

## **RESOLUTION NO. 2011-19**

### **A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ROHNERT PARK ACCEPTING THE SEWER FINANCIAL PLAN AND RATE STUDY PREPARED BY THE REED GROUP, INC., WHICH RECOMMENDS NEW SEWER FEES AND NEW RATE STRUCTURE**

**WHEREAS**, the City of Rohnert Park operates a sanitary sewer utility collecting and transporting wastewater to the Santa Rosa Subregional System for treatment, disposal, and recycling; and

**WHEREAS**, the City Council of the City of Rohnert Park has retained the services of The Reed Group, Inc. to analyze the financial operations of the sanitary sewer system and make recommendations on a new rate structure that would bring the sanitary sewer utility to revenue sufficiency and financial stability so that it can be operated in conformance with the City's contractual obligations and State and Federal Law; and

**WHEREAS**, The Reed Group, Inc. has now submitted to the City the *City of Rohnert Park Sewer Financial Plan and Rate Study* ("the Reed Report") dated March 3, 2011, a copy of which is on file with the City Clerk of the City of Rohnert Park; and

**WHEREAS**, Robert Reed, President of The Reed Group, Inc. and author of the Reed Report, is a licensed civil engineer in the State of California with masters' degrees in Water Resources Engineering and Public Policy and Management from the University of California at Davis with over 25 years of experience in providing financial and management consulting services to public agencies in the areas of water and wastewater utility management, as more particularly set forth in Appendix C of the Reed Report; and

**WHEREAS**, the financial analysis in the Reed Report confirms that since 2009, annual expenses for sanitary sewer services have exceeded revenue, resulting in rapid reduction in the balance of the sewer operating fund and a projected exhaustion of that fund in fiscal year 2011-2012 unless fee revenues are increased; and

**WHEREAS**, on April 3, 1975, the City entered into an Agreement Between the City of Santa Rosa and the City of Rohnert Park, the City of Sebastopol and the South Park County Sanitation District for Use of the Santa Rosa Subregional Sewer System ("Subregional Sewer System Agreement") to treat the City's sewage as required by State and Federal Law; and

**WHEREAS**, Section 20 of the Subregional Sewer System Agreement requires that the City adopt a sewerage service revenue program which shall, at a minimum, meet the applicable requirements of the California Clean Water Grant Program and of the Environmental Protection Agency ("EPA"), which in turn require that the City adopt a revenue program that will fund operations, maintenance and replacement of the sewer system; and

**WHEREAS**, on May 1, 2005, as a step in the issuance of Certificates of Participation, the City signed an Installment Purchase Agreement in order to secure funds for essential capital

improvements to repair and restore the existing sewer operation as well as to provide for future system expansion; and

**WHEREAS**, Section 6.14 of the Installment Purchase Agreement contains two covenants regarding sewer rates and charges made by the City for the benefit of holders of the Certificates of Participation that it issued in 2005; and

**WHEREAS**, the first covenant requires that the City fix, prescribe and collect rates and charges for Sewer Service which will yield, in any Fiscal Year, Net Revenues equal to 120% of the Debt Service, as those capitalized terms are defined in the Installment Purchase Agreement; and

**WHEREAS**, the second covenant requires that the City fix, prescribe and collect rates and charges for Sewer Service that will yield Net Revenues, exclusive of Connection Fees, equal to 115% of Debt Service; and

**WHEREAS**, Exhibit II-4 of the Reed Report demonstrates that for Fiscal Year 2010-2011 the City is in breach of those debt coverage covenants because there is no Net Revenue at all, because Operations and Maintenance Costs exceed Revenues; and

**WHEREAS**, the lack of Net Revenue demonstrated in the Reed Report will also prevent the City from meeting its obligations under Section 20 of the Subregional Sewer System Agreement, including the City's obligation to adopt a sewer service revenue program that, at a minimum, meets the applicable requirements of the California Clean Water Grant Program and of the EPA; and

**WHEREAS**, the City has paid its operating expenses for Fiscal Year 2009-2010 and Fiscal Year 2010-2011 by spending down its Sewer Operating Fund, and the Reed Report projects that the City will completely exhaust the Sewer Operating Fund in Fiscal Year 2011-2012 if it continues to use its present rate structure; and

**WHEREAS**, the Reed Report recommends that the existing sewer rate structure be replaced by a new sewer rate and rate structure that will improve revenue stability and/or improve proportionality in rates by assigning a greater portion of revenue to fixed monthly rates; apportion fixed rates to meter size in recognition of the increase potential for demands upon the system from larger meters; establish new usage rates that take into account the relative "strength" of the wastewater and the varying costs for treating various wastewater loadings; retain a fee component which will be apportioned by system usage, which is another important factor in allocating costs of service proportionately; and calculate usage for schools based on adjusted metered water consumption; and

**NOW, THEREFORE, BE IT RESOLVED** by the City Council of the City of Rohnert Park as follows:

Section 1. The City Council hereby accepts the *City of Rohnert Park Sewer Financial Plan and Rate Study* dated March 3, 2011 and prepared by The Reed Group, Inc. and attached hereto as Exhibit "A" as an accurate representation of the financial operations of the City's

sanitary sewer enterprise and sound recommendation for a new sewer rate and rate structure that will permit the City to operate its sanitary sewer system in compliance with State and Federal Law and its contractual obligations.

Section 2. The City Council hereby finds that the new sewer rate structure recommended in the Reed Report will:

- (1) provide revenues that will not be in excess of those needed to provide sanitary sewer service;
- (2) allocate charges among parcels and as an incident of property ownership in an amount that will not exceed the proportional cost of providing the service attributable to that parcel and/or customer; and
- (3) will not impose any fee or charge unless the sewer service is actually used by, or immediately available to, the owner of the property in question.

Section 3. The City Manager and City Attorney are directed to prepare and bring to the City Council for its consideration those documents necessary to implement the proposed new rate structure including, but not limited to, the conduct of a hearing on a new sewer rate structure pursuant to Article XIII D of the California Constitution and the Proposition 218 Omnibus Implementation Act.

**DULY AND REGULARLY ADOPTED** this 8<sup>th</sup> day of March, 2011.

ATTEST:

City Clerk



CITY OF ROHNERT PARK

Mayor

APPROVED AS TO FORM:

City Attorney

AHANOTU: <u>AYE</u>	CALLINAN: <u>AYE</u>	MACKENZIE: <u>AYE</u>	STAFFORD: <u>AYE</u>	BELFORTE: <u>AYE</u>
AYES: (5)	NOES: (0)	ABSENT: (0)	ABSTAIN: (0)	

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# **City of Rohnert Park**

## **SEWER FINANCIAL PLAN AND RATE STUDY**

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**March 3, 2011**



**THE REED GROUP, INC.**

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**EXHIBIT A**

## TABLE OF CONTENTS

<b>I. EXECUTIVE SUMMARY .....</b>	<b>1</b>
INTRODUCTION .....	1
FIVE-YEAR FINANCIAL PLAN .....	4
NEW SEWER RATE STRUCTURE .....	6
FIVE-YEAR RATE PLAN .....	7
<b>II. FIVE-YEAR SEWER FINANCIAL PLAN .....</b>	<b>11</b>
ROHNERT PARK'S SEWER UTILITY .....	11
FUND/RESERVE STRUCTURE AND CASH FLOWS .....	14
FINANCIAL PLAN ASSUMPTIONS .....	17
SEWER SYSTEM FINANCIAL PLAN .....	26
<b>III. NEW SEWER RATE STRUCTURE .....</b>	<b>32</b>
EXISTING SEWER RATE STRUCTURE .....	32
NEW RATE STRUCTURE OBJECTIVES .....	34
CUSTOMER ACCOUNT DATA AND WASTEWATER FLOW AND LOADING ESTIMATES .....	35
NEW SEWER RATE STRUCTURE AND RATE PLAN .....	45
<b>APPENDIX A – LIST OF REFERENCES</b>	
<b>APPENDIX B – DATA ON SEWER USER STRENGTH CLASSIFICATIONS</b>	
<b>APPENDIX C – CONSULTANT QUALIFICATIONS</b>	

## **I. Executive Summary**

### **Introduction**

The City of Rohnert Park (City) retained the Reed Group to undertake a comprehensive analysis of the financial operations of the City's sewer system and recommend a new rate structure that will (1) efficiently and effectively fund sewer operations in conformance with state and federal law; (2) meet the City's contractual obligations with regard to the Santa Rosa Subregional System and Certificates of Participation; (3) be proportional to the cost of providing service to ratepayers; (4) respond to the changing economic and ecological environment in which the system operates (i.e., shift to greater reliance on fixed service charges and strength-based usage charges); and (5) exclude costs of system expansion to serve new development.

The collection, treatment, and disposal of wastewater is an essential service to the community that must be provided to ensure the health and safety of the City's residents. The City has the lowest sewer rates in the region. As a result, the City works each day with increasingly limited resources to ensure that the sewer system is properly operated and maintained to avoid sewage overflows, protect public health, and protect the environment. Unfortunately, however, the revenues generated from sewer operations are insufficient to cover operating and maintenance costs, debt service obligations, and capital program needs. The sewer utility is operating at a financial deficit, and the City is currently in violation of certain debt covenants. If the current trend continues, operating cash reserves may be exhausted in 2012. At that point, the City will no longer be able to meet other legal obligations, both under contract and under statute, exposing the City to significant litigation risk and its residents to substantial health and safety issues.

The funding problems facing the City's sewer operations arise from insufficient revenue and changing consumer practices. Since December 2008, the City's sewer operation has been in the vulnerable position of not generating sufficient revenues with current rates to cover operating and maintenance costs and meet contractual debt service coverage obligations. During this same period, declining customer water usage has further reduced revenues (about 99 percent of sewer rate revenue is tied to water usage and only about 1 percent is fixed). The slowdown in the economy, concerns about water

supply conditions, weather patterns, and water conservation efforts have all contributed to reduced demand, and a further decline in revenue.

The City engaged The Reed Group, Inc. to review the sewer utility's operating and maintenance costs, debt service obligations, and capital program needs, and to develop a multi-year financial plan including recommendations for a new sewer rate structure to meet these obligations. The new sewer rate structure is the foundation for a new five-year rate plan that will enable the City to continue to provide sewer services to the community, without threatening the City's ability to continue providing other essential services to residents. In addition, the recommended sewer rate structure will also enhance proportionality among customers by applying a new approach to the manner in which rates are calculated.

Financial viability is a prerequisite to ensuring the City is able to continue providing essential sewer services in accordance with state, federal, and regional regulations. To ensure long-term financial viability, four important needs must be met: (1) covering ongoing operation and maintenance costs of wastewater collection, treatment, and disposal; (2) meeting certain debt covenants, which include both making annual principal and interest payments (debt service) and meeting debt service coverage requirements (described below); (3) maintaining adequate and prudent financial reserves for working capital, emergencies, and variable capital program needs; and (4) providing ongoing funding for the long-term rehabilitation and upgrade of the sewer system.

The vast majority of the operations and maintenance costs associated with the City's sewer operations are charged by the Santa Rosa Subregional System (Subregional System) for wastewater treatment and disposal, and are thus beyond the control of the City. The Subregional System provides treatment and disposal for the cities of Santa Rosa, Rohnert Park, Cotati, and Sebastopol, as well as South Park County Sanitation District. The relationship between these agencies, as well as the agencies' contractual payment obligations, are set by the *Subregional Agreement* dated April 3, 1975, and subsequent amendments (*Subregional Agreement*). Under the *Subregional Agreement*, the City is required to pay for its proportionate share of operating and maintenance costs of treatment and disposal operations based on wastewater flow and loading factors, as well as a portion of annual debt service related to capital facility needs based on contracted capacity.

Annual payments to the Subregional System (for operating, maintenance, and debt service costs) account for about 80 percent of sewer utility annual operating and maintenance costs, and the City has limited control over the amount of these costs. The remaining 20 percent of sewer system operating and maintenance costs is related to the City's collection system, as well as administrative costs of the utility, including utility billing. Current (FY 10-11) operating and maintenance costs, including payments to the Subregional System, total about \$11.1 million, while general sewer rate revenues are estimated at about \$7.3 million and total sewer operating fund revenues are about \$8.8 million.

In addition, the City is also legally obligated to make annual debt service payments of nearly \$820,000 on sewer revenue certificates of participation (COPs) issued in 2005. As required by the *Installment Purchase Agreement*, the City is also contractually obligated to fix, prescribe, and collect sewer rates and charges such that annual revenues would cover annual operating and maintenance costs and provide net operating revenues equal to at least 1.20 times annual debt service. This debt service coverage test is a debt covenant intended to provide lenders with additional security that the City will be able to meet its debt repayment obligations. A second test requires the annual net operating revenues, exclusive of connection fee revenue, to cover operating and maintenance costs, as well as 1.15 times annual debt service.

As a result of inadequate rate revenues, the City is currently in breach of the debt service coverage covenants, putting the City in a vulnerable legal and financial condition. This problem cannot be solved with transfers from other City funds, because the City's debt covenants require adequate sewer revenue to cover system costs. The City has been able to make annual principal and interest payments by relying on available financial reserves in the sewer funds. However, these reserves are estimated to be exhausted in 2012 with currently available revenues. At that time, not only will the sewer utility be unable to adequately fund capital program needs and unable to meet the debt service coverage covenants, but it will also be unable to make annual principal and interest payments, or even cover ongoing operating costs.

The five-year rate plan presented in this report focuses primarily on covering operating and maintenance costs, and meeting debt service obligations. The third and fourth financial obligations listed above are maintaining adequate reserves and funding a long-

term rehabilitation and upgrade capital program. Both of these needs were deemed secondary to ongoing operations and meeting debt repayment obligations. However, once rates are adjusted to meet the debt service coverage covenants an adequate operating reserve can be maintained, and most of the City's sewer capital improvement program can be funded. The limitation on funding the entire capital improvement program is described in greater detail in Section II of the report.

This report documents the financial planning and rate analyses performed to look at the next five years for the sewer utility, which in turn forms the basis for recommendations for a new rate structure that reflects the cost of providing service, enhances proportionality, and improves revenue stability, as well as a comprehensive rate plan to cover the five-year planning period.

Because of the requirements of Proposition 218 on public notification, it may be July 2011 before the new sewer rate structure and the initial phase of the rate plan can be implemented. As a result, the City will not meet debt service coverage covenants in FY 10-11. However, the sewer rate plan presented herein is intended provide the necessary revenues to cover all operating and maintenance costs, as well as debt service coverage covenants, in FY 11-12 and beyond.

The remainder of this Executive Summary summarizes the financial planning and rate study analyses supporting the new sewer rate structure and five-year rate plan. Other sections of the report provide additional details of the study. **Section II** presents information and assumptions related to development of the sewer financial plan. **Section III** describes recommendations for a new rate structure.

### **Five-Year Financial Plan**

The five-year financial plan for the sewer utility covers the period from FY 10-11 through FY 14-15. The model is based on the City's FY 10-11 budget, 5-year capital improvement plan, and existing debt service obligations. The financial plan model is intended to serve as planning and management tool, and enables the City to take a multi-year look at its financial needs.

As with other cities, the sewer utility is intended to be a self-supporting enterprise of the City. That is, the utility is expected to generate the revenues (through user charges,

capacity fees, and other revenues) to cover the ongoing costs of: (1) operations, maintenance, and administration, (2) debt service, (3) capital improvements to provide needed capacity and to rehabilitate and upgrade of the utility system, and (4) maintaining prudent financial reserves.

The sewer utility is running an operational deficit. At present, annual operating costs, including debt service payments, exceed operating revenues by about \$3.4 million. The sewer utility has been able to cover operating and debt service costs by drawing down limited financial reserves. However, it is estimated that, without an increase in sewer revenues, financial reserves in the operating fund may be exhausted in early 2012.

The financial plan model estimates the annual sewer revenue requirements necessary to cover operating and maintenance costs, as well as debt obligations. The City is contractually obligated to satisfy debt covenants under the *Installment Purchase Agreement*. The primary covenants affecting rate analyses are the promises (1) to make annual principal and interest payments, and (2) to meet specific debt service coverage tests. Failure to meet these contractual obligations could result in costly and protracted litigation and also impair the City's ability to borrow money in the future. The new rate plan proposed herein focuses on meeting the cash needs of utility operations, as well as meeting these debt covenants throughout the planning period. Section II of this report presents details of the five-year financial plan for the sewer utility. The financial plan is used to identify the annual sewer rate revenue requirements, which are subsequently used to develop recommendations for a new sewer rate structure, as well as the new rate plan.

In order to meet the critical financial needs of the sewer utility, significant additional revenue is required. Because the new rate structure would result in higher rates, it is recommended that an overall rate plan be implemented in five phases: in July 2011, January 2012, January 2013, January 2014, and January 2015, as shown below. The first two phases (July 2011 and January 2012) together are critical to bringing the utility to a financially stable condition where it can meet financial obligations in FY 11-12. Subsequent adjustments to the new rate structure are necessary to maintain revenue sufficiency through the planning period.

### **New Sewer Rate Structure**

A proposed new rate structure is intended to assist the City with meeting financial obligations and achieving rate setting objectives. The following rate setting objectives have guided the development of the proposed new rate structure for the sewer utility.

- Rates should generate sufficient revenues to meet the utility's financial obligations related to operations, debt service, and the capital improvement program, as reflected in the multi-year financial plan
- Rates should reflect the cost of providing service by proportionately allocating costs to each customer class; and
- Rates should improve revenue stability.

The City also has policies and programs to encourage water conservation, and the new sewer rate structure helps to achieve this objective as well.

The rates proposed under the new rate structure reflect the cost of providing service and are based on the annual revenue needs beginning in July 2011. While the rate setting objectives listed above guided the review and recommendations in this report, it is hoped that the analysis and explanations contained in this report will also assist customers' understanding regarding the need for a new rate structure to address urgent and fundamental deficiencies with the City's current sewer rates and the financial health of the utility.

Sewer rate calculations are based on estimated wastewater flows from each customer class, as well as wastewater strength characteristics for biochemical oxygen demand (BOD) and total suspended solids (TSS). Under the current rate structure, all customers pay the same fixed service charge (\$1.08 per month), which represents customer-related costs such as utility billing. About 1 percent of the annual sewer rate revenue is generated through this charge. This service charge approach does not reflect the fact that different customers can place very different demands on the sewer system. The proportionate distribution of the costs of providing service could be better achieved if service charges also include a portion of fixed capacity-related costs. The proposed rate structure makes this change.

The proposed new rate structure would establish the fixed service charge based on the size of the water meter (similar to water rates) for multi-family and non-residential customers. All single family residential customers would pay the same fixed service charge. Under the new rate structure, about 15 percent of annual rate revenue would come from fixed service charges, and about 85 percent from usage charges.

Usage charges for each customer will be determined based on wastewater flow, as well as strength characteristics for each customer class. Residential wastewater flows are estimated based on the lower of either (1) the average monthly water usage from the prior December through February period, or (2) actual water usage for the month. Non-residential wastewater flows are based on actual monthly water usage, as most non-residential irrigation is separately metered. The usage rate for residential accounts is based on typical residential wastewater strength characteristics. Non-residential sewer rates are proposed for low, medium, and high strength categories, with each rate reflecting a proportionate share of costs associated with treatment based on loading characteristics associated with different types of businesses. Section III of this report further describes the rate setting methodology, as well as the basis and rationale for strength-based rates.

While the overall revenue increase from proposed new sewer rates in July 2011 would be 25 percent, the actual bill changes for individual customers would vary depending on customer class, meter size, and usage. Because this would be a new rate structure, and not simply the application of an across-the board rate increase to the current rates, some bills would increase more, and others less, than of overall revenue increase. In all cases, however, it is believed that the proposed new rate structure would provide an improved distribution of costs to each customer and the proposed rates would be justified on a cost of service basis. The potential impact of the new rate structure on various "typical" sewer customers is presented in **Exhibits III-7 and III-8**, at the end of Section III.

### **Five-Year Rate Plan**

It is proposed that the City adopt a new five-year rate plan based on the new sewer rate structure. Under this plan, the sewer utility would return to financial stability, meet its contractual and legal obligations for revenue sufficiency, and continue to provide

essential sewer services for the protection of health and safety in a financially responsible manner.

The five-year rate plan is summarized in **Exhibit I-1** and includes the adoption and implementation of a new sewer rate structure in July 2011, followed by adjustments to the new rates each January from January 2012 through January 2015. Exhibit I-1 presents the proposed new sewer rates as they would be implemented and adjusted during the five-year period.

**Exhibit I-1**  
**City of Rohnert Park**  
**Proposed New Sewer Rate Structure and Five-Year Rate Plan**

	July 2011	Jan. 2012	Jan. 2013	Jan. 2014	Jan. 2015
See Note (1) Below -->	25%	25%	3%	3%	3%
<b>Monthly Service Charges</b>					
<i>Residential Customers (per dwelling unit)</i>					
Single Family	\$ 6.88	\$ 8.60	\$ 8.86	\$ 9.13	\$ 9.40
<i>Multi-Family and Non-Residential Customers</i>					
Up to 3/4" meter	\$ 18.52	\$ 23.15	\$ 23.84	\$ 24.56	\$ 25.30
1" meter	\$ 28.34	\$ 35.43	\$ 36.49	\$ 37.58	\$ 38.71
1 1/2" meter	\$ 52.68	\$ 65.85	\$ 67.83	\$ 69.86	\$ 71.96
2" meter	\$ 82.00	\$ 102.50	\$ 105.58	\$ 108.75	\$ 112.01
3" meter	\$ 150.48	\$ 188.10	\$ 193.74	\$ 199.55	\$ 205.54
4" meter	\$ 248.27	\$ 310.34	\$ 319.65	\$ 329.24	\$ 339.12
6" meter	\$ 492.54	\$ 615.68	\$ 634.15	\$ 653.17	\$ 672.77
8" meter	\$ 785.79	\$ 982.24	\$ 1,011.71	\$ 1,042.06	\$ 1,073.32
<b>Sewer Usage Rate (\$/gal.) (2)</b>					
<i>Residential</i>	\$ 0.00801	\$ 0.01001	\$ 0.01031	\$ 0.01062	\$ 0.01094
<i>Non-Residential</i>					
Low Strength	\$ 0.00837	\$ 0.01046	\$ 0.01077	\$ 0.01109	\$ 0.01142
Medium Strength	\$ 0.01122	\$ 0.01403	\$ 0.01445	\$ 0.01488	\$ 0.01533
High Strength	\$ 0.01690	\$ 0.02113	\$ 0.02176	\$ 0.02241	\$ 0.02308

**Notes:**

- (1) The percentage shown for July 2011 reflects the overall increase in sewer rate revenue resulting from the first phase in implementing the new rate plan. Subsequent percentages reflect the rate adjustments in subsequent phases of the plan necessary to meet annual revenue needs. Annual rate revenue growth is also affected by growth in the customer base, as well as changes in customer demand.
- (2) Residential sewer flow is based on the lower of actual monthly water use or the average water use during the prior December-February period. Non-residential sewer flow is estimated equal to monthly water usage.

The proposed five-year rate plan meets the sewer utility's sewer rate revenue needs as identified with the five-year financial plan (described in Section II of this report), as well as replaces the existing sewer rate structure with an entirely new structure that meets the City's rate-setting objectives, particularly improving the manner in which the costs of

sewer operations are proportionately distributed to customers and recovered through the sewer rates (described in Section III of this report). The five-year rate plan has the following four major features and benefits:

1. In July 2011 the current sewer rate structure would be replaced with a new sewer rate structure. The new rate structure would help improve revenue stability by increasing the proportion of revenue coming from fixed service charges, and also establishing new sewer usage charges that more proportionately recover the costs of collection, treatment, and disposal based on use of the system (wastewater flow), as well as sewer strength characteristics (BOD and TSS) for each customer class. The new sewer rates also take a critical step in increasing sewer rate revenues to meet the financial needs and obligations of the utility. With the first phase of the proposed new rates for July 2011, sewer rate revenues are estimated to increase by about 25 percent.
2. In order to fully meet the sewer utility's contractual and legal obligations for maintaining sufficient sewer rates and revenues, a second phase in the new rate plan is proposed for January 2012. At that time, the new sewer rates would be adjusted by increasing all rate components (fixed service charges and sewer flow charges) by 25 percent. It is the combination of the first and second phases of the new rate plan in July 2011 and January 2012 that bring the sewer utility to a place of revenue sufficiency in terms providing revenues to cover all operating and maintenance costs, and existing debt service obligations. The second phase in the new rate plan also ends the sewer utility's financial deficit, which must be abated.

To provide sufficient revenues in FY 11-12 to meet the sewer utility's contractual and legal obligations it is not possible to extend the new rates implemented through the first and second phases of the new rate plan over a longer period of time.

3. In January 2013, January 2014, and January 2015 the last elements of the proposed five-year rate plan would be implemented. These include additional adjustments to the new sewer rates of 3 percent per year. Based on financial plan analyses, these modest rate adjustments are necessary in order to sustain

sewer rate revenues at levels required to meet financial needs for operation, maintenance, and debt service, as well as maintain prudent financial reserve and fund the current capital improvement program, as reflected in the financial plan.

4. To help ensure that existing rate payers are not paying costs related to new development, the proposed rate plan also includes continuing to use sewer capacity fee revenue to pay for Subregional System debt service related to capacity expansion, as well as use a portion of PFFP fee revenues to cover the expansion portion of 2005 COP debt service costs.

Details of the assumptions, analyses, methodology, and rationale supporting the proposed five-year rate plan are contained in the remainder of this report.

In conclusion, based on financial plan assumptions and estimates, the sewer utility is expected to be financially stable if the proposed new sewer rate structure and the new five-year rate plan are adopted and implemented. While the assumptions and information used in the preparation of the sewer financial plan are based on expert analysis and reasoning, as well as staff review and concurrence, no assurances can be made that actual financial results will be as presented herein. City staff should continue to monitor the financial condition of the sewer utility, as well as changes in wastewater demands and related rate revenues, to ensure that the utility moves forward on a sound financial course.

## **II. Five-Year Sewer Financial Plan**

This section of the report describes the five-year financial plan developed for the City's sewer utility. The financial plan reflects the City's current operation and maintenance costs, debt service obligations, and capital improvement plans, as well as various sources of revenues and the reserves maintained by the City for various purposes.

The financial plan is intended to serve as planning and management tool and enable the City to take a multi-year look at its financial needs. In order of priority, these needs include funding of ongoing operation and maintenance, meeting debt service obligations (including debt service coverage covenants), maintaining prudent financial reserves, and supporting the utility's current capital improvement program. The financial plan model also provides a means to examine ways to minimize utility rate increases, while still meeting financial objectives.

The financial plan model is based on information provided by the City and assumptions reviewed with City staff. Efforts have been made to make the analyses as complete and accurate as possible. However, the City's sewer utility operates in a dynamic environment in which economic conditions, customer demands, external costs, and other factors are outside of the City's direct control. Future conditions and events cannot be known at this time. The financial plan is intended to help shape and inform decisions to be made by the City. It is not a prediction of the future.

### **Rohnert Park's Sewer Utility**

The City is responsible for the operation and maintenance of the City's sewer utility. The wastewater produced by the City's customers is delivered by the City's collection system to a regional wastewater treatment and disposal system (Subregional System), which treats and disposes the wastewater. The Subregional System is owned and operated by the City of Santa Rosa and serves the City, Santa Rosa and the nearby cities of Cotati, Sebastopol, and the South Park County Sanitation District through contractual agreements with Santa Rosa and those public agencies. Through the City's collection system and the Subregional System, the City provides sewer services throughout Rohnert Park and certain adjacent areas.

Operations of the sewer utility are carried out under the general supervision of the Public Works Director. The sewer utility is operated as an enterprise fund of the City, with a separate and independent set of accounting records and financial transactions. As a condition of the COPs the City is required to set rates and charges sufficient to cover all operating and maintenance costs of the utility without support of the General Fund. It is through establishing appropriate rates and charges that the sewer utility can operate in compliance with this requirement.

The entire City is included within the area currently served by the sewer utility. This service area includes the 7.3 square miles of the City. The utility serves approximately 8,350 accounts in the City and two additional customers (Sonoma State University and Sonoma County's Canon Manor Assessment District) outside the City limits in Sonoma County.

The sewer utility currently consists of wastewater collection and conveyance facilities. All wastewater is treated and disposed through the Subregional System. The City has approximately 411,000 lineal feet (nearly 78 miles) of gravity sewer pipe ranging in size from 6-inch to 30-inch. In addition, the sewer trunk system, which delivers wastewater to the Subregional System, consists of approximately 20,000 lineal feet of 24-inch gravity sewer installed in the 1970's, as well as a second trunk line of approximately 18,000 lineal feet with a 30-inch diameter installed in 2006. Both trunk lines are now operated as pressurized pipelines. The City's sewer collection system operates under gravity flow to a pump station, which then pumps the wastewater through the trunk system to the Subregional Systems's treatment plant. Currently, the average aggregate wastewater treatment demand in the City's service area is approximately 2.8 mgd (average dry weather flow). The current treatment capacity of the Subregional System allocated to the City is 3.43 mgd (average dry weather flow).

Untreated wastewater from the City's collection system is delivered to the Subregional System where it is treated. Primary treatment consists of screening, grit removal and primary sedimentation. In the primary treatment tanks, suspended material in the wastewater is allowed to settle out. The settled material (primary sludge) is removed to digesters while the liquid effluent flows to the secondary treatment facility.

In secondary treatment, the primary effluent is aerated and bacteria consume most of the organic material. The resulting mixture then flows into secondary clarifiers where additional settlement occurs. The secondary sludge is either re-circulated to the aeration tanks or removed for sludge thickening while the liquid effluent flows to the tertiary treatment facility.

The tertiary treatment facility consists of filtration of the secondary effluent through anthracite coal beds that remove any remaining organic material. After filtration, the tertiary effluent is disinfected by ultraviolet light, which eliminates any remaining bacteria or viruses. After disinfection, the effluent is pumped through pipelines to storage ponds for subsequent re-use or for discharge to Laguna de Santa Rosa.

The solids generated during the wastewater treatment process (sludge) are thickened to remove excess water and then pumped to four anaerobic digesters to degrade, stabilize and to produce methane gas to help meet treatment plant power needs. The product of this process, called biosolids, is further dewatered and then transported for agricultural land application, for landfill disposal, or further processed by composting which produces a marketable product.

Tertiary treated, recycled water is currently disposed by the Subregional System in three ways: irrigation, Geysers Recharge (geothermal power plant), and Laguna de Santa Rosa discharge. By managing these three disposal methods, the Subregional System can remain in regulatory compliance independent of weather. The City of Santa Rosa is currently expanding its reuse capacity into urban areas. Revenues generated from the sale of treatment bi-products, including recycled water, is used to offset the cost of operation and maintenance that otherwise would need to be recovered from member agencies, including Rohnert Park.

The Subregional System operates in a heavily regulated environment with strict limits on treatment and discharge. The primary regulatory body is the North Coast Regional Water Quality Control Board. Other regulatory agencies impacting Subregional System operations include: US Environmental Protection Agency, California State Water Resources Control Board, California Department of Fish and Game, US Fish and Wildlife Service, US Army Corp of Engineers, and others.

The City is required to establish and maintain sewer rates and revenues that meet the financial needs of the utility. Section 20 of the *Subregional Agreement* requires Rohnert Park to “adopt a sewerage service revenue program which shall meet, as a minimum, applicable requirements of the California Clean Water Grant Program and of the EPA.” These state and federal requirements (as specified in the State Water Resources Control Board’s *Revenue Program Guidelines*) include establishing a revenue program “designed to provide a source of revenue for operation, maintenance, and replacement (O. M. & R.) costs of the wastewater system.” In addition, sewer rates are to be “set based on the identification of users and their respective contribution to the wastewater loading of the treatment works.” Beyond these state and federal requirements, pursuant to the *Installment Purchase Agreement* for the 2005 COPs, the City is also required to fix, prescribe, and collect rates and charges for sewer service that generate net revenues (defined as gross system revenues minus operating and maintenance expense) at a level that exceeds annual debt service. This debt service covenant is explained in greater detail later in this report.

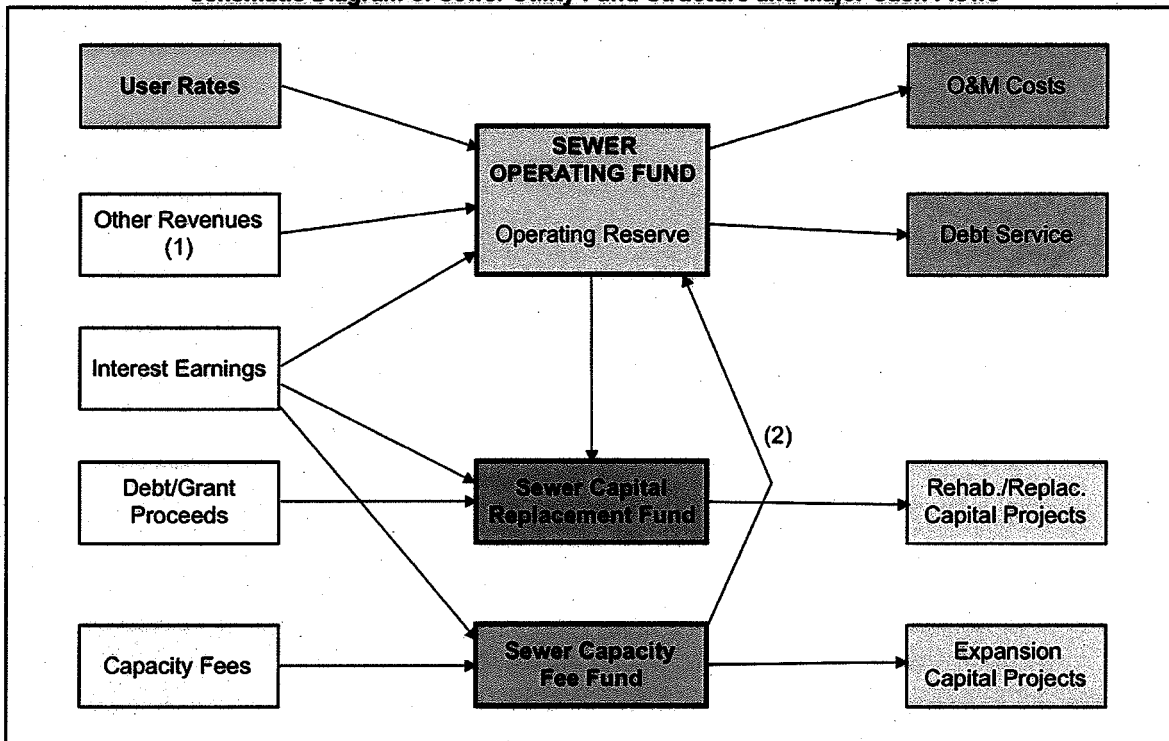
### **Fund/Reserve Structure and Cash Flows**

The financial plan is a multi-year cash flow model. As a cash flow model, it differs from financial accounting income statements and balance sheets that present financial information on an accrual accounting basis in conformance with the Governmental Accounting Standards Board (GASB). The financial plan models the sources and uses of funds into and out of the various funds and reserves of the City’s sewer utility.

The sewer utility is an independent enterprise operated by the Public Works Department. As an enterprise, the utility has an independent set of financial accounts contained within the City’s overall budget. The financial plan was developed to reflect the fund and account structure used by the City. The financial plan is used to model the cash inflows and outflows of the sewer utility, as well as transfers between the various sewer funds.

**Exhibit II-1**, on the following page, schematically illustrates the fund and reserve structure used for financial planning and analysis purposes, as well as the major revenue inflows and expenditure outflows. An understanding of the fund/reserve structure is helpful in understanding the financial plan exhibits that model the flow of funds through the utility from one year to the next. Each of the funds and reserves is described below.

**Exhibit II-1**  
**City of Rohnert Park**  
**Schematic Diagram of Sewer Utility Fund Structure and Major Cash Flows**

**Notes:**

- (1) Includes service revenues from SSU and Canon Manor, penalties, refunds from the Subregional System, and PFFP revenues. The PFFP revenues are transferred in from another City fund and used for a portion of annual COP debt service.
- (2) Sewer capacity fee revenue is transferred to the operations fund and used to pay Subregional expansion debt service.

- Operating Funds – The operating fund is the primary fund for the sewer utility. Most sewer revenues, including user rates and other service revenues, flow into this fund. All operating and maintenance expenditures, including administrative costs and debt service payments, are paid out of the operating fund.
  - Operating Reserves – The primary purposes of an operating reserve is to provide working capital sufficient to pay expenses as needed and to provide for unanticipated or emergency expenditures that could not be reasonably foreseen. The financial plan seeks to maintain a minimum operating reserve throughout the 5-year planning period. Operating reserves equal to from 10 percent to 50 percent of annual operating expenses is common and accepted within the water and wastewater industry. Given the size and nature of the City's sewer operation, as well

as relative risks (e.g., high revenue volatility and limited ability to control Subregional System costs), a 33 percent operating reserve is recommended. At present, it is estimated that the balance in the operating fund will be slightly above the recommended minimum balance at the end of FY 10-11. The new rate structure would help maintain the minimum balance for the remainder of the planning period.

- *Available Balance* – The balance in the operating funds in excess of the operating reserve is shown in the financial plan model as the available balance. When the total fund balance exceeds the target reserve amount the available balance is positive. If the fund balance dips below the desired minimum reserve the available balance is negative. This is a convenient way to monitor the status of the operating fund over the planning period as various scenario analyses are performed.
- Capital Replacement Fund – The capital replacement fund is used to track capital outlay items and capital program expenditures, as well as the monies available for capital rehabilitation and upgrade projects. Grant or debt proceeds obtained for capital projects are also shown in the capital replacement fund. At present, about \$2.6 million in this fund represents remaining proceeds from the issuance of COPs in 2005. In addition, the fund is supported through annual transfers from the operating fund. Contributions to the capital program from operating revenues are reflected in the financial plan models as annual transfers from the operating to the capital replacement fund.
- Capacity Fee Fund – The sewer capacity fee fund is used to track revenues from new development when capacity fees are paid. Sewer capacity fees are used to pay costs due to the Subregional System related to providing capacity in the wastewater treatment and disposal system owned and operated by the City of Santa Rosa. Capacity fee revenue cannot be used to cover general operating and maintenance costs of the utility. The purpose of capacity fees is described in the *Sewer Capacity Charge Analysis* report prepared by the City in 2006.

The City also receives development fee revenue under the Public Facilities Financing Plan (PFFP) fee structure. These revenues are accounted for in a separate fund (outside of the sewer utility). Their use in covering certain sewer

system costs is described later in this section, but is not part of the funds flowing through the capacity fee fund.

### **Financial Plan Assumptions**

The five-year financial plan reflects a number of assumptions. The financial plan was developed based on the City's FY 10-11 budget, existing long-term debt obligations and debt service schedules as reflected in the *Official Statement* for the 2005 COPs, and the current five-year capital improvement plan (CIP).

#### **General Assumptions**

A number of general assumptions are reflected in the financial plans, including inflation rates, interest rates, customer growth rates, water demand estimates, etc. Primary assumptions are described below, and also shown in **Exhibit II-2**. City staff members reviewed the assumptions used in the analyses, and concur with their reasonableness for the time period covered.

- Inflation and Interest Rates – The financial plan model includes the following assumptions for annual inflation and interest:
  - Approximately two-thirds of the current operating and maintenance cost to the City's sewer utility is the cost of treatment and disposal operations and maintenance provided by the Subregional System (excluding Subregional System debt service). The City of Santa Rosa's planning efforts have assumed Subregional System operating costs will increase by 5 percent each year. However, like other cities, they are under pressure to reduce costs as much as possible, and have been directed to reduce costs for FY 11-12. For this reason, the analysis herein assumes that Subregional System operating and maintenance costs to the City of Rohnert Park will be unchanged in FY 11-12 (relative to FY 10-11), will increase by 3 percent in FY 12-13, and then increase by 5 percent each year for the remainder of the planning period.

**Exhibit II-2**  
**City of Rohnert Park**  
**Sewer Financial Plan Assumptions**

	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15
<b>Financial Assumptions</b>						
Interest Earnings		0.5%	1.0%	1.0%	1.5%	1.5%
General Inflation			3.0%	3.0%	3.0%	3.0%
Subregional O&M Inflation			0.0%	3.0%	5.0%	5.0%
Construction Inflation		2.0%	3.0%	4.0%	4.0%	4.0%
<b>Fund/Reserve Policies</b>						
Min. Operating Reserve	33%	of operating expenses, including debt service				
Cap. Replacement Fund		Maintain positive balance				
Capacity Fee Fund		Maintain positive balance				
<b>Customer Account and Water Usage Assumptions</b>						
No. of Sewer Accounts	8,349	8,357	8,365	8,407	8,491	8,576
No. of Sewer ESFDs	11,595	11,603	11,611	11,653	11,737	11,822
Annual Sewer Flow (MG)	933	934	935	940	949	959
Customer Growth Rate	0.0%	0.1%	0.1%	0.5%	1.0%	1.0%
<b>Wastewater Treatment and Disposal</b>						
Subregional O&M	\$ 4,628,412	\$ 5,115,000	\$ 5,120,000	\$ 5,300,000	\$ 5,621,000	\$ 5,961,000
Subregional DS Preservation	\$ 3,197,575	\$ 2,854,000	\$ 2,289,000	\$ 2,637,000	\$ 2,637,000	\$ 2,983,000
Subregional DS Expansion	\$ 1,085,354	\$ 877,000	\$ 877,000	\$ 877,000	\$ 877,000	\$ 1,094,000
<b>Capacity Fees</b>						
Sewer Capacity Fees (\$/ESFD)		\$ 12,421	\$ 12,421	\$ 12,421	\$ 12,421	\$ 12,421

<b>RP Subregional Debt Service Details</b>						
<i>Existing Based on 15 MGD Base Capacity</i>						
Preservation	\$ 709,446	\$ 460,299	\$ 460,299	\$ 460,299	\$ 460,299	\$ 460,299
Expansion	\$ 521,864	\$ 324,036	\$ 324,036	\$ 324,036	\$ 324,036	\$ 324,036
<i>Existing Based on 21.34 MGD Base Capacity (through 2008 bonds)</i>						
Preservation	\$ 2,488,129	\$ 2,394,090	\$ 1,828,566	\$ 1,828,566	\$ 1,828,566	\$ 1,828,566
Expansion	\$ 563,490	\$ 553,062	\$ 553,062	\$ 553,062	\$ 553,062	\$ 553,062
<i>Future Issues</i>						
Preservation				\$ 348,081	\$ 348,081	\$ 694,086
Expansion				\$ -	\$ -	\$ 217,022
<i>Estimated Future Funds Needed</i>				\$ 46,190,000		\$ 100,540,000
Annual Debt Service				\$ 3,041,000		\$ 6,540,000
	<u>RP Shr</u>					
% Preservation	16.07%		% of issue -->	71.23%		32.92%
% Expansion	37.07%		% of issue -->	0.00%		8.95%
RP Preservation				\$ 348,081		\$ 346,005
RP Expansion				\$ -		\$ 217,022

- General inflation is assumed to be 3 percent per year of the planning period. This is a long-term average of general inflation trends in the San Francisco bay area, as compiled by the US Bureau of Labor Statistics. This assumed general inflation rate applies to the City's sewer operating, maintenance, and administrative costs.
- Construction inflation is assumed to be 2 percent for FY 10-11, 3 percent in FY 11-12, and 4 percent per year thereafter. Lower inflation is initially

assumed due to the current economic climate. The 4 percent inflation is reflective of long-term norms, based on data from the *Engineering News Record*, which maintains a historical construction cost index. These construction inflation rates apply to capital project costs contained in the City's 5-year capital improvement program covering through FY 13-14.

- Interest earnings on the City's investment of available cash are at historic lows, based on rates paid on the State Treasurer's Local Agency Investment Fund (LAIF). Interest on general cash balances is assumed to be 0.5 percent in FY 10-11, 1.0 percent in FY 11-12 and FY 12-13, and then 1.5 percent in FY 13-14 and FY 14-15. This interest rate applies to each fund's beginning-of-year balances and accrues to each fund.
- Current Customer Base – The City currently has about 8,350 sewer accounts. The City also provides sewer services to Sonoma State University (SSU) and to the Canon Manor development, each under special contracts. Customer account and water use data were obtained from the City's utility billing system for the period from September 2009 through August 2010. Customer account, water use, and estimated wastewater flow data are presented in greater detail in Section III of this report.
- Growth Projections – The financial plan conservatively assumes annual growth of about 0.1 percent (equivalent to about 8 new homes) each year through FY 11-12, and then increasing to 0.5 percent in FY 12-13 and to 1.0 percent thereafter. Actual growth will be a function of economic conditions, the City's development policies, and the status of specific development projects. While the growth assumption is low it is reasonable given the current economic climate. The growth rate affects capacity fee revenues, as well as ongoing rate revenues.
- Wastewater Demand – Water demand, as well as wastewater flows, have been reduced in recent years due to the effects of the current economy, weather conditions, and water conservation awareness and programs. Reduced demands have had an adverse impact on sewer revenues. Statewide policies are increasing the emphasis on water conservation and efficient water use as well. While new connections will be added to the sewer system as the economy recovers, no increases or decreases in wastewater demands, on a per account

basis, are included in the financial plan analyses presented herein. This is a reasonable assumption given the relatively short (5-year) planning period. Actual demands may fluctuate, upwards or downwards, due to changing conditions.

- Service Revenue from SSU and Canon Manor – Sonoma State University pays for sewer service under a special agreement with the City. Sewer service revenue from the SSU is affected by the university's wastewater flows and O&M cost changes from the Subregional System. SSU is also allocated a portion of the City's collection system costs. For financial planning purposes, sewer service revenue from SSU is assumed to be constant through the planning period because of decreasing flows from the university, as well as cost saving efforts by the Subregional System.

The Canon Manor development, outside the City limits, also receives sewer service from the City under a special agreement. Sewer service revenue from Canon Manor is assumed to increase as the City's overall costs of providing service increase.

Because the agreements covering service to both SSU and Canon Manor result in charges that reflect the costs of providing service, the City's ratepayers do not subsidize these special contract users.

- Subregional System Costs – The Subregional System costs paid by the City for wastewater treatment and disposal services are comprised of two components. These are operating and maintenance costs, and debt service costs related to capital preservation and expansion. As noted earlier, Subregional System operating and maintenance costs are assumed to remain unchanged in FY 11-12 (relative to FY 10-11), increase by 3 percent in FY 12-13, and increase by 5 percent per year thereafter.

Each year the City is billed for Subregional operating and maintenance costs based on the budget for the upcoming year and estimated flow volumes. At the end of each year, reconciliation to actual costs and flow volumes occur. This generally results in a refund back to the City, which has averaged about \$400,000 over the past seven years. Consistent with the practice and trend, an annual refund in the amount of \$400,000 is included in the operating fund as additional revenue.

Annual Subregional System debt service costs to Rohnert Park are as scheduled, and currently include about \$2.85 million annually for preservation, and about \$877,000 annually for capacity expansion. City staff believes that a temporary transfer of capacity from Santa Rosa to Rohnert Park may no longer be needed, and that the City may be able to reduce the amount paid to the Subregional System by about \$550,000 annually. The financial plan analyses contained herein assumes this reduction in Subregional System debt service costs beginning in FY 11-12. It should be noted, however, that this change has not been approved by the City of Santa Rosa.

- Sewer Capacity Fees and Fee Revenue – The current sewer capacity fee for a single family residential dwelling is \$12,421. Other fee amounts apply to other types of development. The financial plan assumes the fee amount remains constant during the planning period. The fee is applied to new connections (see growth assumption above) and the revenue from the fee accrues to the sewer capacity fee fund. Capacity fee revenue can be used for two purposes: (1) to pay for facilities providing capacity to serve new development, and (2) to pay debt service related to this capacity. Analysis of sewer capacity fees and the manner in which projects needed to meet the needs of new development may be funded is beyond the scope of this study. To the extent capacity fee revenue is available, for purposes of this study capacity fee revenue is used solely to pay for the expansion portion of Subregional System debt service owed by the City.

Because of the current economic climate and reduced capacity fee revenue, the capacity fee fund may not have sufficient funds for annual Subregional System expansion debt service costs. Any shortfall is shown in the financial plan model as a negative balance in capacity fee fund, and does not affect the sewer rate calculations. The City should review the status of the sewer capacity fees, and consider updating the fees based on anticipated revenue needs.

- Public Facilities Financing Plan (PFFP) Fees and Fee Revenue – The City collects PFFP fees from new development within the City for a variety of infrastructure purposes. These revenues are accounted for in a separate fund of the City (outside of the sewer utility). As described in further detail below, a majority of the sewer debt issued by the City in 2005 was used to fund the sewer

interceptor outfall project, and a portion of that project benefits new development. As a result, the financial plan uses PFFP revenue to pay 30.3 percent of this annual debt service. This is shown in the financial plan model as a transfer into the Operating Fund from the PFFP Fund.

### Existing Long-Term Debt Obligations

In 2005, the City of Rohnert Park issued \$13.0 million in Certificates of Participation (COPs) to provide funding for needed capital improvements to the sewer system, primarily the sewer interceptor outfall project. Annual principal and interest payments on the COPs total nearly \$820,000 per year. This is a relatively modest amount of long-term debt for a sewer utility, and use of COPs is a common form of financing for sewer system improvements.

**Exhibit II-3** summarizes the annual debt service payment obligations related to the 2005 sewer revenue COPs during the planning period.

**Exhibit II-3**  
**City of Rohnert Park**  
**Summary of Sewer Debt Service Obligations**

	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15
<b>Series 2005 Sewer System Revenue COPs</b>						
Principal	255,000	265,000	275,000	280,000	295,000	305,000
Interest	559,604	551,129	542,074	532,386	522,205	511,518
Total	814,604	816,129	817,074	812,386	817,205	816,518
Remaining Balance	12,030,000	11,765,000	11,490,000	11,210,000	10,915,000	10,610,000

In addition to making annual debt service payments, the COPs require the City to meet specified debt service coverage covenants (i.e., establish rates and other revenues at levels that exceed annual debt service by specific ratios). Debt service coverage requirements are a common obligation in COPs that provide security to lenders regarding the City's ability to repay the debt. One coverage covenant requires the City to establish rates and other revenues of the sewer system sufficient to provide net revenues (defined as gross revenues less operating and maintenance expenses) equal to at least 120 percent of annual debt service. A second covenant requires that net revenues, exclusive of sewer connection fees, equal or exceed 115 percent of annual debt service (COP

documents use the term "connection fees", which is synonymous with "capacity fees"). The coverage covenants are intended to provide a buffer of surplus funds for debt service payments. For the purpose of these covenants, both the City's sewer capacity fees and the transfers into the sewer Operating Fund from the City's PFFP Fund are considered "connection fees".

**Exhibit II-4** provides a calculation of debt service coverage, with and without capacity fee revenue, for both FY 10-11 and FY 11-12. Current revenues are insufficient to cover existing operating and maintenance costs, and result in negative coverage factors. The coverage calculations shown for FY 11-12 assume that the new sewer rate structure is adopted as proposed.

**Exhibit II-4**  
**City of Rohnert Park**  
**Sewer System Debt Service Coverage Calculations**

	FY 10-11	FY 11-12 (1)
<b>Gross Sewer System Revenues (2)</b>		
With Capacity/PFFP Fees (3)	\$ 8,894,200	\$ 12,070,200
Without Capacity/PFFP Fees	\$ 8,539,700	\$ 11,715,200
<b>Operating and Maintenance Expense</b>		
Rohnert Park - Collection & Admin.	\$ 2,370,303	\$ 2,443,000
Subregional - Treatment & Disposal	\$ 5,115,000	\$ 5,120,000
Subregional - Debt Service (4)	\$ 3,731,000	\$ 3,166,000
Total Oper. & Maint. Expense	\$ 11,216,303	\$ 10,729,000
<b>Net Sewer System Revenues</b>		
With Capacity/PFFP Fees	\$ (2,322,103)	\$ 1,341,200
Without Capacity/PFFP Fees	\$ (2,676,603)	\$ 986,200
<b>Annual Debt Service</b>		
2005 Sewer System Revenue COPs	\$ 816,100	\$ 817,000
<b>Debt Service Coverage</b>		
With Capacity/PFFP Fees (required minimum is 1.20)	(2.85)	1.64
Without Capacity/PFFP Fees (required minimum is 1.15)	(3.28)	1.21

**Notes:**

- (1) Assumes proposed new sewer rate schedule is adopted and implemented.
- (2) Includes revenue accruing to all sewer system funds.
- (3) Sewer capacity fees are counted as connection fee revenue when received by the utility. PFFP fees are counted as connection fee revenue when transferred into the sewer enterprise from the PFFP Fund.
- (4) Subregional debt service is considered an O&M expense for coverage purposes, as it is not a direct debt obligation of the City but a contractual obligation under the terms of the Subregional Agreement.

A description of the City's obligations with respect to the 2005 COPs are contained in the *Official Statement -- \$13,000,000 City of Rohnert Park Sewer System Revenue Certificates of Participation, Series 2005* dated May 27, 2005, and related legal documents, such as the *Installment Purchase Agreement*.

Since sewer rates were reduced following a November 2008 ballot initiative, the City has made every required debt service payment. However, the City has not met the required debt service coverage covenants in the COPs. Accordingly, meeting debt service covenants is a factor in designing a new sewer rate structure. Continued failure to meet these covenants can harm the City's credit rating, and make it more costly to borrow money in the future. There is also the potential for costly and protracted litigation against the City for failure to meet its contractual obligations.

According to the *2006 Public Facilities Financing Plan*, 38.9 percent of the sewer interceptor outfall project is the responsibility of new development. In addition, about 82 percent of the COP proceeds were used for the interceptor outfall project. As a result, 30.3 percent (38.9% of 82%) of the annual debt service is the responsibility of new development. The financial plan model includes PFFP fee revenue (transferred in from the PFFP Fund) in the operating fund, which is then used to pay this portion of the annual debt service on the 2005 COPs.

### **Capital Improvement Plan**

The capital improvement plan (CIP) set forth in the financial plan draws upon information in the City's 5-year CIP for FY 09-10 through FY 13-14. Because of the magnitude of the operational and debt service requirements, and the resulting rates under the new rate structure, it was determined that capital improvement needs should be secondary. As a result, the financial plan model CIP was modified to reflect those projects that could be implemented with the funding available either through existing reserves or through revenues generated from rates needed for operational and debt service requirements.

**Exhibit II-5** summarizes the capital improvement plan reflected in the financial plan model. This plan differs from the City's 5-year CIP for FY 09-10 through FY 13-14 in the following ways:

**Exhibit II-5**  
**City of Rohnert Park**  
**Summary of Sewer System Capital Improvement Program**

Project Title	CIP No.	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15
<b>SEWER SYSTEM CIP</b>							
Sewer Rehab. Old Pipeline to S. Rosa	WW-08	\$ 150,000		\$ -	\$ -		
Sewer Pipeline Replacement	WW-10		\$ 1,200,000	\$ 1,200,000	\$ 1,200,000	\$ 1,200,000	\$ 1,200,000
Eastside Sewer Project - Phase 2	WW-11		\$ -				
College Trunk Sewer Improvements	WW-13	\$ 457,333					
Bruce Avenue Sewer Line Replacement	WW-14	\$ 149,600	\$ 950,400				
Inflow/Infiltration Reduction Program	WW-15	\$ -	\$ -	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
Sewer Pump Station Pony Pump	WW-16		\$ -	\$ 61,000	\$ 339,000		
Vehicles & Equipment (capital outlay)		168,500	168,000	100,000	100,000	100,000	100,000
<b>Sewer System CIP Totals</b>		<b>\$ 925,433</b>	<b>\$ 2,318,400</b>	<b>\$ 1,461,000</b>	<b>\$ 1,739,000</b>	<b>\$ 1,400,000</b>	<b>\$ 1,400,000</b>
Sewer Capital Replacement Fund (w/ inflation)		\$ 925,000	\$ 2,365,000	\$ 1,535,000	\$ 1,900,000	\$ 1,591,000	\$ 1,654,000
Sewer Capacity Fee Fund (120) (w/ inflation)			\$ -		\$ -		

- Rehabilitation of Old Pipeline from Rohnert Park to Subregional System – Construction of the sewer rehabilitation of the old pipeline from Rohnert Park to the Subregional System treatment plant has been deferred to beyond the planning period reflected in the financial plan. This project was estimated at about \$5 million and would be funded through a combination of rate revenues and new development revenues. Neither sewer rate revenues nor sewer capacity fee revenues are sufficient to fund this project within the planning period.
- The Eastside Sewer Project – Phase 2 has been excluded from the financial plan pending funding/financing from new development. This project has an estimated cost of \$11.2 million, and is not the responsibility of existing ratepayers.
- The inflow/infiltration reduction program was budgeted at \$100,000 per year beginning in FY 10-11. For purposes of the financial plan analysis, the ongoing project is assumed to begin in FY 11-12. The City had previously budgeted spending \$500,000 per year on this rehabilitation activity.
- The sewer pump station pony pump project is assumed to be delayed by 1 year (from FY 10-11 to FY 11-12) from the schedule included in the 5-year CIP.
- Ongoing rehabilitation and replacement projects for pipeline replacements, inflow/infiltration reduction, and vehicles and equipment are shown to continue

beyond the CIP planning horizon of FY 13-14 and through the financial plan's planning horizon of FY 14-15.

The average annual capital program expenditure over the five-year planning period, as reflected in the financial plan, is about \$1.8 million, including inflation.

It is estimated that the combination of available reserves (about \$3.4 million in the capital replacement fund), as well as revenues under the new rate structure, would be sufficient to fund the capital projects as outlined in Exhibit II-4. Funding under the new rate structure, as a transfer to the replacement fund, is as follows: \$0 in FY 10-11, \$1,400,000 in FY 11-12, and \$1,500,000 per year thereafter. The rates proposed under the new sewer rate structure may not be sufficient to fully support the future capital rehabilitation and replacement needs of the sewer system. Because the financial plan does not fully fund the planned CIP, the rates proposed under the new rate structure are, in effect, below the true cost of providing and maintaining service to customers over the long-term.

It is recommended that the City develop a comprehensive capital improvement plan based on system condition and need, and then consider how best to provide the funding to meet that need. The City's *Sewer System Management Plan (SSMP)*, updated in 2009, provides a description of the regulatory requirements, as well as goals for properly managing, operating, and maintaining the sewer collection system. These requirements include establishing a capital improvement program to address hydraulic deficiencies, reduce infiltration and inflow, reduce the risk of overflows, and address other system needs.

The manner in which new facilities needed to meet the needs of new development will be funded was beyond the scope of this study. The study focused solely on meeting sewer system costs that are the responsibility of existing ratepayers.

### **Sewer System Financial Plan**

The sewer system financial plan is an annual cash flow model that reflects beginning balances, revenues and transfers in, expenditures and transfers out, and ending balances for each fund each year of the planning period. The financial plan includes actual FY 09-10 operating revenues and expenditures (for information purposes) from

financial reports provided by the City, and then looks forward based on the budget for FY 10-11. Future year operating and maintenance expenses are based on the FY 10-11 budget with adjustments for inflation and growth, as previously described.

The sewer system financial plan model is presented in **Exhibit II-6**. The financial plan analysis results in recommendations for a five-year rate plan, which includes implementation of a new sewer rate structure (described in Section III), as well as phased-in adjustments to the new sewer rates during the planning period to meet the utility's financial needs and obligations. The first phase of the rate plan provides for a 25 percent overall sewer rate revenue increase in July 2011, as the new sewer rate structure is implemented. This would be followed by a 25 percent adjustment to the new rates in January 2012, and additional rate increases of 3 percent in January 2013, January 2014, and January 2015 to meet the utility's financial needs throughout the planning period.

#### **Current Situation**

The cash balance in the sewer utility as of June 30, 2010 was about \$11.32 million. The distribution of this total across the three sewer funds is summarized below. The capital replacement fund includes about \$2.6 million in remaining debt proceeds from the issuance of COPs in 2005. The additional \$800,000 in the replacement fund has been assigned to specific capital projects. Within the financial planning model, fund balances are calculated for the end of each year based on annual revenues, expenditures, and transfers using the information below as the starting point.

#### ***Sewer Utility (as of June 30, 2010)***

Operating Fund	\$6,390,000
Capital Replacement Fund	\$3,400,000
Capacity Fee Fund	<u>\$1,530,000</u>
Total Sewer	\$11,320,000

**Exhibit II-6  
City of Rohnert Park  
Sewer System Financial Plan**

	<b>FY 09-10</b>	<b>FY 10-11</b>	<b>FY 11-12</b>	<b>FY 12-13</b>	<b>FY 13-14</b>	<b>FY 14-15</b>
	See Note (1) Below →	<b>25%</b> July 2011	<b>25%</b> Jan. 2012	<b>3.0%</b> Jan. 2013	<b>3.0%</b> Jan. 2014	<b>3.0%</b> Jan. 2015
<b>SEWER OPERATING FUND</b>						
<b>Beginning Balance</b>	8,461,709	6,393,238	4,008,300	3,892,400	4,263,300	4,690,200
<b>Revenues</b>						
Sewer User Charges	7,319,383	7,319,000	10,490,000	11,682,000	12,128,000	12,617,000
Sonoma State University	668,431	668,000	668,000	668,000	668,000	668,000
Canon Manor	46,004	46,000	49,000	52,000	54,000	58,000
Penalties	83,283	50,000	50,000	50,000	50,000	50,000
Refunds from S Rosa	468,242	400,000	400,000	400,000	400,000	400,000
Interest Earnings	93,728	32,000	40,100	38,900	63,900	70,400
Transfer from Sewer Cap. Fee Fund	1,085,354	877,000	877,000	877,000	877,000	1,094,000
Transfer from PFFP Fund	-	255,500	256,000	254,000	256,000	256,000
<b>Total Revenues</b>	<b>9,764,425</b>	<b>9,647,500</b>	<b>12,830,100</b>	<b>14,021,900</b>	<b>14,496,900</b>	<b>15,213,400</b>
<b>Expenditures</b>						
Personnel	503,190	686,643	707,000	728,000	750,000	773,000
Administration	75,052	185,660	191,000	197,000	203,000	209,000
Operations	94,132	76,500	79,000	82,000	85,000	88,000
Maintenance	209,710	275,500	284,000	294,000	306,000	318,000
Laguna WWTP - O&M	4,628,412	5,115,000	5,120,000	5,300,000	5,621,000	5,961,000
Laguna WWTP - DS Preservation	3,197,575	2,854,000	2,289,000	2,637,000	2,637,000	2,983,000
Laguna WWTP - DS Expansion	1,085,354	877,000	877,000	877,000	877,000	1,094,000
Transfers Out						
General Fund Recharge	930,400	900,000	928,000	961,000	1,000,000	1,040,000
Employee Retiree Medical Cost	108,332	246,000	254,000	263,000	274,000	285,000
2005 COP Debt Service	814,604	816,100	817,000	812,000	817,000	817,000
Capital Replac. Fund Transfer	186,135	-	1,400,000	1,500,000	1,500,000	1,500,000
<b>Total Expenditures</b>	<b>11,832,896</b>	<b>12,032,403</b>	<b>12,946,000</b>	<b>13,651,000</b>	<b>14,070,000</b>	<b>15,068,000</b>
<b>Ending Balance</b>	<b>6,393,238</b>	<b>4,008,300</b>	<b>3,892,400</b>	<b>4,263,300</b>	<b>4,690,200</b>	<b>4,835,600</b>
Operating Reserve (33%)	3,843,000	3,971,000	3,810,000	4,010,000	4,148,000	4,477,000
Available Balance	2,550,238	37,300	82,400	253,300	542,200	358,600
DS Coverage (min. = 1.20 w/ CFs)	(2.64)	(2.85)	1.64	2.88	3.57	2.98
DS Coverage (min. = 1.15 w/o CFs)	(2.64)	(3.28)	1.21	1.92	1.98	1.37
<b>SEWER CAPITAL REPLACEMENT FUND</b>						
<b>Beginning Balance</b>		3,396,081	1,048,100	923,600	532,800	449,800
<b>Revenues</b>						
Interest Earnings		17,000	10,500	9,200	8,000	6,700
Transfer In From Sewer Oper. Fund		-	1,400,000	1,500,000	1,500,000	1,500,000
<b>Total Revenues</b>		<b>17,000</b>	<b>1,410,500</b>	<b>1,509,200</b>	<b>1,508,000</b>	<b>1,506,700</b>
<b>Capital Project Expenditures</b>						
Rehab./Upgrade Projects		2,365,000	1,535,000	1,900,000	1,591,000	1,654,000
<b>Total Expenditures</b>		<b>2,365,000</b>	<b>1,535,000</b>	<b>1,900,000</b>	<b>1,591,000</b>	<b>1,654,000</b>
<b>Ending Balance</b>		<b>1,048,100</b>	<b>923,600</b>	<b>532,800</b>	<b>449,800</b>	<b>302,500</b>
<b>SEWER CAPACITY FEE FUND</b>						
<b>Beginning Balance</b>		1,530,317	760,000	(10,400)	(365,400)	(199,400)
<b>Revenues</b>						
Sewer Capacity Fee Revenue		99,000	99,000	522,000	1,043,000	1,056,000
Interest Earnings		7,700	7,600	-	-	-
<b>Total Revenues</b>		<b>106,700</b>	<b>106,600</b>	<b>522,000</b>	<b>1,043,000</b>	<b>1,056,000</b>
<b>Capital Project Expenditures</b>						
Expansion Projects		-	-	-	-	-
Trans. to Oper. Fund - Subreg. Expan. DS		877,000	877,000	877,000	877,000	1,094,000
<b>Total Expenditures</b>		<b>877,000</b>	<b>877,000</b>	<b>877,000</b>	<b>877,000</b>	<b>1,094,000</b>
<b>Ending Balance</b>		<b>760,000</b>	<b>(10,400)</b>	<b>(365,400)</b>	<b>(199,400)</b>	<b>(237,400)</b>

**Notes:**

- (1) The percentage shown for July 2011 reflects the overall increase in sewer rate revenue resulting from the first phase in implementing the new rate plan. Subsequent percentages reflect the rate adjustments in subsequent phases of the plan necessary to meet annual revenue needs. Annual rate revenue growth is also affected by growth in the customer base, as well as changes in customer demand.

By the end of FY 10-11, the sewer operating fund is estimated to only have a balance of about \$4.0 million, or just \$37,000 more than the recommended target operating reserve minimum. This estimate is based on the information and assumptions used in the financial analyses, as previously described. This deficit situation is clearly unsustainable.

### **Sewer System Conclusions and Recommendations**

Should the City continue to operate the sewer system without an increase in revenues the utility could exhaust the operating fund in FY 11-12 (most likely in early 2012). Remaining proceeds from the issuance of COPs in 2005, as well as capacity fee revenue within the capacity fee fund, cannot be used for sewer operations. When the operating fund becomes depleted, utility operations could face dire consequences. The implication of that potential event is beyond the scope of this study.

The financial plan was used to design a new rate structure that would reverse the current deficit situation and bring the sewer utility to a point of financially stable operations, thus ensuring health, safety, and financial integrity for the utility, the City, and its residents. The requirements of ongoing operation and maintenance, as well as debt obligations, were the controlling factors. Capital program needs and reserve requirements were viewed as secondary.

While initial analyses suggested that the new rate structure would need to provide for an immediate rate revenue increase of about 65 percent to provide financial stability, upon review certain assumptions were modified. In addition, City staff suggested reducing payments to the Subregional System for treatment capacity by about \$555,000 per year (terminating a transfer of capacity from Santa Rosa). These and other changes allow for a phasing of the new rate plan and a reduction in the overall magnitude of the required revenue increase. In order to meet the financial needs of the sewer utility, as well as soften the potential burden on ratepayers, a phased implementation of the new sewer rate plan is recommended.

The following recommendations are presented for the City's consideration with regards to meeting the ongoing financial needs of the sewer utility:

- A new sewer rate structure, described in Section III of the report, and a new rate plan based on that structure, are recommended that will increase overall rate revenue by 25 percent in July 2011, followed by subsequent rate increases of 25 percent in January 2012, and 3 percent in January of 2013, 2014, and 2015 to eliminate the current financial deficit, return the utility to financial stability, and meet existing debt service obligations.
- The City should closely monitor sewer revenues and expenses. While estimates and assumptions used in the analyses are believed reasonable, there is no guarantee that actual revenues and expenses will be as estimated herein, and adjustments to the new rate structure may be necessary. Of particular concern is the sensitivity of sewer rate revenues to changes in customer demands. This issue is addressed in greater detail in Section III of this report, and the new rate structure includes measures to help moderate the current potential for revenue volatility. In addition, the City has limited ability to influence Subregional System costs, and the Subregional System operates in a heavily regulated environment. Because Subregional System costs comprise a majority of the sewer utility's costs, the need to adjust the new rates may be largely dictated by outside factors.
- The City should use remaining debt proceeds on planned capital projects, and then plan to support planned capital program needs with a portion of ongoing sewer rate revenues. Further rate analyses, as well as adjustments to the new rate structure, may be needed to fund the utility's long-term capital replacement and rehabilitation needs. Such an undertaking should be considered following a comprehensive review of the replacement and rehabilitation needs of the utility.
- The City should seek to maintain the minimum operating fund balance equal to 33 percent of annual operating and maintenance costs, including debt service, as a source of working capital, for unanticipated expenditures, and to counter the affects of revenue volatility.
- As is current practice, sewer capacity fee revenue should be used to help pay for debt service payments to the Subregional System for capacity expansion. Also, a portion of PFFP fee revenue and/or reserves should be used to pay 30.3 percent of annual debt service payments related to the City's 2005 sewer revenue COPs.

An evaluation of the adequacy of these funding sources is beyond the scope of this study, and this may be an area for further study by the City.

In conclusion, based on financial plan assumptions and estimates, the sewer utility is expected to be financially stable if the proposed new sewer rate structure and the new five-year rate plan are adopted and implemented. While the assumptions and information used in the preparation of the sewer financial plan are based on expert analysis and reasoning, as well as staff review and concurrence, no assurances can be made that actual financial results will be as presented herein. City staff should continue to monitor the financial condition of the sewer utility, as well as changes in wastewater demands and related rate revenues, to ensure that the utility moves forward on a sound financial course.

### **III. New Sewer Rate Structure**

This section of the report describes and presents recommendations for a new sewer rate structure for implementation in July 2011. The new rate structure, along with the proposed new rate plan based on that structure would provide sufficient revenues for the utility's ongoing operations and debt obligations, as well as support the capital improvement program and maintain prudent reserves, based on cost of service and other rate setting objectives.

Annual sewer rate revenue requirements were presented in Section II of the report as a result of the development of the 5-year financial plan. The annual sewer rate revenue requirement for FY 11-12 was used to perform rate analyses and to develop the new sewer rate structure presented herein. The sewer rate calculations presented in the exhibits that follow relate to the sewer rate revenues needed beginning in July 2011, which reflects a 25 percent increase in overall rate revenue.

The new sewer rate schedule presented herein includes a new structure to improve the proportionate distribution of costs across customer classes, reflect the cost of providing service, and help improve revenue stability. The analyses and explanations provided herein are also intended to explain to customers the need for a new rate structure to address urgent and fundamental problems with the sewer system's current financial structure.

#### **Existing Sewer Rate Structure**

Upon review of the current rate structure, four weaknesses were identified. These include:

- With very low service charges (\$1.08 per month for each account) nearly 99 percent of rate revenue is tied to water usage patterns, with only about 1 percent of rate revenue derived from fixed service charges. This results in unnecessary revenue volatility and financial risk.
- All accounts pay the same monthly service charge, regardless of size of connection or use of the system. The fixed charge appears to represent fixed

customer costs (e.g., utility billing), but does not include fixed capacity costs. Service charges should reflect, in part, fixed capacity-related costs of sewer service. This standard utility rate setting practice improves the proportionate distribution of capacity-related costs across customer classes and to customers within each class.

- Current usage-based rates for non-residential accounts do not reflect the full variety of business types, and the different strength characteristics that are found among different types of businesses. Usage rates should reflect the strength characteristics of different types of users. An approach that categorizes non-residential customers into low, medium, and high strength categories is proposed as a way to more equitably assign wastewater treatment costs to system customers.
- Sewer rates for schools are based on the number of students and staff within each school. This approach may have been necessary before water meters were installed on all accounts, but is not necessary at this time. Schools should be included within the low strength category of non-residential users.

Because the existing rates have these weaknesses, as well as provide insufficient revenues for the utility, a new sewer rate is proposed, rather than a simple increase in the existing rates.

**Exhibit III-1**, on the following page, summarizes the current sewer rates of the City's sewer utility. Sewer rates were last changed in December 2008 with a reduction of about 30 percent pursuant to a ballot initiative in November 2008.

The City also provides sewer services to the Sonoma State University (SSU). The amount paid by SSU for sewer service is determined under a special agreement and is related to the volume of waste discharged, the costs of treatment and disposal provided by the Subregional System, and a portion of the City's collection system costs. The City also provides service to the Canon Manor development located outside the City limits. Charges to Canon Manor are also determined under a separate arrangement based on cost of service. The specific arrangements with and charges to these customers were beyond the scope of this study.

**Exhibit III-1  
City of Rohnert Park  
Current Sewer Rates**

	<b>Monthly Service Charge</b>	<b>Flow Charge (1)</b>
<b>Sewer Charges</b>		
Single Family Residential	\$ 1.08	\$ 7.30 per 1,000 gal.
Multi-Family and Mobile Home Parks	\$ 1.08	\$ 7.30 per 1,000 gal.
Churches	\$ 1.08	\$ 10.00 per 1,000 gal.
Public Libraries	\$ 1.08	\$ 10.00 per 1,000 gal.
Bakery & Restaurants	\$ 1.08	\$ 12.70 per 1,000 gal.
Industrial	\$ 1.08	\$ 9.60 per 1,000 gal.
All Other	\$ 1.08	\$ 10.00 per 1,000 gal.
Schools (2)		
Elementary Schools	\$ 9.16	per pupil (ADA) + staff
Junior High Schools	\$ 12.18	per pupil (ADA) + staff
Senior High Schools	\$ 16.76	per pupil (ADA) + staff

**Notes:**

- (1) Residential sewer flow is based on the lower of actual monthly water use or the average water use during the prior December-February period. Non-residential sewer flow is assumed equal to monthly water usage.
- (2) Rate for each school based on number of pupils as determined by average daily attendance (ADA), plus faculty and all other personnel.

**New Rate Structure Objectives**

The development of recommendations for a new sewer rate structure has been guided by several objectives. These objectives were reviewed with City staff and include:

- Rates should generate sufficient revenues to meet the utility's financial obligations related to operations, debt service, and the capital improvement program, as reflected in the multi-year financial plan
- Rates should reflect the cost of providing service by proportionately allocating costs to each customer class; and
- Rates should improve revenue stability.

The City also has policies and programs to encourage water conservation, and the new sewer rate structure helps to achieve this objective as well. These objectives guided the review of and recommendations on sewer rates and rate structures. It is hoped that the

following analyses and explanations assist customers in understanding the need to adopt a new rate structure to address urgent and fundamental deficiencies in the City's sewer system financial structure, as described in Section II.

### **Customer Account Data and Wastewater Flow and Loading Estimates**

The calculations supporting the new sewer rate structure are based on a number of factors related to the City's customers and the wastewater they generate. Factors include the number of customers, customer classes, water usage and estimated wastewater flows, meter size, and strength characteristics of wastewater as determined by biochemical oxygen demand (BOD) and total suspended solids (TSS). **Exhibit III-2** summarizes customer account and water usage data obtained from the City's utility billing system for the period from September 2009 through August 2010, as well as estimates of resulting wastewater flow and loading characteristics.

#### **Water Use as an Estimator of Wastewater Flow**

No utility is able to measure the actual flow discharged into the sewer system by each individual customer. The material content (loading) of wastewater, and the challenges with metering wastewater make this impractical. Instead, wastewater flows are estimated based on water usage characteristics.

Residential wastewater flows are typically estimates by considering winter water usage patterns. The City currently averages residential water usage (single family and multi-family) for billing cycles covering the months of December, January, and February. These months are chosen because it is the period when irrigation demands are minimal (or non-existent) and it is reasonable to assume that water entering the home will end up in the sewer system. Using winter water usage as a proxy for sewer flow is a standard technical used in sewer rate setting. Beyond this, the City uses the winter average monthly water usage as a sewer flow cap. That is, if a customer's actual monthly usage is less than the winter average, then the lower amount is used for determining sewer usage.

**Exhibit III-2**  
**City of Rohnert Park**  
**Sewer Customer Account Data and Estimated Sewer Flows and Loadings**

Customer Recent Data and Estimated Sewer Flows and Loadings											
Customer Class	No. of Accts. (1)	No. of ESFDs (2)	Ann. Water Usage (1) 1,000 Gal.	Rate of Return (4)	Estimated				Annual BOD Loading lbs	TSS Strength (5) mg/l	Annual TSS Loading lbs
					Annual Sewer Flow (3) 1,000 Gal.	Estimated Annual Sewer Flow (3) MG	BOD Strength (5) mg/l	Annual BOD Loading lbs			
Single Family Residential											
Single Family	7,537	7,540	603,200	70%	422,810	422.81	175	617,091	175		617,091
Multi-Family and Non-Residential											
Multi-Family	405	2,455	451,179	83%	373,205	373.21	175	544,693	175		544,693
Low Strength	300	1,160	67,352	100%	67,352	67.35	200	112,343	200		112,343
Medium Strength	77	334	60,318	100%	60,318	60.32	400	201,221	400		201,221
High Strength	30	105	9,603	100%	9,603	9.60	1,000	80,092	600		48,055
Totals	8,349	11,595	1,191,653		933,288	933.29	200	1,555,440	196		1,523,403

**Notes:**

- (1) From City's billing system for Sept. 2009 thru Aug. 2010.
- (2) ESFDs = equivalent single family dwellings, based on meter capacity for multi-family and non-residential accounts.
- (3) Based on lesser of average winter water use or actual monthly use for residential accounts, and total annual water use for non-residential accounts.
- (4) Estimate of percent of water usage becoming sewer flow.
- (5) Assigned for defined customer classes based on compiled industry data and SWRCB guidelines.

Average wastewater flow for single family dwellings during the most recent winter period available (December 2009 through February 2010) was about 4.7 thousand gallons (tg) per month (about 156 gpd).

Non-residential sewer flows are based on actual monthly water usage through domestic water connections (for indoor water usage). Most irrigation within the City is separately metered through irrigation meters. As a result, it is reasonable to assume that water usage through water meters on domestic connections enters the sewer system. The City allows any customer that irrigates off of a domestic water connection to install a new irrigation connection for purposes of avoiding excess sewer billing.

These existing practices for estimates wastewater flow volumes for each customer are reasonable and are continued with the new sewer rates proposed in this report.

### **Wastewater Loading**

The cost of treating wastewater is in direct relation to the loading characteristics of the waste stream. The entire wastewater treatment process is operated to remove unwanted constituents from wastewater. The *Subregional Agreement*, in Section 13.B.2.b, specifies that operation and maintenance costs of treatment and disposal are to be allocated to each member agency on the basis of the flow volume, BOD, and TSS. Through ongoing sampling of the wastewater received from each member agency over many years, it was found that the wastewater concentrations of BOD and TSS from each member agency were effectively the same. As a result, operation and maintenance costs are allocated based on each agency's proportionate share of flow volume coming into the Subregional treatment plant. Because the loading concentrations are the same, the proportioning of cost based on flow also achieves the requirement that costs also be allocated based on BOD and TSS.

Individual customers of the sewer system contribute wastewater with varying concentrations of BOD and TSS. The proportioning of costs to customers in relation to cost of service therefore requires that customers generating wastewater of lower or higher strength be charged in relation to the strength characteristics. The City's current sewer rates only achieves this in a limited way, with bakeries and restaurants assigned a

higher rate and industrial customers a lower rate, relative to all other non-residential accounts. With the new sewer rates it is proposed that a more robust segregation of non-residential accounts by strength characteristics be achieved.

During the rate study, City staff reviewed all non-residential customers and, with our assistance, all were assigned into a low, medium, or high strength category based on published industry data on typical loading characteristics for various types of businesses.

**Appendix B**, at the end of this report, includes a compilation of industry data that aided this process, and can be used as a guideline in assigning customers to appropriate strength categories in the future. Examples of how various types of businesses have been categorized for sewer rate purposes are summarized below (the list is not all inclusive). The assignment of customers to appropriate strength categories should be made administratively by Public Works staff.

Low Strength

Bar w/o food  
Beauty salon  
Car wash  
Church  
Convalescent home  
Dry cleaner  
Health club/spa  
Hospital  
Hotel/motel w/o restaurant  
Laundromat  
Manufacturing w/o proc. disch.  
Office building  
Public/municipal building  
Retail stores  
Schools

Medium Strength

Auto repair facilities  
Auto service stations  
Commercial laundry  
Hotel/motel w/ restaurant  
Mixed use, incl. restaurants  
Restaurant w/ grease  
interceptor  
Retail w/ food service

High Strength

Bakery  
Bar w/ food  
Butcher  
Grocery w/ bakery, butcher,  
or food waste grinder  
Mortuary  
Restaurant w/o grease  
interceptor

The percentage of non-residential accounts assigned to the low, medium, and high strength categories is about 74 percent, 19 percent, and 7 percent, respectively.

**Meter Capacity for Allocating Capacity Costs**

As described in greater detail later in this section, meter size is also a factor in the proposed rates under the new rate structure. The size of the water meter reflects the potential demand a customer can place on both water and sewer systems. Meter

capacity (hydraulic flow capacity) is frequently used as a basis for proportionately allocating capacity-related costs to customers of both water and sewer utilities. Hydraulic capacity factors were determined based on meter capacity information published by the American Water Works Association. As an example, a 3" meter has ten times the capacity of a standard  $\frac{3}{4}$ " residential meter. Therefore, a 3" meter is considered equal to ten equivalent single family dwellings (ESFDs) for rate setting purposes. The conversion of multi-family and non-residential accounts into ESFDs is also presented in Exhibit III-2, based on the number of accounts of various meter sizes, as well as published hydraulic capacity factors.

### **Calculation of the New Rates**

There are three steps that were used to determine the proposed rates under the new rate structure. These were:

- Determine annual overall sewer rate revenue requirements;
- Analyze the relative cost of providing service and allocate costs to each customer class; and
- Design sewer rates to recover costs proportionately from customers in each customer class.

### **Sewer Rate Revenue Requirements**

The 5-year financial plan was used to identify the overall revenue needs for each fiscal year of the five-year planning period. The financial plan shows overall sewer rate revenue needs in FY 11-12 of \$10.49 million (see Exhibit II-6), with the amount growing slightly each subsequent year. However, as described previously, the new rate plan would be phased-in in a five-step process, with the first two phases occurring in FY 11-12. With this proposal, the first phase would be implemented in July 2011 (beginning of the fiscal year) to partially address revenue needs, and the second phase would occur in January 2012 (midway through the fiscal year). Combined, these two phases would meet the full revenue needs of the sewer utility in FY 11-12. The overall revenue requirement for the new rate structure, beginning in July 2011, is \$9.154 million. This is

the estimated amount of annual revenue that the new rate structure would generate if it were in effect for a 12-month period.

### **Cost of Service Analysis**

Once the annual overall rate revenue requirement is determined, the next step in the rate setting process is to evaluate the cost of providing service. Sewer rate calculations contained herein are intended to generate the level of revenue commensurate with the revenue requirement from the City's sewer service customers. This includes the City's general sewer customers, but excludes SSU and Canon Manor. The manner in which each customer is responsible for the sewer utility's costs is the subject of the cost of service analysis.

To develop equitable sewer rates, the revenue requirement is proportionately allocated to various customer classifications according to the services provided and the demands placed on the sewer system. A majority of sewer costs have been allocated to customer classifications on the basis of estimated wastewater flows, with a portion of costs also allocated based on BOD and TSS loading factors. This information was summarized in Exhibit III-2 for each customer class.

In order to improve revenue stability, the new rates structure would generate about 15 percent of rate revenue from service charges (rather than the current 1 percent). This will result in usage charges generating about 85 percent of sewer rate revenues. As much as 50 percent of the sewer utility's costs are fixed (i.e., do not vary with usage), but it is not unreasonable to recover fixed costs on the basis of system usage. As an example, the cost of a treatment operator is generally considered a fixed cost, however, it is reasonable to recover this cost on the basis of use. With these considerations in mind, it is proposed that the City adopt a new sewer rate structure under which 15 percent of the rate revenue is recovered from fixed service charges.

**Exhibit III-3** summarizes how the new rate structure would allocate the revenue requirement for July 2011 to fixed charges as well as to flow, BOD, and TSS components that end up in usage charges.

**Exhibit III-3**  
**City of Rohnert Park**  
**Determination of Unit Costs**

Cost Category	Allocation of Revenue Requirement (1)	Parameter Allocation Percentages (2)	Annual Cost Allocated to Each Parameter	Total Annual Quantities (3)	Unit Cost for Each Parameter
<i>Fixed Allocation for O&amp;M and Capital</i>	15%				
Flow (MG)		100%	\$ 1,373,100	933.29 MG	\$ 1,471.25 /MG
<i>Variable Allocation Costs for Collection</i>	27%				
Flow (MG)		100%	\$ 2,513,386	933.29 MG	\$ 2,693.04 /MG
<i>Variable Allocation Costs for Treatment</i>	58%				
Flow (MG)		50%	\$ 2,633,757	933.29 MG	\$ 2,822.02 /MG
BOD (lbs)		25%	\$ 1,316,878	1,555,440 lbs	\$ 0.847 /lb
TSS (lbs)		25%	\$ 1,316,878	1,523,403 lbs	\$ 0.864 /lb
<b>Total Annual Overall Revenue Requirement for July 2011 Rates</b>			<b>\$ 9,154,000</b>		

**Notes:**

- (1) Allocation of the overall revenue requirement includes 15% to fixed charges to improve revenue stability, with the remaining 85% being allocated between collection and treatment, with 32% to collection and 68% to treatment (32% of 85% is 27%, and 68% of 85% is 58%).
- (2) Allocation of treatment costs is based on review of Subregional System budget by activity for FY 10-11.
- (3) Annual quantities obtained from Exhibit III-2.

A review of sewer operation and maintenance costs (City collection and administration and Subregional System treatment and disposal) indicates that about 68 percent of these costs are related to the Subregional System, and about 32 percent to the City's collection and administration (this analysis excludes Subregional System debt service paid by the City). Once total costs are allocated, unit costs were determined by dividing the total cost for each component by the number of units identified in Exhibit III-2. These unit costs are the basis for then assigning costs to customer classes.

The cost of service analysis for sewer utilities is more complicated than for water utilities in that treatment costs are separated from collection system costs. Collection system costs are allocated entirely on the basis of flow, whereas treatment costs are allocated on the basis of flow, BOD, and TSS. The allocation of treatment costs shown in Exhibit III-3 were derived based on a review of the Subregional System operation and maintenance budget for FY 10-11, with costs allocated between flow, BOD, and TSS. This review resulted in an allocation of 50 percent to flow, 25 percent to BOD, and 25 percent to TSS.

Unit costs are applied to the annual wastewater flows, as well as BOD and TSS loadings associated with each customer class to arrive at the allocation of total costs to each customer class. **Exhibit III-4** presents the allocation of overall costs to each user class, and uses information brought forward from Exhibits III-2 and III-3.

**Exhibit III-5** presents the proposed sewer rates for July 2011 under the new sewer rate structure for each customer class. Rates for single family residential customers include a fixed service charge for each dwelling unit, plus a usage charge to be applied to the lesser of average monthly winter water usage, or actual monthly water usage. Multi-family and non-residential (low, medium, and high) customers are subject to a service charge based on the size of the water meter. In this calculation, 5 percent of allocated fixed costs are distributed equally to each customer (reflecting fixed customer costs) and 95 percent of allocated fixed costs are distributed proportionately to each customer based on ESFDs (reflecting fixed capacity costs). Sewer usage charges for multi-family customers are determined the same way as single family customers. That is, based on the lesser of average monthly winter water usage or actual monthly water usage. Non-residential sewer usage charges are determined based on actual monthly water usage.

**Exhibit III-4**  
**City of Rohnert Park**  
**Allocation of Overall Sewer Costs to User Classifications (1)**

No. of Accts.	Customer Class	Fixed Costs		Usage Based Costs				Allocation of Total Costs
		O&M and Cap.	Collection	Treatment				
				Flow	Flow	BOD	TSS	
		Unit Cost = \$ 1,471.25 /MG	Unit Cost = \$ 2,693.04 /MG	Unit Cost = \$ 2,822.02 /MG	Unit Cost = \$ 0.847 /lb	Unit Cost = \$ 0.864 /lb		
<b>Single Family Residential</b>								
7,537	Single Family	\$ 622,059	\$ 1,138,645	\$ 1,193,177	\$ 522,446	\$ 533,433	\$ 4,009,759	
<b>Multi-Family and Non-Residential</b>								
405	Multi-Family	\$ 549,078	\$ 1,005,058	\$ 1,053,192	\$ 461,152	\$ 470,850	\$ 3,539,330	
300	Low Strength	\$ 99,092	\$ 181,382	\$ 190,069	\$ 95,113	\$ 97,113	\$ 662,769	
77	Medium Strength	\$ 88,743	\$ 162,439	\$ 170,219	\$ 170,359	\$ 173,942	\$ 765,702	
30	High Strength	\$ 14,129	\$ 25,862	\$ 27,101	\$ 67,808	\$ 41,540	\$ 176,440	
8,349	Totals	\$ 1,373,100	\$ 2,513,386	\$ 2,633,757	\$ 1,316,878	\$ 1,316,878	\$ 9,154,000	

**Notes:**

(1) Unit costs at the top of each column, and obtained from Exhibit III-3, are multiplied by the sewer flow, BOD loading, or TSS loading for each customer class from Exhibit III-2.

**Exhibit III-5**  
**City of Rohnert Park**  
**Determination of Proposed July 2011 Sewer Rates (New Rate Structure)**

No. of ESFDs	Customer Class	Estimated Annual Sewer Flow	BOD Strength	TSS Strength	Monthly Fixed Charge (1)	Usage Rate (2)	Fixed Charge Revenue	Usage Charge Revenue	Total Annual Revenue
		1,000 gal.	mg/l	mg/l	\$/DU	\$/gal.			
<b>Single Family Residential</b>									
7,540	Single Family	422,810	175	175	\$ 6.88	\$ 0.00801	\$ 622,059	\$ 3,387,701	\$ 4,009,759
<b>Multi-Family and Non-Residential</b>									
2,455	Multi-Family	373,205	175	175	See Below	\$ 0.00801	\$ 549,078	\$ 2,990,252	\$ 3,539,330
1,160	Low Strength	67,352	200	200		\$ 0.00837	\$ 99,092	\$ 563,677	\$ 662,769
334	Medium Strength	60,318	400	400		\$ 0.01122	\$ 88,743	\$ 676,959	\$ 765,702
105	High Strength	9,603	1,000	600		\$ 0.01690	\$ 14,129	\$ 162,311	\$ 176,440
<b>11,595</b>	<b>Totals</b>	<b>933,288</b>					<b>\$ 1,373,100</b>	<b>\$ 7,780,900</b>	<b>\$ 9,154,000</b>

**Notes:**

- (1) The single family service charge (\$/DU) is calculated by dividing the allocated single family fixed charge cost by the number of dwelling units. The multi-family and non-residential service charges are calculated for each meter size based on the number of ESFDs (see text of report).
- (2) Sewer usage rates for residential customers are to be applied to the lesser of the average monthly winter water usage or actual monthly usage, and the rates for non-residential customers (low, medium, and high) are to be applied to each gallon of actual monthly water usage.

**Multi-Family and Non-Residential**  
**Fixed Service Charges**

	(\$/month)
Up to 3/4" Mtr.	\$ 18.52
1" Mtr.	\$ 28.34
1 1/2" Mtr.	\$ 52.68
2" Mtr.	\$ 82.00
3" Mtr.	\$ 150.48
4" Mtr.	\$ 248.27
6" Mtr.	\$ 492.54
8" Mtr.	\$ 785.79

**Sewer Rate Design**

The new rate structure would make major structural improvements to the City's sewer rates. Primarily, the portion of revenue generated by fixed service charges would be increased. At present only about 1 percent of rate revenue comes from service charges, resulting in a significant potential for revenue volatility. The rates proposed under the new rate structure would increase service charge revenue to 15 percent of rate revenue. Under the new rate structure, all single family residential customers would pay the same monthly service charge. Service charges for multi-family and non-residential customers would vary with the size of the water meter. As a result, customers able to place larger demands on the sewer system would bear a larger responsibility for capacity costs.

Certain aspects of the rate structure, however, would not change. As with the current rate structure, all customers would pay for sewer service based on usage. Residential customers would continue to pay the usage rate based on the lesser of average monthly winter water usage or actual water usage. Non-residential customers would pay for sewer usage based on actual water usage (more irrigation usage occurs through separate water meters). The reasons that wastewater flows are estimated on this basis were described earlier in this section. The proposed usage rates vary between residential customers (single and multi-family) and non-residential (low, medium, and high strength categories) based on strength characteristics for each group. This improved categorization of customers based on wastewater strength factors would provide enhanced proportionality in sewer billing.

**New Sewer Rate Structure and Rate Plan**

**Exhibit III-6** presents the proposed sewer rate schedules under the new sewer rate structure and the proposed new rate plan. The rates proposed for July 2011 are based on the cost of service analysis and the new rate restructure described above. Proposed rates for subsequent periods are adjusted to meet the revenue needs of the utility, as reflected in the financial plan. The first two rate adjustments (July 2011 and January 2012) are critical to bringing the utility to a financially stable condition where it can meet current financial obligations. Subsequent adjustments are necessary to maintain revenue sufficiency through the planning period.

**Exhibit III-6**  
**City of Rohnert Park**  
**Proposed New Sewer Rate Structure and Five-Year Rate Plan**

	July 2011	Jan. 2012	Jan. 2013	Jan. 2014	Jan. 2015
See Note (1) Below -->	25%	25%	3%	3%	3%
<b>Monthly Service Charges</b>					
<i>Residential Customers (per dwelling unit)</i>					
Single Family	\$ 6.88	\$ 8.60	\$ 8.86	\$ 9.13	\$ 9.40
<i>Multi-Family and Non-Residential Customers</i>					
Up to 3/4" meter	\$ 18.52	\$ 23.15	\$ 23.84	\$ 24.56	\$ 25.30
1" meter	\$ 28.34	\$ 35.43	\$ 36.49	\$ 37.58	\$ 38.71
1 1/2" meter	\$ 52.68	\$ 65.85	\$ 67.83	\$ 69.86	\$ 71.96
2" meter	\$ 82.00	\$ 102.50	\$ 105.58	\$ 108.75	\$ 112.01
3" meter	\$ 150.48	\$ 188.10	\$ 193.74	\$ 199.55	\$ 205.54
4" meter	\$ 248.27	\$ 310.34	\$ 319.65	\$ 329.24	\$ 339.12
6" meter	\$ 492.54	\$ 615.68	\$ 634.15	\$ 653.17	\$ 672.77
8" meter	\$ 785.79	\$ 982.24	\$ 1,011.71	\$ 1,042.06	\$ 1,073.32
<b>Sewer Usage Rate (\$/gal.) (2)</b>					
<i>Residential</i>	\$ 0.00801	\$ 0.01001	\$ 0.01031	\$ 0.01062	\$ 0.01094
<i>Non-Residential</i>					
Low Strength	\$ 0.00837	\$ 0.01046	\$ 0.01077	\$ 0.01109	\$ 0.01142
Medium Strength	\$ 0.01122	\$ 0.01403	\$ 0.01445	\$ 0.01488	\$ 0.01533
High Strength	\$ 0.01690	\$ 0.02113	\$ 0.02176	\$ 0.02241	\$ 0.02308

**Notes:**

- (1) The percentage shown for July 2011 reflects the overall increase in sewer rate revenue resulting from the first phase in implementing the new rate plan. Subsequent percentages reflect the rate adjustments in subsequent phases of the plan necessary to meet annual revenue needs. Annual rate revenue growth is also affected by growth in the customer base, as well as changes in customer demand.
- (2) Residential sewer flow is based on the lower of actual monthly water use or the average water use during the prior December-February period. Non-residential sewer flow is estimated equal to monthly water usage.

### **Impact of Proposed Rates on Representative Customer Bills**

**Exhibit III-7** summarizes the impact of the new sewer rate structure for a variety of "typical" sewer customers, based on proposed rates for July 2011 and January 2012. In addition, **Exhibit III-8** provides information on how bills for single family residential customer with various levels of usage would be affected by the new rate structure.

**Exhibit III-7**  
**City of Rohnert Park**  
**Summary of Potential Bill Impacts of New Sewer Rate Structure**

Customer	Mtr. Sz.	Usage (tg)	Typical Monthly Sewer Bills		
			Current Rates	Proposed New Rates	
				July 2011	Jan. 2012
Single Family	3/4"	5	\$ 37.58	\$ 46.93	\$ 58.65
Small Multi-Family	1"	20	\$ 147.08	\$ 188.54	\$ 235.63
Large Multi-Family	2"	120	\$ 877.08	\$ 1,043.20	\$ 1,303.70
Very Lrg Multi-Family	1", 4-2"	2,200	\$ 16,061.08	\$ 17,978.34	\$ 22,467.43
MH Park	4"	1,200	\$ 8,761.08	\$ 9,860.27	\$ 12,322.34
Small Office (L)	1"	6	\$ 61.08	\$ 78.56	\$ 98.19
Small Retail (L)	1"	8	\$ 81.08	\$ 95.30	\$ 119.11
Restaurant (M) (1)	1 1/2"	80	\$ 1,017.08	\$ 950.28	\$ 1,188.25
Restaurant (H) (2)	2"	250	\$ 3,176.08	\$ 4,307.00	\$ 5,385.00
Large Retail (M)	3"	200	\$ 2,001.08	\$ 2,394.48	\$ 2,994.10
Hotel (M)	4"	300	\$ 3,001.08	\$ 3,614.27	\$ 4,519.34
Hotel (M)	6"	600	\$ 6,001.08	\$ 7,224.54	\$ 9,033.68

**Notes:**

- (1) Restaurant with grease interceptor.
- (2) Restaurant without grease interceptor.

Because the new sewer rate structure involves different methodologies and criteria than the existing rates, the new rate structure will result in changes in customer bills, even if they were applied in a revenue neutral situation. All rate structure changes are proposed to occur with the proposed rates for July 2011. The specific change to an individual customer will depend on customer class, meter size, usage, and strength characteristics. If the new rate structure is adopted, subsequent rate adjustments called for in the proposed five-year rate plan would affect all customers equally (on a percentage basis), as no additional changes to the structure are currently contemplated. In all cases, it is believed that the new rate structure would provide greater proportionality by improving the distribution of costs across customer classes, as well as within each class.

**Exhibit III-8  
City of Rohnert Park**

**Summary of Impacts of the New Sewer Rate Structure on Single Family Customers**

Monthly Usage (1,000s of Gal.)	Monthly Sewer Bills			Bill Change	
	Current Rates	Proposed New Rates		July 2011	Jan. 2012
		July 2011	Jan. 2012		
1	\$ 8.38	\$ 14.89	\$ 18.61	\$ 6.51	\$ 3.72
2	\$ 15.68	\$ 22.90	\$ 28.62	\$ 7.22	\$ 5.72
3	\$ 22.98	\$ 30.91	\$ 38.63	\$ 7.93	\$ 7.72
4	\$ 30.28	\$ 38.92	\$ 48.64	\$ 8.64	\$ 9.72
5	\$ 37.58	\$ 46.93	\$ 58.65	\$ 9.35	\$ 11.72
6	\$ 44.88	\$ 54.94	\$ 68.66	\$ 10.06	\$ 13.72
7	\$ 52.18	\$ 62.95	\$ 78.67	\$ 10.77	\$ 15.72
8	\$ 59.48	\$ 70.96	\$ 88.68	\$ 11.48	\$ 17.72
9	\$ 66.78	\$ 78.97	\$ 98.69	\$ 12.19	\$ 19.72
10	\$ 74.08	\$ 86.98	\$ 108.70	\$ 12.90	\$ 21.72

**Appendix A – List of References**

*Agreement Between City of Santa Rosa and City of Rohnert Park, City of Sebastopol, South Park County Sanitation District for Use of Santa Rosa Subregional Sewerage System, dated April 3, 1975, along with 5 amendments thereto*

*California State Treasurer's Office, Local Agency Investment Fund (LAIF) Quarterly Appropriations Rates (updated quarterly on the State Treasurer's website)*

*City of Rohnert Park, 2006 Update Public Facilities Financing Plan, prepared by Winzler & Kelly Consulting Engineers, June 2006*

*City of Rohnert Park, 5-Year Capital Improvement Program FY 09-10 to FY 13-14, project descriptions for sewer system projects*

*City of Rohnert Park, Ordinance 729 – An Ordinance Amending Title 13 of the Rohnert Park Municipal Code to Increase Sewer Service Charges (Sewer Use Ordinance), Uncodified*

*City of Rohnert Park, Ordinance 774 – An Uncodified Ordinance of the City of Rohnert Park Regarding Sewer Service Charges*

*City of Rohnert Park, Sewer Capacity Charge Analysis, prepared by Winzler & Kelly Consulting Engineers, November 2006*

*City of Rohnert Park Sewer System Management Plan, updated January 2009*

*Engineering News Record, 20-Cities Construction Cost Index, updated monthly on the ENR website*

*Installment Purchase Agreement-Sewer System Dated May 1, 2005 Relating to Sewer System Revenue Certificates of Participation Series 2005*

*Manual M6 – Water Meters: Selection, Installation, Testing, and Maintenance, American Water Works Association*

*Official Statement: \$13,000,000 City of Rohnert Park Sewer System Revenue Certificates of Participation, Series 2005, May 27, 2005*

*Revenue Program Guidelines for the Small Community Wastewater Grant (SCWG) Program, State of California, State Water Resources Control Board, Division of Financial Assistance*

*Updating the Sewer Capacity Charge for All Development in the City of Rohnert Park, City of Rohnert Park Council Agenda Item for August 12, 2008, including Resolution 2008-127*

*US Bureau of Labor Statistics, Consumer Price Index, San Francisco-Oakland-San Jose, All Urban Consumers (CPI-U), updated monthly at the BLS website*

**Appendix B – Data on Sewer User Strength Classifications**

Information in this Appendix was used as an aid in classifying customers into low, medium, and high strength user classifications. It is a compilation of data generated from a variety of sources (state agency, large regional wastewater utilities, etc.) regarding strength characteristics related to wastewater from a variety of business types.

**Appendix B**  
**Compilation of Published Data on Sewer User Strength Classifications**

User Classification Description	Proposed Strength (mg/l)			Percent of Single Family	Data Source
	BOD	SS	Weighted Average		
Strength Weighting Factor	50%	50%			
Residential Single Family and Multi-Family	175	175	175	100%	SWRCB
<b>LOW STRENGTH CLASSIFICATION</b>					
<b>Low I Strength:</b>					
Soft Water Service	3	55	29	17%	SWRCB
Office With Public Access	80	80	80	46%	SWRCB
Car Wash	20	150	85	49%	SWRCB
Veterinarian	130	80	105	60%	Los Angeles
Business Equipment Rental	130	80	105	60%	Los Angeles
Business Services -- Other	130	80	105	60%	Los Angeles
Office (Finance, Insurance, etc.)	130	80	105	60%	Los Angeles
Office (No Public Access)	130	80	105	60%	SWRCB
Office (Medical Services)	130	80	105	60%	Los Angeles
Personal Services (Other)	130	80	105	60%	Los Angeles
Photo & Portrait Studios	130	80	105	60%	Los Angeles
Manufacturing - Textile Mill Products	115	115	115	66%	Metcalf & Eddy
Schools	130	100	115	66%	SWRCB
<b>Low II Strength:</b>					
Laundromat-Public	150	110	130	74%	SWRCB
Landscaping Services	150	150	150	86%	Los Angeles
Amusement & Recreation: Indoor & Out	150	150	150	86%	Los Angeles
Auto Parking	150	150	150	86%	Los Angeles
Barber Shop	150	150	150	86%	Los Angeles
Beauty Shop	150	150	150	86%	Los Angeles
Church (No Kitchen)	150	150	150	86%	Los Angeles
Community Center (No Kitchen)	150	150	150	86%	Los Angeles
Grocery Market (No Butcher or Baker)	150	150	150	86%	Los Angeles
Health Spa	150	150	150	86%	Los Angeles
Kennel	150	150	150	86%	Los Angeles
Malls/Dept. Stores (No Food Svcs)	150	150	150	86%	SWRCB
Manufacturing (Other)	150	150	150	86%	Los Angeles
Manufacturing (Apparel & Other Textiles)	150	150	150	86%	Los Angeles
Manufacturing (Furniture)	150	150	150	86%	Los Angeles
Membership Organizations	150	150	150	86%	Los Angeles
Museum/Art Gallery	150	150	150	86%	Los Angeles
Nursery/Greenhouse	150	150	150	86%	Los Angeles
Office (Construction)	150	150	150	86%	Los Angeles
Massage Parlor	150	150	150	86%	Los Angeles
Retail Apparel and Accessory Store	150	150	150	86%	Los Angeles
Retail Bldg. (Materials & Gardening)	150	150	150	86%	Los Angeles
Retail (Packaged) Food (No Sewer Disposal)	150	150	150	86%	Los Angeles
Retail Furniture & Home Furnishings	150	150	150	86%	LACSD
General Merchandise -- Retail/Wholesale	150	150	150	86%	SWRCB
Retail Trade -- Misc. (Except Food/Drink)	150	150	150	86%	SWRCB
Storage, Warehouse & Outdoor	150	150	150	86%	Los Angeles
Studio/Recording Sound Stage	150	150	150	86%	Los Angeles
Theater/Auditorium (No Food)	150	150	150	86%	Los Angeles

**Appendix B – Continued**  
**Compilation of Published Data on Sewer User Strength Classifications**

User Classification Description	Proposed Strength (mg/l)			Percent of Single Family	Data Source
	BOD	SS	Weighted Average		
<b>Low III (Residential) Strength:</b>					
Convalescent Homes	250	100	175	100%	SWRCB
Hospital	250	100	175	100%	SWRCB
Other Health Services	250	100	175	100%	SWRCB
Transp. & Utilities (SIC 400 through 489)	200	150	175	100%	Metcalf & Eddy
Agricultural Production	150	250	200	114%	Metcalf & Eddy
Agricultural Services - Other	250	150	200	114%	Metcalf & Eddy
Bar Without Restaurant	200	200	200	114%	SWRCB
Restaurant -- Preprocessed Only	200	200	200	114%	Los Angeles
Social Services	200	200	200	114%	SWRCB
<b>MEDIUM STRENGTH CLASSIFICATION</b>					
<b>Medium I Strength:</b>					
Hotel (No Restaurant)	310	120	215	123%	SWRCB
Prison With Food Service	310	120	215	123%	Los Angeles
Auto Repair (No Steam Cleaning)	180	280	230	131%	SWRCB
Auto Service Station (No Steam Cleaning)	180	280	230	131%	SWRCB
Agricultural Services -- Animal	350	150	250	143%	Metcalf & Eddy
Auto/Vehicle Sales	300	200	250	143%	Metcalf & Eddy
Repair Services -- Misc.	250	250	250	143%	Metcalf & Eddy
Manufacturing -- Rubber/Plastic Products	200	350	275	157%	Metcalf & Eddy
<b>Medium II Strength:</b>					
Manufacturing -- Electric/Electronic Equipment	300	350	325	186%	Metcalf & Eddy
Manufacturing -- Instruments	300	350	325	186%	Metcalf & Eddy
Manufacturing -- Fabricated Metal Products	300	350	325	186%	Metcalf & Eddy
Manufacturing -- Transport Equipment	400	250	325	186%	Metcalf & Eddy
Laundromat, Commercial	450	240	345	197%	SWRCB
Transportation -- Bus/Air Terminal	350	350	350	200%	Metcalf & Eddy
<b>Medium III Strength:</b>					
Malls/Shopping (Including Food Sales)	400	400	400	229%	Los Angeles
Manufacturing -- Machine Shops	290	550	420	240%	Los Angeles
Manufacturing -- Metal Industry	290	550	420	240%	Los Angeles
Manufacturing -- Lumber & Wood Products	431	431	431	246%	Los Angeles
Manufacturing -- Stone, Clay, Glass Products	200	700	450	257%	Metcalf & Eddy
Reproduction/Mailing Service	500	400	450	257%	Metcalf & Eddy
Hotel (With Restaurant)	500	600	550	314%	SWRCB
Manufacturing -- Paper/Containers	700	500	600	343%	Metcalf & Eddy
Manufacturing -- Printing & Publishing	700	500	600	343%	Metcalf & Eddy
Laundry (Industrial)	670	680	675	338%	SWRCB
<b>HIGH STRENGTH CLASSIFICATION</b>					
<b>High I Strength:</b>					
Agricultural Production - Livestock	1,200	350	775	443%	Metcalf & Eddy
Mortuary	800	800	800	457%	SWRCB
Grocery (W/Butcher or Baker)	800	800	800	457%	SWRCB
Manufacturing -- Baked Foods	1,000	600	800	457%	SWRCB
Restaurant/Bar (W/Food Preparation)	1,000	600	800	457%	SWRCB
Manufacturing -- Beverages	1,500	300	900	514%	Metcalf & Eddy
Manufacturing -- Paint	1,300	1,100	1,200	686%	Metcalf & Eddy
Manufacturing -- Other Chemical Products	1,300	1,100	1,200	686%	Metcalf & Eddy
<b>High II Strength:</b>					
Manufacturing -- Dairy Products	2,369	922	1,646	940%	Los Angeles
Steam Cleaning -- Auto	1,150	2,150	1,650	943%	SWRCB
Manufacturing -- Other Food Products	2,213	1,453	1,833	1047%	Los Angeles
<b>High III Strength:</b>					
Septage	5,400	12,000	8,700	4971%	SWRCB

## **Appendix C – Consultant Qualifications**

Information in this Appendix presents firm qualifications, partial list of past clients, and resume for the consultant retained by the City at the time he was retained to assist with the sewer financial plan and rate analysis.



## THE REED GROUP, INC.

The Reed Group, Inc. (TRGI) is a Sacramento-based management consulting firm specializing in financial management services for local governments<sup>1</sup>. Our mission is to provide clients with an exceptional level of service and responsiveness, to develop creative yet practical solutions to clients needs, and to broaden understanding and facilitate consensus on complex issues. As such, we believe we are uniquely qualified to offer services for municipal utilities in the following areas:

- Water and wastewater rate studies
- Cost of service analyses
- Capacity charge nexus studies
- Long-range financial and strategic planning
- Public participation and facilitation
- Litigation support

The firm brings the following strengths to client engagements:

- Extensive California and national experience in water and wastewater utility operations, management, finance, and planning.
- Broad knowledge of traditional practices and innovative techniques in water and wastewater rates, fees, and cost of service analyses.
- Familiarity with legal and regulatory requirements affecting public agency management and finance.
- Leadership in developing public participation and consensus-oriented approaches to rate and fee setting.
- A network of resources and an ability to coordinate and manage multi-disciplinary project teams on broad ranging engagements.

Robert Reed is President of TRGI. He brings more than 25 years of experience as an engineer for a major water/wastewater agency and a management consultant to local governments. He has provided a diverse range of services to more than 60 clients. Approximately two-thirds of the engagements have been for clients for whom Robert has provided multiple services.

TRGI is a certified small business with the California Department of General Services and with the Sacramento Office of Business Development.

## FIRM QUALIFICATIONS

TRGI consultants have performed more than 100 projects with various public and private entities. A partial listing of clients and projects is provided below.

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<sup>1</sup> The firm was originally organized as a sole proprietorship in May 1998 under the name Reed Consulting Group. It incorporated in January 2002.



<b>Client</b>	<b>Engagement</b>
City of Sacramento	<ul style="list-style-type: none"><li>• Water system development fee study</li><li>• Metered water rate development</li><li>• Water service annexation study</li></ul>
City of Roseville	<ul style="list-style-type: none"><li>• Meter retrofit program development</li><li>• Water, sewer, solid waste rate studies</li><li>• Development of stormwater mgmt. program and funding strategy</li><li>• Recycled water cost and rate analysis</li><li>• Water shortage rate development</li></ul>
City of West Sacramento	<ul style="list-style-type: none"><li>• Financial plan, water rate, and connection fee study</li><li>• Metering implementation plan</li></ul>
City of Santa Rosa	<ul style="list-style-type: none"><li>• Water conservation pricing analysis</li><li>• Water rate and demand fee studies</li><li>• Water shortage contingency planning</li><li>• Financial reserve policy analysis</li><li>• Recycled water economic and rate analyses</li></ul>
City of Folsom	<ul style="list-style-type: none"><li>• Meter retrofit program development</li><li>• Water system long-range plan and rate study</li><li>• Sewer and solid waste rate and impact fees</li></ul>
City of Santa Monica	<ul style="list-style-type: none"><li>• Water/wastewater rate studies</li><li>• Water connection fee studies</li></ul>
City of Oceanside	<ul style="list-style-type: none"><li>• Capacity charge update study</li><li>• Long-range plan and water rate study</li></ul>
San Juan Water District	<ul style="list-style-type: none"><li>• Retail and wholesale water rate studies</li><li>• Retail and wholesale connection fee studies</li><li>• Multi-year financial planning</li></ul>
Fair Oaks Water District	<ul style="list-style-type: none"><li>• Meter retrofit program development</li><li>• Water rate study</li><li>• Special rate setting issues</li></ul>
Carmichael Water District	<ul style="list-style-type: none"><li>• Water rate study and annual updates</li><li>• Proposition 218 litigation support</li><li>• Business financial plan development</li></ul>
Solano Irrigation District	<ul style="list-style-type: none"><li>• Long-range financial plan and rate studies</li><li>• Organization, job classification and compensation study</li></ul>
Amador Water Agency	<ul style="list-style-type: none"><li>• AWS long-range plan, rates, and fee studies</li><li>• CAWP long-range plan, rates, and fees</li></ul>
Millview County Water District	<ul style="list-style-type: none"><li>• Water financial plan and rate study</li></ul>
Sacramento Suburban Water District	<ul style="list-style-type: none"><li>• CIP, financial plan, and water rate studies</li><li>• Facilities development charge studies</li><li>• Wheeling water rates</li></ul>
Northridge Water District	<ul style="list-style-type: none"><li>• Long-range plan, water rate, and capacity</li></ul>



	<ul style="list-style-type: none"><li>charge study</li></ul>
Arcade Water District	<ul style="list-style-type: none"><li>Development of wheeling rates</li></ul>
Rio Linda/Elverta Community Water District	<ul style="list-style-type: none"><li>Irrigation Task Force facilitation and incentive pricing program development</li></ul>
Quincy Community Services District	<ul style="list-style-type: none"><li>Rate/fee survey</li><li>Long-range plan, water rate/fee study</li><li>Citizen committee facilitation</li></ul>
East Bay Municipal Utility District	<ul style="list-style-type: none"><li>Long-range plan</li><li>Water/wastewater rates &amp; capacity charges</li><li>Grant application assistance</li></ul>
Contra Costa Water District	<ul style="list-style-type: none"><li>Water capacity charge study</li></ul>
	<ul style="list-style-type: none"><li>Metering policy &amp; procedure development</li><li>Wheeling water rate presentation</li><li>Litigation support</li><li>Wholesale water rates</li></ul>
City of Dixon	<ul style="list-style-type: none"><li>DSMWS long-range plan, water rate and connection fee study</li><li>Wastewater financial plan, rate and connection fee studies</li></ul>
City of Lathrop	<ul style="list-style-type: none"><li>Water/wastewater rate/fee studies</li><li>Citywide capital facilities fee studies</li></ul>
City of Suisun Study	<ul style="list-style-type: none"><li>SSWA long-range plan, water rate and connection fee studies</li></ul>
City of St. Helena	<ul style="list-style-type: none"><li>Water and wastewater rate studies and financial plans</li></ul>
Town of Windsor	<ul style="list-style-type: none"><li>Water and wastewater rate study and financial plan</li><li>Water capacity charge study</li></ul>
City of Del Mar	<ul style="list-style-type: none"><li>Water rate and connection fee studies</li></ul>
Nipomo Community Services District	<ul style="list-style-type: none"><li>Water and sewer financial plans, rates, and capacity charge studies</li><li>Water rate structure analysis</li></ul>
Olivenhain Municipal Water District	<ul style="list-style-type: none"><li>Water rate update study</li><li>Strategic planning and operations review</li></ul>
Trabuco Canyon Water District	<ul style="list-style-type: none"><li>Water rate study</li></ul>
San Elijo Joint Power Authority	<ul style="list-style-type: none"><li>Recycled water program financial assessment</li></ul>



## Robert Reed

## The Reed Group, Inc.

Mr. Reed is President of The Reed Group, Inc. (TRGI). He has over 25 years of experience providing a broad range of financial and management consulting services to local governments in the areas of water and wastewater utility management, as well as public works and engineering functions. The mission of TRGI is to provide clients with an exceptional level of service and responsiveness, to develop creative yet practical solutions to client needs, and to broaden understanding and facilitate consensus on complex issues. Areas of specialty include:

**Utility Rate/Fee Studies** – water, wastewater, stormwater, and solid waste cost of service and rate design studies; wholesale and retail rates; marginal cost pricing; community-based rate setting methodologies.

**Capital Facility Financing Studies** – evaluation of the economic and financial feasibility of capital improvement programs; capital facility financial planning; development impact fee and capacity charge studies

**Resources Management** – meter retrofit programs, water conservation planning; drought impact studies; urban water management plan preparation; water rate conservation incentives; water supply yield and water availability studies.

**Litigation Support** – litigation support, including expert witness testimony in matters related to water and wastewater rates and charges including Proposition 218; provided technical support during SWRCB water rights proceedings.

## Representative Projects

- *City of Santa Rosa, CA (since 1997)* – Water and wastewater rate study. Performed a water and wastewater rate study for the City of Santa Rosa's retail operations. The study included detailed cost of service analyses, refinement of current rate structures, development of a five-year financial plan, and review of financial policies and practices. During the study we performed two day-long workshops with City staff to explore rate and financial issues in detail. Mr. Reed also performed studies pertaining to demand fees (capacity charges), water shortage rates, water conservation incentives embodied in rate structures, and financial reserve policies. Recently, he helped the City address critical economic and cost sharing issues related to expansion of the recycled water system into urban areas.
- *City of Sacramento (since 1999)* – Mr. Reed has assisted the City of Sacramento Utilities Department with several projects over a number of years. Currently, he is assisting the City with the development of metered water rates applicable to both residential and non-residential customers. The rates reflect the cost of providing water service, address financial stability and fairness issues, and will assist the City in meeting requirements associated with the implementation of the meter retrofit program. Mr. Reed previously assisted the City with updating water system impact fees.
- *City of Roseville (since 1999)* – In 1999 Mr. Reed assisted with a controversial study to develop a water meter retrofit program, including developing a strategy whereby customers would pay for water meters. This study involved working with a citizens advisory committee, and conducting community meetings, prior to taking recommendations to the City Council. Mr. Reed also assisted with the development of the City's stormwater management program with particular focus of cost estimating and identifying potential funding sources. For the past eight years, Mr. Reed has assisted in preparing biennial rate recommendations for water, wastewater, and solid waste. He has also



assisted in revising water rates to better achieve conservation objectives, and helped develop water shortage rates to be implemented during periods of water shortage.

- *Nipomo Community Services District (since 2004)* – Prepared water and wastewater financial plans, as well as developed water and wastewater capacity charges for the District in multiple studies. Restructured water and wastewater rates to meet District rate setting objectives, including encouraging water conservation and reflecting the cost of providing service. Studies have included workshops with the Board of Directors and community meetings.
- *Town of Windsor (since 2006)* – Developed multi-year financial plans for the Town's water and reclaimed water utilities prepared user rate studies to recommend water and reclaimed water rates that reflect the cost of providing service and meet each utilities revenue needs. This study included workshops with the Town Council and consideration of special cost of service issues, as well as assessing the potential rate impacts of future capital project financing.
- *City of Healdsburg* – Conducted a wastewater rate study, including development of a multi-year financial plan. This study resulted in increases to the City's wastewater rates to meet operating, capital program, and debt service obligations. The wastewater rate structure for residential was modified such that user rates reflect the winter water use characteristics of each customer. This change improved equity among customers and helped to encourage water conservation.
- *Millview County Water District* – Currently developing a 10-year financial plan, consistent with the District's capital improvement program, and evaluating potential water rate and debt financing scenarios. The purpose of the study is to develop a financial strategy to meet operating and capital program needs, as well as meet obligations of future debt service, while minimizing water rate increases. This study may result in the first increase in the District's water rates in nearly 15 years.
- *San Juan Water District (since 1998)* – Multiple retail and wholesale financial plans and rate studies. Retail rate analyses included developing a metered water rate structure while working closely with a citizens advisory committee and members of the Board. Wholesale rate analyses have included developing an equitable cost of service methodology and working both with the District and family member agencies. More recently, The Reed Group, Inc. has assisted the District in updating retail connection fees and developing new wholesale connection fees.
- *Carmichael Water District* – Water rate study and 5-year financial plan. Conducted 10 workshops with an 11-member citizen advisory committee (including 2 Board members). Focus of study was on cost of service issues and rate design with a transition from flat to metered rates. The District's largest customers were represented on the committee. Mr. Reed has continued to assist the District with water rate and financial plan updates, as well as litigation support services. He also assisted the District in successfully rebutting a legal challenge to the District's water rates on Proposition 218 grounds.
- *Solano Irrigation District (since 1998)* – Water rate and financial plan studies. Assisted the District in three separate studies to address policy issues related to rate structures, revenue strategies, financial policies, and long-range financial planning. Separate studies were performed for the Dixon-Solano Municipal Water Service (joint water system with City of Dixon), the Suisun-Solano Water Authority (joint water system with the City of Suisun City), and SID's General Fund. Public workshops have been conducted with elected officials and the public in each study. In 2000, Mr. Reed served as Project Manager on a classification, compensation, and organization study for the District. The study included interviews with about one-half of the staff throughout the organization and focused on organizational structure issues to improve operational effectiveness. A compensation survey was performed to compare the District with its labor market, and job descriptions were updated to reflect the work performed for each of about 40 staff positions.



- *Sacramento Suburban Water District, CA (since 1996)* – Mr. Reed worked with the Sacramento Suburban Water District to prepare an update to their capital improvement plan, multi-year financial plan, and water rates. Mr. Reed worked with the predecessor Northridge Water District on to develop two previous five-year water rate plans and FDC calculations. He also developed recommendations on wheeling charges whereby other entities could wheel water through the District's transmission facilities. Mr. Reed also assisted the Arcade Water District (also a predecessor to SSWD) in working with their Irrigation Task Force and developing an alternative conservation-oriented water rate structure for public agency irrigation customers.
- *City of Del Mar* – In 1993, Mr. Reed participated in a major water and wastewater rate structure review study involving city staff, a citizens advisory committee, and the City Council. The study resulted in rate restructuring and multi-year financial planning that was widely accepted by customers and the City Council. Mr. Reed has since participated in water rate updates every few years since the original study, most recently in 2004.
- *City of Santa Monica (since 1996)* – Served as project manager for a comprehensive water and wastewater rate study. We conducted five workshops with a citizen advisory committee during the study to assure that rate recommendations achieve desired community objectives. In 2002, assisted as Project Manager with an update to the water and wastewater rate study, including calculation of connection fees.
- *City of Folsom* – Assisted the Public Works Department with the development of a meter retrofit program and water rate structure study, and also performed wastewater and solid waste rate and fee studies. Each study includes technical, financial, and public outreach aspects. Mr. Reed's has included long-range financial planning assistance, and extensive involvement with the City's Utility Advisory Committee.
- *Contra Costa Water District* – Wholesale (raw) water rate structure study affecting the District's municipal and industrial customers. Working with a Technical Advisory Committee (TAC), we developed recommendations for modifying the water rate structure to better achieve District objectives. Also provided litigation support or expert witness assistance in litigation on the District's Facilities Reserve Charges.

### **Education**

B.S., Engineering, University of California, Los Angeles, 1982  
M.S., Water Resources Engineering, University of California, Davis, 1990  
M.B.A., Public Policy and Management, University of California, Davis, 1990  
Licensed Civil Engineer in California (Lic. No. 41064)

### **Professional Background**

East Bay Municipal Utility District, Water Resources Planning, 1983-1988  
Ernst & Young, Governmental Consulting Practice, 1990-1992  
David M. Griffith & Associates, Utility Consulting Practice, 1992-1996  
Hilton Farnkopf & Hobson, Water/Wastewater Practice, 1996-1998  
The Reed Group, Inc., President, 1998-present