serve based on the facilities in place at CIP completion based on JUB capacity analysis. Applying the same growth rate used to arrive at the ERU capacity level to the existing MCE total, results in the MCE capacity served at CIP completion. Calculation of the unit cost connection fee is shown in **Table 8-13.**

Table 8-13 – Unit Cost - Connection Fee

Connection Fee Unit Cost Calculation	$
Existing Cost Basis	$123,418,571
Future Cost Basis	4,355,500
Total Cost Basis	$127,774,071
Total System Capacity Served (MCEs)	27,116
Unit Cost of System Capacity – Connection Fee per MCE	**$4,712**

The updated fee is $2,717 more than the current $1,995 per MCE. The City's existing connection fee is based on the water meter size of new customers. The updated charge would represent the fee for the standard single family meter

size. The meter capacity ratio for larger meter sizes would be applied to the updated base fee to determine the connection fee.

8.8 Affordability

The Department of Health and the Department of Commerce Public Works Board use an affordability index to prioritize low-cost loan awards depending on whether rates exceed 2.0 percent of the median household income for the service area. The median household income for the City of Richland was $68,744 in 2008 – 2012 according to the U.S. Census Bureau. The 2012 figures are escalated based on the assumed 2.22 percent labor cost inflation to show the median household income in future years. **Table 8-14** presents the City's rates projected to 2020, tested against the 2.0 percent monthly affordability threshold.

Table 8-14– Affordability Analysis

Year	Labor Inflation	Median HH Income	2% Monthly Threshold	Projected Monthly Bill	% of Median HH Income
2012		$ 68,744	$ 114.57		
2013	2.22%	70,270	117.12		
2014	2.22%	71,830	119.72	25.60	0.43%
2020	**2.22%**	**81,945**	**136.57**	**31.10**	**0.46%**

Applying the 2.0 percent test, the City's rates are forecast to remain within the indicated affordability range through 2020.

8.9 Conclusion

The results of this analysis indicate that rate increases are necessary to fund ongoing operating needs and future debt requirements to fund the CIP, as well as meet financial policy targets. Implementation of a rate plan that achieves the 21.5% cumulative increase to rates by 2020 should provide for continued financial viability while maintaining generally affordable rates.

It is important to remember that the analysis performed in this chapter assumes growth rates from **Section 2.11** of this GSP. If the future growth rates change, the proposed annual rate increases may need to be updated and revised.

It is recommended that the City regularly review and update the key underlying assumptions that compose the multi-year financial plan to ensure that adequate revenues are collected to meet the City's total financial obligations.