Return to Agenda

MARINA COAST WATER DISTRICT

FINANCIAL PLAN AND RATE AND FEE STUDY

August 2013

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MARINA COAST WATER DISTRICT

FINANCIAL PLAN AND RATE AND FEE STUDY

TABLE OF CONTENTS

Page

1.0 INTRODUCTION 2
1.1 Marina Coast Water District Background 2
1.2 Current Rates and Fees 3
1.3 Forward-Looking Statement 5
2.0 OVERVIEW OF RATE SETTING PROCESS 6
2.1 Assumptions & Data 7
2.1.1 Project Objectives 7
2.1.2 Growth and Water Demand 7
3.0 REVENUE REQUIREMENTS ANALYSIS 10
3.1 Introduction 10
3.1.1 Existing Financial Position 11
3.2 Existing Operating Expenditures 12
3.2.1 Operating Needs 12
3.2.2 Debt Service 13
3.2.3 Debt Service Coverage 14
3.2.4 Capital Projects 15
3.2.5 Policy Driven Needs 18
3.3 Existing Revenues 18
3.3.1 User Rates 19
3.3.2 Other Revenues 19
3.4 Recommended Revenue Requirements 20
4.0 COST OF SERVICE ANALYSIS 22
4.1 Water Cost of Service 22
4.1.1 Water Functional Cost Components 22
4.1.2 Allocation to Functional Components 23
4.1.3 Unit Cost Calculations 24
4.1.4 Functional Allocation Impact 25
4.1.5 Customer Class Allocation 25
4.2 Sewer Cost of Service 27
4.2.1 Sewer Functional Cost Components 27
4.2.2 Unit Cost Calculations 28
5.0 RATE DESIGN ANALYSIS 30
5.1 Selecting Rate Structures 30
5.2 Recommended Water Rates 30
5.2.1 Fixed Charge 31
5.2.2 Commodity Rates 33
5.3 Sewer Rate Recommendations 35
5.3.1 Sewer Rates per EDU 35
5.4 Fire Meter Service Charges 36
5.5 Customer Impacts 36
5.5.1 Water Rate Comparison 38
6.0 CAPACITY FEE UPDATE 39

1.0 INTRODUCTION

The Marina Coast Water District (MCWD) engaged Carollo Engineers to develop an agency wide financial plan and conduct a water and sewer rate and fee study (study). This study includes the development of a five-year financial plan, cost-based water and wastewater user charges through a comprehensive cost of service and rate design analysis, as well as an update of the District's water and sewer capacity fees.

MCWD operates public water and sewer utilities that are responsible for providing service to the approximately 38,000 residents, as well as many public and commercial institutions. Customers of the water and sewer utilities are located in two service areas, Central Marina (Marina) and the Ord Community (Ord). The operations of the District are further split between water and sewer, resulting in four cost centers, Marina Water, Marina Sewer, Ord Water, and Ord Sewer. The cost centers are maintained as separate enterprises; having distinct budgets, user rates and fees, capacity fees, capital improvement plans, and operating, capital, and bond reserves.

In order to develop updated user rates, an in-depth study of each cost center's revenue needs, customer usage characteristics, capital improvement program (CIP), and additional future drivers of service costs and revenue was conducted. This report documents the methodology and assumptions used to develop the financial plan, the policy decisions reached, the proposed water and wastewater rates, and the customer bill impacts.

1.1 Marina Coast Water District Background

The Central Marina service area has a current population of approximately 18,000 residents. Marina Water's current deliveries total approximately 750,000 hundred cubic feet (hcf) per year to its 3,800 customer accounts. Marina Sewer currently serves approximately 3,700 accounts totaling 7,200 equivalent dwelling units (EDUs).

In August 2005, the Central Marina and Ord Community water systems were connected; integrated operations allow water to flow between the two systems to meet peak demands and improve overall services. The amount of water exchanged between the systems is automatically monitored and recorded. In July 2007, the California Department of Public Health approved the consolidation of the water systems as Marina Coast Water District Water System.

Supply wells in Central Marina consist of three deep groundwater wells located in the 900-foot aquifer of the Salinas Valley Groundwater Basin. Water is treated at each well site for disinfection and to remove the naturally occurring hydrogen sulfide that can sometimes cause odor problems.

The Ord Community service area has a current population of approximately 20,500 residents. Ord Water's current deliveries total approximately 1,000,000 hundred cubic feet (hcf) per year to its 3,900 customer accounts. Ord Sewer currently serves approximately 3,100 accounts totaling 5,500 equivalent dwelling units (EDUs).

Supply wells in the Ord Community are from three groundwater wells located in the lower 180-foot and 400-foot aquifers of the Salinas Valley Groundwater Basin. Groundwater from these wells is also disinfected to provide the community with healthy and safe drinking water

1.2 Current Rates and Fees

The District last performed a cost of service water and sewer rate analysis in 2008. The 2008 report proposed five years of sizeable increases to fund capital improvements for all cost centers. Since that time, the District has not implemented the full-recommended rates. Lesser annual rate increases have been implemented as across the board increases, applying each cost center's revenue needs increase to the user rates.

Capacity fees for both water and sewer were also last updated in 2008 and since that time have been adjusted only slightly to their current levels. Table 1-1 and 1-2 summarize the existing Marina and Ord Community water and wastewater rate and fee structure, respectively. The rates consist of two parts: a monthly service charge assessed on the size of the meter, and a tiered water commodity charges for all water delivered. In addition, newer residents in the Ord Community also pay a $20.00 monthly capital surcharge to help fund capital expansion.

Table 1-1 below presents the existing rate schedule for Marina Water.

Table 1-1: Marina – Existing Rate Schedule

Marina Water Consumption Rates (per hcf)		
Tier 1	0 to 8 hcf	$2.29
Tier 2	9 to 16 hcf	2.79
Tier 3	17+ hcf	5.09
Marina Water Service Charges, by Meter Size		
5/8" - 3/4"	$18.85	
1"	47.09	
1 1/2"	94.19	
2"	150.68	
3"	282.52	
4"	470.87	
6"	941.75	
8"	1,883.49	
Marina Sewer Service Charges		
Sewer Charge (per EDU)	$9.15	
Marina Capacity Fees		
Water Capacity Fee (Per EDU)		$5,450
Sewer Capacity Fee (Per EDU)		$3,950

Table 1-2: Ord – Existing Rate Schedule

Ord Water Consumption Rates (per hcf)		
Tier 1	0 to 8 hcf	$2.33
Tier 2	9 to 16 hcf	3.27
Tier 3	17+ hcf	4.22
Ord Water Service Charges, by Meter Size		
5/8" - 3/4"	$17.11	
1"	42.76	
1 1/2"	85.49	
2"	136.78	
3"	256.47	
4"	427.45	
6"	854.89	
8"	1,709.79	
Ord Sewer Service Charges		
Sewer Charge (per EDU)	$25.26	
Ord Capacity Fees		
Water Capacity Fee (Per EDU)		$5,750
Sewer Capacity Fee (Per EDU)		$2,150

In addition to general water rates, both water cost centers maintain current fire service rates. The fire rate is a flat fee of $20.00 per month for each service. Residential users with upsized meters currently pay the monthly meter charge associated with the larger meter. Based on available records, Carollo's detailed review of billings records found that of the 289 fire service accounts, only 29 are currently being billed. Based on discussions with District staff, the additional unbilled accounts will have to be researched to determine the appropriate charge.

The current water rate structure applies equal monthly service fees and usage charges per unit of water (748 gallons or one hcf) to all customer classes (excluding temporary accounts). Monthly charges for sewer service are calculated based on the number of equivalent dwelling units (EDUs) serviced by each account. EDUs are calculated based on each account's wastewater demand factor; a table of these factors is shown in Appendix A for reference.

1.3 Forward-Looking Statement

The projections and forecasts of this analysis are based on reasonable expectation of future events. Additionally, Carollo did not audit nor verify the accuracy of the District's customer billing or financial records used as the foundation of this analysis. Should cost escalation, operating expenditures, or capital needs vary from projected levels prior to Fiscal Year Ending (FY) 2018, the District may require an additional Proposition 218 process to increase rates above currently projected levels. The District may similarly be required to begin a new Proposition 218 process should revenues not materialize as projected.

2.0 OVERVIEW OF RATE SETTING PROCESS

Rate analyses are typically performed every few years so that revenues from rates are adequately funding utility operations, maintenance, and ongoing capital needs. Additionally, in California, water rates must adhere to the cost of service requirements imposed by Proposition 218 and the State Constitution. Proposition 218 requires that property related fees and charges, including water rates, do not exceed the reasonable and proportional cost of providing the service. Article X (2) of the State Constitution establishes the need to preserve the State's water supplies and discourage the wasteful or unreasonable use of water by encouraging conservation.

To achieve these requirements, a comprehensive rate study typically consists of following progression of three interconnected processes.

Revenue Requirement Analysis:

- Compares the existing revenues of the utility to its operating, capital, and policy driven costs in order to determine the adequacy of the existing rates to fully recover the utility's costs.

Cost of Service Analysis:

- Identifies and apportions annual revenue requirements to functional rate components based on its application of the utility system.

Rate Design:

- Considers both the level and structure of the rate design to collect the distributed revenue requirements from each class of service

Within the standard approach and legal requirements, there is significant flexibility in a cost-of-service application to develop rates that appropriately and adequately reflect the distinct and unique characteristics of a utility and the values of the community.

2.1 Assumptions & Data

2.1.1 Project Objectives

Marina Coast Water District retained Carollo to perform a water rate and revenue study to achieve three primary objectives:

- Conduct a cost of service study to determine the appropriate rate and charge levels that are consistent with legal requirements
- Create water and sewer rates that provide sufficient and predictable revenues to adequately fund expenditures and funding of reserves;
- Within the principles of Proposition 218, design rates that promote efficient use of water to meet the State's 20x2020 (SB 7x-7) mandate
- Develop a capital financing plan to fund the District's five year Capital Improvement Plan (CIP) and provide a financial foundation for capital projects in future years

2.1.2 Growth and Water Demand

Water sales are the primary source of revenues; thus, it is critical to examine and validate potential shifts in short and long-term water demands. For the purposes of understanding potential usage reductions, Carollo prepared a water demand analysis consisting of the previous thirty-three months of billing data and over ten years of water production records. This data along with the growth projections of the 2010 Marina Coast Water District Urban Water Management Plan (UWMP) was reviewed to examine historical patterns and potential developing trends.

As illustrated in Figures 2-1 and 2-2, both the Marina and Ord Water experienced sizable swings in annual water production (as proxy for demand) with no discernable trend. Given the current rate structure and dependency on commodity charges, these swings in water consumption significantly affect the District's ability to accurately predict revenues on an annual basis. As described later within this report, the proposed reserve targets and rates are designed to mitigate some financial instability associated with the usage and revenue volatility.

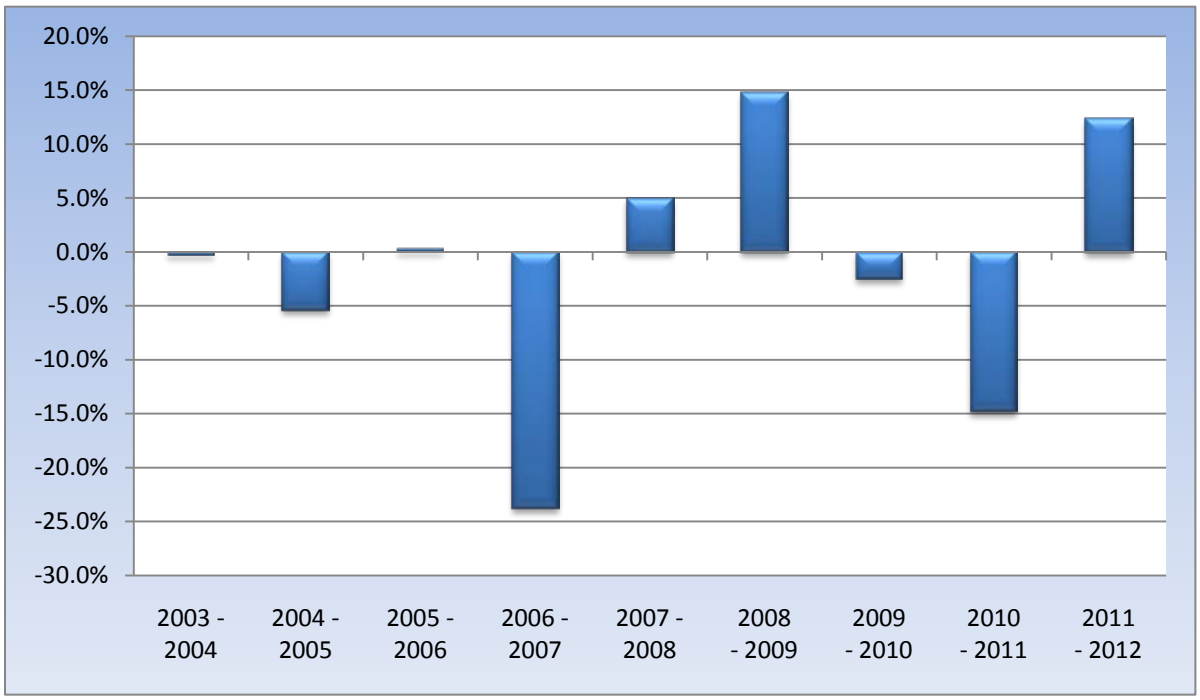


Figure 2-1: Marina Water Annual Change in Water Production

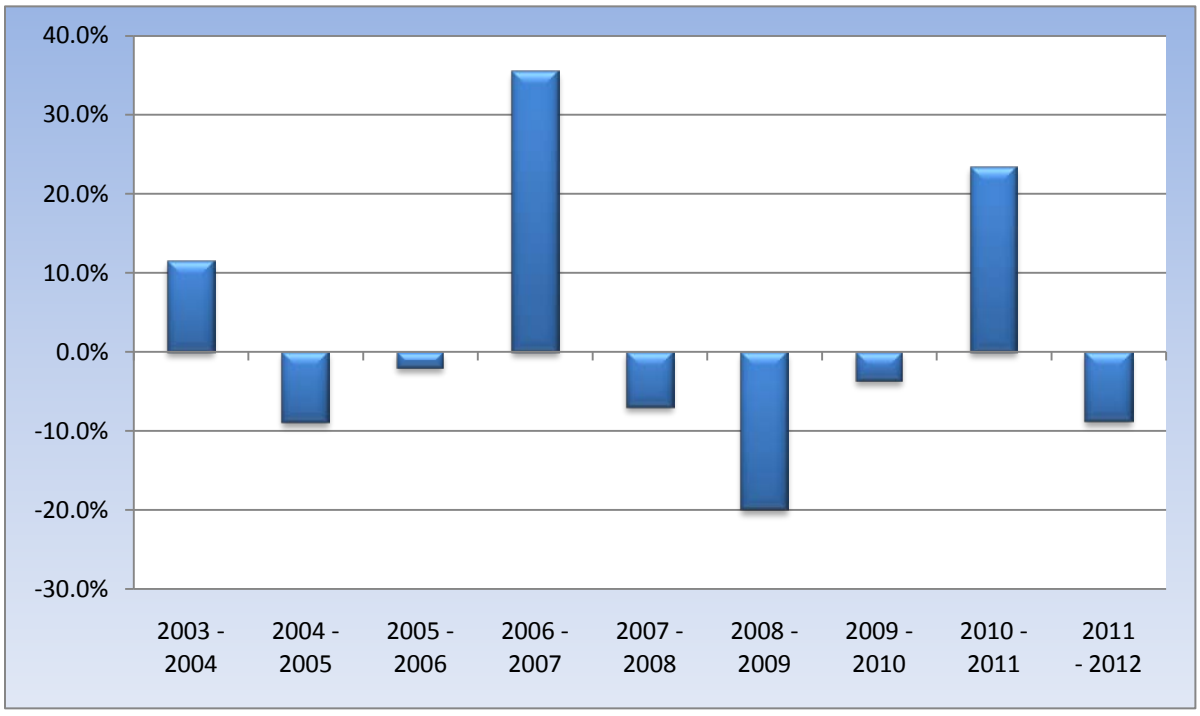


Figure 2-2: Ord Water Annual Change in Water Production

Upon analysis of historical consumption and billing data, it was found that the growth predictions of the District's 2010 Urban Water Management Plan (UWMP) might have been overly aggressive given the continued consequence of the economic downturn. In the practice of financial planning and rate setting for water and wastewater utilities, aggressive growth assumptions are often cause for concern. Rates and fees are developed based on the predicted number of accounts and on predicted levels of consumption, therefore, growth not materializing as expected leads to insufficient collection of revenues. These concerns were discussed with district staff, and it was agreed upon that the growth figures of the UWMP would be adjusted downward for the rate study in order to minimize financial risk.

According to the UWMP, the population of the Central Marina service area will increase from approximately 16,800 in 2010 to approximately 24,000 in 2020, an annualized growth rate on 3.6 percent. However, this analysis assumes a more conservative annual customer account growth of just over 1.0 percent over that same time period. Equal annual account growth escalators were applied to both Marina Water and Marina Sewer.

The population of the Ord Community service area is expected to increase from approximately 15,300 in 2010 to approximately 34,000 in 2020, an annualized growth rate of 7.6 percent. Given the realized growth rate since 2010 is considerably lower, Carollo has adjusted the analysis with a forecasted annual customer account growth of 4.3 percent Again, equal annual account growth escalators were applied to both Ord Water and Ord Sewer.

In its last fiscal year, Marina Water sold approximately 740,000 units of water. Over the course of the study, through FY2018, demand is forecasted to rise to 815,000 hcf. This increase constitutes nearly a 10% increase in overall consumption as compared to FY2012. This forecast is based on historical trends and reflects the reductions to the UWMP predictions.

In FY2013, Ord Water sold approximately 940,000 units of water. Demand is forecasted to rise to 1.3 million hcf by FY2018. This increase constitutes nearly a 38% increase in overall consumption as compared to FY2012. This forecast is based on historical trends and reflects the reductions from the UWMP. Should demands or other major assumptions, significantly vary from forecasted levels, the District may need to update its financial plan and rates to adequately fund operations.

3.0 REVENUE REQUIREMENTS ANALYSIS

3.1 Introduction

The adequacy of the existing rate structure can be measured by comparing revenue requirement projections against revenues projections under existing rates. If revenue projections under existing rates do not meet forecasted requirements, rates need to be adjusted.

The FY2013 budget for each cost center was used as the base year for O&M costs. The foundation of the analysis is based on relevant financial information provided by the District including: existing debt service and future payments, current reserve ending fund balances, other future expenses, other future revenues, and other miscellaneous financial information.

The first step in a rate analysis is to prepare the revenue requirements for both water and sewer cost centers. This analysis has two main purposes – it serves as a means of evaluating each cost center's fiscal health and adequacy of current rate levels, and it sets the basis for near- and long-term rate planning.

The revenue requirement is derived of five components: Operations and Maintenance (O&M), Annual Debt Service; Policy Requirements & Coverage; Capital Expenditures; and, Offsetting Revenues.

There are two tests utilized to define the annual revenues necessary to provide both sufficient (1) cash flow and (2) debt coverage. These sufficiency tests are commonly used to determine the amount of annual revenue that must be generated from an agency's rates.

- Cash Flow Sufficiency Test – The cash flow test defines the amount of annual revenues that must be generated in order to meet annual expenditure obligations of the utility.

- Bond Coverage Sufficiency Test – Bond coverage refers to the collection in revenues to meet all operating expenses and debt service obligations plus an additional multiple of that debt service. MCWD has a legally required minimum bond coverage ratio of 1.25x on senior debt (2006 series bonds) and 1.10x on junior debt (2010 series bonds); however, for the purpose of prudent financial planning the bond coverage test was set to meet a 1.35x coverage ratio senior debt service and a 1.20x coverage ratio for junior debt service.

  Revenues must be sufficient to satisfy both tests. If revenues are found to be deficient through one or both of the tests, then the greater deficiency (shortfall) drives the rate increase.

The cash flow test identifies projected cash requirements in each given year. Cash requirements include O&M expenses, debt service payments, policy-driven additions to working capital, miscellaneous capital outlays, replacement funding, and rate-funded capital

expenditures. These expenses are compared to the total annual projected revenues. Shortfalls are then used to estimate needed rate increases.

The bond-coverage test measures the ability of a utility to meet legal and policy-driven revenue obligations. Given the District's existing debt obligations, it is required to collect sufficient funds through rates to meet all ongoing O&M expenses, as well as 1.25 times (1.35x as tested) the total senior debt-service requirements, and additionally 1.10 times (1.20x as tested) the total junior debt-service requirements due in a year.

Currently, the District meets its debt service coverage requirements through a combined coverage test in which total debt service (allocated amongst all four cost centers) is tested against the total revenues generated by all cost centers. It is the recommendation of this study that for increased equity between cost centers that each cost center be responsible for generating its own proportionate share of the coverage-required revenues. While the District would continue to utilize a combined coverage test for its legal obligations, each cost center's revenue requirements will be set to individually recover its apportioned debt service and coverage obligations. Simply, if debt is incurred by a cost center, the same cost center is burdened with the repayment of the debt and debt coverage obligations.

3.1.1 Existing Financial Position

Marina Water is currently financially stable. Proposed revenue adjustments for Marina Water are driven by the desire to continue that state of well being, as well as to smooth rate increases ahead of increased capital expenditures in future years. Marina Water maintains sufficient operating reserves in excess of the six-month (180 day) minimum operating target. It is has capital reserves in excess of the minimum $1.0 million target for each cost center.

The Marina Sewer cost center requires revenues increases to meet its financial obligations; both coverage and cash flow needs drive proposed revenue increases in the near term. Currently, Marina Sewer is not meeting is desired minimum operating reserve levels as recent expenditure levels have exceeded available revenues. Immediate increases are required to fund the existing 25 percent reserve deficiency. In subsequent years, debt coverage will become the main driver of Marina Sewer rate increases as the issuance of future debt is assumed to fund much of the proposed Marina Sewer CIP.

Ord Water is projected to end the current fiscal year with 17 percent of its desired minimum operating fund balance. In addition, Ord Water has a significant capital program to repair or replace existing infrastructure. As such, necessary increases are required to generate a positive cash flow and return the Ord Water cost center to a self-sustaining enterprise. Following a return to positive cash flow, debt coverage will become the main driver of future rate increases as the issuance of future debt is assumed to fund much of the proposed CIP.

Ord Sewer is projected to end the current fiscal year with fully funded operating and capital reserves. Although sizeable increases are not recommended at this time, the District has

identified significant capital needs in the near term (next five years). To minimize the overall ratepayer impact, based on discussions with District staff, these capital projects will be undertaken over a longer ten-year time horizon. Similar to the other cost centers, the use of debt is assumed to mitigate the upfront cash outlay of projects and to align payments of the asset with its useful life.

3.2 Existing Operating Expenditures

For sound financial operations of the District's water and sewer systems, the revenues generated by each cost center must be sufficient to meet the expenditures or cash obligations of each cost center. The revenue needs are defined as the amount of revenues that must be recovered through water or sewer rates in order to cover annual expenditures, less any offsetting revenues. Offsetting revenues can include interest earnings and other non-operating revenues.

3.2.1 Operating Needs

Operating needs are expenditures that the each cost center incurs in the day-to-day operations of its systems – e.g., employee salaries and benefits, system maintenance, fuel, and chemicals

The District's FY2013 operating budget served as the basis for forecasting future operating expenses for each of the utilities. The budget was compared to prior year actual financial information to identify any anomalies or one-time expenditures not appropriate for forecasting in future years. District staff also reviewed the budget to identify costs that may need to be adjusted due to future operational changes. Unless manually calculated, future years were forecasted using escalation factors provided by District staff. These factors were assigned on a line-item basis using one of the following factors:

Table 3-1: Cost Escalation Factors

Cost Escalator	Description
Labor Cost Inflation	Labor rates are assumed to increase at 3%.
Construction Cost Inflation	Although capital cost inflation is commonly linked to the Engineering News Record (ENR) Construction Cost Index (CCI), the inflation rate assumes a long-term average of 3.5%.
General Cost Inflation	This rate applies to most expenses in the operating expense forecast, and the District's expected long-term inflation rate (3%).

3.2.2 Debt Service

The District's existing debt service payments are established in the debt repayment schedules. As part of the development of the budget, each debt obligation is allocated to each cost center, based on use of funds within each series, to reflect the benefit received. Marina Water's FY2013 annual payment for existing debt service is nearly $890,000 and roughly $260,000 for Marina Sewer. Ord Water and Sewer's existing annual debt service is $1.7 million and $250,000, respectively. For each cost center, existing debt service is comprised of three outstanding debt issues: the 2006 series bonds, the 2010 series bonds, and a small amount from a Fort Ord Reuse Authority (FORA) promissory note. Typically, debt is a preferred funding mechanism for large capital programs as the payments represent a capital investment to be paid over the life of the asset.

Tables 3-2 through 3-5 summarize the existing debt repayment schedule obligations for each of the four cost centers.

Table 3-2: Marina Water Debt Service Schedule

Fiscal Year	2006 Series Bond	2010 Refunding	FORA Prom. Note	Total Debt
FY2013	$594,759	$283,757	$8,489	$887,005
FY2014	601,607	282,657	6,367	890,631
FY2015	614,835	281,257	-	896,092
FY2016	584,648	280,956	-	865,604
FY2017	597,961	280,296	-	878,258
FY2018	611,103	280,676	-	891,779
FY2019	624,074	276,776	-	900,850
FY2020	831,327	511,826	-	1,343,153
FY2021	650,933	-	-	650,933

Table 3-3: Marina Sewer Debt Service Schedule

Fiscal Year	2006 Series Bond	2010 Refunding	FORA Prom. Note	Total Debt
FY2013	$174,502	$82,429	$1,981	$258,912
FY2014	173,083	81,999	1,486	256,568
FY2015	172,323	81,479	-	253,802
FY2016	166,584	81,268	-	247,853
FY2017	165,881	80,950	-	246,831
FY2018	165,064	80,924	-	245,988
FY2019	164,133	79,634	-	243,767
FY2020	184,886	146,608	-	331,495
FY2021	160,492	-	-	160,492

Table 3-2: Ord Water Debt Service Schedule

Fiscal Year	2006 Series Bond	2010 Refunding	FORA Prom. Note	Total Debt
FY2013	$1,197,606	$495,425	$14,431	$1,707,462
FY2014	1,187,688	494,425	10,824	1,692,937
FY2015	1,182,226	492,925	-	1,675,151
FY2016	1,143,005	493,425	-	1,636,430
FY2017	1,137,935	493,325	-	1,631,260
FY2018	1,132,080	495,125	-	1,627,205
FY2019	1,125,440	489,625	-	1,615,065
FY2020	1,265,748	910,875	-	2,176,623
FY2021	1,099,842	-	-	1,099,842

Table 3-3: Ord Sewer Debt Service Schedule

Fiscal Year	2006 Series Bond	2010 Refunding	FORA Prom. Note	Total Debt
FY2013	$529,501	$129,239	$3,396	$662,136
FY2014	527,018	129,769	2,547	659,334
FY2015	527,178	130,190	-	657,368
FY2016	508,107	131,200	-	639,308
FY2017	508,423	132,079	-	640,502
FY2018	508,428	133,525	-	641,953
FY2019	508,120	133,216	-	641,335
FY2020	592,379	252,441	-	844,821
FY2021	503,195	-	-	503,195

Eight years of debt service is shown as the debt service associated with the 2010 Series Bonds expires in FY2021. As such, approximately $290,000 in debt service cost is removed from Marina Water, and approximately $80,000 in debt service cost removed from Marina Sewer. As the Ord cost centers have a greater amount of debt, the will realize expenditure savings of $910,000 and 250,000, respectively between water and sewer. This helps mitigate the need for additional revenue adjustments and helps provide increased capital funding capacity in the form of both cash and the ability to issue new debt.

3.2.3 Debt Service Coverage

The District must meet debt service coverage requirement on its outstanding bond issues. As noted above, for the purposes of this rate analysis, the required debt coverage is 1.35x on the 2006 Series Bonds (Senior Debt) and 1.20x on the 2010 Series Bonds (Junior Debt), which means that the District's adjusted net revenues shall amount to at least 135 percent of the annual debt service. Once coverage of senior debt is established, the net revenues available for coverage of the junior debt must amount to at least 120 percent of the annual debt service. Annual debt service includes the annual principal and interest payments on outstanding debt. Under the proposed revenue adjustments, the District is forecasted to

meet and exceed the coverage requirements during each year of the study's planning period.

3.2.4 Capital Projects

The CIP includes a variety of capital projects that involve repairing (or replacing) existing assets and/or expanding system capacity to accommodate growth. Although all projects were identified, only projects related to the supporting the existing infrastructure are included in the rate analysis and proposed rates. Carollo worked with the District to identify and prioritize projects over the course of the study. Even so, the identified prioritized improvements would significantly increase rates. District staff assessed future capital needs and identified critical and non-critical capital projects over an extended time horizon. The identified CIP for each cost center is included for reference in Appendix B.

The prioritization of the capital program is based solely on staff direction and is not based upon an independent risk assessment. It is recommended the District update its Water and Sewer Master Plans, as well as, implement an asset management program to better identify and prioritize the needs of the each system.

Given the inability to increase rates to adequately fund the proposed CIP, revenue increases were capped based on direction from District staff. As such, rather than detail the specific projects to be funded, Carollo identified the forecasted funding potential of each cost center, available to pay for the proposed capital program. Without modifying the proposed revenue increases, Carollo evaluated various funding scenarios by modifying existing reserve levels and the utilization of debt. Although the District could potentially fund additional projects by utilizing reserves (lowering from existing levels), the Board believed it was best to maintain strong reserves in light of existing unknowns.

For illustrative purposes, Figure 3-1 identifies the capital funding potential for Marina Water given the proposed revenue adjustments. Under both scenarios, Marina Water is able to fund the proposed capital needs of the system over the next five years.

In addition, for reference, Carollo identified the cost center's estimated system depreciation over the same 5-year time horizon. This amount can be used as a benchmark for the reasonableness of the existing capital improvement program for an existing system. Furthermore, a funding level below the depreciation point would signify an under investment of capital and los in system equity on paid off assets. Marina Water is the District's only cost center to generate sufficient cash flow to fully reinvest depreciation.

Figure 3-1 defines Marina Water's capital funding potential, relative to planned capital improvements and system depreciation.

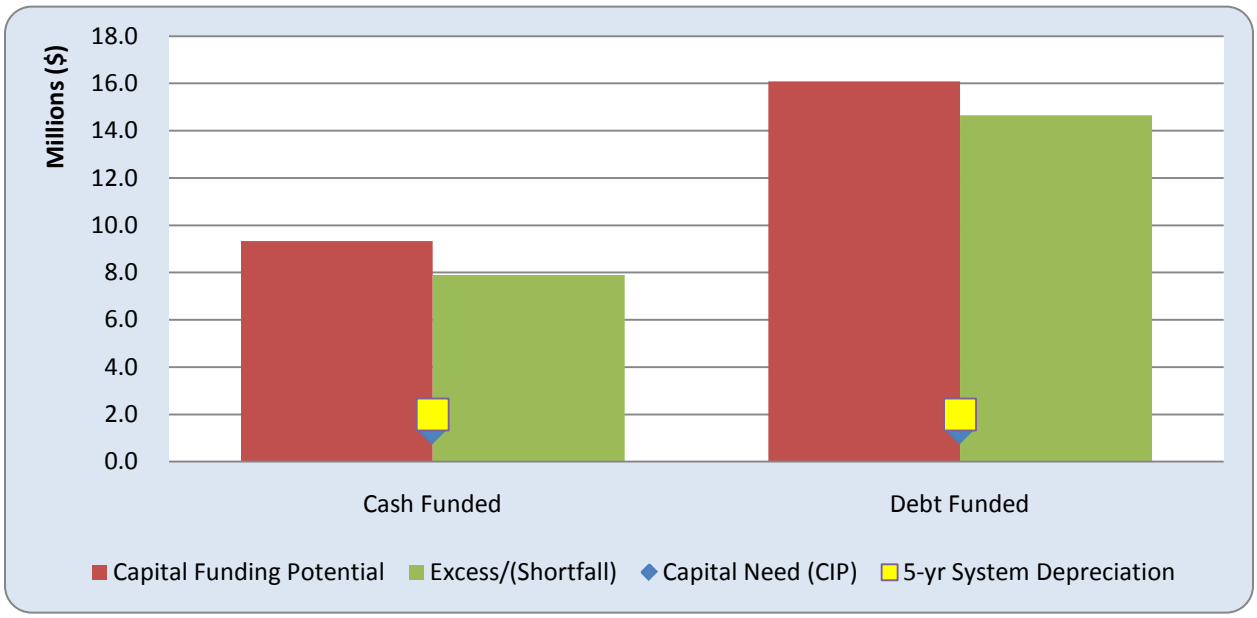


Figure 3-1: Marina Water – Five-Year Capital Funding Potential

Unlike Marina Water, even with the proposed revenue adjustments Marina Sewer is unable to fund the proposed capital improvement program. Under the cash option, the cost center also fails to fund the depreciation level. Although debt options were explored, Carollo explored this from a feasibility level. The District would have to seek funding to define the appropriate terms and conditions. General debt assumptions were applied as a tool for discussion purposes only.

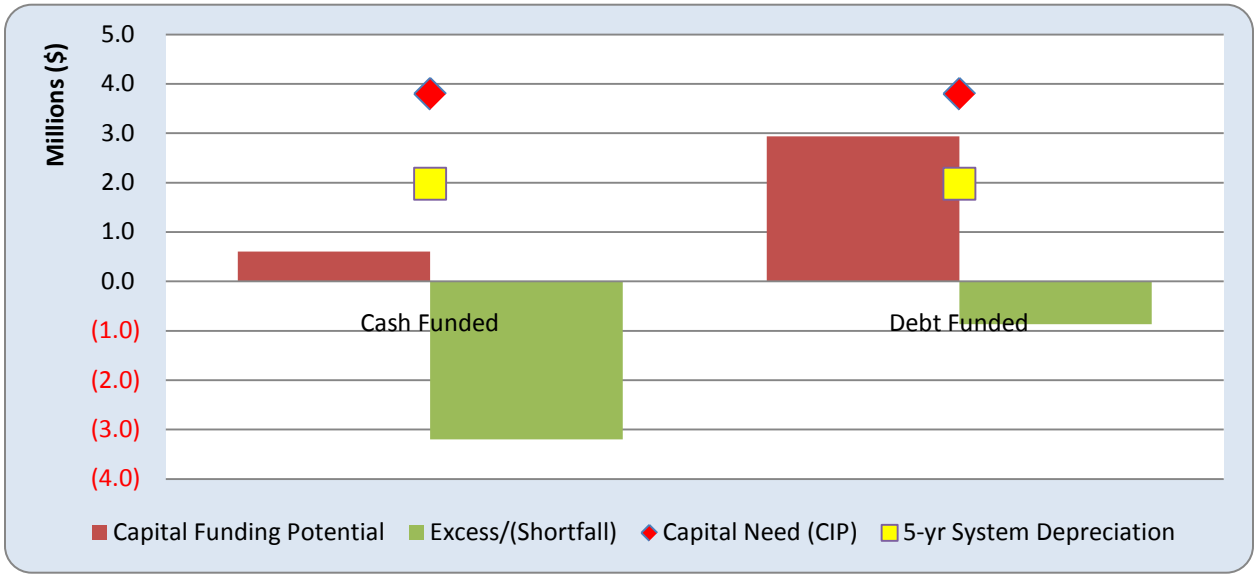


Figure 3-2: Marina Sewer - Five-Year Capital Funding Potential

Ord Water has the largest asset value of the four cost centers. As shown below, the proposed CIP is actually less than the calculated depreciation. Given the need to increase rates to generate sufficient cash flow and the significant improvement program, Ord Water is forecasted to be able to leverage proposed increases to fund capital projects with debt. The funding capacity assumptions for debt are highly sensitive to timing. Furthermore, the analysis did not analyze the District's ability to borrow, but simply included the costs and coverage requirements associated with a possible debt issuance.

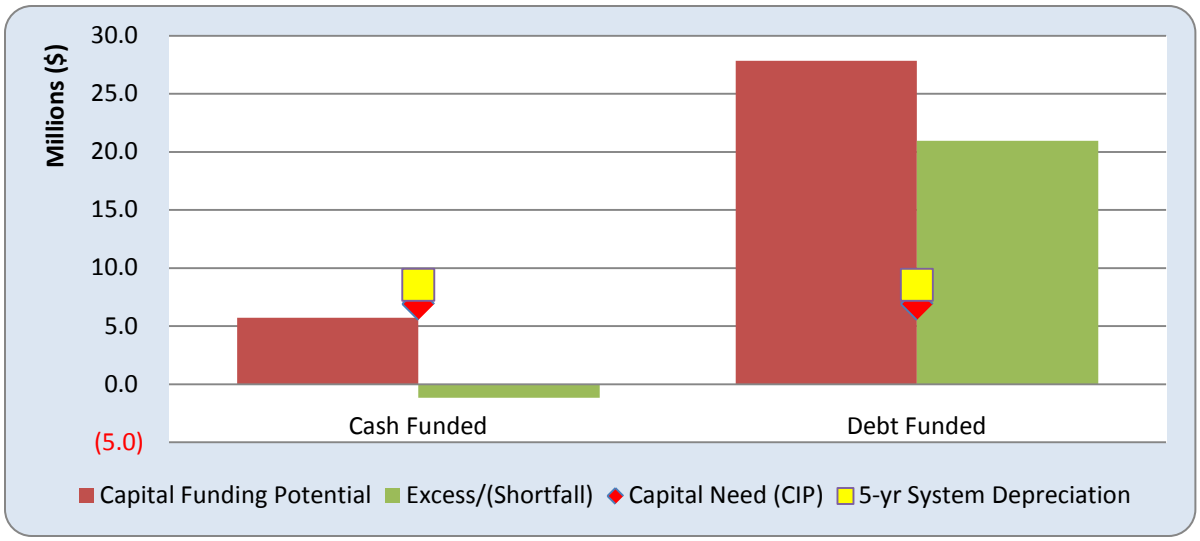


Figure 3-3: Ord Water - Five-Year Capital Funding Potential

Over the next five years, the District has identified a significant CIP program for Ord Sewer. However, looking to years 6-10, there are no proposed CIP expenditures. As such, the identified CIP is assumed to be spread over a 10-year horizon to smooth expenditures and minimize costs.

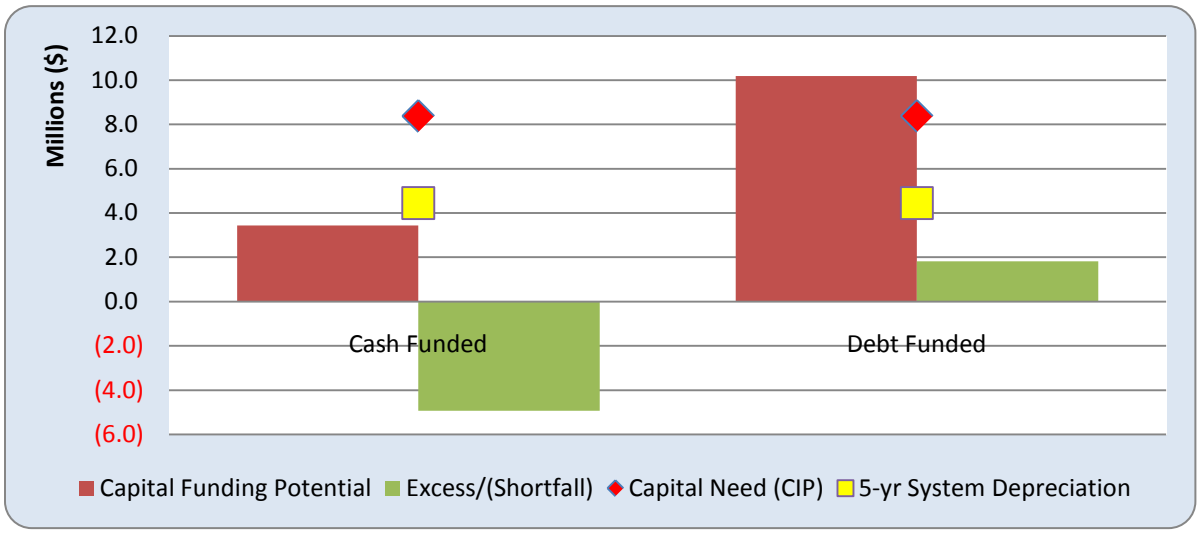


Figure 3-4: Ord Sewer - Five-Year Capital Funding Potential

As the District does not have an asset management program or a policy in place to define risk, this analysis assumes all projects can be deferred as presented within this report. Additionally, the analysis does not account for possible increases to operational expenditures associated with these future projects or possible increased capital costs due to emergency repairs. It is recommended the District establish a formal Repair and Replacement (R&R) program to help manage its assets from installation through disposal in a cost-effective manner. R&R programs provide the tools to better predict and maintain infrastructure to provide increases reliability, performance, and safety.

3.2.5 Policy Driven Needs

In addition to the operating and capital expenses, discussed above, there are also expenses resulting from policy decisions. Under current policy, the District has established both operating and capital reserves for each cost center. The revenue requirements analysis targets a total minimum operating fund balance equivalent to 180 days of operating expenses for each cost center as dictated by District policy. The minimum capital reserve target is $1 million for each cost center, again as dictated by District policy. As existing Marina Sewer and Ord Water are currently under the minimum operating reserve target, it is recommended that the District continue to closely monitor revenues and reserve levels.

The analysis explored and presented to the board multiple financial scenarios exploring the effects of lowered reserve targets on revenue needs and capital funding potential. Upon review, the board indicated that although the lowered reserves targets offered the benefit of increased capital funding potential, those benefits were out weighed by the financial security provided by the current reserve targets. Nevertheless, the reserve targets could be adjusted in the future as policy dictates to minimize rates or to smooth future rate increases.

3.3 Existing Revenues

Marina Water and Sewer currently generate total revenues of approximately $3.9 million and $800,000 per year, respectively. Ord Sewer currently generates total revenues of approximately $1.8 million per year. The vast majority (over 95 percent) of their revenue comes from user rates. The remaining revenue is generated from a variety of sources including administrative fees, capacity fees and surcharges, and interest income.

Ord Water currently generates total revenues of approximately $5.4 million per year. Table 3-5 shows revenues, by source, for the Ord Cost Center (FY2013 budgeted amounts).

Table 3-5: Ord Water Revenue by Source

Source	Revenue	Percent
Metered User Rates	$3,021,466	56%
Flat Rate Accounts	1,177,545	22%
Other Water Sales	915,000	17%
All Other Revenue	302,620	6%
Total	**5,416,631**	**100%**

The percentage of revenues generated by each source is expected to shift in the near term. The District is in the process of switching flat rate accounts to metered, shifting revenue generation to the Metered User Charges Source. The analysis assumes that this change will be revenue neutral. Another change expected to take place relates to the Other Water Sales. Revenues from this source are currently shown as cash, however, in reality they are payment for water usage by the Seaside Golf Course in the form of land assets. It is expected that after the next two fiscal years, this land for water deal will expire as the total contract amount of 5,000 acre feet of water will have been delivered. The analysis assumes that at this time, revenue from Other Water Sales will be collected as cash, and will be available to fund operating and CIP expenditures.

3.3.1 User Rates

User rate revenues are the primary revenue source of each utility. As detailed in Tables 1-1 and 1-2, user charges are comprised of a fixed and variable component. In FY2012, both water utilities generated over 30 percent of total rate revenue from fixed charges – with Marina Water at roughly 31 percent and Ord Water generating a slightly higher 34 percent. This fixed revenue versus variable revenue split is in line with the California Urban Water Conservation Council (CUWCC) BMP 1.4 advised target of collecting 30 percent of revenue from fixed charges.

All sewer service charges are fixed monthly charges based on the number of EDU's served by each account. Unlike Water, this rate structure provides a very predictable and steady source of funds for Marina and Ord Sewer.

In recent years, the Marina Sewer, Ord Water, and Ord Sewer cost centers have required inter-fund loans from other cost centers, primarily to assist in the funding of capital projects. The prepared revenue requirements analysis is designed to move away from this practice, and push these cost centers toward a state of self-sustainability.

3.3.2 Other Revenues

As mentioned earlier in this section, other revenues make up a very small portion of annual revenue for each cost center. Consequently, changes in other revenue have a minimal

impact on the revenue requirement analysis. In most cases, other revenues were escalated from the FY2013 budget based on general inflation and/or customer growth.

3.4 Recommended Revenue Requirements

Throughout the development of the proposed revenue requirements, multiple rate revenue forecasts were developed to explore the feasibility of funding future capital needs and options to mitigate ratepayer impacts. The extent of the proposed revenue adjustments is largely contingent on the funding and timing of capital projects. Two sets of financial scenarios were developed for each cost center. The first assumed that all capital projects would be cash funded; the second assumed that capital would be funded with a combination of cash and the issuance of additional debt.

Due to its strong financial health, revenue generation, existing reserves, and proposed CIP, Marina Water will be able to cash fund its CIP with minimal rate increases. Given the high amount of capital expenditures planned for Marina Sewer relative its operating revenue, funding of Marina Sewer's CIP will require the issuance of new debt along with delaying some projects to later years until increased funding capacity is available.

Proposed rate revenue increases are shown for Marina Water and Marina Sewer in Tables 3-5 and 3-6, respectively. The results of the revenue requirement analysis for Marina Water and Marina Sewer are summarized in Appendix C, Tables C-1 and C-2 respectively.

Table 3-5: Marina Water Revenue Adjustments Schedule

Fiscal Year	Revenue Adjustments	Revenues From Rate Increase
FY2014	3.00%	$58,721
FY2015	3.00%	$60,859
FY2016	3.00%	$63,744
FY2017	3.00%	$66,765
FY2018	3.00%	$69,930

Table 3-6: Marina Sewer Revenue Adjustments Schedule

Fiscal Year	Revenue Adjustments	Revenues From Rate Increase
FY2014	10.00%	$40,099
FY2015	10.00%	$44,384
FY2016	10.00%	$49,647
FY2017	10.00%	$55,534
FY2018	10.00%	$62,119

Given the high amount of capital expenditures planned for both Ord Water and Ord Sewer relative to the operating revenue generated by each cost center CIP funding will require the

issuance of new debt along with delaying some projects until increased funding capacity is available.

Proposed rate revenue increases are shown for Ord Water and Ord Sewer in Tables 3-7 and 3-8 respectively. The results of the revenue requirement analysis for Marina Water and Marina Sewer are summarized in Appendix C, Tables C-3 and C-4 respectively.

Table 3-7: Ord Water Revenue Adjustments Schedule

Fiscal Year	Revenue Adjustments	Revenues From Rate Increase
FY2014	10.00%	$272,078
FY2015	10.00%	$318,234
FY2016	10.00%	$364,281
FY2017	10.00%	$417,109
FY2018	4.00%	$191,093

Table 3-8: Ord Sewer Revenue Adjustments Schedule

Fiscal Year	Revenue Adjustments	Revenues From Rate Increase
FY2014	4.00%	$36,449
FY2015	4.00%	$40,792
FY2016	4.00%	$44,471
FY2017	4.00%	$48,482
FY2018	8.00%	$105,710

For each of the Cost Center's, the proposed revenue adjustments are defined to meet the District's outlined objectives. While rates were increased to meet the District operating and capital reserve requirements, the capital program was limited to mitigate additional increases.

4.0 COST OF SERVICE ANALYSIS

The purpose of a cost-of-service analysis is to provide a rational basis for distributing the full costs of Marina and Ord Water service to each customer in proportion to the demands they place on the system. Detailed cost allocations help determine the degree of equity that can be achieved in the design of the resulting unit rates. This analysis yields an appropriate method for allocating costs, which could be sustained unless substantial changes in cost drivers or customer consumption patterns occur.

4.1 Water Cost of Service

The cost of service allocation completed in this study is established on the base-extra capacity method as defined by the American Water Works Association (AWWA). Under the base-extra capacity method, revenue requirements are allocated based on the demand placed on the water system.

4.1.1 Water Functional Cost Components

The functional allocation assigns the annual revenue requirement for a select base year by major function. The water utility's primary functions are related to base flow, peak flow, customer costs (customer and services). These functional cost pools include the rate paid for water supplied by outside agencies, the system's existing operations and maintenance (O&M) expenditures, debt service, and rate-funded capital costs.

The District's budget was analyzed line-item by line-item and expenditures were distributed between the available functions:

Base: costs are those operating and capital costs incurred by the water system to provide a basic level of service to each customer.

Peak: costs represent those operating costs incurred to meet peak demands for water in excess of basic demand (base). This cost also includes capital costs related providing the required system over-sizing to meet excess demand. This allocation also includes basic water supply and distribution costs.

Customer: Fixed expenditures that relate to operational support activities including accounting, billing, customer service, and administrative and technical support. These expenditures are essentially common-to-all customers and are reasonable uniform across the different customer classes.

Service: Meter and capacity related costs, such as meter maintenance and peaking charges, that are included based on the meters hydraulic capacity (measured in gallons per minute). Additionally, as the system's facilities are designed to meeting peaking requirements, a portion of the capacity related costs, including debt service, are allocated to Service.

Fire Service: Capacity related costs that are incurred based on the excess capacity that must be designed into the system in order to provide fire service.

4.1.2 Allocation to Functional Components

The result of Marina Water's functional allocation is presented in Figure 4-1. The Service, Customer, and Fire Service components collectively represent 28 percent of Marina Water's costs and will generate the fixed charge. The remaining 72 percent of costs are allocated to the Base and Peak components, and are the basis for the variable rates.

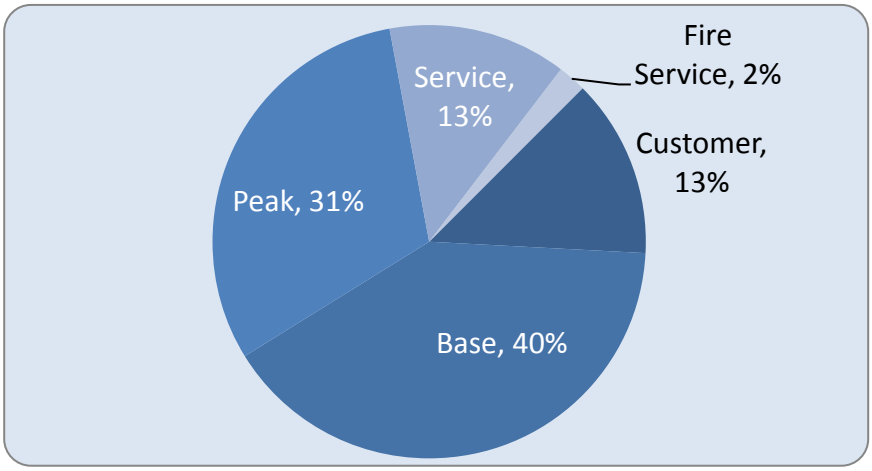


Figure 4-1: Marina Water - Functional Cost Allocation

As Ord Water is an entirely separate system, the resulting functional allocation results in a slightly different spread. Presented in Figure 4-2 are the results of the functional allocation. The fixed components comprised of the Service, Customer, and Fire Service components collectively represent 34 percent of Ord Water's costs. The remaining 66 percent of costs are allocated to the Base and Peak components, and are the basis for the variable rates.

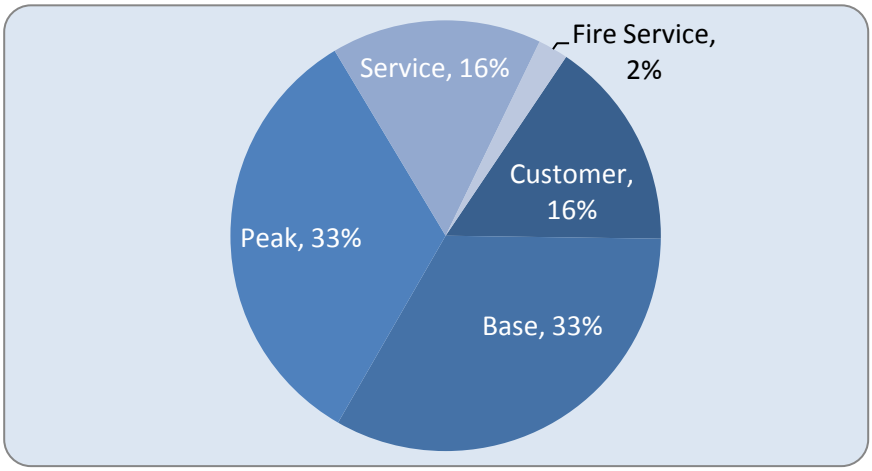


Figure 4-2: Ord Water - Functional Cost Allocation

The breakdown between functional categories is important and used to better understand how costs are incurred and whether they fluctuate with changes in water sales. For example, debt service or personnel costs are considered fixed cost and could be recovered through a fixed charge. Alternatively, purchased water is solely related to how much water sold and therefore could be attributed and recovered via the variable rates.

There is significant debate over the proper allocation ratio. The general consensus falls to the California Urban Water Conservation Council (CUWCC) target of a 70%/30% split (variable/fixed) as defined in Best Management Practice 1.4. This split is thought to provide sufficient revenue stability (in the form of fixed charges) while still providing adequate conservation incentives. However, many retail agencies have moved to a higher fixed to variable ratio due to revenue fluctuations and need for greater fiscal sustainability.

Based on the results of the functional allocation, the proposed functional allocation is aligned with the CUWCC recommendation. As shown earlier, both Marina and Ord's existing water revenues were examined to derive a current fixed/variable ratio near the recommended levels.

4.1.3 Unit Cost Calculations

The unit costs of service are developed by dividing the total annual costs allocated to each parameter by the total annual service units of the respective component. The Base component is allocated based on the total sales volume. The Peaking component cost is based on the system's peak ratio developed from the ratio between annualized winter consumption and annual consumption. For the fixed components, the Customer component unit cost is based on the number of accounts and the Service component is based on equivalent meters.

Table 4-1 shows the units of service and the associated unit costs for each component derived for Marina Water.

Table 4-1: Development of Unit Costs – Marina Water

	Customer	Base	Peak	Service	Fire Service
Amount Allocable to Constituent	$537,246	$1,626,200	$1,246,196	$537,246	$85,286
Total Units	45,768 *Annual Accounts*	770,313 *Annual Usage (hcf)*	770,313 *Annual Usage (hcf)*	66,108 *Annual EDUs*	57,296 *Annual Equivalents*
Per Unit Costs	**$11.74**	**$2.11**	**$1.62**	**$8.13**	**$1.49**

Table 4-2 provides Ord Water's calculated units of service and the corresponding component unit costs.

Table 4-2: Development of Unit Costs – Ord Water

	Customer	Base	Peak	Service	Fire Service
Amount Allocable to Constituent	$944,683	$1,980,149	$1,980,149	$944,683	$136,051
Total Units	52,058 *Annual Accounts*	1,085,466 *annual Usage (hcf)*	1,085,466 *annual Usage (hcf)*	87,348 *Annual EDUs*	80,645 *Annual Equivalents*
Per Unit Costs	**$18.15**	**$1.82**	**$1.82**	**$10.82**	**$1.69**

4.1.4 Functional Allocation Impact

Although fairly consistent in methodology with the previous rate study, there is one notable difference. Carollo recommends the consideration and inclusion of an account-based component (Customer component). The previous rate study and existing rate structure do not recognize costs that are associated with customer/account only. In effect, there is currently no required revenue allocated to the Customer component or developed unit cost.

As discussed in Section 4.1, costs such as customer billing and administration do not vary or incur a greater benefit (cost) based on meter size. Accordingly, costs that are allocated to the Customer component are spread equally to all accounts, rather than meter size or EDUs.

4.1.5 Customer Class Allocation

The unit costs of each component shown in Table 4-1 are then applied to each customer classes' projected use, accounts, and meter equivalents to derive customer class allocations. Costs are allocated to each customer class based on their respective peaking factors to reflect its use of the overall system.

The District does not differentiate user rates based on customer class. Given the limitations of the consumption and billing data provided, and the reasonableness of the current rate structure, customer class specific rates were not developed.

Table 4-3 shows Marina Water's customer class characteristics that were obtained through billing data analysis.

Table 4-3: Customer Class Characteristics – Marina Water

Customer Statistics *(FY 2012)*	Single Family	Multi-Family	Commercial	Irrigation	Temp	Fire	Total
Number of Accounts	3,370	173	241	29	1	-	3,814
Number of MEUs (Meter Equivalents)	3,709	857	877	62	2	-	5,509
Water Usage (Annual hcf)	374,760	238,176	124,696	5,130	189	-	742,951
Winter Water Usage (Annualized hcf)	334,615	233,275	108,919	3,941	324	-	681,074
Summer Water Usage (Annualized hcf)	430,963	245,038	146,784	6,794	-	-	829,579
Summer Usage (Incremental hcf)	40,145	4,901	15,777	1,189	N/A	-	61,877
Fire Service (Equivalent Connections)	-	-	-	-	-	4,775	4,775

Table 4-4 shows cost allocation for each customer based on the forecasted revenue requirement based on the data in Table 4-3.

Table 4-4: Customer Class Costs – Marina Water

Functional Component	Single Family	Multi-Family	Commercial	Irrigation	Temp	Fire Service	Total
Customer	$474,703	$24,369	$33,948	$4,085	$141	-	$537,246
Base	820,289	521,329	272,940	11,229	414	-	1,626,200
Peak	805,002	98,279	316,368	23,839	2,707	-	1,246,196
Service	361,744	83,605	85,559	6,094	244	-	537,246
Fire Service	-	-	-	-	-	85,286	85,286
Total	**$2,461,739**	**$727,583**	**$708,814**	**$45,247**	**$3,505**	**$85,286**	**$4,032,174**

Table 4-5 identifies Ord Water's customer class characteristics that were obtained through billing data analysis.

Table 4-5: Customer Class Characteristics – Ord Water

Customer Statistics *(FY 2012)*	Single Family	Multi-Family	Com.	Irrigation	Public Agency	Fire	Total
Number of Accounts	3,523	22	196	69	57	-	3,867
Number of MEUs (Meter Equivalents)	2,710	490	1,280	385	492	-	5,357
Water Usage (Annual hcf)	625,295	58,431	148,023	74,786	32,505	-	939,040
Winter Water Usage (Annualized hcf)	550,777	30,402	118,323	49,983	30,789	-	780,274
Summer Water Usage (Annualized hcf)	774,332	114,489	207,423	124,392	35,937	-	1,256,573
Summer Usage (Incremental hcf)	74,518	28,029	29,700	24,803	1,716	-	158,766
Fire Service (Equivalent Connections)	-	-	-	-	-	6,720	6,720

Table 4-6 shows cost allocation for each customer based on the forecasted revenue requirement based on the characteristics identified in Table 4-5.

Table 4-6: Customer Class Costs – Ord Water

Functional Component	Single Family	Multi-Family	Com.	Irrigation	Public Agency	Fire Service	Total
Customer	$860,646	$5,374	$47,882	$16,856	$13,925	-	$944,683
Base	1,318,556	123,213	312,135	157,701	68,543	-	1,980,149
Peak	929,400	349,580	370,421	309,345	21,402	-	1,980,149
Service	477,838	86,399	225,658	67,961	86,825	-	944,683
Fire Service	-	-	-	-	-	136,051	136,051
Total	**$3,586,440**	**$564,567**	**$956,096**	**$551,864**	**$190,695**	**$136,051**	**$5,985,714**

4.2 Sewer Cost of Service

The cost of service process for development of sewer rates follows an approach similar to that used for water service. However, as the Marina and Ord Sewer operations are responsible solely for the collection and conveyance of wastewater and not treatment, a much simpler method of rate design can be used.

4.2.1 Sewer Functional Cost Components

The functional allocation assigns the annual revenue requirement for a select base year by major function. Sewer rates are developed based on the total system costs to be collected through user rates, and the total number of EDUs served. A unit cost per EDU is developed and customers are charged based on the associated number of EDUs.

Table 4-7 shows a summary of the Marina Sewer customer characteristics.

Table 4-7: Marina Sewer Customer Characteristics

Customer Class	Accounts	Average EDUs per Account	Total EDUs
Residential	3,371	1.2	**4,064**
Multi Family Residential	139	14.9	**2,064**
Business	165	5.5	**911**
Restaurants	8	5.0	**40**
Schools	6	23.1	**139**
Church	14	1.3	**18**
Total	**3,703**	**2.0**	**7,235**

Table 4-8 shows a summary of the Ord Cost Center's Sewer customer characteristics

Table 4-8: Ord Sewer Customer Characteristics

Customer Class	Accounts	Average EDUs per Account	Total EDUs
Residential	2,918	1.6	**4,560**
Multi Family Residential	0	0.0	**0**
Business	137	4.1	**565**
Public Agency	2	1.7	**3**
Schools	9	28.4	**256**
Church	1	0.7	**1**
CSUMB	39	4.0	**157**
Total	**3,067**	**1.8**	**5,384**

4.2.2 Unit Cost Calculations

For Sewer the unit costs of service are developed by dividing the total annual costs by the total annual service units (EDUs).

Table 4-9 provides Marina Water's calculated component unit costs.

Table 4-9: Development of Unit Costs - Marina Sewer

Fiscal Year	Rate Revenue Required	Projected EDU's	Annual cost Per EDU	Monthly Rate per EDU
Existing	$794,437	7,235	$109.80	$9.15
FY2014	882,187	7,280	121.17	10.10
FY2015	976,447	7,326	133.29	11.11
FY2016	1,092,235	7,449	146.62	12.22
FY2017	1,221,752	7,575	161.28	13.44
FY2018	1,366,628	7,703	177.41	14.78

Table 4-10 provides Marina Water's calculated component unit costs.

Table 4-10: Development of Unit Costs - Ord Sewer

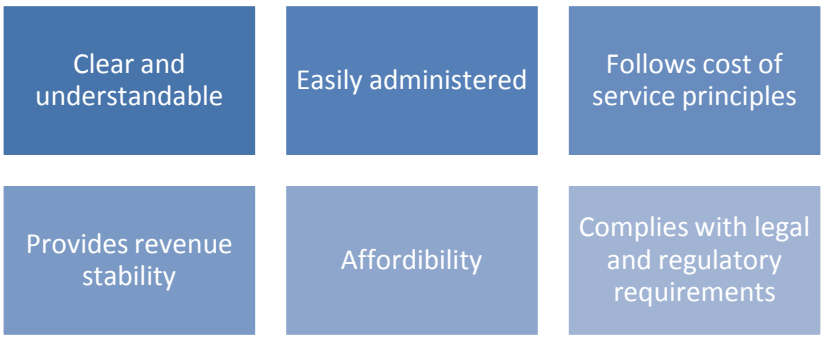
Fiscal Year	Rate Revenue Required	Projected EDU's	Annual cost Per EDU	Monthly Rate per EDU
Existing	$1,679,652	5,541	$303.12	$25.26
FY2014	1,895,353	5,963	317.86	26.49
FY2015	2,121,192	6,417	330.57	27.55
FY2016	2,312,510	6,726	343.79	28.65
FY2017	2,521,085	7,051	357.54	29.80
FY2018	2,854,182	7,391	386.15	32.18

5.0 RATE DESIGN ANALYSIS

The water rate design analysis determines how the costs, identified in Tables 4-4 and 4-6, are recovered by each customer through specified water rates. The focus of this process is to achieve full cost recovery and substantiate that customers are paying their fair and proportionate share of system costs.

5.1 Selecting Rate Structures

Once costs have been equitably allocated to each functional component, the District has some flexibility in designing the rate structure in order to meet its policy objectives. In determining the appropriate rate level and structure, Carollo analyzed various rate design alternatives and the corresponding customer and utility implications. Beyond the identified study objectives, Carollo identified additional criteria for considerations and discussed them at length with District staff. Listed below is a partial list of the additional rate design elements:



Given the numerous and at time competing elements, selection of an appropriate rate structure is complex. There is no single structure that meets all objectives equally, nor are all objectives or elements valued the same by the utility or customers. Each criteria or element has merit and plays an important role in the rates implementation and overall effectiveness. These elements and competing objectives were discussed and evaluated at length throughout the financial and rate study process.

5.2 Recommended Water Rates

Based on discussion with District staff and careful review of the cost of service analysis, Carollo recommends that the District consider the following rate design recommendations

- *Implement the proposed Cost of Service allocations:* The cost-of-service analysis includes a Customer component. As such, costs are allocated distributed evenly to each account. This reflects the equal benefit each account receives from customer component related costs. As a result, fewer costs are now allocated to the Service component which increases based on the size of the meter.

- *Retain the current rate structure.* Through consumption and billing data analysis, the study found the current rate structure to be reasonable. Average winter month consumption per account falls well within the allotment of tiers one and two, providing that the tier three rate is continuing to drive conservation.

- *Implement Proposed Increase on January 1st of each year*. Rate increases during low consumption months better enables ratepayers to adapt to potential increases. While increases that coincide with the start of the fiscal year are ideal for budget purposes, it would also coincide with summer and the District's peak water demand.

- *Removal of Capital Surcharge for New Users*. As Carollo has developed an updated Ord Water Capacity Charge that fully recognizes the value of the existing system (buy-in component), it is no longer necessary or appropriate to capture a Capital Surcharge.

5.2.1 Fixed Charge

A monthly fixed charge is a cost recovery mechanism that is generally included in the rate structure to recover the utility's fixed expenditures, including meter and customer related costs. As discussed previously, this cost also includes a portion of the capacity related cost to provide a stable source of revenue independent of monthly water demand.

While an increased fixed charge provides a stable source of revenues for the utility, increasing the fixed charge reduces the commodity rates and incentive for conservation. 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 based on their meter size and water consumed.

The proposed fixed charge is a combination of the Customer and Service functional components. To determine this charge, the meter unit cost is multiplied by the meter capacity ratios previously developed by the District to calculate the meter capacity cost. These ratios mirror the ratios identified in the AWWA M22 Manual Sizing Water Service Lines and Meters. The ratios reflect a reasonable cost and benefit factor associated with greater hydraulic flow capacity.

The meter capacity cost is then added to the Customer Service cost to calculate the cost based service charges shown in Table 5-1.

Table 5-1: Components to Proposed Fixed Charge – Marina Water

Meter Size	Meter Capacity Ratio	Service Unit Cost	Customer Unit Cost*	Total
5/8"	1.0	$8.13	$11.74	$19.87
3/4"	1.0	8.13	11.74	19.87
1"	2.5	20.31	11.74	32.05
1-1/2"	5.0	40.63	11.74	52.36
2"	8.0	65.00	11.74	76.73
3"	15.0	121.90	11.74	133.64
4"	25.0	203.11	11.74	214.85
6"	50.0	406.22	11.74	417.96
8"	100.0	812.67	11.74	824.41
10"	115.0	934.30	11.74	946.04
* Based on the previous rate study, the existing rate was entirely allocated to the Service component. The Customer Unit Cost recognizes the equal benefit received to each account for expenditures, such as customer billing				

Table 5.2 identifies the proposed monthly fixed charges for Marina Water analyzed for the 5-year rate period.

Table 5-2: Proposed Fixed Charges – Marina Water

Meter Size	FY 2013/14	FY 2014/15	FY 2015/16	FY 2016/17	FY 2017/18
5/8"	$19.87	$20.46	$21.07	$21.71	$22.36
3/4"	19.87	20.46	21.07	21.71	22.36
1"	32.05	33.01	34.00	35.02	36.07
1-1/2"	52.36	53.94	55.55	57.22	58.94
2"	76.73	79.04	81.41	83.85	86.36
3"	133.64	137.65	141.78	146.03	150.41
4"	214.85	221.30	227.93	234.77	241.82
6"	417.96	430.50	443.41	456.71	470.42
8"	824.41	849.14	874.62	900.86	927.88
10"	946.04	974.42	1003.66	1033.77	1064.78

Table 5.3 provides the components utilized to develop the proposed fixed charge for Ord Water

Table 5-3: Components to Proposed Fixed Charge – Ord Water

Meter Size	Meter Capacity Ratio	Service Unit Cost	Customer Unit Cost*	Total
5/8"	1.0	$10.82	$18.15	$28.96
3/4"	1.0	10.82	18.15	28.96
1"	2.5	27.03	18.15	45.18
1-1/2"	5.0	54.07	18.15	72.21
2"	8.0	86.50	18.15	104.64
3"	15.0	162.23	18.15	180.37
4"	25.0	270.30	18.15	288.45
6"	50.0	540.60	18.15	558.75
8"	100.0	1081.51	18.15	1099.66
* Based on the previous rate study, the existing rate was entirely allocated to the Service component. The Customer Unit Cost recognizes the equal benefit received to each account for expenditures, such as customer billing				

Table 5.4 identifies the proposed monthly fixed charges for Ord Water analyzed over the 5-year rate period.

Table 5-4: Proposed Fixed Charges – Ord Water

Meter Size	FY 2013/14	FY 2014/15	FY 2015/16	FY 2016/17	FY 2017/18
5/8"	$28.96	$31.48	$34.37	$37.55	$38.79
3/4"	28.96	31.48	34.37	37.55	38.79
1"	45.18	49.11	53.62	58.57	60.51
1-1/2"	72.21	78.49	85.71	93.62	96.71
2"	104.64	113.74	124.20	135.66	140.14
3"	180.37	196.05	214.09	233.85	241.57
4"	288.45	313.52	342.36	373.96	386.31
6"	558.75	607.31	663.18	724.39	748.31
8"	1099.66	1195.24	1305.19	1425.66	1472.72

5.2.2 Commodity Rates

The District's existing rate structure is comprised of three inclining block tiers. Although Marina and Ord have different rates, they share the same tier structure. Through a comprehensive evaluation of consumption and billing data, the analysis confirmed the reasonableness of the current rate structure and individual tier allocations. For both Marina and Ord Water, average winter month consumption per account falls well within the allotment of tiers one and two, providing that the tier three rate is continuing to drive conservation due to price signaling. As such, Carollo recommends the District maintain its

existing commodity structure and update costs associated with the generated cost of service allocations.

Based on the District's peaking factors, Customer related commodity costs are calculated based on the District's average annually water usage and its incremental summer consumption. The water commodity rate for each customer class is calculated based on the allocated cost to each customer class (required revenues) and the forecasted annual water demands. In this case, all classes share equal commodity rates. Marina Water's proposed monthly tiers and corresponding commodity based rates are shown in Table 5-5.

Table 5-5: Proposed Commodity Rates – Marina Water

	FY 2013/14	FY 2014/15	FY 2015/16	FY 2016/17	FY 2017/18
All Customer Classes			**Rate (per hcf)**		
0 - 8 (hcf)	$2.45	$2.52	$2.60	$2.68	$2.76
9 - 16	3.47	3.57	3.68	3.79	3.90
17 - +	4.82	4.97	5.12	5.27	5.43
* Rate adjustments to be effective January 1st of each year					

Ord Water's proposed monthly tiers and corresponding commodity based rates are shown in Table 5-6.

Table 5-6: Proposed Commodity Rates – Ord Water

	FY 2013/14	FY 2014/15	FY 2015/16	FY 2016/17	FY 2017/18
All Customer Classes			**Rate (per hcf)**		
0 - 8 (hcf)	$2.22	$2.60	$2.97	$3.40	$3.68
9 - 16	3.40	3.98	4.56	5.22	5.65
17 - +	4.59	5.37	6.14	7.03	7.62
* Rate increase to be effective January 1st of each year					

5.3 Sewer Rate Recommendations

Based on discussion with District staff and careful review of the cost of service analysis, Carollo recommends that the District implement the following rate design recommendations

- *Retain the current rate structure.* Through customer and billing data analysis, the study has found that the current rate structure is reasonable and appropriate. It provides customer equity by assigning EDU's to each customer based on wastewater demand factors, and provides a consistent and predictable source of revenue.

- *Implement Rates on January 1st of each year*. Although water consumption does not affect the monthly sewer charge, implementing during the low water use months is advantageous as the customers overall cost for water and sewer is lower than in the peak months. Additionally, implementing water and sewer rate increases in the same month simplifies procedures required by Proposition 218.

- *Removal of Capital Surcharge for New Users*. As Carollo has developed an updated Ord Sewer Capacity Charge that fully recognizes the value of the existing system (buy-in component), it is no longer necessary or appropriate to capture a Capital Surcharge.

5.3.1 Sewer Rates per EDU

Table 5-7 shows the proposed Marina Sewer rates per EDU for the five-year rate study period through FY 2017/18.

Table 5-7: Marina Sewer - Proposed Sewer Rates

	FY 2013/14	FY 2014/15	FY 2015/16	FY 2016/17	FY 2017/18
Rate per EDU	$10.10	$11.11	$12.22	$13.44	$14.78

Table 5-8 shows the proposed Ord Sewer rates per EDU for the five-year rate study period through FY 2017/18.

Table 5-8: Ord Sewer - Proposed Sewer Rates

	FY 2013/14	FY 2014/15	FY 2015/16	FY 2016/17	FY 2017/18
Rate per EDU	$26.49	$27.55	$28.65	$29.80	$32.18

5.4 Fire Meter Service Charges

As part of the suite of services provided by the District, numerous accounts have a water line connection to the District's water system that is specifically for fire protection or has been upsized based on building codes. Fire Service Charges are assessed to private protection meters. Currently, the District charges a uniform rate of $20 for commercial fire meters. Residential customers that have been upsized to a 1" meter (from a 5/8" or 3/4" meter) pay the existing 1" meter service charge.

The proposed methodology is designed to reflect the design and operation of the water system that is specifically available for fire protection. The recommended charge is based on the diameter of the line that connects their fire protection system to the District's water system. Based on the preliminary cost of service analysis and allocation assumptions, the table below provides the proposed monthly charges. Under this methodology, upsized residential meters would pay the proposed 1" fire meter charge and the proposed 3/4" meter service charge.

Table 5-9: Proposed Sewer Rates

Meter Size	Existing	Proposed Marina Water	Proposed Ord Water
5/8" - 3/4"	$20.00	$1.49	$1.69
1"	20.00	4.32	4.90
1 1/2"	20.00	9.21	10.44
2"	20.00	16.57	18.78
3"	20.00	26.77	30.34
4"	20.00	57.04	64.65
6"	20.00	165.69	187.79
8"	20.00	353.09	400.18

5.5 Customer Impacts

Before implementing any rate structure recommendations, Carollo worked closely with District staff to evaluate the impact of the proposed rate structure's impact to water and wastewater customers. Proposed revenue increases and the capital funding levels were balanced to mitigate overall impacts to ratepayers.

The following figure (Figure 5-1) demonstrates the impact of the proposed Marina Water and Sewer rates for a single-family resident with a 5/8" or 3/4" meter across various usage levels. The blue portion of the bar represents the customers fixed water charge, while the red represents the commodity or variable portion of the overall water bill. The relative increase in the fixed charge is a direct result of recognizing utility's significant fixed costs and a desire to increase revenue predictability. In addition, as users typically view their utility bill as a single unit, the green bar represents the rate associated with sewer charges.

Figure 5-1 illustrates the relative impact of the proposed Marina Water and Sewer rates for various single-family customers.

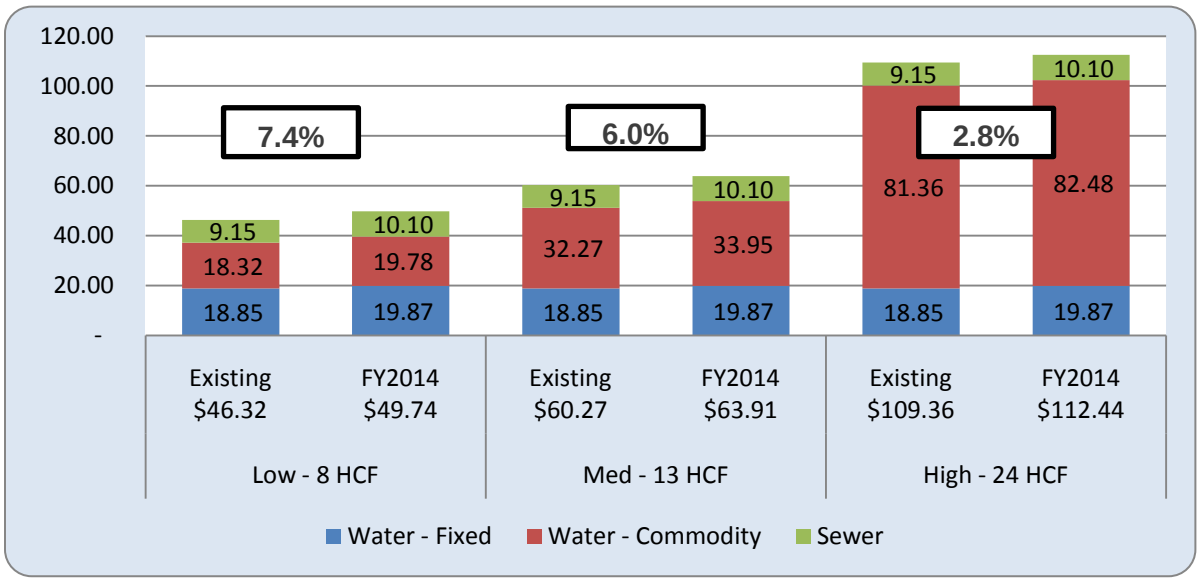


Figure 5-1: Single-Family Residential Customer Impacts – Marina Water & Sewer

Figure 5-2 illustrates the relative impact of the proposed Ord Water and Sewer rates for various single-family customers. The effect of allocating a portion of the revenue requirement to the Customer component is clearly seen this comparison. Water's fixed charge, represented by the blue bars, makes up a significant portion of the proposed impact.

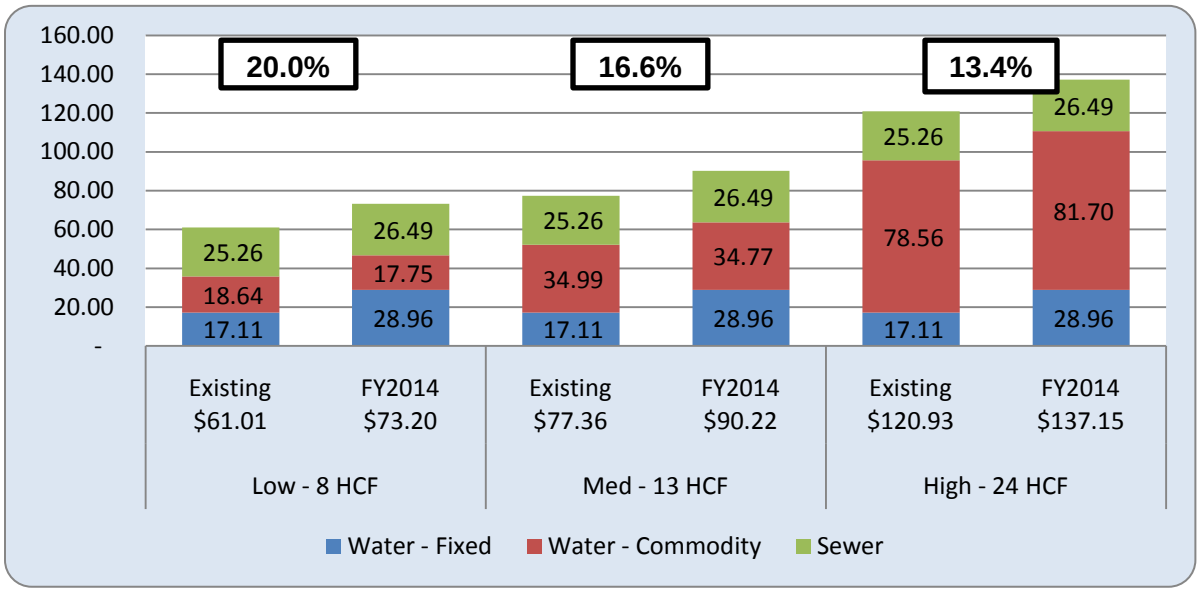


Figure 5-2: Single-Family Residential Customer Impacts – Ord Water & Sewer

5.5.1 Water Rate Comparison

Carollo conducted a water rate survey of nearby utilities. Although utilities are not equal, it is common to examine comparisons between similar or neighboring utilities. Figure 5-3 compares a typical single-family residential user with the current rate structure and the proposed rates against three nearby utilities. In addition to the local comparisons, Carollo details the District's existing rates.

Care should be taken in drawing conclusions from such comparisons as factors including locations, source of supply, customer profiles, age of the system, and various operational and capital related needs vary from agency to agency. A simple example of this is the difference between Marina and Ord rates.

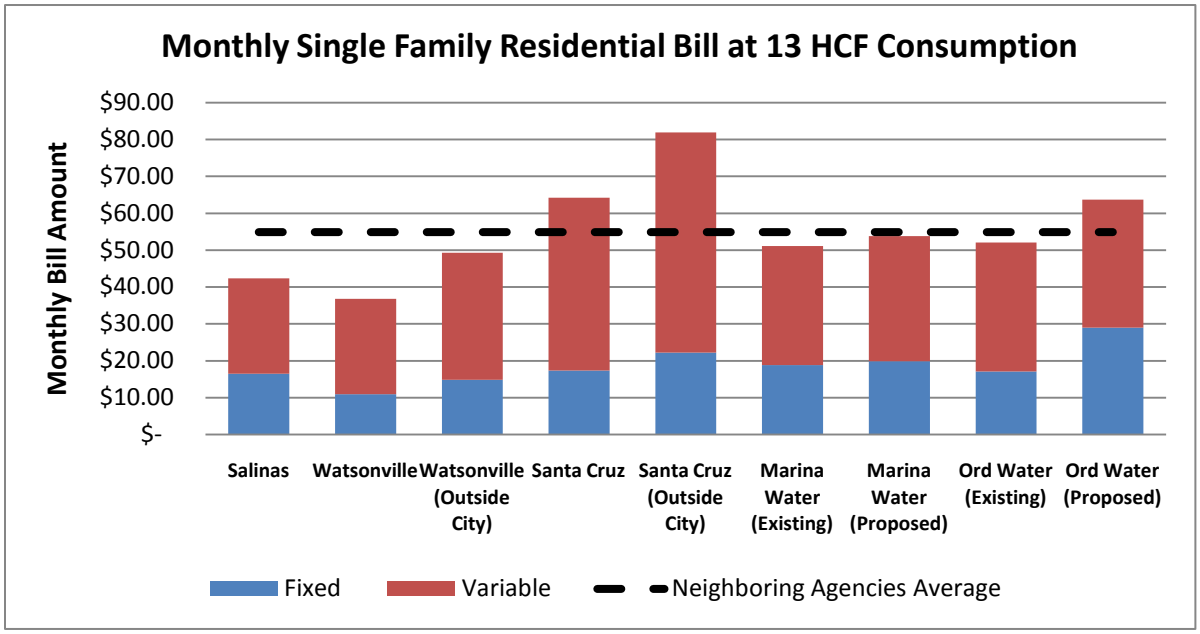


Figure 5-3: Local Rate Comparison Survey

As illustrated, despite the proposed increase to customers, water rates are in line with the average of nearby agencies.

6.0 CAPACITY FEE UPDATE

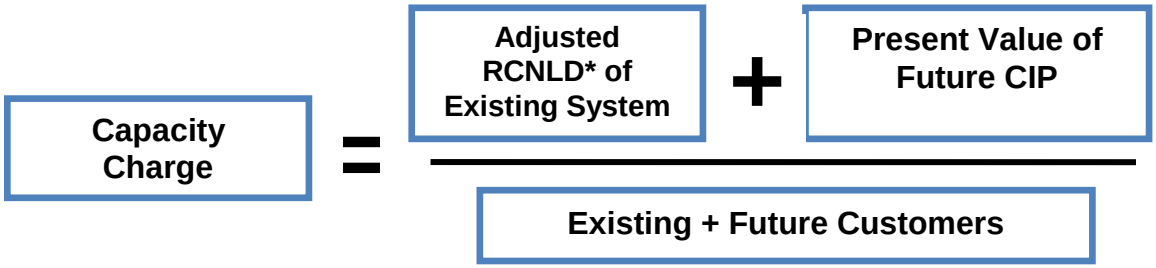
Capacity fees are one-time charges that are assessed when new connections are added to the water or wastewater system, or existing connections are increased in size. The purpose of capacity fees is to ensure that each customer is paying for the amount of system capacity required to service their connection.

Marina Coast Water District currently uses a combined buy-in and future cost approach to calculate capacity fees for each of the four cost centers. In this approach, asset values are calculated based on the current replacement value of the existing system plus the value of planned CIP projects and all other current assets held by each cost center. Net assets are calculated by subtracting all liabilities from the total asset value. The value of net assets is then divided by the total number of EDUs that the system is expected to be able to serve at the end of the CIP period, to determine the system equity per EDU, or capacity charge.

There are two basic components to the District's capacity charge – the "buy-in component" (or existing cost basis); and the "future component" (or future cost basis). For the purposes of this analysis, the term "buy-in component" shall refer to the value of existing system assets (i.e. facilities already in service) that may be recovered through the capacity charge. The term "future component" shall refer to future facilities (i.e., facilities in the CIP) that may be recovered through the capacity charge.

The buy-in component of the capacity charge is based on replacement cost new less depreciation (RCNLD). Outstanding debt principal and monetary reserves are also accounted for in this cost basis. The future component incorporates the present value of the District's CIP. Costs are fairly and reasonably spread over both existing and future users by dividing the total system value by the total number of equivalent meters that are projected to receive water service through 2030.

The methodology for calculating each cost centers capacity charges is illustrated below in Figure 6-1.



*Replacement Cost New Less Depreciation

Figure 6-1: Overview of Capacity Charge Calculation

Capacity charges were developed based on financial information and other data provided by the District. Staff also provided direct guidance on the allocation of assets among each of the four cost centers. Summaries of the capacity fee calculations and the resulting proposed capacity fees for each cost center are shown in tables 6-1 through 6-4. Detailed Capacity charge calculations can be found in Appendix D.

Table 6-1: Marina Water Capacity Fee Calculation

Water System Capacity Charges	Marina Water
RCNLD of Water Infrastructure in Service	$13,374,123
RCNLD of Other Depreciable Assets	3,197,842
Sub-Total of Adjustments	3,382,972
Total Value of Capital Assets	**19,954,937**
Total Liability and Asset-Related Adjustments	-10,038,849
Total Value of Existing Assets Net of Liabilities	**9,916,088**
Infrastructure Related Future CIP Costs	27,514,092
Total Value of Existing and Future Assets	**$37,430,180**
Total Number of Meter Equivalents	8,269
Calculated System Capacity Charge	**$4,526**

Table 6-2: Marina Water Capacity Fee Calculation

Sewer System Capacity Charges	Marina Sewer
RCNLD of Water Infrastructure in Service	$13,124,445
RCNLD of Other Depreciable Assets	326,498
Sub-Total of Adjustments	1,004,812
Total Value of Capital Assets	**14,455,755**
Total Liability and Asset-Related Adjustments	-805,081
Total Value of Existing Assets Net of Liabilities	**13,650,674**
Infrastructure Related Future CIP Costs	11,423,891
Total Value of Existing and Future Assets	**$25,074,564**
Total Number of Meter Equivalents	10,748
Calculated System Capacity Charge	**$2,333**

Table 6-3: Ord Water Capacity Fee Calculation

Water System Capacity Charges	Ord Water
RCNLD of Water Infrastructure in Service	$57,099,474
RCNLD of Other Depreciable Assets	2,206,873
Sub-Total of Adjustments	83,375,806
Total Value of Capital Assets	**142,682,153**
Total Liability and Asset-Related Adjustments	-7,952,134
Total Value of Existing Assets Net of Liabilities	**134,730,020**
Infrastructure Related Future CIP Costs	90,693,766
Total Value of Existing and Future Assets	**$225,423,786**
Total Number of Meter Equivalents	14,387
Calculated System Capacity Charge	**$15,669**

Table 6-4: Ord Sewer Capacity Fee Calculation

Sewer System Capacity Charges	Ord Sewer
RCNLD of Water Infrastructure in Service	$29,691,490
RCNLD of Other Depreciable Assets	774,317
Sub-Total of Adjustments	28,159,438
Total Value of Capital Assets	**58,625,245**
Total Liability and Asset-Related Adjustments	-4,161,888
Total Value of Existing Assets Net of Liabilities	**54,463,357**
Infrastructure Related Future CIP Costs	35,130,846
Total Value of Existing and Future Assets	**$89,594,203**
Total Number of Meter Equivalents	11,734
Calculated System Capacity Charge	**$7,636**

APPENDIX A – WASTEWATER DEMAND FACTORS

Table A-1 **Waste Water Demand Factors**
Marina Coast Water District
Financial Plan and Rate and Fee Study

User Classification	Wastewater Demand Factor	Unit
Single-family residence	1.00	
Apartment unit with washer	1.00	
Apartment unit without washer	0.80	
Apartment central laundry facility	0.60	Machine
Mobile home with washer	1.00	
Mobile home without washer	0.80	
Mobile home park central laundry	0.60	Machine
Hotels, motels and rooming houses	0.25	Room
Campground with central facilities	0.20	Space
RV park with individual hookups	0.30	Space
Barber and beauty shops	0.30	Station
Service station with restrooms	2.00	
Service station without restrooms	0.80	
Recreational vehicle dump station	2.00	Station
Auto or truck repair shop	1.00	
Mortuary	0.40	Employee
Bakeries, catering service	0.30	Employee
Restaurants	0.07	Seat
Restaurants, twenty-four-hour, fast food	0.09	Seat
Bars, cardrooms, casinos, taverns	0.10	Seat
Bowling alley	0.10	Alley
Theater (maximum capacity)	0.02	Seat
Laundry or laundromat	0.60	Machine
Dry cleaner employees PLUS	0.10	Employee
Dry cleaner machines	1.00	Machine
Fire station	0.20	Employee
Offices (attorney; accountant; realtor; etc.)	0.10	Employee
Dentist	0.50	Operatory
Doctor office or clinic	1.00	Office or MD
Dry goods retail store	0.10	Employee
Commercial swimming pool	2.50	Pool
Car wash	3.00	Stall
Food markets	0.10	Employee
Public buildings	0.10	Employee
School	0.07	Enrollment
Meeting hall; Church	0.01	Seat
Fairgrounds complex	4.00	
Restroom buildings	1.00	Toilet
Hospital	0.80	Bed
Convalescent or nursing home	0.50	Bed
Industrial waste	45.00	
Minimum demand for all classifications	0.80	Account

APPENDIX B – PROPOSED CIP

Table B-1 Marina Water Proposed CIP
Marina Coast Water District
Financial Plan and Rate and Fee Study

CIP No.	PROJECT DESCRIPTION	Previous YEARS	FYE 2014 Current Year	FYE 2015 Proposed	FYE 2016 Proposed	FYE 2017 Proposed	FYE 2018 Proposed	OUT YEARS	TOTAL	CATEGORY
MW-0204	Edna Court Water Main Replacement	$20,000	$0	$0	$0	$0	$0	$0	$20,000	ε
MW-0200	Wharf Hydrant Replacement	30,000	0	0	0	0	0	0	30,000	ε
MW-0203	Well 11 Pump Replacement	155,000	0	0	0	0	0	0	155,000	ε
MW-0111	Beach Road Pipeline	0	0	74,679	100,000	0	0	340,000	514,679	ε
MW-0163	Repair & Recoat Reservoir 2	0	0	0	0	450,000	0	0	450,000	ε
MW-0109	Lake Court Waterline Extension	0	0	0	0	0	0	435,468	435,468	δ δ
MW-0201	Salinas Ave Pipeline Extension	0	0	0	0	0	0	395,665	395,665	ε
MW-0202	Reservoir 2 Demolition	0	0	0	0	0	0	703,644	703,644	ε

SPLIT OF GENERAL WATER (GW) COST CENTER PROJECTS - SHARE ASSIGNED TO MARINA WATER (MW) = 37%

CIP No.	PROJECT DESCRIPTION	Previous YEARS	FYE 2014 Current Year	FYE 2015 Proposed	FYE 2016 Proposed	FYE 2017 Proposed	FYE 2018 Proposed	OUT YEARS	TOTAL	CATEGORY
GW-0212	Potable Water Tank Compliance Project	$0	$39,140	$0	$0	$0	$41,132	$0	$80,272	ε
GW-0112	A1 & A2 Zone Tanks & B/C Booster Station	48,470	116,814	1,335,870	1,219,565	0	0	1,349,182	4,069,901	δ δ , ε
GW-0300	Marina & Ord Water Master Plan	0	92,500	0	0	0	0	0	92,500	ε
GW-0123	"B2" Zone Tank @ CSUMB	0	0	0	0	0	0	952,702	952,702	δ δ
GW-0210	Reservoir A3 (1.6 MG)	0	0	0	0	0	0	1,283,619	1,283,619	δ δ
GW-0231	Install Well 37 - Retire well 12	0	0	0	0	0	0	2,313,061	2,313,061	ε
GW-0232	Install Well 38 - Retire well 10	0	0	0	0	0	0	2,313,061	2,313,061	ε
GW-0233	A-BPS at ASP Bldg + Forebay Tank	0	0	0	0	0	0	616,248	616,248	ε
GW-0234	Install Well 39 - Retire Well 30	0	0	0	0	0	0	2,313,061	2,313,061	ε
GW-0235	B-BPS Expansion and Transmission to A1/A2 Tanks	0	0	0	0	0	0	4,841,096	4,841,096	ε
GW-0236	Install Well 40 - Retire Well 11	0	0	0	0	0	0	2,313,061	2,313,061	ε
GW-0237	Install Well 41 - Retire Well 31	0	0	0	0	0	0	2,313,061	2,313,061	ε

SPLIT OF WATER DISTRICT (WD) COST CENTER PROJECTS - SHARE ASSIGNED TO MARINA WATER (MW) = 30%

CIP No.	PROJECT DESCRIPTION	Previous YEARS	FYE 2014 Current Year	FYE 2015 Proposed	FYE 2016 Proposed	FYE 2017 Proposed	FYE 2018 Proposed	OUT YEARS	TOTAL	CATEGORY
WD-0203	MCWD Fort Ord Office Landscape Project	$0	$6,355	$0	$0	$0	$0	$0	$6,355	ε
WD-0115	SCADA System Improvements - Phase I	296,016	41,850	42,687	43,541	44,412	0	0	468,505	ε

Table B-1 Marina Water Proposed CIP
Marina Coast Water District
Financial Plan and Rate and Fee Study

CIP No.	PROJECT DESCRIPTION	Previous YEARS	FYE 2014 Current Year	FYE 2015 Proposed	FYE 2016 Proposed	FYE 2017 Proposed	FYE 2018 Proposed	OUT YEARS	TOTAL	CATEGORY
WD-0300	Long-Term Facilities Planning	0	45,000	0	0	0	0	0	45,000	ε
WD-0202	IOP Building E (BLM)	23,800	242,200	630,000	0	0	0	0	896,000	δ
WD-0106	Corp Yard Demolition & Rehab	0	0	0	36,000	135,000	0	0	171,000	ε
WD-0110	Asset Management Program - Phase II	0	0	0	75,000	0	0	0	75,000	ε
WD-0110A	Asset Management Program -- Phase III	0	0	0	0	75,000	0	0	75,000	ε
WD-0115A	SCADA System Improvements (Security + RD integration)	0	0	0	0	90,000	0	0	90,000	ε

Table B-2 Marina Sewer Proposed CIP
Marina Coast Water District
Financial Plan and Rate and Fee Study

CIP No.	PROJECT DESCRIPTION	Previous YEARS	FYE 2014 Current Year	FYE 2015 Proposed	FYE 2016 Proposed	FYE 2017 Proposed	FYE 2018 Proposed	OUT YEARS	TOTAL	CATEGORY
MS-0133	Replace Lift Station No. 5	$17,150	$487,477	$0	$0	$0	$0	$0	$504,627	ε
MS-0206	Reservation Road Siphon	177,510	602,000	0	0	0	0	0	779,510	ε
MS-0143	Lift Station No. 6 Replacement	0	0	0	0	401,576	0	0	401,576	ε
MS-0138	Hillcrest Ave/Sunset Ave Sewer Main Imp. Project	0	0	0	0	50,889	299,905	0	350,794	ε
MS-0141	Reservation Rd from Nicklas Lane to Crescent Ave.	0	0	0	0	75,017	442,101	0	517,118	ε
MS-0172	Reservation Rd from Crescent to Seacrest	0	0	0	0	82,121	483,965	0	566,086	ε
MS-0202	Carmel Ave Sewer Main Imp Project	0	0	0	0	55,748	328,543	0	384,291	ε
MS-0203	Abdy Way & Paul Davis Dr Sewer Main Imps Project	0	0	0	0	0	465,477	0	465,477	δ
MS-0205	Del Monte/Reservation Road Sewer Main Imp. Project I	0	0	0	0	0	201,762	0	201,762	δ δ
MS-0137	Del Monte/Reservation Road Sewer Main Imp. Project II	0	0	0	0	0	351,399	0	351,399	δ δ
MS-0201	Armstrong Ranch Sewer Improvements	0	0	0	0	0	0	5,428,589	5,428,589	δ δ , ε
MS-0207	Marina WWTP Demolition	0	0	0	0	0	0	883,265	883,265	ε

SPLIT OF GENERAL SEWER (GS) COST CENTER PROJECTS - SHARE ASSIGNED TO MARINA SEWER (MS) = 40%

CIP No.	PROJECT DESCRIPTION	Previous YEARS	FYE 2014 Current Year	FYE 2015 Proposed	FYE 2016 Proposed	FYE 2017 Proposed	FYE 2018 Proposed	OUT YEARS	TOTAL	CATEGORY
GS-0300	Marina & Ord Wastewater Master Plan	$0	$120,000	$0	$0	$0	$0	$0	$120,000	ε
GS-0200	Odor Control Project	0	0	0	60,000	0	0	0	60,000	ε
GS-0201	Del Monte/Reservation Road Sewer Main Improvements	0	0	0	0	134,984	0	0	134,984	ε

SPLIT OF WATER DISTRICT (WD) COST CENTER PROJECTS - SHARE ASSIGNED TO MARINA SEWER (MS) = 9%

CIP No.	PROJECT DESCRIPTION	Previous YEARS	FYE 2014 Current Year	FYE 2015 Proposed	FYE 2016 Proposed	FYE 2017 Proposed	FYE 2018 Proposed	OUT YEARS	TOTAL	CATEGORY
WD-0203	MCWD Fort Ord Office Landscape Project	$0	$1,435	$0	$0	$0	$0	$0	$1,435	ε
WD-0115	SCADA System Improvements - Phase I	66,842	9,450	9,639	9,832	10,028	0	0	105,791	ε
WD-0300	Long-Term Facilities Planning	0	13,500	0	0	0	0	0	13,500	ε
WD-0202	IOP Building E (BLM)	6,800	69,200	180,000	0	0	0	0	256,000	δ
WD-0106	Corp Yard Demolition & Rehab	0	0	0	10,800	40,500	0	0	51,300	ε
WD-0110	Asset Management Program - Phase II	0	0	0	22,500	0	0	0	22,500	ε
WD-0110A	Asset Management Program -- Phase III	0	0	0	0	22,500	0	0	22,500	ε
WD-0115A	SCADA System Improvements (Security + RD integration)	0	0	0	0	27,000	0	0	27,000	ε

Table B-3 Ord Water Proposed CIP
Marina Coast Water District
Financial Plan and Rate and Fee Study

CIP No.	PROJECT DESCRIPTION	Previous YEARS	FYE 2014 Current Year	FYE 2015 Proposed	FYE 2016 Proposed	FYE 2017 Proposed	FYE 2018 Proposed	OUT YEARS	TOTAL	CATEGORY
OW-0169	Intergarrison Road PRV	$197,000	$0	$0	$0	$0	$0	$0	$197,000	
OW-0170	Well 34 (deep aquifer at Well 32 site)	1,772,320	0	0	0	0	0	0	1,772,320	
OW-0116	Eastern Distribution System - Watkins Gate Well/Distribution Pipe	4,870,019	0	0	0	0	0	0	4,870,019	
OW-0119	Demolish D-zone Reservoir	0	0	17,340	156,060	0	0	0	173,400	ε
OW-0223	Well 30 Pump Replacement	0	210,000	0	0	0	0	0	210,000	ε
OW-0201	Gigling Transmission from D Booster to JM Blvd	0	1,800	439,200	0	0	0	0	441,000	ε
OW-0206	Inter-Garrison Road Pipeline Up-Sizing	0	0	165,485	526,639	0	0	0	692,124	ε
OW-0128	Lightfighter "B" Zone Pipeline Extension	0	0	314,586	0	0	78,647	0	393,233	δ δ
OW-0211	Eastside Parkway (D-Zone pipeline)	0	0	415,632	2,498,444	0	0	0	2,914,076	δ δ
OW-0202	South Boundary Road Pipeline	0	0	412,218	1,261,387	0	0	0	1,673,605	δ δ
OW-0230	Wellfield Main 2B - Well 31 to Well 34	0	0	161,194	493,253	0	0	0	654,447	ε
OW-0129	Rehabilitate Well 31	0	0	0	1,707,438	0	0	0	1,707,438	ε
OW-0127	CSUMB Pipeline Up-Sizing - Commercial Fireflow	0	0	0	38,311	117,231	0	0	155,542	ε
OW-0203	7th Avenue and Gigling Rd	0	0	0	61,990	189,689	0	0	251,679	ε
OW-0122	Replace D & E Reservoir Off-Site Piping	0	0	0	0	0	996,467	0	996,467	ε
OW-0167	2nd Ave extension to Gigling Rd	0	0	0	0	0	267,053	0	267,053	ε
OW-0118	"B4" Zone Tank @ East Garrison	0	0	0	0	0	0	3,116,949	3,116,949	δ
OW-0212	Reservoir "D2" + D-BPS Up-Size	0	0	0	0	0	0	3,997,826	3,997,826	δ δ , ε
OW-0208	Pipeline Up-Sizing - to Stockade	0	0	0	0	0	0	709,391	709,391	δ
OW-0209	Pipeline Up-Sizing - between Dunes & MainGate	0	0	0	0	0	0	220,050	220,050	δ δ
OW-0210	Sand Tank Demolition	0	0	0	0	0	0	542,078	542,078	ε
OW-0204	2nd Ave Connection, Reindollar to Imjin Pkwy	0	0	0	0	0	0	1,214,489	1,214,489	ε
OW-0164	Imjin Parkway Pipeline, Reservation Rd to Abrams Drive	0	0	0	0	0	0	513,619	513,619	ε
OW-0214	Imjin Road, 8th St. to Imjin Pkwy	0	0	0	0	0	0	1,104,081	1,104,081	ε
OW-0121	"C2" to "B4" Pipeline and PRV Station	0	0	0	0	0	0	1,409,403	1,409,403	δ
OW-0171	Eucalyptus Rd Pipeline	0	0	0	0	0	0	2,351,264	2,351,264	δ δ
OW-0213	Reservoir B4/B5 to East Garrison Pipeline	0	0	0	0	0	0	257,487	257,487	δ
OW-0216	UCMBEST Pipeline	0	0	0	0	0	0	402,493	402,493	δ
OW-0217	Reservation Road, Imjin to MBEST Drive	0	0	0	0	0	0	539,368	539,368	δ δ
OW-0218	Golf Boulevard Transmission Line	0	0	0	0	0	0	1,104,081	1,104,081	δ δ
OW-0219	"B5" Zone Tank @ East Garrison	0	0	0	0	0	0	3,116,949	3,116,949	δ
OW-0231	Wellfield Main 3A - Intergarrison to ASP Bldg	0	0	0	0	0	0	3,541,126	3,541,126	ε

Table B-3 Ord Water Proposed CIP
Marina Coast Water District
Financial Plan and Rate and Fee Study

CIP No.	PROJECT DESCRIPTION	Previous YEARS	FYE 2014 Current Year	FYE 2015 Proposed	FYE 2016 Proposed	FYE 2017 Proposed	FYE 2018 Proposed	OUT YEARS	TOTAL	CATEGORY
OW-0232A	Install Well 36 - Retire Well 29	0	0	0	0	0	0	2,515,243	2,515,243	ε
OW-0232B	Wellfield Main 1B - between Wells 36 and 35	0	0	0	0	0	0	3,169,802	3,169,802	ε
OW-0233	Wellfield Main 1C (Parallel) - between Wells 36 and ASP Bldg	0	0	0	0	0	0	3,736,274	3,736,274	δ δ
OW-0234	B-BPS at ASP Bldg	0	0	0	0	0	0	1,355,195	1,355,195	δ δ
OW-0235	Ord Well-head Disinfection	0	0	0	0	0	0	2,710,391	2,710,391	δ δ

SPLIT OF GENERAL WATER (GW) COST CENTER PROJECTS - SHARE ASSIGNED TO ORD WATER (OW) = 63%

CIP No.	PROJECT DESCRIPTION	Previous YEARS	FYE 2014 Proposed Year	FYE 2015 Planned	FYE 2016 Planned	FYE 2017 Planned	FYE 2018 Planned	OUT YEARS	TOTAL	CATEGORY
GW-0212	Potable Water Tank Compliance Project	$0	$63,860	$0	$0	$0	$67,111	$0	$130,971	ε
GW-0112	A1 & A2 Zone Tanks & B/C Booster Station	82,530	198,900	2,274,589	2,076,557	0	0	2,297,256	6,929,832	δ δ , ε
GW-0300	Marina & Ord Water Master Plan	0	157,500	0	0	0	0	0	157,500	ε
GW-0123	"B2" Zone Tank @ CSUMB	0	0	0	0	0	0	1,622,169	1,622,169	δ δ
GW-0210	Reservoir A3 (1.6 MG)	0	0	0	0	0	0	2,185,621	2,185,621	δ δ
GW-0231	Install Well 37 - Retire well 12	0	0	0	0	0	0	3,938,455	3,938,455	ε
GW-0232	Install Well 38 - Retire well 10	0	0	0	0	0	0	3,938,455	3,938,455	ε
GW-0233	A-BPS at ASP Bldg + Forebay Tank	0	0	0	0	0	0	1,049,287	1,049,287	ε
GW-0234	Install Well 39 - Retire Well 30	0	0	0	0	0	0	3,938,455	3,938,455	ε
GW-0235	B-BPS Expansion and Transmission to A1/A2 Tanks	0	0	0	0	0	0	8,242,947	8,242,947	ε
GW-0236	Install Well 40 - Retire Well 11	0	0	0	0	0	0	3,938,455	3,938,455	ε
GW-0237	Install Well 41 - Retire Well 31	0	0	0	0	0	0	3,938,455	3,938,455	ε

SPLIT OF WATER DISTRICT (WD) COST CENTER PROJECTS - SHARE ASSIGNED TO ORD WATER (OW) = 50%

CIP No.	PROJECT DESCRIPTION	Previous YEARS	FYE 2014 Current Year	FYE 2015 Proposed	FYE 2016 Proposed	FYE 2017 Proposed	FYE 2018 Proposed	OUT YEARS	TOTAL	CATEGORY
WD-0203	MCWD Fort Ord Office Landscape Project	$0	$10,455	$0	$0	$0	$0	$0	$10,455	ε
WD-0115	SCADA System Improvements - Phase I	486,994	68,850	70,227	71,632	73,064	0	0	770,767	ε
WD-0300	Long-Term Facilities Planning	0	75,000	0	0	0	0	0	75,000	ε
WD-0202	IOP Building E (BLM)	42,500	432,500	1,125,000	0	0	0	0	1,600,000	δ
WD-0106	Corp Yard Demolition & Rehab	0	0	0	60,000	225,000	0	0	285,000	ε
WD-0110	Asset Management Program - Phase II	0	0	0	125,000	0	0	0	125,000	ε
WD-0110A	Asset Management Program -- Phase III	0	0	0	0	125,000	0	0	125,000	ε
WD-0115A	SCADA System Improvements (Security + RD integration)	0	0	0	0	150,000	0	0	150,000	ε

Table B-4 Ord Sewer Proposed CIP
Marina Coast Water District
Financial Plan and Rate and Fee Study

CIP No.	PROJECT DESCRIPTION	Previous YEARS	FYE 2014 Current Year	FYE 2015 Proposed	FYE 2016 Proposed	FYE 2017 Proposed	FYE 2018 Proposed	OUT YEARS	TOTAL	CATEGORY
OS-0200	Clark Lift Station Improvement	$14,610	$403,975	$0	$0	$0	$0	$0	$418,585	ε
OS-0150	East Garrison Lift Station Improvements	588,620	0	0	0	0	259,135	0	847,755	ε
OS-0205	Imjin LS & Force Main Improvements - Phase I	0	28,000	530,000	0	0	0	558,000	δ δ	
OS-0154	Del Rey Oaks - Collection System Planning	0	0	61,200	0	0	0	0	61,200	δ
OS-0208	Parker Flats Collection System	0	0	25,500	78,030	0	0	0	103,530	δ δ
OS-0214	Intergarrison/8th Ave SS (for Eastside Pkwy developments)	0	0	255,000	780,300	0	0	0	1,035,300	δ δ
OS-0153	Misc. Lift Station Improvements	0	0	561,000	936,360	0	0	0	1,497,360	ε
OS-0152	Booker, Hatten, Neeson LS Improvements Project	0	0	102,000	624,240	0	0	0	726,240	ε
OS-0202	SCSD Sewer Improvements - DRO	0	0	0	502,454	1,537,510	0	0	2,039,964	δ
OS-0203	Gigling LS and FM Improvements	0	0	0	497,803	1,523,276	0	0	2,021,079	ε
OS-0147	Ord Village Sewer Pipeline & Lift Station Impr Project	0	0	0	0	562,651	0	0	562,651	ε
OS-0209	Imjin LS & Force Main Improvements -- Phase II	0	0	0	0	55,612	677,811	0	733,423	ε
OS-0204	CSUMB Developments	0	0	0	0	0	608,899	0	608,899	δ
OS-0207	Seaside Resort Sewer Imps. Project	0	0	0	0	0	326,146	0	326,146	δ
OS-0148	Marina Heights Sewer Pipeline Improvements Project	0	0	0	0	0	825,863	0	825,863	δ δ
OS-0149	Dunes Sewer Pipeline Replacement Projects	0	0	0	0	0	461,923	0	461,923	δ δ
OS-0151	Cypress Knolls Sewer Pipeline Improvements Project	0	0	0	0	0	97,424	0	97,424	δ
OS-0215	Demolish Ord Main Garrison WWTP	0	0	0	0	0	1,623,648	0	1,623,648	ε
OS-0206	Fitch Park Sewer Improvements	0	0	0	0	0	0	127,071	127,071	δ
OS-0210	1st Ave Sewer Pipeline Replacement Project	0	0	0	0	0	0	408,340	408,340	δ δ
OS-0211	Gen'l Jim Moore Sewer Pipeline Replacement Project	0	0	0	0	0	0	49,972	49,972	δ δ
OS-0212	Gen'l Jim Moore Sewer Pipeline Replacement Project III	0	0	0	0	0	0	187,037	187,037	δ δ
OS-0213	MRWPCA Buy-In	0	0	0	0	0	0	11,040,808	11,040,808	δ δ
OS-0216	SCSD Sewer Improvements - Seaside East	0	0	0	0	0	0	6,480,709	6,480,709	δ
OS-0217	SCSD Sewer Improvements - City of Monterey	0	0	0	0	0	0	1,444,854	1,444,854	δ

SPLIT OF GENERAL SEWER (GS) COST CENTER PROJECTS - SHARE ASSIGNED TO ORD SEWER (OS) = 60%

CIP No.	PROJECT DESCRIPTION	Previous YEARS	FYE 2014 Current Year	FYE 2015 Proposed	FYE 2016 Proposed	FYE 2017 Proposed	FYE 2018 Proposed	OUT YEARS	TOTAL	CATEGORY
GS-0300	Marina & Ord Wastewater Master Plan	$0	$120,000	$0	$0	$0	$0	$0	$120,000	ε
GS-0200	Odor Control Project	0	0	0	60,000	0	0	0	60,000	ε
GS-0201	Del Monte/Reservation Road Sewer Main Improvements	0	0	0	0	134,984	0	0	134,984	ε

Table B-4 Ord Sewer Proposed CIP
Marina Coast Water District
Financial Plan and Rate and Fee Study

CIP No.	PROJECT DESCRIPTION	Previous YEARS	FYE 2014 Current Year	FYE 2015 Proposed	FYE 2016 Proposed	FYE 2017 Proposed	FYE 2018 Proposed	OUT YEARS	TOTAL	CATEGORY
SPLIT OF WATER DISTRICT (WD) COST CENTER PROJECTS - SHARE ASSIGNED TO ORD SEWER (OS) = 11%										
CIP No.	**PROJECT DESCRIPTION**	**Previous YEARS**	**FYE 2014 Current Year**	**FYE 2015 Proposed**	**FYE 2016 Proposed**	**FYE 2017 Proposed**	**FYE 2018 Proposed**	**OUT YEARS**	**TOTAL**	**CATEGORY**
WD-0203	MCWD Fort Ord Office Landscape Project	$0	$2,255	$0	$0	$0	$0	$0	$2,255	ε
WD-0115	SCADA System Improvements - Phase I	105,038	14,850	15,147	15,450	15,759	0	0	166,244	ε
WD-0300	Long-Term Facilities Planning	0	16,500	0	0	0	0	0	16,500	ε
WD-0202	IOP Building E (BLM)	11,900	121,100	315,000	0	0	0	0	448,000	δ
WD-0106	Corp Yard Demolition & Rehab	0	0	0	13,200	49,500	0	0	62,700	ε
WD-0110	Asset Management Program - Phase II	0	0	0	27,500	0	0	0	27,500	ε
WD-0110A	Asset Management Program -- Phase III	0	0	0	0	27,500	0	0	27,500	ε
WD-0115A	SCADA System Improvements (Security + RD integration)	0	0	0	0	33,000	0	0	33,000	ε

APPENDIX C – RESULTS OF REVENUE REQUIREMENTS ANALYSIS

Table C-1 **Marina Water: Revenue Requirements Summary**
Marina Coast Water District
Financial Plan and Rate and Fee Study

Ref	Description	FY 2013/ 2014	FY 2014/ 2015	FY 2015/ 2016	FY 2016/ 2017	FY 2017/ 2018
Revenues(1)						
1	**Proposed Revenue Increase**	**3.0%**	**3.0%**	**3.0%**	**3.0%**	**3.0%**
2	User Charges	$3,973,453	$4,118,137	$4,313,328	$4,517,771	$4,731,905
3	Licenses and Permits	3,090	3,183	3,278	3,377	3,478
4	Other Revenues	53,732	54,067	54,980	55,909	56,853
5	Capacity Related	20,125	20,250	20,592	20,940	21,293
6	Income from Prop & Investments	0	0	0	0	0
7	Defd Revenue	3,450	3,450	3,450	3,450	3,450
8	Other Revenue Sources	9,270	9,548	9,835	10,130	10,433
9	Total Revenues	$4,063,120	$4,208,634	$4,405,463	$4,611,576	$4,827,413
Requirements						
10	Admin	$716,437	$737,930	$760,068	$782,870	$806,356
11	Operating and Maintenance	1,065,496	1,100,032	1,140,261	1,182,037	1,225,420
12	Laboratory	115,313	119,082	123,525	128,143	132,942
13	Conservation	132,083	136,046	140,127	144,331	148,661
14	Engineering	302,796	312,456	323,449	334,848	346,669
15	Debt Service	890,631	896,092	865,604	878,258	891,779
16	Rate Funded Capital (PAYGO)	0	0	0	0	0
17	Senior Debt Coverage (2)	210,563	215,192	204,627	209,286	213,886
18	Junior Debt Coverage (2)	56,531	56,251	56,191	56,059	56,135
19	Total Requirements	$3,489,850	$3,573,081	$3,613,854	$3,715,832	$3,821,849
20	Revenues - Requirements	$573,270	$635,554	$791,609	$895,744	$1,005,564
21	Senior Debt Coverage Factor	2.91 x	2.97 x	3.32 x	3.45 x	3.58 x
22	Junior Debt Coverage Factor	3.32 x	3.53 x	4.09 x	4.47 x	4.86 x
Accumulated Funds						
23	Operating Fund Ending Balance	$1,589,304	$1,628,205	$1,653,552	$1,701,610	$1,751,586
24	Days of Operating Expenditures	180 Days	180 Days	180 Days	180 Days	180 Days
25	Capital Expenditures (3)	$604,294	$2,231,614	$1,634,368	$911,606	$593,843
26	Capital Fund Ending Balance (4)	6,178,698	4,876,968	4,318,450	4,563,060	5,240,456
27	Consolidated Funds	$7,768,003	$6,505,172	$5,972,002	$6,264,669	$6,992,042

Notes:

(1) All user rate based revenues are post rate increase.

(2) Note that debt coverage is calculated assuming policy based coverage factor requirements on 1.35 x (senior debt) and 1.2 x (junior debt).

(3) Capital Expenditures Based on Proposed CIP

(4) Note that bonds which are each issued to cover CIP costs are shown as being deposited into the Capital Fund.

Table C-2 **Marina Sewer: Revenue Requirements Summary**
Marina Coast Water District
Financial Plan and Rate and Fee Study

Ref	Description	FY 2013/ 2014	FY 2014/ 2015	FY 2015/ 2016	FY 2016/ 2017	FY 2017/ 2018
Revenues[1]						
1	**Proposed Revenue Increase**	**10.0%**	**10.0%**	**10.0%**	**10.0%**	**10.0%**
2	User Charges	$842,087	$932,063	$1,042,588	$1,166,218	$1,304,509
3	Licenses and Permits	2,591	2,684	2,810	2,942	3,080
4	Other Revenues	0	0	0	0	0
5	Capacity Related	10,062	10,125	10,296	10,470	10,647
6	Income from Prop & Investments	0	0	0	0	0
7	Defd Revenue	1,900	1,900	1,900	1,900	1,900
8	Other Revenue Sources	515	530	546	563	580
9	Total Revenues	$857,155	$947,303	$1,058,140	$1,182,093	$1,320,715
Requirements						
10	Admin	$227,187	$234,003	$241,023	$248,253	$255,701
11	Operating and Maintenance	325,882	336,088	347,379	359,066	371,163
12	Laboratory	0	0	0	0	0
13	Conservation	0	0	0	0	0
14	Engineering	67,919	69,963	72,082	74,264	76,514
15	Debt Service	256,568	253,802	247,853	340,046	426,415
16	Rate Funded Capital (PAYGO)	38,607	38,607	36,763	0	0
17	Senior Debt Coverage [2]	60,579	60,313	58,304	90,684	120,922
18	Junior Debt Coverage [2]	16,400	16,296	16,254	16,190	16,185
19	Total Requirements	$993,141	$1,009,072	$1,019,658	$1,128,504	$1,266,900
20	Revenues - Requirements	-$135,986	-$61,769	$38,483	$53,589	$53,815
21	Senior Debt Coverage Factor	1.42 x	1.84 x	2.45 x	1.97 x	1.82 x
22	Junior Debt Coverage Factor	0.15 x	1.04 x	2.25 x	1.99 x	2.00 x
Accumulated Funds						
23	Operating Fund Ending Balance	$320,066	$334,906	$447,947	$503,818	$557,158
24	Days of Operating Expenditures	133 Days	137 Days	180 Days	180 Days	180 Days
25	Capital Expenditures [3]	$0	$0	$1,844	$1,650,580	$1,650,580
26	Capital Fund Ending Balance [4]	982,104	991,925	1,000,000	1,104,591	1,137,581
27	Consolidated Funds	$1,302,170	$1,326,831	$1,447,947	$1,608,409	$1,694,739

Notes:

(1) All user rate based revenues are post rate increase.

(2) Note that debt coverage is calculated assuming policy based coverage factor requirements on 1.35 x (senior debt) and 1.2 x (junior debt).

(3) Conservative estimate of the maximum amount of capital funding available based on funding with both debt and available cash.

(4) Note that bonds which are each issued to cover CIP costs are shown as being deposited into the Capital Fund.

Table C-3 **Ord Water: Revenue Requirements Summary**
Marina Coast Water District
Financial Plan and Rate and Fee Study

Ref	Description	FY 2013/ 2014	FY 2014/ 2015	FY 2015/ 2016	FY 2016/ 2017	FY 2017/ 2018
Revenues(1)						
1	**Proposed Revenue Increase**	**10.0%**	**10.0%**	**10.0%**	**10.0%**	**4.0%**
2	User Charges	$5,713,636	$6,682,913	$7,649,893	$8,759,296	$9,745,728
3	Licenses and Permits	5,150	5,305	5,464	5,628	5,796
4	Other Revenues	58,676	63,141	66,189	69,383	72,732
5	Capacity Related	139,894	150,541	157,807	165,423	173,407
6	Income from Prop & Investments	0	0	0	0	0
7	Defd Revenue	19,880	19,880	19,880	19,880	19,880
8	Other Revenue Sources	515	530	546	563	580
9	Total Revenues	$5,937,751	$6,922,311	$7,899,779	$9,020,174	$10,018,123
Requirements						
10	Admin	$1,542,384	$1,624,611	$1,698,570	$1,776,721	$1,859,344
11	Operating and Maintenance	1,723,877	1,844,318	1,947,853	2,058,266	2,176,060
12	Laboratory	207,983	221,610	233,441	246,032	259,438
13	Conservation	143,973	148,293	152,741	157,324	162,043
14	Engineering	419,493	437,550	454,515	472,289	490,920
15	Debt Service	1,741,631	1,849,263	1,952,635	2,707,352	3,463,182
16	Rate Funded Capital (PAYGO)	915,000	1,006,500	0	0	0
17	Senior Debt Coverage [2]	48,694	174,112	316,205	1,076,091	1,835,977
18	Junior Debt Coverage [2]	144,425	130,425	115,925	100,825	85,125
19	Total Requirements	$6,887,461	$7,436,682	$6,871,885	$8,594,899	$10,332,090
20	Revenues - Requirements	-$949,710	-$514,371	$1,027,894	$425,275	-$313,967
21	Senior Debt Coverage Factor	1.65 x	2.06 x	2.45 x	2.02 x	1.77 x
22	Junior Debt Coverage Factor	0.75 x	1.96 x	3.24 x	3.01 x	2.50 x
Accumulated Funds						
23	Operating Fund Ending Balance	$488,397	$278,563	$1,738,586	$3,340,777	$4,147,884
24	Days of Operating Expenditures	31 Days	17 Days	99 Days	164 Days	180 Days
25	Capital Expenditures [3]	$2,217,359	$2,217,359	$2,217,359	$12,628,080	$12,628,080
26	Capital Fund Ending Balance [4]	1,000,000	1,000,000	1,000,000	1,000,000	1,800,029
27	Consolidated Funds	$1,488,397	$1,278,563	$2,738,586	$4,340,777	$5,947,913

Notes:

(1) All user rate based revenues are post rate increase.

(2) Note that debt coverage is calculated assuming policy based coverage factor requirements on 1.35 x (senior debt) and 1.2 x (junior debt).

(3) Conservative estimate of the maximum amount of capital funding available based on funding with both debt and available cash.

(4) Note that bonds which are each issued to cover CIP costs are shown as being deposited into the Capital Fund.

Table C-4	Ord Sewer: Revenue Requirements Summary Marina Coast Water District Financial Plan and Rate and Fee Study					
Ref	**Description**	**FY 2013/ 2014**	**FY 2014/ 2015**	**FY 2015/ 2016**	**FY 2016/ 2017**	**FY 2017/ 2018**
Revenues(1)						
1	**Proposed Revenue Increase**	**4.0%**	**4.0%**	**4.0%**	**4.0%**	**8.0%**
2	User Charges	$1,858,904	$2,080,399	$2,268,039	$2,472,603	$2,748,472
3	Licenses and Permits	5,531	6,117	6,596	7,112	7,669
4	Other Revenues	0	0	0	0	0
5	Capacity Related	23,674	25,476	26,706	27,995	29,346
6	Income from Prop & Investments	0	0	0	0	0
7	Defd Revenue	7,800	7,800	7,800	7,800	7,800
8	Other Revenue Sources	773	796	820	844	869
9	Total Revenues	$1,896,681	$2,120,589	$2,309,961	$2,516,354	$2,794,156
Requirements						
10	Admin	$266,146	$274,130	$282,354	$290,825	$299,549
11	Operating and Maintenance	430,568	458,414	482,638	508,408	535,835
12	Laboratory	0	0	0	0	0
13	Conservation	0	0	0	0	0
14	Engineering	99,287	103,792	107,976	112,369	116,984
15	Debt Service	801,765	938,535	1,098,799	1,233,901	1,363,584
16	Rate Funded Capital (PAYGO)	0	0	0	0	0
17	Senior Debt Coverage (2)	234,307	282,921	338,660	385,638	430,521
18	Junior Debt Coverage (2)	25,954	26,038	26,240	26,416	26,705
19	Total Requirements	$1,858,026	$2,083,830	$2,336,666	$2,557,557	$2,773,178
20	Revenues - Requirements	$38,655	$36,759	-$26,706	-$41,203	$20,979
21	Senior Debt Coverage Factor	1.68 x	1.62 x	1.51 x	1.48 x	1.52 x
22	Junior Debt Coverage Factor	1.70 x	1.68 x	1.20 x	1.10 x	1.58 x
Accumulated Funds						
23	Operating Fund Ending Balance	$787,939	$875,279	$972,378	$1,058,056	$1,142,113
24	Days of Operating Expenditures	180 Days	180 Days	180 Days	180 Days	180 Days
25	Capital Expenditures (3)	$2,551,025	$2,551,025	$2,551,025	$1,774,095	$1,774,095
26	Capital Fund Ending Balance (4)	1,098,274	1,258,378	1,241,095	1,285,173	1,394,147
27	Consolidated Funds	$1,886,213	$2,133,657	$2,213,473	$2,343,229	$2,536,260

Notes:

(1) All user rate based revenues are post rate increase.

(2) Note that debt coverage is calculated assuming policy based coverage factor requirements on 1.35 x (senior debt) and 1.2 x (junior debt).

(3) Conservative estimate of the maximum amount of capital funding available based on funding with both debt and available cash.

(4) Note that bonds which are each issued to cover CIP costs are shown as being deposited into the Capital Fund.

APPENDIX D – DETAILED CAPACITY CHARGE CALCULATIONS

MCWD - Capacity Charge Calculations

2013

		Marina Water	Ord Water
System Capacity Charge			
Existing Cost Basis			
Value of Water Infrastructure in Service			
1	Total Replacement Cost of Existing System Infrastructure	$ 28,018,200	$ 119,943,500
2	Less Accumulated Depreciation on Existing Infrastructure Assets	(14,644,077)	(62,844,026)
3	**RCNLD of Water Infrastructure in Service (sum of 1 to 2)**	**$ 13,374,123**	**$ 57,099,474**
Value of Other Depreciable Assets			
4	Total Value of Water/Sewer Rights Assets	$ 2,379,410	$ -
5	Less Accumulated Depreciation on Water/Sewer Rights Assets	(308,062)	-
6	Total Value of Building and Improvements Assets	1,303,118	1,985,062
7	Less Accumulated Depreciation on Building and Improvements Assets	(369,265)	(184,589)
8	Total Value of Equipment Assets	1,271,176	945,542
9	Less Accumulated Depreciation on Equipment Assets	(1,078,535)	(539,142)
10	**RCNLD of Other Depreciable Assets (sum of 4 to 9)**	**$ 3,197,842**	**$ 2,206,873**
Value of Non-depreciable Assets			
11	Land	$ 3,163,765	$ 4,344,818
12	Property Easement	-	14,100,000
13	Water/Sewer Rights	-	57,450,000
14	Construction in Progress	219,207	7,480,988
15	**Sub-Total of Adjustments (sum of 11 to 14)**	**$ 3,382,972**	**$ 83,375,806**
16	**Total Value of Capital Assets (3+10+15)**	**$ 19,954,937**	**$ 142,682,153**
Liability and Asset Related Adjustments			
17	Outstanding Debt for Infrastructure (2006 and 2010 Bonds)	$ (18,825,395)	$ (16,398,665)
18	Other Long-term Debt	(14,856)	(38,459)
19	Capital Fund	1,972,600	3,522,500
20	Operating Fund	5,175,741	1,181,088
21	Debt Service Reserve Fund	1,653,060	3,781,403
22	**Total Liability and Asset-Related Adjustments (sum of 17 to 21)**	**$ (10,038,849)**	**$ (7,952,134)**
23	**Total Value of Existing Assets Net of Liabilities (16+22)**	**$ 9,916,088**	**$ 134,730,020**
Future Cost Basis			
Future CIP			
24	Cost Center Specific Projects	$ 2,499,456	$ 48,157,623
25	General Water Project Costs Assigned to Cost Center	23,451,061	39,930,184
26	Water District Pojects Assigned to Cost Center	1,563,575	2,605,959
27	**Infrastructure Related Future CIP Costs (24+26)**	**$ 27,514,092**	**$ 90,693,766**
28	**Total Value of Existing and Future Assets (23+27)**	**$ 37,430,180**	**$ 225,423,786**
Existing and Future Customer Base			
Meters Equivalents			
29	Total Existing Meter Equivalents	5,520	6,689
30	Number of Future Meter Equivalents	2,750	7,697
31	**Total Number of Meter Equivalents (29+30)**	**8,269**	**14,387**
System Capacity Charge Results			
32	**Estimated CY System Capacity Charge (28/31)**	**$ 4,526**	**$ 15,669**
33	Current CY 2012 Capacity Charge (System)	$ 5,450	$ 5,750
34	Difference (32-33)	$ (924)	$ 9,919
	CCI Adjusted Charge (Based on 2003 Charge)	**$ 7,563**	**$ 7,980**

MCWD - Capacity Charge Calculations

March 2013

		Marina Sewer	Ord Sewer
System Capacity Charge			
Existing Cost Basis			
Value of Water Infrastructure in Service			
1	Total Replacement Cost of Existing System Infrastructure	$ 27,684,650	$ 62,336,100
2	Less Accumulated Depreciation on Existing Infrastructure Assets	(14,560,205)	(32,644,610)
3	**RCNLD of Water Infrastructure in Service (sum of 1 to 2)**	**$ 13,124,445**	**$ 29,691,490**
Value of Other Depreciable Assets			
4	Total Value of Water/Sewer Rights Assets	$ -	$ -
5	Less Accumulated Depreciation on Water/Sewer Rights Assets	-	-
6	Total Value of Building and Improvements Assets	319,215	501,880
7	Less Accumulated Depreciation on Building and Improvements Assets	(108,434)	(76,519)
8	Total Value of Equipment Assets	432,429	572,448
9	Less Accumulated Depreciation on Equipment Assets	(316,711)	(223,493)
10	**RCNLD of Other Depreciable Assets (sum of 4 to 9)**	**$ 326,498**	**$ 774,317**
Value of Non-depreciable Assets			
11	Land	$ 857,002	$ 1,216,549
12	Property Easement	-	10,800,000
13	Water/Sewer Rights	-	15,300,000
14	Construction in Progress	147,810	842,889
15	**Sub-Total of Adjustments (sum of 11 to 14)**	**$ 1,004,812**	**$ 28,159,438**
16	**Total Value of Capital Assets (3+10+15)**	**$ 14,455,755**	**$ 58,625,245**
Liability and Asset Related Adjustments			
17	Outstanding Debt for Infrastructure (2006 and 2010 Bonds)	$ (2,463,925)	$ (8,360,980)
18	Other Long-term Debt	(16,670)	(5,942)
19	Capital Fund	563,600	986,300
20	Operating Fund	663,971	2,071,647
21	Debt Service Reserve Fund	447,943	1,147,087
22	**Total Liability and Asset-Related Adjustments (sum of 17 to 21)**	**$ (805,081)**	**$ (4,161,888)**
23	**Total Value of Existing Assets Net of Liabilities (16+22)**	**$ 13,650,674**	**$ 54,463,357**
Future Cost Basis			
Future CIP			
24	Cost Center Specific Projects	$ 10,639,834	$ 34,242,551
25	General Sewer Project Costs Assigned to Cost Center	314,984	314,984
26	Water District Pojects Assigned to Cost Center	469,073	573,311
27	**Infrastructure Related Future CIP Costs (24+26)**	**$ 11,423,891**	**$ 35,130,846**
28	**Total Value of Existing and Future Assets (23+27)**	**$ 25,074,564**	**$ 89,594,203**
Existing and Future Customer Base			
Equivalent Dwelling Units (EDUs)			
29	Total Existing (EDUs)	7,235	5,541
30	Number of Future EDUs	3,513	6,193
31	**Total Number of Meter Equivalents (29+30)**	**10,748**	**11,734**
System Capacity Charge Results			
32	**Estimated CY System Capacity Charge (28/31)**	**$ 2,333**	**$ 7,636**
33	Current CY 2012 Capacity Charge (System)	$ 3,950	$ 2,150
34	Difference (32-33)	$ (1,617)	$ 5,486
	CCI Adjusted Charge (Based on 2003 Charge)	**$ 5,482**	**$ 2,984**