City of Pinole

May 14, 2013

2013 Wastewater Rate Study

Administrative Final Report

WILLDAN Financial Services | *extending your reach*

Temecula Office:
27368 Via Industria, Suite 110
Temecula, California 92590
T 951.587.3500 | T 800.755.6864 | F 951.587.3510

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Executive Summary

This study of wastewater rates was conducted for the City of Pinole (City) to comprehensively examine the financial operation of the wastewater utility, create multi-year financial projections, and develop updated wastewater rates. The supporting objectives for the study were to determine wastewater utility revenue requirements, analyze and apportion costs of service to utility functions and customer classes, and develop appropriate, fair and equitable wastewater rates. This process will help ensure that the wastewater utility continues forward on a financially sound and stable basis over the next ten fiscal years. The study was conducted using City budget documents and audited financial statements, historical and projected data on operating expenses, non-operating expenses, and capital expenditures. We also analyzed seasonal water use by wastewater customers in the City in order to create projections of expected wastewater discharge, as well as historical wastewater billing data.

The City retained Willdan Financial Services to prepare a wastewater rate analysis that will include a new wastewater rate schedule that meets current and near-term projected system revenue requirements. For purposes of determining annual revenue requirements as a basis to set future wastewater rates, we used a projection period of ten years, spanning fiscal years (FYs) 2013/2014 through 2023/2024 (the study period). However, it is important to note that; in accordance with Proposition 218, this study proposes rate adjustments for ***only*** the five year period beginning FY 2013/2014. There is no contemplation or anticipation of rate adjustments beyond the five year period, and any adjustments after the initial five years would need to be supported by a separate and updated financial rate analysis.

Assumptions

This section presents the assumptions used in the development of this wastewater rate analysis.

1. The budget for the fiscal year ending June 30, 2013, was used as the base year.
2. The beginning General Operating Fund balance for FY 2012/2013 is estimated at $3,118,407 for the wastewater utility. The ending operating fund balance for FY 2012/2013 is estimated at $4,005,791.
3. Zero customer growth is expected throughout the study period.
4. The personnel cost growth rate used for the study is four percent (4%).
5. The expenditure growth rate used for the study is three percent (3%).
6. This Study assumes a ten percent (10%) revenue increase in Fiscal Year 2014/15 and three point three percent (3.3%) revenue increases in Fiscal Years 2015 through 2017.
7. The wastewater utility currently is making an annual debt service payment in the amount of approximately $626,000 on the outstanding Wastewater Revenue Bonds.
8. An estimated $450,000 per year is needed to fund necessary infrastructure improvements to the sewer collection system through June 30, 2017.
9. The joint wastewater plant shared by the Cities of Pinole and Hercules will be undergoing an expansion and upgrade. The cost of required plant upgrades is estimated to be $42 million of

which $21 million will be the City of Pinole's share. The City anticipates receiving a State Revolving Loan at an interest rate of 2.2% to finance an estimated $24 million to cover the City's share of the upgrade costs and reimbursement for engineering and planning costs. Assuming the loan is finalized as anticipated, annual payments of $1,497,000 would commence in FY 2016/17.

10. Annual depreciation expense for wastewater throughout the study period is included as line item "Depreciation (Repair and Replacement) Reserve Account" and estimated to be $290,000.
11. Desired Operating Reserve Fund balances are set at 90 days of O&M expenses or twenty-five percent (25%).

Findings

This section presents the findings of the wastewater rate analysis.

1. Existing rates will not adequately fund system replacement and major capital project needs, including primarily, the $42M in wastewater plant upgrades.

Recommendations

Based on the findings of this wastewater utility financial review and rate analysis, we recommend that the City adopt the following items:

1. The proposed wastewater rate structure (see Figure 7 on page 18). The rate structure adequately provides for ongoing costs, repayment of debt associated with the expansion and upgrade of the joint wastewater plant, and allows for funding of reserves for unscheduled expenses.

2. A policy of targeting an operating fund balance of 90 days of annual operations and maintenance expenses to ensure that funds are available for emergency purposes and to mitigate future rate shocks.

3. A policy of setting aside funds annually in a repair & replacement reserve account to provide a modest accumulation for unscheduled system maintenance and rehabilitation.

Introduction

The City of Pinole (the "City") maintains the City's wastewater collection system, and shares a joint wastewater treatment facility with the City of Hercules. Wastewater for roughly 6,500 Pinole customers is treated at the Pinole-Hercules Water Pollution Control Plant (WPCP), with a small portion of the City's wastewater treated at a separate facility operated by the West County Sanitary District. Customers of the West County Sanitary District are not part of this study, nor are any facilities or operations of West County. As previously stated, the WPCP treats wastewater from a large segment of the City of Pinole as well as the City of Hercules. It was originally constructed in 1955 as a primary treatment facility. Later, in 1972, the plant was upgraded to a secondary treatment facility. Despite having had two major expansions and several modifications, the Regional Water Quality Control Board issued a permit requiring major upgrades and improvements to the plant. The National Pollutant Discharge Elimination System (NPDES) permit requires the upgrades to be operational by June 1, 2017.

Currently the WPCP serves a combined population of approximately 40,000 with an annual flow of approximately 3.5 million gallons per day (mgd) and peak wet weather flows up to 15 mgd. Flows in excess of 10.3 mgd do not currently receive secondary treatment and are blended with the secondary effluent, disinfected, and discharged to San Pablo Bay. The required upgrades and improvements will allow the WPCP to provide full secondary treatment for influent flows up to 20 mgd and limit use of the Emergency Outfall to flows in excess of 14.6 mgd. The City is committed to operating the WPCP facility at the highest standard and to protecting the community and the environment. It is with this in mind that the City has considered increasing wastewater rates to provide funding for the upgrades.

In 2008, a rate study was performed to prepare for the construction of upgrades then under discussion, as well as improvements to the WPCP. In 2009, the City Council approved wastewater rates for a three year period beginning in FY 2009. These rates generated sufficient revenues to cover operational costs, capital improvements needed at that time, and allowed for an accumulation of reserves to cover the cost of preliminary design and engineering for the anticipated improvements and upgrades to the WPCP. The estimated cost for the upgrades that have been now been deemed necessary, and which are currently planned, has been determined to be $42 million, and will be shared equally between the City of Pinole and the City of Hercules. Pinole will fund its share of the improvements with a Loan from the State Revolving Fund, and the associated new debt service will be paid for from the rate increase currently under consideration. It was also previously determined that the City would need to increase wastewater rates to finance its share of anticipated and routine upgrades and cover escalating operational costs, which is still the case with this current study and proposed rate increase. In addition, the proposed rate increase will establish and begin to fund a Depreciation (Repair and Replacement) Reserve to provide funding for anticipated repairs as current infrastructure continues to age.

The current rate has not changed since FY 2011-12 despite rising costs for salaries, benefits, utilities, chemicals, and supplies. In late 2012, the City of Pinole selected Willdan Financial Services ("Willdan") to prepare a wastewater rate analysis and financial plan. As part of this effort, Willdan reviewed the current financial status of the utility, and analyzed current revenues relative to their ability to sustain

operations and maintenance costs, fund capital needs of the system, and maintain compliance with State mandates. Following this analysis, and discussion with City staff, Willdan estimated the annual revenues needed to cover operational costs, repair and replacement costs, ongoing debt service, new debt service associated with the planned State Revolving Loan, and then projected these costs over a ten (10) year period ending in FY 2023-24.

This analysis provides financial recommendations that focus on two key objectives: short and long-term financial health and stability; and equitable cost-of-service based rates.

Initial review of the City's existing rate structure suggested that adjustments were necessary to ensure that future rates for the various classes of customers reflect the costs of the wastewater services provided by the City that are attributable to those customers. More specifically, any new rates needed to account for the differential costs associated with serving various types of customers. Finally, the existing rates would fail to generate sufficient revenue to fund the upcoming improvements, additional debt service, and reserve targets.

This report details the methodology, approach, and results of this analysis. Based on discussions with City staff, and on policy guidance and direction from the City's Finance Subcommittee and City Council throughout the process, this report presents the recommended revenue adjustments and the corresponding rate impacts.

Overview of the Rate Setting Process

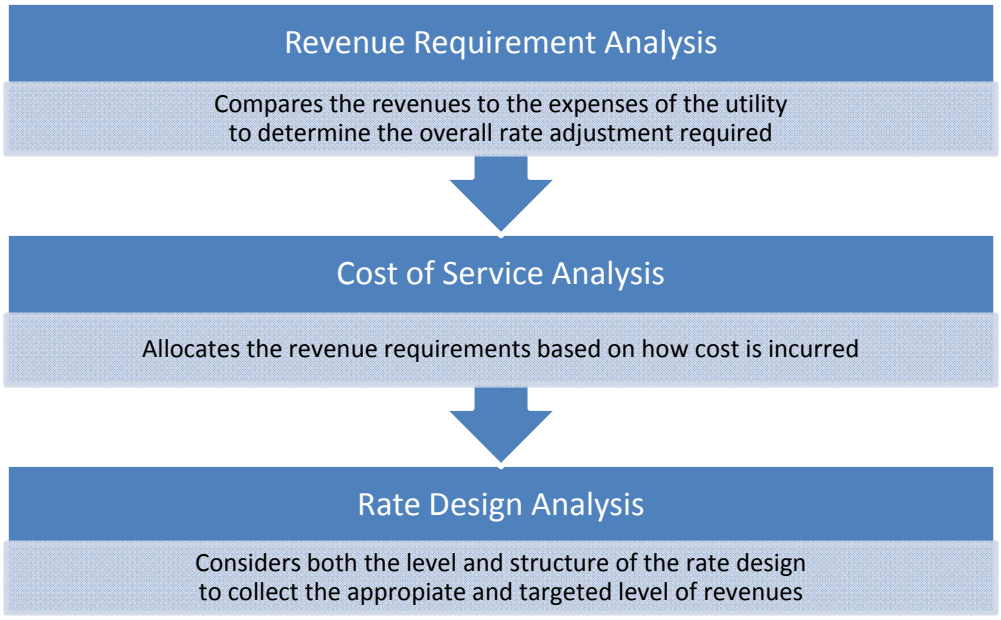
The scope of this study included the development of cost-based wastewater user charges through a comprehensive cost-of-service and rate design analysis. Wastewater utility rates must be set at a level where a utility's operating and capital expenses are met with the revenues received from customers. This is a significant point, as failure to achieve this level could lead to a situation where insufficient funds are available to adequately maintain the system. A comprehensive rate study typically consists of the following three interrelated analyses.

I. ***Financial Planning/Revenue Requirement Analysis***: Creation of a ten-year plan to support an orderly, efficient program of on-going maintenance and operating costs, capital improvement and replacement activities, debt financing, and retirement of any outstanding debt. In addition, the long-term plan should fund and maintain adequate reserve balances based on industry standards and the City's fiscal policies. Again, as mentioned previously; it is important to note that the proposed rate increase is only for a period of five years. The ten year analysis just helps to provide a broader and longer-term picture of the financial health of the utility.

II. ***Cost of Service Analysis***: Identifies and apportions annual revenue requirements to customers based on their demand on the utility system.

III. ***Rate Design:*** Develops an equitable and proportionate schedule of rates to recover the costs of the wastewater utility. This is also where other policy objectives can be achieved, such as accumulation of reserves and/or cash funding of depreciation and repair and replacement associated with existing infrastructure. The policy objectives are

harmonized with cost-of-service objectives to achieve the balance of equity, financial stability, and policy goals.



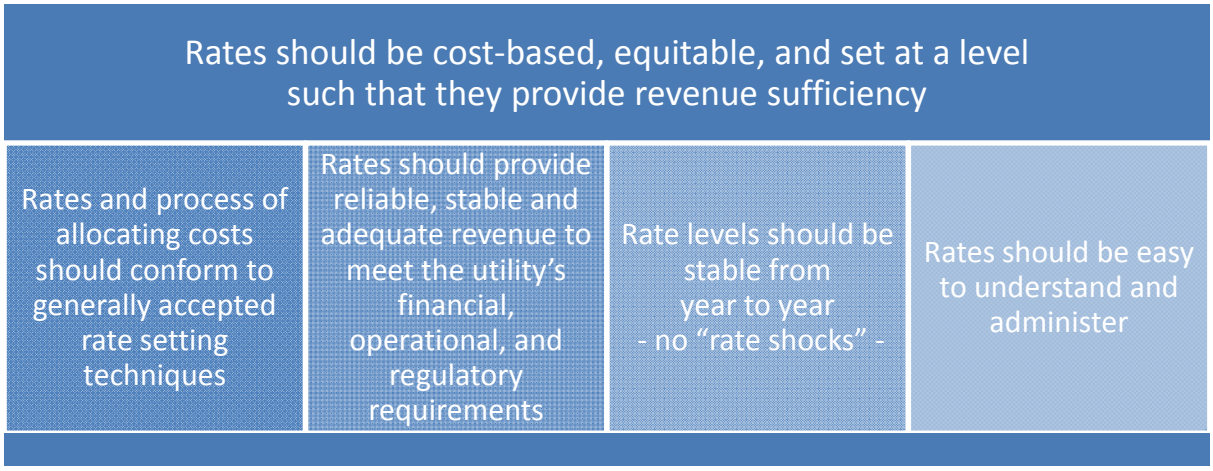
Rate Setting Principles

The primary objective when conducting this comprehensive rate and financial analysis was to determine the adequacy of the existing rates (pricing, structure, and revenue sufficiency) and provide the basis for any necessary adjustments to meet the City's operating and capital needs and policy objectives. The City desires a rate structure that appropriately reflects costs and recovers costs based on customer's demand. Furthermore, the City would like a rate structure that sufficiently funds operations, maintenance, and capital costs while providing long- term funding of reserves.

Financial Management, Policies, and Rates

A financial plan revolves around the development of a proper long and short-term balance of revenues and expenditures. The following provides an outline of the City's financial targets and policies, and the financial foundation of the cost-of-service and rate analysis. Over the past years, many generally accepted principles or guidelines have been established to assist in developing utility rates. The purpose of this section of the report is to provide a general background of the methodology and guidelines used for setting cost-based utility rates, in order to provide a higher-level understanding of the rate setting approach detailed later in this report.

As a practical matter, there should be a general set of principles used to guide the development of wastewater rates. The Water Environment Federation (WEF) establishes such guiding principles to help ensure that there is a consistent global approach employed by utilities in the development of their rates (water and water-related utilities, including wastewater and reclaimed water). Below is a summary listing of the established guidelines, which public utilities should consider when setting their rates. These closely reflect the City's specified objectives.



These guidelines, along with the City's objectives, have been utilized within this study as a framework to help develop utility rates that are cost-based and equitable.

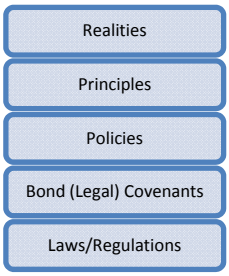
Overview of Rate Setting Environment, Objectives, Process

Rate analyses are typically performed every few years to ensure that revenues from rates are adequately funding utility operations, maintenance, and future capital needs. In California, rate analysis requires compliance with the cost-of-service principles imposed by Proposition 218. Rates must correlate to how the costs associated with providing the service are incurred. Beyond the laws, regulations, and guiding principles, rates ultimately are approved and implemented by the City Council, after a Proposition 218 protest hearing has been conducted, assuming there is no majority protest.

Considerations in Setting Revenue Requirements

There are a multitude of considerations, ranging from financial to political to legal, which must be analyzed or discussed during the revenue requirements process of a rate analysis. This section, along with the accompanying graphic, provides an overview of the considerations that are reviewed during this process.

Capital Budgeting and Financing



Capital needs are defined by the City's Capital Improvement Plan. As part of its budget and planning process, the City identifies capital improvements that are necessary for the continued collection and treatment of wastewater in accordance with increasingly stringent wastewater standards. The Capital Improvement Plan is typically funded by a variety of sources including system depreciation, wastewater rates, connection (impact) fees, and capital reserves.

Capital Funding: Debt vs. PAYGO

The selection of the most appropriate funding strategy for capital projects is primarily a policy decision between use of cash ("Pay-as-you-go financing" or PAYGO), the issuance of debt (bonding), or other financing mechanisms. PAYGO is the use or build-up of cash to fund capital improvements. With debt financing, capital improvements are paid for with borrowed funds (usually through the issuance of bonds) with the obligation of repayment, typically with interest, in future years. Development of an optimal capital financial plan depends on the definition of optimal. Each funding mechanism has a different impact on wastewater rates in the short and long-term, different net present values, risks, and legal obligations. Due to the borrowing costs associated with debt, cash funding can be cheaper in the end; however, debt typically ensures greater generational equity for larger and longer lasting capital projects.

Our review of the City's historical and planned Capital Improvement Plan revealed that the City does not have sufficient funding on hand to meet its planned capital investments without an increase to rates.

Our recommendation is consistent with the observed funding policy of the City, and is that the City continues to balance the use all financing options, by using debt to mitigate the impact of large capital upgrades and improvements on rates, and cash funding in the long-term for annual replacement projects.

Revenue Requirements

The method used by most public utilities to establish their revenue requirements is called the "cash basis" approach of setting rates. As the name implies, a public utility combines its cash expenditures over a time period to determine their required revenues from rates and other forms of income. The figure below presents the "cash basis" methodology.

Figure 1: Overview of the "Cash Basis" Design

+ Operation and Maintenance Expenses
+ Taxes
+ Capital Additions Financed with Rate Revenue
+ Debt Service (Principal and Interest)
= Total Revenue Requirements

Willdan reviewed existing, approved/pending, and proposed Capital Improvement Projects (CIPs) with City staff in order to allocate projects between new (growth) and existing customers (operations and maintenance or "O&M"). This was done to ensure that existing ratepayers are not paying for growth-related capital projects. Additionally, capital replacement expense (depreciation) is sometimes included in the cash basis approach to stabilize annual required revenue by spreading the replacement costs of a depreciated asset over the expected life of the asset, or through the term of a bond issue.

Based on the revenue requirement analysis, the utility can determine the overall level of rate adjustments needed in order for the utility to meet its overall expenditures.

Financial Planning

In the development of the revenue requirements, certain parameters are utilized to project future expenditures, growth in customers and consumption, and necessary revenue adjustments. The City's budget documents are used as the baseline, which are then projected over a ten-year planning horizon to account for fluctuations in costs from year to year as well as adjustments to debt service payments.

Conservative growth assumptions and prudent financial planning are fundamental in ensuring adequate rate revenue to promote financial stability. The developed financial model considers the City's existing debt service coverage ratio and operating cash balances (cash on hand). In addition, as part of the financial planning, debt financing is incorporated into the model to fund necessary capital improvements. The cost of depreciated infrastructure is collected through rate revenue and used to fund annual repair and replacement of the infrastructure as it ages. As debt is redeemed, additional bonds may be utilized to fund additional capital improvements required due to aging infrastructure.

Rate Setting Principles Summary

In meeting the overall objectives of the City, the rate design must also conform to the State Constitution and the State's Water Code. More specifically, Proposition 218 requires that property related fees and charges, such as wastewater rates (as affirmed in Bighorn-Desert View Water Agency v. Verjil), not

exceed the reasonable cost of providing the service associated with the fee or charge, and shall also not exceed the proportional cost of the service attributable to the parcel that is subject to the fee or charge.

Besides ensuring compliance with State law, another key principle for a comprehensive rate study is found in economic theory, which suggests that the price of a commodity must roughly equal its cost or value if equity among customers is to be maintained – i.e. cost-based. For example, capacity-related costs are usually incurred by a wastewater utility to meet peak use requirements. Consequently, the customers should pay for the demand-related facilities in proportion to their contribution to maximum demands (i.e. flow volume and strength of effluent treated).

Through refinement of costing and pricing techniques, consumers of a product are given a more accurate price point, representative of the costs necessary to meet their needs, in this case, for maintenance of wastewater collection and treatment systems, and costs for the operation of the facilities. The above fundamentals have considerable foundation in economic literature and correlate to the cost of service principles of Proposition 218. This "price-equals-cost" theory provides the basis for much of the subsequent analysis and comment.

Rate Design

The final element, the rate design process, applies the results from the revenue requirements to develop rates that achieve the general guidelines, policies and objectives of the City, and compliance with the provisions of law. These objectives are achieved through the development of cost-based rates, but may also account for adjustments to expenditures or the level of cash reserves to balance rate shock, continuity of past rate philosophy, , ease of administration, and legal requirements. This section of the report incorporates the general principles, techniques, and economic theory used to set utility rates. These principles, techniques, and economic theory were the starting point for this rate study and the groundwork used to meet the City's key objectives in analyzing and redesigning their utility rates.

This utility rate study was performed to allocate the costs of providing service to users in order to ensure that the resulting rates are equitable and in compliance with Proposition 218 requirements. The total cost of serving the City's customers is determined by distributing each of the utility cost components based upon the service demands placed on the City by its customers. Therefore, a cost of service rate study enables a utility to adopt rates based on the costs incurred to serve its customers and corresponding accounts. The purposes of this cost of service study include defining the proportional allocation of the costs of service to users and deriving unit costs to support the development of wastewater rates.

Wastewater Rate Analysis

The Wastewater Fund is facing increased future expenditures related to increased operations costs and additional debt service to fund mandated improvements. This section of the report outlines the details of the analysis and the approach to developing the recommendations.

Wastewater Discharge and User Characteristics

Wastewater discharge data, as is typically the case, was unavailable on a per customer basis; therefore, Willdan used water consumption data, excluding irrigation, to infer wastewater discharge. Willdan examined the previous three years of water consumption data provided by East Bay Municipal Utility District (EBMUD). Multiple years of data were analyzed to ensure short-term anomalies were accounted for and long-term trends were captured. Analysis of water consumption data was focused on the winter quarter period, or January through March. As would be expected, water consumption was at its lowest during these months, which is consistent with the assumption that during the winter months there is minimal irrigation or other outdoor water usage. In the absence of irrigation and outdoor usage, minimal loss from the system occurs; therefore, the water coming in correlates closely to the water coming out, or the expected wastewater discharge, during the winter months.

It is important to note that multi-family complexes are charged and analyzed on a per unit basis, rather than by meter size. This is due to the lack of correlation between the meter size for water service and the amount discharged into the system.

Customer Statistics

During the Fiscal Year 2012, an analysis of the wastewater billing data, provided by the City, showed service was provided to an estimated 6,500 units across 15 different customer classifications, with an estimated 544 thousand HCF of wastewater. A projection of units, discharge, and loading strengths associated with various customer categories is necessary in the evaluation of the revenue requirements, and in order to allocate the required revenue to customer classes in relation to the costs attributable to each. This projection is critical for the determination of revenues from rates, escalation of treatment-related costs, and design of the rates.

Revenue Requirements Analysis

The first step in a wastewater rate analysis is the review of required revenues. The result of this analysis is a snapshot of the utility's existing financial health, which is necessary to determine current and future revenue needs. Willdan performed a 10-year financial outlook to ensure that both short-term and long-term financial health was considered. Willdan reviewed expenditures (operation and maintenance (O&M), capital, and reserves requirements) against revenues. Willdan also analyzed and reviewed the wastewater fund's historical and current financial statements, three years of water consumption records, capital improvement programs and plans, reserve policies, and conferred with staff to forecast future expenditures.

Existing Wastewater Revenues

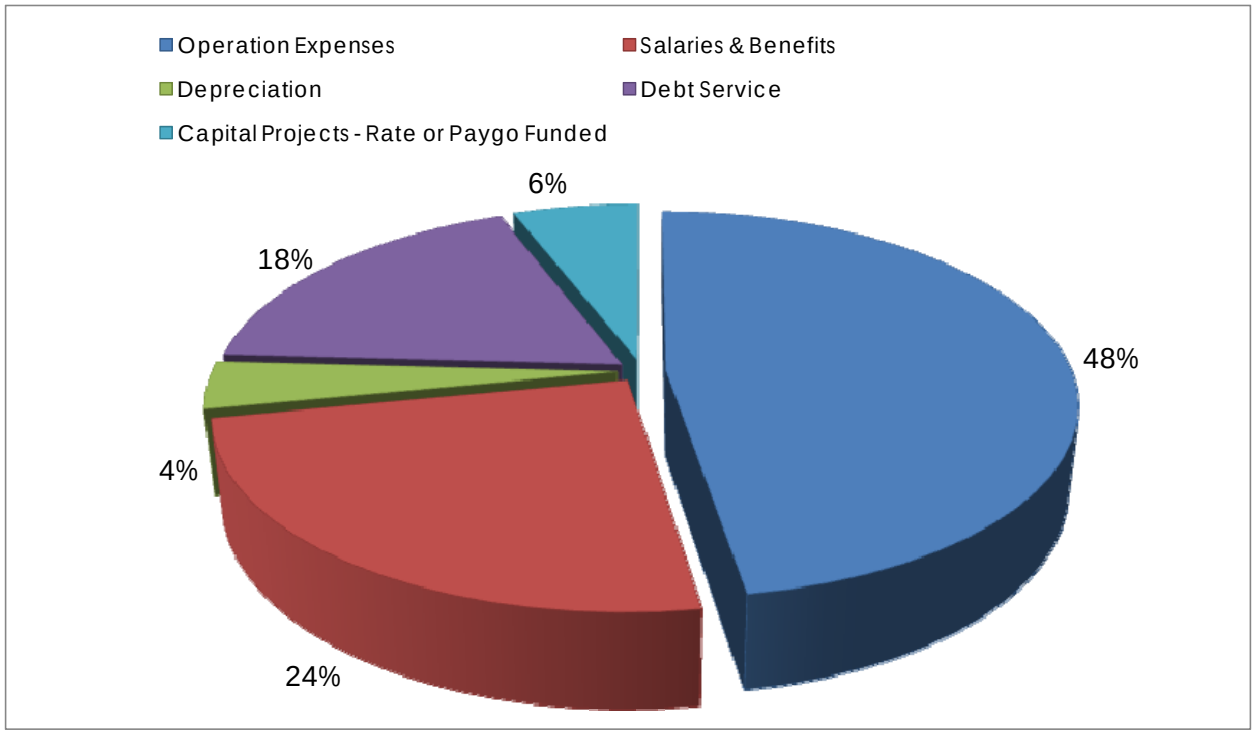
The Wastewater Fund receives a majority of its revenues from rates. In Fiscal Year 2012-2013, the Wastewater Fund yielded $5.7 million in operating rate revenue of which $4.042 million was attributed to the City of Pinole and $1.717 million was attributed to the City of Hercules, compared with only $20 thousand in non-operating revenue. Of the $4.042 million, only a portion is related to the operation of the combined WPCP, the rest is for debt service, maintenance and operation of the collection system, accumulation of appropriate reserves, and other costs specific to Pinole-only facilities and operations.

Existing Wastewater Expenditures

To achieve long-term financial health, a utility's revenues must be sufficient to meet total expenditures or cash obligations. This "required revenue" includes all incurred costs related to operation and maintenance, capital improvement programs, and principal and interest payments on existing or proposed debt.

As demonstrated by Figure 2, Wastewater Fund expenditures were categorized into one of five classifications: (1) Operation Expenses; (2) Salaries & Benefits; (3) Depreciation; (4) Debt Service; and (5) Capital Projects – Rate or PAYGO Funded. The pie chart below demonstrates the relative size of the various expense categories over the study period.

Figure 2: Wastewater Fund - Cost Distribution by Expenditure Classification



The analysis assumed a 3-4% annual increase in both Operations and Salaries and Benefit costs. This was to account for increased costs related to chemicals, supplies, utilities, salaries, benefits, etc.

Currently, the City does not have a Depreciation (Repair and Replacement) Reserve account. Best practices suggest that the City should set aside funds on an annual basis to cover the cost of repairing

and replacing aged and/or expended equipment. Without a Depreciation Reserve account, repairs must be funded through current funds. If the City does not have sufficient funds they may end up having to use funds allocated for other projects or issue additional debt, which might result in an unanticipated rate increase to support the new debt. As part of this financial review of the utility, Willdan recommends establishing a Depreciation Reserve account. Review of the City's annual audit and discussions with City staff indicated that the City of Pinole's share of depreciation to be funded through rate revenue should be estimated at $290,000 annually. The wastewater rate model establishes the depreciation reserve fund beginning in FY2013-2014 and does not attempt to retroactively capture prior depreciation. The needed upgrades and improvements to the Pinole - Hercules Plant will be financed through debt issuance, not through this reserve. However in future years, it may be necessary to reconsider the amount accumulated annually in the Depreciation Reserve, as the new infrastructure constructed as part of the $42 million upgrade begins to age.

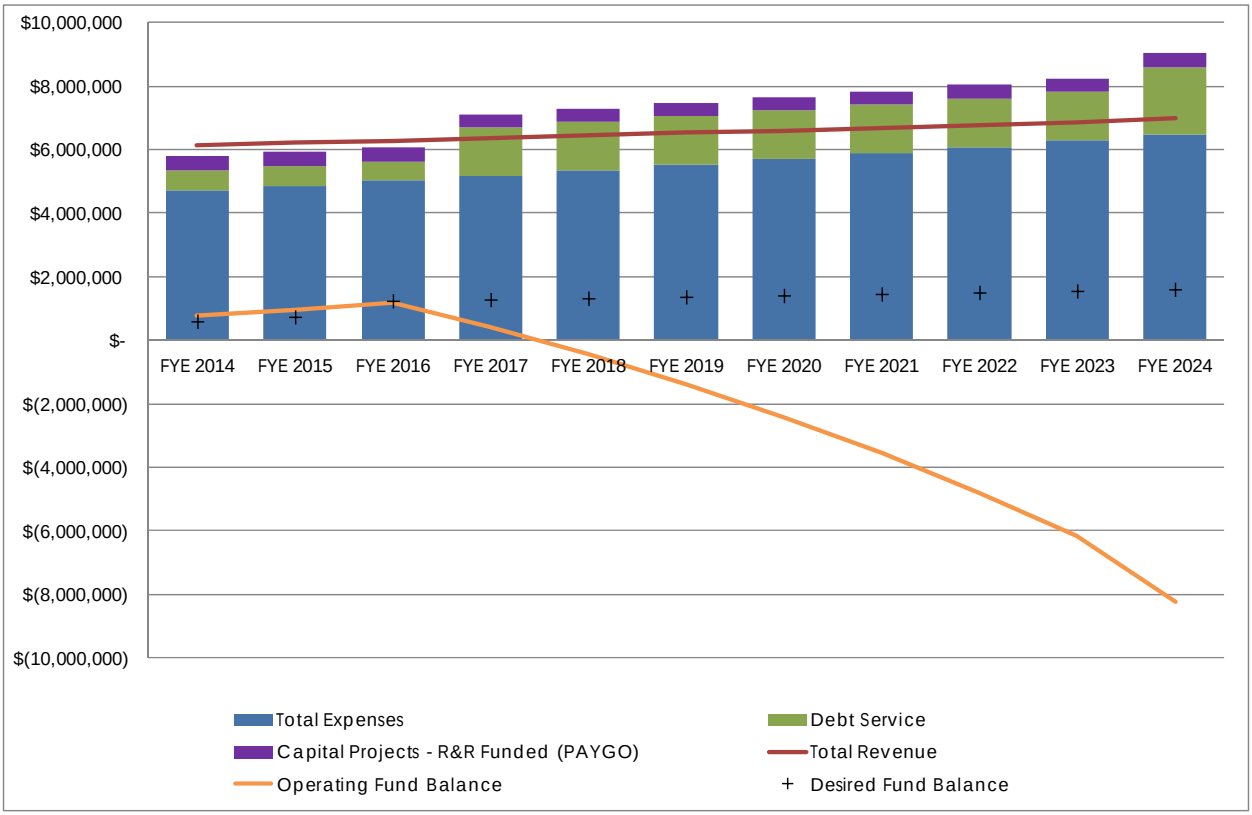
Throughout the study period, debt service costs related to principal and interest on the existing and proposed debt service, account for roughly eighteen percent (18%) of the wastewater fund's expenditures. Revenues must be targeted to ensure the City meets its debt service coverage requirements, of 1.25, on any existing and proposed debt service.

The City prepared a list of wastewater related capital improvements that addresses both current and future wastewater system needs. The mandated upgrades and improvements to the WPCP are expected to be financed through debt issuance in the form of a State Revolving Loan. The analysis in this study assumes $24 million will be financed ($21 million in plant improvements, $1.5 for engineering costs, and an additional $1.5 million contingency) using the State Revolving Loan with an interest rate of 2.2%. Furthermore, annual payments of $1,497,000 will not commence until 2017. Additionally, an estimated $1.8 million will be used to fund necessary infrastructure improvements to the wastewater collection system over the next five years (2013 through June 30, 2017).

In order to maintain financial flexibility, the City has established an operation reserve policy for the wastewater fund of maintaining a minimum operating reserve of 90 days operating expenses, and a maximum reserve of 120 days. This amount is currently estimated at nearly $1.606 million of operating expenses, and is included in the analysis. The proposed operating reserves would be used in instances of unanticipated reductions in revenue due to periodic reductions in customer discharge, dramatic short-term increases in expenditures, or mismatches in the timing of expenses and revenues.

Figure 3 demonstrates the Baseline Scenario for the Wastewater Fund. This represents the current and projected financial conditions over the next ten years of the Sewer utility, absent any revenue adjustment (increases). As the figure illustrates, existing revenue levels are unsustainable and the wastewater fund is forecasted to run at a loss beginning in 2017.

Figure 3: Wastewater - Baseline Financial Scenario



The declining orange line (lower line) shows the fund's projected ending cash balance. While short-term drops or dips of reserve levels are acceptable, the continued downward trend must be reversed with revenue adjustments.

Revenue Requirement Summary

Given the existing financial condition of the utility, without near term revenue adjustments, the City's wastewater fund will not be able to meet its targeted objectives. As such, Willdan engaged in discussion with City staff to develop a financial plan and rate structure that provides gradual adjustments and ensures financial stability throughout the study period. Numerous financial scenarios were analyzed and presented over the course of the study. Various possible levels of reserve and depreciation funding were evaluated, as were methods of funding capital repair and replacement projects. The results and recommendations provided in the analysis were presented to the City Finance Subcommittee and subsequently on April 16, 2013 to the City Council. Assuming City Council decides to continue forward with a proposed rate increase, a Proposition 218 Notice will be mailed to ratepayers on May 12, 2013 announcing the time and place for the public hearing that must be held under the requirements of Proposition 218. The recommended financial scenario was structured and analyzed to ensure a positive net income within the five-year study period and to maintain compliance with the City's Debt Coverage Ratio. The financial condition of the wastewater should be analyzed and re-evaluated after the five year period to be addressed by this proposed rate increase, and any future rate adjustments discussed at that time.

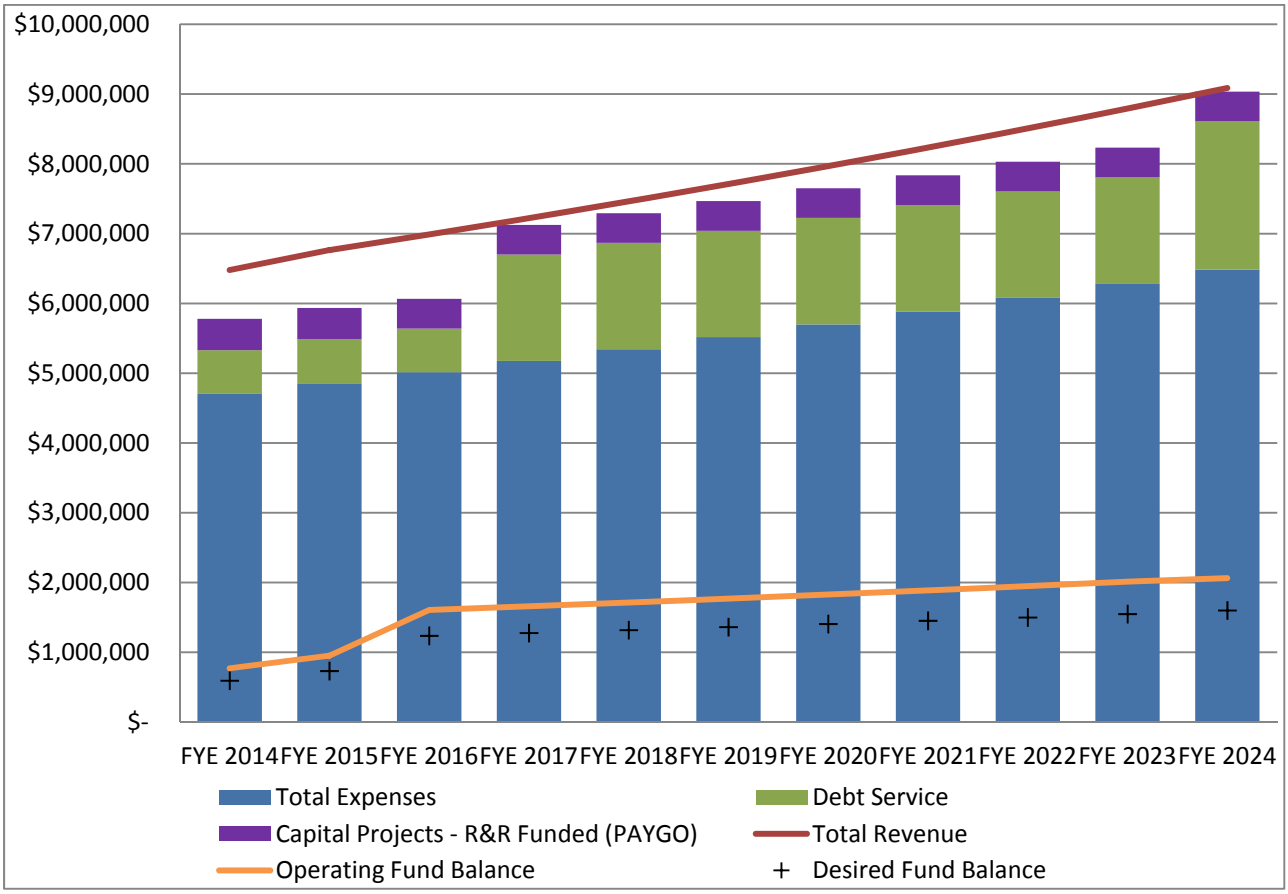
Figure 4 details the existing and projected expenditures of the wastewater fund and the corresponding impact of the revenue adjustments on the fund's financial health.

Figure 4: Wastewater - Revenue Requirements Analysis

Fund	Description Title	Escalation Code	Account #	FYE 2014	FYE 2015	FYE 2016	FYE 2017	FYE 2018
				1	2	3	4	5
	Revenue from Rates			Current Year	Projected			
648	Pinole Usage Charges	GS		4,042,504	$ 4,042,504	$ 4,042,504	$ 4,042,504	$ 4,042,504
648	Sewer Plant - Hercules	GS		2,078,348	2,149,399	2,222,929	2,299,027	2,377,784
648	Sewer Maint. - Hercules	GS		1,693	1,693	1,693	1,693	1,693
	Total Operating Revenue			$ 6,122,545	$ 6,193,596	$ 6,267,126	$ 6,343,224	$ 6,421,981
	Additional Rate Revenue Required							
	Fiscal Year	**Revenue Increase**	**Months Effective**					
	FYE 2014	10.0%	10	$ 336,900	$ 404,300	$ 404,300	$ 404,300	$ 404,300
	FYE 2015	3.3%	12		146,700	146,700	146,700	146,700
	FYE 2016	3.3%	12			151,600	151,600	151,600
	FYE 2017	3.3%	12				156,600	156,600
	FYE 2018	3.3%	12					161,800
	Total Additional Rate Revenue			$ 336,900	$ 551,000	$ 702,600	$ 859,200	$ 1,021,000
	Total Required Revenue			$ 4,379,404	$ 4,593,504	$ 4,745,104	$ 4,901,704	$ 5,063,504
	Total Revenue			$ 6,459,445	$ 6,744,596	$ 6,969,726	$ 7,202,424	$ 7,442,981
	Operation Expenses							
	SALARIES & BENEFITS							
	SERVICES AND SUPPLIES							
	FIXED ASSETS							
	EXPENDITURE TRANSFERS							
	Shared Operating Expenditures (Funds 648 & 650)			$ 4,156,697	$ 4,298,798	$ 4,445,858	$ 4,598,054	$ 4,755,569
	Total Operating Expenditures			$ 4,413,118	$ 4,564,987	$ 4,722,191	$ 4,884,922	$ 5,053,377
	Net Operating Income			$ 2,046,327	$ 2,179,609	$ 2,247,535	$ 2,317,502	$ 2,389,605
	Other Revenue							
	Total Non-Operating Revenue			$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ 20,000
	Capital Projects (funded by rates)							
	Total Capital Projects (funded by rates)			$ 450,000	$ 450,000	$ 425,000	$ 425,000	$ 425,000
	Non-Operating Expenses							
	Total Non-Operating Expenses			$ 290,000	$ 290,000	$ 290,000	$ 290,000	$ 290,000
	Debt Service							
	Total Debt Service			$ 626,329	$ 629,648	$ 627,310	$ 1,526,316	$ 1,524,323
	Targeted Debt Coverage Ratio			125%	125%	125%	125%	125%
	Calculated Debt Coverage Ratio			330%	349%	361%	153%	158%
	Net Income with depreciation			$ 699,998	$ 829,961	$ 925,225	$ 96,186	$ 170,282

Similar to the "Wastewater - Baseline Financial Scenario" figure above, Figure 5 forecasts the financial health of the wastewater fund; however, as opposed to the baseline scenario, the revenue adjustments provide a more positive outlook and allow for the funding of reserves.

Figure 5: Wastewater - Recommended Financial Scenario



Cost of Service Analysis

Following the discharge and revenue requirement analysis, the next stage is to distribute costs (revenue requirements) to functional components, and ultimately, to each customer class. The cost of service analysis is a systematic process by which revenue requirements are allocated by function to generate a classification of fair and equitable costs in proportion to the service received for each user class.

This section of the report discusses the allocation of operating and capital costs to the Flow, Suspended Solids (SS) and Biochemical Oxygen Demand (BOD) and Customer Cost parameters, the determination of unit rates, and the calculation of user class cost responsibility.

Cost Allocation by Function

The cost of service allocation conducted in this study is established on the flow and strength characteristics method, which is endorsed by the Water Environmental Federation (WEF). Under this method, costs of operating the wastewater utility are allocated first to the functional components (flow, BOD, SS and customer service). Costs are allocated to each function in a way that reasonably represents

the manner and use for which the costs are incurred. The result of this process is a percentage of operating costs attributable to each of the functional components. Next, revenue requirements are then allocated to the different user classes proportionate to their use of the wastewater system, based on the flow and strength characteristics associated with each customer class. Allocations are based on flow volume, SS, BOD, customer accounts, and wastewater monitoring. Costs associated with flow (determined in the first step described above) are allocated to customer classes based on each class's flow characteristics, costs associated with BOD are allocated based on BOD characteristics, and costs associated with SS are distributed in accordance with customer SS characteristics. Customer service and monitoring costs (generally fixed) are allocated to all customers. Use of this methodology results in a generally accepted cost distribution among customer classes and a means of calculating and designing rates to proportionately recover those costs.

Figure 6 presents the operating expenditures broken down by function. This analysis is important in order to determine an appropriate and reasonable means of allocating debt service requirements and future capital projects to utility demand.

Figure 6: Distribution of Expenditure by Function

	Rate Revenue Required	Flow Volume	BOD	SS	Customer Accounts
Percent Allocation	100%	12.6%	25.2%	25.2%	37.0%
Fiscal Year Ending					
FYE 2014	$ 4,379,404	$ 551,934	$ 1,103,867	$1,103,867	$1,619,735
FYE 2015	4,593,504	578,917	1,157,833	1,157,833	1,698,921
FYE 2016	4,745,104	598,023	1,196,045	1,196,045	1,754,991
FYE 2017	4,901,704	617,759	1,235,518	1,235,518	1,812,910
FYE 2018	5,063,504	638,150	1,276,301	1,276,301	1,872,752
FYE 2019	5,230,604	659,210	1,318,420	1,318,420	1,934,554
FYE 2020	5,403,204	680,963	1,361,925	1,361,925	1,998,391
FYE 2021	5,581,504	703,434	1,406,867	1,406,867	2,064,336
FYE 2022	5,765,704	726,648	1,453,297	1,453,297	2,132,463
FYE 2023	5,956,004	750,632	1,501,263	1,501,263	2,202,846
FYE 2024	6,152,504	775,396	1,550,793	1,550,793	2,275,522

The separation of costs into these functional components provides the means for further allocation to the customer classes based upon their respective demand of each function. The resulting distribution percentages are utilized to allocate annual required revenue to each customer class based on the class' respective demand on the system.

Rate Design Analysis

The final step of the rate study is the design of the wastewater rates to collect the desired level of revenue determined in the revenue requirement analysis. During this analysis, consideration is given to the levels of the rates. This section reviews the proposed wastewater rate design for the City.

Criteria and Considerations

In determining the appropriate rate level and structure, Willdan, in conjunction with City staff, analyzed various financial scenarios concerning the proposed adjustments and the implications attributed to those decisions.

Listed below is a simplified list of the design considerations that were reviewed:

- Consideration of the customer's ability to pay
- Clear and understandable rates
- Ease of administration
- Revenue stability (month to month and year to year)
- Efficient allocation of resources
- Implementation of Capital Improvements (rate of improving the existing system)
- Fair and equitable (cost-based) rates
- Compliance with legal and regulatory requirements

When developing the proposed rates all of the aforementioned criteria were taken into consideration. Determining the appropriate balance is crucial, as some of the criteria occasionally conflict with one another, i.e. the customer's ability to pay and cost-based rates. In designing rates, there will always be concessions between the various objectives; however, the proposed rates meet all of the leading objectives of the City as discussed with staff and the City Council.

Existing Rate Structure

The existing rate structure is a fixed monthly charge per dwelling unit for Single Family and Multi-Family units and a flat rate per unit of flow for all other customer classes.

Proposed Rate Structure

Willdan recommends keeping a monthly flat rate for Single Family and Multi-Family classes and a flat rate per unit of flow for all remaining classes. Some components and characteristics of the rate structure and customer classes were modified to reflect the current analysis and allocation of the costs incurred based on the discharge data of the utility over a three year span, along with industry standard information. Below are the proposed components of the recommended rate structure – while each customer class' rate(s) is comprised of these charges, the specific rates may differ based on demand.

> ***Fixed Charge:*** This charge has been updated to reflect the cost of service related to the number of dwelling units for Single Family and Multi-family classes.
>
> ***Variable Charge:*** This charge has been updated to reflect the cost of service related to the projected discharge and discharge characteristics, for all remaining classes.

Rate Recommendations

The proposed revenue adjustments as a percentage do not equal or necessarily correlate to an equivalent percentage increase to rates or monthly bills. The results of the cost-of-service analysis and rate redesign will affect users differently, at both the customer class and account level.

Wastewater Charge

100% of expenditures are distributed and recovered via rates that reflect a customer's discharge volume and strength characteristics. This determination is made through the cost of service analysis conducted in a preceding step of this process. Figure 7 provides the rates and basis for billing for each of the customer classes.

Figure 7: Recommended Wastewater Charges

		July 1, 2013	July 1, 2014	July 1, 2015	June 30, 2016	July 1, 2017
	Billing Units	Monthly Charge Rate	Monthly Charge Rate	Monthly Charge Rate	Monthly Charge Rate	Monthly Charge Rate
Single Family	DU	$ 54.10	$ 56.74	$ 58.62	$ 60.55	$ 62.55
Multiple Family	DU	$ 45.20	$ 47.41	$ 48.97	$ 50.59	$ 52.26
Auto Steam Cleaning	CCF	$ 18.16	$ 19.05	$ 19.68	$ 20.33	$ 21.00
Bars without dining facilities	CCF	$ 6.41	$ 6.73	$ 6.95	$ 7.18	$ 7.41
Commercial Laundries	CCF	$ 8.24	$ 8.65	$ 8.93	$ 9.23	$ 9.53
Restaurants	CCF	$ 17.03	$ 17.86	$ 18.45	$ 19.06	$ 19.69
Gasoline And Oil Dealers/Service Stations	CCF	$ 7.33	$ 7.69	$ 7.94	$ 8.21	$ 8.48
Hospitals/Health Services	CCF	$ 5.03	$ 5.28	$ 5.45	$ 5.63	$ 5.82
Hotels With Food	CCF	$ 12.01	$ 12.60	$ 13.02	$ 13.45	$ 13.89
Hotels Without Food Service	CCF	$ 5.44	$ 5.70	$ 5.89	$ 6.08	$ 6.28
Office	CCF	$ 5.95	$ 6.25	$ 6.45	$ 6.66	$ 6.88
Retail/Department Store	CCF	$ 5.00	$ 5.25	$ 5.42	$ 5.60	$ 5.79
General Commercial (All Other)	CCF	$ 6.49	$ 6.81	$ 7.04	$ 7.27	$ 7.51
Schools	CCF	$ 3.59	$ 3.77	$ 3.89	$ 4.02	$ 4.15
General Institutional (All Other)	CCF	$ 5.38	$ 5.64	$ 5.82	$ 6.02	$ 6.22

Customer Impacts

The recommended rates will provide the City with the necessary revenue to provide continued quality service, without a significant impact on the average ratepayer. The figure below provides a sample bill for the single-family residential customers. The black box represents the difference between the existing and proposed July 1, 2014 rates.

Figure 8: Single-Family Monthly Bill Comparison