

# CITY OF SAN CLEMENTE: Water Cost of Service Study

## SCOPE OF WORK

The proposed scope of work outlines our proposed approach for undertaking the Cost of Service and Water Rate Design Study.

### TASK 1: PROJECT KICK-OFF AND IDENTIFY DATA REQUIREMENTS

Carollo will hold a project kick-off meeting with City staff. The meeting will outline key objectives, determine priorities, and, if necessary, modify the scope of work. Carollo will submit a detailed data request in advance of the meeting, which can be reviewed and discussed during this meeting.

As with any data-driven analysis, our approach begins with gathering the necessary cost and consumption data to complete the rate study. The City's existing and historical revenue and billing data will be analyzed as a proxy of future projections. However, past consumption or financials are not indicative of future results. This is especially true when developing and implementing new rate structures. Given the advancements in conservation efforts and other possible water demand/supply and financial factors, Carollo will build from our wealth of experience to provide greater context and perspective to the analyzed data and forecasts.

While Carollo envisions this project as a collaborative process with City staff, our goal is to provide a management plan that streamlines the process in order to adhere to the desired project schedule and to minimize time requirements placed on staff. However, throughout the process, Carollo will look to the City/staff to provide and share knowledge of the system, verify assumptions, and provide key input. Not only will this enhance the cost of service foundation of the analysis, but it will streamline the entire process.

### TASK 2: DEVELOP COST-OF-SERVICE STUDIES

Carollo will develop a 10-year revenue requirement analysis and forecast for the City's water utility. The City's existing financial information will be analyzed and forecasted over a 10-year time horizon to determine the City's annual revenue needs, including long-term maintenance and replacement costs. Carollo will use the developed model to run multiple scenarios and sensitivity analyses to determine the scenario that best meets City's desired objectives.

Building from a foundation espoused by the AWWA, the calculated revenue requirements will then be allocated to each customer class based on a calculation of the City's specific capacity and treatment requirements by billable constituent. These billable constituents will likely include customer service, base water demand, peak water demand, and capacity. As various revenue and demand projections are analyzed, the cost of service analysis will evaluate the impacts of these various scenarios. The proposed rate structures will adhere to Proposition 218 requirements and sound cost of service, rate-making principles.

### *TASK 2.1 – POLICY REVIEW*

Carollo believes that fiscal policies are a critical building block for any effective utility financial plan and rate study. Moreover, in presenting any proposed rate plan to the City Council, we know that it is critical to provide context for any rate increases or design modifications based on your fiscal policies. The City has developed sound fiscal and reserve policies that are the underlying basis for its credit rating. We will review and evaluate reserve policies and capital funding strategy with City staff, discussing the City's goals and potential rate impacts. A comparison of these policies and strategies to industry standards could help provide context in determining possible enhancements or changes that would benefit the utility's stakeholders and customers. As appropriate, we will work with City staff to refine its fiscal policies.

### *TASK 2.2 – FINANCIAL NEEDS FORECAST*

At the heart of any utility rate study is a revenue requirement, which uses projected cash flows and debt service requirements to project potential revenue shortfalls. We will incorporate data elements collected throughout the Study process to develop a long-range financial forecast that projects operating expenditures; repair, replacement, and other capital needs; and offsetting revenues. The analysis will focus primarily on revenue sufficiency over the next 10 years.

Our evaluation of financial plans will consider the overall funding strategy including near- and long-term capital and operational needs, as well as potential customer usage changes due to modifications of the rate structures. The results of the revenue requirement will determine what levels of rate increases are necessary in order to promote the financial stability of the wastewater fund and to meet City's policy goals.

### *TASK 2.3 - CUSTOMER DATA ANALYSIS*

Carollo will conduct a statistical analysis of your past historical billing and consumption records. Due to the variable nature of the water demands and the City's recent allotment reduction, it is important to evaluate a multi-year trend and determine potential revenue lulls during low-usage years. In addition to Excel, we will use advanced statistical software (IBM SPSS) to quickly and more efficiently analyze existing customer billing records and provide usable information, such as consumption breakpoints used in developing a recommendation. This step is essential to analyze potential inequities (i.e., the need for additional customer classes) and further drought or conservation impacts.

We will examine the usage data and calibrate billing records against actual rate revenues to prevent over or under estimation of the City's customer base. This is a critical step in setting appropriate and sufficient rates. In addition, we will perform sensitivity analyses related to uncertain factors, such as possible water rationing, or alternative growth scenarios. These results will flow through to the revenue requirements and funding analysis to determine potential impacts to revenues and overall revenue stability.

### *TASK 2.4 - ALLOCATION OF COSTS TO FUNCTIONAL CATEGORIES*

Carollo will develop a cost allocation based on the City's unique system and consider the AWWA methodologies. Functional Allocation designates each budget item to a specific City functional categories, which is intended to translate each cost into a specific rate component. Given staff's thorough knowledge

of the water systems and history with the City, Carollo will rely on staff's input and support during the allocation process.

Those functional categories and their associated costs are allocated to the distinct customer classes based on each class' unique account, meter, and demand characteristics. A customer class consists of customers that commonly create or share responsibility for certain costs incurred by the utility. In the end, the revenue requirement has been allocated twice. First, to several broad functional categories intended to provide structure to the rates, and second, to each customer class to equitably reflect their share of each functional category's costs. Carollo will review and incorporate the City's current asset and accounting records.

Line-item expenditures will be allocated to customer service, base water usage, and peak water usage. As necessary to address specific customer factors or demands, Carollo will work with staff to create additional cost allocation factors. Finally, these costs will be assigned to fixed and variable categories in order to develop defensible monthly fixed charges.

### TASK 3: RATE DESIGN FOR NORMAL & DROUGHT CONDITIONS

Carollo will evaluate and analyze emerging or expected future rate structures, technologies, and trends for water services that might impact or influence future rate structures, including how pricing and how those influences might effect of apply to the City. The evaluation will also provide an overview of known or potential risks, mandated drought restrictions, fixed vs. variable revenues and expenses, and costs associated with implementation.

Carollo has worked with many similarly sized and complex agencies in developing innovative rate structures that meet the unique needs of our clients. Complexity and sophistication must be balanced with stakeholder understanding and administrative ease and costs. We will meet with City staff to review and evaluate potential rate structure alternatives, such as budget-based rates, that promote an equitable allocation of costs among customer groups.

Carollo will also present the concept of Budget-Based Rate structures. While this alternative may not be preferred, it will be included in the overview of rate structure for thoroughness. This scope of work does not include design or implementation of budget-based rates as additional time, effort, and communication efforts would be required. Should the City decide to move forward with budget-based rates, it could be accommodated under a separate scope that defines the necessary level of effort.

#### *TASK 3.1 - OVERVIEW OF RATE STRUCTURES*

Carollo will develop an easy to understand matrix that outlines:

- Advantages and disadvantages of each rate alternative.
- Nexus between each rate structure, system costs, and overall equity between customer classes.
- Effect of rate structures on revenue stability.
- Ability and effectiveness of rate structures to meet the City's policy objectives.
- Administrative ease.
- Potential for legal challenges.

For each proposed rate structure, the matrix will illustrate both qualitative and quantitative advantages, including achievement of policy objectives and revenue risk. This approach allows City staff and stakeholders to choose the rate structures that best meet stated objectives and is critical in explaining the recommendations to the public-at-large. Issues such as added administrative costs, tie-backs to the City's connection fees, and revenue impacts will be illustrated in this matrix for straightforward communication.

Carollo's entire process will be designed to comply with Proposition 218 and relevant case law, including the Palmdale Water District, Castaic Lake Water Agency, and San Juan Capistrano cases.

### *TASK 3.2 – RATE DESIGN RECOMMENDATIONS*

Carollo will prepare a rate design analysis for the water services that provides a clear, written overview of the basis upon which the rates are calculated, including an analysis of rate classes to eliminate and/or add classes as appropriate. As part of this review, Carollo will:

- Review composition and construction of customer classes, and recommend any changes following the customer data analysis in task 2.3.
- Provide clear documentation outlining how the recommended rate structure complies with all relevant regulations (namely Proposition 218), industry best practices, and agency policies.
- Assess external rate considerations, such as social and economic factors, ease of administering recommended rates, and the expense to implement the rates.
- Determine fiscal impacts of outlined scenarios, such as continued demand reductions or mandatory drought restrictions, capital project funding requirements, compliance with reserves and debt covenants, and expansion of the recycled water program.
- Forecast bill impacts of representative customers in each customer class, and present typical bill impacts for a minimum of 3 usage patterns per classification (low, medium, and high demand), showing how bills will be impacted following the proposed rate changes.
- Review and provide recommendations on the City's existing leak adjustment policies.
- Provide rate comparisons of neighboring and comparable utilities.
- Develop a matrix that details the pros and cons of making each change, and make a recommendation based on the best and most appropriate approach.

To account for the more detailed alternatives, Carollo will analyze the existing and planned infrastructure and system as it was designed and is being utilized to enhance equities and cost recovery. By creating a logical nexus between the infrastructure, its design, and use, Carollo can create a rate structure that complies with Proposition 218 and 26 and can be easily understood and communicated to the City Council and general public.

### TASK 3.3 – RECYCLED WATER INTEGRATION

While this review does not entail a development of a Recycled Water Cost of Service Study, there are customers transitioning from potable to recycled water, which will require that some recycled water elements be evaluated. Carollo will:

- Review the recycled water rates.
- Evaluate the recycled water system either as part of, or as a separate entity from potable water system and rates.
- Explore the cost savings of onsite storage.
- Review the potential cost reduction on monthly fixed charge for recycled water customers.

This review will detail what costs are borne by potable customers versus recycled water customers to provide a clear delineation and definition of potable water rate costs.

### TASK 4: MODEL DEVELOPMENT

Based on the collected data and feedback from the kick-off and subsequent meetings, Carollo will prepare a user-friendly tailored model in Microsoft® Excel to fit the City's expressed needs. Our model will allow us to include multiple "what-if" scenarios, which will let the City look at water supply costs, changes in demand, contract cost, etc. The four major components of the model consist of:

- 1) **Revenue Requirement.** Carollo will tailor this specifically around the City's line-item budget, which will include, but not be limited to, operations and maintenance, CIP, and debt.
- 2) **Customer Analysis.** In order to develop sound revenue forecasts and equitable customer allocations, the statistical analysis of customer usage and billing data is a critical component to the model development.
- 3) **Functional Allocation.** As addressed in Task 2.4, a cost allocation module will be built within each model to allocate costs specific to the utility, which will then be used to form the rate structures.
- 4) **Rate Design.** The current rate structures for the water utility will be reviewed and revised as outlined in Task 3.

Carollo will work with the City to develop a version of the model that works for your needs. The model is developed collaboratively with City staff throughout the study to provide constant feedback and input. The model will also serve as a complementary piece to the City's administrative record and Carollo's written report.

### TASK 5: RATE REPORT

Draft and final study reports will be prepared to present the methodology, process, and findings of the Study, and its recommendations. This report will document the need for any rate increases, forecast a multi-year revenue requirement, present two rate scenarios for each division, outline an implementation plan for presenting and communicating utility costs and the proposed rate structures to rate payers and members of the public, and provide any supporting calculations as necessary. Comments on the draft report will be incorporated in a final report.

## TASK 6: MEETINGS AND WORKSHOPS

Carollo will hold three (3) meetings with City Staff during the course of the project, including a Kickoff meeting and two workshops to review model development and gain input from City staff. One (1) public workshop and two (2) City Council presentations are proposed to discuss alternatives, findings, and policy or rate payer implications. To gain input from the City Council prior to public engagement, Carollo will hold a series of two-by-two meetings. This will allow for Council members to provide input and feedback while complying with the Brown Act. Carollo will assist City staff with the rate adoption process associated public hearings and attend at the request of the City. For added efficiencies, Carollo will hold additional progress meetings via WebEx.

## PROJECT BUDGET

The proposed budget reflects the necessary level of effort to satisfy the requirements of proposition 218. The cost of service report will define the nexus between the system costs and the proportional recovery of those costs from system users. The proposed hours and overall budget is predicated on rate adoption for January 1, 2017 implementation. *Invoices will be provided monthly and the project is to be billed on a time and material basis.*

Task	Robb Grantham Project Director	Jeff Weishaar, P.E. Engineering Advisor	Pierce Rossum Project Manager	Analytical Support	Labor Cost	PECE	Expenses	Total
	\$ 281	\$ 237	\$ 194	\$ 165		\$ 11.70		
<b>Phase I - Cost of Service Analysis</b>								
<b>Task 1: Project Kick-off &amp; Data Request</b>	2.0	-	8.0	4.0	\$ 2,774	\$ 163	\$ -	\$ 2,937
<i>Kickoff meeting with staff, data request, and research/supporting analysis</i>								
<b>Task 2: Financial Forecast and Cost of Service</b>	8.0	5.0	48.0	66.0	\$ 23,635	\$ 1,485	\$ -	\$ 25,120
<i>Review and development of revenue requirements, functional allocations, and reserve policies</i>								
<i>Task 2.1 - Policy Review</i>	1.0	1.0	6.0	2.0				
<i>Task 2.2 - Financial Needs Forecast</i>	2.0	2.0	12.0	16.0				
<i>Task 2.3 - Customer Data Analysis</i>	1.0	-	12.0	32.0				
<i>Task 2.4 - Cost Allocation Analysis</i>	4.0	2.0	18.0	16.0				
<b>Task 3: Rate Design Recommendations</b>	7.0	-	28.0	40.0	\$ 13,999	\$ 877	\$ -	\$ 14,876
<i>Development and documentation of rate structure alternatives</i>								
<i>Task 3.1 Overview of Rate Structures</i>	2.0	-	12.0	6.0				
<i>Task 3.2 Rate Design Recommendations</i>	4.0	-	12.0	32.0				
<i>Task 3.3 Recycled Water Integration</i>	1.0	-	4.0	2.0				
<b>Task 4: Model Development</b>	-	-	6.0	24.0	\$ 5,124	\$ 351	\$ -	\$ 5,475
<i>Development of a tailored Financial Plan and Rate setting</i>								
<b>Task 5: Study Report</b>	8.0	2.0	24.0	32.0	\$ 12,658	\$ 772	\$ -	\$ 13,430
<i>Development of a defensible and cost of service based</i>								
<b>Task 6: Meetings &amp; Presentations</b>	30.0	-	47.0	24.0	\$ 21,508	\$ 1,181	\$ 1,500	\$ 24,189
<i>Meetings and presentations (and development of related materials) in order to receive/develop staff and Council input and garner support for recommendation.</i>								
<i>Presentations/Workshops(each):</i>	8.0	-	8.0	4.0	\$ 4,460	\$ 234	\$ 500	\$ 5,194
<i>Council 2x2 (per day)</i>	8.0	-	8.0	-	\$ 3,800	\$ 187	\$ 500	\$ 4,487
<i>Staff Meetings (each)</i>	2.0	-	5.0	4.0	\$ 2,192	\$ 128	\$ -	\$ 2,320
<b>Total</b>	55.0	7.0	161.0	190.0	\$ 79,698	\$ 4,829	\$ 1,500	\$ 86,027

**Deliverables:** Rate Model (Excel) and Draft and Final Summary Cost of Service Report

**Presentations:** Assumes a total of 3 on-site presentations/workshops (1 Initial Public Workshop and 2 Council Presentations)

**Council 2x2:** Assumes a series of 2x2x1 meetings with the City Council in compliance with Brown Act. Assumes single day of meetings.

**Staff Meetings:** Assumes 3 working/review meeting with staff