

8. Financial Evaluation

8.1. Introduction

The effective implementation of a Wastewater Comprehensive Plan is dependent upon accurately developing recommendations that can be financially supported by the utility. A Wastewater Comprehensive Plan must also meet State and local regulatory requirements and provide the flexibility to deal with unforeseen changes.

This chapter presents a financial plan that reviews the sources of funds (revenues) and applications of funds (expenses) for the City of Gig Harbor's (City) sewer system. The financial plan includes projected operating and capital costs of the system for the six-year time horizon of 2009-2014 as well as historical information for the years 2004-2008. The revenues and expenses used in the financial plan were obtained from the City's recent rate analysis performed by Peninsula Financial Consulting. The capital costs contained within the financial plan were captured from the Capital Improvement Plan presented in Chapter 7 of this Plan. The result of the financial plan outlines the annual operating and capital needs of the sewer system and determines if sewer revenues are sufficient to cover costs over the projected time period. This analysis does not provide a detailed review of cost of service or rate designs.

8.2. Past Financial History

The past five years of financial information for the sewer utility were evaluated to gain an understanding of the past performance of the utility and, at the same time, gain perspective of the current financial status of the City's sewer utility.

Table 8-1 is a summary of a five-year financial history (2004-2008) for the City's sewer utility.

Table 8-1. Sewer System Financial History

| | 2004 | 2005 | 2006 | 2007 | 2008 |
|--------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Sources of Funds | | | | | |
| Rate Revenues | | | | | |
| In City Sewer Service | \$1,012,896 | \$1,043,270 | \$1,104,945 | \$1,251,663 | \$1,431,100 |
| County Sewer Service | 424,365 | 445,308 | 491,450 | 534,700 | 597,400 |
| Total Rate Revenues | \$1,437,261 | \$1,488,578 | \$1,596,395 | \$1,786,363 | \$2,028,500 |
| Total Other Revenues | \$72,356 | \$68,684 | \$56,101 | \$72,125 | \$49,700 |
| Total Sources of Funds | \$1,509,617 | \$1,557,262 | \$1,652,496 | \$1,858,488 | \$2,078,200 |
| Use of Funds | | | | | |
| Salaries & Benefits | \$708,292 | \$732,267 | \$799,461 | \$904,129 | \$933,700 |
| Office & Operating Supplies | 96,823 | 97,212 | 139,454 | 107,899 | 97,400 |
| Professional Services | 22,999 | 48,895 | 49,054 | 84,345 | 53,500 |
| Communications | 15,312 | 21,600 | 25,899 | 23,068 | 22,000 |
| Travel | 1,258 | 980 | 1,146 | 3,418 | 3,600 |
| Advertising | 466 | 2,923 | 2,001 | 6,123 | 6,300 |
| Conference/Training | 4,269 | 2,427 | 2,387 | 4,092 | 3,400 |
| Uniforms | 1,022 | 1,317 | 637 | 1,364 | 1,100 |
| External Taxes & Assessments | 21,365 | 20,906 | 23,417 | 26,702 | 59,300 |
| Small Tools & Equipment | 4,998 | 7,391 | 13,085 | 30,873 | 31,600 |
| Machinery & Equipment | 2,037 | 984 | 8,982 | 3,327 | 87,100 |
| Fuel | 2,439 | 3,865 | 8,412 | 6,434 | 6,600 |
| Water Quality Study | 32,676 | 553 | 1,192 | 0 | 8,800 |
| Comprehensive Sewer Plan | 0 | 3,738 | 0 | 0 | 1,200 |
| Miscellaneous | 4,648 | 6,514 | 8,950 | 16,354 | 16,700 |
| Operating Rentals & Leases | 3,376 | 2,161 | 2,412 | 3,248 | 3,300 |
| Repairs & Maintenance | 53,364 | 42,993 | 89,702 | 94,202 | 85,600 |
| Utilities | 183,637 | 195,582 | 190,322 | 176,292 | 193,600 |
| Video Inspections | 0 | 0 | 309 | 3,153 | 3,300 |
| Vactor Truck Rental | 0 | 614 | 2,297 | 138 | 100 |
| Total Use of Funds | \$1,158,981 | \$1,192,922 | \$1,369,119 | \$1,495,161 | \$1,618,200 |
| Balance/(Deficiency) of Funds | \$350,636 | \$364,340 | \$283,377 | \$363,327 | \$460,000 |

Table 8-1 illustrates that the utility's revenue was sufficient to cover all operating costs. A later section of this report will discuss proposed rates designed in order to ensure the utility covers all of its operating costs as well as its capital and debt service requirements through the end of the planning period.

8.3. Development of the Financial Plan (Revenue Requirement)

A financial plan was developed in order to determine the City's ability to meet its capital improvement and operating needs over a projected time period. Fund balances and reserve levels were also analyzed in developing the financial plan. The City's financial plan was developed to review the projected revenues and expenses of the sewer system for 2009-2014. The City's recently completed rate analysis was used as a base for the years 2009-2012, while 2013 and 2014 were escalated by applying factors for inflation, growth, and other trends.

8.3.1. Sources of Funds/Revenue

The first component of the financial plan is a review of the sources of funds for the sewer utility. The different revenues or sources of funds received from operations are:

- Rate revenues – sewer sales to customers both in City and outside the City
- Other revenues – miscellaneous charges and interest income

The rate revenues of the City come from retail sales to residential, commercial, and governmental customers. The City serves customers within the City limits as well as customers outside of the City limits. Rate revenues are projected to be just over \$2.4 million in 2009. This is an increase of nearly \$400,000 from 2008 which is the result of recently instituted rate adjustments. Rate revenue is projected to reach \$3.35 million by 2014 due to an estimated growth of 1.9%. The cash flows beyond 2008 do not reflect the impact of any rate increases. Necessary rate adjustments will be reflected at the end of the analysis to incorporate the impact of debt costs and new capital expenditures funded from rates.

8.3.2. Application of Funds

The second component of the financial plan is a review of the expenses of the fund. Three main cost components were reviewed in developing the financial forecast:

- Operation & Maintenance Expenses
- Debt Service
- Capital Improvements Funded From Rates

Projections for future year expenses were developed by applying inflationary factors to historical figures. Table 8-2 shows the inflationary factors used in escalating expenses. Inflationary factors include such items as general inflation, annual cost of living adjustments (COLAs), and annual increases in benefit costs (Benefits).

Table 8-2. Inflationary Factors

| Forecast Factors | Percentage |
|------------------|------------|
| COLA | 3.0% |
| Benefits | 4.0% |
| Inflation | 2.5% |
| Electricity | 5.0% |
| Insurance | 5.0% |

Operation and Maintenance Expenses

Expenses were escalated in order to obtain projected future costs using estimated future inflation rates. Different expenses are expected to increase at different rates. Salaries are expected to increase at a rate of 3.0%, while benefits are expected to increase at 4.0%.

Most other expenses were escalated at 2.5% except for electricity and insurance which are both expected to increase at a higher rate of 5.0%.

Operation and maintenance expenses increase from approximately \$1.7 million in 2009 to about \$1.9 million by 2014.

Debt Service

The sewer utility currently has three outstanding debts, the 2003 Revenue and Refunding Bonds, a 1993 DOE loan and a new loan from PWTF that is a five-year loan which starts repayment in 2009. The 2003 Bonds and the 1993 DOE loan have a combined annual debt service cost of approximately \$313,000. The new PWTF loan has an annual cost of \$187,000.

The City's capital improvement program developed in Chapter 7 of this Plan includes over \$27 million in WWTP improvements. This cost falls in the years 2009-2011 causing a significant deficit in revenues if these improvements are to be funded solely from rates. The CIP also identifies over \$7 million in lift station improvements that create a significant impact if funded solely from rates. Therefore, assumptions were made for new revenue bonds to be issued in the years 2009 through 2011 to mitigate the impact of these improvements on rates. In these three years, a total of \$27.5 million in new revenue bonds is assumed. This creates an additional \$1.7 in debt service.

Meeting debt service coverage (DSC) requirements is an important financial indicator for well managed utilities. Debt service coverage is a financial measurement of an entity's ability to repay debt. A debt service coverage ratio is a comparison of net income before debt service payments to the total debt service on revenue bonds. Utilities must typically maintain a 1.25 coverage ratio minimum, although this value may vary based on existing bond covenants. The utility is not projected to be able to meet this minimum value without additional rate adjustments. The City should monitor this ratio during its future financial evaluations. The City currently has one outstanding bond. However, for the City's financial health it should maintain a minimum DSC ratio of 1.0 for its outstanding debt. Bond rating agencies review past performance of DSC and use this information in order to set interest rates. It is therefore important for the City to maintain high DSC ratios in order to secure future loans and bonds. Without a rate adjustment, the City's debt service coverage ratio is 0.75 in 2009, declining to 0.62 by 2014. With rate adjustments, however, the City stays comfortably above 1.0, with a 1.31 DSC ratio in 2009, which drops to 1.15 in 2011 due to new debt issues, and then stabilizing around 1.25 by 2014.

Capital Improvement Projects from Rates

Capital improvement projects are related to the infrastructure of a utility. Capital improvement projects are generally divided into two categories: capital improvements related to renewal and replacements of existing plant and depreciated facilities, upgrades required to maintain compliance with new regulations, and growth related projects including system expansion and upgrades to accommodate new customers.

The financial analysis conducted for this plan has incorporated the capital projects outlined in Chapter 7 of this Plan. These projects have been identified by year planned for installation in order to quantify the annual capital requirements for the projected time period. For 2009 to 2014, the identified capital improvement projects total \$36 million. It should be noted that over \$27 million of the total is for WWTP improvements.

Additionally, this financial analysis assumes that the City will fund renewals and replacement projects through rates. Typically, a fixed amount equal to or greater than the annual depreciation expense of the utility is used to identify this amount. Utilities should strive to replace the annual depreciation expense each year in order to maintain their system at an appropriate level. For the purposes of this plan, the amount assumed for renewals and replacements, indicated as CIP from rates in the tables, ranges from \$292,000 to \$425,000 from 2009 through 2014.

Table 8-3 presents the capital improvement plan and possible funding sources for 2009 through 2014.

Table 8-3. Sewer System Capital Improvement Plan

| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|--|---------------------|--------------------|---------------------|--------------------|--------------------|--------------------|
| Capital Outlays | | | | | | |
| LS Improvements | \$75,000 | \$801,000 | \$4,605,000 | \$691,000 | \$387,000 | \$693,000 |
| Flow Meters | 0 | 116,000 | 93,000 | 0 | 180,000 | 114,000 |
| WWTP Improvements | 10,883,949 | 8,874,000 | 7,351,000 | 0 | 0 | 0 |
| Reuse & Reclamation Studies | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| Annual Replacement, Rehab, and Renewal | 86,000 | 92,000 | 99,000 | 105,000 | 113,000 | 121,000 |
| Transfer to Capital Improvement Fund | 0 | 0 | 0 | 810,000 | 930,000 | 700,000 |
| Total Capital Outlays | \$11,144,949 | \$9,983,000 | \$12,248,000 | \$1,706,000 | \$1,710,000 | \$1,728,000 |
| Outside Sources Of Funds | | | | | | |
| Connection Charges | \$2,135,000 | \$1,195,600 | \$1,195,600 | \$1,195,600 | \$1,195,600 | \$1,195,600 |
| New Loan Funds | 8,600,000 | 8,350,000 | 10,600,000 | 0 | 0 | 0 |
| CIACs (Grants/Developer Ext.) | 0 | 0 | 0 | 0 | 0 | 0 |
| New WWTP Phase I Expansion Grant | 0 | 0 | 0 | 0 | 0 | 0 |
| Interest Earnings from Cash | 117,400 | 111,600 | 84,600 | 92,100 | 99,600 | 107,100 |
| Total Outside Sources of Funds | \$10,852,400 | \$9,657,200 | \$11,880,200 | \$1,287,700 | \$1,295,200 | \$1,302,700 |
| Capital Outlays From Rates | \$292,549 | \$325,800 | \$367,800 | \$418,300 | \$414,800 | \$425,300 |

The capital analysis assumes that any additional funding beyond what is necessary to meet the annual capital requirements will be placed into a capital improvement fund for future capital needs.

8.4. External Sources of Funds for Capital Projects

The City has the ability to apply for grant and loan funds available to public entities for sewer system projects. The City has been successful in the past at obtaining low-interest loans and grants for capital improvement funding. Table 8-4 provides a summary of the contacts for various funding agencies. It should be noted that these sources rarely provide full funding of a construction project and the City would need to supplement any of these funds with matching funds to meet eligibility criteria and to ensure that implementation of the recommended capital improvement projects can occur. For the purposes of this plan, no funds were assumed to come from these sources because the programs have become highly competitive and funding requests

far exceed funding availability. For this plan, a more conservative approach was employed using new revenue bonds for funding capital improvements at an interest rate of 4.5%.

A brief description of these funding sources is provided below.

Table 8-4. Funding Agency Contact Information

| Program | Address | Phone | Fax | Internet |
|---|---|----------------|----------------|--------------------------|
| Centennial Clean Water Fund | Department of Ecology P.O. Box 47600 Olympia, WA 98504-7600 | (360) 407-6000 | (360) 407-6426 | www.ecy.wa.gov |
| State Revolving Fund | Department of Ecology P.O. Box 47600 Olympia, WA 98504-7600 | (360) 407-6000 | (360) 407-6426 | www.ecy.wa.gov |
| Public Works Trust Fund | Public Works Board P.O. Box 48319 Olympia, WA 98504-8319 | (360) 586-4120 | (360) 664-3029 | www.pwb.wa.gov |
| Infrastructure Database (over 200 funding programs) | Infrastructure Assistance Coordinating Council (IACC) P.O. Box 48319 Olympia, WA 98504-8319 | (360) 586-4123 | (360) 664-3029 | www.infracfunding.wa.gov |

8.4.1. Department of Ecology (Centennial Clean Water Fund & State Revolving Fund)

The Centennial Clean Water Fund (CCWF) is available to local governments for measures to prevent and control water pollution. Both grants and loans are available on a yearly funding cycle. CCWF is the largest State grant program for water quality projects. It provides grants for planning, design, and construction of facilities and other activities related to water quality. The primary focus of the program is pollution prevention and funding projects with a quantifiable water quality benefit, such as protecting a source of water supply. Funding from this program is not available to provide excess capacity, but must be used to meet existing residential needs. Interest rates are 1.3% for loans up to five years while those over five years but less than 20 years have a 2.6% rate. Grant funding of 50% to 75% of a project is available depending on the type of project.

Another source of funding for local governments from the Department of Ecology (Ecology) is the State Revolving Fund (SRF). Loans are available on a yearly funding cycle for planning, design, and construction projects associated with wastewater treatment facilities. Eligible projects may consist of secondary treatment, advanced treatment, infiltration/inflow correction, sewer system rehabilitation, collector and interceptor sewers, storm sewers, and combined sewer overflow correction. Interest rates are 1.3% for loans up to five years while those over five years but less than 20 years have a 2.6% rate.

8.4.2. Public Works Trust Fund

The PWTF loan program is set up by the Legislature to assist local governments with funding for different types of public works projects. The projects can include sanitary sewer systems, water systems, streets, roads, and drainage systems. PWTFs emphasize using their allocated funds for replacement and/or repair of existing systems. Funds are not normally allocated to install new sewer systems. Funds are instead granted to rehabilitate or replace existing systems serving an existing population. Loans are issued at up to 2% interest rate for a maximum term of 20 years for applications requesting 95% project funding. The interest rate decreases to 0.5% when applicants provide at least 15% of the project funding.

8.4.3. Infrastructure Assistance Coordinating Council

Many programs exist with funding available for sewer utility capital projects. A key resource in identifying such programs is the Infrastructure Assistance Coordinating Council (Council). The Council is comprised of State and Local organizations whose function is to provide funding for infrastructure repair and development. The purpose of the Council is to assist local governments in coordinating funding efforts for infrastructure improvements. This is an important resource as the Council will be aware of any new funding opportunities that may arise.

While the above list of possible grant and loan opportunities for the City is not exhaustive, it highlights the most probable outside funding sources, excluding revenue bonds, available to the City for its sewer capital improvement needs.

8.4.4. Revenue Bonds

Revenue bonds are another external source of funding for capital projects. The sale of revenue bonds is the most common source of funds for construction of major utility improvements. Sewer fees and charges are the main source of funds for debt service (principal and interest) payments. A key benefit of revenue bonds is the exemption of interest paid on them from federal income taxes, making them attractive to investors. A determination of the utility's ability to repay debt is an important consideration and is conducted by the lender or bond counsel. A debt service coverage ratio (see Application of Funds – Debt Service) is calculated and the utility's finances are reviewed in order to assist with the determination. The financial review generally includes both current and past budgets, financial statements, budgetary practices and policies, and reserve level balances. A utility must be strong in these areas in order to gain favorable terms on their bond issues.

8.5. Internal Funding Sources

Internal funding sources available to offset capital costs include general facility charges (GFCs) received from new sewer connections and existing reserves. New sewer connections are assessed a GFC as a way to recover part or all of the cost of building the infrastructure necessary

to service the connection. The intent is that all new system customers will pay an equitable share of the cost of the system improvements needed to accommodate growth.

The City recently engaged the services of a financial consultant to assist them in reviewing their GFCs. The results of this review yielded a new proposed sewer GFC of \$8,540. The connection fees reflected in this financial analysis are based upon the proposed GFC amount.

Existing reserves can also be used for capital projects when costs can not be entirely financed by current revenues. An advantage of using existing reserves includes the forgoing of additional annual debt service payments. Utilities typically use a mix of current funds and bond proceeds to fund larger capital projects. The City’s CIP requires new bond issues in the first three years of the planning period which drives the need for rate adjustments to cover the new debt service associated with the new bond issues. In the latter years of the planning period, the CIP stabilizes and revenues exceed capital and operating needs, providing for a significant surplus after all uses of funds are satisfied. It is recommended that the City transfer a portion of the amount of surplus to a capital improvement fund and maintain a modest annual rate adjustment rather than reducing rates. This will help the City in the future by providing a source of funds for future capital improvements other than new bond issues as well as provide for an inflationary adjustment to ensure that the rates keep pace with the anticipated increases in operational expenses.

8.6. Summary of the Financial Projections

A summary of the financial plan of the sewer system is provided in Table 8-5. This is an abbreviated summary of the detailed financial plan and analysis, which is provided in Appendix D.

Table 8-5. Summary of the City's Project Five-Year Financial Plan

| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|--|--------------------|--------------------|----------------------|----------------------|----------------------|----------------------|
| Sources of Funds | | | | | | |
| Rate Revenue | \$2,401,000 | \$2,804,000 | \$3,132,500 | \$3,276,900 | \$3,276,900 | \$3,276,900 |
| Other Revenue | 57,100 | 65,200 | 71,800 | 74,600 | 76,017 | 77,462 |
| Total Sources of Funds | \$2,458,100 | \$2,869,200 | \$3,204,300 | \$3,351,500 | \$3,352,917 | \$3,354,362 |
| Uses of Funds | | | | | | |
| Operations & Maintenance | \$1,683,000 | \$1,787,200 | \$1,848,000 | \$1,908,100 | \$1,972,870 | \$2,039,943 |
| Capital Improvements funded from Rates | 292,549 | 325,800 | 367,800 | 418,300 | 414,800 | 425,300 |
| Debt Service (Principal & Interest) | 1,029,267 | 1,454,187 | 2,105,337 | 2,105,437 | 2,105,437 | 2,105,437 |
| Changes in Working Capital | 29,524 | 115,173 | (51,787) | 115,731 | 137,802 | 143,596 |
| Total Uses Of Funds | \$3,034,340 | \$3,682,360 | \$4,269,350 | \$4,547,568 | \$4,630,909 | \$4,714,276 |
| Balance/(Deficiency) Of Funds | (\$576,240) | (\$813,160) | (\$1,065,050) | (\$1,196,068) | (\$1,277,991) | (\$1,359,914) |
| Balance as a % of Rate Revenue | 24.00% | 29.00% | 34.00% | 36.50% | 39.00% | 41.50% |

When interpreting the results of Table 8-5 it is important to understand that the “Balance as a % of Rate Revenues” is cumulative; any rate adjustments made in previous years would reduce what is required in the following years. It is also important to keep in mind that the model assumes expenses are completely expended within each year. The results of Table 8-5 indicate that the existing sewer rates are not sufficient to meet operating and maintenance, capital, and debt service expenses during the review period; rate adjustments are required. Additional rate adjustments ensure that the sewer system will have sufficient funding for adequate operations

and maintenance of the system, proper funding of capital improvements, and an acceptable debt service coverage ratio. The City should continue to review the utility’s financial position to confirm that such rate increases are necessary and to determine if additional funds may be required due to unforeseen circumstances.

It is important to note that the financial plan presented in this section is predicated upon an assumed level of growth on the system (1.9% per year), and assumptions related to inflation based on historical data. Should this growth increase, slow down, or not occur, the level of rate adjustment required will be affected. If costs escalate faster or slower than indicated in this plan, the rate adjustments needed would likewise be affected.

8.7. Review of the Existing Sewer Rates

There are various “generally accepted” sewer rate structures that can be used to establish or develop rates. The starting point in considering a rate structure is the relationship between fixed costs and variable costs. Fixed costs are generally collected as a fixed charge on a monthly basis (e.g. \$5.00 per month/account). This charge may be given various names (e.g. customer charge, base charge, etc.) but it is intended in all cases to collect those fixed costs that the utility incurs.

Variable costs are primarily based upon the volume of wastewater flow. Sewer customers are typically billed a variable charge on the actual amount of water that each customer consumes. Since water that is used by the customer is not all discharged to the sewer system, the sewer service charges are based on an estimated percentage of the metered water volume that is returned to the sewer, or "flow factor". Some utilities monitor water use during the winter months for residential customers in order to determine how much of the consumed water is returning to the sewer system. Water during the winter months is primarily consumed for household use rather than outdoor use, such as lawn watering.

The City’s sewer utility has four different rate classes. The City’s sewer service rate schedules in effect as of 2008 are presented below in Table 8-6.

Table 8-6. Overview of the City's 2009 Sewer Rate Schedules

| Class of Service | Minimum/Base | Cost Per CCF |
|---|--------------|--------------|
| Residential | \$23.63 | \$2.90 |
| Multifamily residential (per living unit) | 18.18 | 2.90 |
| Commercial/School | 55.15 | 5.12 |
| Dept. of Corrections | 7,286.00 | 2.90 |

8.8. Overview of Future Sewer Rates

The City will require a 24% rate adjustment in the next year to meet the on-going needs of the sewer utility system based upon the results of the financial analysis. Rate adjustments in subsequent years range from 5.0% to 2.5% through 2014.

The annual rate projected in this financial review would lead to a residential rate of \$29.30 in 2010 and increases to \$34.79 by 2014.

8.9. Summary

The financial plan results presented indicate that the sewer rates with the proposed adjustments in 2009 – 2014 will adequately fund the O&M, capital, and debt service requirements. The rate adjustments will assist the City in the management of the utility by funding operations, capital, and debt service at a sufficient level. Continued prudent fiscal management will enable the sewer utility to operate on a financially sound basis.