

INTRODUCTION

This chapter was prepared by FCS GROUP to provide a financial program that allows the water utility to remain financially viable during the planning period. This financial viability analysis considers the historical financial condition, current and identified future financial and policy obligations, operation and maintenance needs, and the ability to support the financial impact related to the completion of the capital projects identified in **Chapter 9** of this Comprehensive Water System Plan (WSP) Update. Furthermore, this chapter provides a review of the utility's current rate structure with respect to rate adequacy and customer affordability. **Appendix R** presents backup documentation related to this financial plan.

PAST FINANCIAL PERFORMANCE

This section includes a historical summary of financial performance as reported by the City of Stanwood (City) on the fund resources and uses arising from cash transactions, as well as a historical summary of comparative statements of net position, which are useful indicators of the financial position of the City.

COMPARATIVE FINANCIAL STATEMENTS

The City legally owns and operates a water utility. **Table 10-1** shows a summary of the combined utility fund resources and uses arising from cash transactions for the previous 6 years (2008 through 2013). **Table 10-2** shows a summary of water construction funds 422 to 424. In 2010, the City combined all water funds, including operating and construction funds, for reporting purposes. Noteworthy findings and trends are discussed to demonstrate the historical performance and condition of the City's water fund.

**Table 10-1
Summary of Historical Fund Resources and Uses Arising From Cash
Transactions Water Fund 421**

Water Fund 421	2008	2009	2010	2011	2012	2013
Beginning Net Cash and Investments						
Unspecified	\$ 620,420	\$ 729,887				
308.1 Reserved			\$ 93,783	\$ 94,269	\$ 318,486	\$ 294,024
308.8 Unreserved			\$ 1,569,901	\$ 1,009,606	\$ 3,380,106	\$ 3,200,968
Total Beginning Cash Balance	\$ 620,420	\$ 729,887	\$ 1,663,684	\$ 1,103,875	\$ 3,698,592	\$ 3,494,992
Revenues:						
330 Intergovernmental		\$ 2,480				
340 Charges for Services	\$ 1,241,984	\$ 1,334,291	\$ 1,355,230	\$ 1,220,348	\$ 1,310,643	\$ 1,432,835
350 Fines and Forfeits						\$ 40,328
360 Miscellaneous	\$ 54,071	\$ 40,885	\$ 169,532	\$ 141,874	\$ 384,610	\$ 515,330
390 Other Financing Sources	\$ 100,000	\$ 50,000		\$ 60,000	\$ 730	
397 Transfer-in					\$ 62,226	\$ 65,337
Total Revenues and Other Sources	\$ 1,396,055	\$ 1,427,656	\$ 1,524,762	\$ 1,422,222	\$ 1,758,209	\$ 2,053,830
Total Resources	\$ 2,016,476	\$ 2,157,543	\$ 3,188,446	\$ 2,526,097	\$ 5,456,801	\$ 5,548,822
Operating Expenditures:						
510 General Government						
530 Physical Environment	\$ 747,443	\$ 1,046,719	\$ 1,053,128	\$ 848,292	\$ 823,422	\$ 833,176
Total Operating Expenditures	\$ 747,443	\$ 1,046,719	\$ 1,053,128	\$ 848,292	\$ 823,422	\$ 833,176
591-593 Debt Service	\$ 40,069	\$ 46,890	\$ 42,600	\$ 73,136	\$ 642,755	\$ 637,380
594-596 Capital Outlay			\$ 720,371	\$ 448,915	\$ 495,376	\$ 482,024
Total Expenditures	\$ 787,512	\$ 1,093,609	\$ 1,816,099	\$ 1,370,343	\$ 1,961,553	\$ 1,952,580
597 Other Financing Uses	\$ 266,000	\$ 10,000	\$ -	\$ -	\$ 255	
Total Uses	\$ 1,053,512	\$ 1,103,609	\$ 1,816,099	\$ 1,370,343	\$ 1,961,808	\$ 1,952,580
Excess (Deficit) of Resources Over Uses	\$ 962,964	\$ 1,053,934	\$ 1,372,347	\$ 1,155,754	\$ 3,494,993	\$ 3,596,242
380 Non-Revenues			\$ 124,081	\$ 2,948,482		
580 Non-Expenditures	\$ 233,077	\$ 357,848	\$ 392,553	\$ 405,645		
Ending Net Cash and Investments						
Unspecified	\$ 729,887	\$ 696,086				
508.1 Reserved			\$ 94,269	\$ 318,486	\$ 294,024	\$ 305,331
508.8 Unreserved			\$ 1,009,606	\$ 3,380,105	\$ 3,200,968	\$ 3,290,911
Total	\$ 729,887	\$ 696,086	\$ 1,103,875	\$ 3,698,591	\$ 3,494,993	\$ 3,596,242

**Table 10-2
Summary of Historical Fund Resources and Uses Arising From Cash
Transactions Water Construction Funds 403-407**

Water Construction Funds (422-424)	2008	2009	2010	2011	2012	2013
Beginning Net Cash and Investments	2,310,658	1,032,432				
Revenues:						
340 Charges for Services	28,716	-				
360 Miscellaneous	36,702	-				
390 Other Financing Sources	1,124,907	668,497				
Total Revenues and Other Sources	1,190,325	668,497				
Total Resources	3,500,983	1,700,929				
Operating Expenditures:						
591-593 Debt Service						
594-596 Capital Outlay	3,278,811	-				
Total Expenditures	3,278,811	-				
597 Other Financing Uses	1,661,861	2,324,858				
Total Uses	4,940,672	2,324,858				
Excess (Deficit) of Resources Over Uses	(1,439,689)	(623,929)				
380 Nonrevenues	2,485,150	1,382,186				
580 Nonexpenditures						
Ending Net Cash and Investments	1,045,461	758,257				

FINDINGS AND TRENDS

- The City’s water charges for services increased from \$1.24 million in 2008 to \$1.43 million in 2013. Although revenue decreased 10 percent in 2011, revenue increased in 2012 and 2013. Average annual change is 3 percent per year. Expenses stay between \$745,000 and \$845,000 with the exception of 2 years at over \$1 million in 2009 and 2010, due to a higher indirect cost allocation and resulting transfer to the General Fund in those 2 years.
- The Operations and Maintenance (O&M) Coverage Ratio (total operating revenue divided by total operating expenses) began 2008 at 173 percent, and grew to 247 percent by 2013, due to a rapidly increasing miscellaneous revenue category. Plant Investment Fee (PIF) revenue is included in the miscellaneous line item, and 2012 and 2013 experienced higher than typical residential growth and connection revenue. A ratio of 100 percent or greater shows that revenue will successfully cover expenses and the City has remained above this ratio for the past 6 years.
- Net Operating Income as a percent of Operating Revenue was 46 percent in 2008, and climbed to 59 percent by 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 to ensure the City is positioned to achieve favorable terms in the municipal bond market when issuing bonds for capital funding needs. Typically, bond debt service coverage requires a minimum factor of 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. The water utility has one outstanding revenue bond. The Debt Service Coverage Ratio for all outstanding debt decreases from

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1.77 in 2008 to 1.40 in 2013, indicating the City's capacity for new debt is eroding over the 6-year period.

- The City's capital reserves went from just over \$1 million in 2008 to \$758,257 in 2009, before reporting of these fund levels was grouped with the Water Fund 421.

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 WSP.

FINANCIAL PLAN

The water utility is responsible for funding all of its costs. The primary source of funding is derived from ongoing monthly charges for service, with additional revenues coming from miscellaneous revenues. The City controls the level of user charges and, subject to the City Council, 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 water services, both operating and capital. To meet these objectives, the following elements have been completed:

1. **Capital Funding Plan.** Identifies the total capital improvement plan (CIP) obligations of the planning period. The plan defines a strategy for funding the CIP, including 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 through the use of debt financing (resulting in annual debt service) and the assumed rate revenue available for capital funding.
2. **Financial Forecast.** Identifies future annual non-capital costs associated with the operation, maintenance, and administration of the water system. Included in the financial plan is a reserve analysis that forecasts cash flow and fund balance activity along with testing for satisfaction of actual or recommended 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. The plan also identifies the future adjustments required to fully fund all utility obligations in the projection period.

CAPITAL FUNDING PLAN

The CIP developed for this WSP identifies \$8.2 million in project costs (\$9.4 million inflated) over the 6-year planning horizon (including study period years 2014 and 2015). The 20-year period totals \$22.3 million (\$33.2 million inflated). Costs are stated in 2014 dollars and are escalated by 3.62 percent annually to the year of planned spending, based on a 10-year average cost inflation rate from the Engineering News Record (ENR) Construction Cost Index (CCI).

A summary of the 20-year CIP is shown in **Table 10-3**. As shown, each year has varied capital cost obligations depending on construction schedules and infrastructure planning needs. Approximately 37 percent (2014 dollars) of the capital costs are included in the 6-year planning period. Six projects were identified as expensed costs rather than capitalized and are grouped with operating costs for funding purposes in the financial analysis to exclude the use of capital revenues for operating costs. **Table 10-4** provides more detail for the 6-year CIP.

**Table 10-3
6-and 20-Year CIP**

Year	2014\$	Inflated
Study Year 2014/2015	\$ 2,130,000	\$ 2,176,682
2016	950,000	1,020,001
2017	523,000	581,858
2018	75,000	86,460
2019	944,000	1,127,624
2020	2,744,000	3,396,369
2021	742,000	951,641
6- Year Capital Total	8,108,000	9,340,636
Expensed Outlay	68,000	77,392
6- Year CIP Total	8,176,000	9,418,027
2022-2035	13,967,000	23,565,589
Expensed Outlay	109,000	183,945
20- Year CIP Total	\$ 22,252,000	\$ 33,167,561

**Table 10-4
6-Year CIP (2014\$)**

Project	Study Year	Six-Year CIP					
	2014/2015	2016	2017	2018	2019	2020	2021
Annual Water Main Replacement Program	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
Corrosion Improvements in 100th, 272nd & 99th	-	-	-	-	-	155,000	311,000
Pioneer Highway Water Main from 72nd to 64th	600,000	-	-	-	-	-	-
Conversion of Middle Pressure Zones to 245 Zone	-	-	-	-	-	-	340,000
252 Zone PRV Replacement	-	-	-	-	100,000	-	-
Pressure Relief Valve in the 245 Zone	-	55,000	-	-	-	-	-
Knittle Reservoir No. 2 Recoating	-	540,000	-	-	-	-	-
Bryant Well Treatment Facility Pilot Study for Additional Flow	-	30,000	-	-	-	-	-
Bryant Well Treatment Facility Improvements for Additional Flow	-	-	405,000	-	-	-	-
Bryant Well No. 2 Monitoring Well Modifications	-	-	23,000	-	-	-	-
Decommission Fure Well	30,000	-	-	-	-	-	-
Telemetry Improvements - PLC Upgrades	10,000	-	-	-	-	-	-
Telemetry Improvements - Extend Life of Existing Telemetry System	-	-	-	-	-	-	16,000
Telemetry Improvements - Radio System Equipment	-	-	-	-	33,000	-	-
Long-term Water Supply Study	-	-	20,000	-	-	20,000	-
Cedarhome Booster Pump Station Generator	-	250,000	-	-	-	-	-
Knittle Booster Pump Station Generator	-	-	-	-	-	260,000	-
Knittle Booster Pump Station Improvements	-	-	-	-	236,000	709,000	-
Hatt Slough Springs Evaluation	-	-	-	-	-	25,000	-
297 Zone Reservoir Design & Construction	-	-	-	-	500,000	1,500,000	-
Decommission Sill Well	15,000	-	-	-	-	-	-
Bryant Well No. 3 (completion of 2014 project)	550,000	-	-	-	-	-	-
Comprehensive Water System Plan Update	10,000	-	-	-	-	-	-
Budgeted Machinery and Equipment	25,000	25,000	25,000	25,000	25,000	25,000	25,000
125 and 242 to 245 Zone Conversion	840,000	-	-	-	-	-	-
Total	\$ 2,130,000	\$ 950,000	\$ 523,000	\$ 75,000	\$ 944,000	\$ 2,744,000	\$ 742,000

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 have been used as the debt funding instrument in this analysis. The capital financing strategy developed to fund the CIP identified in this WSP assumes the following funding resources:

- Accumulated cash reserves.
- Transfers of excess cash (over minimum balance targets) from the Operating Fund.
- Annual cash from rates earmarked for rate funded system reinvestment.
- Interest earned on Construction Fund balances and other miscellaneous capital resources.
- Revenue bond financing.

Based on information provided by the City, the water utility began in 2014 with \$690,438 in the Operating Fund and \$2.3 million between the Construction Fund and Plant Investment Fee (PIF) Fund. The Cedarhome PIF Fund began in 2014 with \$275,715, and is restricted for Cedarhome asset debt repayment along with annual Cedarhome PIF revenues. Additional funds beyond the Operating Fund target of 60 days of O&M expenses are transferred to the Construction Fund, though no additional funds are available until 2021. Rate Funded System Reinvestment Funds are projected to range between \$111,027 and \$210,418 in the 6-year forecast.

The cash resources described above are forecasted to fund 47 percent of the 6-year CIP and 83 percent of the 20-year CIP. **Table 10-5** presents the corresponding 20-year capital financing strategy.

**Table 10-5
20-Year Capital Funding Strategy**

Year	Capital Expenditures 2014 \$	Capital Expenditures Escalated	Debt Financing	Cash Funding	Total Financial Resources
2014/2015	\$ 2,130,000	\$ 2,176,682	\$ -	\$ 2,176,682	\$ 2,176,682
2016	950,000	1,020,001	735,395	284,606	1,020,001
2017	523,000	581,858	236,524	345,334	581,858
2018	75,000	86,460	-	86,460	86,460
2019	944,000	1,127,624	407,579	720,045	1,127,624
2020	2,744,000	3,396,369	2,981,722	414,647	3,396,369
2021	742,000	951,641	575,383	376,258	951,641
Subtotal	8,108,000	9,340,636	4,936,603	4,404,032	9,340,636
2022-2035	13,967,000	23,565,589	416,981	23,148,607	23,565,589
Total	\$ 22,075,000	\$ 32,906,224	\$ 5,353,585	\$ 27,552,640	\$ 32,906,224

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 WSP. 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.

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 PIF revenue. The first two resources will be discussed in the Fiscal Policies section of the Financial Forecast. Capital-related charges are discussed below.

CAPITAL CONNECTION CHARGES

A connection charge such as the PIF refers to a one-time charge imposed on new customers as a condition of connecting to the water system. The purpose of the connection charge is two-fold: to promote equity between new and existing customers and to provide a source of revenue to fund capital projects. 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 PIF based on a charge of \$5,280 per equivalent residential unit (ERU).

The updated PIF analysis produced a charge of \$6,236 per ERU, or \$8,247 per MCE (meter capacity equivalent). The City might choose to update the charge, though to be conservative, the revenue needs forecast bases future PIF revenue on the current charge.

LOCAL FACILITIES CHARGES

While a connection charge is the manner in which new customers pay their share of plant investment 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 upfront 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 PIF); (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

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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 off-site 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. The City passes this charge on to the developer who installed the facilities. As part of the developer extension process, this 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.

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.

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 WSP.

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. Due to current funding restrictions and funding allocations, the Public Works Board has suspended the non-Construction Programs. As the economy builds, the Board will attempt to re-institute these programs.

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 communities that have been declared a natural disaster. 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.

Due to legislative budget changes made on June 30, 2013, the 2014 Construction Loan cycle did not receive funding. The Legislature also passed a statute with the intent of redirecting tax revenue from the Public Works Assistance Account for 6 years to the state General Fund. Loan repayment revenues will continue to be available in future biennia. The effect of this diversion resulted in a decrease in funding available to local governments for high priority infrastructure projects from the PWTF. For drinking water and sanitary wastewater projects not on the 2014 unfunded PWTF list, applicants must first apply to the Washington State Departments of Health (DOH) or Ecology during their normal funding cycle. Only projects that were not selected for funding and/or were partially funded by these agencies are eligible for the 2016 Construction Loan program.

Information regarding the application process as well as rates and terms are posted on the PWTF website in early spring.

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

Drinking Water State Revolving Fund (DWSRF) Loan Program – DWSRF funding historically targets protection of public health, compliance with drinking water regulations, and assistance for small and disadvantaged communities. Terms are up to 20 years to pay back, and in some cases, provide partial loan forgiveness. Interest rates are 1.0 to 1.5 percent and no local match is required.

Applicants need an approved water system plan, or plan amendment, containing the DWSRF project prior to submitting an application. All public water systems that receive a DWSRF loan must undergo an environmental review, a cultural review, and an Investment Grade Efficiency Audit (IGEA). The IGEA is an effort to apply energy efficiency to water systems and may be financed as part of the DWSRF loan.

Further detail is available at <http://www.doh.wa.gov>.

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.

Revised Code of Washington (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 State 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.

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. The objective of the financial forecast is to evaluate the sufficiency of the current level of rates. 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 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 developed 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, rate-funded system reinvestment 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. For purposes of this analysis, revenue bond debt is assumed for any needed debt issuance. 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.

CURRENT FINANCIAL STRUCTURE

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

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 60 days of O&M expenses for working capital, plus a rate stabilization reserve equal to 25 percent of annual rate revenues. Establishing the recently adopted rate stabilization reserve is done as a phased-in approach, reaching 100 percent of target by the end of the 6-year forecast.

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 current policy is to maintain a minimum balance in the Construction Fund equal to 1 percent of fixed assets.

System Reinvestment – System reinvestment funding promotes system integrity through reinvestment in the system. 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 currently funds system reinvestment based on annual depreciation, net of debt principal payment. The transfer increases from \$111,027 in 2015 up to \$210,418 in 2018 due to added

depreciation from CIP assets. In 2019 the transfer declines, reaching \$160,447 in 2021 as annual debt principal from new borrowing erodes depreciation.

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 has one outstanding water revenue bond and coverage is tested at 1.25.

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 for the water utility. 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: water service charges (rate revenue) and water other revenue (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 increase with customer growth or not escalate depending on the nature of the revenue.
- **Plant Investment Fee Revenue** – The current PIF of \$5,280 per ERU expected to increase annually based on construction cost inflation and to generate \$165,545 in 2016 after a year of no growth projected in 2015. It is projected to generate a total of \$16.3 million by 2035 collected from 2,289 new connections.
- **Growth** – Rate revenue is escalated based on the growth rates provided in **Chapter 3** of this WSP. The financial analysis utilizes a near-term growth rate that considers recent historical growth, and uses a rate in later years that results in the same total average growth rate over the 20-year period. The growth rate through 2021 averages 1.09 percent per year and 2.57 percent per year thereafter.
- **Expenses** – O&M expense projections are based on the 2014 budget and are forecasted to increase with general and labor cost inflation of 2.23 percent, construction cost inflation of 3.62 percent, and benefit cost inflation of 5.00 percent. Budget 2014 figures were used for 2014 taxes; future taxes are calculated based on forecasted revenues and prevailing tax rates.
- **Existing Debt** – The City currently has three outstanding debt issues after paying off three loans in 2014. The remaining three include one revenue bond and two PWTF loans. Revenue bond payments range between \$209,000 and \$212,200 and PWTF payments range from a combined \$329,921 to \$320,564.
- **Future Debt** – The capital financial strategy developed for this WSP forecasts the need to issue \$5.4 million new debt. The analysis performed assumes all revenue bond financing.
- **Revenue Bond Assumptions** – The forecast assumes a revenue bond interest rate of 5.0 percent, an issuance cost of 1.5 percent, and a term of 20 years.

- **Transfer to Capital** – Any Operating Fund balance above the minimum requirement is assumed to be transferred to the Construction Fund each year, though no excess is forecasted until 2021. The 2015 Operating Fund balance is expected to end the year at 176 days of O&M expenses, which is just above the minimum target for the combined reserves and utilized to maintain the adopted rate increase plan. The Capital Fund balance is expected to end the year at \$284,606.

Although the financial plan is completed for the 20-year time horizon of this WSP, the rate strategy focuses on the shorter term planning period 2015 through 2021. It is recommended that the City revisit the proposed rates 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 10-6 summarizes the annual revenue requirements based on the forecast of revenues, expenditures, fund balances, and fiscal policies.

**Table 10-6
6-Year Financial Forecast**

Revenue Requirement	Study Years		6-Year Forecast					
	2014	2015	2016	2017	2018	2019	2020	2021
Revenues								
Rate Revenues Under Existing Rates	\$ 1,467,955	\$ 1,467,955	\$ 1,478,007	\$ 1,488,059	\$ 1,498,111	\$ 1,508,164	\$ 1,518,216	\$ 1,565,986
Cedarhome PIF Revenue for Debt Service	139,519	136,196	77,100	77,100	77,100	77,100	77,100	366,398
Non-Rate Revenues	104,386	105,613	107,661	109,664	109,276	109,458	110,303	113,020
Total Revenues	\$ 1,711,860	\$ 1,709,763	\$ 1,662,768	\$ 1,674,824	\$ 1,684,488	\$ 1,694,722	\$ 1,705,619	\$ 2,045,404
Expenses								
Cash Operating Expenses	\$ 1,046,016	\$ 1,086,954	\$ 1,091,217	\$ 1,121,770	\$ 1,141,846	\$ 1,174,126	\$ 1,207,528	\$ 1,242,583
Existing Debt Service	873,504	541,121	540,161	539,001	534,442	533,082	531,523	529,764
New Debt Service	-	-	65,222	86,199	86,199	122,347	386,795	437,825
Rate Funded System Reinvestment	-	111,027	159,655	210,375	210,418	212,577	173,297	160,447
Total Expenses	\$ 1,919,520	\$ 1,739,102	\$ 1,856,255	\$ 1,957,345	\$ 1,972,906	\$ 2,042,132	\$ 2,299,142	\$ 2,370,619
Net Surplus (Deficiency)	\$ (207,660)	\$ (29,339)	\$ (193,486)	\$ (282,521)	\$ (288,418)	\$ (347,410)	\$ (593,523)	\$ (325,214)
Additions to Meet Coverage	-	-	-	-	-	-	-	(37,144)
Total Surplus (Deficiency)	\$ (207,660)	\$ (29,339)	\$ (193,486)	\$ (282,521)	\$ (288,418)	\$ (347,410)	\$ (593,523)	\$ (362,358)
% of Rate Revenue	14.15%	2.00%	13.09%	18.99%	19.25%	23.04%	39.09%	23.14%
Annual Rate Adjustment	0.00%	5.00%	5.00%	5.00%	5.00%	5.00%	11.00%	0.00%
Cumulative Annual Rate Adjustment	0.00%	5.00%	10.25%	15.76%	21.55%	27.63%	41.67%	41.67%
Rate Revenues After Rate Increase	\$ 1,467,955	\$ 1,541,353	\$ 1,629,503	\$ 1,722,615	\$ 1,820,964	\$ 1,924,841	\$ 2,150,815	\$ 2,218,490
Additional Taxes from Rate Increase	\$ -	\$ 3,691	\$ 7,619	\$ 11,796	\$ 16,236	\$ 20,955	\$ 31,813	\$ 32,814
Net Cash Flow After Rate Increase	(207,660)	40,368	(49,609)	(59,762)	18,198	48,313	7,262	294,475
Coverage After Rate Increases	2.59	2.68	2.34	2.38	2.65	2.56	1.73	1.65

The financial forecast indicates that the City’s adopted rate plan of 5.0 percent rate increases through 2019 are sufficient, followed by 11 percent in 2020. Rate increases move above the 5.0 percent adopted level to support new debt service from funding the capital program. The City’s existing debt service is \$541,121 (after 2014 pay-offs) and nearly doubles, adding \$437,825 by 2021. Rate impacts also include the increased capacity to contribute to Rate Funded System Reinvestment. As schedule and cost for projects in the outer years become more firm, the forecast should be updated to reflect the resulting rate impacts.

CITY FUNDS AND RESERVES

Table 10-7 shows a summary of the projected Operating Fund and Construction Fund ending balances through 2021 based on the rate forecasts presented above. The combined minimum target balance is based on 60 days of O&M expenses plus 25 percent of rate revenue for the rate stabilization fund (according to the phase-in). The construction fund target is 1 percent of utility plant assets and the bond reserve minimum balance is equal to one annual debt service payment. Funds remain above the targets throughout the forecast.

**Table 10-7
Ending Cash Balance Summary**

Ending Fund Balances	Study Years		6-Year Forecast					
	2014	2015	2016	2017	2018	2019	2020	2021
Water Fund	\$ 482,778	\$ 523,146	\$ 473,536	\$ 413,775	\$ 431,973	\$ 480,286	\$ 487,548	\$ 685,944
Water Construction Fund	1,502,747	284,606	345,334	401,065	720,045	414,647	376,258	1,224,268
Water Bond Reserve	215,602	215,602	280,824	301,802	301,802	337,950	602,397	653,428
Total	\$2,201,128	\$ 1,023,354	\$ 1,099,695	\$ 1,116,641	\$ 1,453,820	\$ 1,232,882	\$ 1,466,203	\$ 2,563,640
Combined Minimum Target Balance	764,443	802,648	878,770	801,748	621,162	673,893	977,795	1,044,104

CURRENT AND PROJECTED RATES

CURRENT RATES

The City’s current rate structure consists of a fixed monthly charge based on meter size (includes an allowance of water) and a variable monthly charge per hundred cubic feet (ccf) of use above the allowance. **Table 10-8** shows the existing rate schedule.

**Table 10-8
Existing Schedule of Rates**

2014 Water Rates		
Monthly Base Rate		
Meter size (Inches)	Quantity Allowed CCF	Current
0.75	6	\$ 22.10
1	10	\$ 36.89
1.5	20	\$ 73.58
2	40	\$ 117.77
3	80	\$ 220.94
4	150	\$ 368.31
Metered Water Rate(per ccf)		\$ 2.89

In order to enhance conservation signals in the rate structure, the City might consider varying water rates by customer class. In doing so, adding an increasing block rate structure for the residential class would allow the City to encourage reduction in discretionary water use, particularly in the summer.

A seasonal usage rate for non-residential customers would ensure water is priced to encourage conservation among customers whose total water use can vary significantly within a customer class.

PROJECTED RATES

The analysis for this WSP shows the City can maintain the adopted rate increases of 5.0 percent per year in 2015 through 2019, 11 percent increase in 2020 to address the increased debt repayment obligation, and no increase in 2021 due to the catch-up required in 2020. **Table 10-9** shows the proposed rates for the 6-year planning period.

**Table 10-9
6-Year Proposed Rates**

Across the Board Projected Rate Increases									
Meter size (Inches)	Quantity Allowed CCF	2014	2015	2016	2017	2018	2019	2020	2021
0.75	6	\$ 22.10	\$ 23.21	\$ 24.37	\$ 25.58	\$ 26.86	\$ 28.21	\$ 31.31	\$ 31.31
1	10	\$ 36.89	\$ 38.73	\$ 40.67	\$ 42.70	\$ 44.84	\$ 47.08	\$ 52.26	\$ 52.26
1.5	20	\$ 73.58	\$ 77.26	\$ 81.12	\$ 85.18	\$ 89.44	\$ 93.91	\$104.24	\$104.24
2	40	\$117.77	\$ 123.66	\$ 129.84	\$ 136.33	\$ 143.15	\$150.31	\$166.84	\$166.84
3	80	\$220.94	\$ 231.99	\$ 243.59	\$ 255.77	\$ 268.55	\$281.98	\$313.00	\$313.00
4	150	\$368.31	\$ 386.73	\$ 406.06	\$ 426.36	\$ 447.68	\$470.07	\$521.77	\$521.77
Volume Charge		\$ 2.89	\$ 3.03	\$ 3.19	\$ 3.35	\$ 3.51	\$ 3.69	\$ 4.09	\$ 4.09

Table 10-10 shows residential monthly bill comparisons for the proposed annual increases.

**Table 10-10
6-Year Proposed Rates**

Residential	Current	2015	2016	2017	2018	2019	2020	2021
Monthly Bill	\$24.99	\$26.24	\$ 27.55	\$ 28.93	\$ 30.38	\$ 31.89	\$ 35.40	\$ 35.40
% Increase		5.00%	5.00%	5.00%	5.00%	5.00%	11.00%	0.00%
\$ Difference		\$ 1.25	\$ 1.31	\$ 1.38	\$ 1.45	\$ 1.52	\$ 3.51	\$ -
<i>Sample Bill at 7 ccf</i>								

AFFORDABILITY

The DOH 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 average median household income for the City was \$53,858 in 2009 through 2013 according to the U.S. Census Bureau. The 2013 value is escalated based on the assumed 2.23 percent general cost inflation to show the median household income in future years. **Table 10-11** presents the City's rates with the projected rate increases for the forecast period, tested against the 2.0 percent monthly affordability threshold.

**Table 10-11
Affordability Test.**

Year	Inflation	Median HH income	2.00% Monthly Threshold	Projected Monthly Bill	% of Median HH Income
2013	2.23%	\$ 53,858	\$ 89.76	-	-
2014	2.23%	\$ 55,059	\$ 91.77	\$ 24.99	0.54%
2015	2.23%	\$ 56,287	\$ 93.81	\$ 26.24	0.56%
2016	2.23%	\$ 57,543	\$ 95.90	\$ 27.55	0.57%
2017	2.23%	\$ 58,826	\$ 98.04	\$ 28.93	0.59%
2018	2.23%	\$ 60,138	\$ 100.23	\$ 30.38	0.61%
2019	2.23%	\$ 61,479	\$ 102.47	\$ 31.89	0.62%
2020	2.23%	\$ 62,851	\$ 104.75	\$ 35.40	0.68%
2021	2.23%	\$ 64,252	\$ 107.09	\$ 35.40	0.66%

Applying the 2.0 percent test, the City’s rates are forecasted to remain within the indicated affordability range through 2021.

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. Implementation of the proposed rate increases 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 **Chapter 3** of this WSP. 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.

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