Agenda Item 6J

Approvals:
City Manager
Dept. Head
Attorney
Finance

# AGENDA REPORT

SAN CLEMENTE CITY COUNCIL MEETING
Meeting Date: February 19, 2019

**Department:** Finance and Administrative Services
**Prepared By:** Ambrocia Dominas, Revenue Supervisor

**Subject:** ***AWARD OF PROFESSIONAL SERVICES AGREEMENT TO RAFTELIS FINANCIAL CONSULTANTS, INC. FOR A COMPREHENSIVE COST-OF SERVICE STUDY OF THE CITY'S WASTEWATER UTILITY.***

**Fiscal Impact:** Yes. The cost for the Study is not to exceed $57,388. One-time study costs were budgeted for $75,000 in the Water Operating Fund.

**Summary:** Staff recommends that Council approve a contract with Raftelis Financial Consultants, Inc. The purpose of the Agreement is to provide a one-time cost-of-service study of the City's Wastewater utility.

**Background:** A Cost-of-Service Study is performed to examine the cost of providing Wastewater utility services with the objective of developing a fair and equitable rate structure. Rates need to be adequate to recover the expenses of the Wastewater enterprise fund, while ensuring that costs are equitably allocated, so that rates are fair and in proportion to the services received by the various customer classes. Ordinarily, a study is performed every five to ten years. The City's most recent study was completed in 2012.

**Discussion:** A comprehensive Cost-of-Service Study for the City's Wastewater utilities is in the FY 2019 budget. Staff prepared and distributed a Request for Proposals to perform the Cost-of Service Study. Proposals were received from seven firms, ranging from $25,370 to $89,850. Staff evaluated the written proposals, reviewed work experience, and conducted interviews. Raftelis Financial Consultants, Inc. was deemed most qualified to provide services for this project for a total cost not to exceed $57,388.

Per City Policy No. 201-2-3 and State law, selection of professional engineering services contractors is based on qualifications only. Raftelis Financial Consultants, Inc. presented the best work plan. Their experience with other wastewater agencies in Southern California and knowledge of wastewater rate design methods were significant elements in the selection of Raftelis Financial Consultants, Inc.

**Recommended Action:** STAFF RECOMMENDS THAT the City Council approve, and authorize the Mayor to execute, Contract _____ by and between the City of San Clemente and Raftelis Financial Consultants, Inc. provided for the Wastewater Comprehensive Cost-of Service Study in the amount not to exceed $57,388.

***Attachments:*** 1. Raftelis Financial Consultants, Inc. April 30, 2018 Proposal
2. The Professional Services Agreement is on file with the City Clerk's Office.

***Notification:*** Black & Veatch Management Consulting, LLC
Carollo Engineers, Inc.
HF&H Consultants, LLC
Municipal & Financial Services Group
NV5, Inc.
Raftelis Financial Consultants, Inc.
Willdan Financial Services

Attachment 1

RAFTELIS

Proposal / April 30, 2018

# City of San Clemente

Wastewater Cost of Service Study

2-19-18 / 6J-3

# Table of Contents

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RAFTELIS

April 26, 2018

Mr. Dave Rebensdorf
Utilities Director
City of San Clemete
910 Calle Negocio
San Clemente, CA 92672

**Subject: Proposal for Wastewater Cost of Service Study**

Dear Mr. Rebensdorf:

Raftelis is excited to submit this proposal to conduct a wastewater cost of service study for the City of San Clemente (City). We are excited because rate setting and cost-based rates which meet Proposition 218 requirements are our expertise. We assisted the City with water, wastewater and recycled water rate studies several times since 2010. We have also conducted thousands of rate studies across the U.S. and hundreds in California. Recent engagements in Southern California include studies for the Cities of Orange, Long Beach, Huntington Beach, Vista, Lakewood, Trabuco Canyon Water District, and the Municipal Water District of Orange County. A complete list of prior clients in the past three years and references are detailed in our proposal.

Raftelis was founded in 1993 and has grown to more than 70 consultants nationwide. We have 15 consultants in California alone and continue to grow. Our Project Team consists of three experienced rate practitioners. I will serve as the Project Director and Technical Reviewer – ultimately responsible for the success of the project. I have conducted more than 200 wastewater, water, and recycled water studies. I also revised San Juan Capistrano's water rates after the precedent-setting Capistrano Taxpayers Association vs City of San Juan Capistrano legal case.

Steve Gagnon, PE will be the Project Manager – managing day-to-day aspects and ensuring the project meets the City's objectives. He has 20 years of consulting experience, is on the California/Nevada AWWA Rates and Charge Committee, and recently spoke at the California Society of Municipal Finance Officers annual conference on typical water and wastewater rate-setting challenges including setting fixed charges.

Our proposal describes in detail the tasks associated with this wastewater cost of service study which include:

- Project due diligence and kick-off
- Financial plan development
- Cost of service analysis
- Rate development
- Two City Council meetings
- Draft and final reports
- A Public Hearing presentation and review of the Public Hearing Notice
- Reviewing the pricing model from the Santa Margarita Water District to treat wastewater from the Talega community and sell recycled water back to the District (as shown, we have assumed a number of hours to review and prepare a memo on this task)

Two of the City's main concerns involve reviewing and setting the proper fixed charge for fixed revenue collection and reviewing wastewater rates to ensure they are based on a sound cost of service basis which reflects the strength of the wastewater from each class.

This project will be managed from Raftelis' Los Angeles Office (445 South Figueroa Street, Suite 2270, Los Angeles, CA 90071), which is located approximately 60 miles from the City of San Clemente. In addition, staff from our Murrieta Office (24640 Jefferson Avenue, Suite 207, Murrieta, CA 92562 – which is our closest office to San Clemente) will work on the project; this office is approximately 50 miles from the City.

I am authorized to bind the firm and this cover letter transmits a firm proposal that is valid for 90 days. Should you have any questions, please contact us using the following information.

Sanjay Gaur, Project Director and Technical Reviewer
445 South Figueroa Street, Suite 2270
Los Angeles, CA 90071
Phone: 213.262.9304 / Email: sgaur@raftelis.com

Steve Gagnon, PE, Project Manager
45 South Figueroa Street, Suite 2270
Los Angeles, CA 90071
Phone: 714.351.2013 / Email: sgagnon@ratelis.com

Sincerely,

Sanjay Gaur
Vice President

# Background & Approach

## BACKGROUND

The City of San Clemente (City) provides water, recycled water, and sewer services to more than 17,500 accounts within the City limits.

The City currently reviews its wastewater rates annually and rate adjustments are calculated based on the current year's budget and a five-year financial forecast prepared annually by City personnel. The City would like to develop a five-year rate-setting approach instead of annually reviewing rates and would like a cost of service study to ensure rates reflect class flows and loadings as well as to review the level of fixed revenue recovery.

The City's current sewer rates were implemented in August of 2016. Raftelis will conduct a detailed review of the current rates and charges and, if appropriate, recommend alternative rate structures to ensure rates are equitable and proportional to the costs of providing service.

Additionally, the City is currently in negotiations with Santa Margarita Water District (SMWD) to develop a long-term agreement to convey and treat wastewater flows from the Talega community and to sell recycled water back to SMWD. Raftelis will analyze the proposed pricing model to evaluate the equitability of a wholesale wastewater and recycled water pricing approach and provide recommendations and modifications as warranted.

In 2012, the City engaged Raftelis to conduct a comprehensive Water and Sewer Rate Study, in which we developed a financial plan and water and sewer rates. In 2014, the City retained Raftelis to conduct a Recycled Water Rate Study to calculate recycled water rates for existing and converted customers as the expansion approached the completion stage. In 2013 and 2015, Raftelis assisted the City in its annual water and sewer rate updates to revise the financial plan and rates for its Water, Recycled Water, and Sewer Enterprise Funds. Through this experience, we have gained an in-depth understanding of the City's situation, and we will use this knowledge to hit the ground running on this project.

## PROJECT OBJECTIVES

The major objectives of the study include the following:

- Review the Wastewater Rate Ordinance, compare it to industry standards, and provide feedback and recommendations
- Evaluate historic consumption patterns and analyze customer usage patterns to determine their peak to average ratios
- Review the existing customer classification and commodity rate structure (number of classes and strengths) and determine if they are appropriate based on actual data and/or industry standards
- Determine whether the customer classification and strength levels currently used are appropriate based on actual or industry standard customer loadings and recommend modifications to the current rate structure if necessary
- Determine if the cost recovery between fixed and variable rates is appropriate
- Analyze the depreciation reserve balances and the funding assumptions to determine appropriate reserve levels and recommend long term funding strategies
- Review the proposed SMWD model and determine if the pricing is fair and equitable

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# Methodology(ies)

Raftelis' project approach is based on years of experience. Our approach entails several interrelated work efforts that will require effective coordination between City staff and the Raftelis Project Team. Raftelis will work with City staff on an ongoing basis via scheduled in-person meetings and web conferences to cultivate a strong sense of City staff ownership over the final results.

We will develop rates according to the Water Environment Federation's (WEF) *Financing and Charges for Wastewater Systems Manual No. 27* - which is the industry standard text for wastewater rates, and was co-authored by Raftelis staff. We will use five major steps, described here, to develop utility rates that comply with Proposition 218, industry standards, and City goals.

## 1. DUE DILIGENCE AND POLICY REVIEW

Raftelis will start the rate-making process with a due diligence phase to understand the underlying reasons and/or goals for the rate study. This will include a kick-off meeting with City staff to ascertain goals and objectives.

## 2. FINANCIAL PLAN

The financial plan assesses the amount of yearly revenue required to operate and maintain the sewer system and includes funding for reserves and debt service. Normally, we develop a 10-year financial plan to assess the utilities long-term financial health. A long-term view helps ensure smooth rate adjustments and long-term capital planning with minimal customer bill impacts.

## 3. COST OF SERVICE ANALYSIS

The annual costs of providing wastewater services should be allocated among customer classes commensurate with their service requirements – i.e., how they use the wastewater system. In this step, costs are identified and allocated to cost components and distributed to respective customer classes according to the industry standards provided in WEF's *Manual of Practice No. 27.* Wastewater cost components normally include flow, biochemical oxygen demand (BOD), and total suspended solids.

## 4. RATE DESIGN

Rates do more than simply recover costs. Properly designed rates optimize a blend of objectives, such as affordability, fairness and equity, revenue stability, and ease of implementation. The rate development process is a public information tool that communicates the City's rate objectives to customers. In this step, Raftelis will design rates according to industry standards that meet the City's rate-setting objectives and are defensible. Raftelis will develop a customized rate model to assess different rate alternative customer impacts to facilitate informed decision making. The results will be summarized in both an easy-to-understand graphical format and a tabular format to ease communications with elected officials.

## 5. RATE ADOPTION

In the last step of the rate-making process, to comply with Proposition 218 requirements, study results will be documented in a Study Report to educate the public about the proposed changes, the rationale and justifications behind the changes, and their anticipated financial impacts in layman's terms. This will serve as the administrative record to justify the proposed rate structure. At a public hearing, 45 days after sending out the public notices, Raftelis can present study recommendations to assist the City's adoption of the new wastewater rates.

The results of the most comprehensive study can be lost if Raftelis and the City don't attain consensus with the City's constituency. Therefore, rate communications must be clear, straightforward, and simple. Raftelis has assisted hundreds of agencies with implementing rates and is well known for presenting thoughtful and concise presentations. Raftelis will attend public meetings to present, in an easily understandable format, the proposed changes to and rationale for the rates. Raftelis' presentations include visual graphics and our staff is skilled at clearly and simply explaining the basics of rate setting.

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# Work Plan

The utility industry consistently seeks Raftelis as an advisor to lead the national discourse on rates and rate structures. The value that Raftelis adds to the rate design process is based not only on the level of technical expertise that results from broad and deep experience, but the ability to glean the best ideas and strategies through a collaborative process with our clients. The following section outlines our proposed tasks for the comprehensive wastewater cost of service study to accomplish the City's goals. While the tasks are listed consecutively, elements of a task may be done concurrently with other tasks.

Task 1

## PROJECT MANAGEMENT, KICK-OFF, AND DATA COLLECTION

### TASK 1.1: KICK-OFF MEETING

A productive kick-off meeting is the most effective way to begin a rate study. The goals for the kick-off meeting include:

- Acquainting City staff with our Project Team
- Establishing goals and objectives
- Establishing the work plan and schedule
- Discussing the City's pricing objectives
- Discussing the data request and any additional data requirements

Prior to the kick-off meeting, we will prepare a detailed data request that identifies the information needed. If the data is provided in time, Raftelis will review the initial data before the kick-off meeting and will come prepared with our questions to get the most out of the meeting.

### TASK 1.2: ONGOING PROJECT MANAGEMENT AND QA/QC

Competent project management ensures a successful project. The project management task involves client correspondence, progress updates, timely billing, and internal management of Raftelis staff.

Our well-defined QA/QC program fosters work products that meet or exceed our clients' standards. To ensure robust quality control, two members of the Raftelis team (the Technical Reviewer and Project Manager) review the model and results to ensure they are based on sound rate-making principles.

**Meeting(s):** One kick-off meeting with City staff
**Deliverable(s):** Kick-off meeting presentation and minutes and data request list

Task 2

## FINANCIAL PLAN MODEL DEVELOPMENT

The financial plan assesses the enterprise's current financial status and suggests revenue adjustments to ensure long-term fiscal sustainability. Raftelis will project expenses and revenue requirements over a 10-year planning horizon. Projecting revenue adjustments over a 10-year planning horizon illustrates future rate impacts and potential challenges to the City's financial health so the City can plan expenses, reserve balances, or capital project scheduling to

smooth rate impacts. We will project revenue requirements based on the current budget, the City's long-term capital funding strategy, and existing debt service (if applicable). Options for capital financing include rates, debt, grants, capacity fees, or infrastructure bank loans.

We strive for smooth revenue adjustments and minimal rate impacts while achieving long-term revenue goals. For example, strategic timing of capital expenditures and the use of reserve funds help mitigate rate fluctuations. As part of the financial plan, we review and discuss reserves for operating, capital, and emergency purposes.

Raftelis understands the importance of developing a user-friendly, flexible model that the City can use for future financial planning. Our models include a financial plan dashboard, which includes the following features:

- Flexibility to change many assumptions such as water sales, CIP levels, and revenue adjustments
- Error flagging and problematic results such as: failure to meet debt coverage, below target reserves, etc.
- Sensitivity analyses and various "what-if" scenario assessments, so that impacts can be viewed instantaneously with built in-screen graphics

The dashboard is an effective tool to visually asses how each assumption (scenario) impacts the financial plan. It is an easy-to-understand format which shows the impacts of various assumptions so that decisions regarding revenue adjustments, capital financing through pay-go or debt, and reserve balances can be made quickly and efficiently. A sample model dashboard is shown below.

Raftelis will hold up to two webinars to review assumptions and finalize the financial plan with which to calculate rates.

**Meeting(s):** Up to two webinars with City staff
**Deliverable(s):** Draft financial planning model in Microsoft Excel

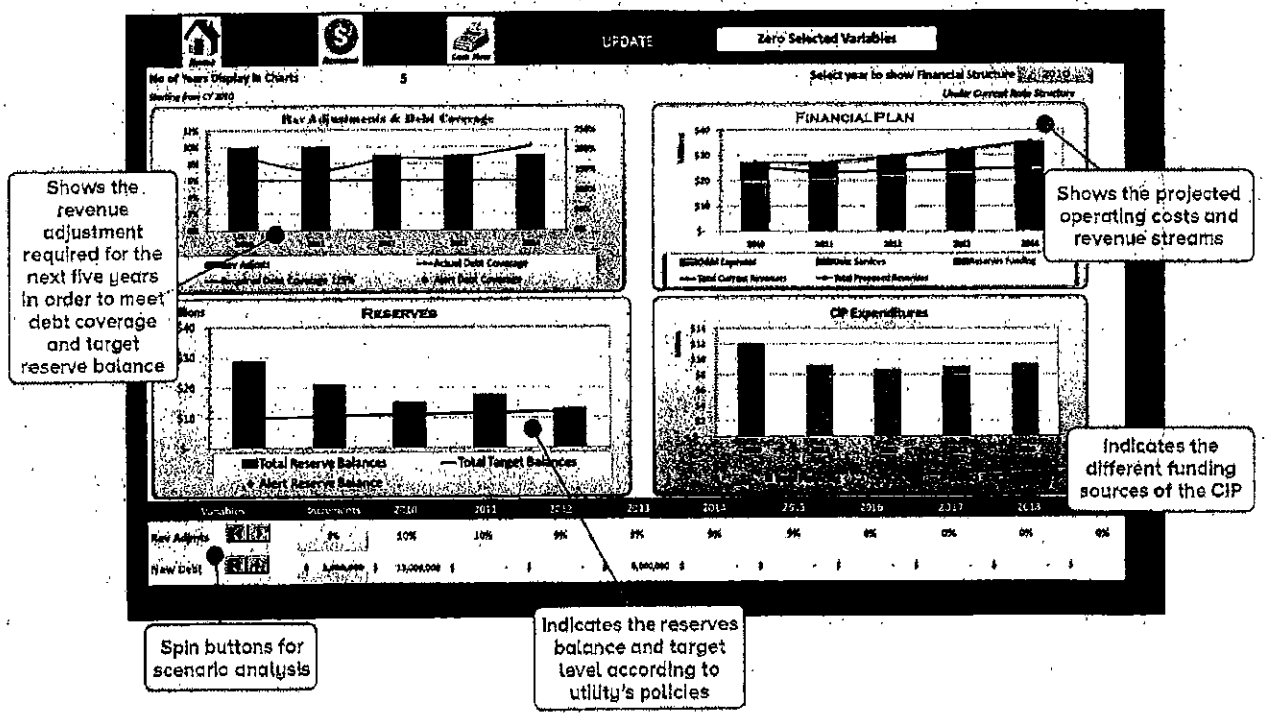
## Task 3
## COST OF SERVICE ANALYSIS

Although Raftelis tailors a utility's cost of service analysis to meet each utility's needs, we make sure to conform to industry standards and regulatory requirements. A wastewater cost of service study involves the following three steps:

- Functionalizing revenue requirements to functions such as Collection, Pumping, Treatment, Residuals Handling, etc.
- Allocating those functions to cost causative factors such as average daily flow, peak flow, BOD, and total suspended solids (TSS)
- Distributing cost components to customer classes based on service requirements

Raftelis will review the current strength assumptions for each class and discuss any warranted changes with City staff. The cost of service analysis calculates unit costs for flow, BOD, and TSS which are applied to the

**Sample Model Dashboard**
The dashboard allows quick decision-making by visually displaying impacts of changes to selected variables.



class loadings to determine the each class' share of costs. Once we know each class' cost responsibility, we will calculate sewer service charges in Task 4.

**Meeting(s):** Webinar, if needed
**Deliverable(s):** Cost of service analysis in Microsoft Excel

### Task 4
## RATE MODEL DEVELOPMENT

Raftelis will calculate rates based on the cost to serve each class. Raftelis can develop a few rate structures for evaluation – such as rate structures with varying levels of fixed revenue. Raftelis creates customized cost of service and rate models based on standardized approaches for each of its rate study projects, which will allow us to tailor the model to meet each your specific needs.

Rate models consist of three modules: a financial planning module (Task 2), a cost of service module (Task 3), and a rate calculation module (Task 4). The rate calculation module will determine rates, considering the City's goals and objectives.

The model will be developed using Microsoft Excel and will incorporate industry standard rate-setting methodology consistent with State Water Resources Control Board and Water Environment Federation (WEF) guidelines. During the project, City staff can be provided with working copies of the rate model, if desired, such that they can review and provide input to the final results.

Raftelis will also determine the potential financial impact on customers that result from the proposed rate structures. The model will include a series of tables and figures that show projected rate impacts on different types of customers at various levels of usage, allowing the City to review the impact of the alternative rate.

**Meeting(s):** Two staff meetings to review rate results
**Deliverable(s):** Rate model in Microsoft Excel

### Task 5
## CITY COUNCIL MEETINGS

Raftelis will present the rate study results to City Council in a workshop setting. We will explain the need for revenue adjustments and the rationale and basis for rate structure changes (if warranted and/or desired). Raftelis will field questions and solicit input from City Council. After consulting with City staff, we will incorporate this feedback into the rate structure/model and present the final rates to City Council at a second meeting. At this second meeting, we will seek approval to proceed with the Proposition 218 process (mailing of the Prop 218 notices).

**Meeting(s):** One City Council Workshop and one City Council Presentation of final rates
**Deliverable(s):** Presentation materials in Microsoft PowerPoint

### Task 6
## DRAFT AND FINAL REPORTS

The report will describe the financial plan and proposed rate structures, along with preliminary rate recommendations. The draft report will

be submitted after the second City Council meeting and will incorporate their input into the final results. To ensure that the study includes a thorough administrative record, the Final Report will include an exhibit listing all rate design assumptions and methodologies used to develop the financial plan and rates. Raftelis will incorporate City staff comments on the Draft Report. The report will include supporting data from the model to address the requirements of Proposition 218.

**Meeting(s):** Phone calls as needed to discuss the draft report
**Deliverable(s):** Draft and Final Report in Microsoft Word

**Task 8**
## REVIEW PROPOSED SMWD MODEL

Raftelis will review and analyze a proposed pricing model between the City and Santa Margarita Water District (SMWD). In this agreement, the City would treat wastewater flows from the SMWD Talega service area and sell recycled water back to SMWD. The proposed pricing model will be evaluated to determine if the wholesale wastewater and recycled water pricing approach is fair and equitable, and modifications and recommendations to the model. We will prepare a short memo to detail our findings and recommendations. We have assumed a certain number of hours to perform this task as shown in the fee schedule.

**Meeting(s):** Phone calls as needed to discuss findings
**Deliverable(s):** Memo describing our findings and recommendations

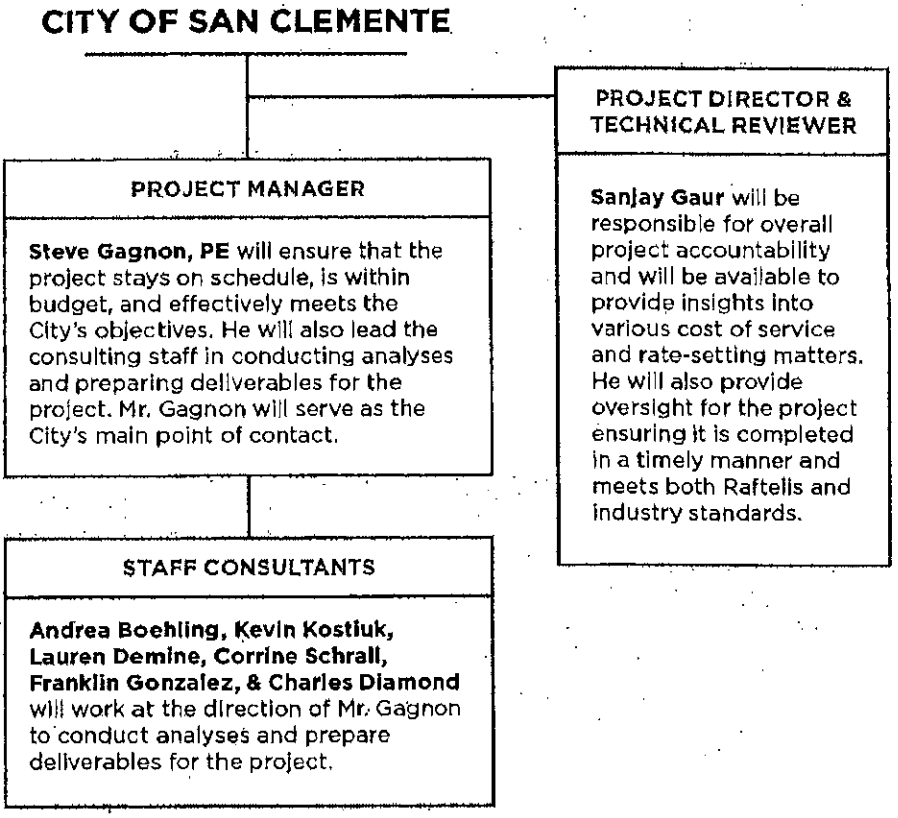
**"Steve (Gagnon), I want to say that this is the best Rate Study that I have ever reviewed. You really took to heart what I have been asking rate consultants to do for some time. You thoroughly explained the process you used, and you tied your explanation directly to each table.**

Kelly Salt, Attorney at Best, Best and Krieger (reviewed Raftelis reports for Sweetwater Authority and Santa Fe Irrigation District)

# Project Organization & Staffing

## OUR PROJECT TEAM CONSISTS OF SOME OF THE MOST KNOWLEDGEABLE AND SKILLED FINANCIAL CONSULTING PROFESSIONALS SERVING THE UTILITY INDUSTRY.

We have included senior-level personnel to provide experienced leadership, with support from talented consultant staff. Raftelis places a high priority on being responsive to our clients and, therefore, actively manages each consultant's project schedule to ensure appropriate availability for addressing client needs. Raftelis currently has a team of more than 70 consultants specializing in financial and management consulting for wastewater, water, and stormwater utilities. The organizational chart to the right shows the structure of our Project Team and roles for each team member. On the following pages, we have included brief profiles for each of our team followed by detailed resumes.




**Hours each team member will devote:**
Sanjay Gaur: 15 hours
Steve Gagnon, PE: 104 hours
Staff Consultants: 138 hours

For a detailed breakdown of the hours by each task, please refer to the *Cost Data* section.

## Sanjay Gaur

**PROJECT DIRECTOR & TECHNICAL REVIEWER**

*Vice President*

Experience: 20 years

Career highlights

- Regarded as a leader in innovative rate structures
- Co-author of: AWWA's *M1 Manual*; AWWA's *Water, Rates, Fees, and the Legal Environment*; & *Water and Wastewater Finance and Pricing*
- Financial/rate consulting experience with San Clemente, Huntington Beach, Long Beach, Trabuco Canyon Water District, & East Bay Municipal Utility District

Mr. Gaur has over 20 years of public-sector consulting experience, primarily focusing on providing financial and rate consulting services to water and wastewater utilities. His experience includes providing rate structure design, cost of service studies, financial analysis, cost benefit analysis, capacity fee studies, conservation studies, and demand forecasting for utilities spanning the west coast. He has provided consulting service to over 100 different agencies. Mr. Gaur is considered one of the leading experts in developing rates that meet Proposition 218 requirements, has exceptional public speaking skills and, due to these qualities, he is often sought out to provide assistance on rate studies that are complex and controversial. He has often provided his insight into utility rate and conservation-related matters for various publications and industry forums including: authoring articles in Journal AWWA; being quoted in various newspaper articles including the Los Angeles Times and the New York Times; participating in a forum regarding the future of water in Southern California sponsored by the Milken Institute; being quoted on National Public Radio; speaking at various industry conferences including American Water Works Association (AWWA), the Utility Management Conference, Association of California Water Agencies, and California Society of Municipal Finance Officers; and, co-authoring several industry guide books including AWWA's *Manual M1 Principles of Water Rates, Fees and Charges, 7th Edition* as well as AWWA's *Water Rates, Fees, and the Legal Environment, Second Edition*. Mr. Gaur co-authored a chapter entitled, "Understanding Conservation and Efficiency Rate Structures," for the Fourth Edition of the industry guidebook, *Water and Wastewater Finance and Pricing: The Changing Landscape*. Mr. Gaur is also active in a number of utility-related associations, including serving as a member of AWWA's Rates and Charges Committee.

## Steve Gagnon PE

**PROJECT MANAGER**

*Manager*

Experience: 20 years

Career highlights

- Registered with the Securities and Exchange Commission as a Municipal Advisor
- Member of CA-NV AWWA Rates and Charges Committee
- Financial/rate consulting experience with Orange, Trabuco Canyon Water District, Channel Islands Beach Community Services District, & Western Municipal Water District

Mr. Gagnon has 20 years of experience in financial analysis and environmental engineering. He has worked for leading engineering consultants as well as the federal government. His broad range of experience includes water and wastewater pricing studies, capacity fees and utility valuations. His financial experience includes water and wastewater rate studies for the City of Redlands, CA, Santa Fe Springs, Henderson, NV, City of Anaheim, La Habra Heights County Water District, Rowland Water District, Walnut Valley Water District, Sweetwater Authority, Helix Water District and Otay Water District. He has also performed strategic financial analysis of water sourcing alternatives and costing of ground water remediation alternatives, asset inventory and condition assessments, utility performance metrics, earned value analysis. He has also managed the construction and installation of water treatment equipment and oversaw Superfund remediation for the US Army.

## Andrea Boehling

**STAFF CONSULTANT**

*Senior Consultant*

Experience: 11 years

Career highlights

- Financial/rate consulting experience with Galt, Livermore, Los Alamos Water District, Rincon Del Diablo Water District, Temescal Valley Water District, & Western Municipal Water District

Mrs. Boehling has a strong background in mathematics and accounting and has been serving public agencies for more than 11 years. She possesses extensive analytical and modeling skills which she has used to perform various financial analysis such as cost of service user fee studies, utility rate studies, fiscal impact analysis, special district formations, cost allocation plan modeling, etc. Mrs. Boehling is well-versed with the cost of service principles and special benefit provisions of Proposition 218. In addition, with over 6 years of experience in the auditing field, she is very familiar with monitoring and evaluating compliance with regulations, performing data analysis, and performing data integrity testing.

## Kevin Kostiuk

**STAFF CONSULTANT**

*Senior Consultant*

Experience: 10 years

Career highlights

- Financial/rate consulting experience with Goleta Water District, Riverside, Redlands, Simi Valley, Henderson, & East Valley Water Dsitrict

Mr. Kostiuk has a background in economics and accounting and and he possesses extensive analytical skills. His expertise lies in financial accounting, analysis of water supply reservoir operations and management, environmental policy, and water quality trading programs; as well as United States Army Corps of Engineers (USACE) water supply and flood control policy. Mr. Kostiuk is an active member of the American Water Works Association (AWWA) Young Professionals and the Young Professionals Summit Committees in conjunction with the AWWA Utility Management Conference (UMC). He authored an article on potable reuse in Journal AWWA discussing the treatment, financing structures, and pricing of treated water at advanced purification treatment plants. Most recently Mr. Kostiuk coauthored an article on proactive financial planning in times of drought for California Society of Municipal Finance Officers (CSMFO) Magazine.

## Lauren Demine

**STAFF CONSULTANT**

*Associate Consultant*

Experience: 12 years

Career highlights

- Currently conducting rate-setting and financial modelling for the Monterey County Water Resources Agency and Sierra Madre
- Related Geophysical experience for Monterey Interlake Tunnel, Cadiz Inc. Pipeline, & Stringfellow Acid Pits

Ms. Demine has a background in geology and geophysics. Her expertise includes geophysical data analysis, processing and modeling, and technical report writing and review. During her time as a geophysicist, she has worked with private firms and water districts to address capital infrastructure needs, mitigate the potential of groundwater contaminates, and evaluate the integrity of groundwater basins/ well locations.

## Corrine Schrall

**STAFF CONSULTANT**

*Consultant*

Experience: 7 years

Career highlights

- Financial/rate consulting experience with OraAlameda County Water District, Castaic Lake Water Agency, Camarillo, El Toro Water District, La Habra Heights County Water District, & Orange

Ms. Schrall's expertise lies in complex data analysis, project management, and environmental law and policy. She is an experienced financial modeler, conducting complex surveys; building budgets and financial plans; developing water and wastewater costs of service and rates; and establishing connection and capacity fees. In addition, she is a strong technical writer and has built numerous presentations for diverse audiences.

## Franklin Gonzalez

**STAFF CONSULTANT**

*Associate Consultant*

Experience: 1 year

Career highlights

- Financial/rate consulting experience with Sierra Madre, Atwater, & Yulma

Mr. Gonzalez has a background in environmental engineering, specially, in water and wastewater engineering, and air quality treatment. His primary expertise includes financial modeling and data analysis.

## Charles Diamond

**STAFF CONSULTANT**

*Associate Consultant*

Experience: 8 months

Career highlights

- Financial/rate consulting experience with Brendwood & La Cañada Irrigation District

Mr. Diamond has a background in environmental economics and water resources management. His expertise lies in financial modeling and data analysis. He joined Raftelis initially in 2017 as an Associate Consultant upon receiving a Master's degree from UC Santa Barbara's Bren School of Environmental Science & Management in June 2017. Mr. Diamond has developed financial models and conducted analyses of energy use for UC Santa Barbara's Facilities Management department as a graduate student.

### TECHNICAL SPECIALTIES

- Proposition 218 rate compliance
- Financial analysis
- Cost of service studies
- Conservation rate structure design
- Capacity fee studies
- Cost benefit analysis
- Econometric analysis

### PROFESSIONAL HISTORY

- Raftelis: Vice President (2015-present); Senior Manager (2012-2014); Manager (2009-2012)
- Red Oak Consulting, Division of Malcolm Pirnie (2007-2009)
- MuniFinancial (2005-2006)
- A & N Technical Services (1999-2003)
- United States Peace Corps, Bulgaria (1995-1997)

### EDUCATION

- Master of Public Administration, Public Administration/International Development, Kennedy School of Government - Harvard University (2003)
- Master of Science, Applied Economics - University of California, Santa Cruz (1994)
- Bachelor of Arts, Economics and Environmental Studies - University of California, Santa Cruz (1992)

### PROFESIONAL RECOGNITION

- Who's Who in America, 63rd Edition (2009)
- Finalist, National Venture Competition (2003); Goldman Sachs Foundation
- Roy Environmental Fellowship (2002), Kennedy School of Government, Harvard University
- Academic Scholarship (2001-2003), Kennedy School of Government, Harvard University
- Certificate of Outstanding Service (1997), United States Peace Corps

### PROFESSIONAL MEMBERSHIPS

- American Water Works Association - Rates and Charges Committee
- California Society of Municipal Finance Officers

# Sanjay Gaur

## PROJECT DIRECTOR & TECHNICAL REVIEWER

Vice President

Mr. Gaur has over 20 years of public-sector consulting experience, primarily focusing on providing financial and rate consulting services to water and wastewater utilities. His experience includes providing rate structure design, cost of service studies, financial analysis, cost benefit analysis, capacity fee studies, conservation studies, and demand forecasting for utilities spanning the west coast. He has provided consulting service to over 100 different agencies. Mr. Gaur is considered one of the leading experts in developing rates that meet Proposition 218 requirements, has exceptional public speaking skills and, due to these qualities, he is often sought out to provide assistance on rate studies that are complex and controversial. He has often provided his insight into utility rate and conservation-related matters for various publications and industry forums including: authoring articles in Journal AWWA; being quoted in various newspaper articles including the Los Angeles Times and the New York Times; participating in a forum regarding the future of water in Southern California sponsored by the Milken Institute; being quoted on National Public Radio; speaking at various industry conferences including American Water Works Association (AWWA), the Utility Management Conference, Association of California Water Agencies, and California Society of Municipal Finance Officers; and, co-authoring several industry guide books including AWWA's *Manual M1 Principles of Water Rates, Fees and Charges, 7th Edition* as well as AWWA's *Water Rates, Fees, and the Legal Environment, Second Edition*. Mr. Gaur co-authored a chapter entitled, "Understanding Conservation and Efficiency Rate Structures," for the Fourth Edition of the industry guidebook, *Water and Wastewater Finance and Pricing: The Changing Landscape*. Mr. Gaur is also active in a number of utility-related associations, including serving as a member of AWWA's Rates and Charges Committee.

## RELEVANT PROJECT EXPERIENCE

**Alameda County Water District (CA)**
Mr. Gaur has provided financial and rate consulting experience to Alameda County Water District since 2010. During these years, Mr. Gaur has been the Project Manager on numerous studies, including the evaluation of different types of conservation rates, development of a 25-year financial model that assists the District in evaluating different financial risks, development of drought rates, and public outreach to stakeholders. During these projects, Mr. Gaur has led a series of workshops with the Executive Management and the Board of Directors in evaluating and identifying which financial/rate solutions meet their objectives.

**East Bay Municipal Utility District (CA)**
Since 2013, Mr. Gaur has provided consulting services to East Bay Municipal Utility District .He successfully accomplished several objectives for the District and served as the Project Manager for a comprehensive water and wastewater cost of service study. The last comprehensive cost of service study was done in 2000. As part of the study, Raftelis thoroughly examined the District's cost structure, analyzed water and wastewater flow and customers data, and evaluated alternative rate structures to develop an equitable rate structure that meets Proposition 218 requirements and the District's goals and objectives. One of the key deliverables was the administrative record, which is a document that clearly explains how the rates are derived and is a critical document to support the requirements of Proposition 218.

**Castaic Lake Water Agency (CA)**
Castaic Lake Water Agency is a wholesale water agency that is a member of the State Water Contractor. Since 2012, Mr. Gaur has provided numerous consulting services

including the evaluation of different types of wholesale rates, a financial model, annexation fees, capacity fees, and other financial consulting services. Mr. Gaur has made numerous presentations to the Board of Directors and has secured their supports on critical matters.

**City of San Juan Capistrano (CA)**
In 2012, San Juan Capistrano was in the midst of a legal lawsuit over its water rates. A group of taxpayers sued the City over its water rates, saying they did not comply with Proposition 218. The City sought out an expert rate consultant to assist them in developing new rates that will meet the stringent requirements of the taxpayer group and City Council. The City hired Raftelis and Mr. Gaur served as the Project Manager for this significant project. The project required a series of six City Council Workshops, with each one lasting over 3 hours. In addition, two members of the City Council were active in supporting the lawsuit against the City. Mr. Gaur was successful in mustering support for the new rates and developing the new standard associated with the administrative record. The rates were approved and the President of the Taxpayer association expressed his support of the new rates.

**City of Long Beach (CA)**
In 2016, the City of Long Beach hired Raftelis in conducting a comprehensive rate study that meets the heightened standard associated with Proposition 218. Given the large percentage of the population at the poverty rate, the City was concerned about affordability, revenue stability due to the recent drought, and developing a strong nexus associated with its water and wastewater rates. Mr. Gaur served as the Project Manager and successfully assisted the City in adopting rates that meet their requirements. Since then, Mr. Gaur has provided financial and rate consulting services to the City, including how to fund stormwater services.

**Fallbrook Public Utility District (CA)**
Fallbrook Public Utility District provides water, recycled water, and wastewater services. The District has a complex rate structure due to the fact that it provides both domestic service, special agricultural rates from the San Diego County Water Authority, normal agricultural service, and a combination of these services to the same meter. Given the recent lawsuit associated with San Juan Capistrano, the District was interested in developing a comprehensive rate study that can fund a new source of water supply and cost of service rate study that can justify the different types of rates. In 2016, Mr. Gaur served as the Project Manager on this study and was successful in developing a 180-page administrative record that clearly explains the nexus requirement associated with Proposition 218 and the adoption of the five years of rates.

**Placer County Water Agency (CA)**
Placer County Water Agency provides four major types of water services: treated retail, untreated retail, treated wholesale, and untreated wholesale. Given the complexity of the system, the agency has over 50 different types of rates. The agency has evolved over the last 60 years of existence and has acquired numerous neighboring agencies. Given the San Juan Capistrano ruling, the Agency was interested in consolidating and developing a clear rationale behind the complex services it provides. The Agency sought out Mr. Gaur to be the Project Manager on this significant study in redeveloping all the different water rates. Mr. Gaur conducted a series of workshops with Executive Management in developing a rationale and logic behind the services it provides. The 150-page administrative record was well received by the Board of Directors and they were pleased with this study. The new rates were approved in 2017.

**Las Virgenes Municipal Water District (CA)**
Since 2008, Mr. Gaur has provided financial and rate consulting services to Las Virgenes Municipal Water District. This include assisting the District in adopting a controversial rate increase, the evaluation and implementation of a water budget rate structure, capacity fees for water and wastewater services, and other financial related matters. The District receives water from only one source, Metropolitan Water District of Southern California. With the desire to implement a water budget tiered rate, Mr. Gaur assisted the District in establishing tiered rates that meet the requirements of Proposition 218.

**Santa Cruz (CA)**
Since 2012, Mr. Gaur has provided financial and rate consulting services to the City of Santa Cruz. This includes developing a financial model that can evaluate different water demand factors and associated drought rates, reserve policies, a comprehensive rate study, drought rates, capacity fees and other financial/rate matters. The drought rates study was particularly complex. The City experienced a significant drought and had to allocate water. Water use was already at a historical low level and residential water use was one of the lowest in California. With the desire of refunding a debt and low commodity revenues sales, the City needed to adopt drought rates within a short time period. Mr. Gaur was successful in adopting 5 stage drought rates and was able to assist the City in at this critical time. Lastly, Mr. Gaur assisted the City in redeveloping its rate structure so that it would meet the values of the community, while remaining both be financially sustainable and meeting the requirements of Proposition 218.

**Rancho California Water District (CA)**
Mr. Gaur has provided consulting services to Rancho California Water District since 2007. During this time, he has assisted the District in the development of a water budget rate structure. The project required the consultant to develop a flexible water budget model that could determine multiple blocks widths and allocations. The team was successfully able to accomplish this task and assisted the District in implementing the new water budget rate structure. The rates where successfully adopted in November 2009.

Mr. Gaur also assisted the District in the development of a New Water Demand Offset Fee. The New Water Demand Offset Program is a form of funding for conservation measures that will

help to create sustainable, zero water footprint development. New developments will pay fees called New Water Demand Offset Fees to create potable water savings in the existing system to support water demand generated by new developments. Water savings can be achieved by converting irrigation accounts to recycled water or installing high efficiency retrofits to replace inefficient fixtures for existing accounts in the District. Lastly, Mr. Gaur has provided consulting services on Capacity Fee studies and updating water rates.

**Western Municipal Water District (CA)**
Since 2009, Mr. Gaur has provided consulting services to Western Municipal Water District. Mr. Gaur successfully accomplished several objectives for the District including the implementation of water budget rates, which included facilitating and leading a discussion on the policy options associated with the development of water budget rates. Based on these policy options, a water budget model was developed that evaluated different allocation factors for indoor and outdoor water use, determined rate components for the corresponding tiers, and developed the corresponding rates and customer impacts.

In addition, Mr. Gaur served as the Project Manager for the development of a financial model for the District. The model has the capability of examining the 14 different fund centers of the District, develop and save different Capital Improvement Plan scenarios, examine the financial consequences of these scenarios and compare the results. In addition, the model has the ability aggregate the fund centers by water, wastewater, or by the whole District. The model is currently being utilized by the District to examine long term health of the District.

Lastly, Mr. Gaur conducted a Capacity Fee study for the District, which included water, wastewater, and recycled water. The prior Capacity Fee was outdated and significant changes were required. This study included public outreach to the Business Industry Association. Since then, Mr. Gaur has provided assistance to the District in updating its water rates and developing the administrative record required.

## OTHER RECENT PROJECT EXPERIENCE

- American Water Company (CA) - Water Rate Study
- Borrego Water District (CA) – Financial Planning Study, Groundwater Sustainability Plan, Water Rate Study, and Basin Management Evaluation
- City of Calexico (CA) - Water and Sewer Rate Study
- City of Camarillo (CA) – Water and Wastewater Rate Study, Financial Plan Study, and Cost of Service Study,
- Carpinteria Sanitary District (CA) – Sewer Rate and Fee Study
- Central Basin Municipal Water District (CA) – Financial Plan
- City of Chino (CA) – Water Budge Rate Design, Financial Plan Study and Cost of Service and Rate Design
- City of Chowchilla (CA) – Water and Wastewater Rate Study
- Coastside County Water District (CA) – Water Rate Study
- Contra Costa Water District (CA) – Financial Plan Study, Water Rate Study and Drought Rates Study
- City of Corona (CA) – Water Budget Rate Study, Wastewater Capacity Fees Study
- Cucamonga Valley Water District (CA) – Financial Plan, Water Conservation Rate Study, and Drought Rates
- Eastern Municipal Water District (CA) – Water Budget Study and Financial Plan Study
- East Orange County Water District (CA) - Water Budget Study, Sewer Capacity Fees Study, and Financial Plan Study
- Elsinore Valley Municipal Water District (CA) – Financial Model, Drought Rate Analysis, Water and Recycled Water Rate Study, Capacity Fee Study, and Wastewater Rate Study
- El Toro Water District (CA) – Water Budget Study and Recycled Water Financial Plan Study
- City of Escondido (CA) – Water and Wastewater Rate Study and Capacity Fees Study
- City of Glendora (CA) – Water Budget Feasibility Study
- City of Gridley (CA) – Water Rate Study
- Helix Water District (CA) – Water Rate and Cost of Service Study
- Hi-Desert Water District (CA) – Water Rate Study
- City of Hollister (CA) - Sewer Rate and Impact Fee Study, Water Rates Study, and Capacity Fee Study
- City of Huntington Beach (CA) - Sewer Rate Study, Water Budget Rate Study, and Financial Plan Study
- Imperial County Gateway County Service Area(CA) – Water and Wastewater Rate Study
- Indio Water Authority (CA) - User Fee Study and Water Rate Study
- Inland Empire Utilities Agency (CA) – Conservation Rate Structure Workshop and Financial Plan Study
- Inyo County Water Department (CA) – Water Rate Study
- Irvine Ranch Water District (CA) - Conservation Study
- Jurupa Community Services District (CA) – Water Budget Study
- La Habra Heights County Water District (CA) – Wheeling Rate Study and Financial Plan Study
- La Puente Valley County Water District (CA) – Water Rate and Fee Study
- City of Livermore (CA) – Water Cost of Service Study
- City of Livingston (CA) - Water Rate Study
- City of Lomita (CA) - Water Rate Workshop
- Los Alamos Community Services District (CA) – Water and Wastewater Rate Study
- Los Angeles Department of Water and Power (CA) - Daily Demand Estimates
- City of Lynwood (CA) - Cost Allocation Plan
- City of Malibu (CA) – Wastewater and Recycled Water Rate Study
- Mammoth Community Water District (CA) – Water Rate Study
- City of Merced (CA) - Water and Sewer Rate and Impact Fee Study
- Mesa Consolidated Water District (CA) – Financial Plan Study, Cost Comparison Study, Water and Recycled Water Cost of

Service and Rate Design Study
- Metropolitan Water District of Southern California (CA) – Drought Allocation Model, Long Range Financial Plan, and Cost of Service Evaluation
- Mill Valley – Tamalpais Community Services District (CA) – Financial Plan Study
- Mojave Water Agency (CA) – Financial Plan Study, Financial Impact Analysis for Water Exchange and Leasing Programs and Water Reliability Rate Development
- Modesto Irrigation District (CA) – Stormwater Fee Study
- Monterey Peninsula Water Management District (CA) - Water Budget Study
- Municipal Water District of Orange County (CA) - Conservation Potential Study and Rate Study
- City of Newport Beach (CA) – Water Rate Study
- City of Palo Alto (CA) – Water Cost of Service and Rate Study
- Pasadena Water and Power (CA) - Water Cost-of-Service and Rate Design Study
- City of Pomona (CA) – Rate Study
- City of Port Hueneme (CA) - Water and Solid Waste Rate Study
- City of Orange (CA) – Water and Sanitation Rate Study
- City of Reno (NV) – Wastewater Rate Study
- City of Rio Vista (CA) - Water and Sewer Rate and Impact Fee Study
- Salton Community Services District (CA) – Sewer Rate Study
- City of San Clemente (CA) – Water and Wastewater Rate Study
- San Diego County Water Authority (CA) - Indexing Model and Wholesale Water Rate
- City of San Juan Capistrano (CA) – Water Rate Study
- Santa Clara Valley Water District (CA) - Project Evaluation - Water Conservation Project
- Santa Clarita Water District (CA) – Retail Water Rate Study
- Scotts Valley Water District (CA) – Water and Recycled Water Rate Study
- City of Shasta Lake (CA) – Water Rate Study and Water and Wastewater Capacity Fee Study
- City of Sierra Madre (CA) – Water and Sewer Rate Study
- City of Signal Hill (CA) – Water Rate and Cost of Service Study
- City of Simi Valley (CA) – Sewer Rate Study
- Soquel Creek Water District (CA) – Water Rate Structure Study
- South Coast Water District (CA) – Water Budget Assessment
- South Mesa Water Company (CA) – Rate Structure and Recycled Water Rate Study
- City of South Gate (CA) - Water Impact Fee
- Sunnyslope County Water District (CA) – Water Rates and Capacity Fees
- Temescal Valley Water District (CA) – Water and Sewer Rate Study and Capacity Fee Study
- Trabuco Canyon Water District (CA) – Water Rate Study
- City of Thousand Oaks (CA) – Water and Wastewater Cost of Service and Financial Plan Study
- City of Ventura (CA) – Water and Wastewater Rate Study
- City of Vista (CA) - Sewer Rate and Connection Fee Study
- Walnut Valley Water District (CA) - Water Rate Study
- City of Watsonville (CA) – Utility Enterprise Rate Study
- Yorba Linda Water District (CA) - Sewer and Water Budget Rate Study, Financial Plan Study, and Cost of Service Rate Study
- Zone 7 Water Agency (CA) – Cost of Services Study and Water Rate Study Update

## RECENT PUBLICATIONS/ PRESENTATIONS

- Gaur, S., Magu, D. "California Water Rate Trends: Maintaining Affordable Rates in a Volatile Environment", Journal – American Water Works Association, September 2017, Volume 109, Number 9.
- Contributing Author to "M1 Principles of Water Rates, Fees and Charges" 7th Edition, American Water Works Association, 2017.
- Gaur, S., Giardina, R.D., Kiger, M.H., Zieburtz, W., "Committee Report: Ripples from the San Juan Capistrano Decision," Journal – American Water Works Association, September 2016, Volume 108, Number 9.
- Gaur, S., Alikhan, A., Kostiuk, K. "The Drought is over – Now is the time to develop drought rates", CSMFO Magazine, July 1, 2016.
- Gaur, S., Alikhan, A., Crea, J. "Developing Drought Rates: Why Agencies Should Prepare for a Not-So-Rainy Day", January 2016, Volume 108, Number 1.
- Gaur, S., Isaac, Habib "There's Opportunity in the San Juan Capistrano Rates Decision", Source California-Nevada Section AWWA, Fall 2015, Volume 29, Number 4.
- Gaur, S., Atwater, D., "California Water Rate Trends," Journal – American Water Works Association, January 2015, Volume 107, Number 1.
- Contributing Author to "Water and Wastewater Finance and Pricing: The Changing Landscape", 4th Edition, 2015, CRC Press, Editor: George Raftelis.
- Gaur, S., Atwater, D., Cruz, J., "Why do Water Agencies need Reserves?", Journal – American Water Works Association, November 2014, Volume 106, Number 11.
- Gaur, S., Atwater, D., Lee, J., "Conservation Rates Offer Options," CA/NV Section of American Water Works Association, Spring 2014, Volume 28, Number 2.
- Gaur, S., Lim, B., Phan, K., "California Water Rate Trends," Journal – American Water Works Association, March 2013, Volume 105, Number 3.
- Contributing Author to "Water Rates, Fees and the Legal Environment", 2nd Edition, American Water Works Association, 2010 Editor: C.(Kees) W. Corssmit.
- Hildebrand, M. Gaur, S. and Salt, K. "Water Conservation Made Legal: Water Budgets and California Law", Journal of American Water Works, 101:4 April 2009, p.85-89.
- Gaur, S. "Policy Objectives in Designing Water Rates", Journal of American Water Works, 99:5 May 2007, p.112- 116.
- Gaur, S., "Adelman and Morris Factor Analysis of Developing Countries", The Journal of Policy Modeling, Vol. 19, Issue 4, pp. 407-415, August 1997.

# Steve Gagnon PE

## PROJECT MANAGER

Manager

Mr. Gagnon has 20 years of experience in financial analysis and environmental engineering. He has worked for leading engineering consultants as well as the federal government. His broad range of experience includes water and wastewater pricing studies, capacity fees and utility valuations. His financial experience includes water and wastewater rate studies for the City of Redlands, CA, Santa Fe Springs, Henderson, NV, City of Anaheim, La Habra Heights County Water District, Rowland Water District, Walnut Valley Water District, Sweetwater Authority, Helix Water District and Otay Water District. He has also performed strategic financial analysis of water sourcing alternatives and costing of ground water remediation alternatives, asset inventory and condition assessments, utility performance metrics, earned value analysis. He has also managed the construction and installation of water treatment equipment and oversaw Superfund remediation for the US Army.

### TECHNICAL SPECIALTIES

- Utility cost of service and rate structure studies
- Conservation rate studies
- Economic feasibility studies
- Capital Budgeting Studies
- Wastewater rate studies
- Capital recovery/Capacity fee studies
- Survey research of water and wastewater utility characteristics and rates

### PROFESSIONAL HISTORY

- Raftelis: Manager (2017-present); Senior Consultant (2014-2016)
- APTwater, Inc. (Now Ultura): Project Manager (2011-2014)
- PBS&J (now ATKINS): Project Manager – Utility Finance (2005-2011)
- Earth Tech (now AECOM): Senior Project Manager (2004-2005)
- Malcolm Pirnie, Inc. (now ARCADIS): Consultant (2002-2003)
- National Parks Conservation Association – Business Plan Initiative: Business Plan Consultant (2000)
- U.S. Army Corps of Engineers - New England Division: Project Manager (1995-1999)
- Geophex, Limited: Graduate Research Assistant (1994)

### EDUCATION

- Master of Business Administration - University of Southern California (2001)
- Master of Science in Environmental Engineering - University of Massachusetts (1995)
- Bachelor of Science in Civil Engineering - University of Massachusetts (1994)

### PROFESSIONAL MEMBERSHIP

- American Water Works Association er Works Association

### CERTIFICATION

- Registered Professional Environmental Engineer in Arizona
- Series 50 Municipal Advisor Representative

## RELEVANT PROJECT EXPERIENCE

**Trabuco Canyon Water District (CA)**
Mr. Gagnon helped the District establish water, wastewater and recycled water rates. The Trabuco Canyon Water District's revenue plummeted significantly during the recent drought. Mr. Gagnon helped the District established rates, including drought rates, that fully funded operations, capital expenses and reserves. The District previously had a 7-tier rate structure. Mr. Gagnon helped the district establish a 4-tier rate structure in which the rates were based on the supply costs and peaking costs to serve water in each tier – as required by Proposition 218. The study started with a pricing objectives exercise so that the Board could communicate its most important rate setting goals. Mr. Gagnon presented financial plan options and rate study results and a public hearing.

**City of Orange (CA)**
Mr. Gagnon is helping the City update its water rates and rate structure to ensure that rates are based on cost of service principles. The study includes a financial plan to fully fund operational and capital expenses and reserves.

**Channel Islands Beach Community Services District (CA)**
Mr. Gagnon helped the District establish equitable water and wastewater rates. Particularly noteworthy in this study was a class of customers that required the District to reserve capacity in the water treatment plant for possible future growth. Mr. Gagnon explained the cost causation based rate for this customer class at Board meetings and the Public Hearing. Mr. Gagnon also held special web based workshops with this customer class to explain cost of service principles and the basis for the rates.

**City of Shasta Lake (CA)**
The City of Shasta Lake's water revenue dropped significantly during the recent drought – while their water costs increased due to emergency water purchases from expensive sources. In addition, the City's infrastructure was over 80 years old which necessitated significant capital expenditures. Mr. Gagnon worked with City staff to develop a water financial plan that fully funded their capital program, reserves and operational expenses. The financial plan called for a 30% revenue increase in one year. Mr. Gagnon presented the basis for revenue adjustments and rate development at a well-attended public hearing at City Hall.

**Santa Fe Irrigation District (CA)**
Santa Fe Irrigation District has one of the largest per capita water use rates in the State due

to its large lots, many of which have orchards and other agriculture requiring irrigation. Mr. Gagnon worked with City Staff and Board members to establish water cost of service based rates which included a complete restructuring of their fixed charges so that the District could pass through their fixed wholesaler charges. The consumption rates were based on the peaking characteristics of each class. Mr. Gagnon presented at a contentious Public Hearing, in which that rates were adopted, to answer Board and the Public's questions.

**City of Encinitas (San Dieguito Water District, CA)**
Mr. Gagnon helped the City establish water rates that are based on cost of service principles. Cost of service based rates creates large bill impacts for the agricultural class. Mr. Gagnon worked with City staff and the Board rate setting committee to evaluate rates and explain rate setting basics to the committee and public in a Proposition 218 public hearing.

**Sweetwater Authority (CA)**
Mr. Gagnon is evaluated water rates, including drought rates, for the Sweetwater Authority in light of recent legal concerns over their current rate structure. The evaluation includes a cost of service study to clearly demonstrate the nexus between the rate for each single family tier and the associated costs to serve that tier. The study started by soliciting input from Board members regarding their water pricing objectives so that rates could be designed accordingly. Mr. Gagnon concluded the study with presentations to the District Board of Directors and the Public.

**Moulton Niguel Water District**
Mr. Gagnon prepared water and wastewater capacity fees and miscellaneous fees in June of 2016. The water and wastewater capacity fees were calculated using the buy-in methodology and varied by meter size. The District also decided to implement a water demand offset fee for new water connections based on the premise that the recycled water system offsets potable water use and benefits potable water users. Mr. Gagnon attended Board meetings to help staff explain the rationale and basis for the capacity fees.

Mr. Gagnon also helped calculate miscellaneous fees by interviewing staff to assess the time and effort involved with the fees, benefit burden rates and material charges to properly calculate over three dozen fees for the water and wastewater systems. The deliverable included an excel model with which the District could update the miscellaneous fees in the future.

**City of Henderson (NV)**
Mr. Gagnon is creating water and wastewater rate and financial planning models for the City as well as updating their water and sewer system development charges. The models will be used over the next 5 to 10 years not only to calculate water and wastewater rates but also to create yearly financial statements.

**City of Redlands (CA)**
Mr. Gagnon updated the City's water and wastewater rates and development impact fees. The rate study process included workshops with the City's Utility Advisory Committee in which he presented the basics of rate setting and the financial environment of the utilities. The interactive workshops solicited input from committee members and staff regarding revenue adjustments and rates.

**Rainbow Municipal Water District (CA)**
Mr. Gagnon created water conservation based sewer rates to complement the Rainbow Municipal Water District's (District) conservation based water rate structure. These rates will be based on the actual water usage of each customer within the District. In addition, appropriate sewage strengths will be incorporated into the District's sewer user rates.

**County of San Diego (CA)**
Mr. Gagnon prepared integrated financial models for a landmark study for the County of San Diego. The study will not only be updating the sewer user, capacity, and annexation fees for the nine dependent sewer districts but will also include the economic analysis of creating one "super sanitation district". Long-range financial plans will be prepared for all of the districts as well as the super district including 10 years of operational and capital costs.

**Town of Quartzsite (AZ)**
Mr. Gagnon performed a third party rate review of a recently completed water and wastewater rate study for the Town of Quartzsite (Town). The Town is concerned with insuring that their winter RV population is paying their fair share of the water and sewer expenses.

**Town of Parker (AZ)**
Mr. Gagnon updated the Town of Parker's (Town) water rates. One of the Town's main concerns was the fairness and equity of water system cost distribution given the Town's large population of Native Americans who do not pay sales or utility taxes yet benefit from Town parks and other Town amenities. He also helped the Town establish operating and capital reserves.

**Walnut Valley Water District (CA)**
Mr. Gagnon performed the Walnut Valley Water District's (District) first professional rate study which included updating the rate structure. Mr. Gagnon created a three-tier residential rate structure to help decrease discretionary consumption and ensure the District avoids or reduces water purchase surcharges from the Metropolitan Water District. He presented his findings to District staff and the District's Board of Directors.

**Fallbrook Public Utility District (CA)**
With water shortages looming in Southern California, this progressive water and sewer district asked for help creating water conservation-based sewer rates to complement their conservation based water structure. Mr. Gagnon created rates based on the actual water usage of each customer within the Fallbrook Public Utility District (District). In addition, appropriate sewage strengths were incorporated into the District's sewer user rates.

**Otay Water District (CA)**
The Otay Water District (District) performs an update to their

capacity and annexation fees every five years. In this update they changed their capacity fee from an incremental fee based on future costs to a combined fee structure using replacement costs less depreciation. They are also revised their annexation fee to recover taxes and availability charges paid by existing users who are currently inside the District's boundaries. In addition, they added a new water supply fee to recover the expansion costs of their water system. This is a new fee that addresses the issue of new development bringing their own water supply or pay for offsets.

Mr. Gagnon was also the lead economist on a fast track study to assist the District in adding further conservation incentives into their potable and reclaimed water user rates. Specifically, he added rate blocks into their non-residential and landscaping user rate structures based on specific base extra capacity cost allocations per user class. In addition, he assisted the District in the preparation of a drought/shortage rate structure that overlays their new conservation rate structure. This drought rate structure is based on the guidelines provided by the Metropolitan Water District of Southern California and the San Diego County Water Authority.

**Rowland Water District (CA)**
Mr. Gagnon updated the Rowland Water District's (District) water rates for the second time. The District had several concerns for the most recent study which included a large debt issue for a recycled water system as well as staff increases and wholesale water rate increases. The model helped the district size its debt issue by performing a rate sensitivity analysis to the size of the debt issue.

**Olivenhain Municipal Water District (CA)**
Mr. Gagnon created a drought rate model to help the Olivenhain Municipal Water District (District) develop a drought rate ordinance. The model calculated commodity rate adjustments for four drought stages. It allowed for customer voluntary cutbacks in consumption as well as cutbacks due to higher water prices using the price elasticity of water. The model will help ensure the District maintains adequate revenue in times of drought.

Mr. Gagnon helped the District update their wastewater rates and developed a customized model for its unique rate structure. The District's residential rates are a flat charge per Equivalent Dwelling Unit (EDU) and the commercial rate structure includes a service charge per EDU and a variable rate based on measured water consumption.

Mr. Gagnon also prepared valuation calculations for the system capacity required for update of water and wastewater connection and annexation fees for the District. The analysis showed that the District would benefit by changing capacity fee calculation methodologies from a growth method to a combined method, thereby imposing less restrictions on the use of capacity fee revenue.

Mr. Gagnon modeled the long-term cost of several different water sources for the District. Options included purchasing treated water, expanding their water treatment plant and purchasing untreated water from the Metropolitan Water District or partnering with other local agencies to desalinate ocean water. The model contained many variable inputs to allow "what-if" scenario analysis. Although purchasing treated water was the least costly option, the authority favored plant expansion due to other benefits such as reliability of water supply.

**City of Poway (CA)**
Mr. Gagnon completely rebuilt the City of Poway's water and wastewater rate models to reflect the latest rate setting practices.

**Helix Water District (CA)**
Mr. Gagnon created an economic model to add life-line and a water waster tier to the Helix Water District's (District) three-tier rate structure. In addition, budget-based water rates were created for all irrigation accounts. The District is transitioning slowly to budget-based rates due to staffing limitations. In 2010 they will implement budget-based rates for all commercial accounts.

Mr. Gagnon also performed all of the economic modeling in the preparation of the District's first Capacity Fee Study. The capacity fee was designed to collect a buy-in portion based on replacement costs of the District's current water system and the incremental cost of adding a new water supply, the El Monte Valley Ground Water Recharge project.

**City of Anaheim (CA)**
Mr. Gagnon prepared a commercial and residential wastewater rate study for the City of Anaheim (City). The proposed rate structure was based on water consumption to replace the antiquated structure based on the number of toilets. Proper water use and wastewater return to sewer analysis is required to ensure proper revenue generation for the City.

**City of Coronado (CA)**
Mr. Gagnon is helping restructure the City of Coronado's wastewater rates from a flat parcel-based fee for residential users to one with a consumption-based charge and a fixed charge.

**City of Lemon Grove (CA)**
Mr. Gagnon helped update the commercial and residential wastewater rates for the City of Lemon Grove. The rate structure included 20 different user classes for residential, commercial, and institutional customers.

**Western Municipal Water District (CA)**
Mr. Gagnon prepared a long-range financial plan to help ensure the Western Municipal Water District's (District) financial health. Based on the District's five-year CIP, inflationary water rate adjustments, and reserve policies, the plan showed that a debt issue was needed to execute the CIP and maintain adequate reserves.

**Julian and Pine Valley Sanitation Districts (CA)**
Mr. Gagnon updated the wastewater rates and connection fees for both sanitation districts. The wastewater fees had not been updated for several years in one district and over 15 years in the other neces-

sitating large rate increases. He developed a few different scenarios which included postponing CIP projects or lowering reserve balances, to ease ratepayers into higher rates.

**San Antonio Water System (TX)**
Mr. Gagnon prepared a sewer impact fee economic model and study for the City of San Antonio. This included a valuation of the system's facilities using several asset based approaches. Ultimately the total net book value without depreciation was selected as the basis for the valuation of the System's assets. In addition, an equity residual model was prepared that included the allocation of the present value of past and future debt service payments. The study also analyzed a number of impact fee structures to determine the most fair and equitable fee.

**La Habra Heights County Water District (CA)**
Mr. Gagnon assisted with the update in water user rates, capacity charges, and long-range financial plan for the La Habra Heights County Water District (District). The 2001 study set the District's user rates for five years and expired in 2005. The District had recently completed an updated Water Master Plan and wished to incorporate the new cost of replacement capital facilities for the next ten years into their long-range financial plan and user rates.

**City of La Habra (CA)**
Mr. Gagnon helped prepare the City of La Habra's (City) first professional sewer user rate study. This study followed industry standards and an EPA approved rate structure. The City plans to create a formal enterprise fund for their sewer utility to properly finance their sewer operations and maintenance. He developed the long-range financial plan modeled year-end cash reserves to ensure execution of the City's $21 million capital improvement program and to fund operations and maintenance.

**City of Webster (TX)**
Mr. Gagnon is constructing a stormwater model for the City of Webster (City). The rates are based on the impervious surface of each parcel. The City plans using water meters to bill customers.

**City of Norman (OK)**
Mr. Gagnon is constructing a stormwater rate model for the City of Norman. The model is constructed in several different ways to allow the city council to choose from alternative rate structures, including the contentious issue of whether or not Oklahoma University, which owns large parcels of impervious surface area, will support the stormwater utility.

**Boxelder County (CO)**
Mr. Gagnon assisted Boxelder County (County) in the determination of how they will finance their required stormwater improvements. They plan to create a stormwater utility through diverse funding sources including impact and user fees, a community financing district, and grants and loans. The goal of this study was to identify and size a system of improvements which will achieve the greatest defined economic benefit (both local and regional) per dollar of cost, based on the 100-year floodplain extents.

**City of Fullerton (CA)**
Mr. Gagnon conducted a field audit to determine appropriate return to sewer flows as well as fats, oils and greases surcharge rates for the top 50 industrial water customers in the City of Fullerton.

## UTILITY AND WATER RIGHT VALUATIONS EXPERIENCE

**Blue Plains Wastewater Treatment (DC)**
Mr. Gagnon is valuing the largest advanced wastewater treatment plant in the world (370 MGD) using several different valuation methods for Metropolitan Washington Council of Governments. The study values capacity rights in a treatment plant shared by several users. Valuation methodologies include original cost, reproduction cost, and market comparables.

**Metro Wastewater Joint Powers Authority (CA)**
Mr. Gagnon updated a prior valuation study which values treatment capacity in the San Diego Metropolitan Wastewater System. The valuation study considered several different valuation methodologies including the asset approach, prior sale (market comparables); buyer's avoided cost, seller's potential future cost and alternative investment value.

**City of Pico Rivera (CA)**
Mr. Gagnon is slated to help the City of Pico Rivera value groundwater pumping rights. Groundwater pumping rights will likely be valued using both a market comparables approach and a buyer's avoided cost approach.

## OTHER FINANCIAL AND MANAGEMENT STUDIES

**Town of Parker (AZ)**
Mr. Gagnon is performing a benchmarking analysis of the Town of Parker's (Town) water, parks and recreation and streets departments due to efficiency concerns. The study will compare the Town's cost efficiency with other small towns.

**Marine Corps Base Camp Pendleton (CA)**
Mr. Gagnon led an asset inventory and condition assessment of the water and wastewater systems on Marine Corps Base Camp Pendleton. The inventory included field visits and literature reviews to document and describe the extent and condition of all utility assets. Asset data was compiled in a database and linked to GIS mapping.

**Olivenhain Municipal Water District (CA)**
Mr. Gagnon developed an economic model that evaluates the cost benefit analysis of four different water supply options including desalinization, increased use of recycled water, and expansion of their existing water treatment plant using membrane technology. Proposed funding levels were prepared for the long-range financial plan to match projects against the revenue levels necessary to support them.

**Confidential Fortune 500 Aerospace Corporation (CA)**
Mr. Gagnon created an excel based financial model to cost and budget one of the largest corporate environmental liabilities – a nine-mile long plume of rocket fuel-related contamination – underlying several cities in southern California. Remediation strategies were constantly changing and, thus, the model simulated costs for numerous remediation alternatives. The model also allowed for monthly and yearly budgeting and total clean-up expenditures.

**Earth Tech (CA)**
Mr. Gagnon developed an Operation Excellence Plan to ensure client satisfaction on the execution of a multimillion dollar Master Services Agreement with a Fortune 500 Aerospace Corporation. The plan provided guidance in many areas including QA/QC, client feedback, staff allocation, etc. The plan also included performance measures to evaluate client satisfaction, program success, and failures.

**Otay Water District (CA)**
Mr. Gagnon assisted in facilitating performance metric workshops with the Otay Water District management staff. The workshops discussed performance metric basics, analyzed dozens of performance metrics, how to calculate them, and eventually helped staff narrow down the metrics they believed were best for their utility.

**Keweenaw National Historical Park, National Park Service (MI)**
Mr. Gagnon coauthored a business plan submitted to the U.S. Congress to seek additional funding to expand a national park in Michigan. The business plan included a historical cost accounting analysis of prior fund use and projected future fund needs.

**U.S. Army Sudbury Annex Superfund Site (MA)**
Mr. Gagnon was the Project Manager for the remediation and real estate transfer of a 2,000-acre army ammunition depot and research installation in central Massachusetts. Mr. Gagnon oversaw project funds, environmental studies, and construction contracts with consulting firms and partnered with the U.S. EPA to determine clean-up goals and strategies.

### TECHNICAL SPECIALTIES

- Utility cost of service and rate structure studies
- Capacity fee studies
- Cost analysis and cost allocation plan modeling
- Long range financial planning and feasibility studies
- Proposition 218
- Special District Formation
- Special tax and assessment modeling
- Compliance auditing
- Data analysis

### PROFESSIONAL HISTORY

- Raftelis: Senior Consultant (2017-present); Consultant (2014-2016)
- Willdan Financial Services: Financial Analyst II (2012-2014)
- State of Tennessee: Legislative Information Systems Auditor II (2006-2012)

### EDUCATION

- Bachelor of Science in Business Administration with a major in Accounting – University of Alabama in Huntsville (2005)
- Studied Computer Engineering, DeVry University (2000-2002)

### PROFESSIONAL MEMBERSHIPS

- California Society of Municipal Finance Officers
- Water Environment Federation

# Andrea Boehling

## STAFF CONSULTANT

Senior Consultant

Mrs. Boehling has a strong background in mathematics and accounting and has been serving public agencies for more than 11 years. She possesses extensive analytical and modeling skills which she has used to perform various financial analysis such as cost of service user fee studies, utility rate studies, fiscal impact analysis, special district formations, cost allocation plan modeling, etc. Mrs. Boehling is well-versed with the cost of service principles and special benefit provisions of Proposition 218. In addition, with over 6 years of experience in the auditing field, she is very familiar with monitoring and evaluating compliance with regulations, performing data analysis, and performing data integrity testing.

## RELEVANT PROJECT EXPERIENCE

**Temescal Valley Water District (CA)**

In 2016, the Temescal Valley Water District (District) engaged Raftelis to conduct a comprehensive water, recycled water, and wastewater rate study. The main objectives of the study were to ensure financial sufficiency, meet operation and maintenance costs, and to ensure funding for both capital and reserves. Mrs. Boehling served as Lead Consultant and was responsible for gathering and analyzing data, creating each enterprise's financial plan and rate model, developing several rate scenarios, presenting results to the Finance Committee and Board of Directors, and drafting the detailed report highlighting the decisions made and the explaining the calculation of the final rates. As part of the study, Raftelis evaluated interfund loans from one enterprise to another with varying repayment terms, modeled various rate structures, and explored seasonal rates for the recycled enterprise. The Public Hearing was held in January 2017 and the proposed rates were successfully adopted.

**City of Galt (CA)**

In early 2015, the City of Galt (City) hired Raftelis to conduct a comprehensive cost of service analysis and water rate study. The City was in the process of metering all customers and had previously had a flat rate for all unmetered customers. The main goal of the study was to establish a uniform commodity rate and fixed monthly charge for all customers that would generate the same level of revenue as their existing rate structure. Mrs. Boehling served as Lead Consultant and was responsible for developing the financial plan and rate model capable of evaluating several scenarios. Mrs. Boehling gathered all necessary data, developed the financial plan, created a model capable of adjusting the expected water demand, worked closely with City staff to project expected water sales, documented the results of the study, performed customer impacts, and assisted with presentations to the City. The proposed rates were adopted on March 14, 2016.

After successful completion of the water rate study, in early 2017, Mrs. Boehling began working on a comprehensive wastewater rate study for the City. The goal of the project was to evaluate several cost allocation and rate structures to ensure compliance with Proposition 218. Mrs. Boehling served as Lead Consultant and managed the consulting staff in conducting analysis and preparing project deliverables. The study was completed and proposed rates adopted in November of 2017.

**Rainbow Municipal Water District (CA)**

In 2015, Mrs. Boehling served as Lead Consultant for Rainbow Municipal Water District's (District) comprehensive cost of service based water rate study. The study

involved developing a long-term financial plan, consumption analysis cost of service analysis, and rate structure development. The rate structure included many components such as a fixed monthly operations and maintenance charge, a fixed pass-through charge to recover the costs imposed by the San Diego County Water Authority, commodity rates (including special agriculture rates, tiered commodity rates for single-family residential customers and agriculture customers with a residence on the property, uniform rates for non-single family residential customers), and pumping charges to account for the costs to pump water to higher elevations. Mrs. Boehling was responsible for data collections, model development, collaboration with the client, presentations to the Finance Committee and Board, model training, and drafting the report.

Mrs. Boehling continues to work with the District on an on-going basis. She assisted with the preliminary budget process in 2015, annual updates in 2016 and 2017, and is currently serving as Lead Consultant for a new water and wastewater rate study. Various rate alternatives were evaluated during the most recent study including uniform, tiered, and consumption-based fixed rates. Results of the study were presented to the District and rates are anticipated to be implemented in March of 2018.

**City of Santa Cruz (CA)**
The City of Santa Cruz Water Department (City) currently provides water service to a population of approximately 93,000. The City is faced with increasing operation and maintenance costs, a significant projected capital program over the next 10 years, and volatile water sales due to the drought. Raftelis is currently working on a series of projects for the City to help ensure financial sustainability of the City's water system. Mrs. Boehling served as Lead Consultant on the City's comprehensive water rate study. She worked at the direction of the Project Manager to assist the City in evaluating various rate structures including water budget rates. She developed a dynamic model capable of instantly changing the recovery mechanisms and assisted the City as they evaluated 6 different rate scenarios. The rate structure includes an analysis to determine the allocation to inside customers versus outside customers, allocations by class, and tier. In addition, she worked with the City to develop a separate Infrastructure Reinvestment Charge to help finance the significant repairs and replacements. She was responsible for all data collections, consumption analysis, model development, customer impacts, presentations, and drafted the report following the final rate selection. Rates were approved and adopted on August 23, 2016.

**Western Municipal Water District (CA)**
Raftelis has been assisting Western Municipal Water District (District) with several projects spanning many years. Most recently, Mrs. Boehling served as Lead Consultant on the development of comprehensive water budget rate structure for each of the District's retail service areas. Mrs. Boehling created presentations and helped facilitate discussions on the policy options associated with the development of water budget rates. Based on these policy options, Mrs. Boehling developed a flexible rate model that could easily analyze different methodologies of allocating water sources to different customer classes, different allocation factors for indoor and outdoor water use, determined price ratios for the corresponding tiers, and developed the corresponding rates and customer impacts. Mrs. Boehling worked closely with the Project Manager and District Staff to evaluate scenarios and refine the rate structure.

**Rincon del Diablo Water District (CA)**
Like many water agencies in California, Rincon del Diablo Water District (District) was faced with challenges related to the reduction in water usage as a result of conservation, the slow economy, increasing water supply costs, and the recent Executive Order by Governor Brown to reduce water consumption by 25% statewide. Raftelis was hired to conduct a comprehensive cost of service water rate study and develop a financial plan to help achieve a strong financial outlook in future years. Ms. Boehling served as staff consultant and assisted with data collection, financial plan analysis, model development, rate design, and drafted the study report. The study incorporated a pass-through component to allow the District to pass on increased imported water costs to their customers without having to undergo the rate adjustment process. In addition, the study adjusted target reserves and modified the rate structure for each customer class to ensure Proposition 218 compliance and financial sufficiency.

**Helix Water District (CA)**
The Helix Water District (District) hired Raftelis to conduct a comprehensive cost of service analysis and financial plan update. The last cost of service study was conducted back in 1988 and needed to be updated to be in compliance with Government Code Section 54999.7(c). Mrs. Boehling's responsibilities included supporting project managers and conducting fiscal analysis, data compilation, and modeling. Various rate structures, components, and objectives were evaluated and cost of service based rates were developed. The study incorporated a pass-through component to clearly identify and account for San Diego County Water Authority costs which are outside of the District's control. Mrs. Boehling assisted with the preparation of the study report and helped ensure the Proposition 218 noticing requirements were met. Rates for a five-year period were adopted in October of 2015.

Raftelis was hired to perform annual updates of the financial plan. Mrs. Boehling continues to work closely with the District and Project Manager to complete the annual updates. She added enhancements to the model to assist the District in evaluating whether or not the District needs to implement the full rate increase as adopted in 2015 or whether a lower rate adjustment is sufficient.

**East Valley Water District (CA)**
Mrs. Boehling assisted with a 10-year financial plan and water rate study for the East Valley Water District. Raftelis designed a water budget rate structure which ensured revenue stability, financial sufficiency, and provided appropriate price signals for different supply costs, peaking costs, and conservation program funding for the District. Mrs. Boehling worked in support of the project man-

ager to develop a water budget rate model developed that allowed the District to quickly view the impacts of alternative rates and budgets to assist policy makers in making well-informed decisions in a timely manner. She was responsible documenting the study results and drafting the study report.

## OTHER RELEVANT EXPERIENCE

- Galt Wastewater Rate and Capacity Fee Study
- Livermore Water and Wastewater Rate Study
- Ramona Water Rate, Capacity Fee, and User Fee Study
- Atwater Water, Wastewater, and Capacity Fee Study
- Elsinore Valley Capacity Fee Study
- Imperial County – Water & Wastewater Rate Study w/ Assessments
- Sierra Madre – Water and Wastewater Rate Study
- Santa Cruz – Recycled Feasibility Study
- Inland Empire Utilities Agency – Financial Plan QC

**TECHNICAL SPECIALTIES**

- Water and Drought rate design
- Water budget rate structures
- Utility cost of service
- Data analysis
- Environmental Policy Analysis

**PROFESSIONAL HISTORY**

- Raftelis: Consultant (2014-2015); Senior Consultant (2014-present)
- Turner New Zealand, Inc.: Director of Operations (2009-2012); Accounting Manager (2007-2009)
- Lesley, Thomas, Schwarz & Postma, Inc.: Staff Accountant (2007)

**EDUCATION**

- Master of Environmental Management - Duke University (2014)
- Bachelor of Arts in Business-Economics and History - University of California, Santa Barbara (2006)

# Kevin Kostiuk

## STAFF CONSULTANT

Senior Consultant

Mr. Kostiuk has a background in economics and accounting and possesses extensive analytical skills. His expertise lies in financial accounting, analysis of water supply reservoir operations and management, environmental policy, and water quality trading programs; as well as United States Army Corps of Engineers (USACE) water supply and flood control policy. Mr. Kostiuk is an active member of the American Water Works Association (AWWA) Young Professionals and the Young Professionals Summit Committees in conjunction with the AWWA Utility Management Conference (UMC). He authored an article on potable reuse in Journal AWWA discussing the treatment, financing structures, and pricing of treated water at advanced purification treatment plants. Most recently Mr. Kostiuk coauthored an article on proactive financial planning in times of drought for California Society of Municipal Finance Officers (CSMFO) Magazine.

## RELEVANT PROJECT EXPERIENCE

**Crescenta Valley Water District (CA)**

Mr. Kostiuk developed a combined water and sewer financial plan and rate model for the District in 2016. The cost of service and rate study included several workshops with the District Board which culminated in structural changes to the District's existing water and sewer rate structures. In addition to the tiered water rate structure, which was ultimately adopted, Mr. Kostiuk developed a water budget rate model for evaluation by District staff and the District Board.

Prior to the cost of service and rate study, Mr. Kostiuk performed an economic analysis for the District to determine the feasibility of offsetting imported water supply with the production of local groundwater. Mr. Kostiuk created a customized model for the District to use under different scenarios of capital requirements, lease options, and contract lengths. As part of the study, he reviewed the District's prior consultant's work, determined internal rate of returns, calculated the net present value of district savings, and determined the cost at which the District should lease water rights for groundwater production.

**East Valley Water District (CA)**

Raftelis contracted with East Valley Water District in 2014 to develop budget based rates to replace the District's existing uniform rate structure. Mr. Kostiuk assisted the District with design and implementation of budget-based water rates for their 23,000 accounts including residential, commercial and irrigation customers. The study included creation of a long-term financial plan and full cost of service study for the water enterprise. Mr. Kostiuk developed the 10 year financial plan model, rate model, and water budget model for the District.

Mr. Kostiuk worked closely with the District's finance, IT, and, billing departments in the early stages to analyze customer account level data including monthly use. He also worked with the District's GIS and other outside consultants to develop the water budget model using irrigable landscape area, customer class, assessor parcel number (APN), etc. for construction of indoor and outdoor allocations, or budgets.

The project incorporated significant public outreach whereby Raftelis led meetings with ratepayers to receive input, provide Study updates, and answer questions of the public. The ratepayer meetings assisted adoption of the new rate structure and implementation. The rate structure that the Board adopted allows for the most precise, scientific and equitable design of rate structures, tailored specifically to an individual account.

**Goleta Water District (CA)**
Mr. Kostiuk completed a full water cost of service study for the District which included design of inclining tiered rates for their single-family residential class, as well as agricultural rates for two classes. Complexities in customer classes' access to District water supplies, interruptibility during times of drought, and benefit (or lack thereof) from treatment made the analysis unique and challenging. The study included development of a long term financial plan model, rate model, and corresponding bill impacts.

To achieve the District's demand reduction targets as outlined in their Drought Management Plan, the District wished to explore drought rates/drought surcharges to curb demand. Ultimately, Mr. Kostiuk developed three options of revenue neutral drought surcharges for the Board's consideration. These various options ranged from targeted surcharges on an inter and intra-class basis, to a surcharge applied to non-drought commodity rates, to a uniform commodity surcharge irrespective of customer class or use. The proposed rates and drought surcharges were adopted and implemented July 1, 2015.

**City of Redlands (CA)**
Mr. Kostiuk updated prior financial plans developed by Raftelis for the City for their water and sewer enterprises. The update included building in more flexibility to the model for ease of use and for future updates, as well as, making the model dashboards more user friendly.

The state-wide drought in California called for a mandatory 25% reduction for all water service agencies in the state. The City's target was to reduce residential consumption by 35%. Mr. Kostiuk assisted the City in design and implementation of drought surcharges to achieve a 35% reduction and to recover lost revenue from reduced water sales.

Additional work for the City included updating the City's Storm Drain Impact Fee and miscellaneous fee for NPDES inspections as part of the MS4 permit requirement. The storm drain fee had not been reevaluated in 20 years. Additionally, the City had recently completed a Storm Drain Master Plan which called for $83 million in improvements to system deficiencies. Mr. Kostiuk developed a methodology to retain the existing impact fee structure while updating the fee paid by different land use classes.

In 2015 and 2016 Mr. Kostiuk developed a water budget rate model for the City to evaluate a new rate structure. The model integrated with the existing water financial plan model and designed parallel water budget rates for consideration by City staff and the Council.

**City of Camarillo (CA)**
Raftelis has provided rate consulting services to the City for the past seven years with Mr. Kostiuk serving as lead analyst the past three years. In the current rate cycle Mr. Kostiuk serves as Project Manager. The City adopts rates on a two year cycle and the most recent Study included rebuilding long term financial plan models, revising the wastewater utility's rate structure, and performing a cost of service analysis for the sewer utility. Mr. Kostiuk has made presentations to the City Manager, City's Utility Committee, and City Council in consecutive years. Mr. Kostiuk successfully presented rates to City Council in December 2016 and November 2017.

During the height of the most recent state-wide drought, the City contracted with Raftelis to evaluate emergency drought rates as a conservation and revenue recovery tool. Mr. Kostiuk adapted the existing financial plan model and developed multiple scenarios based upon the City's water supply condition stages. Mr. Kostiuk developed drought rates utilizing the City's financial plan at each stage and estimating water reductions. The rates were not adopted prior to the end of the state-wide drought however the drought tool is available for quick implementation should drought conditions return.

City of Tustin – Raftelis contracted with the City of Tustin to develop a ten-year financial plan and evaluate a budget-based rate structure for its customers. Mr. Kostiuk worked extensively with City staff, Raftelis' data services team, and outside consultants of the City to develop the water budget allocation and rate model for the City's approximately 14,000 customer accounts. As part of the model build, data from GIS consultants had to be organized and validated for each of the City customers' parcels. Raftelis' data services team worked internally to ensure matches between assessor's data and GIS data for integration to the water budget model. Rates and customer impacts have been presented to City staff and a public outreach campaign is being devised in anticipation of the council workshop. The project is ongoing.

**Placer County Water Agency (CA)**
In 2015 Placer County Water Agency (PCWA) contracted with Raftelis to evaluate its water system. PCWA provides retail and wholesale water service to treated water and raw water users throughout western Placer County. In Phase I of the project Mr. Kostiuk evaluated the current system's four service zones and numerous service classes and customer classes. Raftelis then provided recommendations to consolidate and simplify the water system organization and structure. In Phase II Raftelis performed a cost allocation study between the four proposed classes of service to identify the cost of providing service to these distinct users. Phase III consisted of performing cost of service analyses for PCWA's four service classes and developing corresponding rates. The Study was completed in October 2017 with new organization, rate structures, and associated rates implemented January 1, 2018.

Additional to the water system evaluation and cost of service study, Mr. Kostiuk developed a water budget model for PCWA's internal use. The water budget model allows PCWA to examine their single family residential (SFR) customer's usage patterns relative to efficiency standards, climate, and account level characteristics. The model will aid in water management and give insight into water demand pattern changes with the Agency's new rate structure and rates.

**Mammoth Community Water District (CA)**
Raftelis provided the District with a 10 year financial plan model for both the water and wastewater enterprises, as well as performing a cost of service analysis for the water enterprise. The district carries out operating and capital activities that are indirectly assigned to the two enterprises. Mr. Kostiuk worked with District staff to carry out a cost allocation study to distribute administrative costs appropriately. Raftelis recommended changes to the water rate structure as part of the Study to simplify the rates and make them more legally defensible.

The study took place at the height of the statewide drought and as part of the project Mr. Kostiuk developed drought rates for the District to implement in times of mandatory conservation or water supply shortage. Being an agency with a large seasonal population Raftelis worked with staff to determine the most appropriate and effective means of charging the drought rates. Mr. Kostiuk designed drought rates for each stage of the District's water conservation plan, effective on the meter-based fixed charge of a customer's bill. This ensured that every connection in the water system shared in the burden caused by the drought, irrespective of water use. Raftelis also evaluated existing capacity fees for both enterprises. This task is ongoing. The water rates, wastewater rates, and drought rates were adopted and implemented January 2016.

**Borrego Water District (CA)**
Raftelis contracted with the District to evaluate the impact of county growth projections as well as the Sustainable Groundwater Management Act (SGMA) of 2014. Mr. Kostiuk utilized the existing financial plan model, water supply analyses provided by other District consultants, and assumptions on land acquisitions to determine the effect of SGMA on long term water rates. The Borrego Groundwater Basin is critically over drafted and users will need to decrease water production significantly to achieve sustainable yield by 2040. This will require the District to reduce per capita water use and acquire production credits within the basin by fallowing agricultural land. Mr. Kostiuk estimated water rates in each year through 2040 incorporating assumptions on groundwater production, market values of land in the basin, debt financing, and water source alternatives.

Raftelis and Mr. Kostiuk are currently engaged with the District and the County of San Diego to assess the costs of implementing the Groundwater Sustainability Agency (GSA) as part of SGMA, identify baseline allocations for basin users, and calculate fees and penalties for extraction

**Summerland Sanitary District (CA)**
Raftelis contracted with the District in 2016 to perform a cost of service and rate study for wastewater services. The study included a 10 year financial plan model, cost of service analysis, and review of the existing equivalency definitions for the District's user classes. Additional work included adoption of a formal financial reserves policy to ensure long term fiscal health as well as updates and additions to the District's miscellaneous fee schedule. Mr. Kostiuk served as Project Manager and Lead Analyst for the project and held several meetings with District staff, the Finance Committee, and the Board of Directors. Five years of rates were authorized in December 2017.

**City of Buenaventura (Ventura, CA)**
Raftelis developed long-range financial plans so that the water and wastewater utilities could be financially stable and save costs in the long run. Raftelis also assisted the City with developing different water and wastewater rate alternatives with various scenarios based upon estimated water sales and capital improvement plan (CIP) funding. The study is being conducted with several meetings and input from stakeholders comprised of customers within the City. Raftelis educates the Water Commission on the basics of rates, cost allocations, and rate design to obtain their buy-in through the use of the dashboards in the rate models that were developed. This allows us to demonstrate the impacts of various revenue adjustments on the long-term financial stability of the enterprises. As of January 2018 the studies are ongoing.

**City of Riverside (CA)**
Mr. Kostiuk completed a study for the City of Riverside (City) to determine the value of an elevation fee credit for present and future customers in a special district. The project required calculation of asset replacement values for infrastructure serving the special district, specific to booster capacity, and within the context of a historical assessment. The findings from the study were used to defend the City's move to assess its elevation fee schedule.

**City of Simi Valley (CA)**
The City had last raised sewer rates in fiscal year 2008-2009 and was facing a backlog of sewer system improvements and repair and replacement. Mr. Kostiuk updated the existing sewer financial plan with recent data, as well as updated the cost of service analysis. As part of the study, tier definitions were changed for non-residential customers to reduce the base charge on small users without impacting revenue recovery. Working with City staff, and with presentations to City management, Raftelis assisted in getting Council authorization for proposition 218 notices of a rate increase to the City's customers.
The revenue increases will allow the City to commence the public works department's capital improvement schedule while maintaining reserve funds at target levels.

**City of Henderson (NV)**
Mr. Kostiuk created water and wastewater rate and financial planning models for the City as well as updated their water and sewer system development charges. The project created a combined model for the water and sewer enterprises which incorporated finance department reporting tools. The combined model allows the utility (water and sewer) to be viewed as a one, with impacts and reporting available to the user. The models will be used over the next 10 years to calculate water and wastewater rates as well as to create annual financial statements.

**City of Corona (CA)**
Mr. Kostiuk assisted the City in updating its financial plans for

the water and reclaimed water enterprises. The study included performing cost of service analyses for both utilities and updating the water budget rate structure. In addition, Mr. Kostiuk developed a framework and corresponding rates for contract reclaimed water customers.

**City of Raleigh Public Utilities Department- American Rivers (NC)**
Mr. Kostiuk served as project leader for a study of alternatives to meet Raleigh's long term water supply shortfall. The project examined four options in extending the life of the existing federal reservoir, thereby postponing capital expenditures on a new raw water supply. Results were delivered to city staff, their consultants and the United States Army Corps of Engineers.

**Lower Cape Fear Water Quality Trading Program - The Nature Conservancy (NC)**
To reduce nutrient loading and decrease utility costs, the Nature Conservancy proposed a Water Fund to improve water quality through improved agricultural practices on private landholdings in the watershed. Mr. Kostiuk was in charge of researching comparable programs and providing options for a financial mechanism and governance approach between various stakeholders in the region including utilities, agriculture, environmental organizations and community groups.

## OTHER RELEVANT PROJECT EXPERIENCE

- Elsinore Valley Municipal Water District – Drought Surcharge Study
- City of San Jose – Water Cosy of Service and Rate Study
- City of Torrance – Wastewater Cost of Service and Rate Study
- Triunfo Sanitation District – Water Rate Study
- Monterey County Water Resources Agency – New Source Water Evaluation
- Soquel Creek Water District – CustomerSelect Rate Structure Evaluation
- La Canada Irrigation District – Water Cost of Service and Rate Study
- City of Lancaster – Wastewater Cost of Service Study

**TECHNICAL SPECIALTIES**

- Geophysical data analysis
- Groundwater sustainability analysis
- Excel modeling
- Database management
- Technical report writing and review

**PROFESSIONAL HISTORY**

- Raftelis: Associate Consultant (2017-present)
- GEOVision Geophysical Services: Senior Staff Geophysicist (2007-2017)
- GeoConcepts, Inc.: Staff Geologist (2005-2007)

**EDUCATION**

- Bachelors in Geology- California State University, San Bernardino (2012)

# Lauren Demine

## STAFF CONSULTANT

Associate Consultant

Ms. Demine has a background in geology and geophysics. Her expertise includes geophysical data analysis, processing and modeling, and technical report writing and review. During her time as a geophysicist, she has worked with private firms and water districts to address capital infrastructure needs, mitigate the potential of groundwater contaminates, and evaluate the integrity of groundwater basins/well locations.

## RELEVANT PROJECT EXPERIENCE

**Monterey County Water Resources Agency (CA)**

Ms. Demine assisted in the preparation of the 2017 new source waters study report for Monterey County Water Resources Agency. In this report, she documented the cost analysis for the operation and maintenance of new source waters as well as the capital costs of the new source waters. New source waters included additional agricultural wash, pond water, and new treated effluent from industrial users.

**Sierra Madre (CA)**

Ms. Demine assisted in the preparation of the 2018 comprehensive water and wastewater cost of service study report for the City of Sierra Madre. The purpose of this study was to develop a financial plan and design rates for the City's utilities over the next five years.

**Relevant Professional Experience**

As a geophysicist for GEOVision Geophysical Services, Ms. Demine was responsible for conducting subsurface investigations. She was also involved in helping to determine the best geophysical method to meet the client's needs. Ms. Demine was responsible for efficiently managing and organizing the data collection, analysis, and processing phases of the geophysical investigation. She has worked on projects ranging from determining the depth and lateral extent of groundwater tables in various basins, gathering data on bedrock properties for the construction or repair of various infrastructure projects (e.g. dams, tunnels, and pipelines), relocating abandoned water wells, locating the depth and/or lateral extent of contamination plumes or seawater intrusion, and determining the best location for the placement of new water wells.

**Related Geophysical experience:**

- Monterey Interlake Tunnel
- Cadiz Inc. Pipeline
- Stringfellow Acid Pits
- Hinkley, CA Chromium Cleanup
- Catalina Seawater intrusion analysis
- Oroville Dam
- Sierra Madre Dam
- San Vicente Dam

**TECHNICAL SPECIALTIES**

- Environmental Economic and Policy Analysis
- Data Collection and Analysis
- Financial Modeling

**PROFESSIONAL HISTORY**

- Raftelis: Consultant (2015-present)
- CSI Capital Management, Inc.: Tax Clerk (2007-2011)
- Origins Natural Resources, Inc.: Assistant Manager (2006-2008)
- RWR Homes, Inc.: Land Acquisitions Coordinator (2004-2006)

**EDUCATION**

- Master of Environmental Management – Duke University (2015)
- Bachelor of Arts in Business Economics and German Studies – University of California, Santa Barbara (2003)

# Corrine Schrall

## STAFF CONSULTANT

Consultant

Ms. Schrall's expertise lies in complex data analysis, project management, and environmental law and policy. She is an experienced financial modeler, conducting complex surveys; building budgets and financial plans; developing water and wastewater costs of service and rates; and establishing connection and capacity fees. In addition, she is a strong technical writer and has built numerous presentations for diverse audiences.

## RELEVANT PROJECT EXPERIENCE

**City of Orange (CA)**
Ms. Schrall conducted the cost of service study for the City's sanitation services and is currently preparing the analysis for the City's water service. In conducting the analysis for the sanitation system, she assessed the cash flows of the different services the system provides. In addition, she reviewed budgeted expenses such as labor and electricity Ms. Schrall prepared multiple rate structure options for each service to enable the District to determine which structures best served the needs of these services and fairly and equitably distributed costs across customer classes. In addition, she conducted a 33-city water rate survey in order to provide the City with an understanding of how their proposed and current rates compared to neighboring municipalities and agencies.

**Alameda County Water District (CA)**
The District was evaluating its late fee assessment methodology. Ms. Schrall conducted an analysis of five separate late fee cost allocation methods. This allowed the District to examine the best course of action in addressing its late payments that balanced fair assessment of late fees while adequately encouraging timely payment.

**City of Atwater (CA)**
Ms. Schrall conducted the water and sewer rate analyses for the City of Atwater. The City is in the process of converting to metered water service. Both the water and sewer analyses needed to account for this mix of metered and unmetered customers. In addition, the City provides contracted sewer service to three large customers, which needed to be incorporated into the study. The analysis resulted in condensed water and sewer rate structures, simplifying the management of rate revenue.

**Borrego Water District (CA)**
The District needed assistance in preparing its groundwater sustainability plan. Ms. Schrall evaluated the allocation of groundwater costs across three consumer types. She examined them under three different methodologies. She then developed a user-friendly model in order to allow the District to fully assess the costs and benefits associated with each of the options the District was considering. The District was able to evaluate their groundwater cost allocations to fairly balance them across the consumer types and determine which methodology best fit the unique characteristics of the District.

**City of Camarillo (CA)**
Ms. Schrall assisted in the preparation of the 2015 water, wastewater, and recycled water rate study report for the City of Camarillo. In this report, she provided an analysis of the rate structures and the reasoning for them.

**El Toro Water District (CA)**
The District has worked with Raftelis for several years and wanted to update its financial

plan and rates for its water, recycled water, and sewer services in addition to its demand offset fee. Ms. Schrall surveyed neighboring water agencies to provide the District information on size and type of assessments local agencies have implemented. In addition, she updated the financial plan and rate analysis for all three services.

**La Habra Heights County Water District (CA)**
Raftelis conducted a water rate study for the District in 2012, and the District wanted to update its financial plan and resulting rates. The financial plan projected the District's revenue requirements, incorporating the variations of costs associated with its different water supplies in addition to the different revenue streams that the District has. The update provided the District with recommended revenue adjustments for the next five years so they could adjust their rates accordingly and meet the District's projected revenue requirements.

**Las Virgenes Municipal Water District (CA)**
The District engaged Raftelis to update the capacity fees for its water, recycled water, and wastewater utilities as its previous capacity fee analysis was conducted in 2004. Ms. Schrall served as lead consultant, determining the appropriate methodologies for deriving the capacity fees for each utility. In her analysis, she assessed that the District's existing systems and plans for serving the area through build-out warranted the use of a hybrid approach. She examined the value of their current assets, outstanding debt obligations, and reserves to first develop buy in components for all services. She then examined the District's plans to accommodate expansion of their services to new customers and developed incremental an incremental water fee component to ensure that new development contributed to future expansion projects to be constructed for their benefit.

**Los Alamos Community Services District (CA)**
The District commissioned Raftelis to develop financial plans and cost of service studies for the District's water and wastewater services as well as a capacity fee study for both enterprises. Ms. Schrall developed two separate cost of service models for the District. Ms. Schrall first developed the financial plan, considering costs such as insurance, legal fees, and labor. As a result of the financial analysis, Raftelis condensed the District's customer classes for both services to improve ease of management and ensure equitability in assessment of rates. In addition, she incorporated a flexible CIP analysis so the client could review different scenarios as they project future needs through build-out.

**City of Malibu (CA)**
The City of Malibu was developing a new wastewater and recycled water system to replace the independent septic systems currently used by residential and commercial customers. The City engaged Raftelis to develop rates and a rate structure that were fair and equitable for all customers in Phase 1 of the project. Ms. Schrall first developed a budget for the City by reviewing the City's contract with the operator and by analyzing the budgets of similar agencies and reviewing expenses such as labor, legal, and utilities. Next, Raftelis developed flow-based rates that created parity between the different customer parcels in Phase 1. Ms. Schrall developed the presentations for Raftelis' public outreach with the Phase 1 stakeholders, the City's Public Works Commission, and City Council. In addition, she developed the Proposition 218 notice and wrote the study report outlining the derivation of the budget and resulting rate structure for both the wastewater and recycled water utilities.

**Placer County Water Authority (CA)**
The Authority engaged Raftelis to conduct a cost of service study. The District encompasses several zones with multiple water sources and varied topography requiring different pumping demands. In addition, the District covers a diverse customer base, from large and small scale agriculture to suburban development. The complexity of the system results in large data sets with several interconnected components. Ms. Schrall analyzed and condensed these large data sets for implementation in the client's developing water cost of service model. In addition, she reviewed client water supply agreements in order to ensure the study accurately reflected agreed upon service revenues.

**San Elijo Joint Powers Authority (CA)**
The Authority originally contracted with Raftelis to conduct a reclaimed water rate study in 2014. Ms. Schrall developed an updated model for the Authority to integrate new changes to the Authority's financial plan, with changes to the contracted rates with customers.

**Stanford University (CA)**
Stanford University engaged Raftelis to conduct a water and sewer rate structure study. The University was considering alternative rate structures for both services, including the incorporation of a fixed rate. Ms. Schrall surveyed other member agencies within the Bay Area Water Supply & Conservation Agency for a number of factors defining their rate structures, such as variable rate structure and the inclusion of a fixed charge. She also prepared customized bill impacts for specific Stanford customers based on the rates of the different surveyed agencies in order to give the University an understanding of how their bills align with these neighboring agencies. As part of this analysis, Ms. Schrall examined the ratio of the fixed to variable charges in order to determine how much neighbor agencies were relying on their fixed charges for revenue.

**City of Tustin (CA)**
The City of Tustin was considering exercising its option to purchase water from two wells Irvine Ranch Water District was returning to production. The City wanted to understand if the option would be an appropriate addition to the City's water supply from both economic and water supply stability perspectives. Ms. Schrall conducted the analysis, examining the costs and benefits of the option in comparison to the City's current supplies. This analysis also projected the expected increase in costs associated with this option in comparison to other supplies.

# Franklin Gonzalez

## STAFF CONSULTANT

Associate Consultant

Mr. Gonzalez has a background in environmental engineering, specially, in water and wastewater engineering, and air quality treatment. His primary expertise includes financial modeling and data analysis.

### TECHNICAL SPECIALTIES

- Financial modeling
- Cost of analysis and cost allocation plan modeling
- Cost of Service - Utility Studies
- Data analysis
- Capacity Fees Studies

### PROFESSIONAL HISTORY

- Raftelis: Associate Consultant (2017-present)
- United States Department of Agriculture - Riverside Soil Salinity Lab; Physical Science Technician (2016-2017)

### EDUCATION

- Bachelor of Science in Environmental Engineering – University of California, Riverside (2016)

## RELEVANT PROJECT EXPERIENCE

**City of Sierra Madre (CA)**

In 2017, the City of Sierra Madre (City) engaged Raftelis to conduct a Comprehensive Water and Wastewater Cost of Service Study (Study) for the City's utilities over the next five years. The City provides water which serves approximately 3,900 customer accounts and conveys wastewater generated by approximately 4,500 units. The City has an adjudicated right to extract 1,740 AF/yr. However, since the groundwater level is currently below 500' MSL (meters above sea level), the adjudicated rights are reduced to 980 AF/yr. Furthermore, the difference between demand and allowable extraction is made up by spreading imported water and allowing it to reach the groundwater table. As the lead analyst, Mr. Gonzalez was able to construct the financial plan for both utilities and develop each utility's cost of service. For the water utility, tiered rates were developed for single-family customers based on available groundwater allotment, imported water demand, and groundwater recharge. Uniform rates were developed for multi-family and non-residential customers in a similar structure as the single-family tiered rates. Mr. Gonzalez is currently drafting a comprehensive water and wastewater report detailing the financial plans and recommendations for the City.

**City of Atwater (CA)**

The City of Atwater (Atwater or City) contracted with Raftelis to conduct a Water and Sewer Cost of Service and Rate Study (Study) to develop financial plans for each utility enterprise as well as design corresponding water and sewer rates for the Study Period spanning FYE 2018 through FYE 2022. Located approximately eight miles northwest of Merced, CA in Merced County, the City was incorporated in 1922. It provides water service to approximately 7,600 customers and wastewater services to approximately 8,500 units. It maintains and operates the collection system and sewer treatment plant. As the lead analyst, Mr. Gonzalez responsibilities include updating the financial plans for both water and wastewater utility, develop both utilities' cost of service analysis, and rate designs. Furthermore, in August 2017, Mr. Gonzalez, along with several City staff, was able to assist the City of Atwater in contributing data to the Official Statement for the Refunding of 2010 and 2011 Wastewater Bonds.

**City of Galt (CA)**

In early 2017, the City of Galt began working on a comprehensive wastewater rate study for the City. The goal of the project was to evaluate several cost allocation and rate structures to ensure compliance with Proposition 218. The Study was led by Andrea Boehling, who served as the Lead Consultant for the Study. Mr. Gonzalez was primarily responsible for conducting a rate survey of neighboring agencies to compare wastewater rates and capacity fees.

**Yuima Municipal Water District (CA)**

In 2017, Yuima Municipal Water District contacted Raftelis to update a comprehensive water rate study for the District. The District serves six mutual water companies in addition to encompassing two community service districts: The Rincon Ranch Road

Community Services District and the Pauma Valley Community Services District. The District serves a total of 354 accounts, providing interruptible and uninterruptible service to agricultural, residential, and commercial customers in the Pauma Valley. The District is divided into two service areas: General District service area and Improvement District "A" (IDA). Mr. Gonzalez was responsible for updating the financial plans for both the General and IDA service areas, and drafted a comprehensive water report that highlighted Raftelis' recommended rates for the next five fiscal years.

### Imperial County Gateway Service Area (CA)

In 2017, the Imperial County Gateway Service Area contacted Raftelis to conduct a comprehensive water and wastewater rate study for the Service Area. In 1997, the Imperial County Local Agency Formation Commission (LAFCO) approved the formation of a new County Service Area known as the Gateway County Service Area (CSA), and designated the Imperial County Board of Supervisors as the conducting authority. The CSA provides water and wastewater services at the Gateway of the Americas Specific Plan Area (SPA) located at the eastern border crossing on the Imperial Valley. The Service Area is approximately a 1,775-acre industrial commercial area adjacent to the border with Mexico and 6 miles east of the City of Calexico. As the lead analyst, Mr. Gonzalez's current responsibilities consist of updating budget information for both water and wastewater utilities, and analyzing consumption and flow data for each respective enterprise.

### City of Lemoore (USDA)

Mr. Gonzalez has participated in surveying specific crop fields to determine the levels of salinity and other trace elements that potentially affects crop production. Using a global positioning system tracker (GPS) and Genomics Electro-Magnetic instrument (EM38-DD), he was able to determine soil salinity levels for multiple fields and excavate soil samples which were analyzed in the lab. By using specific and time-sensitive procedures, Mr. Gonzalez is able to determine actual readings from the soil samples and create visual maps of these readings using ARC-GIS computer program, capable of analyzing geographical information of the sampled fields to determine salinity trends and protocol to alleviate future salinity conflicts.

# Charles Diamond

## STAFF CONSULTANT

Associate Consultant

Mr. Diamond has a background in environmental economics and water resources management. His expertise lies in financial modeling and data analysis. He joined Raftelis initially in 2017 as an associate consultant upon receiving a master's degree from UC Santa Barbara's Bren School of Environmental Science & Management in June 2017. Mr. Diamond has developed financial models and conducted analyses of energy use for UC Santa Barbara's Facilities Management department as a graduate student.

### TECHNICAL SPECIALTIES

- Utility Financial Analysis
- Data Collection and Analysis
- Statistical Analysis

### PROFESSIONAL HISTORY

- Raftelis: Associate Consultant (2017-present)
- UC Santa Barbara Department of Economics: Teaching Assistant (2017)
- UC Santa Barbara Earth Research Institute: Graduate Student Assistant (2015-2017)

### EDUCATION

- Master of Environmental Science & Management - UC Santa Barbara (2017)
- Bachelor of Science in Environmental Economics & Policy – UC Berkeley (2013)

## RELEVANT PROJECT EXPERIENCE

**City of Brentwood (CA)**
The City of Brentwood engaged Raftelis to conduct a water and wastewater rate study. In 2017, Raftelis helped the City evaluate the current water and wastewater utilities' cost of service and adjusted rates accordingly. Recently Mr. Diamond updated a financial plan model and performed a cost of service analysis for the City's wastewater utility. Mr. Diamond assisted with the update of existing rates as well as the development of a proposed alternative rate structure and rates.

**La Cañada Irrigation District (CA)**
La Cañada Irrigation District engaged Raftelis to conduct a water rate study. Since the last rate study was performed in 2008, Raftelis helped the District evaluate the cost of service and adjusted rates accordingly. In 2017, Mr. Diamond developed a financial plan model for the District to support the financial plan development for fiscal years 2018 to 2027. Mr. Diamond also recently performed a cost of service analysis to assist with the update of the District's rates.

**UC Santa Barbara (CA) 2016 - 2017**
Mr. Diamond aided the Facilities Management department at UC Santa Barbara by creating a financial model to evaluate potential cost savings from energy efficiency projects as part of a client-based master's group thesis project at the Bren School of Environmental Science & Management. Cost analyses of multiple energy procurement options were also conducted.

# STATEMENT OF AVAILABILITY

Raftelis plans to maintain the same team for the duration of the project. This is advantageous for both the City and Raftelis in providing efficient service and maintaining project knowledge. We manage each staff's workload on a weekly basis. Each week, Raftelis' management team holds a conference call to review workload of all staff members so that we meet the needs of our clients during the upcoming week. This weekly meeting allows Raftelis' Project Managers to deploy our consulting staff in a flexible manner that ensures a suitable level of hours will be devoted to the City. Raftelis also uses Deltek Vision to monitor project progress and hours.

All of our team members have the necessary availability to begin work on this project immediately, and provide the proposed services throughout the study. In addition to our dedicated team, the City will have the support of Raftelis' full staff of more than 70 utility financial and management consultants.

# PROJECT MANAGEMENT APPROACH

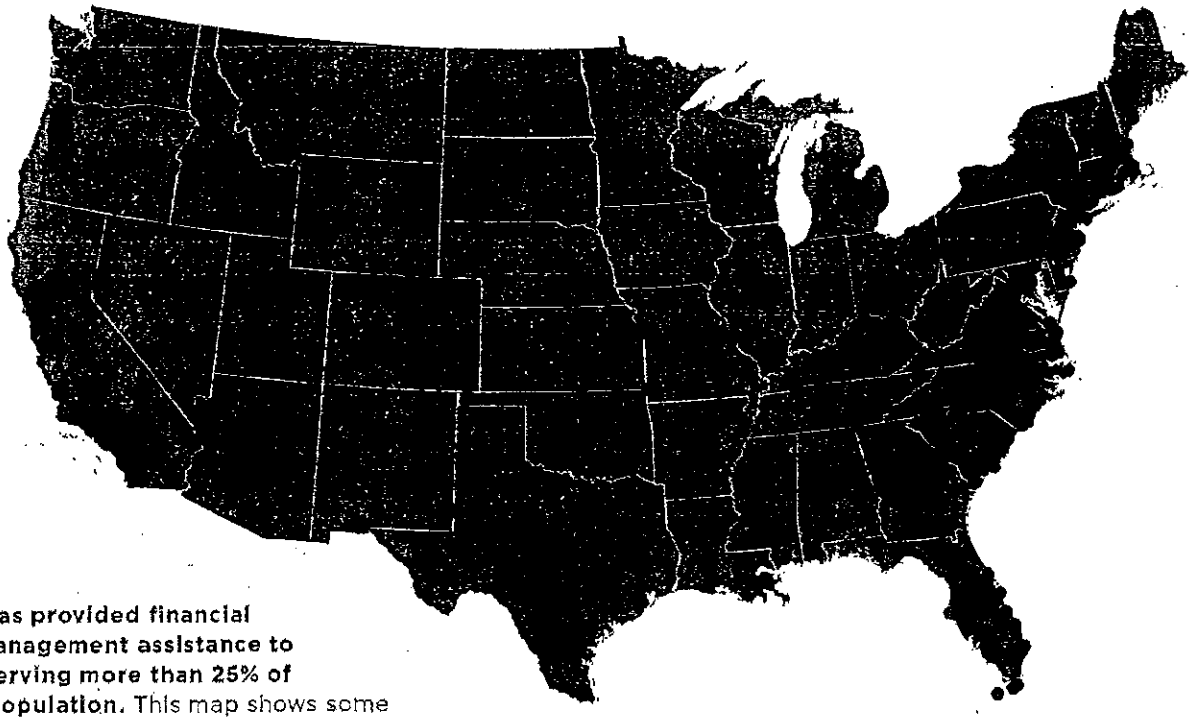
Raftelis' organizational structure is designed to allow members of our executive team to devote a significant amount of time to client consulting activities in the role of Project Manager. The Project Manager is responsible for client communications, project management, and ensuring the project meets client needs in an efficient and effective manner. Raftelis assigns a Staff Consultant who is responsible for deliverables such as financial plans, cost of service studies, and other technical analyses. Staff Consultants report to the Project Manager and prepare work products under his/her direct supervision.

# STAFF SUPPORT REQUIRED FROM CITY PERSONNEL

Most of the effort required by City staff is the upfront effort required to gather the necessary data to fullfil our data request. The data request normally includes:

- Financial data such as operating budgets, revenue sources (including connection fees and other non-operating revenues), capital improvement plans, reserve fund balances
- Previously conducted studies such as cost of service studies and master plans
- Current reserve policies
- Detailed list of sewer assets
- Historical data on flows and loadings of the City's wastewater entering the treatment plant
- Historical water use by account

This normally takes about two weeks but depends on each agency. We may have a few questions about the data after our review. Aside from this, City staff normally helps coordinate City Council and City staff meetings, and reviews and provides input on our work products during the scheduled meetings and phone calls.



**Raftelis has provided financial and/or management assistance to utilities serving more than 25% of the U.S. population.** This map shows some of the stormwater, water, and/or wastewater utility clients where Raftelis has provided financial/ management consulting.

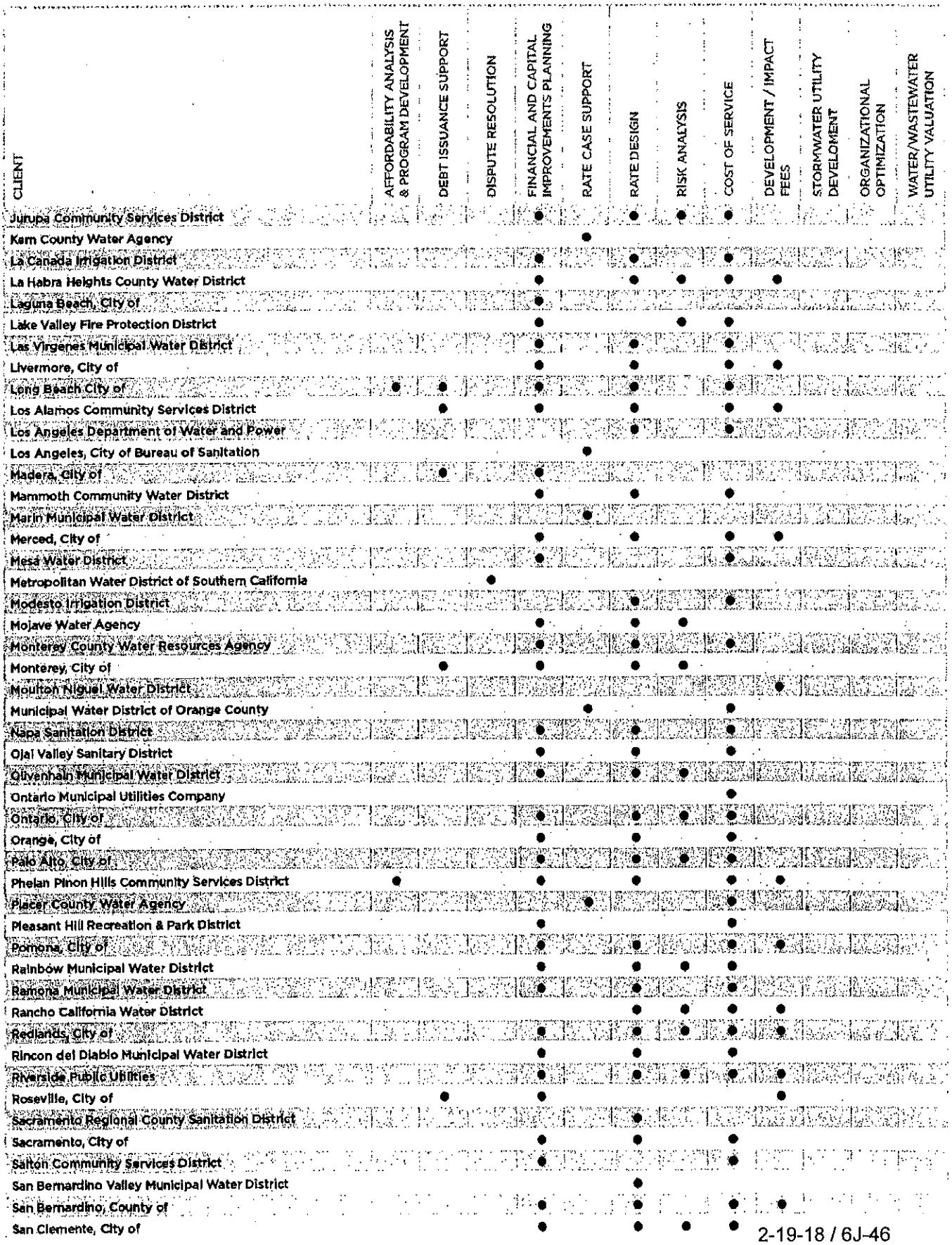
# Related Experience

Raftelis has focused on financial and management consulting for wastewater, water, and stormwater utilities since the firm's founding in 1993, and our staff have assisted more than 1,000 utilities across the country. In the past year alone, Raftelis worked on more than 600 financial, rate, and management consulting projects for over 400 water, wastewater, and/or stormwater utilities in 40 states, the District of Columbia, and Canada.

## CALIFORNIA EXPERIENCE

This table lists the California utilities that Raftelis has assisted over the past five years on financial, rate, and/or management consulting projects.

| CLIENT | AFFORDABILITY ANALYSIS & PROGRAM DEVELOPMENT | DEBT ISSUANCE SUPPORT | DISPUTE RESOLUTION | FINANCIAL AND CAPITAL IMPROVEMENTS PLANNING | RATE CASE SUPPORT | RATE DESIGN | RISK ANALYSIS | COST OF SERVICE | DEVELOPMENT / IMPACT FEES | STORMWATER UTILITY DEVELOMENT | ORGANIZATIONAL OPTIMIZATION | WATER/WASTEWATER UTILITY VALUATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alameda County Water District | | ● | | ● | | ● | ● | ● | | | | |
| Anaheim, City of | | | | ● | | ● | ● | ● | | | | |
| Arroyo Grande, City of | | | | ● | | ● | ● | ● | | | | |
| Atwater, City of | | | | ● | ● | ● | | ● | | | | |
| Bakersfield, City of | | ● | | ● | | ● | | ● | | | | |
| Benicia, City of | | | | | | | | | ● | | | |
| Beverly Hills, City of | | ● | | ● | | ● | ● | ● | ● | | ● | |
| Borrego Water District | | | ● | ● | | ● | | | | | | |
| Brea, City of | | | | ● | | ● | | ● | | | | |
| Brentwood (CA), City of | | | | ● | | ● | ● | ● | | | | |
| CAL FIRE/San Luis Obispo | | | | | | | | ● | | | | |
| Calleguas Municipal Water District | | ● | | ● | | ● | ● | ● | | | | |
| Camarillo, City of | | ● | | ● | | ● | | ● | ● | | | |
| Carlsbad Municipal Water District | | ● | | ● | | ● | ● | ● | | | | |
| Casitas Municipal Water District | | | | ● | | ● | | ● | | | | |
| Castaic Lake Water Agency | | | ● | ● | | | ● | ● | ● | | | |
| Central Basin Municipal Water District | | ● | | ● | | | ● | ● | | | | |
| Central Contra Costa Sanitary District | | | | ● | | ● | | ● | | | | |
| Channel Islands Beach Community Services District | | | | ● | | ● | | ● | | | | |
| Chino Hills, City of | | | | ● | | ● | | ● | | | | |
| Chino, City of | | | | ● | | ● | | ● | | | | |
| Chowchilla, City of | | | | ● | | ● | ● | ● | | | | |
| Corona, City of | | | | | | ● | | | ● | | | |
| County of San Diego | | | | ● | | | | ● | | ● | | |
| Crescenta Valley Water District | | | | ● | | ● | | ● | | | | |
| Cucamonga Valley Water District | | | | ● | | ● | | | | | | |
| Del Mar Union School District | | ● | | | | | | | | | ● | |
| Delta Diablo Sanitation District | | | | | | | | | | | | |
| East Bay Municipal Utility District | | | | ● | | | | ● | | | | |
| East Orange County Water District | | | | ● | | ● | | ● | ● | | | |
| East Valley Water District | | | | ● | | ● | ● | ● | | | | |
| Eastern Municipal Water District | | | | ● | | | | | | | | |
| El Toro Water District | | | | ● | | ● | | ● | | | | |
| Elk Grove Water District | ● | | | ● | | ● | ● | ● | ● | | | |
| Elsinore Valley Municipal Water District | | | | ● | | ● | | ● | ● | | | |
| Escondido, City of | | ● | | ● | | ● | ● | ● | ● | | | |
| Galt, City of | | ● | | ● | | ● | | ● | ● | | | |
| Glendora, City of | | | | | | ● | | | | | | |
| Goleta Water District | | | | ● | | ● | ● | ● | | | | |
| Goleta West Sanitary District | | | ● | ● | | ● | ● | ● | ● | | | |
| Helix Water District | | | | ● | | ● | | ● | | | | |
| Henderson, City of | | | | ● | | ● | | ● | ● | | | |
| Hollister, City of | | | | ● | | ● | | ● | ● | | | |
| Holtville, City of | | | | ● | | | | ● | | | | |
| Huntington Beach, City of | | | | ● | | ● | ● | ● | | | | |
| Imperial County | | | | ● | | ● | | ● | | | | |
| Inland Empire Utilities Agency | | | | ● | | | | | | | | |
| Irvine Unified School District | | ● | | | | | | | | | | |

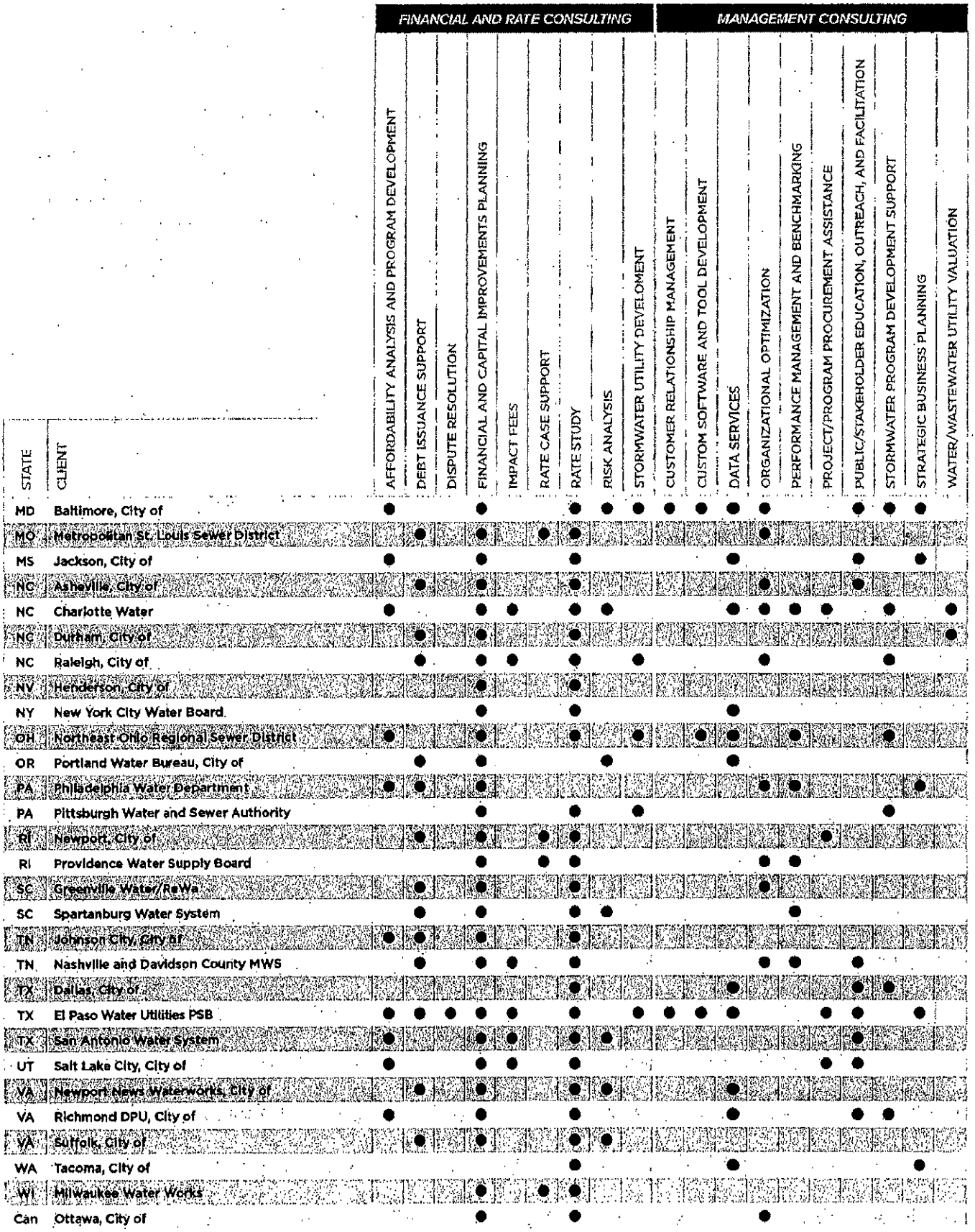

CLIENT
AFFORDABILITY ANALYSIS & PROGRAM DEVELOPMENT
DEBT ISSUANCE SUPPORT
DISPUTE RESOLUTION
FINANCIAL AND CAPITAL IMPROVEMENTS PLANNING
RATE CASE SUPPORT
RATE DESIGN
RISK ANALYSIS
COST OF SERVICE
DEVELOPMENT / IMPACT FEES
STORMWATER UTILITY DEVELOPMENT
ORGANIZATIONAL OPTIMIZATION
WATER/WASTEWATER UTILITY VALUATION
Jurupa Community Services District
Kern County Water Agency
La Canada Irrigation District
La Habra Heights County Water District
Laguna Beach, City of
Lake Valley Fire Protection District
Las Virgenes Municipal Water District
Livermore, City of
Long Beach City of
Los Alamos Community Services District
Los Angeles Department of Water and Power
Los Angeles, City of Bureau of Sanitation
Madera, City of
Mammoth Community Water District
Marin Municipal Water District
Merced, City of
Mesa Water District
Metropolitan Water District of Southern California
Modesto Irrigation District
Mojave Water Agency
Monterey County Water Resources Agency
Monterey, City of
Moulton Niguel Water District
Municipal Water District of Orange County
Napa Sanitation District
Ojai Valley Sanitary District
Olivenhain Municipal Water District
Ontario Municipal Utilities Company
Ontario, City of
Orange, City of
Palo Alto, City of
Phelan Pinon Hills Community Services District
Placer County Water Agency
Pleasant Hill Recreation & Park District
Pomona, City of
Rainbow Municipal Water District
Ramona Municipal Water District
Rancho California Water District
Redlands, City of
Rincon del Diablo Municipal Water District
Riverside Public Utilities
Roseville, City of
Sacramento Regional County Sanitation District
Sacramento, City of
Salton Community Services District
San Bernardino Valley Municipal Water District
San Bernardino, County of
San Clemente, City of

| CLIENT | AFFORDABILITY ANALYSIS & PROGRAM DEVELOPMENT | DEBT ISSUANCE SUPPORT | DISPUTE RESOLUTION | FINANCIAL AND CAPITAL IMPROVEMENTS PLANNING | RATE CASE SUPPORT | RATE DESIGN | RISK ANALYSIS | COST OF SERVICE | DEVELOPMENT / IMPACT FEES | STORMWATER UTILITY DEVELOMENT | ORGANIZATIONAL OPTIMIZATION | WATER/WASTEWATER UTILITY VALUATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| San Diego, City of Public Utilities Deptartment | | ● | ● | ● | | ● | ● | ● | ● | | | |
| San Dieguito Water District | | | | ● | | ● | | ● | | | | |
| San Elijo Joint Powers Authority | | | | ● | ● | ● | ● | ● | ● | | | |
| San Gabriel County Water District | | | | ● | | ● | | ● | | | | |
| San Gabriel, City of | | | | ● | | ● | | ● | | | | |
| San Jose, City of | | | | | | | | ● | | | | |
| San Juan Capistrano, City of | | | | ● | | ● | ● | ● | ● | | | |
| Santa Ana, City of | | | | | | | | ● | | | | |
| Santa Barbara, City of | | | | ● | | ● | ● | ● | ● | | | |
| Santa Clara Valley Water District | | | ● | ● | ● | | | | | | | |
| Santa Clarita Water District | | ● | | ● | | ● | ● | ● | ● | | | |
| Santa Cruz, City of | | | | ● | | ● | ● | ● | | | | |
| Santa Fe Irrigation District | | | | ● | | ● | ● | ● | ● | | | |
| Santa Fe Springs, City of | | | | ● | | ● | | ● | | | | |
| Santa Margarita Water District | | | | ● | | ● | ● | ● | | | | |
| Santa Rosa, City Attorney's Office | | | | | | | | | ● | | | |
| Scotts Valley Water District | | ● | | ● | | ● | ● | ● | ● | | | |
| Shafter, City of | | | | ● | | ● | | ● | | | | |
| Shasta Lake, City of | | | | ● | | ● | ● | ● | | | | |
| Sierra Madre, City of | ● | | | ● | | ● | | ● | | | | |
| Signal Hill, City of | | | | ● | | ● | | ● | | | | |
| Simi Valley, City of | | | | ● | | ● | ● | ● | ● | | | |
| South Mesa Water Company | | | | ● | | ● | ● | ● | | | | |
| South Pasadena, City of | | | | ● | | ● | | ● | | | | |
| South San Francisco, City of | | | | ● | | ● | | ● | | | | |
| Sunnyslope County Water District | | | | ● | | ● | ● | ● | ● | | | |
| Sweetwater Authority | | | | ● | | ● | | ● | | | | |
| Temescal Valley Water District | | | | ● | | ● | | ● | ● | | | |
| Thousand Oaks, City of | | | | ● | | ● | ● | ● | ● | | | |
| Torrance, City of | | | | ● | | ● | | ● | | | | |
| Trabuco Canyon Water District | | | | ● | | ● | | ● | | | | |
| Triunfo Sanitation District | | | | ● | | ● | | ● | | | | |
| Tustin, City of | | | | ● | | ● | | ● | | | | |
| Union Sanitary District | | | | ● | | ● | ● | ● | ● | | | |
| Ventura Regional Sanitation District | | | | ● | | ● | | ● | | | | |
| Ventura, City of | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| Vista, City of | | | | ● | | ● | | ● | ● | | | |
| Walnut Valley Water District | | | | ● | | ● | | ● | | | | |
| Watsonville, City of | ● | | | ● | | ● | ● | ● | | | | |
| West Basin Municipal Water District | | | | ● | | ● | ● | ● | | | | |
| Western Municipal Water District | | | | ● | | ● | | ● | ● | | | |
| Yorba Linda Water District | | | | ● | | ● | | ● | | | | |
| Zone 7 Water Agency | | | | ● | | ● | | ● | | | | |

## NATIONAL EXPERIENCE

This matrix shows a brief sample of some of the utilities throughout the U.S. and Canada that we have assisted and the services performed for these utilities.

| | | FINANCIAL AND RATE CONSULTING | | | | | | | | | MANAGEMENT CONSULTING | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STATE | CLIENT | AFFORDABILITY ANALYSIS AND PROGRAM DEVELOPMENT | DEBT ISSUANCE SUPPORT | DISPUTE RESOLUTION | FINANCIAL AND CAPITAL IMPROVEMENTS PLANNING | IMPACT FEES | RATE CASE SUPPORT | RATE STUDY | RISK ANALYSIS | STORMWATER UTILITY DEVELOMENT | CUSTOMER RELATIONSHIP MANAGEMENT | CUSTOM SOFTWARE AND TOOL DEVELOPMENT | DATA SERVICES | ORGANIZATIONAL OPTIMIZATION | PERFORMANCE MANAGEMENT AND BENCHMARKING | PROJECT/PROGRAM PROCUREMENT ASSISTANCE | PUBLIC/STAKEHOLDER EDUCATION, OUTREACH, AND FACILITATION | STORMWATER PROGRAM DEVELOPMENT SUPPORT | STRATEGIC BUSINESS PLANNING | WATER/WASTEWATER UTILITY VALUATION |
| AL | Birmingham Water Works Board | ● | ● | ● | ● | ● | | ● | ● | | | | ● | | ● | | ● | | ● | ● |
| AL | Mobile Area Water & Sewer System | | | | ● | | | ● | | | | | | | | | | | | ● | |
| AR | Central Arkansas Water | | | | ● | | | ● | | | | | | ● | ● | | | | | ● | |
| AR | Little Rock Wastewater Utility | | | | ● | | | ● | | | | | | ● | ● | | ● | | | | ● |
| AZ | Peoria, City of | | ● | | ● | ● | | ● | | | | | | | | | | | | | ● |
| AZ | Phoenix, City of | ● | ● | | ● | ● | | | | | | | | | ● | ● | | | | | |
| AZ | Pima County | | | ● | ● | ● | | ● | ● | | | | | | | | ● | | | | ● |
| AZ | Tucson Water | | | | ● | | | ● | | | | | | | | | | ● | | | |
| CA | Anaheim, City of | | | | ● | | | ● | | | | | | | | | | | | | |
| CA | Beverly Hills, City of | | | | ● | | | ● | ● | | | | | ● | ● | | | | | | |
| CA | MWD of Southern California | | | ● | ● | | | ● | | | | | | | ● | | | | | | |
| CA | San Diego, City of | | | | ● | ● | | ● | ● | | | | | | | | | | | | |
| CA | San Francisco PUC | | | | ● | | | ● | | | | | | | | | | | | ● | |
| CA | Santa Clara Valley Water District | | | ● | ● | | | ● | | | | | | | | | | | | | |
| CA | Western Municipal Water District | | | | ● | ● | | ● | | | | | | | | | | | | | |
| CO | Denver Water | | | | | | | ● | | | | | ● | | | ● | ● | | | | |
| CO | Denver Wastewater, City of | | ● | | ● | | | ● | | | | | | ● | ● | | ● | | | | |
| DC | DC Water | | | | ● | ● | | ● | ● | | | | ● | ● | ● | | | | | ● | |
| DE | Wilmington, City of | | | | | | | | | | | | | ● | | ● | | | | ● | |
| FL | Clearwater, City of | | | | | | | | | | | | | ● | ● | | | | | | |
| FL | Pompano Beach, City of | | | | ● | | | ● | | | | | | ● | | | | | | | |
| FL | Port St. Lucie, City of | | | | ● | ● | | ● | | | | | | | | | | | | | |
| FL | St. Johns County | | ● | | ● | ● | | ● | ● | | | | | | | | | | | | |
| GA | Columbus Water Works | | ● | | ● | | | ● | ● | | | | | | | ● | | | | | |
| HI | Honolulu ENV, City and County of | | | | ● | | | ● | | | | | | | | | | | | | |
| IL | Naperville, City of | | | | ● | | | ● | | | | | | | | | | | | | |
| KS | Wichita, City of | | | | ● | | | ● | ● | | | | | | | | | | | | |
| KY | Hardin County Water District #1 | | | | ● | | ● | ● | | | | | | | | | | | | | |
| LA | New Orleans, Sewerage & Water Board of | | ● | | ● | | | ● | | ● | | | ● | | | ● | ● | ● | ● | | |


FINANCIAL AND RATE CONSULTING
MANAGEMENT CONSULTING
AFFORDABILITY ANALYSIS AND PROGRAM DEVELOPMENT
DEBT ISSUANCE SUPPORT
DISPUTE RESOLUTION
FINANCIAL AND CAPITAL IMPROVEMENTS PLANNING
IMPACT FEES
RATE CASE SUPPORT
RATE STUDY
RISK ANALYSIS
STORMWATER UTILITY DEVELOMENT
CUSTOMER RELATIONSHIP MANAGEMENT
CUSTOM SOFTWARE AND TOOL DEVELOPMENT
DATA SERVICES
ORGANIZATIONAL OPTIMIZATION
PERFORMANCE MANAGEMENT AND BENCHMARKING
PROJECT/PROGRAM PROCUREMENT ASSISTANCE
PUBLIC/STAKEHOLDER EDUCATION, OUTREACH, AND FACILITATION
STORMWATER PROGRAM DEVELOPMENT SUPPORT
STRATEGIC BUSINESS PLANNING
WATER/WASTEWATER UTILITY VALUATION
STATE
CLIENT
MD Baltimore, City of
MO Metropolitan St. Louis Sewer District
MS Jackson, City of
NC Asheville, City of
NC Charlotte Water
NC Durham, City of
NC Raleigh, City of
NV Henderson, City of
NY New York City Water Board
OH Northeast Ohio Regional Sewer District
OR Portland Water Bureau, City of
PA Philadelphia Water Department
PA Pittsburgh Water and Sewer Authority
RI Newport, City of
RI Providence Water Supply Board
SC Greenville Water/ReWa
SC Spartanburg Water System
TN Johnson City, City of
TN Nashville and Davidson County MWS
TX Dallas, City of
TX El Paso Water Utilities PSB
TX San Antonio Water System
UT Salt Lake City, City of
VA Newport News Waterworks, City of
VA Richmond DPU, City of
VA Suffolk, City of
WA Tacoma, City of
WI Milwaukee Water Works
Can Ottawa, City of

**On the following pages, we have provided detailed descriptions of several projects that we have worked on that are similar in scope to the City's project. We have included references for each of these clients and urge you to contact them to better understand our capabilities and the quality of service that we provide.**

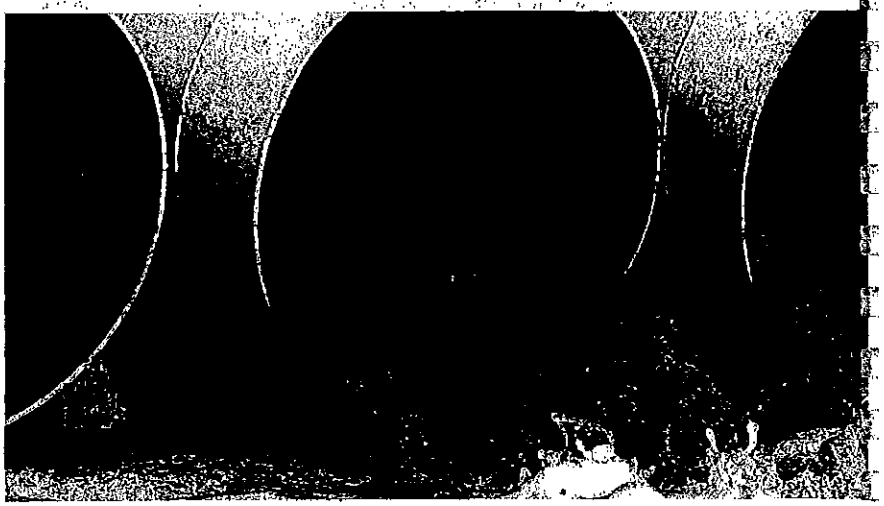
## TRABUCO CANYON WATER DISTRICT (CA)

**Client Contact**
Hector Ruiz, P.E., General Manager
Trabuco Canyon Water District
32003 Dove Canyon Drive
Trabuco Canyon, CA 92679
P: 949.858.0277 x177
E: Hruiz@tcwd.ca.gov

**Date**
2015

**Project Team**
Sanjay Gaur (Project Director)
Steve Gagnon, PE (Project Manager)

Raftelis completed a water, wastewater and recycled water rate study. Raftelis revised the District's tier rate structure from an 8-tier rate structure to a 4 tiered rate structure that is based on the cost to serve water in those tiers. Raftelis also develop drought rates to recover lost revenue from reduced sales. The wastewater rates had not been updated since the mid-1990s. Therefore a significant revenue adjustment was needed to align rates with true costs. Raftelis worked with District staff to minimize both water and wastewater rate impacts by funding consistent levels of capital infrastructure.



## CITY OF SAN CLEMENTE (CA)

**Client Contact**
Tom Rendina, Municipal Services Manager
100 Avendia Presidio
San Clemente, CA 92672
P: 949.361.8312
E: rendinat@san-clemente.org

**Date**
2011-2015

**Project Team**
Sanjay Gaur (Project Manager)

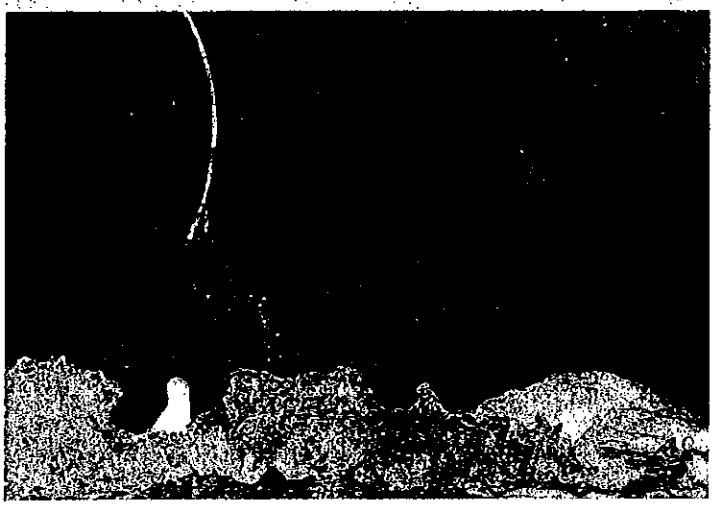
The City of San Clemente (City) provides recycled water, sewer, and water services to over 17,500 accounts within City limits. For the past few years, the City has experienced a steady decline in water demand, from roughly 10,000 acre-feet (AF) four years ago to a total water usage of approximately 8,600 AF in FY 2012. As a result of this decreased demand, revenues generated from water sales (along with several other forms of miscellaneous revenues) have been unable to fully fund the City's expenditures; as a result, the City has been operating at a deficit. The approved fiscal year (FY) 2012 budget projected the City's Water and Sewer Funds to operate at a combined deficit of approximately $1.7 million. In addition to these issues, the City wished to develop a financial plan that incorporated the City's expansion of recycled water production at its sewer facility. The City had approximately 100 irrigation customers it intended to convert from potable water consumption to non-potable water consumption.

In 2011, the City engaged Raftelis to conduct a Recycled Water, Sewer, and Water Rate Study (Study) to address these concerns and establish equitable rates in compliance with Proposition 218. The Study included the development of the financial plans for Water and Sewer Enterprise Funds (to ensure financial sufficiency in order to meet operation and maintenance (O&M) costs, to ensure sufficient depreciation funding for capital replacement and refurbishment (R&R) needs, and to improve the financial health of the enterprises), the development of fair and equitable water and sewer rates, the review of the current rate structure for recycled water (RW), and the modeling of impacts resulting from the recycled water system expansion.

In addition, Raftelis evaluated the benefits and costs of implementing a water budget rate structure. Raftelis assisted the City in merging the County parcel data with the water consumption by addresses for single family residential accounts. Based on this information, Raftelis developed a water budget model that examined different estimates for weather factors (seasonal or historical daily) and landscape estimates (percentage of lot size, grouping of lots sizes by bins, and lot size minus footprint). The analysis concluded that due to recent water conservation efforts and the unique characteristics of the City, potential outdoor water savings provided by water budget rates for residential customers were minimal and not substantial enough to offset the increased costs of implementation and administering such a rate structure. The usage analysis also suggested changing to the season and tier definitions for the current water rate structures. Raftelis also developed a web-based bill calculator for the City's residential customers as a public outreach tool for the recommended changes to the water and sewer rates. The bill calculator was posted on the City's website for residential customers to easily assess the actual impacts on their monthly bills.

As part of the Study, Raftelis developed the Recycled Water, Sewer and Water Rate Study Report (Report) to be used as an administrative record. The Report highlighted the major issues and decisions made during the course of the Study, provided an overview of operations, CIP, and the financial plan, and discussed and explained the cost of service analysis and methodology used to develop the final rates. The explanation of the methodology found within the Report demonstrates that the rates are equitable, reflect the City's policies and values, and are driven by the City's revenue requirements. The Final Report was submitted to the City in May 30, 2012 for the Public Hearing in June 2012. Rates were adopted on August 1, 2012.

Since the Recycled Water, Sewer, and Water Rate Study in 2011, each year Raftelis was retained by the City to update its water, RW and sewer financial plan with updated financial information including the operating budget, and projections for sales, and water supply costs. In 2013, the City again requested Raftelis to conduct the



cost of service study for its Recycled Water (RW) Rates as the Water Reclamation Plant (WRP) expanded to a peak capacity of 5.0 million gallons per day (MGD) from 2.2 MGD. The Study involved the evaluations of the RW financial plan using the updated projected sales and relevant financial information and the cost of service analysis and rate development for existing and expanded water services.

## CITY OF LONG BEACH (CA)

**Client Contact**
Anatole Falagan, Assistant General Manager
Long Beach Water Department
1800 E. Wardlow Rd.
Long Beach, CA 90807 - 4994
P: 562.570.2317
E: anatole.falagan@lbwater.org

**Date**
2011-present

**Project Director and/or Manager**
Sanjay Gaur (Project Manager)

The City of Long Beach Water Department (LBWD or Department) maintains a system of water, sewer, and recycled water infrastructure that provides services to nearly 470,000 Long Beach residents. LBWD receives its potable water supply from two main sources: groundwater produced from the Central Groundwater Basin, regulated by the Water Replenishment District of Southern California (WRD), and purchases from the Metropolitan Water District of Southern California (MWD).

The prior water and sewer rates were developed in 1996 and updated annually across the board to account for rising operating and capital costs. LBWD engaged Raftelis to conduct a cost of service and rate design study for its water and sewer services and develop an administrative record that demonstrates a nexus between LBWD's costs and rates to meet the requirements of Proposition 218.

Raftelis collaborated with LBWD staff to develop the rate design framework for water, recycled water, and sewer rates based on the policy priorities such as promoting conservation, being easy to administer and for customers to understand, and providing affordability for essential use. The current three-tier inclining rate structure for residential customers achieves most of these pricing objectives. LBWD meets the needs of its customers through a diverse portfolio of water resources, including local groundwater combined with imported supplies. To better align residential usage tiers with available water supply, Raftelis proposed to define tier breakpoints by water supply source.

The LBWD Board of Water Commissioners (Board) commits to continue the Exemption Program to provide affordability for essential water use for eligible customers in need in conjunction with the City of Long Beach Utility Users Tax Exemption Program. To continue to support the Exemption Program, Raftelis and LBWD staff recommended to use non-rate revenue such as rental income as qualified funding sources.

Raftelis conducted a detailed and vigorous cost of service analysis for water, recycled water, and sewer services and rate calculations demonstrating the nexus and proportionality between the costs and the rates to ensure compliance with Proposition 218. To help communicate with customers about the drivers and rationale behind the proposed rates, the water quantity rates include several cost-based rate components, including water supply costs, delivery, peaking, conservation and revenue offsets. To facilitate informed decisions by policy makers, sensitivity and customer impact analyses were conducted for all customer classes at various usage levels receiving water, recycled water, and sewer services. Raftelis developed an Excel-based, non-proprietary financial plan and rate model documenting all of the data and assumptions used in the study. The rate model presents the results of the study in a series of tables and charts that allows the Department to quickly review the impacts of different rates alternatives, so that policy makers can make informed decisions.

At the end of the study, Raftelis presented the results to the Board in a workshop illustrating the nexus between the costs and rates to ensure that the proposed water, recycled water, and sewer rate

structures complied with Proposition 218 requirements. As part of the study, Raftelis developed the cost of service and rate study report to be used as an administrative record. The report highlighted the major issues and decisions made during the course of the study and discussed and explained the cost of service analysis and methodology used to develop the final rates. The explanation of the methodology found within the report demonstrates that the rates: are equitable, reflect the Department's policies and values, and are driven by the Department's revenue requirements. The final report was submitted to the LBWD, the Long Beach Board of Water Commissioners conducted a public hearing to consider the proposed changes outlined in the Proposition 218 legal notice, and the City Council adopted an ordinance approving the new rate structure.

## CITY OF ORANGE (CA)

**Client Contact**
Frank Sun, Deputy Director Public Works
300 E. Chapman Avenue,
Orange, CA 92866
P: 714.744.5529
E: fsun@cityoforange.org

**Date**
2016-2017

**Project Director and/or Manager**
Sanjay Gaur (Project Director)
Steve Gagnon, PE (Project Manager)
Corrine Schrall (Staff Consultant)

Raftelis prepared a 10-year financial plan and rates for the wastewater enterprise. The rates included a capital component to convey the need for capital funding. The rates were also redesigned to reflect estimate sewer discharge as opposed to water use to truly reflect cus-tomer use of the sewer collection system.

## CITY OF HUNTINGTON BEACH (CA)

**Client Contact**
Kenneth Dills, Project Manager
City of Huntington Beach Puolic Works Department,
Utilities Division
19001 Huntington Street
Huntington Beach, CA 92648
P: 714.375.5055
E: kdills@suRaftelisity-hb.org

**Date**
2010-2018

**Project Director and/or Manager**
Sanjay Gaur (Project Manager)

In 2010, City of Huntington Beach (City) engaged Raftelis to conduct a water budget rate study and design a water budget rate structure for its 48,000 residential and irrigation accounts. Budgets were based on household size for indoor allocations and weather and irrigation area for outdoor allocations. The formula for developing allocation budgets considers irrigation efficiency and type of landscape. The concept is to encourage efficient use of water and to provide users adequate water but penalize wasteful practices.

In 2011, Raftelis developed a water budget rate model that allowed the City to quickly view the impacts of alternative rates and budgets. The water budget rate structure was designed to ensure revenue stability, financial sufficiency and conservation program funding for the City. This tool was invaluable when presenting results in graphical format to the City Council so that they could see the impacts of different water budgets and different rate alternatives on their customers instantaneously. In addition, Raftelis was requested to prepare the billing system framework required to accommodate a water budget rate structure. As part of this engagement, Raftelis conducted a market research to identify potential vendors that had successfully implemented a water budget rate structure, and provided the City a list of vendors and their associated contact information.

In 2012, the City commissioned Raftelis to develop a Financial Plan Model to evaluate financing options for the capital improvement projects (CIP) included in its recently updated Water Master Plan, to assess the resulting financial impacts and to perform sensitivity analyses for different CIP scenarios.

## CITY OF VISTA (CA)

**Client Contact**
Elmer Alex , Principal Engineer
200 Civic Center Drive
Vista, CA 92084
P: 760.643.5416
E: ealex@cityofvista.com

**Date**
2011-2015

**Project Director and/or Manager**
Sanjay Gaur (Project Manager)

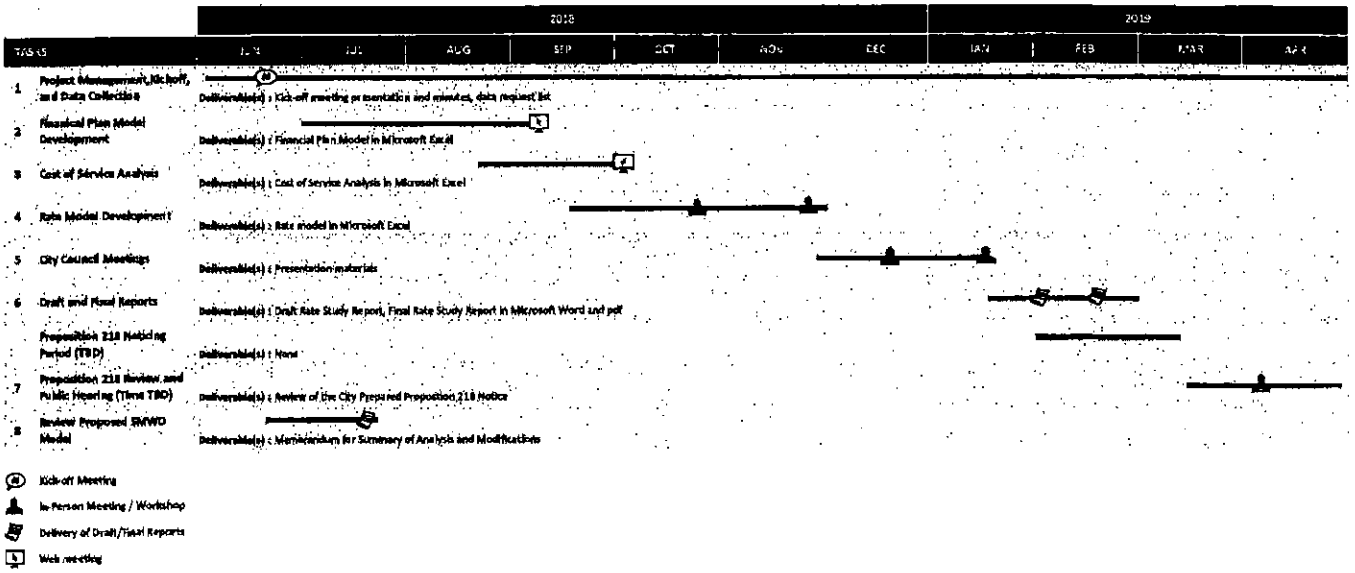
In 2011, the City of Vista (City) and Buena Sanitation District (District) engaged Raftelis to conduct a financial plan study that developed rates for both the City and District. Raftelis prepared two 10-year financial plans that evaluated the City and the District's operating and capital expenses, debt service, reserve requirements, and associated rates and usage patterns to recover the required revenue. This model was used to determine new rates for the City and the District.

In 2014, Raftelis updated the financial plan study and provided new rates for the City and District.

In 2015, Raftelis conducted a connection fee study for the City and District. This study took into account existing infrastructure, debt, reserve balances, and total meter capacity of the City and District in order to develop appropriate connection fees. The proposed connection fees were successfully adopted in November 2015.

# Project Schedule

Raftelis will complete the scope of services within the timeframe shown in the schedule below, but the schedule can be adjusted if needed. The proposed schedule assumes a notice-to-proceed by June 2018 and that Raftelis will receive the needed data in a timely manner and be able to schedule meetings as necessary. Project completion is estimated for April 2019.



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# Cost Data

Raftelis proposes to complete the scope of work outlined in our proposal on a time-and-materials basis with a not-to-exceed cost of $57,388 including related expenses. The following table provides a breakdown of the estimated level of effort required for completing each task described and the hourly billing rates for the personnel scheduled to complete the project. Expenses include costs associated with travel and a $10 per hour technology charge covering computers, networks, telephones, postage, etc.

| Task | Task Descriptions | Web Meetings | No of Meetings | Hours by Position | | | | | Total Fees & Expenses |
|---|---|---|---|---|---|---|---|---|---|
| | | | | PD | PM | SC | Admin | Total | |
| | HOURLY RATES | | | $290 | $235 | $180 | $75 | | |
| 1 | Project Management,Kickoff, and Data Collection | | 1 | 8 | 12 | 8 | 4 | 32 | $7,415 |
| 2 | Finanical Plan Model Development | 2 | | 1 | 8 | 26 | | 35 | $7,200 |
| 3 | Cost of Service Analysis | | | 1 | 6 | 16 | | 23 | $4,810 |
| 4 | Rate Model Development | | 2 | 1 | 16 | 20 | | 37 | $8,205 |
| 5 | City Council Meetings | | 2 | 1 | 28 | 8 | | 37 | $8,865 |
| 6 | Draft and Final Reports | | | 2 | 10 | 32 | 2 | 46 | $9,300 |
| 7 | Proposition 218 Review and Public Hearing | | 1 | | 12 | 4 | | 16 | $3,793 |
| 8 | Review Proposed SMWD Model | | | 1 | 12 | 24 | | 37 | $7,800 |
| | TOTAL ESTIMATED MEETINGS / HOURS | 2 | 6 | 15 | 104 | 138 | 6 | 263 | |
| | PROFESSIONAL FEES | | | $4,350 | $24,440 | $24,840 | $450 | $54,080 | |
| | | | | | | | | Total Fees | $54,080 |
| | | | | | | | | Total Expenses | $3,308 |
| | | | | | | | | TOTAL FEES & EXPENSES | $57,388 |

*Project Director and Technical Reviewer (PD/TR) - Sanjay Gaur*
*Project Manager (PM)- Steve Gagnon*
*SC - Staff Consultants*
*Admin - Administrative Staff*

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# Statement of Compliance

This proposal is in strict compliance with the Request for Proposal and Draft Agreement, and no exceptions to either are proposed.

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WHO IS

# Raftelis

**RAFTELIS HAS THE LARGEST CONSULTING PRACTICE IN THE NATION FOCUSING ON THE FINANCIAL AND RATE ASPECTS OF WATER-INDUSTRY UTILITIES.**

In 1993, Raftelis was founded to provide services that help utilities function as sustainable organizations while providing the public with clean water at an affordable price. With this goal in mind, Raftelis has grown to have the largest and most experienced utility financial and rate consulting practice in the nation. Raftelis has experience providing these services to hundreds of utilities across the country and abroad, allowing us to provide our clients with innovative and insightful recommendations that are founded on industry best practices. Throughout our history, we have maintained a strict focus on the financial and management aspects of utilities, building a staff with knowledge and skills that are extremely specialized to the services that we provide, and thus allowing us to provide our clients with independent and objective advice.

# WHAT MAKES RAFTELIS Unique

MSRB REGISTERED MUNICIPAL ADVISOR

Raftelis is registered with the U.S. Securities Exchange Commission (SEC) and the Municipal Securities Rulemaking Board (MSRB) as a Municipal Advisor. Registration as a Municipal Advisor is a requirement under the Dodd-Frank Wall Street Reform and Consumer Protection Act. All firms that provide financial forecasts that include assumptions about the size, timing, and terms for possible future debt issues, as well as debt issuance support services for specific proposed bond issues, including bond feasibility studies and coverage forecasts, must be registered with the SEC and MSRB to legally provide financial opinions and advice. Raftelis' registration as a Municipal Advisor means our clients can be confident that Raftelis is fully qualified and capable of providing financial advice related to all aspects of utility financial planning in compliance with the applicable regulations of the SEC and the MSRB.

## DEPTH OF RESOURCES

With more than 70 consultants, Raftelis has the largest water-industry financial and rate consulting practice in the nation.

### Benefit to the City

Our depth of resources will allow us to sufficiently staff this project with the qualified personnel necessary to efficiently and expeditiously meet the City's objectives.

## FOCUS

Raftelis' services are solely focused on providing financial, rate, and management consulting services to water-industry utilities.

### Benefit to the City

This focus allows Raftelis professionals to develop and maintain knowledge and skills that are extremely specialized to the services that we provide, and will allow us to provide the City with independent and objective advice.

## UNPARALLELED LOCAL & NATIONAL EXPERIENCE

Raftelis staff have assisted numerous utilities throughout California and the U.S. with financial, rate, and management consulting services.

### Benefit to the City

Our extensive experience will allow us to provide innovative and insightful recommendations to the City, and will provide validation for our proposed methodology ensuring that industry best practices are incorporated.

## RATE ADOPTION EXPERTISE

Raftelis has assisted numerous agencies with getting proposed rates successfully adopted.

### Benefit to the City

Our experience has allowed us to develop an approach that effectively communicates with elected officials about the financial consequences and rationale behind recommended rates to ensure stakeholder buy-in and successful rate adoption. This includes developing a "message" regarding the changes in the proposed utility rates that is politically acceptable, and conveying that message in an easy-to-understand manner.

## MODELING EXPERTISE

Raftelis has developed some of the most sophisticated yet user-friendly financial/rate models available in the industry.

### Benefit to the City

Our models are tools that allow us to examine different policy options and cost allocations and their financial/customer impacts in real time. Our models are non-proprietary and are developed with the expectation that they will be used by the client as financial planning tools long after the project is complete.

## INDUSTRY LEADERSHIP

Our senior staff is involved in shaping industry standards by chairing various committees within the American Water Works Association (AWWA) and Water Environment Federation (WEF). Raftelis' staff members have also contributed to many industry standard books regarding utility rate setting.

### Benefit to the City

Being so actively involved in the industry will allow us to keep the City informed of emerging trends and issues, and to be confident that our recommendations are insightful and founded on sound industry principles.

## EXPERTS ON CALIFORNIA REGULATORY REQUIREMENTS

The regulatory environment in California has become more stringent due to Proposition 218 and Government Code Section 54999. Raftelis staff are very knowledgable about these regulations and have made presentations on this subject for the Association of California Water Agencies (ACWA), California Society of Municipal Finance Officers (CSMFO), and CA-NV AWWA. In addition, we are frequently called on to be expert witnesses regarding these regulatory matters.

### Benefit to the City

This expertise will allow the City to be confident that our recommendations take into account all of these regulatory requirements.

# Leading the Industry

**Raftelis staff shape industry standards for water and wastewater utility finance and rate setting through our active leadership in AWWA, WEF, and EPA. Raftelis' staff includes:**

**AWWA**

- Chair and three members of Rates and Charges Committee
- Trustee of Management and Leadership Division
- Chair of Management and Leadership Division
- Member of Strategic Management Practices Committee
- Vice Chair and member of Finance, Accounting, and Management Controls Committee
- Division Liaison to Workforce Strategies Committee
- Trustee of Technical and Education Council

**WEF**

- Three members of Utility Management Committee
- Subcommittee Chair of Finance and Administration
- Member of Technical Practices Committee
- Two members of WEFTEC Conference Planning Committee
- Member of Utility Management Conference Planning Committee

**EPA**

- Member of Environmental Financial Advisory Board

# We Wrote the Book

**Raftelis staff have co-authored many of the industry's leading guidebooks regarding water and wastewater financial issues and rate setting, including:**

- AWWA's *Manual M1, Principles of Water Rates, Fees and Charges*
- AWWA's *Water Rates, Fees, and the Legal Environment, 2nd Edition*
- AWWA's *Manual M29, Water Utility Capital Financing*
- AWWA's *Financial Management for Water Utilities: Principles of Finance, Accounting, and Management Controls*
- AWWA's *Manual M5, Water Utility Management, 2nd Edition*
- WEF's *Manual of Practice No. 27 - Financing and Charges for Wastewater Systems*
- WEF's *The Effective Water Professional: Leadership, Communication, Management, Finance, and Governance*
- *Water and Wastewater Finance and Pricing: The Changing Landscape*

Raftelis also conducts and publishes the national *Water and Wastewater Rate Survey* in conjunction with AWWA, which is the most comprehensive collection of water and wastewater utility financial and rate data available in the industry. We also conduct the *California-Nevada Water and Wastewater Rate Survey* in collaboration with the CA-NV Section of the AWWA.