



*Inland Empire Utilities Agency*

A MUNICIPAL WATER DISTRICT



**PROPOSAL**

Consulting Engineering Services for the  
**Sewer Use Fee Evaluation**

**RFP-RW-16-007**

April 21, 2016

Mr. Craig Proctor  
*Project Manager*  
Inland Empire Utilities Agency  
6075 Kimball Avenue, Building A  
Chino, CA 91708

Subject: Proposal for Consulting Engineering Services for the Sewer Use Fee Evaluation  
(RFP-RW-16-007)

Dear Mr. Proctor,


In a time of increasing litigation and water demand challenges, it is critical that the Inland Empire Utilities Agency (Agency) selects a team with proven utility finance and engineering expertise. Carollo Engineers (Carollo) is not only a leader in water, wastewater, and cost-of-service rate setting, but also possesses the knowledge, resources, and capabilities to provide the engineering backstop required to support this complex undertaking.

By carefully addressing several key issues and challenges, your study will provide a cohesive roadmap for the equitable recovery of costs from system users. These issues and challenges that must be addressed during the sewer evaluation study include:

- ▶ What are alternative billing procedures and how would they improve or streamline upon current practices?
- ▶ What are alternatives to calculating sewer discharge factors and feasibility of using these updated metrics?
- ▶ How will the collective changes impact IEUA operations and Contract Agencies?

We have recently addressed these issues throughout California, including peer agencies such as Orange County Sanitation District, Sacramento Regional, San Francisco, and another 300 agencies. We are pleased to submit this proposal as we view this Study as a partnership with the Agency, the Agency Board, and the local community. At the completion of this Study, we trust that you will move forward with confidence that the Study will provide a long-range approach, supporting the Agency's program and reflecting the community values. Should you have any questions in regard to this proposal, please contact me at (714) 593-5100.

Sincerely,  
CAROLLO ENGINEERS, INC.

  
Robb Grantham  
*Principal-in-Charge*

  
Toby Weissert  
*Project Manager*

# FIRM PROFILE

## FIRM HISTORY/BACKGROUND

Carollo was established in Phoenix, AZ, in 1933 as Headman, Ferguson and Carollo and was renamed John A. Carollo, Consulting Engineers in 1957. The partnership was reorganized in 1970 under the name of John Carollo Engineers, and was renamed Carollo Engineers in 1996. The firm was incorporated in 1998 under the name of Carollo Engineers, P.C. The firm then converted from an Arizona professional corporation to a Delaware corporation under the name of Carollo Engineers, Inc. on May 13, 2010.

## National Water and Wastewater Experts

Carollo is the nation's largest environmental engineering firm specializing exclusively in the planning, design, and construction of water and wastewater facilities. Since 1933, Carollo has successfully completed more than 20,000 projects for public sector clients. Carollo is currently ranked within *Engineering News-Record's* (ENR) top 100 design firms. More importantly, ENR's annual Source Book ranks Carollo among the top 15 firms for water and wastewater/sewer design. Carollo is the largest consulting firm in the U.S. dedicated exclusively to water and wastewater engineering.

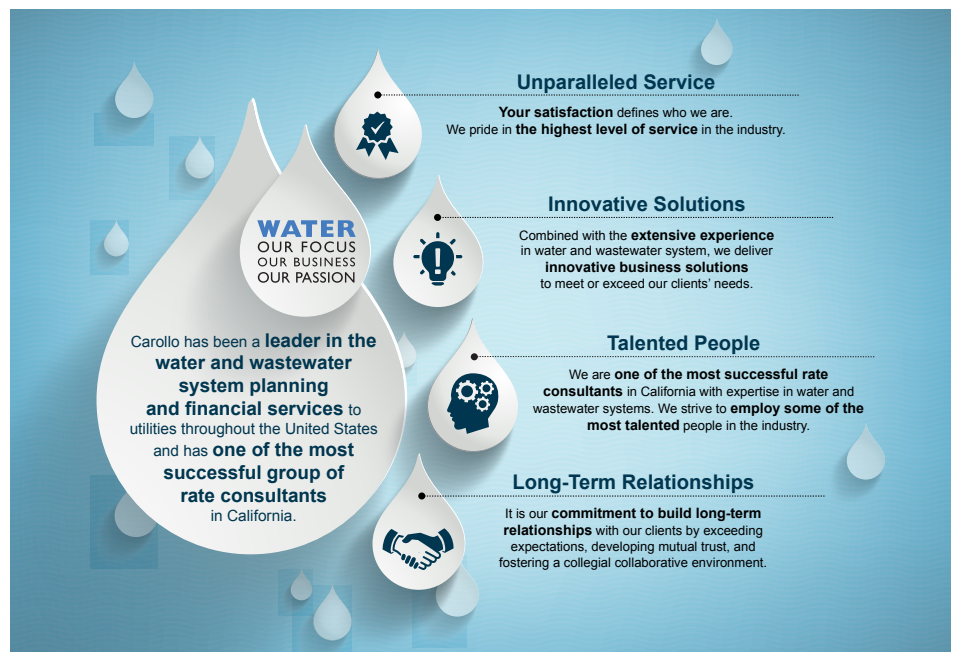
## Water-Related Rate Study Leaders

For 83 years, Carollo has provided water and wastewater system planning and financial services to utilities throughout California and the United States. Over the past 3 years, Carollo has become one of the most successful rate consultants in California. Collectively, the individuals assigned for this program have provided financial planning services for more than 300 utilities. We have performed

work for clients with service area populations ranging in size from several hundred to 4 million residents. Our comprehensive financial studies for public agencies include financial modeling, cost allocations, and rate and fee developments.

## Carollo Business Solutions Group

To achieve success in the cost-conscious and results-driven modern utility market, it is important for utilities to provide creative technical solutions executed within the context of sound business practices. Combined with the technical expertise in water and wastewater system, the Carollo Business Solutions Group (BSG) has been successfully helping its clients like no other consultant can in the industry. The BSG works with utility managers to effectively administer business operations with creative solutions to evolving challenges. As a leading environmental consulting firm focused in the utility market, our experts understand the unique hurdles that agencies face. It is important for utilities to continue to provide creative technical solutions. We understand that these solutions must be executed within the context of sound, innovative



*The elements of Carollo BSG's core character move us toward our goal of delivering innovative, cost-conscious, and superior water-related business solutions to our clients.*

business practices to be successful in the competitive and results-driven modern utility market. Our goal is to provide you with the information and advice to help you implement successful and creative solutions.

The BSG is a team of professionals with proven and practical experience delivering innovative business solutions tailored to each client's needs. We provide a broad range of services in addition to rate studies. Our services are grouped into the following disciplines:

- ▶ Finance, Funding, and Economic Sustainability.
- ▶ Asset Management.
- ▶ Strategy and Business Case Evaluations.
- ▶ Information Management.
- ▶ Organizational Development.
- ▶ Operations and Maintenance (O&M) Management.

Our mission is clear: we help our clients navigate their utility into the future with resiliency, efficiency, sustainability, and equity.

## FIRM CAPABILITY

Carollo has a depth of resources few other firms can match. Carollo's project team will provide quality management and technical expertise as well as personal attention and resources required to successfully complete the rate structure study.

### Understanding Legal Requirements

In light of recent legal case law, more than ever, the Inland Empire Utilities Agency (IEUA) needs a trusted and tested advisor to help develop defensible cost-of-service analysis and transparent rates for its customers.

*Recent cases such as Palmdale Water District, Castaic Lake, San Juan Capistrano, and the recent recall at Yorba Linda are prime examples of what not to do.* Carollo's combined financial and engineering expertise crosses over to provide accurate financial results based on sound engineering and cost

causation foundation. *With this unique principle, unlike some other firms, Carollo has not lost a case on the grounds of cost of service (Proposition 218 or 26).*

### Proven Legal Understanding

We have a thorough understanding of Proposition 218 as well as the recent legal opinions and their potential implications. Our combined financial and engineering approach is necessary to achieve the IEUA's desired result of detailing a defensible cost-of-service framework and validating its existing work. With a true engineering basis providing the foundation of the analysis, the IEUA can pinpoint the specific attributes of the system related to providing various wastewater demands. This approach sets us apart from the rest of the industry, as it has provided Carollo a clean legal record.

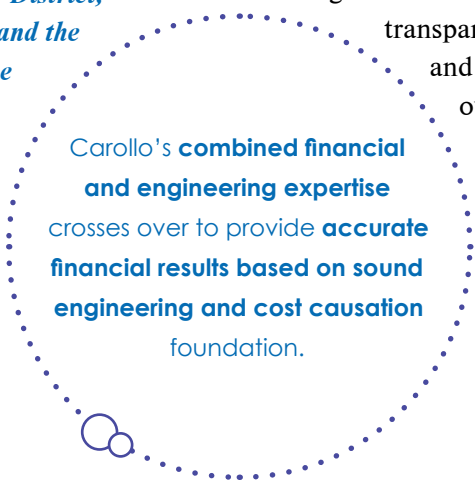
### Collaborative Peer-Review

#### Comprehensive Understanding

Too often, cost-of-service or rate studies are only approached from a single (financial) lens. Financial planning from this single lens fails to account for the true capital and infrastructure realities of the agency. Our understanding of your system combined with our proven approach to the cost-of-service rate studies will address the full picture.

### Trusted Experts and Communicators

Beyond providing a strong technical basis, our team is comprised of industry leaders in cost-of-service and rate design. The proposed study team has also worked with well over 300 agencies and their Boards to clearly communicate complex issues by translating them into laymen's terms. We have presented to and facilitated large committees and workshops to provide clarity, transparency, and understanding of existing and developing trends. Additionally, our team has published extensively on cost-of-service rate setting and regularly presents at industry conferences.



# PROJECT TEAM

## PROJECT TEAM AND ITS CAPABILITY

The Inland Empire Utilities Agency (IEUA/Agency) has created fiscally sound utilities and continues to evaluate how best to maintain the long-term reliability of its water and wastewater services. While many firms can conduct a rate study, this cost-of-service rate study requires a consulting team that will partner with the Agency staff, building on existing knowledge and expertise of your system, and understands the legal constraints of Proposition 218. This team must be cost-of-service industry leaders who have demonstrated an ability to clearly communicate complex rate issues to councils and public stakeholders. Carollo offers that team to the Agency.

We have a depth of resources few other firms can match. Our team provides not only quality management and technical expertise, but also personal attention and the resources required to successfully complete this rate structure study. More importantly, the proposed Principal-in-Charge, **Robb Grantham**, and Project Manager, **Toby Weissert**, have experience working together on rate studies for the Inland Empire Utilities Agency, Orange County Sanitation District, City of Riverside, and Western Riverside County Regional Wastewater Authority. These

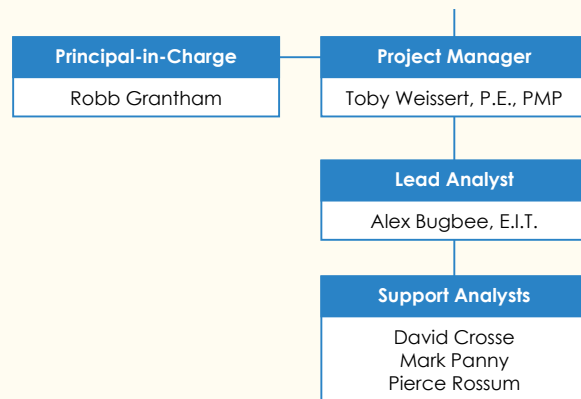
projects demonstrated not only their technical abilities to deliver a successful program, but also exquisite teamwork to deliver them in the most efficient and timely manner. Upon receipt of the notice-to-proceed, our team is ready to begin work immediately with the water rate and complete it in an expedited manner, while meeting your needs. The organization chart presented below illustrates our proposed team. Each member was carefully selected based on his or her technical expertise and knowledge of your system and will not be reassigned without prior written approval from the Agency.

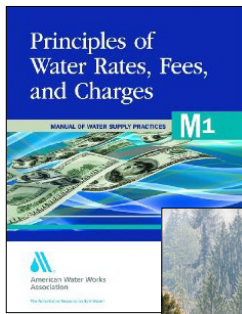
### **Robert (Robb) Grantham** *Principal-in-Charge*

Robb has 18 years of experience and is the leading industry specialist in financial and management analyses for wastewater, water, stormwater, and solid waste utilities. He has worked with more than 200 municipalities throughout the United States and is currently completing or has recently completed wastewater capacity charge studies for the cities of San Francisco, San José, and San Diego Water Authority (SDWA), as well as Sacramento Regional County Sanitation District (SRCSD) and Orange County Sanitation District (OCSD).

### TRUSTED EXPERTISE. PROVEN RESULTS.

Our team will be an extension of your staff and will work in close collaboration with you to peer-review the existing cost-of-service and rate design analyses, and develop comprehensive recommendations following our internal review and collaborative process.





Robb is a featured author in the industry standard, **Principles of Water Rates, Fees, and Charges M1 Manual**, and has written the chapter **User Fee Supported Stormwater Fees** for WEF.



Robb is active in industry associations including the American Water Works Association (AWWA) National Rates and Charges Committee and served on an advisory committee for the WaterReuse Association. He was a contributing author for AWWA's updated Principles of Water Rates, Fees, and Charges M1 Rates Manual and an author of the 2013 Water Environment Federation (WEF), User Fee Supported Stormwater Manual. Robb was also published in the Underground Infrastructure Management Magazine on recycled water rates and cost-of-service allocations and in the WEF Journal. Also, as an expert in Proposition 218 and applicable case law, Robb routinely presents at law conferences on rate making in California. He has been involved with the law associated with helping to educate attorneys throughout California and will be able to help identify the impacts of some or the recent court cases as it applies to your systems.

As Principal-in-Charge, Robb will provide the on-going commitment of Carollo to deliver a successful program for the Agency. His extensive experience and thorough knowledge in financial and management analyses will be a key attribute to this Utility Rate Studies and will help the Agency deliver and implement the optimal rate structure to its stakeholders and customers. He will assist the team in focusing technical and staff resources to address your specific needs.

## **Toby Weissert, P.E., PMP**

### *Project Manager*

With an MBA in Business Administration and 33 years of experience, Toby is well-versed in the financial planning elements critical to project success. Toby has been project manager or project engineer on several projects involving development of rate studies and revenue and financial plans. This includes serving as project manager for a strategic plan update for Orange County Sanitation District, as well as revenue plans for the El Toro Water District and San Bernardino Municipal Water Department.

Toby will manage the day-to-day aspects of the project ensuring it is within budget, on schedule, and effectively meets the Agency's objectives. He will also lead the project team in analyses and preparation of project deliverables. Pierce will not be reassigned without prior written approval from the Agency.

## **Alex Bugbee, E.I.T.**

### *Lead Analyst*

Alex is a financial analyst with 7 years of experience in utility rates, asset management, and mine management. During his employment at Carollo, Alex has performed rate analyses for a number of agencies in California, including the cities of Oceanside and Upland, as well as the Rodeo Sanitary District, San Diego County Water Authority, and San Francisco Public Utilities Commission. His previous experience includes extensive work in production and financial budgeting in the construction aggregates industry, as well as engineering design for mining and processing activities and on site civil projects.

As the Lead Analyst, Alex will work directly with your staff to make sure the data, analysis, and resulting models are completed according to the proposed schedule and be primarily responsible for the analysis and development of the sewer fee for the Agency.

## David Crosse

### Support Analyst

David Crosse is a financial analyst in Carollo's BSG with experience in utility rate design and calculations. During his employment at Carollo, David has worked on comprehensive analyses for a number of water and wastewater agencies including the Connection Fee and Rate Study for Inland Empire Utilities Agency, the Capacity Charge Update for Contra Costa Water District, the Flow and Load Study for the City of San José. David will provide support for Alex in developing the models and analyzing the data.

## Mark Panny

### Support Analyst

Mark is a financial analyst in Carollo's BSG. He has experience in cost-of-service analysis and rate design for water and wastewater utilities. Mark also has extensive experience in statistical analysis for water usage planning, and has used his data analysis background to help a number of water and wastewater agencies plan around California's current drought. Mark has been the lead financial analyst for some of the largest agencies in California, including the Eastern Municipal Water District. He has developed user-friendly yet comprehensive financial planning models for many water and wastewater agencies.

## Pierce Rossum

### Support Analyst

Pierce has 9 years of experience and has served as lead financial analyst for over 50 financial planning studies. He brings a depth of knowledge and expertise in Propositions 218 and 26 compliance, rate structure design, and a strong financial modeling background.

Along with David, Pierce will support the effort of the team throughout the course of the project.

## RESUMES

We have provided customized resumes for a complete description of the qualifications and experience of each team member in the *Appendices* section.

## KEY TEAM MEMBER AVAILABILITY

We have provided below, the key team members who will be assigned through completion of the project and their availability. Once the award of the agreement is approved by the Agency, these key members will not be changed throughout the project. In addition, our team is ready to begin work as soon as we receive the notice-to-proceed from the Agency.

Key Team Member	Availability
<b>Robb Grantham</b> , Client Services Manager	20%
<b>Toby Weissert</b> , Project Manager	20%
<b>Alex Bugbee</b> , Lead Analyst	50%
<b>David Crosse</b> , Support Analyst	30%
<b>Mark Panny</b> , Support Analyst	30%
<b>Pierce Rossum</b> , Support Analyst	30%

### Trusted Expertise. Proven Results.

Our team will be an extension of your staff and will **work in close collaboration** with you to **peer-review the existing cost-of-service and rate design analyses, and develop comprehensive recommendations** following our internal review and collaborative process.

# SCOPE OF WORK

## BACKGROUND

IEUA is seeking the services of a consultant to evaluate the Agency's methodology for calculation and collection of sewer connection fees. This evaluation will include a review of the current Exhibit J and monthly sewer billing procedures by the Contracting Agencies. As part of this study, Carollo will conduct a review of other wastewater agencies business models for calculating and collecting sewer connection fees and monthly sewer billing. Based on this review and by accounting for IEUA's unique attributes, Carollo will provide several alternatives including the advantages and disadvantages of each alternative and recommendations for a new business model that will streamline and improve the work process that will work for both IEUA and the Contracting Agencies.

## SCOPE OF WORK

The scope of work outlines our approach for undertaking the Sewer Use Fee evaluation. As IEUA recently adopted a five-year rate plan, this scope of work doesn't not include the recalculation of said charges, rather the feasibility and operational impacts of redefining an EDU. The scope consists of the following tasks:

### Task 0. Data Collection and Review

Carollo will work with IEUA to gather data required to perform the study. In order to streamline the data collection and review process, Carollo will provide IEUA with a detailed data request prior to the project kick-off meeting, and provide an amended data request as needed following the meeting.

### Task 1. Method to Calculate Sewer Connection Fees

Carollo will evaluate the formula and the sewage factors currently used to determine the equivalent dwelling units (EDU) as defined in Exhibit J of the Regional Contract. The current methodology assumes an EDU is equal to the discharge from a single-family residential connection and uses fixture count and sewage factors for commercial business categories. An

EDU is assumed to total 270 gallons per day of sewer discharges.

Carollo will review the existing methodology and propose a less subjective and labor intensive method of calculation of sewer EDUs and associated fees. For each feasible alternative, Carollo will discuss the advantages, disadvantages, potential costs shifts between customer classes, and any associated revenue risk. Carollo will also evaluate the feasibility of using and future availability of data necessary to update the EDUs over time. Data could likely be used from San Bernardino County records, such as land use codes, building square footage, business category type, water usage, or other data. Carollo will also consider the compatibility of the proposed approach with IEUA's GIS so that data that is utilized for the development of the EDU can be integrated into IEUA's current GIS to allow for validation and audit.

### Task 2. Revenue Collection Methodologies

Carollo will evaluate the current method being used to collect connection fees and monthly sewer charges, evaluate how other wastewater agencies collect these fees and their business models, and provide alternatives and considerations for IEUA. It is critical that any recommended program provides both transparency and auditability of the billing process.

#### 2.1. Sewer Use Factor Survey

Carollo will perform a survey of other wastewater utilities to review the basis of their EDU calculations. We will use a combination of available online data and personal communication to gather current information for a representative sample of California agencies similar to IEUA. Up to eight (8) agencies will be incorporated into the survey.

#### 2.2. Functional Cost Allocation

Changing the underlying EDU basis will not only impact connection fee collections, but could potentially impact rate revenues as the number of EDU changes due to modifications to the flow and loading



assumptions. Consequently, Carollo will update the sewer rate functional allocations.

As part of the recently completed sewer connection fee study, Carollo developed a functional cost allocation, which assigned capital costs to three functional categories - flow; biochemical oxygen demand (BOD), and suspended solids (SS). Because customers discharge differing levels of flow and loadings into the wastewater system, this is a critical step to equitably recovering costs from system users.

The current monthly wastewater rates have an assumed allocation of 37% to flow, 31% to BOD, and 32% to SS. Because IEUA's costs have changed over time and in order to continue to comply with Proposition 218, it is important to review and update this allocation. Carollo will develop a line-item allocation of IEUA's five year financial forecast, building on the recent capital allocation performed as part of the connection fee study. Because of our intimate knowledge of the Agency's system and operations, this allocation will be grounded in sound engineering principles rather than relying on industry standards that may or may not apply to IEUA.

### **2.3. EDU Update**

Based on a review of potential EDU calculation methodologies and the update to the functional allocation, Carollo will calculate new EDUs for the top two (2) alternative methods chosen in concert with IEUA staff. Because this update is highly dependent upon available data, Carollo will work with IEUA staff to help assist collecting information from Contracting Agencies and supporting agencies as necessary.

Carollo will review the water demand patterns for commercial discharges within up to three (3) of the Contracting Agencies. By evaluating water demands, Carollo can provide a more accurate understanding of the IEUA's commercial customer profiles, which will help to develop sewer discharge assumptions that better align with sewer discharge demands. This review will be for a sampled set of customers chosen in collaboration with IEUA staff and will represent low, medium, and high flow discharges.

### **2.4. Revenue Risk and Impacts**

Whenever changing the underlying EDU basis or calculations, there could be a potential change in monthly sewer charge revenues and shifts of costs between customer classes. Specifically related to IEUA, the Agency might experience shifts between Contract Agencies. For each proposed methodology, Carollo will evaluate the potential revenue impacts to the extent that IEUA can provide the necessary data.

The sewer connection fee was updated in 2015. The charge is based on flow, BOD, and TSS and accounts for buildout needs based on the current EDU calculations. Carollo will evaluate how the change in the EDU might alter the total number of EDUs into the system and how it could impact the total revenues to be collected from the sewer connection fees.

#### **DELIVERABLE:**

*Report chapter that delineates the basis of the new functional allocation, the survey of similar wastewater agencies, the potential approaches to calculating EDUs, and the recommended EDU calculation methodology and revenue impacts.*

### **2.5. Connection Fee Collection Process**

Sewer connection fees are currently collected by each Contracting Agency and remitted to IEUA. This process has resulted in some inconsistencies in EDU calculations between agencies and uncertainty of the revenues that will be collected. As a result, IEUA is considering taking over this process on behalf of the Contracting Agencies.

Carollo will review the current process for collecting connection fees and evaluate alternative approach that might be feasible, including having IEUA serve as the collection agency. As part of this review, Carollo will meet with each of the Contracting Agencies to review their collection policies and procedures, as well as how the information is shared between internal divisions and external agencies. While IEUA will be aware of a new development that must tap into a collection main, IEUA might not be aware of a change in use for an existing property that would otherwise change the EDU count and could trigger an incremental connection fee. By better understanding each agency's process and internal information systems, such as

the use of Track-It development services software, Carollo will be able to recommend a process that more efficiently and effectively tracks developments.

Finally, Carollo will examine the process that governmental buildings are approved in order to develop a process that allows IEUA to appropriately collect fees from public service facilities as allowed under Government Code §54999, as described in the scope below.

**DELIVERABLE:**

*Report chapter that defines the current connection fee collection procedures and challenges, defines feasible collection alternatives, including the advantages and disadvantages of each alternative, a planning-level cost estimate to implement these programs, and implementation considerations and next steps.*

**2.6. Monthly Sewer Fees Collection Process**

Carollo will evaluate collection alternatives for monthly sewer fees through the County Property Tax Roll. Several regional agencies, such as the Orange County Sanitation District and the Los Angeles County Sanitation District, recover user fees on the annual tax assessment. This approach has two main advantages - provides a secure revenue source, as non-payments become a lien against the property; and it can reduce administrative costs and burdens. However, this approach can create a financial burden on some ratepayers that have difficulty paying large semi-annual payments.

Carollo will create a billing methodology survey, defining the advantages and disadvantage of different billing approaches, including direct monthly billing and collection through the annual tax assessment. The advantages and disadvantages will consider internal and external costs, customer acceptance, and administrative requirements.

**DELIVERABLE:**

*Report chapter that outlines available billing alternatives, including the advantages and disadvantages of each alternative, a planning-level cost estimate to implement these programs, and implementation considerations and next steps.*

**2.7 Implementation Impact & Transition (Optional)**

While this study will produce a redefined EDU based on updated metrics for consistency, transparency, and auditability, the true revenue impact and cost shifts will not be fully known until all customers are transitioned. Where the above tasks provide IEUA with the necessary foundation to evaluate and assess the potential EDU changes (based on sample data), customer shifts and revenue impacts may necessitate further evaluation when applied in full to all customers and Contract Agencies.

For budgeting purposes, this task is optional as the selected methodologies may not necessitate the effort or as this could be performed by IEUA. However, if requested, Carollo would analyze customer data from across the IEUA service area and link the data with the new metrics. By doing so, the analysis would provide IEUA with a full understanding of the potential shifts. Additionally, Carollo will work with IEUA to develop a Transition Plan for implementing the proposed changes to the EDU methodology.

**DELIVERABLE:**

*Report chapter that outlines revenue shifts throughout the IEUA service area, implementation considerations, and transition options to mitigate administrative or Contract Agency impacts.*

**Task 3. Public Service Facilities**

Currently not all public service facilities are charged sewer rates and connection fees. This practice is not applied uniformly by all member agencies. This results in lost revenues and potentially creates a conflict under Proposition 218. Under California Government Code §54999, agencies may impose or increase an existing impact fee on public entities “after [an] agreement has been reached between the two agencies through negotiations entered into by” the District and the public entity on whom the fee is being imposed. In compliance with this statutory requirement and IEUA's own equity requirements, fees imposed on public entities are “determined on the basis of the same objective criteria and methodology applicable to comparable nonpublic users, based on customer classes established in consideration of service characteristics, demand patterns, and other relevant factors.”

Carollo will evaluate the exclusion of Public Service Facilities from the charge for connection fees and monthly sewer charges, the financial impact if these charges are apportioned to other customers of the Regional System, and compliance to regulatory or statutes, such as Propositions 26 and 218. Carollo will meet with IEUA staff and legal counsel to discuss the implications and considerations of CGC §54999. Carollo will also discuss the approaches developed and applied for other peer agencies, such as the Sacramento Regional County Sanitation District. Finally, Carollo will also discuss a transition plan, assuming IEUA wishes to modify the current program. This transition plan will determine the cost impact on this customer class as IEUA can provide the necessary customer data to support this analysis.

**DELIVERABLE:**

*Report chapter that outlines considerations for imposing connection fees and sewer charges on public service facilities in order to recover a proportional share of system costs. The chapter will reference statutory guidelines, such as CGC §54999. Finally, if IEUA wishes to modify its current practice, the chapter will outline a preliminary transition plan and the cost impacts to these customers as a class.*

**Task 4. Leasing of Capacity**

IEUA and its regional partners would like to encourage continued growth to the region's industrial base. This expansion supports the economic prosperity of the region, as well as directly and indirectly helps to spread wastewater system costs, thus providing a positive impact to IEUA's customers. As it has always been IEUA's policy to equitably distribute and recover costs to its customers, any industrial program must align with legal standards (Prop 218 and 26; Government Codes §66013 and §54999).

Due to the magnitude of the upfront cost for large dischargers, connection fees could ostensibly be cost prohibitive and/or deter the relocation or expansion of industrial customers. However, in accordance with Government Code §66013, IEUA must proportionally recover costs from all users, and therefore must impose a connection fee. Because these industrial customers are a unique class of wastewater user, IEUA has some latitude in how it imposes the fee. More specifically,

IEUA could lease capacity to industrial customers, rather than charge them an upfront connection fee. A similar approach could be used for large commercial customers, such as restaurants.

Carollo will explore leasing options that could be made available to industrial and commercial customers and the potential revenue risk. This leasing option will consider approaches used by other agencies such as the Orange County and Napa Sanitation District. As these agencies have done, it is critical to evaluate commercial and industrial customers independently, as they each place a unique burden on the IEUA system that does differ from each other, as well as residential customers.

**DELIVERABLE:**

*Report chapter that defines how industrial customers are a unique class and could therefore be provided a capacity lease, the calculation of a proposed capacity lease rate, and considerations for implementing such a program.*

**Task 5. Draft and Final Report**

Carollo will provide to IEUA a draft and final report that summarizes the findings and the proposed sewer use fees. IEUA comments on the draft report will be incorporated and a final report will be prepared. The report will provide IEUA with the necessary information to support the recommended changes and create a sound administrative record.

**DELIVERABLE:**

*Carollo will provide IEUA with an electronic copy and ten (10) hard copies of the draft report for review. We will provide IEUA with both electronic and ten (10) hard copies of the final report and an electronic copy of any developed Microsoft® Excel model will be provided.*

**Task 6. Meetings and Presentations**

Carollo believes that regular communications are essential for delivery of a successful project that meets IEUA's objectives. We will meet with IEUA to discuss the project, verify data, and discuss the draft report.

Key anticipated meetings include the following:

- ▶ **Kick-off Meeting.** Prior to the design of the project, Carollo will review necessary documents and shall

attend an informal meeting to receive the Agency's input. It is anticipated that the Carollo's core project team will be in attendance. The Agency's project manager will provide a presentation of the scope and a schedule for the project.

- ▶ **Bi-weekly Meetings.** A bi-weekly meeting will be conducted between the Agency project manager and Carollo's project manager to review the status of action items and deliverables. The meeting will be conducted by telephone conference.
- ▶ **Monthly Meetings.** Once a month, a bi-weekly meeting will be replaced by a monthly meeting. Carollo's project manager will lead the meeting and provide updates on the progress of the feasibility study, milestones achieved, any decisions required to maintain the progress of the project, and any potential issues that may affect the project schedule. Carollo's core project team and Agency's core project team may be in attendance, as needed. The meeting shall be conducted onsite at the Agency's Headquarters Building.

Each of these meetings will result in a critical project milestone in that key decisions will be made and results finalized based on the outcome of these meetings.

## **Task 7. Community Outreach (Optional)**

Community outreach can be an important and a substantial component of any rate or connection fee study. Specifically, the possible adoption of significant changes to the EDU calculation could require a high degree of engagement with stakeholders including, Contracting Agencies, developers, businesses, and residents. Carollo is available to participate in and/or lead stakeholder workshops or meetings as requested by the Agency.

# SIMILAR PROJECTS

Many firms can conduct a rate study. However, this study requires a consulting team that will partner with IEUA staff, building on the internal knowledge and expertise. This team must also be industry leaders, have experience working with regional agencies, and have demonstrated the ability to clearly communicate complex issues to boards and public stakeholders. The map below illustrates our team's ability to deliver sound and legally defensible financial services nationwide.

The table on the next page shows a listing of some of Carollo's cost-of-service experience, followed by relevant project descriptions. We encourage you to contact the references listed on the following pages to verify our responsiveness and quality of service on similar projects.



Having performed rate studies and financial planning for utilities of all sizes throughout California and the United States, Carollo brings the largest variety of real-world experience to address your specific issues. In addition, Carollo is the nation's largest environmental engineering firm specializing exclusively in the planning, design, and construction of water and wastewater facilities.

## Comprehensive Financial Planning Experience

Our coupled financial and engineering expertise provides us with the unique ability to efficiently allocate rates in a fair and equitable way, thus reducing potential Proposition 26 and 218 concerns. Our technical expertise, paired with proven financial strategies, will benefit you by allowing us to anticipate and meet the specific objectives for this study. While not a complete list, the matrix below demonstrates the breadth and depth of our financial services expertise. Project experience and references for some of our most relevant projects are located on the following pages.



	Capital Planning	Capital Funding Strategy	Cost-of-Service Rate Structure Analysis	Revenue Requirements	Fiscal Policy Review	Connection/Impact Fee	Financial Modeling	Bond Coverage Evaluation	Stakeholder Involvement/Public Outreach
City of Carlsbad, CA	●	●	●	●	●	●	●	●	●
City of Chula Vista, CA	●	●	●	●	●	●	●	●	●
City of Del Mar, CA	●	●	●	●	●	●	●	●	●
City of Las Vegas, NV	●	●	●	●	●	●	●	●	●
City of Reedley, CA	●	●	●	●	●	●	●	●	●
City of Los Angeles, CA	●	●	●	●	●	●	●	●	●
City of Modesto, CA	●	●	●	●	●	●	●	●	●
City of Oceanside, CA	●	●	●	●	●	●	●	●	●
City of Omaha, NE	●	●	●	●	●	●	●	●	●
City of Portland, OR	●	●	●	●	●	●	●	●	●
City of Lindsay, CA	●	●	●	●	●	●	●	●	●
City of Riverside, CA	●	●	●	●	●	●	●	●	●
City of Sacramento, CA	●	●	●	●	●	●	●	●	●
City of San José, CA	●	●	●	●	●	●	●	●	●
City of Scottsdale, AZ	●	●	●	●	●	●	●	●	●
City of Seattle, WA	●	●	●	●	●	●	●	●	●
City of Simi Valley, CA	●	●	●	●	●	●	●	●	●
City of Upland, CA	●	●	●	●	●	●	●	●	●
City and County of Honolulu, HI	●	●	●	●	●	●	●	●	●
Clean Water Service, OR	●	●	●	●	●	●	●	●	●
Delta Diablo Sanitation District, CA	●	●	●	●	●	●	●	●	●
Eastern Municipal Water District, CA	●	●	●	●	●	●	●	●	●
El Paso Water Utilities Public Service Board, TX	●	●	●	●	●	●	●	●	●
El Toro Water District, CA	●	●	●	●	●	●	●	●	●
Inland Empire Utilities Agency, CA	●	●	●	●	●	●	●	●	●
Irvine Ranch Water District, CA	●	●	●	●	●	●	●	●	●
King County, WA	●	●	●	●	●	●	●	●	●
Marin Municipal Water District, CA	●	●	●	●	●	●	●	●	●
Marina Coast Water District, CA	●	●	●	●	●	●	●	●	●
Monte Vista Water District, CA	●	●	●	●	●	●	●	●	●
Orange County Sanitation District, CA	●	●	●	●	●	●	●	●	●
Palmdale Water District, CA	●	●	●	●	●	●	●	●	●
Sacramento County Department of Water Resources, CA	●	●	●	●	●	●	●	●	●
Sacramento Regional County Sanitation District, CA	●	●	●	●	●	●	●	●	●
San Diego County Water Authority, CA	●	●	●	●	●	●	●	●	●
San Francisco Public Utility Commission, CA	●	●	●	●	●	●	●	●	●
Santa Ana Watershed Project Authority, CA	●	●	●	●	●	●	●	●	●
Santa Margarita Water District, CA	●	●	●	●	●	●	●	●	●
West County Sanitation District, CA	●	●	●	●	●	●	●	●	●
Western Riverside County Regional Wastewater Authority, CA	●	●	●	●	●	●	●	●	●

## Inland Empire Utilities Agency, CA Water and Wastewater Rate and Fee Study



### Reference:

**Ms. Sylvie Lee**, *Project Manager/Senior Engineer*  
6075 Kimball Avenue, Chino Hills, CA 91709  
Ph: (909) 993-1600 | E: [slee@ieua.org](mailto:slee@ieua.org)

**Dates:** 06/2014 – 06/2015

### Team Involvement:

Robert Grantham, *Partner-in-Charge*; Toby Weissert, *Project Manager*; Pierce Rossum, *Financial Analyst*; Mark Panny, *Financial Analyst*

The Inland Empire Utilities Agency (IEUA) is a regional water and wastewater provider and currently collects a connection fee for each new connection to the regional system. Carollo re-evaluated the connection fee with the goal of increasing cost recovery and revenue available. The existing rate required the IEUA to fund growth related capital projects from its property tax revenues, rather than connection charges.

Carollo worked with IEUA, its member agencies, and the development community through a collaborative process to garner rate increases to continue funding regional and necessary capital projects.

Carollo performed a detailed engineering analysis of IEUA's current and future assets. With the focus on meeting California legal requirements as well as developer concerns, this analysis provides a solid foundation and backstop for all system allocations and demand assumptions.

As IEUA continues to expand local water supplies and promote resiliency, it was critical to develop a capital funding and cost-recovery strategy. As part of the water connection fees, Carollo developed a "One Water" approach that combines the potable and recycled water fees into a single water resources fee in compliance with California law. The population for this facility serves is approximately 830,000.

## Orange County Sanitation District, CA Rate and Fee Work



### Reference:

**Ms. Angela Brandt**, *Accounting Supervisor*  
10844 Ellis Avenue, Fountain Valley, CA 92708  
Ph: (714) 593-7576 | E: [abrandt@ocsd.com](mailto:abrandt@ocsd.com)

**Dates:** 07/2012 – 03/2013

### Team Involvement:

Robert Grantham, *Project Manager*; Pierce Rossum, *Lead Financial Analyst*; Mark Panny, *Financial Analyst*

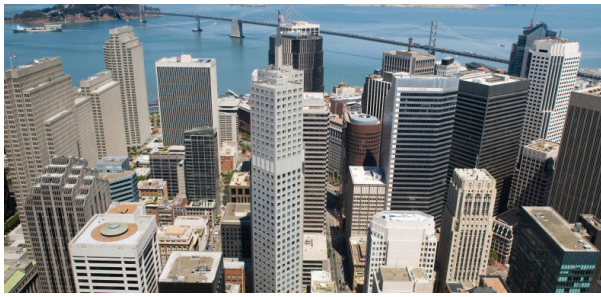
In response to user rates based on flow only, Carollo developed the current cost allocations that assign O&M and capital costs to flow, biochemical oxygen demand, and total suspended solids. This process included a rate advisory committee made up of citizens and businesses to help gain customer support for the new system. Because Orange County Sanitation District (OCSD) user rates are collected on the property tax bill, Carollo developed the tie between property tax use codes and the current equivalent dwelling unit assumptions for customer categories.

To help OCSD remain business-friendly, Carollo developed the current supplemental capital facilities capacity charge that enables large industrial users to pay their capacity charges on a "pay-as-you-go" basis. To simplify administration and collection of capital facility capacity charges, Carollo developed a three-tiered commercial category charge because more than 20 OCSD service area cities/agencies collect the charges for OCSD at their permit counters.

The population for this facility serves is approximately 2.45 million.

## City & County of San Francisco, CA

### Water and Sewer Rate & Fee Study



#### Reference:

**Mr. Crispin Hollings**, *Director of Financial Planning*  
525 Golden Gate Avenue, San Francisco, CA 94102  
Ph: (415) 487-5235 | E: [chollings@sfgwater.org](mailto:chollings@sfgwater.org)

**Dates:** 02/2013 – 05/2014

#### Team Involvement:

Robert Grantham, *Project Manager*; Pierce Rossum,  
*Financial Analyst*

Carollo provided a cost-of-service analysis, evaluating O&M, administration costs, and existing and future debt service related to construction of facilities. These costs were categorized according to their benefit and attributed to various customer classes, based on existing billing data and demand patterns. Based on the resulting analysis, Carollo recommended the water connection fee be imposed solely based on meter size for all customer classes. Similarly for wastewater, Carollo recommended modifications to the existing structure to provide streamlining and improved clarity.

After determining the annual revenue requirement, Carollo developed and evaluated multiple rate recovery alternatives along with acceptable levels of revenue increase, as discussed with San Francisco Public Utilities Commission and the Rate Fairness Board, before ultimately delivering recommendations. Throughout this process, it was important that members involved in public outreach were actively engaged. The proposed rates provided sufficient funding of the annual costs in addition to the roughly \$7.5-billion, multi-year Water and Sewer System Improvement Plans.

The population for this facility serves is approximately is 2.6 million.

## City of Riverside, CA

### Wastewater Cost-of-Service Study



#### Reference:

**Mr. Ernie Marquez**, *Principal Engineer*  
3900 Main Street, Riverside, CA 92522  
Ph: (916) 826-5409 | E: [emarquez@riversideca.gov](mailto:emarquez@riversideca.gov)

**Dates:** 08/2013 – 06/2014

#### Team Involvement:

Robert Grantham, *Project Director*; Mark Panny,  
*Financial Analyst*; Toby Weissert, *Project Manager*

Carollo has assisted the City of Riverside (City) with its utility financial planning since 2001 and is currently developing a comprehensive water rate update and on-going bond and financial planning for the wastewater fund.

In 2008 and 2014, Carollo completed an Integrated Master Plan, which evaluated and recommended system and treatment plant improvements and culminated in revised user rate and connection fees.

The project included development of a \$700-million CIP; cost allocations to assign O&M and capital costs to flow, BOD, and TSS; and a 5-year user rate and connection fee schedule that went through the Proposition 218 approval process. Without this effort, the City would not have been able to come into compliance with their bond covenants and finance the needed capital improvements.

Finally, as part of the capital funding process, Carollo assisted the City with debt issues in 2009 and 2015. This process included presenting alongside City staff during the bond rating presentations to Moody's and Standard & Poor's.

The population for this facility serves is approximately is 300,000.



## South Coast Water District, CA Water, Sewer, and Recycled Water Rate Study



### Reference:

**Ms. Carolyn Rathbone**, *Chief Financial Officer*  
31592 West Street, Laguna Beach, CA 92651  
Ph: (949) 499-4555, ex. 3151 | E: crathbone@scwd.org

**Dates:** 09/2015 – On-going

### Team Involvement:

Robert Grantham, *Project Director*; Pierce Rossum, *Project Manager*; Mark Panny, *Financial Analyst*

Seeking to review the South Coast Water District's water, sewer, and recycled water rates, the District engaged Carollo to perform a comprehensive cost-of-service and rate design study.

Through an extensive education and public input workshop process, Carollo developed various cost-of-service rate design alternatives to balance the District's competing objectives.

Facing declining revenues (due to the drought) and a need to develop resilient revenues, Carollo developed an innovative rate design to provide greater fixed revenues while still providing an incentive to conserve.

Carollo's keen understanding of engineering and finance, also provided cost based refinements to the District's Recycled Water and Sewer Rate.

The population for this facility serves is approximately 100,000.

## Sacramento Regional County Sanitation District, CA Rate and Connection Fees Study



### Reference:

**Mr. Prabhakar Somavarapu**, *District Engineer*  
10060 Goethe Road, Sacramento, CA 95827  
Ph: (916) 875-9116 | E: somavarapup@sacsewer.com

**Dates:** 04/2013 – 10/2013

### Team Involvement:

Robert Grantham, *Partner-in-Charge*

The Sacramento Regional County Sanitation District faced over \$2 billion in regulatory upgrades to its treatment processes for pathogen and ammonia removal. Consequently, the District had to find a way to must increase rates from roughly \$20 per month to \$50 per month by 2020 due to projected debt service and operational expenditures.

The changes to the treatment process required the District to completely restructure its rates and impact fees to equitably and proportionally recover upgrade costs from ratepayers. The functional costs categories included flow, BOD5, TSS, ammonia, and pathogens. The rate methodology recognized the unique nature of the District's industrial discharges, preventing these users from being overcharged from pathogen and ammonia removal.

The population for this facility serves is approximately 1.4 million.

## City of Oceanside, CA Comprehensive Rate Study



### Reference:

**Ms. Cari Dale**, *Water Utilities Director*  
300 North Coast Highway, Oceanside, CA 92054  
Ph: (760) 801-5611 | E: cdale@ci.oceanside.ca.us

**Dates:** 2015 – On-going

### Team Involvement:

Robert Grantham, *Project Manager*; Pierce Rossum, *Analyst*; Mark Panny, *Lead Analyst*

Carollo developed near- and long-term financial forecasts, updated the capital facilities charges, and analyzed the retail and wholesale rate structures for water, wastewater, and solid waste for the City of Oceanside. The rate structures were developed in compliance with Proposition 218 and wholesale contract requirements.

The project included a Citizen’s Advisory Committee process designed to provide an overview of the facilities master plan and financial and rate program, facilitate open discourse, and garner buy-in from the Utilities Commission and Council.

The financial analysis evaluated bond sizing and timing. Carollo worked with City staff to prioritize projects based on sound engineering judgment, funding availability, and to optimize bond issuances.

The team developed a financial planning model in close collaboration with staff. An optimization module was incorporated in order to facilitate holistic decisions with respect to water resources, wastewater treatment and disposal, and energy demands and production. The model incorporates wholesale user allocations and invoices, reducing the administrative burden for annual invoicing.

The population for this facility serves is approximately 170,000.

## City of Sacramento, CA Rate and Connection Fees Study



### Reference:

**Mr. Wally Cole**, *Senior Management Analyst*  
1395 35th Avenue, Sacramento, CA 95822  
Ph: (916) 808-6203 | E: wcole@cityofsacramento.org

**Dates:** 2011 – 2013

### Team Involvement:

Robert Grantham, *Partner-in-Charge*

The Carollo developed the City of Sacramento’s water, wastewater, and solid waste rates and helped the City issue over \$300 million in bonds. With increased regulatory requirements, the City faced a greater challenge in addressing its capital infrastructure needs. The financial planning study became central to successfully funding critical capital needs, meeting regulatory requirements, and implementing a 100-year replacement program for the previous 400- to 600-year replacement cycle.

The project team created a cutting-edge financial model tailored to the needs of City staff. A simulation module was constructed to allow for up to six side-by-side scenarios. The flexibility of the model was invaluable for responding to questions raised by City Council and the Utility Rate Advisory Committee, and ultimately achieving program endorsements from the Council.

The team served as an integral part of the City’s year-long public outreach process. Despite the double-digit rate increases for both the water and wastewater enterprise funds, the team was able to garner widespread public support for the accelerated capital replacement/asset management program. The rate study portion of the project won the 2012 ACWA Outreach Project of the Year.

The population for this facility serves is approximately 300,000.

# PROJECT SCHEDULE

A tentative schedule for completion of the project is shown in the table below. It is important to note that the specific timing of completion of the individual milestones is contingent upon the availability of data from both the Agency. In the event that data is not available as anticipated, the project schedule will be revised accordingly. Carollo intends to complete the study report by December 2016.

<i>Task</i>	<i>MAY</i>	<i>JUN</i>	<i>JUL</i>	<i>AUG</i>	<i>SEP</i>	<i>OCT</i>	<i>NOV</i>	<i>DEC</i>
Task 0. Data Collection	■							
Task 1. Method to Calculate Sewer Connection Fees		■						
Task 2. Revenue Collection Methodologies			■					
Task 3. Public Service Facilities			■					
Task 4. Leasing of Capacity				■				
Task 5. Draft and Final Report						■		
Task 6. Meetings & Presentations		●	●	●	●	●	●	■

◆ Draft Report	● Kick-off Meeting
◆ Final Report	● Meetings/Presentations

# APPENDICES

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**Exception Form**

**Conflicts of Interest**

**Attachment E**  
*(Worker's Compensation Certificate)*

**Resumes**

**Attachment H**  
*(Business Ownership Information)*

**Attachment I**  
*(W-9)*



## APPENDICES – EXCEPTION FORM

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**EXCEPTION FORM**

Should your firm take exception to **ANY** of the terms and conditions or other contents provided in the Request for Proposal, submit the following form with your proposal. If no exception(s) are taken, enter "NONE" for the first item. Make additional copies of this form if necessary.

Page Number: \_\_\_\_\_ Section Title: \_\_\_\_\_

Paragraph Number: \_\_\_\_\_ Exception Taken: \_\_\_\_\_

NONE

\_\_\_\_\_  
\_\_\_\_\_

Page Number: \_\_\_\_\_ Section Title: \_\_\_\_\_

Paragraph Number: \_\_\_\_\_ Exception Taken: \_\_\_\_\_

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## APPENDICES – CONFLICTS OF INTEREST

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Carollo is familiar with applicable conflict of interest laws and requirements. Neither our firm nor any of its employees involved on this project are aware of any conflict of interest that would preclude working on this project. Carollo, at all times, conducts its professional and business activities in a manner to prohibit conflict of interest on the part of the firm and its employees. We foresee no circumstances in which a conflict could arise.

# APPENDICES – ATTACHMENT E

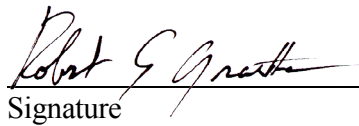
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# WORKERS' COMPENSATION CERTIFICATE

The Consultant shall execute this form to acknowledge and comply with the requirements of California Labor Code, Sections 1860 and 1861:

I am aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and on behalf of my Consultant, I will comply with such provisions before commencing the performance of the work of any contract entered into.

  
Signature

Carollo Engineers, Inc.  
Company Name

Robert Grantham  
Printed Name

C3295365 (Entity Number)  
Business License Number

Vice President

Title

4/20/2016

Date

# APPENDICES – RESUMES

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# Robb Grantham

PRINCIPAL-IN-CHARGE

## FIELD OF EXPERTISE/WORK EXPERIENCE

Robb Grantham has developed rates and integrated long-range financial plans for well over 200 different agencies comparable in size and complexity. He has extensive experience developing joint powers authorities, developing reorganization programs for regional water and wastewater agencies, and has assisted with water and wastewater agencies issues nearly \$2.5 billion in new debt. Robb is active in industry associations, including the AWWA National Rates and Charges and Asset Management Committees and served on an advisory committee for the WaterReuse Association. He was a contributing author for AWWA's updated M1 rates manual and an author of the 2013 WEF User Fee Supported Stormwater Manual. He is also an expert in Proposition 218 requirements and applicable case law and cost-of-service principles.

He is currently completing or has recently completed financial consulting services for the Cities of San Francisco, Riverside, and Los Angeles and the San Diego County Water Authority and Inland Empire Utilities Agency.

**YEARS OF EXPERIENCE:** 18

## EDUCATION

- ▶ BA Government and History, Hackman Scholarship, Franklin and Marshall College, 1998
- ▶ Engineering Science, Rutgers College of Engineering, 2000

## RELEVANT PROJECT EXPERIENCE

- ▶ City of Sacramento, CA - Water, Wastewater, and Solid Waste Rate Studies and Capital Funding Strategies
- ▶ Sacramento Regional County Sanitation District, CA - Wastewater Rate and Connection Fee Study.
- ▶ City of Oceanside, CA - Water, Wastewater, and Solid Waste Rate Study.
- ▶ San Francisco Public Utilities Commission, CA - Rate Update and Connection Fee Study.
- ▶ East Bay Municipal Water District, CA - Capacity Charge Analysis.
- ▶ East Bay Municipal Water District, CA - Connection Fee Structure Study
- ▶ Inland Empire Utilities Agency, CA - Water/Wastewater Rate and Fee Study.
- ▶ City of Riverside, CA - Wastewater Cost-of-Service Study.
- ▶ City of Sacramento, CA - Cost-of-Service Stormwater Study.
- ▶ City of Riverside, CA - Wastewater Master Plan and Wastewater Bond Issuance.
- ▶ City of Oceanside, CA - Water Utilities Financial Plan (water, stormwater, wastewater).
- ▶ San Diego County Water Authority, CA - Cost-of-Service Rate and Charge Study.
- ▶ City of Las Vegas, NV - Wastewater Rate and Connection Fees Study.
- ▶ Irvine Ranch Water District, CA - Cost-of-Service and Rate Study.
- ▶ San Diego County Water Authority, CA - Rate and Capacity Fee Study.
- ▶ Orange County Sanitation District, CA - Rate and Capital Facilities Capacity Charge Study.
- ▶ Santa Ana Watershed Project Authority, CA - Regional Cost Allocation Study.
- ▶ Santa Margarita Water District, CA - Water and Wastewater Cost-of-Service and Rate Design Study.
- ▶ Eastern Municipal Water District, CA - Utility Rate Study.
- ▶ City of Carlsbad, CA - Water Cost-of-Service and Rate Design Study.
- ▶ City of Chula Vista, CA - Wastewater Cost-of-Service and Rate Design Study.
- ▶ City of Del Mar, CA - Cost-of-Service Rate and Connection Fee Study.



# Toby Weissert

PROJECT MANAGER

## FIELD OF EXPERTISE/WORK EXPERIENCE

With an MBA in Business Administration and 33 years of experience, Toby is well-versed in the financial planning elements critical to project success. Toby has been project manager or project engineer on several projects involving development of rate studies and revenue and financial plans. This includes serving as project manager for a strategic plan update for Orange County Sanitation District, as well as revenue plans for the El Toro Water District and San Bernardino Municipal Water Department.

## YEARS OF EXPERIENCE: 33

## EDUCATION

- ▶ MBA Accounting and Finance, University of Oregon, 1983
- ▶ BA Civil Engineering, University of California, 1981

## RELEVANT PROJECT EXPERIENCE

- ▶ Project manager for the Carollo portion of the 2014 Capital Improvement Program (CIP) Study and Rate Update for the City of Riverside, CA.
- ▶ Project lead for the 2013 Wastewater Revenue and Rate Study for the Orange County Sanitation District, CA.
- ▶ Project manager for the 2010 Member Agency Cost Allocation for the Western Riverside County Regional Wastewater Authority, CA.
- ▶ Project manager for the Biosolids Cost Study for the Irvine Ranch Water District/Orange County Sanitation District, CA.
- ▶ Project manager for the 2006 and 2008 Revenue Program and Rate Updates for the Orange County Sanitation District, CA.
- ▶ Project manager for a 2004/05 user rate and connection fee evaluation for the Orange County Sanitation District, CA.
- ▶ Project manager for a user rate and connection fee study for the Orange County Sanitation District, CA.
- ▶ Project manager for the Revenue Plan for the City of Riverside, CA.
- ▶ Project manager for a cost allocation and capacity study for the City of Riverside Water Quality Control Plant, CA.
- ▶ Project manager for a Revenue Plan for the El Toro Water District, CA.
- ▶ Project engineer for the 1998 Determination of Financial Rates and Charges for the Orange County Sanitation District, CA.
- ▶ Project engineer for a study to determine the cost impact to water and wastewater ratepayers of the proposed Orange County Water District/Orange County Sanitation District, CA, Groundwater Replenishment Project.
- ▶ Project engineer for a revenue plan for Environmental Protection Agency grant projects for the San Bernardino Municipal Water Department Water Reclamation Plant, CA.
- ▶ Project manager for a study to evaluate the Revenue Sampling Program for the Encina Wastewater Authority, CA.
- ▶ Project manager for the Carollo portion of the work for the Wastewater Collection and Recycled Water Treatment Master Plan for Inland Empire Utilities Agency, CA.
- ▶ Project engineer for the RP-1 Nitrification Improvements Conceptual Design for the Inland Empire Utilities Agency, CA.
- ▶ Project engineer for the Oxygen Supplementation Project at the RP-1 facility for the Inland Empire Utilities Agency, CA.
- ▶ Project engineer for upgrade of the aeration capacity at the RP-1 plant for the Inland Empire Utilities Agency, CA.
- ▶ Project engineer for the RP-1 Trickling Filter Rehabilitation project for the Inland Empire Utilities Agency, CA.



# Alex Bugbee

LEAD ANALYST

## FIELD OF EXPERTISE/WORK EXPERIENCE

Alex Bugbee is a financial analyst with five years of experience in utility rates, asset management, and engineering. Alex has performed rate analyses for a number of agencies in California, including the cities of Oceanside and Upland, as well as the Rodeo Sanitary District, San Diego County Water Authority, and San Francisco Public Utilities Commission. His previous experience includes extensive work in production and financial budgeting in the construction aggregates industry, as well as engineering design for mining and processing activities and on site civil projects.

## YEARS OF EXPERIENCE: 7

### EDUCATION

- ▶ BS Mining Engineering, Pennsylvania State University, 2009

### RELEVANT PROJECT EXPERIENCE

- ▶ Lead analyst on a comprehensive Wastewater Financial Plan and Rate Study for the City of Riverside, CA, Sewer Division. He developed a funding strategy for the updated wastewater CIP, assessed the impacts of CIP funding on the wastewater Division's finances, and performed cost-of-service analysis to validate the Division's sewer service rates and capacity fees.
- ▶ Analyst on a Financial Plan and Rate and Fee Study for the Marina Coast Water District (MCWD), CA. He updated user rates and capacity charges for water and wastewater, developing unique rates and fees for each of the MCWD's service areas. Responsibilities included consumption analysis, financial model development, cost-of-service evaluation, rate design, and calculation of capacity fees.
- ▶ Analyst for the Financial Study for the City of Oceanside, CA. He developed a financial model for the Solid Waste Department, which allows the client to predict future cash flows and fund

balances based on past performance and expected rate changes in order to optimize the rate impact to customers and develop accurate operational budgets. He provides continued support to the client and makes model modifications as deemed necessary. He also provided as-needed support, including maintenance, updating, and modifications of existing financial models.

- ▶ Analyst for the San Francisco Public Utilities Commission, CA, Capacity Charge Update. He updated the capacity charges for water and wastewater. His responsibilities included analyzing the results of a variety of calculation methods for the capacity charge.
- ▶ Analyst for the San Diego County Water Authority, CA, Capacity Fee Study. He performed data analysis and assisted in the development of a capacity fee model.
- ▶ Analyst for the City of Upland, CA, Water Rate Study. His responsibilities included analysis of usage and financial data and assisting in the development of a financial model for the City's Water Utility. He also performed a cost-of-service analysis in order to design fixed and variable water rates for various customer classes.
- ▶ Analyst for the Rodeo Sanitary District, CA, Financial Analysis of Wastewater Operations as part of the Comprehensive Wastewater Master Plan. He developed a financial model to analyze the impact of the proposed CIP on RSD's finances and on customer rates. He also assisted in the creation of an integrated CIP funding strategy designed to provide sufficient funding while minimizing the effects on customer rates.
- ▶ Analyst for the development of budget-based rates for the City of Arcadia. Evaluated the agency's revenue requirements and numerous rate structure alternatives. Created a integrated cost-of-service analysis based on the City's source of supplies and proposed budget based rate structure to address cost-of-service and customer equity concerns.



# David Crosse

SUPPORT ANALYST

## FIELD OF EXPERTISE/WORK EXPERIENCE

David Crosse is a financial analyst in Carollo's BSG with experience in utility rate design and calculations. During his employment at Carollo, David has worked on comprehensive analyses for a number of water and wastewater agencies including San Jose, Inland Empire Utilities Agency, Contra Costa Water District, the City of Vancouver, the City of Oxnard, the Sewerage Agency of Southern Marin, the City of Riverside, the Sacramento Area Sewer District, and the City of Carlsbad.

## YEARS OF EXPERIENCE: 3

## EDUCATION

- ▶ MEM Water Resources Management, Duke University, 2014
- ▶ BA History, Lafayette College, 2010

## RELEVANT PROJECT EXPERIENCE

- ▶ Analyst for the Connection Fee and Rate Study for Inland Empire Utilities Agency, CA. He assisted in the development of the financial model, which incorporated agency financial information and board policies produce a rate structure and corresponding connection fees.
- ▶ Analyst for the 2015 Wastewater Cost-of-Service Study for the Carlsbad Municipal Water District, CA. The project included developing the revenue requirement, cost-of-service analysis, and functional allocation. His responsibilities included the analysis of the City's billing data and the incorporation of this data during the development of the wastewater financial model. He also updated the City's connection fees for the potable and recycled water systems.
- ▶ Analyst for the Wastewater Cost-of-Service Study for City of Riverside, CA. The project included developing a comprehensive water rate updated and on-going bond and financial planning for the wastewater fund. His responsibilities included analysis of the City's billing data such that the information regarding usage, accounts, customer classes, forecasts, and costs could be utilized to develop new rate structures for each rate class.
- ▶ Analyst for the Flow and Load Study conducted for the City of San José, CA. His responsibilities included analysis of usage data to assist in the evaluation and proposal of a variety of alternatives regarding residential and non-residential water consumption assumptions.
- ▶ Analyst for the Cost-of-Service Study and Funding Analysis for the Sewerage Agency of Southern Marin, CA. He developed a model that incorporated the Agency's growth projections with its financial realities and fiscal policies in order to forecast required revenue increases. Multiple forecasts were developed in order to analyze the benefits of utilizing either municipal bonds or SRF loans.
- ▶ Analyst for the Update of Capacity Charge performed for the Contra Costa Water District (CCWD), CA. He updated CCWD's capacity charge for treated and untreated water. His responsibilities included the incorporation of the District's new capital improvement projects, new debt, and changes to build-out demand projections in the connection fee calculation.
- ▶ Analyst for the Wastewater Financial Rate Study for the City of Oxnard, CA. He assisted in the development of the financial model. Based on flow data, he calculated the projected customer base and the corresponding per capita rate increase. This analysis was utilized for the calculation of the water and wastewater connection fees.
- ▶ Analyst for the update of the Long-Term Revenue and Connection Fee Model for the Sacramento Area Sewer District, CA. He updated the long-term forecast of year-to-year connection fees. His responsibilities included the incorporation of the District's new financial information into the existing model.



# Mark Panny

SUPPORT ANALYST

## FIELD OF EXPERTISE/WORK EXPERIENCE

Mark Panny is a financial analyst in Carollo's BSG with a specialization in cost-of-service analysis and rate design for municipal utilities. He has expertise in demand and supply planning for water and wastewater municipal utilities and has experience conducting statistical analysis for water usage planning.

Mark has served as lead analyst on several projects, including cost-of-service studies and financial master plans for Eastern Municipal Water District, Irvine Ranch Water District, and Monte Vista Water District. He has overseen the development of financial models, directed water usage analysis, and prepared reports and presentations for public outreach. In addition, Mark used his data analysis background to help a number of water and wastewater agencies plan around California's current drought. He is assisting multiple utilities mitigate the impacts of the ongoing drought in California, developing revenue risk assessments and alternative demand based rates to be implemented in the event of continued conservation.

## YEARS OF EXPERIENCE: 3

## EDUCATION

- ▶ MEM Water Resources Management, Duke University, 2014
- ▶ BA History, Lafayette College, 2010

## RELEVANT PROJECT EXPERIENCE

- ▶ Lead analyst on Cost-of-Service and Rate Design Study for Eastern Municipal Water District, CA. He is developing a comprehensive cost allocation for EMWD based on the District's various sources of supply. He is also preparing a full analysis of the District's current customer usage patterns, and modeling customer impacts based on changes to EMWD's budget-based rate structure.

- ▶ Lead analyst on Cost-of-Service and Rate Design Study for Monte Vista Water District, CA. He conducted data analysis on usage and financial trends for the District, and developed water budget allocations to help the District meet its state mandated conservation goals. He calculated baseline water rates, as well as additional stages of drought rates to be implemented during increasing levels of water shortage.
- ▶ Lead analyst on Rebate Program Review for Orange County Sanitation District, CA. He analyzed several years of rebate applications received and processed by OCSD, and calculated new usage factors for all customer classes. Mark modeled the ongoing impact of the rebate program, considering the revenue risk and administrative burden, and developed recommendations for adjusting the program to address these issues.
- ▶ Analyst on Cost-of-Service and Rate Design Study for Riverside Public Utilities, CA. He led the data analysis stage of the Study, processing over a decade of usage and billing records to identify demand trends and the appropriateness of the RPU's current rates and tiers.
- ▶ Analyst on Cost-of-Service and Rate Design Study for Irvine Ranch Water District, CA. He conducted data analysis of usage and financial records spanning over multiple years. He developed financial and rate models to project future cash flows, perform cost-of-service analysis, and determine necessary water, wastewater, and recycled rates.
- ▶ Analyst on Water Rates and Connection Fee Study for Inland Empire Utilities Agency (IEUA), CA. He developed financial model for potable and recycled water supply systems, and provided cost-of-service analysis to determine the necessary rates for IEUA to collect from its member agencies.



# Pierce Rossum

SUPPORT ANALYST

## FIELD OF EXPERTISE/WORK EXPERIENCE

With 8 years of experience, Pierce Rossum has served as project manager or lead financial consultant for over 50 cost-of-service studies. He brings a depth of knowledge and expertise in Proposition 218 and 26 compliance, rate structure design, and brings strong financial modeling, statistical, and economic background. His previous work developing financial and economical models has made him keenly aware that one rational decision cannot be made without affecting another. This approach helps promote the overall defensibility of any cost-of-service recommendation, recommended rate adjustments, and an agency's ownership of final decisions that can be easily communicated to the public.

## YEARS OF EXPERIENCE: 9

### EDUCATION

- ▶ BA Economics, Claremont McKenna College, CA, 2008
- ▶ BA Psychology, Claremont McKenna College, CA, 2008

### RELEVANT PROJECT EXPERIENCE

- ▶ Lead financial consultant for the Cost-of-Service Rate Analysis for IRWD, CA. He performed a detailed review of the agency's existing budget-based water, sewer, and recycled water rates. He was responsible for the development of an independent rate model and reviewed existing cost-of-service methodology for compliance with Prop 218 and industry best practices.
- ▶ Lead financial consultant for SDCWA, CA, FY2014 Cost-of-Service Rate and Charges Study. The study to analyzed and confirmed the appropriateness and legality of the water rates and charges methodology and calculated the CY2014 water rates and charges. Responsible for the development of an independent rate model and reviewed SDCWA's existing cost-of-service

methodology for compliance with the AWWA cost-of-service standards and industry best practices.

- ▶ Lead financial consultant for San Francisco PUC, CA, Utility Rate Consulting. Reviewing SFPUC's financial forecasts models and fiscal policies to update cost-of-service rates and charges. Developing analysis to separate costs of wastewater and stormwater charges within SFPUC's combined system to implement new stormwater charge in compliance with Prop 218.
- ▶ Lead financial consultant for OCSD, CA, Wastewater Rate Study. Responsible for the development of a financial and rate model that updated and analyzed OCSD's cost-of-service wastewater rates.
- ▶ Project manager for the City of Arcadia, CA, Water and Sewer Rate Study. Analyzed the impact of potential water demand forecasts and developed an integrated source of supply analysis to reflect the different costs associated with various sources of supply. Created a budget-based rate structure, which integrated the source of supply analysis to reward customer conservation and water use efficiency.
- ▶ Financial support and technical advisor for the Sewer Rate and Fee Study for the Sacramento Regional County Sanitation District, CA. Provided additional review and played a role of "devil's advocate" to generate a thorough assessment of the findings prior to customer and stakeholder review.
- ▶ Lead financial consultant for the Cost-of-Service and Engineer's Report for Pajaro Valley Water Management Agency, CA. Responsible for the development of a financial and rate model that updated and analyzed the Agency's pumping augmentation and delivered water charges. Facilitated monthly collaborative meetings with an Ad Hoc Finance Committee to prepare rate recommendations.