

CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT

AGENDA REGULAR MEETING WATER BOARD

Tuesday, October 14, 2025 – 9:30 a.m.

MARGARET H. CHANDLER WATER RECLAMATION PLANT
399 CHANDLER PLACE
San Bernardino, California

WATER BOARD

TONI CALLICOTT
President

Commissioners

WAYNE HENDRIX, P.E.
DAVID E. MLYNARSKI
RIKKE V. JOHNSON
THOMAS BRICKLEY



MIGUEL J. GUERRERO, P.E.

General Manager

ROBIN L. OHAMA

Deputy General Manager

STEVE R. MILLER

Director of Water Utility

KEVIN T. STEWART, P.E.

Director of Water Reclamation

CYNTHIA J. MOUSER

Director of Finance

JENNIFER L. SHEPARDSON

Director of Environmental &
Regulatory Compliance

“Trusted, Quality Service since 1905”

Welcome to a meeting of the Water Board of the City of San Bernardino

- The City of San Bernardino Municipal Water Department recognizes its obligation to provide equal access to those individuals with disabilities. Please contact the General Manager's Office (909-384-5191) two working days prior to the meeting for any requests for reasonable accommodation, to include interpreters.
- All documents for public review are on file with the Water Department located at 1350 South “E” Street, San Bernardino or may be accessed online at <https://www.sbmwd.org/agendacenter>
- Please turn off or mute your cell phone while the meeting is in session.
- Any member of the public desiring to speak to the Water Board concerning any matter not on the agenda, but which is within the subject matter jurisdiction of the Water Board, may address the body during the period reserved for public comments. Said total period for public comments shall not exceed forty-five (45) minutes unless such time limit is extended by the Water Board. A three-minute limitation shall apply to each member of the public unless such time limit is extended by the Water Board. No member of the public shall be permitted to “share” his/her three minutes with any other member of the public.
- The Water Board may refer any item raised by the public to staff for appropriate action or have the item placed on the next agenda of the Water Board. However, no other action shall be taken nor discussion held by the Water Board on any item which does not appear on the agenda unless the action is otherwise authorized in accordance with the provisions of subdivision (b) of Section 54954.2 of the Government Code.
- Public comments will not be received on any item on the agenda when a public hearing has been conducted and closed.

THE SAN BERNARDINO MUNICIPAL WATER DEPARTMENT ENCOURAGES THE PUBLIC TO VIEW THIS WATER BOARD MEETING ONLINE. THE MEETING WILL BE LIVE STREAMED VIA YOUTUBE AT: <https://bit.ly/YouTubeSBWater>

MEMBERS OF THE PUBLIC WHO WISH TO COMMENT ON MATTERS BEFORE THE WATER BOARD MAY PARTICIPATE IN THE FOLLOWING WAYS:

1. IF ATTENDING IN PERSON, MAY PROVIDE COMMENT AT THE APPROPRIATE TIME DICTATED BY THE AGENDA AND WATER BOARD PRESIDENT.
2. COMMENTS AND CONTACT INFORMATION MAY BE E-MAILED TO Comments@sbmwd.org BY 8:30 A.M. THE DAY OF THE SCHEDULED MEETING TO BE INCLUDED IN THE WRITTEN RECORD.

CALL TO ORDER

ROLL CALL

1. ANNOUNCEMENTS BY MEMBERS OF THE WATER BOARD
2. PUBLIC COMMENTS ON ITEMS NOT ON THE AGENDA: A three-minute limitation shall apply to each member of the public who wishes to address the Water Board of any item not listed on the agenda. There is no limit on the number of items that may be discussed within the three-minute time limit. **To be called by the Water Board President, please see special public comments instructions above.**
3. PUBLIC COMMENTS ON ITEMS LISTED ON THE AGENDA: A three-minute limitation shall apply to each member of the public who wishes to address the Water Board of any item listed on the agenda, excluding public hearings. There is no limit on the number of items that may be discussed within the three-minute time limit. **To be called by the Water Board President, please see special public comment instructions above.**
4. CONSENT CALENDAR

MOTION: That the motions indicated by consent calendar items 4A through 4C be adopted, except for _____.

MOTION:_____ SECONDED:_____

A. PAYROLL

MOTION: Approve the payroll for the pay periods beginning September 22, 2025 through October 5, 2025 and October 6, 2025 through October 19, 2025.

B. CONTRACTS AND BILLS

MOTION: Approve the payment of contracts and bills to be presented at this meeting.

C. MINUTES

MOTION: Approve the minutes of September 23, 2025, of the Water Board.

DISCUSSION ITEMS

5. APPROVAL OF AGREEMENT WITH FOR THE COMPREHENSIVE WATER, SEWER TREATMENT, WHOLESALE WATER RATE AND CAPACITY CHARGES STUDY PROJECT– REQUEST FOR PROPOSAL NO. 1870: The Department requires a comprehensive evaluation of its water, sewer treatment, and wholesale water rates, along with capacity charges, to ensure they are financially sustainable, equitable, and aligned with regulatory requirements. Periodic rate and capacity charge studies are necessary to recover the full cost of providing service, support long-term capital and operational needs, and maintain compliance with state law.

Department staff solicited professional consulting services with demonstrated expertise in utility financial planning and rate analysis and issued Request for Proposal (RFP) No. 1870 for a Comprehensive Water, Sewer Treatment, Wholesale Water Rate and Capacity Charges Study. The Department received two (2) responses on September 26, 2025, and completed a thorough review and ranking of each proposal submitted. Staff recommends that Raftelis Financial Consultants, Inc. be awarded a Professional Service Agreement to provide a Comprehensive Water, Sewer Treatment, Wholesale Water Rate and Capacity Charges Study pursuant to RFP No. 1870.

The funding source for this contract is the FY 2025/2026 Water Budget Professional Services (Account Number 101400-5201) which currently has a total of \$238,785.00 in unencumbered funds.

MOTION: Approve the Professional Service Agreement with Raftelis Financial Consultants, Inc., in an amount not to exceed ONE HUNDRED SIXTY-EIGHT THOUSAND SEVEN HUNDRED SIXTY-FOUR AND 00/100 DOLLARS (\$168,764.00) for the Comprehensive Water, Sewer Treatment, Wholesale Water Rate and Capacity Charges Study in accordance with Request for Proposal No. 1870; and authorize the General Manager to execute the Agreement.

MOTION:_____ SECONDED:_____

6. AUTOMATIC ANNUAL WATER CAPACITY CHARGE INCREASE FOR FISCAL YEAR 2026/2027: Rule and Regulation No. 5 requires that “On July 1 of each calendar year the acquisition of service charge shall automatically increase in proportion to the published twelve-month increase measured in September each year in the Construction Cost Index. This index is published in “Engineering News Record,” a publication of McGraw-Hill, Inc.

The Board of Water Commissioners may, at its option, determine by resolution adopted prior to November 1, that such an increase shall not be effective for the next succeeding fiscal year (always starting on July 1). In the event the Construction Cost Index has not changed or has decreased, the charge shall not be changed.”

The “Engineering News Record (ENR)” Construction Cost Index shows a 2.2 percent increase for the period of September 2024 through September 2025.

MOTION: A motion to allow the automatic ENR increase to 2.2 percent to the water capacity charges in Rule and Regulation No. 5 to become effective July 1, 2026 and direct staff to provide notification to current and future project holders of the effective date and amount of water capacity charge increases.

or

A motion adopting a resolution foregoing the automatic annual increase in water capacity charges for the 2026/2027 fiscal year period, as set forth in Rule and Regulation No. 5 of the Water Board of the City of San Bernardino.

MOTION:_____ SECONDED:_____

7. CONTRACT NO. 1729 – INFRASTRUCTURE ENGINEERING CORPORATION, AN ARDURRA COMPANY – CHANGE ORDER NO. 3 THIRD PARTY CONSTRUCTION MANAGEMENT AND INSPECTION SERVICES PROJECTS (PROJECT NO. C17000194): On May 12, 2020, the Water Board approved Contract No. 1729 with Infrastructure Engineering Corporation, an Ardurra Company (IEC) to provide Professional Third-Party Construction Management and Inspection Services (CM) for multiple simultaneous projects at the Water Reclamation Plant (WRP). The construction projects have encountered various delays ranging from scarcity of material supply, manufacturing design challenges with the flares, and completion of requirements for permitting of the Tertiary Treatment System Project (TTS).

In February 2025, IEC notified the Department that funds under the existing agreement were nearly depleted, though significant work remained. IEC submitted Amendment Request No. 3 for additional Construction Management Services under Contract No. 1729. Change Order No. 3 seeks ratification of these services and payment for outstanding invoices already submitted.

The funding source for this project is the FY 2025/2026 Sewer Treatment Fund Capital Improvement Project titled *CWF-Phase 4 Tertiary Treatment Project* (Project No. C1700194) which currently has a total of \$571,880.82 in unencumbered funds.

MOTION: Ratify Change Order No. 3 to Contract No. 1729 with Infrastructure Engineering Corporation, an Ardurra Company in the amount of TWO HUNDRED EIGHTY-NINE EIGHT HUNDRED FORTY-ONE AND 00/100 DOLLARS (\$289,841.00) and authorize the General Manager to execute the change order.

MOTION:_____ SECONDED:_____

8. TRANSFER OF FUNDS AND APPROVAL OF CHANGE ORDER NO. 4 WITH INFRASTRUCTURE ENGINEERING CORPORATION, AN ARDURRA COMPANY (CONTRACT 1729) FOR THE THIRD-PARTY CONSTRUCTION MANAGEMENT SERVICES OF THE TERTIARY TREATMENT SYSTEM PROJECT (CO 00194): On May 12, 2020, the Water Board approved Contract No. 1729 with Infrastructure Engineering Corporation, an Ardurra Company (IEC) to provide Professional Third-Party Construction Management and Inspection Services (CM) for multiple simultaneous projects at the Water Reclamation Plant (WRP). The construction projects have encountered various delays ranging from scarcity of material supply, manufacturing design challenges with the flares, and completion of requirements for permitting of the Tertiary Treatment System Project (ITS).

IEC proposes to provide full-time CMS services throughout August 2025, prior to the General Construction Contractor placing the project on suspension pending the delivery of equipment. During this suspension period, certain CMS overhead costs will continue to accrue and/or are necessary. It is anticipated that these part-time costs will persist through the end of November 2025. In December 2025, full-time costs are expected to resume as the General Contractor concludes their contractual obligations.

Change Order No. 4 in the amount of \$215,980.00 has been prepared for the extra work to be performed by IEC under Contract No. 1729 and upon Water Board approval, the revised contract end date will be December 31, 2025.

Staff proposes transferring funds from the project titled *Clean Water Factory – Phase 4 – Tertiary Treatment Design (C.O. 00138)* and requests a budget transfer in the amount of \$250,000.00 from the *Clean Water Factory Project – Phase 2 – Tertiary Treatment Design (C.O. 00138)* to the *Clean Water Factory Project – Phase 4 – Tertiary Treatment Construction (C.O. 00194)*.

MOTION: Approve the transfer of \$250,000.00 from the *Clean Water Factory Project – Phase 2 – Tertiary Treatment Design (C.O. 00138)* to the *Clean Water Factory Project – Phase 4 – Tertiary Treatment Construction (C.O. 00194)*; and

Approve Change Order No. 4 to Infrastructure Engineering Corporation, an Ardurra Company, in the amount of TWO HUNDRED FIFTEEN THOUSAND NINE HUNDRED EIGHTY AND 00/100 DOLLARS (\$215,980.00); and authorize the General Manager to execute the change orders.

MOTION: _____ SECONDED: _____

9. CONTRACT NO. 1723 – MEYERS AND SONS CONSTRUCTION, LLC -CHANGE ORDER NO. 7 – TERTIARY TREATMENT SYSTEM PROJECT (PROJECT NO. C1700194): On April 25, 2023, the Department entered into Contract No. 1723 with Myers & Sons Construction, LLC (Myers), for the construction of the Tertiary Treatment System Project. Several change orders between November 2023 and March 2025 were issued and approved by the Water Board for a variety of issues related to Contract No. 1723.

During a field inspection of the new duct bank by Department staff, the need for two (2) additional tracer wires and four (4) additional access points/termination points was confirmed. As such, the Contractor installed the additional tracer wires and access points on the duct bank to facilitate future use and discovery. Upon the Department's request, the Contractor will also add additional tracer wire, valve cans, and termination points around the Project site. Additional pipe support, deck design, conduit and wiring, concrete removal, local control placement, and trolley door modification work is necessary at this time.

Change Order No. 7 in the amount of \$185,732.16 has been prepared for this extra work to be performed by Meyers under Contract No. 1723.

The funding source for this project is the FY 2025/2026 Sewer Treatment Fund Capital Improvement Project titled *CWF-Phase 4 Tertiary Treatment Project* (Project No. C1700194) which currently has a total of \$571,880.82 in unencumbered funds.

MOTION: Approve Change Order No. 7 to Contract No. 1723 with Meyers & Sons, LLC in the amount of ONE HUNDRED EIGHTY-FIVE THOUSAND SEVEN HUNDRED THIRTY-TWO AND 16/100 DOLLARS (\$185,732.16); and authorize the General Manager to execute the change order.

MOTION:_____ SECONDED:_____

10. REPORTS:

- A. Report of the President
- B. Report of the Commissioners
- C. Report of the Directors
- D. Report of the General Manager

11. ADJOURNMENT

The next regular meeting of the Water Board is scheduled for 9:30 a.m., October 28, 2025, at The Margaret H. Chandler Water Reclamation Plant, 399 Chandler Place, San Bernardino, CA 92408.



**City of San Bernardino
Municipal Water Department**

399 Chandler Place
San Bernardino, CA 92408
<http://www.sbcitywater.org>

*President Cecilia "Toni"
Callicott*

Commissioners

*Wayne Hendrix
David Mlynarski
Rikke Johnson
Thomas Brickley*

MINUTES

FOR THE

WATER BOARD OF THE CITY OF SAN BERNARDINO

SEPTEMBER 23, 2025

One member of the Water Board wished to attend the September 23, 2025 meeting pursuant to AB 2449, which creates an exception to the Brown Act that allows legislative body members to appear by teleconference at a meeting due to "just cause" or "emergency circumstance" without complying with the standard teleconferencing requirements that each teleconference location be identified in the notice and the agenda and that each teleconference location be accessible to the public.

Commissioner Brickley stated that he was using the "just cause" exception as he was in the state of Montana providing caregiving services to his sister and was unable to attend in person as a result.

The record reflects that Commissioner Brickley attended this meeting via the "just cause" exception as outlined by AB 2449.

CALL TO ORDER

The Regular Meeting of the Water Board of the City of San Bernardino was called to order by President Toni Callicott at 9:30 AM, Tuesday, September 23, 2025, in-person and livestream via YouTube.

ROLL CALL

Attendee Name	Title	Status	Arrived
Cecilia "Toni" Callicott	President	Present	9:30 AM
Wayne Hendrix	Vice President	Present	9:30 AM
David Mlynarski	Board Member	Present	9:30 AM
Rikke Johnson	Board Member	Present	9:30 AM
Thomas Brickley	Board Member	Present	9:30 AM
Miguel Guerrero	General Manager	Present	9:30 AM

4C

1. **ANNOUNCEMENTS BY THE BOARD:** Commissioner Johnson announced that Congressman Pete Aguilar would be a speaker at the Akoma Unity Center at 2:00 p.m. on Tuesday, September 23, 2025.

Commissioner Johnson stated that Congressman Aguilar would be speaking on the topic of affordable care and Medicare.

2. **PUBLIC COMMENTS ON ITEMS NOT ON THE AGENDA:** None.
3. **PUBLIC COMMENTS ON ITEMS LISTED ON THE AGENDA:** None.
4. **CONSENT CALENDAR – ITEMS 4A THROUGH 4C:**

A. PAYROLL:

	<u>Water Fund</u>	<u>Sewer Treatment</u>	<u>Total</u>
Claims:3013961-3014109			
Accounts Payable	\$4,045,456.59	\$2,105,966.44	\$6,151,423.03
Gross Payroll	<u>\$494,391.55</u>	<u>\$440,568.35</u>	<u>\$934,959.90</u>
08/25/25-09/07/25			
TOTALS	<u>\$4,539,848.14</u>	<u>\$2,546,534.79</u>	<u>\$7,086,382.93</u>

Payroll for the pay period beginning September 8, 2025 through September 21, 2025.

B. CONTRACTS AND BILLS: Contracts and bills presented at this meeting.

C. MINUTES: September 9, 2025.

RESULT: APPROVED 5-0 BY ROLL CALL VOTE
MOVER: W. Hendrix
SECONDER: R. Johnson
ABSTAINED: N/A
ABSENT: N/A

DISCUSSION ITEMS

5. **SPECIFICATION 1866 – WR DIVISION PROGRAM MANAGEMENT – WATER SYSTEMS CONSULTING, INC (WSC):** The Department owns and operates an extensive array of sewer collections and treatment infrastructure throughout the Service Area. Several Master Plans outlined critically important Capital Improvement Program (CIP) Projects that were recommended for implementation and completion on progressing timelines. Each year, sufficient budget was allocated for these projects. Unfortunately, due to challenges with finding, hiring, and retaining qualified and experienced staff members, the Department was not able to complete or progress on a significant number of these critical CIP Projects.

During an April 2025 internal meeting, staff identified a temporary plan for achieving progress on these projects to keep from falling further behind schedule. This included temporarily bringing a Professional Consultant on to perform “WR Division Program Management” for nine (9) specific projects. This consultant would perform overall management of the listed projects for a period matching the remainder of FY25/26. The consultant would not perform Professional Design or 3rd Party Construction Management services for the listed projects. If the quality of service met the Department’s standard of service, the Department would have the option to extend these services for two (2) additional 1-year terms matching the Department’s fiscal year dates.

In response to a thorough outreach effort and a publicly listed RFP, nine (9) proposals were received. The top four (4) ranked firms were invited to participate in an interview process. Following the interviews, Water Systems Consulting, Inc (WSC) was unanimously viewed as the top-ranked firm based upon a list of factors.

The funding source for this WR Division Program Management FY25/26 was the FY 2025/2026 Operating Fund account 204090-5201 – *Professional Services*. This Project was included in the proposed budget. There were sufficient funds in the account to cover the Agreement.

MOTION: Approve the Professional Service Agreement with Water Systems Consulting, Inc. for Specification Number 1866 in an amount not-to-exceed FOUR HUNDRED TWELVE THOUSAND SIX HUNDRED EIGHTEEN AND 00/100 DOLLARS (\$412,618.00). The General Manager was authorized to execute the Professional Service Agreement.

RESULT:	APPROVED 5-0 BY ROLL CALL VOTE
MOVER:	D. Mlynarski
SECONDER:	T. Brickley
ABSTAINED:	N/A
ABSENT:	N/A

6. APPROVAL OF PURCHASE ORDER FOR SERVICE INSTALLATIONS

AT 701 S. MT. VERNON AVENUE: The Department received a request from San Bernardino Valley College to install and abandon some water service installation services.

The Department utilized an approved list of five (5) construction firms to serve as on-call contractors under Contract No. 1825 – *On-Call Potable Water And Sanitary Sewer Repair Services*. Staff solicited bids from these contractors and four (4) bids were received and opened on August 1, 2025.

Staff recommended that the Water Board approve the issuance of a purchase order in the amount of \$115,000 to Dominguez Engineering, Inc.

The funding source from this contract was Construction Orders assigned for Fiscal Year 2025/26. San Bernardino Valley College would be issued an invoice to cover these installation fees and the water capacity charges established by Rule and Regulation No. 5. The collected installation fees would be deposited into the construction orders listed in the Staff Report.

MOTION: Approve the purchase order for the project installations located at 701 S. Mt. Vernon Avenue by Dominguez Engineering, Inc. in the amount of \$115,000.

RESULT: APPROVED 3-0 BY ROLL CALL VOTE W/ 2 ABSENT

MOVER: W. Hendrix

SECONDER: R. Johnson

ABSTAINED: N/A

ABSENT: N/A

7. REPORTS:

A. Report of the President – President Callicott thanked the Executive team for the Employee Appreciation Pizza Lunch on September 18, 2025.

B. Report of the Commissioners – None.

C. Report of the Directors –

1. Director Shepardson stated that the commercial, general liability, cyber security, EPL, and other annual insurance renewals would be coming before the Water Board in October for approval.
2. Director Miller stated that the construction in front of the Administration Building should be completed in the next two (2) weeks.
3. Deputy General Manager Ohama stated that the Water Conservation team would be attending the following events:
 - Mountain Park HOA Presentation on October 1, 2025 at 6:00 p.m.– focusing on upcoming State regulations that prohibit watering of non-functional turf on Commercial, Industrial and Institutional properties.
 - Arroyo Valley High School Mentor Night on October 1, 2025.

D. Report of the General Manager – General Manager Guerrero stated that the Mayor & City Council approved the lease agreement between the Department and City for the Animal Shelter expansion.

10. PUBLIC COMMENT ON CLOSED SESSION ITEMS: None.

11. CLOSED SESSION:

Pursuant to Government Code Section(s):

A. Conference with legal counsel – existing litigation – pursuant to Government Code Section 54956.9 (a) and (d)(1): Claim No. 25-011.

No reportable action was taken.

12. ADJOURNMENT

The next regular meeting of the Water Board was scheduled for *9:30 a.m., October 14, 2025*, at The Margaret H. Chandler Water Reclamation Plant, 399 Chandler Place, San Bernardino, CA 92408.

By: _____
Miguel J. Guerrero
General Manager

CITY OF SAN BERNARDINO
MUNICIPAL WATER DEPARTMENT
WATER BOARD
STAFF REPORT

TO: Miguel J. Guerrero, P.E., General Manager 
FROM: Cynthia J. Mouser, Director of Finance
SUBJECT: APPROVAL OF AGREEMENT WITH FOR THE COMPREHENSIVE WATER, SEWER TREATMENT, WHOLESALE WATER RATE AND CAPACITY CHARGES STUDY PROJECT- REQUEST FOR PROPOSAL NO. 1870
DATE: October 6, 2025
CC: D. Andolsen

BACKGROUND:

The Department requires a comprehensive evaluation of its water, sewer treatment, and wholesale water rates, along with capacity charges, to ensure they are financially sustainable, equitable, and aligned with regulatory requirements. Periodic rate and capacity charge studies are necessary to recover the full cost of providing service, support long-term capital and operational needs, and maintain compliance with state law.

To accomplish this, the Department solicited professional consulting services with demonstrated expertise in utility financial planning and rate analysis. Staff issued Request for Proposal (RFP) No. 1870 for a Comprehensive Water, Sewer Treatment, Wholesale Water Rate and Capacity Charges Study. The selected consultant will prepare a comprehensive study, provide recommendations, and support staff with implementation of updated rates and charges. The Department received two (2) responses on September 26, 2025, from the following firms: Raftelis Financial Consultants, Inc. and Water Resources Economics, LLC.

Staff completed a thorough review and ranking of each proposal submitted. The basis of these ratings included but was not limited to experience, depth of understanding of the project, and pricing. The following table summarizes the overall rating of the firms:

FIRM	LOCATION	PROPOSED FEE	OVERALL RATING
RAFTELIS FINANCIAL CONSULTANTS, INC.	LOS ANGELES	\$168,764.00	339/400
WATER RESOURCES ECONOMICS, LLC	CULVER CITY	\$220,660.00	336/400

October 6, 2025

SUBJECT: APPROVAL OF AGREEMENT WITH FOR THE COMPREHENSIVE WATER, SEWER TREATMENT, WHOLESALE WATER RATE AND CAPACITY CHARGES STUDY PROJECT- REQUEST FOR PROPOSAL NO. 1870

Based upon staff's review of the proposals, Raftelis Financial Consultant, Inc. (Raftelis) received the highest overall ranking at the best value for the Department. Therefore, staff recommends that Raftelis be awarded a Professional Service Agreement to provide a Comprehensive Water, Sewer Treatment, Wholesale Water Rate and Capacity Charges Study pursuant to RFP No. 1870. A copy of the proposal submitted by Raftelis is attached.

GOALS AND OBJECTIVES:

This proposed Agreement aligns with the Department's Strategic Plan under Goal #5: Ensure Financial Health and Transparency, Subgoal #1 Adopt a Five-Year Financial Plan.

FISCAL IMPACT:

The funding source for this contract is the FY 2025/2026 Water Budget Professional Services (Account Number 101400-5201) which currently has a total of \$238,785.00 in unencumbered funds.

RECOMMENDATION:

It is recommended that the Water Board make the following motion:

- Approve the Professional Service Agreement with Raftelis Financial Consultants, Inc., in an amount not to exceed ONE HUNDRED SIXTY-EIGHT THOUSAND SEVEN HUNDRED SIXTY-FOUR AND 00/100 DOLLARS (\$168,764.00) for the Comprehensive Water, Sewer Treatment, Wholesale Water Rate and Capacity Charges Study in accordance with Request for Proposal No. 1870; and authorize the General Manager to execute the Agreement.

Respectfully submitted,



Cynthia J. Mouser
Director of Finance

sdm

Attachments : Raftelis Financial Consultants, Inc. - Cost Proposal
Raftelis Financial Consultants, Inc. - Proposal



City of San Bernardino Water Department

**Comprehensive Water, Sewer Treatment, Wholesale
Water Rate and Capacity Charges Study Project**

COST PROPOSAL / RFP NO. 1870 / SEPTEMBER 26, 2025



COST

Cost

FIRM NAME

Raftelis Financial Consultants, Inc.

CERTIFICATION

I am entitled to represent the firm, empowered to submit the proposal, and authorized to sign a contract with the Department.

Sincerely,



John Wright

Senior Manager

TOTAL PRICE

\$168,764

RATES BY STAFF LEVEL AND ANTICIPATED HOURS

The following table provides a breakdown of our proposed fee for this project. This table includes the estimated level of effort required for completing each task. Expenses include costs associated with travel and a \$10 per hour technology charge covering computers, networks, telephones, postage, etc.

Our scope of work includes the number of in-person and/or virtual meetings shown in the table below. Should the Department require additional meetings or presentations to stakeholders, these can be arranged upon request at an added cost, which will be determined based on the scope and content of the meeting and/or presentation requested.

Tasks	Meetings		Hours										Total Fees & Expenses
	Virtual	In Person	John Wright	Brian Bass	Todd Cristiano	Lundyn Harrelson	Nicki Bartak	Brandon Vatter	Matt Wittern	Creative Services	Admin	Total Hours	
Retail Water and Sewer Rates and Wholesale Water Rates													
1. Project Initiation and Data Collection		1	8	8	4	8	8					36	\$14,596
2. Financial Plan Development	1		6	8		20	20					54	\$15,340
3. Cost of Service Analysis	1		6	8	4	24	24					66	\$19,040
4. Rate Design and Alternatives	1		6	8	4	16	16					50	\$14,720
5. Proposition 218 Compliance and Notice Preparation	1		1	1		3			20	10		35	\$9,365
6. Public Outreach and Hearings		3	10				10		24	16		60	\$18,238
7. Final Report and Rate Model	1		6	6		20	20					52	\$14,730
Water and Sewer Capacity Charges													
1. Project Initiation and Background Review		1	2	2		2	2	2			2	12	\$5,977
2. Data Collection and System Analysis	1		2	2		6	6	12				28	\$8,750
3. Cost Allocation and Methodology Development	1		2	2		6	6					16	\$4,550
4. Capacity Charge Calculation	1		2	2		6	6					16	\$4,550
5. Financial and Legal Review	1		6	6		6	4					22	\$6,630
6. Stakeholder Communication and Public Communication		2							24	16		40	\$12,038
7. Documentation and Deliverables	1		4	4		14	14					36	\$10,180
Geothermal Rates													
1. Project Initiation and Background Review	1		1	2		2						5	\$1,500
2. Data Collection and System Analysis	1		2	2		12						16	\$4,550
3. Geothermal Rate Calculation	1		2	2		10						14	\$4,010
Total Meetings / Hours	13	7	66	63	12	155	136	14	68	42	2	558	–
Hourly Billing Rates	–	–	\$340	\$295	\$375	\$260	\$260	\$340	\$295	\$170	\$100	–	–
Total Professional Fees	–	–	\$22,440	\$18,585	\$4,500	\$40,300	\$35,360	\$4,760	\$20,060	\$7,140	\$200	–	\$153,345
Travel Expenses													\$9,839
Technology Fee													\$5,580
Total Expenses													\$15,419
Total Fees & Expenses													\$168,764

RATES FOR ADDITIONAL PROFESSIONAL SERVICES

Project team hours and expenses will be billed on the same invoice. Expenses related to travel will be billed at cost. Additional services outside the agreed upon scope of work will be billed on a time and materials basis. Raftelis' billing rates can be found below. These rates will be in effect for calendar year 2025 and will then increase annually by 3% unless specified otherwise by contract.

POSITION	HOURLY BILLING RATE**
Chair/Chair Emeritus	\$500
Chief Executive Officer/President	\$475
Executive Vice President/Senior Principal	\$425
Senior Vice President	\$400
Vice President	\$375
Senior Manager	\$340
Principal Consultant	\$310
Manager	\$295
Senior Consultant	\$260
Consultant	\$230
Creative Director	\$230
Associate Consultant	\$195
Graphic Designer	\$170
Analyst	\$150
Administration	\$100
Technology Charge*	\$10

**Technology/Communications Charge: This is an hourly fee charged monthly for each hour worked on the project to recover telephone, facsimile, computer, postage/overnight delivery, conference calls, electronic/computer webinars, photocopies, etc.*

***For services related to the preparation for and participation in deposition and trials/hearings, the standard billing rates listed above will be increased by an amount up to 50 percent.*



City of San Bernardino Water Department

**Comprehensive Water, Sewer Treatment, Wholesale
Water Rate and Capacity Charges Study Project**

PROPOSAL / RFP NO. 1870 / SEPTEMBER 26, 2025





Giving back

The Raftelis Charitable Gift Fund seeks to make a difference on issues that matter to our clients and employees by helping build sustainable, inclusive communities locally and worldwide. We do this by allocating company profits and employee contributions of time and money. We support organizations that:

- Promote efficient, sustainable resource use
- Advance diversity, equity, and inclusion within the public sector
- Invest in access to clean water and sanitation
- Help vulnerable communities by addressing affordability issues



Raftelis is registered with the U.S. Securities and 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 financial planning in compliance with the applicable regulations of the SEC and the MSRB.

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EXECUTIVE SUMMARY LETTER

September 26, 2025

Sydney Morrison
Contracts Administrator
City of San Bernardino Water Department
1350 S. E Street
San Bernardino, CA 92408

Subject: Proposal for Comprehensive Water, Sewer Treatment, Wholesale Water Rate and Capacity Charges Study Project (RFP NO. 1870)

Raftelis served the City of San Bernardino (City) Water Department (Department) in 2022 when we completed your most recent comprehensive rate study. We would be honored to serve the Department once again. Our proposal is for the entire suite of services described in the Department's RFP including retail water rates, retail sewer rates, wholesale water rates, water capacity charges, sewer capacity charges, and geothermal utility rates.

I'm confident we can provide a higher level of service than our competitors and our own previous work for the Department. Here are some of the key factors that make Raftelis your best choice for this project:



Complex Utility Expertise

There are very few highly qualified utility rate consulting firms in the United States. Among this group, no other firm has as much experience working with large water and wastewater utilities. Our clients include some of the most complex utilities in the nation, and we have relationships with many spanning 15+ years. We have the experience necessary to successfully serve the Department.



Unparalleled Staff Resources and Highly Experienced Project Team

We've created a team of the industry's finest rate consultants, affordability experts, strategic communicators, and data wizards. Although Raftelis has grown over the past few years, we remain committed to recruiting top talent and to matching new talent with the projects for which they are best suited. This commitment is exemplified by our highly experienced project team composed of:

- Project Manager: John Wright, CPA
- Deputy Project Manager: Brian Bass
- Technical Advisor: Todd Cristino
- Engineering Subject Matter Expert: Brandon Vatter, PE
- Communications and Outreach Subject Matter Expert: Matt Wittern, APR, PMP
- Staff Consultants: Lundyn Harrelson and Nicki Bartak



Understanding of the Department

We created detailed financial models for the Department in your most recent comprehensive rate study, and we are always looking for ways to improve. Rather than spending time getting up to speed on the Department's operations, we can hit the ground running and immediately get to the task of improving upon our past work for you.



Industry Leadership

We continue to be the industry leader in utility rate studies because of our passion for client satisfaction. Our goal is to exceed the expectations of our clients and continue to be the most sought-after consulting firm in the industry.



Proposition 218 and Mitigation Fee Act Expertise

Raftelis has completed similar water and sewer rate studies for other California utilities. We have a long history of successfully developing rates that comply with the requirements of Proposition 218. Many of our clients are represented by leading regulatory attorneys. As a result, we are familiar with the ramifications of recent Proposition 218 litigation on the tiered water rate structures of the City of San Diego and the Otay Water District. We have also completed water and sewer capacity charge studies for utilities across California and have a detailed understanding of the Mitigation Fee Act (California Government Code Sections 66000–66025).

We are proud of the resources that we can offer the San Bernardino Water Department. If you have any questions about our proposal, please do not hesitate to contact me at 951.395.1674 or jwright@raftelis.com.

Sincerely,

John Wright

Senior Manager

Raftelis acknowledges the receipt of Addendums 1 and 2.

Requested Modifications to the Department's Standard Professional Service Agreement (Sample Agreement)

Except for our proposed modifications shown below, Raftelis is willing to enter into a contract under the terms and conditions prescribed by this RFP and in the Sample Agreement. We respectfully ask for your consideration of our proposed modifications.

11. Standard of Care. Consultant's services will be performed in accordance with generally accepted professional practices and principles and in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions, as of the time and at the location the services are provided. Consultant may rely on all data and information provided by or on behalf of the City to perform the services hereunder.

17. Indemnification.

a. ~~To the fullest extent permitted by law,~~ Consultant shall defend (with counsel reasonably approved by the City), indemnify and hold the City, its elected and appointed officials, officers, employees, ~~agents,~~ and authorized volunteers free and harmless from ~~any and~~ all claims, demands, causes of action, suits, actions, proceedings, costs, expenses, liability, judgments, awards, decrees, settlements, loss, damage or injury ~~of any kind,~~ in law or equity, to property or persons, including wrongful death, (collectively, "Claims") in ~~any manner arising out of, pertaining to each case to, or incident to any alleged~~ the extent caused by the negligent acts, errors or omissions, or willful misconduct of Consultant, its officials, officers, employees, subcontractors,

consultants or agents in ~~connection with~~ the performance of the Consultant's services, ~~the Project, or under~~ this Agreement, ~~including without limitation the payment of all consequential damages, expert witness fees and attorneys' fees and other related costs and expenses.~~ Notwithstanding the foregoing, to the extent Consultant's services are subject to Civil Code Section 2782.8, the above indemnity shall be limited, to the extent required by Civil Code Section 2782.8, to Claims that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the Consultant. Consultant's obligation to indemnify shall not be restricted to insurance proceeds, if any, received by the City, the City Council, members of the City Council, elected and appointed officials, officers, its employees, or authorized volunteers. Consultant shall have no obligation to indemnify City or any other indemnified party against liability for claims by a third party for failure to comply with its obligations under Article XIII D of the California Constitution (Proposition 218).

b. Additional Indemnity Obligations. Consultant shall defend, with counsel of ~~City's choosing and at reasonably acceptable to City, all Claims to the extent of~~ Consultant's ~~own cost, expense and risk, any and all Claims covered by this section~~ indemnity obligations in Section 17(a) that may be brought or instituted against the City, its elected and appointed officials, employees, agents, or authorized volunteers. ~~Consultant shall pay and satisfy any judgment, award or decree that may be rendered against the City, its elected and appointed officials, employees, agents, or authorized volunteers as part of any such claim, suit, action or other proceeding. Consultant shall also reimburse City for the cost of any settlement paid by the City, its elected and appointed officials, employees, agents, or authorized volunteers as part of any such claim, suit, action or other proceeding. Such reimbursement shall include payment for the City's attorney's fees and costs, including expert witness fees. Consultant shall reimburse the City, its elected and appointed officials, employees, agents, or authorized volunteers, for any and all legal expenses and costs incurred by each of them in connection therewith or in enforcing the indemnity herein provided.~~ Consultant's obligation to indemnify shall not be restricted to insurance proceeds, if any, received by the City, its elected and appointed officials, employees, agents, or authorized volunteers.

26. Documents. Except as otherwise provided in "Termination or Abandonment," above, all original field notes, written reports, Drawings and Specifications and other documents, produced or developed for the Project, to the extent identified as a deliverable in Exhibit "A" shall, upon payment in full for the services described in this Agreement, be furnished to and become the property of the City. Nothing in this Agreement shall be deemed or construed as a waiver, release, transfer, assignment or divestiture by Consultant of any of its intellectual property, know-how or trade secrets.

PROPOSING FIRM'S PROFILE

Proposing Firm's Profile

PRIMARY CONTACT

John Wright, Senior Manager

Email: jwright@raftelis.com / Office: 951.395.1674 / Mobile: 303.909.5575

TYPE OF ORGANIZATIONAL ENTITY

Subchapter-S Corporation

FIRM'S MAIN OFFICE: CHARLOTTE, NC

Address: 227 W. Trade Street, Suite 1400, Charlotte, NC 28202 / Phone: 704.936.4441

BRANCH OFFICES

Office	Address	Phone Number
Albany Metro Office	800 Troy-Schenectady Road, Suite 107, Latham, NY 12110	518.391.8944
Austin Office	3755 S. Capital of Texas Highway, Suite 245, Austin, TX 78704	512.790.2108
Bellingham Office	21 Bellwether Way, Suite 410, Bellingham, WA 98225	360.576.8189
Boston Metro Office	24 Superior Drive, Suite 107, Natick, MA 01760	845.551.7531
Cincinnati Office	19 Garfield Place, Suite 500, Cincinnati, OH 45202	513.221.0500
Denver Office	383 N. Corona Street, Denver, CO 80218	303.305.1135
Durham Office	807 East Main Street, Suite 6-050, Durham, NC 27701	919.780.9151
Greensboro Office	822 N. Elm Street, Suite 104, Greensboro, NC 27401	336.209.1347
Irving Office	222 W. Las Colinas Boulevard, Suite 1650, Irving, TX 75039	512.598.1041
Kansas City Office	215 W. Pershing Road, Suite 406, Kansas City, MO 64108	816.285.9024
Littleton Office	2679 Main Street, Littleton, CO 80120	303.305.1135
Los Angeles Office	611 Wilshire Boulevard, Suite 900, Los Angeles, CA 90017	213.262.9308
Orlando Metro Office	341 N. Maitland Avenue, Suite 300, Maitland, FL 32751	407.312.7088
Santa Barbara Office	1 N. Calle Cesar Chavez, Suite 102, Santa Barbara, CA 93103	213.262.9309

FINANCIAL STABILITY

Raftelis is financially stable and has the resources to provide the requested services to the Department in a satisfactory manner. Raftelis has experienced steady growth throughout our 32 years of successfully providing consulting services to hundreds of public agencies across the country, and we have produced a consistent annual revenue stream and positive net income every year. The firm has never filed for bankruptcy.

FIRM HISTORY

Raftelis was founded in 1993 to provide financial planning services to utilities. Over the last three decades, we have expanded to serve utilities and local governments in the following key areas:

- **Organization:** Identify needs, plan for the future, and implement positive changes.
- **Finance:** Promote financial integrity and the equitable recovery of costs to achieve your objectives.
- **Communication:** Inform and engage with your stakeholders to build understanding and support.
- **Technology:** Gain insights from your data and develop tools to increase effectiveness and engagement.
- **Strategic planning:** Plan for the future to guide your organization to success.
- **Executive services:** Identify and develop top talent to lead local governments and utilities.
- **Stormwater:** Implement sustainable financial practices to equitably fund your stormwater program.
- **Solid waste:** Deliver effective solid waste services while ensuring financial sustainability and customer engagement.

We are the largest team in the nation that solely focuses on management consulting for utilities and local governments. Many of our finance, organizational, executive recruitment, technology, and communications professionals have worked in the public sector and brought their knowledge and passion to Raftelis to help utilities and local governments thrive.

CAPACITY AND RESOURCES

With the depth of more than 190 consulting professionals, and specifically the current and anticipated workload of the individuals assigned to this project, we can provide the requested services in a timely and efficient manner to meet the scheduling requirements and objectives of the Department. As a rule, Raftelis operates at a company-wide project utilization of approximately 65% to 75%. This level of utilization, which we expect to continue through the proposed timeline of this project, will provide the project team with ample time to allocate to the Department's engagement.

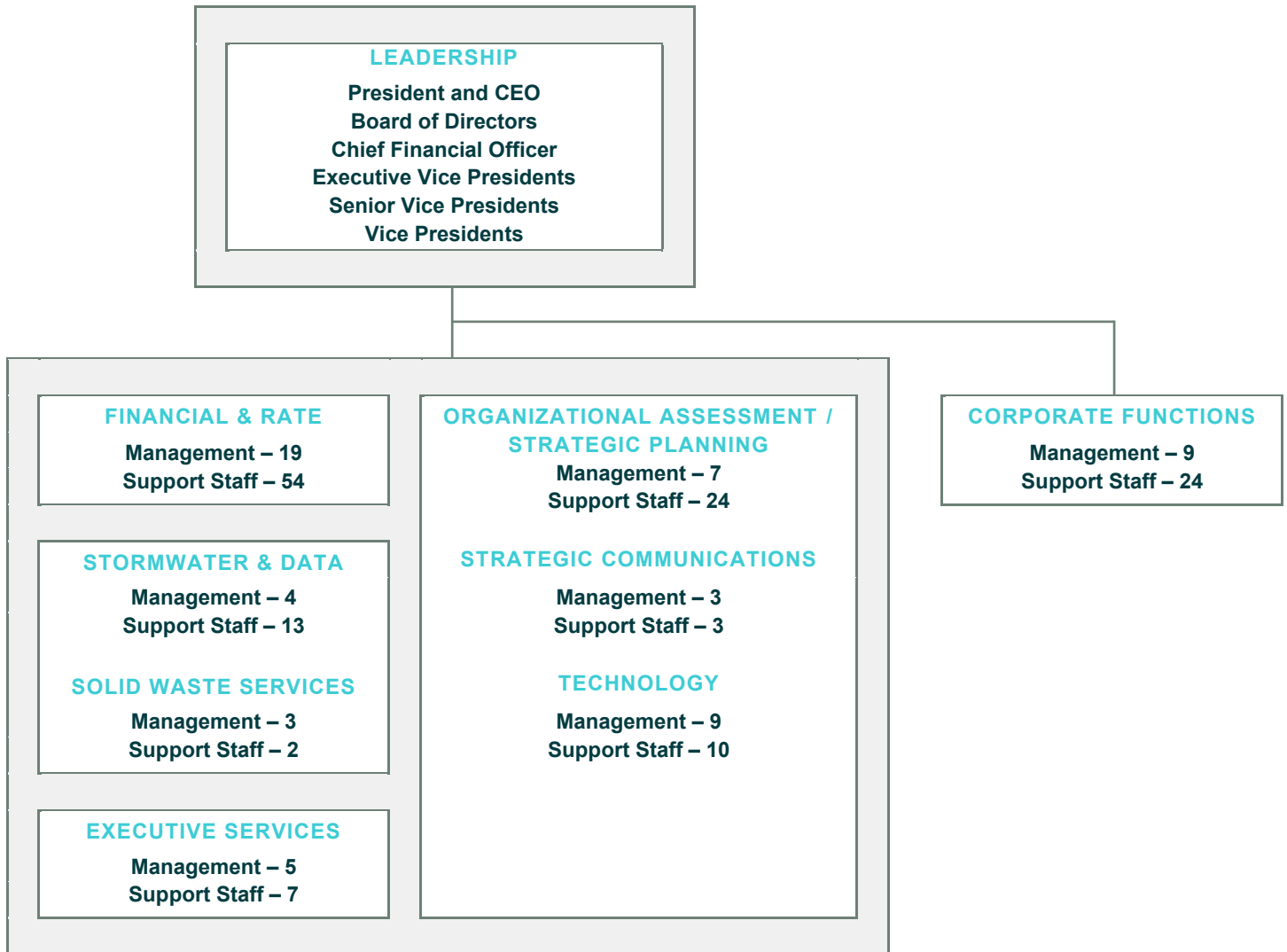
Raftelis actively manages the distribution of our staff hours to ensure we allocate the necessary resources to meet the needs of each of our clients. Raftelis' executive and management team participate in a weekly conference call to review the number of consulting hours required to meet the needs of our clients during the upcoming week. This weekly meeting allows our project managers to deploy our consulting staff in a flexible manner that ensures a suitable level of hours will be devoted to each client.

LITIGATION

Raftelis has been joined as a third-party defendant in a lawsuit filed by local developers against the Town of Fuquay-Varina, North Carolina. The subject of this currently pending litigation is development impact fees assessed by the town and developed by Raftelis. This is the only legal case in which Raftelis has been joined as a party in the history of our firm. Raftelis intends to vigorously defend the allegations and claim.

FIRM ORGANIZATION CHART

Over the last five years, our firm has grown from 97 to 225 employees. Raftelis' staff consists of some of the most knowledgeable and skilled consulting professionals in the municipal consulting industry. The organizational chart below shows the full organization and reporting structure of our firm.



EXPERIENCE AND REFERENCES

Who is Raftelis

HELPING PUBLIC SECTOR UTILITIES THRIVE

Public sector water and sewer utilities across the country partner with Raftelis to transform their organizations by developing financial plans that support their long-term strategic planning objectives, and cost recovery mechanisms that ensure utility financial sufficiency and reliability. We provided financial and management consulting services to more than 700 organizations in the last year alone.

Raftelis is the *right fit* for this project. We provide several key factors that will benefit the Department and help to make this project a success.

RESOURCES & EXPERTISE: Specialized and highly experienced utility rate consultants that all stakeholders can have confidence in. With more than 190 consultants, Raftelis has the largest water-industry financial and rate consulting practice in the nation. Our deep resources allow us to provide the Department with the technical expertise necessary to meet your objectives. In addition to having many of the industry's leading rate consultants, we also have experts in key related areas, like stakeholder engagement and data analytics, to provide additional insights as needed.

DEFENSIBLE RECOMMENDATIONS: Industry knowledge to ensure methodologies reflect best practices. Our senior staff is involved in shaping industry standards by chairing various committees within the American Water Works Association (AWWA) and the Water Environment Federation (WEF). Raftelis personnel have also co-authored many industry-standard books on utility financial planning and rate studies. Being so actively involved in the industry will allow us to keep the Department informed of emerging trends so that you can be confident that our recommendations are insightful and founded on sound industry principles. In addition, with Raftelis' registration as a Municipal Advisor, you can be confident that we are fully qualified and capable of providing financial advice related to all aspects of utility financial planning in compliance with federal regulations.

HISTORY OF SIMILAR SUCCESSES: A long history of project experience to ensure successful execution. Raftelis staff has assisted 1,700+ utilities throughout the U.S. with financial and rate consulting services over the past 32 years. This includes over 350 utilities and local governments in California. Our extensive experience will allow us to provide innovative and insightful recommendations to the Department that incorporate industry best practices.

USER-FRIENDLY MODELING: Powerful and easy-to-use tools for ongoing financial management success. Raftelis has developed some of the most sophisticated yet user-friendly financial/rate models available in the industry. 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 a financial planning tool long after the project is complete.

EXPERTS ON CALIFORNIA REGULATORY REQUIREMENTS: This expertise will allow the Department to be confident that our recommendations reflect California regulatory requirements. The regulatory environment in California has become stringent due to Proposition 218 litigation and increasing more restrictive water use efficiency regulations. Although we are not a law firm, Raftelis staff members are knowledgeable about these legal/regulations issues. We have served as expert witnesses testifying about such matters.

32 years
serving the
public sector

How we stack up

OUR TEAM INCLUDES

190+ consultants focused on
finance/management/communication/
technology for the public sector

2 chairs & **16** members of
AWWA and WEF utility finance and
management committees and subcommittees

RAFTELIS HAS PROVIDED ASSISTANCE FOR

1,700+ public agencies
and utilities

that serve more than

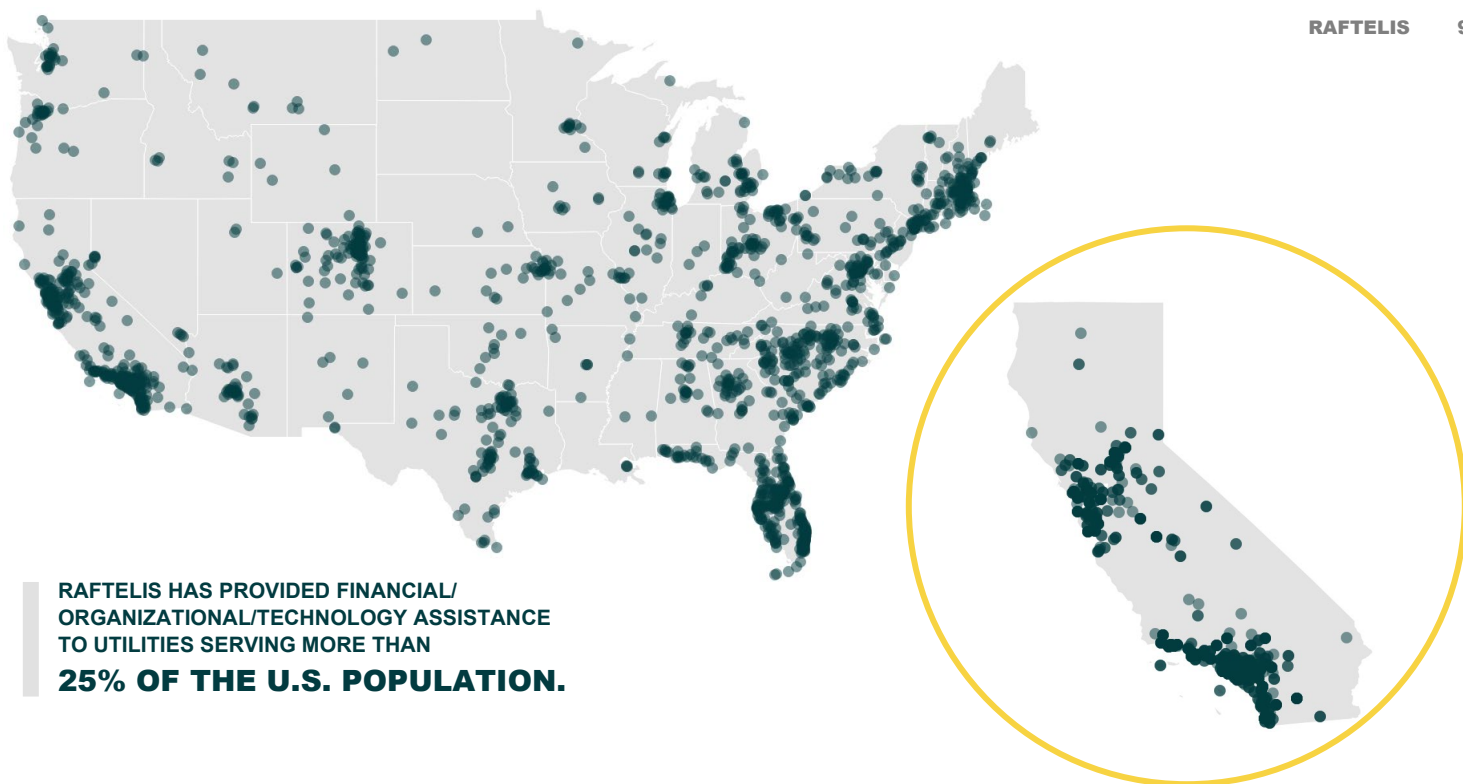
25% of the
U.S. population

including the agencies serving

41 of the nation's
50 largest cities

in the past year alone, we worked on

1,300+ projects for **700+** agencies in **47** states



RAFTELIS HAS PROVIDED FINANCIAL/
ORGANIZATIONAL/TECHNOLOGY ASSISTANCE
TO UTILITIES SERVING MORE THAN
25% OF THE U.S. POPULATION.

Experience

RAFTELIS HAS THE MOST EXPERIENCED PUBLIC UTILITY FINANCIAL AND MANAGEMENT CONSULTING PRACTICE IN THE NATION.

Our staff has assisted more than 1,700 public agencies and utilities across the U.S., including some of the largest and most complex agencies in the nation. In the past year alone, Raftelis worked on more than 1,300 financial, organizational, and/or technology consulting projects for over 700 agencies in 47 states, the District of Columbia, and Canada. In addition, we have assisted over 350 utilities and local governments in California. Below, we have provided descriptions of projects that we have worked on that are similar in scope to the Department's project, all of which were completed within schedule and the budget. 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.

Imperial Irrigation District CA

Reference: Jamie L. Asbury, General Manager

333 E. Barioni Blvd., Imperial CA 92251/ P: 760.339.9477/ jlasbury@IID.com

Project: Cost of Service Study

Start Date: January 2024 / **End Date:** On-Going

Raftelis Personnel: John Wright

Raftelis is in the process of completing a comprehensive water cost-of-service study for the Imperial Irrigation District (IID) that includes financial planning, cost allocations and rate design. John Wright is serving as the Project Manager on the engagement. With more than 3,000 miles of canals, IID is the largest irrigation district in the nation. IID's Water Department is responsible for the timely operation and maintenance of the extensive open channel system that delivers its annual Colorado River water supply entitlement of 3.1 million AFY to primarily for agricultural, but also municipal and industrial use. IID is also a major supplier of water supplies to the Metropolitan Water District of Southern California and the San Diego County Water Authority.

West Valley Water District CA

Reference: Jose Velasquez, Chief Financial Officer

855 W. Base Line Road, Rialto, CA 92376 / P: 909.820.3701 / E: jvelasquez@wwwd.org

Project: Comprehensive Cost of Service and Rate Structure Study

Start Date: January 2023 / **End Date:** September 2025

Raftelis Personnel: John Wright, Ellyse

West Valley Water District (District) provides water service to approximately 26,000 customers in Rialto and surrounding areas. In January 2023, the District retained the services of Raftelis to complete a comprehensive water cost of service and rate structure study. John Wright served as the Project Manager. The District has a diversified water supply portfolio that includes over one dozen water supply sources with annual water demand of over 21,000 AFY. The services provided included the development of several 10-year financial planning scenarios, a cost of service analysis, and rate design. Raftelis assisted the District develop a recommended financial plan that includes the construction of a new headquarters building. Our firm also suggested modification to the District's water rate structure consumption tiers.

City of Pleasanton CA

Reference: Tamara Baptista, Assistant Director of Public Works, Operations and Maintenance

P.O. Box 520, Pleasanton, CA 94566 / P: 925.931.5507 / E: tbaptista@cityofpleasantonca.gov

Project: Water and Wastewater Connection Fee Study

Start Date: January 2024 / **End Date:** October 2024

Raftelis Personnel: Brian Bass

The City of Pleasanton (City) provides water, wastewater, and recycled water service to approximately 27,000 customers with annual potable water demand of approximately 13,000 AFY. In 2023, Raftelis prepared a water and recycled water rate study for the City. In 2024, our firm completed a water and wastewater connection fee study. Brian Bass served Project Manager for both studies. The outcome of the connection fee study was updated water fees (\$/meter size) and updated wastewater fees (\$/EDU). The connections fees were updated in accordance with California State Government Code §66013.

City of San Diego Public Utilities Department CA

References: Adam Jones, Deputy Director of Finance

525 B Street, San Diego, CA 92101 / P: 858.614.4030 / E: jonesal@sandiego.gov

Project: Water Wastewater Financial Plan, Cost of Service, and Rate Study

Initial Project - Start Date: June 2017 / End Date: March 2021

Project Update - Start Date: June 2024 / End Date: December 2024

Raftelis Personnel: Todd Cristiano, John Wright, Brian Bass

Raftelis has worked with the City of San Diego (City) on several financial and rate consulting engagements over the years. The City provides water, wastewater, and recycled water service to approximately 1.4 million people in metropolitan San Diego County. During the period June 2017 – March 2021, Raftelis completed a comprehensive water and wastewater cost-of-service study that resulted in the adoption of Proposition 218 compliant water, wastewater and recycled water rates that were approved by the San Diego City Council for the period FY 2022 – FY 2026. Todd Cristiano served as the Project Manager and Water Lead Consultant on the project. John Wright served as the Wastewater Lead Consultant.

During the period June 2024 – December 2024, Raftelis completed an update of the study. Todd Cristiano served as the Project Manager, Brian Bass served as the Wastewater Lead Consultant, and John Wright served as a Technical Advisor. The key services provided included:

- Water and Wastewater Financial Plans
- Water and Wastewater Cost of Service Analysis
- Water, Wastewater, and Recycled Rates
- Water and Wastewater Capacity Fees
- Industrial Pretreatment Charges



CALIFORNIA EXPERIENCE

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

Client	Affordability Analysis & Program Development	Debt Issuance Support	Dispute Resolution	Financial & 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
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				●								

Client	Affordability Analysis & Program Development	Debt Issuance Support	Dispute Resolution	Financial & 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
Irvine Unified School District		●										
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				●		●		●				
Leucadia Wastewater District				●		●						
Livermore, City of				●		●		●	●			
Long Beach City of	●	●		●		●		●				
Los Alamos Community Services District		●		●		●		●	●			
Los Angeles Department of Water and						●		●				
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	●			●		●		●	●			
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				●		●		●				

Client	Affordability Analysis & Program Development	Debt Issuance Support	Dispute Resolution	Financial & 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
Salton Community Services District				●				●				
San Bernardino Valley Municipal Water						●						
San Bernardino, County of				●		●		●	●			
San Clemente, City of				●		●	●	●				
San Diego, City of Public Utilities		●	●	●		●	●	●	●			
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				●		●	●	●	●			
Sonoma, 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				●		●		●				

TECHNICAL PROPOSAL

Project Understanding

The Department is seeking an expert consultant to complete a comprehensive water, sewer treatment, wholesale water rate, and capacity charges study. As discussed in the Department's RFP, the key elements of the study are:

- **Water and Sewer Rates.** Proposed retail water, retail sewer, and wholesale water rates become effective for the five-year period beginning on July 1, 2026. These rates must comply with the requirements of Proposition 218.
- **Water and Sewer Capacity Charges.** Proposed water and sewer capacity charges that will also become effective on July 1, 2026. These charges must comply with the Mitigation Fee Act (California Government Code Sections 66000–66025).
- **Geothermal Utility Rates.** Proposed fully cost-based geothermal utility rates that will become effective on July 1, 2026.

Our proposal is for the entire suite of services described above including retail water rates, retail sewer rates, wholesale water rates, water capacity charges, sewer capacity charges, and geothermal rates.

Project Approach

Our project approach has been developed based on our previous work with the Department, with utilities throughout California, and our nationwide experience with large water and sewer utilities. To ensure a successful project, we have developed a theme or framework under which this project will be guided – the '3d's':



Defensible. Scenarios, options, and ideas developed can withstand scrutiny or challenge by being grounded in logical reasoning, evidence and sound principles.



Durable. The ability of a solution, system, or decision to remain effective and relevant over time, even in the face of changing circumstances or pressures.



Deliberate. Using a process of intentionally and thoughtfully design or executing actions with a clear purpose, ensuring careful consideration of potential risks and outcomes.

This framework will ensure a clear focus, guide decision making, and encourage long-term thinking with the overarching goal of having a defined process for updating the Department's financial planning, cost allocation, and rate design models in a manner that is defensible, durable, and deliberate.

RETAIL WATER AND SEWER RATES AND WHOLESALE WATER RATES

The Department's RFP provides a detailed description of the specific tasks necessary to successfully develop proposed water and sewer rates. Raftelis will provide all the deliverables specified for each task. Each task, as specified in your RFP, is shown in the blue text boxes below. This is followed by description of the key elements of proposed approach for each task.

Task 1: Project Initiation and Data Collection

- *Conduct a project kickoff meeting*
- *Review existing financials, rate resolutions, CIP plans, user classifications, usage data, billing records, and reserve policies*
- *Identify data gaps and request missing data*
- *Deliverables: Data Request Summary and Kickoff Meeting Notes*

The Kickoff Meeting – Foundation for Project Success

Raftelis will facilitate a one-day onsite kickoff meeting at the Department. In attendance will be our Project Manager, Deputy Project Manager, and Lead Consultants. The meeting will allow for the finalization of the project scope, milestones, deliverables, and communications protocols along with the guiding principles for the study against which we will measure results. Key areas of discussion at the kickoff meeting will include:

- Customer water consumption characteristics and service territory demographics
- Planned capital improvement program expenditures
- The Department's pricing objectives for water and sewer rates
- The effectiveness of the current water and sewer rate structures
- Department staff's assessment of customer and key stakeholder concerns
- Potential rate structure alternatives considering recent Proposition 218 litigation
- Design of the water and sewer financial/rate models.

Prior to the meeting, we will submit a data request. Gathering the requested this information prior to the kickoff meeting will allow us to review and aggregate our list of questions and clarifications. We will place a priority on receiving customer billing data as rapidly as possible.



Project Management

Nimble. Flexible. Adaptable. Those are three adjectives we often hear clients use to describe our performance on projects at the end-of-study of rate studies. We have high expectations for ourselves and a strong sense of what goes into a successful project. In addition to solid work products, you can expect:



Efficient Use of Time. Your time is valuable, and we treat it that way. We commit to running well-planned, useful, and efficient meetings. We will arrive at all meetings with a game-plan and expectation to move the project forward.



Regular Check-Ins. Many decades of project experience have taught us that the best way to keep a project on track is to ensure that it doesn't have too much room to drift off course. We like to schedule short weekly (or bi-weekly) check-in calls to ensure everyone's questions are answered, data needs are met, and no bottlenecks are developed in the project process. You will know we are on track because we will touch base with you regularly.



Thorough Documentation of Calls and Meetings. The Raftelis team takes detailed meeting notes and shares them promptly after each meeting or important call. This allows the full project team to stay abreast of progress, agreements made, and results delivered.

Raftelis will conduct careful and detailed project management and administration. Our Project Manager and Deputy Project Manager will plan, coordinate, monitor, and control all project tasks in concert with other appropriate project team members to ensure continuity and momentum throughout the project.

- **Project Schedule.** We will finalize the project schedule, milestones, and deliverables for the study at the kick-off meeting. We will review the schedule during the regularly scheduled meetings and identify tasks that may be at risk of delay and how that might impact other deliverables. Working with staff, we will develop a contingency plan if needed such as adjusting the sequence of tasks to minimize delays.
- **Staff and Team Management.** We will develop an internal responsibility matrix to clarify roles and maintain project delivery requirements. This will ensure that there is no duplication of effort and will allow us to stay on task and budget. Raftelis will also hold weekly internal meetings to review progress and coordinate deliverables.

Raftelis uses internal safeguards to forecast and track all personnel hours and expenses incurred on each task, which the Project Manager and Deputy Project Manager closely monitor. Analyzing weekly costs helps prevent cost overruns and allows the Department to shift funding priorities if necessary. In our monthly invoicing of services, we typically indicate the dollar value of project work completed so our clients can see where the work stands in any given month. Regular reporting will indicate how the project schedule is proceeding and whether there are issues that need to be addressed relative to analysis, approach, assumptions, schedule, and/or administration.

Quality Assurance and Quality Control

Credibility is vital for building consensus and gaining support for the implementation of study recommendations. To maintain stakeholder trust, the Department must ensure the information provided is accurate, complete, and reliable. Our robust quality assurance (QA) process is designed to guarantee the integrity and reliability of all deliverables. Below are the key steps we implement throughout the project:

- **Initial Review and Validation.** Data inputs and assumptions are thoroughly reviewed for accuracy and completeness before analysis begins. Sources are cross verified to ensure reliability.
- **Structured Methodology.** A standardized and documented approach is followed for all technical analyses to ensure consistency and adherence to best practices.
- **Peer Review.** Todd Cristiano, our project Technical Advisor, will conduct an independent analysis review to verify logical consistency, proper application of models, and alignment with project objectives.
- **Senior Expert Oversight.** John Wright, our Project Manager and Brian Bass, our Deputy Project Manager, will review critical deliverables, providing insights, validating assumptions, and ensuring alignment with industry standards and client expectations.
- **Scenario Testing and Sensitivity Analysis.** Key assumptions are tested under various scenarios to evaluate the robustness and reliability of results.
- **Final Review and Presentation.** A final quality check is conducted before delivery to confirm accuracy, completeness, and clarity based on the best available information at the time of production.



Task 2: Financial Plan Development

- *Develop a 5- to 10-year financial plan for both water and sewer utilities*
- *Analyze revenue requirements based on O&M, capital, debt service, and reserve targets*
- *Evaluate inflation assumptions, growth projections, and funding strategies*
- *Deliverables: Draft and Final Financial Plan Memo*

Financial Planning: Optimal Funding Strategy

The objective of the water and sewer utility financial planning process is to identify the optimal mix of rate revenues, capacity charges, and external debt financing used to fund long-term utility operations. The mix of selected funding must be adequate to ensure:

- **Revenue Sufficiency.** Rate revenues and other sources of cash inflows that are adequate to pay for projected operating costs, capital expenditures, and Department strategic initiatives.
- **Customer Bill Impacts.** Customer bills that are considered reasonable/acceptable by the Department's Water Board and City Council.
- **Cash Reserves.** Operating and capital reserves that are adequate to mitigate risks such as seasonal climate variability, prolonged drought, and emergency infrastructure repairs.
- **Debt Service Coverage.** Debt service coverage that meets Department financial management targets instead of merely meeting contractually required minimums.
- **Bond Rating.** Projected financial performance that meets the credit criteria associated with the bond rating the Department seeks to maintain in the future.

Importance of Comprehensive Demand Forecasting

A critical component of the financial planning process is the development of water and sewer demand forecasts based on realistic assumptions regarding future customer billed water consumption. Projected water and sewer rate revenues should **not** be based on an overly optimistic forecast of future customer demand. Rather than developing a simplistic projection of demand based on recent consumption, Raftelis recommends a detailed analysis of the factors listed below.

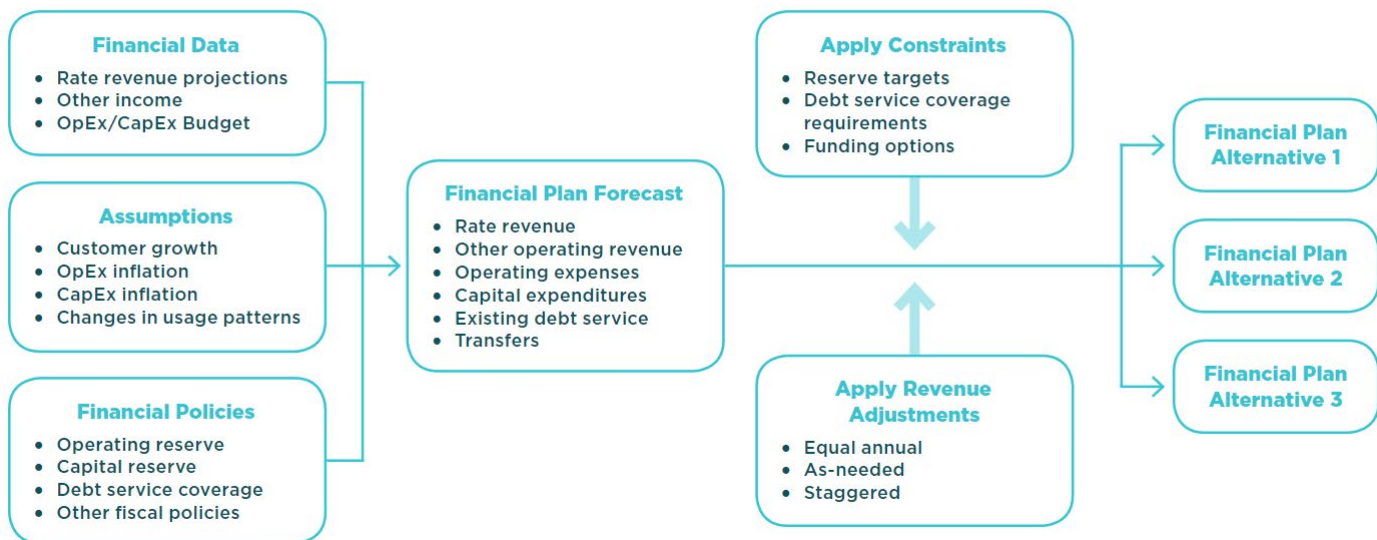
- **Retail Customer Account Growth.** Realistic assumptions of customer account growth based on projected changes in both short- and long-term land use patterns.
- **Historical Analysis.** Analysis of monthly, seasonal, annual, and winter average billed water consumption for each customer class.
- **Intensity of Peak Demand.** Analysis of estimated customer class maximum day and maximum hour demand factors.
- **Consumption by Tier.** The completion of a comprehensive bill frequency analysis that quantifies customer billed water consumption in each consumption tier.
- **Conservation Program Impacts.** Analysis of the impact of the Department's conservation program on customer billed water consumption.
- **California Regulations.** Consideration of evolving California water efficiency regulations on both per capita billed consumption and average billed consumption per account.
- **Drought Curtailment Impacts.** Projection of the reduction in customer demand at each drought emergency stage.
- **Wholesale Customer Demand.** Projection of wholesale water or wastewater customer demand based on actual historical usage and contract specifications.

Scenario Planning Over a 10-Year Period

Comprehensive long-term scenario planning under different demand forecasting and funding inputs allows for the identification of optimal funding strategies. Figure 1 provides an illustration of the scenario planning process. We anticipate working with Department staff to develop multiple 10-year water and sewer utility financial planning scenarios with differing assumptions for items such as those listed below. The outcome of the scenario planning process will be a projection of the annual amount of rate revenue that must be collected from water and sewer customers during each year of the 10-year planning horizon.

- Billed water consumption.
- Inflation rates (i.e., cost escalation factors).
- Operating expenses.
- Capital expenditures.
- Cash reserve levels.
- Debt service coverage level.

Figure 1: Financial Planning Process



Task 3: Cost of Service Analysis

- *Allocate costs to customer classes (residential, commercial, industrial, etc.) using industry-accepted methods (AWWA, WEF standards)*
- *Determine unit costs for water and sewer services*
- *Develop wholesale rate to provide water to neighboring agencies*
- *Establish nexus between costs incurred and rates charged*
- *Deliverable: Cost-of-Service Technical Report*

Industry Standard Cost Allocation Methodologies

Raftelis conducts cost of service studies using industry standard methodologies as published by the American Water Works Association (AWWA) and the Water Environment Federation (WEF). This results in the allocation of costs

to individual customer classes based on the proportionate demands they place on the water and sewer utility systems.

Ultimately, a determination of whether utility rates comply with Proposition 218 can only be made by a court of competent jurisdiction. Raftelis is not a law firm, and we offer no legal opinion on client compliance with Proposition 218. However, the use of industry standard methodologies results in outcomes that are aligned with the requirements of Proposition 218.

Members of our proposed project team are nationally recognized cost of service experts:

- Our Project Manager, John Wright, has been a contributing author to the 6th and 7th editions of the AWWA publication, *Manual of Water Supply Practices M1, Principles of Water Rates, Fees, and Charges* (AWWA Manual M1). John is also a member of the editorial committee for the upcoming 8th edition of Manual M1. In addition, he has been a contributing author to the 4th and 5th editions of the WEF publication, *Manual of Practice No. 27, Financing and Charges for Wastewater Systems*.
- Todd Cristiano, our project Technical Advisor, is the former chair of the AWWA Rates and Charges Committee. He has also contributed to previous editions of Manual M1, and he led the development of the upcoming 8th edition of that publication. Todd is a nationally recognized expert who teaches the AWWA's *Rate Setting Essentials Seminar*. The seminar lasts three days and is focused on the development of financial policies and proposed rates that are cost-based and equitable. Financial managers from utilities across North America and beyond attend this seminar.

Overview of the Cost of Service Process

The cost of service analysis is a natural extension of the demand forecasting and financial planning processes. The costs included in the water and sewer utility revenue requirement are developed during the financial planning process and allocated to customer classes based on their projected demand characteristics as determined in the demand forecasting process. Figure 2 shows a high level overview of the water cost of service process. Figure 3 provides a high level overview of the wastewater cost of service process.

Figure 2: Water Cost of Service Process

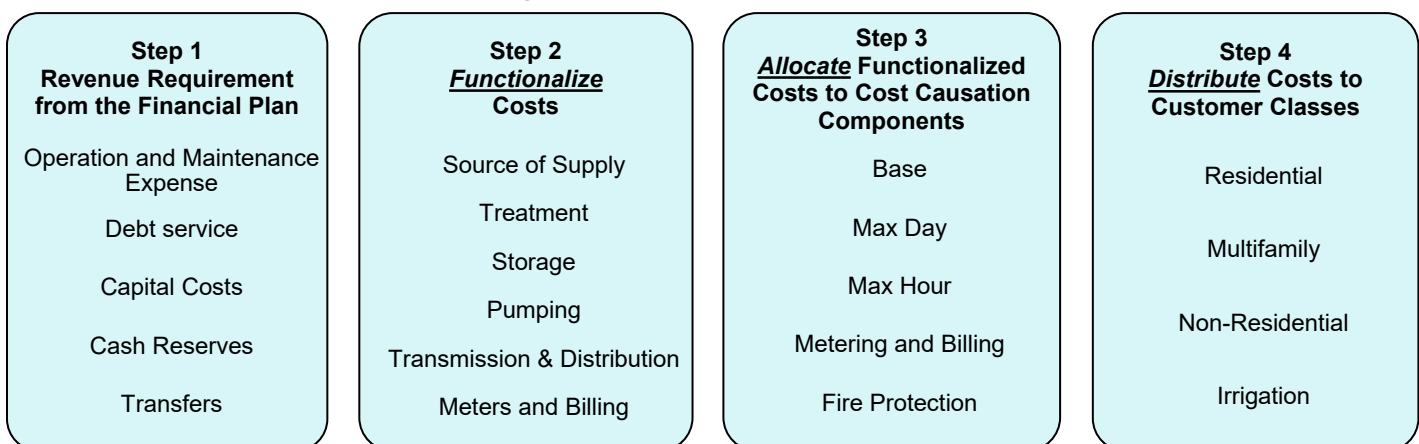
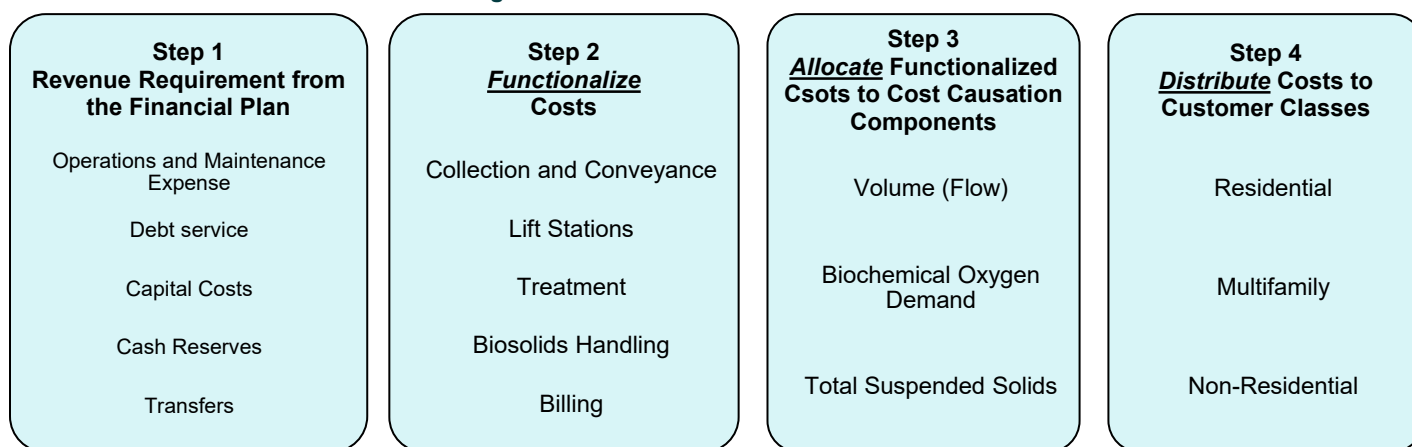


Figure 3: Wastewater Cost of Service Process



Steps in the Cost-of-Service Process

The primary steps in the water and sewer utility cost of service process include:

- **Test-Year Revenue Requirement.** Determine the water or sewer utility revenue requirement from rates as part of the financial planning process.
- **Cost Functionalization.** Assign the operating costs, capital costs, and non-rate revenues to the appropriate system functions. This answers the question, what functions are being paid for using rate revenues? Water utility functions often include treatment, storage, pumping, transmission and distribution. Wastewater utility functions often include conveyance and collection, lift stations, treatment, and biosolids handling.
- **Allocation to Cost Causation Components.** Allocate functionalized costs to cost causation components (i.e., demand characteristics). This answers the question, what types of demand are being paid for using rate revenues? Water utility cost causation components often include base demand, maximum day demand, and maximum hour demand. Wastewater utility cost causation components often include the volume of wastewater discharges returning to the wastewater treatment plant and strength loading characteristics such biochemical oxygen demand (BOD) and total suspended solids (TSS).
- **Customer Class Units of Service.** Determine customer class units of service for each cost causation component. For example, the units of service base, maximum day, and maximum hour demands of water utility customer classes or the volume of flow, and pounds of BOD and TSS for wastewater customer classes.
- **Distribute Costs to Customer Classes (Customer Class Units of Service).** Distribute the allocated test-year water and sewer utility capital costs, O&M expenses and non-rate revenue offsets to customer classes based on their proportionate share of the total system units of service.

Industrial and Domestic Liquid Rate Rates

An important outcome of the wastewater cost of service process described above is the calculation of unit cost of service for volume wastewater discharge flows (\$/gallons) and level of BOD and TSS strength loadings (\$/pound). If desired by the Department, this information can be used to update your current Industrial and Domestic Liquid Rates.

Wholesale Service

As part of the cost of service process Raftelis will determine so-called “common-to-all” costs, which are incurred by the Department to provide inside city retail service, outside city retail service, and outside city wholesale services. We will also identify specific operating or capital costs that are only incurred to provide outside retail or wholesale service. This will result in the development of cost-based wholesale water and sewer rates as appropriate.

Task 4: Rate Design and Alternatives

- *Develop multiple rate structure alternatives (e.g., tiered, uniform, fixed/variable components)*
- *Analyze the impact of each alternative on customer classes and revenue stability*
- *Evaluate conservation incentives and affordability impacts*
- *Recommend preferred rate structures*
- *Deliverables: Rate Alternatives and Impact Analysis Report*

Importance of Legal Counsel Participation in the Water Rate Design Process

Given recent Proposition 218 litigation involving the tiered water rate structures of the City of San Diego and the Otay Water District, we suggest that the Department's legal counsel be an active participant in rate structure discussions. This will help to ensure that the outcome of the rate design process meets all relevant legal defensibility standards.

Pricing Objectives Workshop During the Kickoff Meeting

In the Department's FY 2022 comprehensive rate study, Raftelis developed new water and sewer rate structures that were implemented in April 2022. As part of the project kickoff meeting, we will address the effectiveness of these current rate structures from the perspectives listed below. We suggest that the Department's legal counsel participate in this portion of the project kickoff meeting.

- Revenue stability
- Consumption thresholds for each Single Family Residential water rate tier
- Cost-basis for each Single Family Residential water rate tier
- Ease of rate structure administration
- Customer/stakeholder concerns

Alternative Rate Structures

Based on consultations with Department staff and legal counsel, we will develop a maximum of two alternative water rate structures and two alternative sewer rate structures. These alternatives may be in the form of improvements/modifications to the Department's current rate structures, or they may be entirely new rate structures.

Fixed vs. Variable Revenue Recovery

Determining the appropriate mix of fixed versus variable revenue recovery will be a critical consideration in the rate design process. We will work with Department staff to analyze revenue stability, affordability, and cost-based water use efficiency price signals to determine the appropriate mix of fixed and variable revenue recovery.

Update of Drought Surcharge Rates

As part of the Department's 2022 comprehensive rate study, Raftelis developed drought surcharge rates. Although not referenced in the Department's RFP, the drought surcharges should be updated to reflect projected demand and unique characteristics of the recommended water rate structure alternative.

Task 5: Proposition 218 Compliance and Notice Preparation

- *Prepare Proposition 218-compliant notices detailing proposed rates and rationale*
- *Ensure transparency of cost basis and legal defensibility*
- *Assist with scheduling and noticing requirements per legal timelines*
- *Deliverables: Draft and Final Proposition 218 Notice*

Proposition 218 Compliance and Notice Preparation: Proposed Scope of Services

Our team will draft, design, and finalize Proposition 218 notice that meets all statutory requirements and communicates the study results in plain, customer-friendly language. We will work closely with Department staff and legal counsel to review the notice through multiple iterations, ensuring accuracy and compliance. The final deliverable will be a press-ready PDF that can be sent directly to the Department's printer. Under this task, Raftelis will:

- Draft the Proposition 218 notice text, including rate tables, customer bill impacts, and required protest procedures
- Ensure the draft is consistent with statutory requirements and aligned with Department branding and communication standards
- Coordinate reviews with Department staff and legal counsel, revising the document as needed
- Prepare and deliver a professionally designed, press-ready PDF of the Proposition 218 notice
- Provide Spanish-language translation coordination if requested by the Department

Proposition 218 Compliance and Notice Preparation: Key Assumptions

- The Department will provide the customer mailing list directly to its selected printer and will manage printing and mailing.
- The Raftelis deliverable is a press-ready PDF of the Proposition 218 notice; printer management is excluded from our scope and pricing. If requested, Raftelis can provide these services at additional cost.
- Translation costs will be passed through without markup.

Proposition 218 Compliance and Notice Preparation: Specification of Deliverables

- Draft Proposition 218 notice in MS Word format (two rounds of revisions)
- Final press-ready Proposition 218 notice PDF (two rounds of revisions)

Task 6: Public Outreach and Hearings

- *Attend and present at up to three public meetings or hearings (e.g., Council, Board, or community workshops)*
- *Provide technical support and visual aids for public understanding*
- *Assist in responding to public comments or protests*
- *Deliverables: Presentation Materials and Public Meeting Support*

Public Outreach and Hearings: Proposed Scope of Services

Raftelis will partner with the Department to design and deliver clear, customer-focused outreach that builds understanding and trust in the proposed water and sewer rate adjustments. We recognize that financial studies are only as successful as the public's confidence in them. That is why our team of accredited public relations

professionals and IAP2-trained engagement specialists will translate technical findings into plain language, ensuring all customers understand how the proposed changes affect them and why they are necessary. This expertise in strategic communications is a unique advantage Raftelis offers compared to firms that only provide financial analysis. Under this task, Raftelis will:

- Develop fact sheets, FAQs, bill inserts, presentation materials, and other customer-facing content that explain study results in accessible, plain language.
- We will prepare talking points and visual aids for Department staff and elected officials to use in community meetings, governing body sessions, and media interactions.
- We will facilitate up to two community workshops or open houses, either virtually or in person, to present study findings and gather feedback.
- We will provide bilingual (English/Spanish) materials to expand accessibility, with translation services coordinated through certified providers.
- We will ensure all outreach aligns with best practices in equity, transparency, and inclusivity, reaching historically underrepresented communities.

Public Outreach and Hearings: Key Assumptions

- The Department will take the lead in scheduling and promoting community meetings, with Raftelis providing materials and facilitation support.
- Printing of outreach materials will be managed by the Department, though Raftelis can provide vendor coordination at additional cost if desired.
- Translation costs will be billed at cost, without markup.

Public Outreach and Hearings: Specification of Deliverables

Draft and final outreach materials, including a fact sheet, FAQ, bill insert, and presentation deck.

- Workshop or open house agenda, slide deck, and summary report of community feedback.
- Talking points and media-ready visuals tailored for City leadership and staff.

Task 7: Final Report and Rate Model

- *Prepare a comprehensive final report documenting all analyses, findings, and recommendations*
- *Provide an Excel-based rate model with full transparency and user functionality*
- *Deliverables: Final Water and Sewer Rate Study and wholesale water rate Report and Model*

Importance of the Cost of Service Study Report

The cost of service study report is the Department's first line of defense against a legal challenge. Raftelis prepares exceptionally detailed cost of service study reports. Our reports are designed to achieve the three key objectives:

- Inform both customers and governing bodies of how rates were calculated in a clear and fully understandable manner.
- Provide an administrative record demonstrating legal defensibility in the case of any Proposition 218 challenges.
- Provide a historical record that can be referred to by Department staff in the future.

Legal Counsel Review

The Department's legal counsel *must* review the cost of service study report prior to its release to the public. We have a long history of working collaboratively with client legal counsel.

Rate Model

We will build tailored financial models for the Department. Depending on your preferences, this may be a modification of the water and sewer financial models we developed for the Department in 2022, or it may be entirely new models. The models will be developed over the course of the study and will be built around the tasks identified in this scope of work. We will share the models with Department staff over the course of the study. This will give staff a “real-time” view of how the model is developed. It is our intent that by the end of the study, staff will have a level of familiarity with the model that will accelerate learning during the training sessions.

We will provide hands-on model training, including how to use the model, input data, and interpret results. In lieu of a manual, Raftelis will prepare a slide deck with screen shots and brief instructions on the various requirements for each worksheet. We have found this method to be more effective than a lengthy manual.



WATER AND SEWER CAPACITY CHARGES

The Department's RFP provides a detailed description of the specific tasks necessary to successfully develop proposed water and sewer capacity charges. Raftelis will provide all the deliverables specified for each task. Each task, as specified in your RFP, is shown in the blue text boxes below. This is followed by description of the key elements of proposed approach for each task.

Task 1: Project Initiation and Background Review

- *Conduct a kickoff meeting with Department staff to confirm project goals, scope, schedule, and communication protocols.*
- *Review relevant documents, including water and sewer master plans, capital improvement plans (CIP), prior rate and fee studies, and development projections.*
- *Confirm legal and regulatory framework, with particular attention to California Government Code Sections 66000–66025 (Mitigation Fee Act).*

Project Kickoff Meeting and Data Collection

At the preference of the Department staff, Raftelis will facilitate an onsite or virtual kickoff meeting for the capacity charge portion of the study. Prior to the meeting, we will submit a data request list for the information needed for the study. Gathering this information prior to the kick-off meeting will allow us to review and aggregate our list of questions and clarifications. We will place priority on obtaining the following information:

- **Long-Range Capital Improvement Plans.** Capital improvement plans should specify the estimated timing and cost of planned projects through system buildout; They should identify:
 - What portion of each project will add capacity to serve customer demand growth
 - The amount of capacity that will be added (e.g., EDUs served)
- **Most Recent Water and Sewer Utility Engineering Master Plans**
- **Water and Sewer Utility Fixed Asset Subsidiary Ledgers.** Detailed water and sewer utility property accounting records showing information by major asset function that includes acquisition date, acquisition cost, useful life, accumulated depreciation.

California Government Code Sections 66000–66025 (Mitigation Fee Act)

In the state of California, the basic statutory standards governing water and sewer capacity charges are embodied in Government Code §§ 66000 et seq. The requirement that capacity charges be cost-based is provided in Government Code § 66013(a) which states:

“When local agency imposes fees for water or sewer connections, or imposes capacity charges, those fees or charges shall not exceed the estimated reasonable cost of providing the service for which the fee or charge is imposed ... “

Government Code § 66013(b)(3) provides the following definition of capacity charges:

"Capacity charge" means a charge for public facilities in existence at the time a charge is imposed or charges for new public facilities to be acquired or constructed in the future that are of proportional benefit to the person or property being charged, including supply or capacity contracts for rights and entitlements, real property interests, and entitlements and other rights of the local agency involving capital expense relating to its use of existing or new public facilities.

The procedures for handling capacity charge receipts are found in Government Code § 66013(c) which specifies:

“A local agency receiving payment of a charge in paragraph (3) of subdivision (b) it shall deposit it in a separate capital facilities fund with other charges received, and account for the charges in a manner to avoid commingling with other moneys of the local agency, except for investments, and shall expend those charges solely for the purposes for which the charges were collected.”

Other relevant Government Code sections related to capacity charges are listed below.

Government Code §§ 66016

- Requirement for a public meeting before levying a capacity charge
- Requirement that the capacity charge calculation be available prior to the public meeting

Government Code §§ 66017

- Specification of the effective date of capacity charges after adoption

Government Code §§ 66020

- Procedures to protest adopted capacity charges

Government Code §§ 66022

- Procedures for the judicial review of capacity charges

Task 2: Data Collection and System Analysis

- *Collect and analyze data related to:*
 - *Existing infrastructure and remaining capacity*
 - *Planned infrastructure expansion*
 - *Customer classifications and service areas*
 - *Historic and projected development trends*
- *Evaluate the availability of capacity for new connections and infrastructure needs driven by growth.*

Data Analysis: Key Assumption

Raftelis assumes that the Department has comprehensive long-range water and sewer utility capital improvement plans that are based on recent water and sewer utility engineering master plans. If this assumption is correct, our objective in Task 2 will be to review and analyze this information.

Data Analysis: Optional Capital Improvement Plan Development Assistance

If the Department does not have adequately detailed long-range capital improvement plans, our engineering subject matter expert (Brandon Vatter, PE) can assist in the development of projected growth-related infrastructure requirements. However, this may necessitate a contract amendment depending on the level of work required.

Task 3: Cost Allocation and Methodology Development

- Identify capital costs that are attributable to new development (e.g., expansion projects, proportion of existing system capacity).
- Determine the most appropriate and legally defensible cost recovery method:
 - Buy-in method
 - Incremental (marginal cost) method
 - Hybrid method
- Allocate costs equitably among customer classes and connection types.

Methodology Selection

The three industry standard methods for the legally defensible recovery of growth-related capital costs are discussed below. All three methods are acceptable for use in the State of California. Based on our analysis of the relationship between existing system capacity and projected demand growth, Raftelis will recommend which methodology we feel is appropriate for the water and sewer utility capacity charge calculation.

Equity Buy-In Method: Utilities with Adequate Existing Capacity to Serve Demand Growth

The buy-in method is designed to recover the cost of existing system infrastructure that can be used to serve future demand growth. The premise is that new customers are entitled to utility service at the same cost as existing customers. Under the buy-in method, new customers pay an amount equal to the current infrastructure value. This infrastructure value is then divided by the current capacity of the system to determine the “buy-in” capacity charge. The framework for calculating a capacity charge under the equity buy-in method is shown in the formula below.

Equity Buy-In Method

$$\frac{\text{Value of Existing System Infrastructure Available for Demand Growth}}{\text{Current System Capacity to Serve Customer Demand Growth}} = \text{Capacity Charge (\$/Unit of Capacity)}$$

Incremental Cost Method: Utilities with a Need for Immediate Capacity Additions

In many ways, the incremental cost method is the opposite of the buy-in method. While the buy-in method relies on the valuation of existing infrastructure assets, the incremental cost method relies on the present value cost of planned future infrastructure additions required to increase system capacity to serve new development. This method is most appropriate for utilities where the existing system has “limited or no capacity to serve new development and new or incremental facilities are needed to serve development now and into the future.

When utilizing the incremental cost method, it is important to have a capital improvement plan that identifies the costs associated with new capacity, the timing of the expenditure, and the proposed source(s) of funding. The incremental cost method is designed to equitably distribute these planned future capital costs to new customers in proportion to their projected usage. The framework for calculating a capacity charge under the incremental cost method is shown in the formula below.

Incremental Cost Method

$$\frac{\text{Present Value Cost of Planned Growth-Related Capital Improvements}}{\text{Projected Incremental Increase in Customer Demand}} = \text{Capacity Charge (\$/Unit of Capacity)}$$

Hybrid Method: Utilities with a Need for Medium-Term Capacity Additions

The Hybrid method (also referred to as the Combined method) is typically when the utility system has some remaining capacity is available to serve new development, but additional capacity additions must be made over a medium term planning horizon. With the Hybrid method, the capacity charge is based on the weighted average of the buy-in method calculation and the incremental cost method calculation (i.e., the remaining existing capacity and the new, additional capacity). The framework for calculating a capacity charge under the hybrid method is shown below.

Hybrid Method

$$(Equity\ Buy-In\ Cost\ and\ Demand\ Components + Incremental\ Method\ Cost\ and\ Demand\ Components) = Hybrid\ Capacity\ Charge\ (\$/Unit\ of\ Capacity)$$

Task 4: Capacity Charge Calculation

- *Develop updated water and sewer capacity charges based on the selected methodology.*
- *Calculate charges using appropriate units (e.g., EDU, meter size, GPD).*
- *Ensure charges are proportionate to system demand and reflect infrastructure usage by type of development.*

Capacity Charge Cost Recovery Approaches

As shown below, a variety of methods can be used to recover capacity charges. Raftelis, in consultation with Department staff, will recommend the appropriate capacity charge cost recovery approach for both the water and sewer utilities.

- \$/EDU
- \$/Equivalent Meter Size
- \$/Gallons per Day
- \$/Square Feet

Task 5: Financial and Legal Review

- *Evaluate the impact of proposed charges on financial sustainability and long-term planning.*
- *Ensure the proposed fee structure complies with:*
 - *The Mitigation Fee Act*
 - *Local fee adoption policies*
 - *Relevant case law*
- *Prepare draft nexus findings and cost-of-service documentation.*

Capacity Charge Fund (Growth Capital Fund) Financial Plan

We will prepare a 10-year projection of Capacity Charge Fund revenues (sources of funds), expenditures (uses of funds). The purpose of this projection will be to determine the adequacy of projected Capacity Fund sources of cash as compared to projected growth-related capital improvement expenditures. As part of this process, we will review and make potential recommendations regarding changes to the Capacity Fund cash reserve policies. It is important to note two things about this type of projection:

- They are highly speculative because they assume an annual level of new connections (i.e., new development) that may not materialize as planned
- Even if the new connections materialize as projected, the level of revenue generated by capacity charges may be significantly less than actual level of planned growth-related capital expenditures

Legal Counsel Participation in the Capacity Charge Calculation Process

We suggest that the Department's legal counsel be fully briefed, and as necessary consulted, throughout the capacity charge study. This is especially true as it relates to the recommended cost recovery approach in Task 5 and regulatory requirements regarding the timeline for noticing proposed capacity charge modifications.

Task 6: Stakeholder Engagement and Public Communication

- *Facilitate engagement with internal staff, developers, and other key stakeholders.*
- *Prepare outreach materials, including summaries and presentations.*
- *Support public review and adoption process, including compliance with noticing and transparency requirements under California law.*

Stakeholder Engagement and Public Communication: Proposed Scope of Services

Raftelis will provide communications and engagement support to ensure that proposed wastewater capacity charges are clearly understood and legally defensible. We will prepare plain-language materials that translate complex financial and technical findings into content that resonates with customers and stakeholders. Our team of accredited public relations professionals and IAP2-certified specialists will apply best practices in transparency, equity, and accessibility to help the Department build trust and minimize the risk of misunderstanding or opposition. Our proposed scope of services includes:

- Under this task, Raftelis will develop outreach materials such as fact sheets, FAQs, and presentation content that explain the purpose, structure, and impacts of proposed wastewater rate changes.
- We will support Department staff and elected officials with talking points and visual aids for use in community meetings, governing body discussions, and media interactions.



Our team of accredited public relations professionals and IAP2-certified specialists will apply best practices in transparency, equity, and accessibility to help the Department build trust and minimize the risk of misunderstanding or opposition.

Stakeholder Engagement and Public Communication: Key Assumptions

- The Department will be responsible for scheduling and promoting meetings, while Raftelis will provide facilitation support and the development of materials.
- The Department will manage printing of outreach materials, though Raftelis can coordinate with vendors at additional cost if requested.
- Translation costs will be passed through at cost without markup.

Stakeholder Engagement and Public Communication: Deliverables

- Draft and final outreach materials including a fact sheet, FAQ, and presentation deck.
- Talking points and visuals for Department leadership and staff.
- A summary of customer and stakeholder feedback collected during outreach activities.

Stakeholder Engagement and Public Communication: Outreach to Building Development Community

A critical element in any capacity charge study is outreach to residential and commercial developers. Members of the Raftelis project team have experience in this regard. As part of the stakeholder engagement process, we will work closely with Department staff to develop a strategy for building development community outreach.

Task 7: Documentation and Deliverables

- *Prepare a **Draft Capacity Charge Report** including methodology, data sources, assumptions, and calculations.*
- *Revise report based on staff and stakeholder input.*
- *Provide a **Final Report**, an **Excel-based fee calculator**, and presentation materials suitable for public meetings and decision-maker briefings.*

Importance of the Capacity Charge Study Report

The capacity charge study report is the Department's first line of defense against a legal challenge. Raftelis prepares exceptionally detailed capacity charge study reports. Our reports are designed to achieve the three key objectives:

- Inform both customers and governing bodies of how rates were calculated in a clear and fully understandable manner.
- Provide an administrative record demonstrating legal defensibility.
- Provide a historical record that can be referred to by Department staff in the future.

Legal Counsel Review

The Department's legal counsel must review the capacity charge study report prior to its release to the public.

GEOTHERMAL RATES

Previous Geothermal Rate Experience with the Department

After the completion of the 2022 comprehensive rate study, Raftelis worked with the Department's Director of Finance on the development of potential geothermal rates. It is unknown if the Department modified its geothermal rates as an outcome of this work.

Minimal Ramp-Up Requirements

Our previous experience studying the Department's geothermal operations will allow us to develop proposed geothermal rates in an effective and efficient manner.

Emphasis on Cost-Based Geothermal Rates

From our perspective, the Department's geothermal rates must be fully cost-based to the extent this is possible given existing contractual relationships with your customers. This principle will guide our work in the development of proposed geothermal rates.

Technical Memorandum

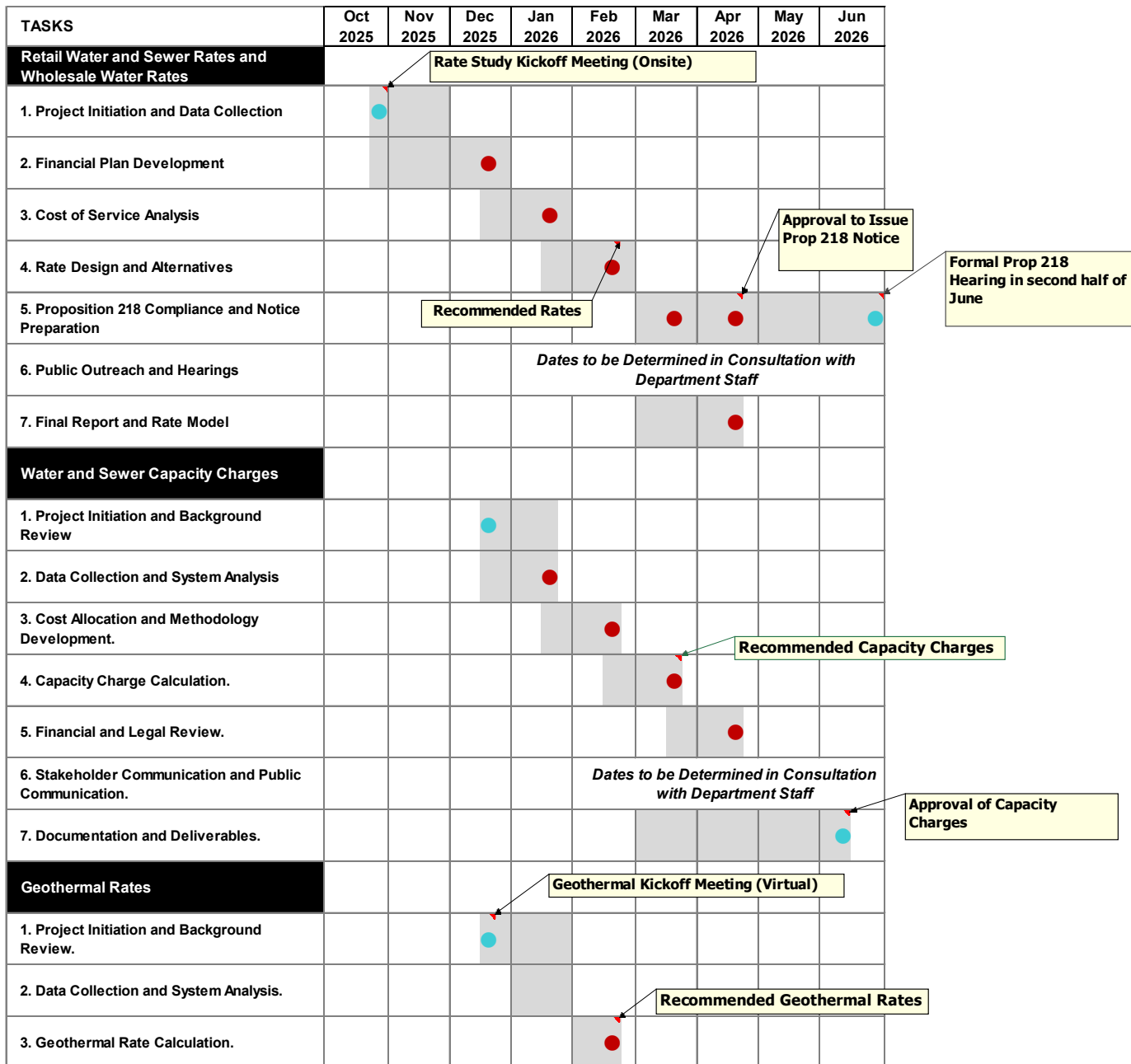
We will prepare a technical memorandum that fully describes the assumptions and methodologies used in the geothermal cost allocation and rate design process.



PROJECT SCHEDULE

Schedule

Raftelis will complete the scope of services within the timeframe shown in the schedule below, assuming a notice-to-proceed by the beginning of October 2025, timely receipt of necessary data, and the ability to schedule meetings as necessary. Project completion is estimated for June 2026. If the Department elects to extend the project completion schedule beyond the initial timeframe, we will work with Department staff to identify any necessary revisions to the project budget.



- In-person Meetings
- Web Meetings
- Deliverables

PROJECT PERSONNEL

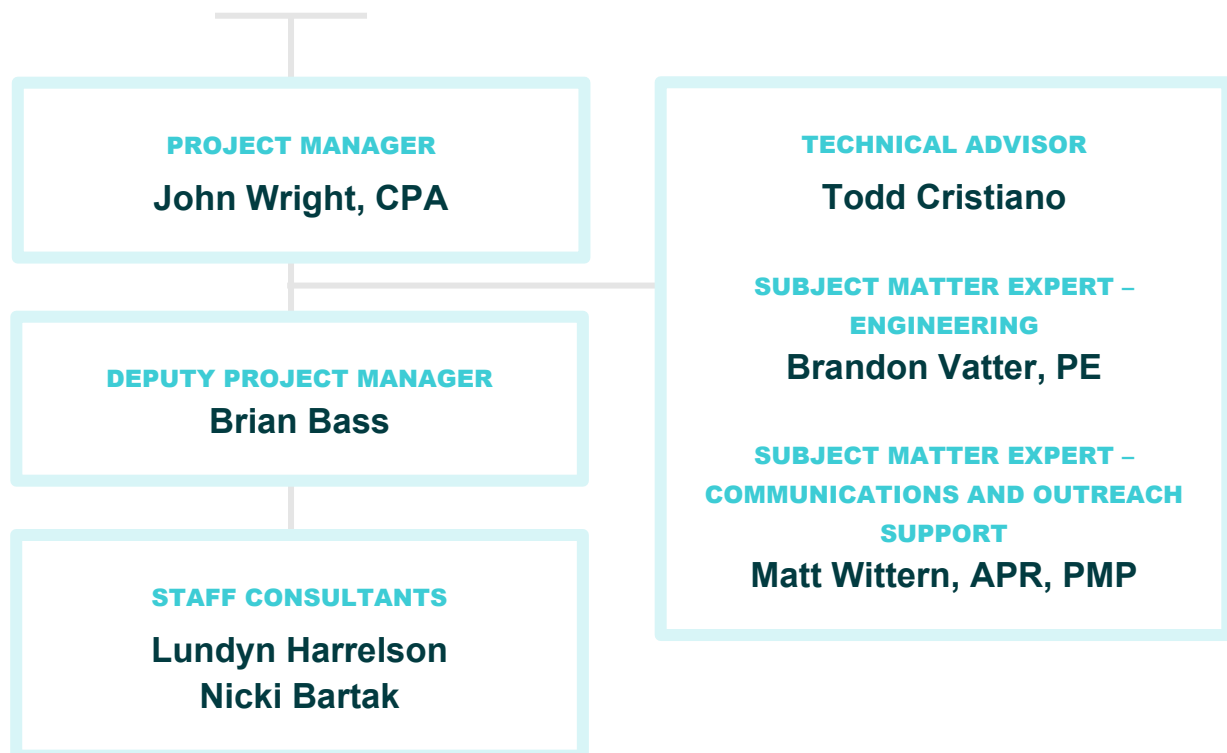
Project Team

WE HAVE DEVELOPED A TEAM OF CONSULTANTS WHO SPECIALIZE IN THE SPECIFIC ELEMENTS THAT WILL BE CRITICAL TO THE SUCCESS OF THE DEPARTMENT'S PROJECT.

Our team includes senior-level professionals to provide experienced project leadership with support from talented consultant staff. This close-knit group has frequently collaborated on similar successful projects, providing the Department with confidence in our capabilities.

Here, we have included an organizational chart showing the structure of our project team. On the following pages, we have provided a brief description of the experience and qualifications of each member of our team as well as a description of their role on the project. Full resumes with more detailed information on each team member's experience and background have been provided in the Appendix.

City of San Bernardino Water Department





John Wright CPA **Project Role: Project Manager | Title: Senior Manager (P: 951.395.1674)**

Role: John will manage the day-to-day aspects of the project ensuring it is within budget, on schedule, and effectively meets the Department's objectives. He will also lead the consulting staff in conducting analyses and preparing deliverables for the project. John will serve as Department's main point of contact for the project.

Career/Experience Highlights:

- 30 years of utility industry financial management and economic analysis experience
- Former Manager of Rate Administration at Denver Water
- Contributing Author: AWWA *M1 Manual, Principles of Water, Rates, Fees and Charges* and WEF *Manual 27, Financing and Charges for Wastewater System*

Relevant Experience: Metropolitan Water District (CA); San Bernardino Water Department (CA); Long Beach (CA); Irvine Ranch Water District (CA); City of San Diego (CA); Imperial Irrigation District (CA); West Valley Water District (CA); Vallecitos Water District (CA); City of La Mesa, (CA); Roseville (CA); Austin Water (TX); Portland Water Bureau (OR)

Certifications:

- Certified Public Accountant, State of Colorado #11959
- Series 50 Municipal Advisor Representative



Brian Bass **Project Role: Deputy Project Manager | Title: Manager**

Role: Brian will assist the Project Manager with managing the day-to-day aspects of the project and leading the consulting staff in conducting analyses and preparing deliverables for the project.

Career/Experience Highlights:

- 20 years of experience in consulting providing financial, project management, and engineering services
- Vice-Chair of AWWA CA-NV Financial Management Committee
- Member of the AWWA Rates and Charges Committee and one of the co-authors for the update of the AWWA *M1 Manual, Principles of Rates, Charges, and Fees*

Relevant Experience: Whittier (CA); Pleasanton (CA); Scottsdale Water (AZ); Los Angeles County Waterworks District (CA); Ontario (CA); Sacramento (CA); Whittier (CA); Columbus (OH); Washington Suburban Sanitary Commission (MD)



Todd Cristiano **Project Role: Technical Advisor | Title: Vice President (P: 303.305.1138)**

Role: Todd will provide oversight for the project ensuring it meets both Raftelis and industry standards. Todd will also provide an independent quality assurance/quality control review of key deliverables to ensure accuracy and completeness.

Career/Experience Highlights:

- 25 years of experience with water, wastewater, electric cost of service and rates
- Former Manager of Rate Administration at Denver Water
- Instructor for AWWA's biannual Rate-Setting Essential seminar
- Lead for the update of the AWWA *M1 Manual, Principles of Rates, Charges, and Fees*

Relevant Experience: San Diego (CA); Salt Lake City (UT); Oklahoma City (OK); Eaton (CO); Fort Collins-Loveland Water District (CO); Johnstown (CO); Erie (CO); Lafayette (CO); Dacono (CO); Firestone (CO)



Brandon Vatter PE

Subject Matter Expert – Engineering | Senior Manager at Raftelis (P: 513.538.1170)

Role: Brandon will provide input and guidance as a Subject Matter Expert for the engineering components of this project.

Career/Experience Highlights:

- Over 27 years of experience working directly with public utility clients with water and wastewater capital planning prioritization and helping to meet regulatory capital needs
- Former Director of Planning & Design for Sanitation District No. 1 of Northern Kentucky

Relevant Experience: Sanitation District No.1 of Northern Kentucky (KY); Pittsburgh Water and Sewer Authority (PA); City of Baltimore (MD); City of Columbus (OH); City of Manor (TX); Louisville Metropolitan Sewer District (KY); City of Houston (TX); Napa Sanitation District (CA)

Professional Registrations

- Professional Engineer: OH, 66169, 2001
- WEF Utility Management Committee – Capital Program Development



Matt Wittern APR, PMP

Subject Matter Expert – Communications and Outreach | Senior Manager at Raftelis (P: 303.305.1147)

Role: Brandon will provide input and guidance as a Subject Matter Expert for the communications and outreach components of this project.

Career/Experience Highlights:

- 25+ year public relations career serving clients and customers in the local government, public utility, engineering, and construction sectors.

Relevant Experience: Madera County (CA); Tuolumne Utilities District (CA); Port Hueneme (CA); Montecito Water District (CA); Bullhead City (AZ); Cucamonga Valley Water District (CA); Crestview-Lake Arrowhead Water Agency (CA); Amador Water Agency (CA); Santa Cruz (CA); St. Helena (CA); Western Municipal Water District (CA); Newport Beach (CA)



Lundyn Harrelson

Project Role: Staff Consultant | Title: Senior Consultant (P: 512.790.2112)

Role: Lundyn will work under the direction of John and Brian on financial analyses and preparing deliverables for the project.

Career/Experience Highlights:

- Five years of experience conducting water, wastewater, electric, solid waste, data, and technology projects

Relevant Experience: San Diego (CA); Valley Water (CA); Oklahoma City (OK); Scottsdale (AZ); Glendale (AZ); Healdsburg (CA); New Orleans (LA); Laramie (WY); Boulder City (NV)



Nicki Bartak

Project Role: Staff Consultant | Title: Senior Consultant (P: 303.305.1136)

Role: Lundyn will work under the direction of John and Brian on financial analyses and preparing deliverables for the project.

Career/Experience Highlights:

- Six years of experience in the water industry in both the private and public sectors
- Previously worked at San Francisco Public Utilities Commission as a utilities analyst

Relevant Experience: Imperial Irrigation District (CA); Ventura (CA); Prescott (AZ); El Toro (CA); Fort Collins Loveland Water District (CO); Eaton (CO); Dacono, CO; Firestone, CO

EVIDENCE OF INSURANCE

Client#: 1722483

RAFTEFIN

ACORD™

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

1/17/2025

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer any rights to the certificate holder in lieu of such endorsement(s).

PRODUCER USI Insurance Svcs, Charlotte 6100 Fairview Road Ste 1400 Charlotte, NC 28210 800 868-8834		CONTACT NAME: Brad Christensen PHONE (A/C, No, Ext): - FAX (A/C, No): E-MAIL ADDRESS: brad.christensen@usi.com	
INSURED Raftelis Financial Consultants, Inc. 227 West Trade Street, Ste. 1400 Charlotte, NC 28202		INSURER(S) AFFORDING COVERAGE INSURER A: Federal Insurance Company 20281 INSURER B: Chubb National Insurance Company 10052 INSURER C: ACE American Insurance Company 22667 INSURER D: Hanover Insurance Company 22292 INSURER E: INSURER F:	

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☒ PROJECT ☐ LOC OTHER:	X	X	36083016	01/21/2025	01/21/2026	EACH OCCURRENCE \$1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$1,000,000 MED EXP (Any one person) \$10,000 PERSONAL & ADV INJURY \$1,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COMP/OP AGG \$2,000,000 \$
A	AUTOMOBILE LIABILITY ☐ ANY AUTO OWNED AUTOS ONLY ☒ HIRED AUTOS ONLY ☐ SCHEDULED AUTOS NON-OWNED AUTOS ONLY	X	X	73648269	01/21/2025	01/21/2026	COMBINED SINGLE LIMIT (Ea accident) \$1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
A	☐ UMBRELLA LIAB ☒ OCCUR ☒ EXCESS LIAB ☐ CLAIMS-MADE DED ☒ RETENTION \$0	X	X	56726414	01/21/2025	01/21/2026	EACH OCCURRENCE \$5,000,000 AGGREGATE \$5,000,000 \$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A	71839613	01/21/2025	01/21/2026	☒ PER STATUTE E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE - EA EMPLOYEE \$1,000,000 E.L. DISEASE - POLICY LIMIT \$1,000,000
C	Professional			D02819028	01/21/2025	01/21/2026	\$5,000,000
D	Excess Prof.			LH6J94293500	01/21/2025	01/21/2026	\$5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Confirmation of Coverage.

CERTIFICATE HOLDER

CANCELLATION

Raftelis Financial Consultants, Inc. 227 W. Trade Street Suite 1400 Charlotte, NC 28202-0000	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE Paula B. Bulman
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APPENDIX: RESUMES

Appendix: Resumes



John Wright CPA (CO)

Senior Manager

PROFILE

John has over 30 years of utility industry financial management and economic analysis experience – 15 years as a utility consultant with Raftelis and 7 years as a utility staff member with Denver Water (CO) and the City of Portland Bureau of Environmental Services (OR). John's expertise includes water, recycled water, and wastewater cost-of-service, financial planning, and capacity fee studies.

John has provided consulting services to numerous complex utility clients, including the San Francisco Public Utilities Commission, the Metropolitan Water District of Southern California, the City of San Diego, the San Bernardino Municipal Water Department, Austin Water, the Portland Water Bureau, Milwaukee Water Works, the City of Calgary, and the Puerto Rico Aqueduct and Sewer Authority.

As the Manager of Rate Administration at Denver Water, John was responsible for the annual water financial planning, cost-of-service, and system development charge studies. At the Portland Bureau of Environmental Services, he was responsible for the annual wastewater and stormwater financial planning, cost-of-service, and system development charge studies.

John is a contributing author to several American Water Works Association (AWWA) and Water Environment Federation (WEF) publications, including AWWA Manual M1, *Principles of Water Rates, Fees, and Charges*, and WEF Manual 27, *Financing and Charges for Wastewater Systems*.

KEY PROJECT EXPERIENCE

Imperial Irrigation District (CA) Cost-of-Service Study

Raftelis is in the process of completing a comprehensive cost-of-service study for the Imperial Irrigation District (IID) that includes financial planning, cost allocations and rate design. John is serving as the project manager on the consulting engagement. With more than 3,000 miles of canals and drains, IID is the largest irrigation district in the nation. IID's Water Department is responsible for the timely operation and maintenance of the extensive open channel system and delivers its annual entitlement of 3.1 million acre-feet, less water transfer obligations, to nearly one-half million acres for agricultural, municipal and industrial use.

Austin Water (TX): Residential Ratepayer Advisor, Comprehensive Water and Wastewater Rate Studies

Raftelis served Austin Water as the residential ratepayer advocate for their 2025 Comprehensive Water and Wastewater Cost of Service Studies. John served as the lead consultant on this



Specialties

- Cost-of-service studies
- Capacity fee studies
- Financial & economic analysis
- Public speaking and presentations
- Expert witness testimony
- Litigation support

Professional History

- Raftelis: Senior Manager (2020-present); Manager (2017-2019); Senior Consultant (2010-2016)
- Denver Water: Manager of Rate Administration (2006-2009)
- Portland Bureau of Environmental Services: Senior Economist (2004-2006)
- Public Utility Commission of Oregon: Senior Utility Analyst (2002-2004)
- Positions in the Competitive Telecommunications Industry (1997-2002)
- Colorado Public Utilities Commission: Senior Financial Analyst (1991-1997)

Education

- Master of Science in Finance - University of Colorado, Denver
- Bachelor of Science in Accounting - Metropolitan State University of Denver

Certifications

- Certified Public Accountant, State of Colorado #11959
- Series 50 Municipal Advisor Representative

Professional Memberships

- AWWA - Rates & Charges Committee
 - Contributing author to the 6th and 7th editions of AWWA Manual M1. Member of the editorial committee responsible for the upcoming 8th edition of Manual M1
- WEF Utility Management Committee
 - Contributing author to the 4th edition of WEF Manual No. 27.

project and was responsible for reviewing Austin Water's proposed water and wastewater rates including customer class demand forecasting, peaking factors, common-to-all cost allocations, and rate design.

Metropolitan Water District of Southern California (CA): Pure Water Southern California Conceptual Cost Recovery Alternatives

Raftelis is assisting the Metropolitan Water District of Southern California (MWD) in developing conceptual cost recovery mechanisms for the Pure Water Southern California project, a potential regional water recycled program with the Los Angeles County Sanitation District that MWD is studying. John is serving as a consultant on this project.

San Francisco Public Utilities Commission (CA): Water and Wastewater Rate Study

John was the project manager for the wastewater cost-of-service study portion of a water and wastewater rate study Raftelis completed for the San Francisco Public Utilities Commission (SFPUC) in 2023. The SFPUC treats approximately 60 to 70 MGD during dry weather and 115 to 180 MGD during wet weather events. Traditionally, SFPUC has recovered stormwater costs through its wastewater rates. The Raftelis study included allocating costs between the SFPUC's wastewater and stormwater operations and resulted in the first separate stormwater rates in SFPUC history. The SFPUC's Wastewater Enterprise provides wastewater and stormwater collection, treatment, and disposal services for the City. The collection system consists of approximately 900 miles of sewer system lines throughout the City. The SFPUC treats sanitary sewer and wet weather flows in its three water pollution control plants (Southeast Treatment Plant, Oceanside Treatment Plant, and the North Point Wet Weather Facility), which discharge effluent to the San Francisco Bay and Pacific Ocean.

Las Virgenes Municipal Water District (CA): Water, Wastewater, and Recycled Water Connection Fee study

In 2023, Raftelis completed a water, wastewater, and recycled connection fee update for the Las Virgenes Municipal Water District (District). The project is being led by our Project Manager, John Wright. The District services approximately 20,000 water customer connections primarily with imported water provided by the Metropolitan Water District of Southern California. The District, in conjunction with the Triunfo Water and Sanitation District, is a member agency of the Las Virgenes-Triunfo Joint Powers Authority (JPA) which provides wastewater and recycled water service. As part of the study, Raftelis used the hybrid method to calculate updated water and recycled water connection fees and the equity buy-in method to calculate updated wastewater connection fees. Our work in this regard included valuing the District's share of Las Virgenes-Triunfo JPA assets.

Long Beach Water (CA): Cost-of-Service Update for Water, Reclaimed Water, and Sewer Rates

Long Beach Water (LBW) is a division of Long Beach Utilities. It provides water, sewer, and recycled water service to a population over 460,000 in the City of Long Beach. John served as the project manager on a water and sewer cost-of-service study for LBW. The key objective of the study was a comprehensive review of the cost allocations used to support LBW's currently effective utility rates and the creation of a new financial planning and cost allocation model. John also served as the project manager for a study investigating the potential implementation of water capacity fees. The study includes the valuation of the City's water infrastructure, the identification of capacity fee calculation methodologies, and the development of proposed capacity fee assessment schedules.

Long Beach Water (CA): Water Capacity Fee Study

In 2022, Raftelis completed a water connection fee study for the Long Beach Water (LBW) potable water system. The study was completed by our Project Manager, John Wright. LBW does not currently charge potable water capacity fees and has not done so in the past. The City of Long Beach is almost fully developed and LBW has available capacity in its existing potable water infrastructure to serve future demand growth. Thus, new customers will largely be served by existing infrastructure, which was originally funded using external debt financing.

Recognizing these factors and taking into consideration the investment made by existing customers in the potable water system, Raftelis calculated potable water connection fees for LBW using the equity buy-in method. As part of the capacity fee calculation process, fees for different functional components of the water system such as wells, pumping, transmission, and treatment have been calculated.

Las Virgenes Municipal Water District: Pure Water Project Financial Planning

In 2021 and 2022, Raftelis assisted the La Virgenes Municipal Water District and the Triunfo Water and Sanitation District develop long-range water, wastewater, and recycled water rate forecasts for the Las Virgenes-Triunfo Pure Water Project. The Raftelis analysis was led by John Wright and consisted of working with both utilities and their financial advisor (Piper Sandler) to develop long-term rate forecasts under differing financing strategies (e.g., WIFIA lands, revenue bonds, grants, and pay-go funding). Las Virgenes and Triunfo provide water and wastewater service to communities in Western Los Angeles County and Eastern Ventura County. Both agencies are partners in the Las Virgenes -Triunfo Joint Powers Authority (JPA) which operates the Tapia Water Reclamation Facility. The JPA has pursued the Pure Water Project to develop an alternative water supply source that is cost competitive with imported water and that significantly reduces the uncertainty of supplies from the California State Water Project. The Pure Water Project will supply up to 1,600 acre feet/year (AFY) for Las Virgenes and up to 670 AFY for Triunfo. The total estimated construction cost for the Pure Water Project ranges from \$300 million (low) to \$342 million (high).

San Bernardino Municipal Water Department (CA): Comprehensive Cost-of-Services and Rate Structure Update

John was the project manager for a comprehensive water and wastewater rate study for the City of San Bernardino (Department). The study included the development of 10-year financial plans, cost-of-service studies using industry-standard principles, and the development of wholly revised water and wastewater rate structures that were implemented by the Department's Board of Water Commissioners. In addition, Raftelis also developed drought surcharges for the Department. The outcome of the study was the development of Proposition 218-compliant water and wastewater rates for the period FY 2022 - FY 2026. The Department provides wholesale wastewater service to the City of Loma Linda and the East Valley Water District. In 2022, the East Valley Water District began using its own Water Reclamation Facility and will no longer be a wholesale wastewater customer of the Department. As part of the rate study, Raftelis has assisted the Department's plan for this significant loss of revenue.

City of San Diego (CA): Consulting Services for the Public Utilities Department - Water and Wastewater Cost-of-Service Studies

The City of San Diego (City) provides retail water, wastewater, and recycled water service to approximately 1.4 million people in metropolitan San Diego. John was the lead consultant on the City's recent wastewater and recycled water rate studies. His responsibilities included working with City staff to prepare a revenue requirement projection for the wastewater enterprise fund, 2) developing wastewater and recycled water cost allocations as part of the wastewater cost of service study, and 3) calculating proposed wastewater and recycled water rates for the period FY 2022 – FY 2026.

The City's wastewater utility system consists of Municipal and Metropolitan sub-systems. The Municipal sub-system is a wastewater collection and conveyance system for retail customers served within the City's jurisdictional boundaries. The Metropolitan sub-system is a regional wastewater treatment and disposal system that provides service to 16 member agencies in the County of San Diego. John's work on the project included analyzing the methodology used to allocate Municipal and Metropolitan subsystem operating and capital costs to the City's retail wastewater and recycled water customers. He also developed a comprehensive mass balance analysis that reconciled the wastewater flow and strength loadings contributed by the City to the flow and strength loadings recorded at each of the three City-owned treatment plants.

Padre Dam Municipal Water District (CA): Comprehensive Cost-of-Service / Rate Study

The Padre Dam Municipal Water District (District) provides water, wastewater, and recycled water service to a population of over 100,000 in East San Diego County. The District features two separate service territories with distinct elevation levels and customer demographics. John served as a project manager for a rate study that included the development of financial plans and revenue requirement projections, cost-of-service studies, and proposed Proposition 218 rates for water (including drought rates), wastewater, and recycled utility services.

Vallecitos Water District (CA): Comprehensive Water Cost-of-Service Study

The Vallecitos Water District (District) provides water service to over 22,000 potable water accounts in northern San Diego County. John served as a project manager for a water cost-of-service study and the development of proposed water rates. The study included a modification to the District's method of allocating water supply costs to each consumption tier and the development of proposed drought surcharge rates.

Irvine Ranch Water District (CA): Cost-of-Service and Rate Design Study

The Irvine Ranch Water District (District) serves a 181 square mile area that includes all of the City of Irvine and portions of the cities of Tustin, Newport Beach, Costa Mesa, Orange, and Lake Forest, as well as some unincorporated regions of Orange County. The total estimated daytime population served is approximately 600,000 people through approximately 118,000 water and 113,000 sewer connections. John was the project manager responsible for a water, sewer, and recycled water cost-of-service and rate design study for the District. The overarching objective of the Study was to conduct a comprehensive review of the methods used by the District to develop the rates it charges for water, sewer, and recycled water service to confirm compliance with Proposition 218 and other applicable legal requirements.

Metropolitan Water District of Southern California (CA): Consideration of Alternative Treatment Cost Recovery Mechanism

In 2016, the Metropolitan Water District of Southern California (MWD) engaged Raftelis to develop a recommended alternative rate design for recovering wholesale water treatment costs from MWD's member agencies. John served as the lead consultant on this project.

Eastern Municipal Water District (CA): Long-Term Financial Plan Update

The Eastern Municipal Water District (District) provides water, wastewater, and recycled water service to a population of approximately 850,000 in Riverside County. John served as the project manager for an update of the long-term financial planning models for each of the District's utilities. The models featured scenario planning capabilities and developed revenue requirement projections over a fifteen-year planning horizon.

City of Coronado (CA): Wastewater Rate and Fee Study Update

Raftelis completed a wastewater cost-of-service study for the City of Coronado (City). John was the project manager for the study. The City operates a wastewater collection and conveyance system that provides services to customers within the City's jurisdictional boundaries. The City is a member of the San Diego Metro Regional Wastewater Joint Powers Authority, and customer wastewater discharges are transported to this agency for treatment. As part of the study, Raftelis completed a five-year financial plan and proposed updated wastewater rates as part of the study.

City of Pico Rivera (CA): Financial Analysis of the Master Plan Update's for the City of Pico Rivera

Raftelis, with John as project manager, served the City of Pico Rivera as a subcontractor to the engineering firm IMEG. The City retained IMEG to complete master plans for the City's water, wastewater, and stormwater infrastructure. For the City's water utility, Raftelis developed a financial plan featuring IMEG's proposed capital

improvement program (CIP) expenditures, a water cost-of-service study, and alternative water rate structures. The City's wastewater collection and conveyance system is maintained by the Los Angeles County Consolidated Sewer Maintenance District (CSMD). Raftelis developed a financial plan that analyzes the customer impacts of IMEG's proposed wastewater CIP expenditures and whether the City should continue as a member of the CSMD. Raftelis also assisted the City in analyzing the funding required to support IMEG's proposed stormwater CIP expenditures.

City of Solana Beach (CA): Wastewater Rate Study

The City of Solana Beach (City) operates a wastewater collection and conveyance system that provides services to customers within its boundaries. The City is a member of the San Elijo Joint Power Authority, and customer wastewater discharges are transported to this agency for treatment. Raftelis completed a wastewater cost-of-service study for the City with John serving as the project manager in this consulting engagement.

Rancho California Water District (CA): Financial Plan and Rate Update Study

Rancho California Water District (District) serves approximately 43,000 water and wastewater customers in Temecula, CA. The City has a sophisticated water budget rate structure that was developed by Raftelis. John served as the project manager for an update of the District's rates for FY 2021 - FY 2023.

Santa Clara County Water District (CA): Validation of Cost Allocation for Proposed Groundwater Benefit Zones

The Santa Clara Valley Water District (District) is the primary water resources agency for almost 2 million people in Santa Clara County. The District is responsible for water supply, watershed stewardship, and flood management. In 2019, the District completed an updated zone of benefit study for its groundwater management activities. Based on this updated study, Raftelis assisted the District in modifying its cost-of-service allocations to reflect this update. John served as the lead consultant on this project.

Austin Water (TX): Comprehensive Water and Wastewater Cost-of-Service Studies

Austin Water (AW) provides water and wastewater service to a population of over one million in metropolitan Austin. In 2017, AW undertook a comprehensive review of its water and wastewater cost-of-service models to ensure the maximum possible equity in customer class revenue requirement determination and to aid regulatory analysis of AW's wholesale rates by the Public Utility Commission of Texas. As part of this process, John has played a lead role in re-designing AW's water and wastewater cost-of-service models to enhance their transparency and ease of usage. He has also made numerous presentations to stakeholder groups composed of AW retail and wholesale customers.

Puerto Rico Aqueduct and Sewer Authority (Puerto Rico): Professional Opinion Report (Financial Planning Forecast Review)

The Puerto Rico Aqueduct and Sewer Authority (PRASA) provides water and wastewater service to approximately three million people in the Commonwealth of Puerto Rico. John was a member of the Raftelis project team retained to provide an independent third-party Professional Opinion regarding the operations and financial position of PRASA. The Raftelis professional opinion report was prepared considering the ongoing economic and fiscal challenges facing Puerto Rico and was explicitly intended to identify opportunities for cost reductions and revenue increases to position PRASA to access capital markets ultimately. John's role in this consulting assignment was the development of financial planning models used to assess PRASA's projected financing gap without the restructuring of existing debt or the acquisition of new external debt financing.

City of Calgary Utilities and Environmental Protection Department (AB, Canada): Water, Wastewater, and Drain (Utilities) Financial Review

John was the lead consultant for a comprehensive financial review of the water, wastewater, and stormwater utilities operated by the City of Calgary's Utilities and Environmental Protection Department (UEP). The objective of the financial review was to assess UEP's current and projected levels of financial risk and to make recommendations regarding how to mitigate these risks by modifying UEP's financial policies, financial management practices, governance structure, and financial management organizational structure. John's activities included conducting detailed interviews with UEP senior executives and high-level management personnel; reviewing UEP financial, engineering, and planning documents; analyzing the assumptions used in UEP's long-range financial planning models; and comparing UEP financial and managerial performance to metrics to the benchmarks used by U.S. credit rating agencies to assess the default risk of water and wastewater utility debt.

Portland Water Bureau (OR): Wholesale Cost Allocation Audit

The Portland Water Bureau (PWB) operates a regional water supply system that delivers drinking water to approximately 950,000 people in the Portland metropolitan area. The PWB provides service to wholesale customers under a standardized wholesale water supply contract that defines the specific ratemaking methodology that must be used. Per the requirements of this contract, the wholesale rate model is subject to a comprehensive audit every five years to determine its continued compliance with contract requirements and industry-standard cost-of-service methodologies as contained in AWWA Manual M1. John served as Raftelis' lead consultant on this project and was responsible for auditing all aspects of the wholesale rate model to assess the appropriateness of the PWB's revenue requirement calculation for wholesale customers under the utility basis method of revenue requirement determination and the commodity-demand method of cost allocations.

PROFESSIONAL EXPERIENCE

Denver Water: Manager of Rate Administration (2006-2009)

Management position supervising three rate analysts and reporting to the Director of Finance at a municipal water utility serving over 1.3 million people.

- Supervised preparation of Denver Water's annual 10-year financial plan, including the coordination of inputs from the water resource planning, engineering, budgeting, and treasury functions
- Supervised preparation of the annual cost-of-service, capacity fee, and miscellaneous fee studies
- Provided corporate finance/economic analysis support for capital investment decisions, integrated resource planning, reclaimed water system expansion, and raw water operations
- Managed relationships with Denver Water's wholesale customers and outside-city retail water distributors
- Extensive public speaking and presentation experience before the Denver Water Board of Commissioners and external stakeholder groups

Portland Bureau of Environmental Services: Senior Economist (2004-2006)

Economic analysis position reporting to the Director of Business Services at a municipal utility wastewater utility serving over 500,000 people.

- Assisted in the preparation of the annual wastewater and stormwater utility financial plans
- Prepared the annual wastewater and stormwater cost-of-service and capacity fee studies
- Developed solid waste and recycling rates for the Portland Office of Sustainable Development
- Developed pricing for services provided by the Bureau of Environmental Services' water pollution control laboratory
- Presentations before the City of Portland's Public Utility Review Board

Public Utility Commission of Oregon: Senior Utility Analyst (2002-2004)

Specialist in telecommunications industry financial, economic, and public policy issues at a state regulatory agency.

- Testified as an expert staff witness in regulatory proceedings related to incumbent local exchange carrier access charges, interexchange carrier credit quality, and wireless carrier high cost funding
- Developed financial models to analyze telecommunications utility cost allocations and rate structures including incumbent local exchange carrier unbundled network element pricing
- Financial advisor to the Oregon Universal Service Fund which provided over \$50 million annually to support the availability of telecommunications services in rural Oregon

Positions in the Competitive Telecommunications Industry (1997-2002)

Senior financial analyst at Electric Lightwave, Inc. (Vancouver, WA) and Marketing Analyst at WCI Cable, Inc. (Hillsboro, OR).

- Developed pricing for high-capacity fiber optic services (DS3 - OC193) in terrestrial, submarine and metropolitan-area networks
- Developed financial models and business cases to analyze network infrastructure expansions and proposed acquisitions
- Developed pricing for Indefeasible Rights of Use (i.e., long-term leases) for dark and lit fiber optic capacity in amounts up to \$30 million

Colorado Public Utilities Commission: Senior Financial Analyst (1991-1997)

Specialist in energy utility financial, economic, and public policy issues at a state regulatory agency.

- Testified as an expert staff witness in Public Service Company of Colorado and San Miguel Power Association rate cases
- One of three staff members selected by the Colorado PUC Commissioners to the first independent team of litigation support advisors in agency history
- Advisor to the Colorado PUC Commissioners on electric power and natural gas utility rate cases, integrated resource planning, and electric power retail deregulation issues
- Participated in the development of electric power utility integrated resource planning rules requiring competitive bidding for new resources, the submission of alternative resource portfolios, and the use of discounted cash flow techniques to estimate ratepayer impacts
- Served as liaison to the Clinton Administration's Council on Sustainable Development, representing former Colorado PUC Commissioner Christine Alvarez
- Author of Colorado PUC staff comments on proposed Federal Energy Regulatory Commission rules for open access electric transmission (FERC Order No. 888) as published in the National Regulatory Institute Bulletin, Volume 17, No. 1.

EXPERT WITNESS TESTIMONY

- **Public Service Commission of Wisconsin - Milwaukee Water Works (Docket No. 3720-WR-108).** Filed direct and rebuttal testimony on behalf of Milwaukee Water Works, on wholesale water service cost allocation and public fire protection issues. Provided oral testimony under oath before a Wisconsin PSC Administrative Law Judge. Subject to hostile cross-examination by legal counsel representing the Wisconsin PSC, wholesale customer intervenors, and Miller-Coors.
- **Oregon Public Utility Commission - CenturyTel of Oregon (Docket No. UT 154).** Filed direct testimony on, on behalf of the Oregon PUC staff, incumbent local exchange carrier access charges and interexchange

carrier credit quality. Provided oral testimony under oath before an Oregon PUC Administrative Law Judge. Subject to hostile cross-examination by legal counsel representing AT&T, Sprint, and WorldCom.

- **Oregon Public Utility Commission - United States Cellular Corporation (Docket Nos. UM-1083 and UM-1084).** Filed direct testimony, on behalf of the Oregon PUC staff, on the applications of United States Cellular Corporation and RCC Minnesota, Inc., to be designated as Eligible Telecommunications Carriers authorized to receive support from the Federal Communications Commission's Universal Service Fund. Provided oral testimony under oath before an Oregon PUC Administrative Law Judge. Subject to hostile cross-examination by legal counsel representing US West.
- **Colorado Public Utilities Commission - Public Service Company of Colorado (Docket No. 93S-001EG).** Filed direct testimony, on behalf of the Colorado PUC staff, on the proposed test-year revenue requirements of the electric and gas utility operations of Public Service Company of Colorado (PSCO, now operating as Xcel Energy). Testimony included the integration of the assets acquired from the Colorado-Ute Rural Electric Association in the PSCO rate base and the recovery of costs associated with a new PSCO utility billing system. Provided oral testimony under oath before the Colorado PUC Commissioners *en banc*. Subject to hostile cross-examination by legal counsel representing PSCO, the Colorado Office of Consumer Counsel, the Land and Water Fund of the Rockies, and municipal and industrial intervenors.
- **Colorado Public Utilities Commission - San Miguel Power Association (Docket No. 93A-211E).** Filed direct testimony, on behalf of the Colorado PUC staff, on the proposed test-year revenue requirements and electric rates of the San Miguel Power Association (SMPA). Provided oral testimony under oath before the CPUC Commissioners *en banc*. Subject to hostile cross-examination by legal counsel representing SMPA and Colorado Office of Consumer Counsel.

PROJECT LIST

- Austin Water (TX) – Water and wastewater cost-of-service studies for retail and wholesale services
- Box Elder Sanitation District (CO) – Financial planning and capacity fees
- City of Calgary Utilities and Environmental Protection Department (AB, Canada) – Comprehensive financial risk assessment of water, wastewater, and stormwater utilities
- City of Chandler (AZ) – Water and wastewater cost-of-service and rate design
- City of Corvallis (OR) – Water and wastewater financial planning, cost-of-service, and rate design
- Contra Costa County Sanitary District – Recycled water project financial analysis
- Eastern Municipal Water District (CA) – Water, wastewater, and sewer financial planning
- East Larimer County Water District (CO) – Water financial planning, cost-of-service, rate design and capacity fees
- Fort Collins Loveland-Water District (CO) – Water financial planning, cost-of-service, and rate design
- Imperial County (CA) – Water and sewer financial planning, cost-of-service, and rate design studies
- Irvine Ranch Water District (CA) – Water, sewer, and recycled water cost-of-service and rate design
- Ken Caryl Ranch Water and Sanitation District (CO) – Water and wastewater financial planning, cost-of-service, and rate design
- Left Hand Water District (CO) – Financial model update and capacity fees
- Long Beach Water Department (CA) – Water, wastewater, and recycled water cost-of-service, and rate design; water capacity fees
- Metropolitan Water District of Southern California (CA) – Potential rate structure alternatives for the recovery of wholesale treatment costs

- Milwaukee Water Works (WI) – Expert witness testimony in a rate case proceeding at the Public Service Commission of Wisconsin
- City of Naperville (IL) – Water and wastewater financial planning, cost-of-service, and rate design
- City of Norman (OK) – Water and wastewater capacity fees
- Padre Dam Municipal Water District (CA) – Water, wastewater, and recycled water financial planning, cost-of-service, and rate design; drought rates
- City of Pico Rivera (CA) – Water financial planning, cost-of-service, and rate design
- Portland Water Bureau (OR) – Audit of wholesale rate model
- Prescott Valley (AZ) – Non-utility impact fee study
- Prosper Coordinating Metropolitan District (CO) – Financial planning, cost-of-service, rate design, and system development charges for a greenfield planned development east of metropolitan Denver
- Puerto Rico Aqueduct and Sewer Authority (PR) – Review of financial planning forecasts
- Rancho California Water District (CA) – Water cost-of-service and rate update
- San Bernardino Municipal Water District (CA) – Water, sewer, and recycled water financial planning, cost-of-service, and rate design; drought rates
- City of San Diego (CA) – Wastewater and recycled water financial planning, cost-of-service, and rate design
- Santa Clara County Water District (CA) – Groundwater zone of benefit cost-of-service study
- Santa Clarita Valley Municipal Water Department – Water stand-by charges
- San Francisco Public Utilities Commission – Wastewater and stormwater cost-of-service study
- Soldier Canyon Water Treatment Authority (CO) – Financial planning and rate design
- South Fort Collins Sanitation District (CO) – Financial planning, cost-of-service, and rate design
- Strathcona County (AB, Canada) – Water and wastewater financial planning, cost-of-service, and rate design
- City of Thornton (CO) – Water financial planning, cost-of-service, and rate design
- Vallecitos Water District (CA) – Water cost-of-service and rate design
- City of Westminster (CO) – Water and wastewater financial planning, cost-of-service, and rate design study
- City of Wichita (KS) – Water and wastewater financial planning, cost-of-service, and rate design

PUBLICATIONS (CONTRIBUTING AUTHOR)

- “AWWA Manual M1, Principles of Water Rates, Fees and Charges,” Sixth Edition (2021) and Seventh Edition (2017).
- Member of the Editorial Committee for the upcoming and as yet unpublished Eighth Edition of AWWA Manual M1 (2024 expected publish date)
- “Financing and Charges for Wastewater Systems,” WEF Manual of Practice No. 27 Fourth Edition, 2018
- “Water Utility Capital Financing,” AWWA Manual M29, Fourth Edition, 2017
- “AWWA Asset Management Definitions Guidebook,” Version 1.0, 2018
- “WEF Effective Water Professional,” First Edition, 2015
- “WEF User-Fee Funded Stormwater Programs,” Second Edition, 2013
- “WEF The Energy Roadmap: A Water & Wastewater Utility Guide to More Sustainable Energy Management,” First Edition, 2013
- “Water and Wastewater Finance and Pricing, The Changing Landscape,” CRC Press, Fourth Edition, 2015

PRESENTATIONS

- "Developing a Financial Plan to Support Deferred Maintenance Funding," AWWA/WEF Utility Management Conference, 2019

- "Water System Development Charges Tailored to Land Use," AWWA/WEF Utility Management Conference, 2019
- "Utility Financial Risk Assessment - The Calgary Experience," AWWA Annual Conference, 2017
- "Water Profession: Current Issues and Future Challenges," Guest Lecturer at the University of Colorado-Boulder, Civil Engineering Class No. 5574, 2017 and 2018
- "Community Involvement Committees from a Municipal Utility Perspective," Colorado GFOA Conference, 2016
- "Securing Thornton's Water Future," RMSAWWA/RMWEA Annual Joint Conference, 2015
- "Financial Strategies to Prepare for the Next Economic Crises," AWWA Annual Conference, 2014
- "Weathering Economic Crises: Creating a Resilient Financial Plan for Your Utility," AWWA Webinar, 2014
- "Wichita Water Utilities Financial Restructuring," KWEA/KAWWA Annual Joint Conference, 2013
- "Capital Planning - A Business Case Process," AWWA Annual Conference, 2013
- "Declining Revenues and Your Rate Structure," AWWA Annual Conference, 2012

Brian Bass

Manager

PROFILE

Brian has over 20 years of experience consulting and providing utility clients with financial, project management, and engineering services. He has performed cost-of-service rate studies, bond feasibility studies, water and wastewater rate design studies, long-term financial plans for asset management programs, and financial capability and affordability studies.

KEY PROJECT EXPERIENCE

City of San Diego (CA): Wastewater Financial Plan, Cost-of-Service, and Rate Study

Brian led a complex multi-year financial planning and rate design engagement for the City of San Diego's wastewater utility, encompassing a projected \$361.5 million FY2026 revenue requirement. We successfully conducted a comprehensive cost-of-service analysis, developing and recommending a multi-year rate adjustment strategy (6-8% annual increases) that ensured long-term fiscal health, operational sustainability, full funding for the Capital Improvement Program, and proportional cost recovery across seven diverse customer classes, all while rigorously adhering to industry best practices and strict compliance with California regulatory mandates under Proposition 218. This project also involved integrating recycled water rate design and cost-of-service, while supporting critical public education and stakeholder outreach efforts, contributing to a successful implementation.

City of Pleasanton (CA): Water Rate and Cost-of-Service Analysis

Brian helped the City of Pleasanton (City) establish water and drought water rates. We prepared a financial plan to ensure revenue recovers all operating and capital revenue requirements. We completed a cost-of-service study to allocate costs to each customer class and a rate design to collect expenses from each class based on the cost-of-service results. We presented the proposed rates and supported the City staff in several City Council meetings to successfully implement the new rates, complying with CA legal requirements.

City of Ontario (CA): Water, Recycled Water, and Wastewater Financial Plan and Rate Study

Brian led comprehensive rate studies and long-term financial planning engagements for the City of Ontario's Water, Recycled Water, and Wastewater utilities in 2022 and 2025. The latest engagement involved developing robust 5-year financial plans to ensure fiscal sufficiency and sustainable asset management, calculating cost-of-service rates having a nexus to the City's costs to serve each customer class in strict adherence to Proposition 218 and industry standards. The financial analysis included over \$350 million in capital improvement programs using over \$100 million in debt financing, and collaborating closely with City staff to deliver data-driven rate recommendations that achieved full cost recovery, bolstered financial stability, and effectively managed customer impacts.

Sacramento County Water Agency (CA): Water Rate Study

Brian helped the Sacramento County Water Agency (Agency) develop a five-year financial plan and rate study for Sacramento County Water Agency's Zone 41, a critical retail and wholesale water utility serving over 63,000



Specialties

- Utility cost of service and rate structure studies
- Capacity fee studies
- Financial capability assessment and affordability studies
- Bond feasibility studies
- Water and sewer rate studies
- Economic feasibility studies

Professional History

- Raftelis: Manager (2022-present)
- Arcadis: Senior Management Consultant (2004–2022)

Education

- Master of Business Administration - Indiana University (2013)
- Bachelor of Science in Agricultural and Biological Engineering - The Ohio State University (2004)

Professional Memberships

- AWWA Rates and Charges Committee
- AWWA CA-NV Financial Management Committee (Vice-Chair)

customers and managing 847 miles of infrastructure. This engagement involved developing a robust financial strategy to ensure fiscal stability, recover rising operational and capital costs (including over \$64 million in infrastructure investments), and achieve stringent debt service coverage targets (1.25x minimum, 1.60x policy). We expertly navigated unprecedented inflationary pressures and a previous three-year rate freeze by formulating balanced annual revenue adjustments (7-17%) that optimized financial health while mitigating customer bill impacts and ensuring strict adherence to California's Proposition 218, providing comprehensive technical support through the public adoption process.

City of Whittier (CA): Water and Sewer Comprehensive Cost-of-Service Rate Study

Brian helped the City of Whittier (City) complete a comprehensive rate study. We developed robust five-year financial plans and calculated cost-of-service rates in compliance with California's Proposition 218 to ensure long-term financial sufficiency and stability for the water and sewer utilities. The financial plans included funding for approximately \$64 million in critical capital projects, including PFAS remediation. We also provided collaborative stakeholder engagement to educate the public on the rate study process, capital needs, and our plan to minimize customer impact.

City of Pleasanton (CA): Water and Wastewater Connection Fee Study

Brian facilitated the update of water and wastewater connection fees for the City of Pleasanton (City). The water and wastewater connection fees were calculated using the incremental methodology. The incremental method is forward-looking, and growth-related capital improvements are allocated to new development based on their estimated usage. The City's water connection fees are charged by meter size. The City's wastewater connection fees are charged based on a unit factor, which differs by customer class. The City successfully implemented the new connection fees to fund capital projects required for its growing population.

San Dieguito Water District (CA): Water and Recycled Water Cost-of-Service Rate Study

Brian helped the San Dieguito Water District (District) establish water, recycled water, and drought water rates. We prepared a three-year financial plan to ensure revenue recovers all operating and capital revenue requirements and achieves the District's fiscal policies. We completed a cost-of-service study to allocate costs to each customer class and a rate design to collect expenses from each class based on the cost-of-service results. We updated drought rates to ensure the collection of sufficient revenue during periods of reduced water demand due to drought or other water shortage emergencies. We presented the proposed rates and supported the City staff in several Board meetings to successfully implement the new rates, complying with CA legal requirements.

City of Sacramento (CA): Water and Wastewater Funds Analysis

Brian helped the City of Sacramento (City) complete a water and wastewater enterprise fund analysis. The analysis includes a detailed review of fiscal policies and procedures, benchmarking against peer communities, review of service level and capacities of the water and wastewater systems, evaluation of the impact of deferred maintenance and capital investments on the value of water and wastewater infrastructure, and the development of 25-year financial plans to ensure financial sufficiency and funding to meet projected operations and maintenance costs, the City's capital programs, proposed capital repair and replacement recommendations, and operating and capital gaps identified by the City that are not included in the budget or capital improvements schedule.

City of Shafter (CA): Water and Wastewater Cost-of-Service Rate Study

Brian led a comprehensive rate study and long-term financial planning engagement for the City of Shafter's Water and Wastewater Enterprise Funds. We developed robust financial models, conducted detailed cost-of-service analyses, and designed equitable, Proposition 218-compliant rate structures to ensure long-term financial sufficiency, fund critical capital improvement programs, and maintain customer affordability. This project

successfully integrated complex rate components, leading to multi-year revenue adjustments that significantly enhanced the financial health and sustainability of vital water and wastewater infrastructure.

City of Needles (CA): Electric, Water, and Wastewater Utility Cost-of-Service Rate Study

Brian is leading a comprehensive multi-utility financial plan and rate study for the City of Needles (City). This engagement will optimize the financial health for each utility and provide cost-of-service rates in strict adherence to Proposition 218 and industry standards. This initiative involves expert financial planning, defensible cost-of-service analysis, and innovative rate design, executed with rigorous project management to ensure client guidance, long-term financial stability, and optimal funding for critical infrastructure investments. The rates for each utility will be implemented in the fall of 2025.

City of Steamboat Springs (CO): Water, Wastewater, and Tap Fee Study

Brian helped the City of Steamboat Springs (City) complete a comprehensive study, significantly enhancing the long-term financial self-sustainability of their enterprise funds. This involved developing robust 10-year financial plans aligned with operational needs, debt service, capital investments, and critical financial policies. We leveraged industry-standard methodologies and performed detailed cost-of-service analyses, resulting in the City Council's adoption of equitable multi-year retail and wholesale rate structures, including strategic adjustments (e.g., 20% initial water rate increases). We also updated the tap fees, optimizing capital recovery for critical system capacity expansion, ultimately ensuring the utility's sound financial health and sustained infrastructure investment.

City of Columbus (OH): Water and Sewer Cost-of-service Studies; Capacity Fee Evaluation; Financial Impact of Cogeneration on the Division of Power

Brian completed cost-of-service rate studies for the City of Columbus' (City) water and wastewater utilities. The results of these analyses were used to compare alternative rate designs and gradually modify the City's rate structure to improve rate equitability. Brian analyzed the City's water and wastewater utility capacity fees and miscellaneous fees and assessed whether the City should adopt new fees.

PROJECT LIST

- Akron (OH) – Long-term financial plan for their asset management program
- Alliance (OH) – Financial capability assessment and rate study
- Attica (OH) – System valuation
- Basalt (CO) – Water rate study
- Bear Creek Special Utility District (TX) – Water rate study
- Bedford (OH) – Water rate and cost-of-service study
- Bucyrus (OH) – Sewer rate study
- Canton (OH) – Long-term financial plan for the asset management program
- Cambridge (OH) – Water rate study and long-term financial plan
- Columbus (OH) – Water and sewer cost-of-service studies; capacity fee evaluation; financial impact of cogeneration on the Division of Power
- Confidential Client – Financial impact concerning PFAS contamination
- Dayton (OH) – Water cost-of-service analysis; water and sewer long-term financial plans
- Denver Water (CO) – Water billing analysis
- Elkhart (IN) – Long-term financial plan for the asset management program
- Evart (MI) – Long-term financial plan for the asset management program
- Fort Collins-Loveland Water District (CO) – Water rate and cost-of-service analysis and tap fee study
- Hackensack (NJ) – Financial capability assessment

- Heath (OH) – Water and sewer rate studies
- Jersey City Municipal Utilities Authority (NJ) – Long-term financial plan for the asset management program
- Kent (OH) – Stormwater fee analysis
- Lafayette (CO) – Water and wastewater rate and cost-of-service analysis
- Lake County (OH) – Rate study and cost-of-service analysis for water, sewer, and solid waste utilities
- Lancaster (OH) – Water and sewer rate and cost-of-service studies, capacity fee evaluation, and financial capability assessment
- Lebanon (OH) – Water and sewer financial plan and rate study
- Marysville (OH) – Analyze policies and financial services to promote growth
- Middlesex County Utilities Authority (NJ) – Long-term financial plan for the asset management program
- Needles (CA) – Electric, water, and wastewater utility cost-of-service rate study
- Newton Falls (OH) – Water rate and cost-of-service study
- Newark (OH) – Bond feasibility study
- Norwood (OH) – Water rate study and long-term financial plan
- Ontario (CA) – Water, recycled water, and wastewater rate and cost-of-service study
- Passaic Valley Sewerage Commission (NJ) – Long-term financial plan for the asset management program
- Pinedale (WY) – Wastewater rate study
- Pleasanton (CA) – Water rate and cost-of-service study
- Pleasanton (CA) – Water and wastewater connection fee study
- PortMiami (FL) – Bond feasibility study
- Portsmouth (VA) – Stormwater rate study
- Sacramento (CA) – Water and wastewater rate implementation: rate study and public outreach
- Sacramento (CA) – Water and wastewater funds analysis
- Sacramento County Water Authority (CA) – Water rate study
- San Diego (CA) – Wastewater financial plan, cost-of-service, and rate study
- San Dieguito Water District (CA) – Water and recycled water cost-of-service rate study
- Scottsdale Water (AZ) – Water rate and cost-of-service study
- Shafter (CA) – Water and wastewater cost-of-service rate study
- Steamboat Springs (CO) – Water, wastewater, and tap fee study
- Steubenville (OH) – Long-term financial plan for the asset management program
- St Marys (OH) – Sewer rate and cost-of-service study
- The Ohio State University (OH) – Economic analysis for beneficial use of dredged sediments
- Tinley Park (IL) – Water and wastewater rate study
- Washington Suburban Sanitary Commission (MD) – Cost-of-service analysis
- Whittier (CA) – Water and sewer cost-of-service rate study
- Youngstown (OH) – Sewer rate study

PRESENTATIONS

- “Assessment Today to Prepare for Tomorrow,” Indiana Water Environment Association Annual Conference, 2022.
- “Long Term Planning for Utility Managers,” American Water Works Association Michigan Annual Conference and Exhibits, 2022.
- “Building the Foundation of Equitable Water Rates,” Metropolitan Planning Council’s Drinking Water Academy (IL), 2019.

Todd Cristiano

Vice President

PROFILE

Todd has nearly 20 years of utility finance experience—19 years as a consultant to utilities and 6 years as the Manager of Rates at Denver Water. He has completed studies across the U.S. for water, wastewater, stormwater, electric, and gas utilities. His experience covers technical areas and industries such as municipal fee development, utility cost-of-service and rate structure studies, economic feasibility analyses, impact fee studies, and budget processes. While at Denver Water, he oversaw four significant rate- and fee-related studies, all unanimously approved by the Board of Water Commissioners, and also served as interim budget manager at Denver Water. As a member of the AWWA, he has helped to develop industry guidelines regarding financial and rate-making practices. In particular, as the Past Chair and current member of the AWWA Rates and Charges Committee, he co-authored the water reuse chapter in the latest edition of *Manual M1, Principles of Water Rates, Fees and Charges*. Todd is also co-instructor for the AWWA's biennial *Financial Management: Cost-of-Service Rate-Making Seminar*.

KEY PROJECT EXPERIENCE

Town of Johnstown (CO): Water and Wastewater Financial Plan, Cost of Service, Rate and Tap Fee Study

Key areas of focus: The Town had not completed a rate study in over 10 years and rate adjustments had not been keeping up with expenditures. Key issues were developing a financial plan to fund a new water treatments plant and wastewater treatment plant. The final financial plan required a 30% increase in water for 2024 and a 15% increase in wastewater. These were adopted in October 2024. Raftelis made minor adjustments to the rate structure based on the cost of service analysis results and proposed an increase in the water tap and resource fees.

Town of Breckenridge (CO): 10-year Financial Plan

Todd served as the project manager on this engagement. The Town of Breckenridge had not completed a comprehensive rate study in recent years. The Town retained Raftelis to develop a 10-year financial plan, cost of service, plant investment fees and rate design alternatives. The Town had just completed the construction of a new water treatment facility as well as repairs to the Tarn Dam. The Tarn Dam repairs were unexpected and required the issuance of state loans. The Town also used state loans to fund a portion of the new WTP. These loans and additional O&M expense from the new WTP caused coverage to fall below the SRF targets of 1.1x debt service.

Raftelis developed a 10-year financial plan using uniform annual revenue adjustments to avoid rate shock. Raftelis also completed a comprehensive cost of service analysis. The analysis showed nominal changes in each class' responsibility. During this process, the project team met regularly with the Rate Advisory Committee to discuss rate design alternatives to address the objectives set forth by the committee – conservation, affordability, and equity. Raftelis presented over 20 rate structure alternatives. The Town's existing rate structure is a base fee based on the



Specialties

- Financial planning
- Cost-of-service & rate structure studies
- Litigation support
- Economic feasibility analyses
- Impact fee studies - utility & non-utility
- Reviews of policies, procedures, & operating practices
- Budget processes

Professional History

- Raftelis: Vice President (2024-present); Senior Manager (2019-2023); Manager (2017-2018)
- Stantec (2016-2017)
- Denver Water: Manager of Rates (2010-2016)
- Malcolm Pirnie-Arcadis-US (2005-2010)
- Black & Veatch (1998-2005)

Education

- Master of Business Administration - University of Colorado (2003)
- Bachelor of Science in Chemical Engineering - University of Tulsa (1995)

Professional Memberships

- AWWA: Past Chair and current member of Rates & Charges Committee
- WEF

number SFEs, includes a 10,000 gallons volume allowance and a volumetric rate for usage above the 10,000 gallons. The 10,000 gallon minimum scales with the number of SFEs for each customer. The existing commercial rate structure includes a base fee which varies by meter size, includes a minimum which varies by meter size, and a volumetric rate for usage over the minimum. The selected residential rate structure retained the existing components but reduced the minimum threshold to 6,000 gallons and added a second tier for the usage over the minimum. The selected commercial rate structure eliminated the base fee and assessed a volumetric rate for all usage. The new rate structures were adopted to be implemented in June 2023 and the rate adjustment was adopted for January 2024.

Town of Eaton (CO): Financial Plan and Cost-of-Service Analysis

Todd was the project manager on this engagement. The Town of Eaton (Town) is planning for their community's future by participating in the Northern Integrated Supply Project (NISP), a large regional water supply reservoir that will provide water for Eaton's anticipated growth for decades to come. Raftelis developed a financial plan that is projected to provide the revenue needed to sustain the utility while also funding the added capital costs of NISP, providing recommended reserves, and producing necessary debt service coverage. Given the significant rate increases the Town was facing, they saw an opportunity to consider alternative rate structures. Raftelis completed a cost-of-service analysis and produced a broad range of rate alternatives for consideration. In light of the increased costs of water supply, Raftelis also evaluated the Town's system development fees and developed a water resource fee intended to equitably recover the costs of development. Ultimately, the Town adopted one of the rate alternatives offered by Raftelis for 2024.

Fort Collins Loveland Water District (CO): 10-year Financial Plan, Water Cost-of-Service Analysis, and Tap Fee Study

Raftelis assisted the Fort Collins-Loveland Water District (District) with completing a financial plan for a ten-year study period, a water cost-of-service analysis, and a tap fee study. The District is experiencing continued growth, requiring significant investments in water resources. Raftelis helped the District to plan and implement rates to address these concerns and still achieve the requirements of their fiscal policies. Raftelis evaluated the water resources fee and adjusted the fee based on most recent historical water use demands based on lot size and changes to the unit price of CBT water. The project team presented several financial plan scenarios to the Board based on varied capital improvement programs. Todd made several presentations to the Board including a rates 101 as well as presenting preliminary and final results.

Town of Erie (CO): Financial Plan for the Water, Wastewater, and Stormwater Utilities; Cost-of-Service And Rate Design Analysis

Todd served as the project manager on this engagement. Todd has worked with the Town since 2002. Following the 2019 study, many of the rate recommendations were put on hold due to covid-19. The Town retained Raftelis to update the 2019 study for the 5-year study period. This study included the development of a financial plan for the water, wastewater, and stormwater utilities including a cost of service and rate design analysis. Todd also updated the Town water and wastewater tap fees along with its water dedication fees. The tap fee analysis showed an increase in the water infrastructure fees as well as the water dedication fees. Wastewater tap fee remained at the same level. The water, wastewater, and stormwater financial plans both indicated increases in revenue over the 5-year period. Todd presented to the Town Council in August and September 2024. Final approval will be made at the November Council meeting.

City of Steamboat Springs (CO): Water and Wastewater Rate and Fee Study

Todd served as the project director on this engagement. The City retained Raftelis to develop a comprehensive water and wastewater rate and fee study. The City is facing a substantial capital repair and replacement program over the next 10 years. Many projects had been delayed due to covid. Those projects coupled with supply chain and inflation challenges has put a significant burden on their cash position. Raftelis developed 10-year financial plans for

each utility evaluating financing sources, timing of debt, and timing of projects. We completed a cost of service analysis for each utility to ensure that customer classes were paying their proportionate share of costs. We updated the current rate design with the cost of service results and transitioned those rates to cost of service over a three year period to mitigate any large impacts to customers. We also updated the water and wastewater tap fees. The tap fee calculations considered existing assets and future expansion projects anticipated over the next 10 years. We presented initial results to City Council in November 2024. The Council will vote to adopt rates in December 2024.

Town of Wellington (CO): Financial Planning and Rate and Fee Assistance

Todd was the project manager on this engagement. The Town of Wellington provides service to approximately 4,200 water and wastewater accounts. The Town has experienced rapid growth in the past few years and their water and wastewater utilities are reaching their maximum capacities. Raftelis provided financial planning, rate and fee assistance to ensure the future financial viability of both utilities. In addition, their tap fees had not been updated in some time. There was concern that the current water and wastewater rate structures were not encompassing the community values (i.e. wise use of water, cost proportionality, essential use affordability) and not recovering costs. As part of the study, Raftelis participated in stakeholder meetings with Town citizens to provide background on the study, the process, and identify rate structure pricing objectives to help them design the best rate structure for the community. Over the course of the rate design development with the stakeholder group, Raftelis separately completed a 5-year financial plan analysis for both utilities, a comprehensive cost-of-service analysis to assign the appropriate costs to customer classes, and developed over 15 rate structure alternatives between the water and wastewater utilities. In addition, we updated their tap fees with minor recommendations to the multifamily assessment schedule and the wastewater tap fee assessment schedule. Raftelis provided an informational presentation to the Board in June outlining the components of the study and will be participating in two presentations later in September 2022 where the Board will vote on the rate and fee proposal. The project is anticipated to be complete by October 2022.

City of Golden (CO): Water, Wastewater, and Stormwater Rate and Financial Planning Study

The City of Golden (City) provided water, sewer, and drainage services to approximately 5,400 customers through separate self-supporting enterprise funds. Rates charged for services must be adequate to support maintenance and operations, debt service, capital improvements, asset reinvestment, and transfers for general administration.

This City requested a comprehensive financial and rate analysis on their water, wastewater, and stormwater utilities. They wished to focus on the rate structures, updates to the cost-of-service with recommendations on the best alternatives for equitable and sustainable revenue recovery by each customer class. The last cost-of-service study was completed over 10 years ago.

Also part of this study was convening a Utility Rate Citizens Committee (URCC) to review and provide recommendations on rate alternatives based on identified pricing objectives. Raftelis developed rate alternatives for each utility.

Raftelis prepared financial plans, cost-of-service analysis, and rate design for each utility. Using the pricing objectives from the URCC, we developed three alternatives for water, two for wastewater, and two for stormwater.

For stormwater, of particular interest was improving the equity between residential and commercial customer classes. The existing residential fee is on a per dwelling unit basis and commercial is based on individual impervious area. Raftelis developed a impervious area fee for both residential and commercial. This increased the residential fee and reduced the commercial fee. The City adopted the new rates and rate structures for 2020.

Three Lakes Water and Sanitation District (CO): Tap Fees Financial Planning Study

Todd served as the project manager on this engagement. The Three Lakes Water and Sanitation District (District) requested a 10-year financial plan and an update to their tap fees. The District is facing a significant upgrade to its wastewater treatment plant as a result of new copper compliance regulations. Raftelis developed a 10-year cash flow which incorporated the enterprise fund as well as their general government funds (general government funds fund a portion of administration expenses). The financial planning projections indicated that revenue adjustments of 3.5% were needed annually over the study period, assuming a state loan would fund 100% of the copper compliance project in 2019.

Raftelis also updated their tap fees which had remained unchanged since 2009. Because the District has capacity available in its existing system, the buy-in replacement cost new methodology was used. During District Board meetings, Directors expressed concern that the proposed fee was greater than the cost to install an individual septic system. Todd presented to the Board three times over the course of six months. The last presentation included the conclusive results of our study. The Board adopted a 6.0% increase for the following year with the anticipation of 3.5% in future years. The tap fee was left at the current levels. Raftelis also provided a rate model for the District to use going forward.

Bancroft-Clover Water District (CO): Water and Wastewater Cost-of-service and Tap Fee Study

Todd served as the project manager on this engagement. Bancroft-Clover Water and Sanitation District (District) is a wholesale customer of Denver Water. They are located west of the City of Denver's boundary and serve approximately 8,000 accounts, most of which are residential customers. The District retained Raftelis to conduct a water and sewer financial plan analysis in 2017. Of concern was the District's ability to cash fund an anticipated wastewater master plan as well as ongoing water repair and replacement projects. He oversaw the development of revenue projections based on historical billing records and the projection of operating and capital expenditures. Todd also provided insight on maintaining sufficient operating and capital reserve levels. Todd presented the findings to the Board of Directors in October 2017. The Board adopted the proposed rate adjustments in December 2018.

The District retained Raftelis to complete a comprehensive water and wastewater cost-of-service and tap fee study in 2018. Of interest to the District was to ensure equity among the customer classes. In addition, the District wanted the cost-of-service analysis and rate design to incorporate the continued gradual reduction in water usage from all customer classes. Todd developed the cost-of-service in accordance with generally accepted rate setting principles and adjusted the allocations to meet District-specific operational parameters. Todd developed several water and wastewater rate design alternatives for the Board's consideration. The Board requested additional analysis which resulted in the adoption of modified versions of the Raftelis proposed alternatives.

Todd also developed water and wastewater tap fees. The District's tap fees were last updated in 2001. Raftelis developed the fees using the buy-in approach as well as the unit cost replacement method using replacement cost estimates from the District's latest master plan. The fees under these methodologies represented the maximum supportable fee. Because of the large increase, the District adopted fees based on inflating the current fees to today's dollars.

City of Durango (CO): Water and Wastewater Cost-of-service and Rate Study; Plan Investment Fees

Todd served as the project manager on this engagement. The City of Durango (City) retained Raftelis to conduct a comprehensive, independent assessment of its water and wastewater utilities and provide recommendations on revenue adjustments, cost of service and rate design. The City's broad objective of the study was to adequately fund water and wastewater utility operations, foreseeable capital costs, and any future bonded debt, which will be

supported by the proposed rates. The study included a comprehensive review of the City's water and wastewater funds and budgets, an inventory of the water and wastewater capital assets, customer classes, current usage data, future planned service area growth, and any other information deemed necessary. This analysis included a review and update of the City's water and wastewater plant investment fees. The City also requested a review of the rate differential between inside City and outside City customers.

The City's last comprehensive study was completed in 2014 which recommended large rate adjustments to fund an upcoming wastewater treatment construction project and a water treatment plant. The wastewater treatment plant is nearing completion and the City has continued to focus efforts on ongoing repair and replacement. The water plant is projected to be constructed over the next few years. Its primary purpose is to provide redundancy and provide for some growth in the system. The water capital program also included ongoing repair and replacement projects. Raftelis prepared several water financial plan alternatives for staff's review and review by the City's Public Utility Commission's stakeholder group. Raftelis also developed cost-of-service-based rates for inside and outside City water and wastewater customers. As an alternative, Raftelis also developed outside City rates based on a rate differential (i.e. higher rates for outside City). This rate was developed based on the premise that the density of customers outside the City was lower than inside City. This lower density required more distribution infrastructure to serve outside City customers. Raftelis calculated a density ratio for inside and outside City customers based on the number of accounts per length of main. This ratio was applied to distribution-related costs in the cost-of-service analysis to arrive at a rate differential for inside and outside City customers.

Raftelis also updated the City's plant investment fees considering the replacement costs of current assets. Because there is sufficient capacity in the current system, no future expansion costs were included in the fee. The $\frac{3}{4}$ -inch meter equivalency used to develop the $\frac{3}{4}$ -inch meter fee was based on peak demand for all $\frac{3}{4}$ -inch meter water users and $\frac{3}{4}$ -inch meter average winter flows for wastewater.

City of Rifle (CO): Water and Wastewater Master Plan; Financial Plan

Todd served as the project manager on this engagement. The City of Rifle retained Raftelis and an engineering consultant to update the City's water and wastewater master plan and to develop a financial plan and rate structures to support the future financial viability of the water and wastewater utilities. Raftelis developed multiple financial plans based on various capital improvement scenarios and funding options. In addition, to help support paying for the cost of growth, Raftelis updated the City's system development fees which had not been updated in some time. The analysis showed an increase was required for both the water and wastewater utilities. Rate adjustments and the proposed system development fees were adopted in 2021.

City of San Diego (CA): Water and Wastewater Cost-of-service and Rate Study

The City of San Diego provides service water and wastewater to approximately 300,000 customers. The City retained Raftelis to conduct a comprehensive water and wastewater cost of service and rate analysis. Also included in this study was development of wastewater industrial pretreatment fees and capacity fees for both utilities. Raftelis delivered a customized financial planning, cost of service, and rate model for the City's use at the end of the project. Todd lead the efforts on this project.

Of particular concern to the City was ensuring that rates are equitable and follow Proposition 218 requirements. In addition, the previous droughts have caused variability in revenues. As a result, they requested an analysis of their recovery of fixed charges and variable charges. Any increases to fixed charges may negatively affect low volume and low-income users. Raftelis completed a scenario analysis on financial planning alternatives that will minimize rate impacts and optimize funding for their large capital improvement program. The rate design module will allow the City to evaluate different rate structures with varying fixed charge recovery as well as showing the impacts to customers. Raftelis presented these results to the City's Independent Rate Advisory Committee (IROC) for feedback

and recommendations. The study concluded with a presentation to City Council for vote on the proposed rates. Rate approvals were effective in FY21.

Todd also updated their industrial pretreatment fees to comply with an internal audit. This evaluation considered all activities the industrial pretreatment department completes to manage permits, issue violations, sample customers, and monitor truck waste. The outcome was cost-based fees for each of these areas which complied with the internal audit and Proposition 218.

Finally, Todd updated the City's water and wastewater capacity fees to ensure that fees recovered the cost to serve growth. The fees included in-service assets plus future growth-related projects. Fees are assessed on a per EDU basis. This process follows the Proposition 218 requirements.

Salt Lake City Department of Public Utilities (UT): Water, Sewer, Stormwater and Streetlight Cost-of-service Rate Study

Todd served as the project manager on this engagement. The Salt Lake City Department of Public Utilities (City) engaged Raftelis in 2017 conduct comprehensive water, sewer, stormwater and streetlight cost-of-service rate studies. These studies included developing revenue requirements, cost-of-service allocations, rate design, and impact fees. Impact fees includes a review of the methodology for each utility - water, sewer, and stormwater. A hybrid or combined methodology was selected for the water and sewer utilities. This methodology included an evaluation of the existing assets as well as determining the growth-related portion of future capital, and estimating the capacity to be served in the 10-year time horizon. The stormwater impact fee was assessed using the buy-in methodology. The valuation of assets for each utility was based on replacement cost less accumulated depreciation.

In conjunction with the rate studies, the City formed a Rate Advisory Committee (RAC) to solicit feedback and recommend changes to the City's existing water and sewer rate structures. Todd co-facilitated six RAC meetings that included an overview of the water and sewer systems, the long-term challenges faced by the City as well as detailed discussion of rate-setting 101 and analysis of various rate structures. The RAC committee members reached consensus on two water rate structure alternatives and two sewer rate structure alternatives to present to the City's Public Utilities Advisory Board (PUAC). The PUAC made their final recommendation to City Council in January 2018. Todd oversaw the development of the cost-of-service and rate design analysis for the utilities. He developed the rate alternatives for review by the RAC based on the selected pricing objectives. He also led the development of the water, sewer, and stormwater impact fee analysis. The fees were developed based on an Impact Fee Facilities Plan completed by their engineering or record. The impact results had to comply with state statutes.

PROFESSIONAL EXPERIENCE

Denver Water (CO)

Originally developed to provide for Denver Water's revenue needs while encouraging conservation, the organization's current rate structure had not undergone a full-scale rate structure study in 20 years. Much has changed since that time-water use habits, average demand and peak day needs, available technology, revenue stability, and an increased emphasis on the customer experience-for a start. To gain support for this initiative, Todd presented key drivers to the CEO and Board. Coming off of the 2013 drought and floods raised the issue of revenue instability to the forefront. Todd served as the project manager on this engagement, which included assistance from Denver Water's Public Affairs Division as well as an outside facilitator. Todd oversaw and managed a 'lessons-learned' workshop co-sponsored with the Water Research Foundation, an external affordability study, a customer rate perception survey, as well as a 20-person stakeholder group. Todd led in-house development of all rate structure modeling with staff.

Denver Water outside-city customers make up 50% of revenues and usage for the utility. Denver Water serves these customers through contracts with special districts called “distributors.” Distributors are charged in accordance with Denver’s Charter provisions, “outside-city rate recover the full cost of providing service plus an additional amount.” In 1990, the Board developed a cost-of-service model using the utility-basis of rate setting. This was used to address the significant population growth outside the city with a decline of population in the city of Denver. As time progressed, the methodology became less suitable, more complex, and more opaque. The Board determined that the utility-basis was no longer workable under current conditions.

Todd led this project and developed cost allocation alternatives that both met current circumstances of a growing Denver, satisfied the Charter provisions, and equitably allocated costs between inside and outside city customers. Over a 14 month process, Todd evaluated several alternatives, worked with a Distributor Task Force, and met with Board members individually to review model alternatives. The Board adopted the new cash basis methodology in May 2013.

Denver Water assesses System Development Charges (SDCs) for new connections to the system. SDCs were updated annually however, the last analysis of the structure was completed in 1999. Todd led an internal team to address inconsistencies in the calculations of capacity costs. The SDCs were developed using the ‘hybrid’ method which considers available capacity with future capacity projects. The unit cost of capacity using the hybrid method was used to develop the fee schedule for each type of development. This uniform unit cost ensured equitable recovery from all classes of customers. Todd developed ‘SDC guidelines’ to assist Water Sales staff in assessing SDCs based on the changes adopted by the Board. Todd met with Distributor representatives, members of the developer community as well as the Citizen’s Advisory Council to review alternatives and present findings.

PUBLICATIONS

- “Evaluating Pricing Levels and Structures to Support Reclaimed Water Systems,” Research Report, WaterReuse Foundation, 2009

PRESENTATIONS

- “A Guide to Designing Conservation-Oriented Water System Development Charges,” AWWA and Western Resources Advocates , 2018, <https://westernresourceadvocates.org/projects/water-system-development-charges/>
- Co-Instructor for American Water Works “Financial Management - Cost-of-Service Rate Making Seminar,” 2010-present
- “The Grass is Always Greener...Building Consensus of Reclaimed Water Project Pricing for Jointly Operated Systems,” Water Environment Federation Technical Exhibition and Conference, 2008
- “Honestly, What’s the Reuse,” WaterReuse Symposium, 2008
- “Showers to Flowers - Objectives and Approaches for Reclaimed Water Pricing,” Utility Management Conference, 2010
- “Which Conservation Rate Structure is Best for Your Utility,” Utility Management Conference, 2013
- “Financial Management and Ratemaking Challenges for Reuse Water,” Utility Management Conference, 2015
- “Rate Perception Surveys: Leveraging Customer Knowledge to Create the Right Rate Structure,” Annual Conference Exhibition (ACE), 2015
- “Assessing Household Affordability in the Denver Water Service Area,” ACE, 2015

- “Rate Perception Surveys: Leveraging Customer Knowledge to Create the Right Rate Structure,” Utility Management Conference (ACE), 2016

PROJECT LIST

- City of Aspen (CO) – Water and electric rate study
- Town of Berthoud (CO) – Water and wastewater rate and fee study
- City of Boulder (CO) – Water budget rate study and plant investment fee study
- Breckenridge Sanitation District (CO) – Wastewater impact fee study
- City of Craig (CO) – Water and wastewater financial plan
- City of Davenport (IA) – Water and wastewater financial plan
- Town of Dillon (CO) – Water and wastewater rate and fee study
- El Paso Water Utility (TX) – Reclaimed water rate study
- Town of Erie (CO) – Water and wastewater rate and fee study
- City of Farmington (NM) – Water and wastewater rate study
- City of Fort Collins (CO) – Water and wastewater rate and fee study
- City of Glendale (AZ) – Water and Wastewater Rate Study
- City of Grand Junction (CO) – Wastewater financial plan
- City of Great Falls (MT) – Water and wastewater financial plan
- City of Greeley (CO) – Water and wastewater cost-of-service update
- Mammoth Community Water District (CA) – Water and wastewater rate study
- Moapa Valley (NV) – Water financial plan
- City of Peoria (AZ) – Water and wastewater rate study
- City of Pocatello (ID) – Water, wastewater and sanitation rate and fee study
- City of Prescott (AZ) – Water and wastewater rate and fee study
- Pueblo Wastewater (CO) - Wastewater rate and fee study
- Pueblo West Metropolitan District (CO) – Water and wastewater rate and fee study
- Puerto Rico Aqueduct and Sewer Authority (Puerto Rico) – Water and wastewater rate and fee study
- Sacramento Sanitation District (CA) – Bond feasibility study
- City of Salt Lake City (UT) – Water, wastewater, and stormwater rate and fee study
- Snyderville Water Reclamation District (UT) – Wastewater financial plan study
- City of Surprise (AZ) – General government impact fee study
- Water Research Foundation (CO) – WaterReuse research project

OTHER RELEVANT PROJECT EXPERIENCE

Utility/Client	Water	Wastewater	Stormwater	Electric	Financial Planning	Cost of Service	Rate Design	Rate Structure	WW Connection/Capacity Fees	Stakeholder Engagement	Non-Utility Impact Fees	Reclaimed Water
Avondale, AZ	●	●							●			
Buckeye, AZ	●	●			●	●	●	●				●
Chandler, AZ	●	●			●	●	●	●				●
Gilbert, AZ	●	●							●		●	
Marana, AZ	●	●			●	●	●	●	●			
Prescott Valley, AZ	●	●							●		●	
Tolleson, AZ	●	●			●							
San Diego, CA	●	●			●	●	●	●	●			●
Manteca, CA	●				●	●	●					
Milpitas, CA	●	●			●	●	●					
Arapahoe Water and Wastewater Authority	●	●			●	●	●	●	●			
Aspen, CO	●			●	●	●	●					
Brancroft Clover WSD, CO	●	●			●	●	●					
Crestview WSD, CO	●	●			●	●	●					
Denver Water, CO	●				●	●	●	●	●	●		●
Durango, CO	●	●			●	●	●	●	●			
Eagle, CO		●			●				●			
Englewood, CO			●		●							
Erie, CO	●	●	●		●	●	●	●				
Evans, CO			●		●	●	●				●	
Golden, CO	●	●	●		●	●	●	●		●		
Greeley, CO	●	●			●	●	●					
Lamar, CO	●	●			●	●	●					
Littleton, CO		●			●	●	●	●				
Lochbuie, CO	●	●			●	●	●					
Pueblo, CO		●			●	●	●					
Project 7 Water Authority, CO	●				●							
Rifle, CO	●	●			●		●		●			
Three Lakes WSD, CO		●			●				●			
Wellington, CO	●	●			●	●	●	●	●	●		
Pocatello, ID	●	●			●	●	●	●	●			
Oklahoma City, OK	●	●			●	●	●	●	●			●
Salt Lake City, UT	●	●	●		●	●	●	●	●			
West Jordan, UT	●	●			●	●	●	●				
Sheridan, WY	●	●			●	●			●			
Laramie, WY	●	●			●	●	●					

Brandon Vatter PE (OH)

Senior Manager

PROFILE

Brandon has over 27 years of experience working directly with multiple public and private clients on the regulatory, consulting, water, wastewater and stormwater utility sides to deliver capital, operations, and asset management programs on-time, at or under budget, and in compliance with necessary regulatory obligations. Brandon's experience includes NPDES permit review and compliance, NPDES permit writing, Clean Water Act (CWA) consent decree negotiations with Federal EPA and ORSANCO, and CWA consent decree implementation. Brandon regularly works with communities to bring practical hands-on experience with capital improvement program development and delivery, asset management program development and implementation, planning & implementation of integrated watershed management plans, green and gray infrastructure projects for wet weather and consent decree compliance, hydraulic modeling, water, sewer and storm sewer design, wastewater collection and treatment facilities, **solids digestion methane processing and utilization, and solids processing facilities**, nutrient removal studies, and water, stormwater and wastewater master planning. Brandon also brings practical field construction knowledge through performance of onsite construction management and inspections for multiple projects and has directed instrumentation, control, process coordination, and start-up for multiple projects.

With a strong technical, operations, and project management background, Brandon regularly provides guidance on necessary capital investments, capital delivery and throughput improvements, NPDES permit compliance and EPA regulatory compliance to meet the obligations, goals, asset management needs, and affordability of clients.

KEY PROJECT EXPERIENCE

Sanitation District No. 1 of Northern Kentucky (KY): Compliance Projects, Watershed Management Plans, Capacity Management Operations & Maintenance

Brandon was the Director of Planning & Design for Northern Kentucky SD1 where he led 4.5 FTEs to deliver between \$100M to \$150M of stormwater and wastewater capital projects annually through highly efficient processes and procedures, staff training, and strategic and cost-effective use of consultant support. He directed the planning & design of multiple wastewater and stormwater compliance projects, **including solids digestion and processing facilities**, within the combined and separate sewer systems to address storm water at its source to reduce overflow volume. Meet future growth requirements, and comply with a Consent Decree and NPDES permit requirements.



Specialties

- Capital Program Development & Risk Advisor
- Capital Program Delivery Technical Expert
- Asset Management Program Development & Execution
- Capital & Operating Program Organizational Review and Efficiency Improvements
- Cost Efficiency and Reductions Reviews
- Integrated Watershed Management Technical Expert

Professional History

- Raftelis: Senior Manager (2019-present)
- Mott MacDonald: Senior Project Manager (2011-2019)
- Sanitation District No. 1 of Northern Kentucky: Program Manager, Director of Planning & Design (2004-2011)
- Black & Veatch Corporation: Project Manager (2001-2004)
- CH2M Hill: Project Manager (1997-2001)
- Ohio EPA, Division of Surface Water: Regulatory Compliance Officer (1994-1996)
- B.G. Danis Industries, Heavy Construction: Cost Estimator (1993-1994)

Education

- Bachelor of Science in Civil Engineering - University of Cincinnati (1997)

Professional Registrations

- Professional Engineer: OH, 66169, 2001
- WEF Utility Management Committee – Capital Program Development

Professional Memberships

- WEF
- National Society of Professional Engineers
- NACWA
- Chi Epsilon

Brandon led a team to develop first of its kind integrated watershed management plans for the 16 watersheds in the NKSD1 service area to plan and implement singular projects that achieved the multiple objectives of reducing CSOs and SSOs, reducing surface flooding, reducing pollutant loads from stormwater discharges, eliminating sewage basement backups, and achieving measurable improvement to in-stream water quality. **SD1's Integrated Plan was estimated to save the ratepayers over \$1 Billion compared to a traditional long-term control plan mandated by the Regulators.**

Brandon also led a team to develop SD1's Capacity Management Operations & Maintenance (CMOM), Nine Minimum Control (NMC) and overall utility-wide stormwater and wastewater asset management program to meet CWA regulatory requirements, increase efficiency and reduce costs across SD1's operations. The programs were developed by in-house staff, greatly increased efficiency and lowered costs, and moved the organization from a reactive to a proactive asset manager.

Hamilton County (OH): Capital Improvement Program

Brandon served from 2011 to 2022 for Hamilton County (OH) as lead technical reviewer and risk advisor for the MSDGC \$4 billion consent decree wet weather and capital improvement program. Brandon worked with the team and the County Administration to confirm MSDGC was complying with all NPDES permits and the consent decree wet weather improvement program, and cost expenditures for the annual wastewater CIP of \$200M - \$300M were accurate and accounted for. Worked with the County Administration to develop wastewater and stormwater management annual capital improvement programs over the last 5 years that met all regulatory and asset management requirements with zero percent rate increases to the ratepayers. MSDGC's annual operating and capital budget is about \$450M. Documented savings from 2010 to 2019 to the MSDGC ratepayers have been over \$80 million in operating budget savings and \$800 million dollars in capital budget savings. **This work prevented 30% of rate increases due to operating expense avoidance and prevented over 20% of rate increases due to capital expense avoidance.**

The team provided the County with assessments regarding every aspect of the program's organization, management organization, processes and procedures, planning and project sizing, cost-effectiveness, operating and capital costs reductions, project execution, **as well as a series of special studies, including the feasibility and cost-effectiveness of a new anaerobic digestion facility with methane gas cleaning, processing and supply to the local gas utility for collecting RINs.**

Pittsburgh Water and Sewer Authority (PA): Green First Integrated Watershed Management Plan, Stormwater Program Management

After Brandon's work at SD1, **Brandon lead a team to develop the Green First Integrated Watershed Management Plan for the Pittsburgh Water & Sewer Authority (PWSA) to achieve over 6 billion gallons of overflow reduction, reduce surface flooding, basement sewage flooding, and improve in-stream water quality at a lower cost than a traditional gray infrastructure only plan to meet TMDL and overall Clean Water Act requirements.**

Brandon served as PWSA's Stormwater Program Manager leading a team of internal PWSA staff to develop and implement a \$250M five-year stormwater management capital program. Brandon trained and assisted internal PWSA staff on project management planning and design for multiple GSI projects in high yield stormwater runoff locations across the City of Pittsburgh (City) to mitigate extreme storm events for infrastructure resiliency, address local surface and basement sewage flooding, as well as CSO reduction balanced with gray infrastructure techniques. All while making sure the projects were brought in on-budget and on schedule.

Brandon also assisted PWSA with developing a stormwater utility and the necessary asset management capital program for proactive renewal of existing stormwater infrastructure through a prioritized asset management program.

City of Baltimore (MD): Capital Improvement Program

Working with the Department of Public Works (DPW) Finance Department to assess the utility's stormwater, water, sewer, and solid waste capital budgets and project delivery processes compared to Best-in-Class utilities to optimize and streamline the capital budget development process and project delivery processes with the goal of developing a six-year CIP that accurately reflects the capital dollars most likely to be spent in FY2024 balanced with affordability, and prioritizes the highest regulatory and asset management projects of the Stormwater, Water, Wastewater, and Solid Waste programs. Baltimore DPW's annual operating and capital budget is \$550M - \$600M.

Developing a Master Cash Flow Spending Tracking report and Master Program Schedule Summary to track project spending and schedule compliance to allow for accurate forecasts of necessary PAYGO and bond funds needed to support the capital program and deliver over \$200M per year in capital projects spending.

City of Dayton (OH): Capital Improvement Program

Brandon is currently assisting the City with implementing new processes and procedures, including a cash flow target spending plan, spending and schedule variance reports, and master program schedule, to ramp up capital delivery for Dayton Water from about 20 projects per year to 50 projects per year to implement the recommended projects in the water and wastewater master plans. Brandon is also developing a formal five-year CIP planning document for Dayton Water to accompany the annual budgeting process. The document will include details about specific capital projects to be undertaken over the next several years, across all divisions, service areas, and infrastructure assets managed by the Department.

Region of Peel (Ontario, Canada): Capital Improvement Program

Assessed the utility's water and sewer asset management programs and overall capital delivery program for comparison against Best-in-Class Utilities. **Brandon reviewed current processes and procedures, identified gaps and provided recommendations and next steps for the Region to become a Best-in-Class Asset Management Utility and increase their capital projects delivery from about \$350M per year to over \$700M per year.** The Region's annual operating and capital budget is about \$900M. The identified gaps and recommended improvements were then incorporated into a 10-year rate study to account for necessary future costs and rate increases to address affordability constraints of the community.

City of Manor (TX): Water and Wastewater Financial Rate Study

Brandon is currently assisting Manor with review of the water and wastewater master plans as part of a financial rate study. Brandon is working with the local engineer and utility staff to confirm growth and flow assumptions, projects sizing and costs, and identify opportunities to reduce nearly \$400M of estimated capital investments to provide a more affordable short-term and long-term capital improvement plan for the City.

Brandon reviewed the stormwater utility's current operations and capital programs and asset management practices compared to Best in Class stormwater utility programs and provided recommendations for incremental and proactive improvements. The improvements were then incorporated into a stormwater rate study to account for necessary future costs and rate increases.

City of St. Helena (CA): Water and Sewer Rate Study

As part of a sewer and water rate study, **helped the water utility reduce their 10-year CIP cost by \$6.6M (8%) and identified an opportunity to save up to an additional \$646,000** with a follow-on chlorine dosing optimization

engineering study. In addition, helped justify adding asset management funds to the sewer and water pipeline portion of their CIP to achieve best in class annual asset renewal.

City of Columbus (OH): Water Rate Study

As part of a water rate study, Brandon is developing capital budget items and costs for the City to take over operations and maintenance of Franklin County's water and sewer systems. This work includes budgeting for the necessary annual water and sewer renewal/replacement programs, water meter, valve and hydrant renewal/replacement, manhole renewal/replacement, and water and sewer asset condition assessments.

City of Mt. Shasta (CA): Stormwater Utility Rate Study

Brandon is assisting the City with writing State Revolving Loan Fund applications and securing SRF funding for over \$10M of stormwater projects. The SRF program is offering low interest loans currently about ½ of market bond interest rates and principle forgiveness grants. Brandon also wrote a grant application on behalf of the City for the Federal Department of Transportation RAISE grant for reconstruction of 4 miles of Mt. Shasta Boulevard (former federal highway) \$43M project.

Pittsburgh Water and Sewer Authority (PA): Stormwater Asset Management Program

Served as Program Manager and worked with PWSA staff to develop the stormwater asset management program for PWSA, including the overall vision, goals & objectives, levels of service, and annual operating and capital budgets needs. Working with PWSA staff, developed and implemented a \$30M annual stormwater management capital program to support construction of new infrastructure and proactive renewal of existing stormwater infrastructure through a prioritized asset management program. Oversaw the planning and design of multiple stormwater management projects in high yield stormwater runoff locations across the City of Pittsburgh (City).

Developed Green First Integrated Watershed Management Plan to achieve over 6 billion gallons of overflow reduction, reduce surface flooding, basement sewage flooding, and improve in-stream water quality at a lower cost than a traditional gray infrastructure only plan to meet TMDL and overall Clean Water Act requirements.

Oversaw and provided guidance and training to PWSA project management staff for the design and construction of green infrastructure to mitigate extreme storm events for infrastructure resiliency, address local surface and basement sewage flooding, as well as CSO reduction balanced with gray infrastructure techniques.

Hamilton County (OH): Capital Improvement Program

Lead technical reviewer and risk advisor for wet weather and capital program management oversight for the Hamilton County (County) Board of County Commissioners and County Administration. Brandon's and the team's role was to advise the County on regulatory compliance, asset management needs and budgets, and program management risks and opportunities to more cost-effectively and efficiently implement MSD of Greater Cincinnati's planned \$3.5 Billion (2006\$) Wet Weather Abatement Program to minimize impacts to sewer rates, address future regulatory risks, efficiently and cost-effectively renew the existing system assets, and minimize ongoing legacy costs of the ultimate program to achieve overall compliance with the Clean Water Act. Played a lead role to develop integrated watershed plans to take advantage of EPA's Integrated Planning Law to ensure the final plan adopted and implemented by MSDGC is the most cost-effective, reasonable, and practical approach for the Hamilton County ratepayers.

Brandon and the team saved Hamilton County in excess of \$900M in capital and operating cost reductions through our work.

The team has provided the County with assessments regarding every aspect of the program's organization, management organization, processes and procedures, planning and project sizing, cost-effectiveness, operating and capital costs reductions, strategy for regulatory compliance, including future regulations, asset management vision and execution, project execution, **as well as a series of special studies, including the feasibility and cost-effectiveness of a new anaerobic digestion facility with methane gas cleaning, processing and supply to the local gas utility for collecting RINs**; proper calibration and validation of the Collection System Hydrologic and Hydraulic Model (SWM) development. Technical assessments have covered a wide range of topics, including: the SWM; the flow monitoring program; asset management program, the sustainable infrastructure (Green) program; tunnels, pump stations, and relief sewers; new stormwater system; surface flooding and basement backup relief, regulatory compliance; water quality issues; and the various treatment technologies being demonstrated or planned.

Advised the County on policies and procedures to be implemented to address the implementation, monitoring, and effectiveness of planned storm sewer separation, post-construction stormwater MS4 permit requirements, and green infrastructure projects in conformance with their current MS4 NPDES permit, the Mill Creek TMDL, EPA Stormwater Regulations, and overall compliance with the Clean Water Act (CWA). Performed owner representative services for various design-build and construction manager at risk projects.

Assisted the County with the development of two Integrated Watershed Management Plans within their CSO and SSO Muddy Creek and SSO 700 watersheds to reduce the costs of their Consent Decree. IWM in these two watersheds has allowed the County to reduce costs by over \$150M for addressing overflows while providing greater water quality and community benefits.

Northern Kentucky Water District (KY): SCADA Improvements Study

Performed study, preliminary design, and cost estimating of various SCADA improvements to the Northern Kentucky Water District's complete distribution system facilities to migrate the existing system from telephone lines and Aquatrol based communication to radio and Wonderware based communication, remote control, and monitoring. Served as project manager for the PLC and Wonderware programming services for the final construction.

Managed and performed resident engineering, inspection, construction phase, and startup services for a new chemical and maintenance building construction and plant wide SCADA system for the existing 40 mgd Ft. Thomas WTP. All existing chemical storage and feed systems were replaced. An automatic plant flow control system to automate raw water flow changes with finished water demands were implemented, along with remote operation of all chemical metering and filtering control.

Louisville Metropolitan Sewer District (KY): Phase 2 Plant Improvements Project

Worked with plant staff to write the Operation and Maintenance manual for the Phase 2 Plant improvements project. The project consisted of increasing the annual average day hydraulic capacity from 15 to 19.5 mgd by adding additional raw water pumping, screening, and grit removal; constructing three new secondary clarifiers, and adding additional sludge pumping and final effluent flow monitoring.

Louisville Water Company (KY): Water Main Project

Conducted a study of alternatives to rehabilitate and/or replace approximately 33,000 feet of existing 48-inch cast-iron unlined water main. Researched and developed cost opinions for various rehabilitation techniques, including joint seals with cement mortar or epoxy lining, cured-in-place liners, sliplining, pipe-bursting, and structural grout repair.

Sanitation District No. 1 of Northern Kentucky: Director of Planning and Design (2007-2011)

While the Director of Planning & Design for SD1, Brandon lead the development of SD1's CMOM and NMC programs. The programs were focused on developing best business practices to implement an asset management program and developed by in-house staff. The results of the AM program greatly increased efficiency, lowered costs, and moved the organization from a reactive to a proactive organization.

- Lowered cost of CCTV inspection by 25%
- Increased in-house crew CCTV inspection footage by 110%.
- Reduced pipeline repair and replacement costs by 70% while increasing annual asset renewal by 500%
- Automation saved \$725,000 in the first year by reducing the number of pipes needing cleaning while simultaneously reducing dry weather SSOs by 24%.
- Reduced dry weather SSOs by 54%.
- SD1 was consistently at least 50% below the industry benchmark for dry weather SSOs because of their CMOM program.
- Published in the EPA publication, Innovative Internal Camera Inspection and Data Management for Effective Condition Assessment of Collection Systems, dated April 2010 as a model to be used when developing automated asset management programs.
- SD1's asset management program was used as a model for developing asset management programs in Columbus, Ohio, Boston Massachusetts, Clayton County, Georgia, Tuscaloosa, Alabama, and Puerto Rico.

The asset management program included a nationally recognized prioritized and proactive asset management program that spans across 33 local member communities. The asset management program was over 1 billion dollars in total asset value consisting of 1,700 miles of sanitary sewers & associated MHs, 400 miles of storm sewers and associated structures & catch basins, 129 pump stations and force mains where previously no program existed. The program consisted of a Continuous Sewer Assessment Program (CSAP) for the sewers and manholes, including catch basin inspection and cleaning, and a preventative maintenance program (PMP) for the pump stations, force mains and air release valves. The goal of the CSAP was to inspect all 1,700 miles of gravity sewers within 10-years. CSAP consisted of cutting-edge decision logic diagrams that have been fully automated for both field and office staff utilizing technology in various forms for next action decision-making to inspect, clean, and/or rehab/replace a pipe segment only when needed.

The program is designed to prevent the need for repeated actions that provide no further asset life renewal and focus investment on the assets that have the least remaining useful life. The CSAP represents the future of asset management and is now the cornerstone of SD1's sewer asset management program.

The Preventative Maintenance Program (PMP) for the force mains and air release valves was developed based on a complete inventory of all record documents associated with each pump station and force main, field inspection of all 148 air release valves and 129 force mains (nearly 100 miles), CCTV inspection of all gravity sewers 1 mile downstream of force main discharges, and surge analyses and force main condition assessments of high criticality pump stations and force mains. The PMP developed complete integration of all data in one central location for each pump station and force main, regular field inspection and rehab/replacement of air release valves, fully utilizing SD1's computerized maintenance management system (CMMS) for logging inventory and tracking work associated with each pump station and force main, prioritized ongoing force main condition assessment, and recommendations for surge mitigation improvements at high criticality pump stations.

Given the proven success of this program for the sewer and storm water assets, asset management efforts expanded to all of SD1's enterprise assets including wastewater treatment and pump station vertical assets, facilities, fleet, and inventory control management. Transferring methods and utilization across other departments provided the

integration and optimization of managing SD1's Capital Improvement Program. SD1's approach and asset management program logic has been used to develop several asset management program software solutions currently utilized in the utility industry. This work ultimately resulted in the development of a simple and effective continuous improvement process model to collect data and effectively manage SD1's business risk exposure.

Key and measurable outcomes included the formal implementation of an AM Vision and Program, development of levels of service and key performance indicators, development of many operational SOPs, and development of effective communication strategies to internal and external stakeholders to achieve shared and unified support.

Lead the study to update the sanitary and storm sewer collection system, treatment plants and pump stations total asset value for use in financial planning and bond rating. ***Total asset value went from approximately \$600M to over \$1Billion as a result of this update study.*** A complete bottoms-up estimate was performed to update the value of each asset class.

Development of a cutting-edge, highly accurate and validated collection system hydraulic model within InfoWorks able to accurately simulate SD1's 1,600 mile collection system, seasonal conditions, antecedent moisture, and varying groundwater levels within a single model. Because of its accuracy, this model was accepted by the regulators to use for quarterly and annual reporting of overflow frequency and volumes.

In July 2010, SD1 experienced a 100-year storm and 8 days later then experienced a 50-year storm. These events caused major flooding, public and private property damage, and basement backups throughout the combined sewer system (CSS) on both occasions. Brandon led the project to understand the root causes of the flooding and damage, evaluate alternatives to increase the level of protection against flooding and basement backups and select the desired solutions throughout the CSS to mitigate future flooding, backups, and damage and increase the level of resilience of the sewer infrastructure. Solutions were analyzed on a series of criteria including, level of protection against basement backups, future flooding, property damage, CSO reduction, water quality improvement, use of green infrastructure, and cost. The selected solutions included a combination of relatively low cost green and gray infrastructure to increase the resilience level of the infrastructure and level of protection against flooding and basement backups in the immediate term with longer-term solutions to be implemented with the CSO LTCP. The study found through an investment of \$15M, a majority of the basement backups (161 of 200) could be eliminated and the infrastructure level of protection increased from the current 2-year storm to a 25-year storm protection level while also reducing CSO volume in the short-term by 35 MG.

Led the development of a public and private source inflow & infiltration removal program for SD1 which included the business case development of economic and non-economic factors, utilization of GPS and pentop technology for data collection, a 50/50 cost-share program with private property owners to properly remove I/I from private property, and regular public, city leaders, and stakeholder presentations and interaction. Projects were developed to holistically address both sanitary and storm assets renewal both on the public and private side and utilization of green infrastructure to provide both water quantity and quality benefits for storm water runoff. Projects are currently in various phases of development, design and construction.

Led the study to update the sanitary and storm sewer collection system, treatment plants and pump stations total asset value for use in financial planning and bond rating. Total asset value went from approximately \$600 million to over \$1 billion as a result of this update study. A complete bottoms-up estimate was performed to update the value of each asset class. Utilized current condition data collected for the sewers and pump stations to calculate asset values and remaining useful life. Data was prepared to be entered into SD1's CMMS for annual updates to asset value and remaining useful life categories for asset management yearly planning and rehabilitation/replacement cost forecasting.

Led a team of three consultants to develop and implement the nine minimum controls program for SD1's combined sewer system and 92 CSOs. NMC program was approved by the regulators and has been implemented. Innovative and cost-effective solids & floatables control program was developed consisting of simple S&F controls (bar racks, weirs/baffles, and net bags), regular diversion inspections, and a comprehensive approximate 12-year catch basin retrofit program. Project identified low-cost simple improvements to the combined sewer system to maximize conveyance to the treatment plant and reduce overflow volumes. One example was adjustment of start/stop elevations at a pump station to reduce typical year annual CSO volume by 80 MG; the equivalent of a six MG storage tank (\$30 million savings).

Led a team of three consultants to develop and implement projects for eliminating SSOs at 14 high priority pump stations and provided a backup power solution at 129 PSs.

Managed and participated in design of approximately 61,000 feet of new 30-inch through 60-inch sanitary sewers and a new 15 mgd peak remote pumping station along with 15,000 feet of 24-inch force main. Worked with the Sanitation District to expand and replace their existing sanitary system infrastructure to treat current and future sanitary flows.

Managed construction phase services and performed inspection for over 5,000 feet of 24-inch force main. Reviewed submittals and interfaced with the Contractor and SD1's full-time inspection staff to ensure a well-constructed project. Conducted training session on restrained joint pipe with SD1's inspection staff to familiarize staff with inspection and installation of restrained joint piping.

Led and managed multiple consultants for various sewer and pump station design projects from conception through preliminary and final design, and through various construction phases. Projects included:

- Pond Creek Pump Station, 7.2 MGD
- Burlington Pump Station, 3.0 MGD
- Riley Road Pump Station, 9.4 MGD
- Alex-Licking Pump Station, 3.6 MGD
- Sunset Pump Station, 1.3 MGD
- Diversion Pump Station, 17 MGD
- Ash St Pump Station, 7 MGD
- Lakeview PS Surge Tanks: Two, approximately 7,000 gallon surge tanks to reduce damaging surge pressures in the force main from 500 psi to less than 250 psi.

Eastern Regional Collection System

Managed the design of approximately 35,000 feet of new sanitary sewers ranging in size from 8-inch to 54-inch. Approximately 26,000 feet of force mains ranging in size from 16-inch to 20-inch. Sewers were constructed to convey flow to the new Eastern Regional Water Reclamation Facility. Sewer infrastructure was sized to provide ultimate build-out growth capacity and eliminate eight MG of overflow volume in a typical year.

Western Regional Tunnel

Managed the design of six miles of 12-foot bore diameter tunnel through shale and limestone, steel ribs and lagging initial support, 8.5-foot finished diameter T-lock lined RCP, approximately 4,600 ft of open-cut 8.5 feet diameter fiberglass reinforced polymer mortar pipe, approximately 702 feet of aerial pipe bridge across a low-lying creek and floodplain. Gravity flow control structure to control flows ranging from eight MGD to 250 MGD to the downstream treatment plant and store flows in the tunnel. Innovative features of the project: first project where both

RCP and fiberglass reinforced polymer mortar pipe joints were tested for exterior pressure capacity in order to withstand 100 psi of groundwater pressure, surge analyses performed to design features into the tunnel to avoid transient waves during storm events, unique multiple redundant sluice gate gravity flow control shaft to regulate flows to the treatment plant.

Western Regional Collection System

Approximately 13 miles of new sanitary sewers ranging in size from 30-inch through 72-inch. Approximately 15,000 feet of 24-inch force main. Sewers were constructed to convey flow to the new 20 MGD Western Regional Water Reclamation Facility. Sewer infrastructure was sized to provide ultimate build-out growth capacity and eliminate 60 MG of overflow volume in a typical year.

River's Edge Inline Storage and Conveyance Project

- 8,000 feet of 84-inch and 110-inch Hobas pipe to replace the existing 27-inch Ohio River Interceptor in Dayton, KY. The project provides 2.2 MG of inline storage and reduces two local CSOs by 56 MG in a typical year. Unique aspects of the project included:
- Design/build project partnership with a local developer to take advantage of an opportunity associated with a proposed riverfront development.
- Challenging geotechnical conditions related to poor soils, settlement, and local and global stability. Involved surcharging the existing soils and laying portions of the sewer in "humps" to counteract the proposed settlement of the underlying soils. Involved the use of stone mattresses below the pipe to bridge areas of poor soils.
- Evaluation and mitigation of surge conditions in the storage pipe to ensure pipe was properly vented and damaging surge pressures did not develop due to fill and conveyance rates
- Two junction chambers between the existing combined sewers and the new conveyance pipe to eliminate a grade conflict between the pipes at both CSOs and also serve as solids & floatable control chambers.

Targeted Sewer Cleaning Project

Led the development and implementation of a comprehensive combination sonar and CCIV inspection and cleaning of the major interceptor sewers within the SD1 system. Approximately 80,000 feet of interceptor and key portions of the combined sewers along the Ohio and Licking Rivers were inspected utilizing above and below the waterline technology to assess condition and determine the amount of debris in the sewers. The interceptor sewers were installed in the 1950s and had never been inspected until this project. The condition assessment allowed each pipe to be prioritized by structural and maintenance condition and led to the first phase of cleaning approximately 30,000 feet of interceptor sewer completed in 2009. Post-cleaning sonar and CCIV inspection of the sewers was performed with the cleaning to assess compliance with cleaning requirements (95% of the debris required to be removed) and to confirm post-cleaning structural condition of the sewer. Estimates predict that CSO volume would be reduced by 20 MG per year from this work.

Miscellaneous Sewer and Pump Station Upgrades

Involved in the day-to-day decision-making and project development for rehabilitation and replacement of the existing sewers, force mains, and pump stations infrastructure throughout the 1,700 mile collection system; Key decisions made: Should trenchless techniques such as pipe bursting, horizontal directional drilling, or cured-in-place lining be used over open-cut; should sewers be rerouted or upsized; what is the history of backups, flooding, dry weather overflows or FOG related problems; how do these repairs integrate with the CSAP and watershed plans.

Preventative Maintenance Program (PMP) for Pump Stations, Force Mains, and Air Release Valves

The PMP was developed based on a complete inventory of all record documents associated with each pump station and force main, field inspection of all 148 air release valves and 129 force mains (nearly 100 miles), CCTV inspection of all gravity sewers one mile downstream of force main discharges and surge analyses and force main condition assessments of high criticality pump stations and force mains. Inspection techniques of the force mains consisted of field walks, insertion probes to identify location, ground penetrating radar, surface location instruments, and the PPIC pipe-diver to locate and identify leaks and air pockets for high criticality force mains. As a result, the PMP called for complete integration of all data in one central location for each pump station and force main, regular field inspection and rehab/replacement of air release valves, fully utilizing SD1's computerized maintenance management system (gbAMS) for logging inventory and tracking work associated with each pump station and force main, prioritized ongoing force main condition assessment, and recommendations for surge mitigation improvements at high criticality pump stations.

PUBLICATIONS & PRESENTATIONS

- Asset Management Made Easy - SD1's Continuous Sewer Assessment Program Implements Practical Asset Management," WEFTEC, 2014
- Asset Management Made Easy – Applying Best Business Practices to Develop Practical Asset Management, WEFTEC 2013
- “Great, we now have a Stormwater Utility! Now how do we prioritize and fix all the problems?, multiple presentations, 2020 - 2022
- "Do Not Forget the Force Mains!!", WEF Collections System, 2010," Five Cities Plus Conference, 2010
- SD1's Innovative Continuous Sewer Assessment Program and Data Automation: Lessons Learned After Three Years of Implementation, WEFTEC 2011 & 2013.
- The Need for an Integrated Water Quality Affordability Strategy, NYWEA, June 2012, WEF Webinar, June 2012, WEFTEC USEPA Integrated Planning Panel, October 2012, Charleston, WV Infrastructure Task Force 2013, WEFTEC 2013, Great Lakes - St Lawrence GI Conf 2017
- Alternative Approaches to Affordability Workgroup, WEF, AWWA, US Conf of Mayors – Reviewer of guidance developed on alternative approaches for measuring a community's ability to afford needed water, wastewater and stormwater improvements and infrastructure, 2013
- Water Quality Trading, WEF Publication, Chapter Author – The Future of Water Quality Trading for CWA Compliance, 2014
- Green Infrastructure Implementation, WEF Publication, Chapter Author – Navigating the Institutional Landscape for Implementation of GI, 2013
- Ask the Experts, Green Infrastructure, Center for Watershed Protection - Watershed Science Bulletin, April 2013
- Developing and Defending Your Utility's Private Lateral Program: A Legal Perspective, KY/TN WEA Annual Conference, July 2011.
- Integrating Stormwater Controls Designed for Channel Protection, Water Quality, and Inflow/Infiltration Mitigation in Two Pilot Watersheds to Restore a More Natural Flow Regime in Urban Streams, Watershed Science Bulletin, Center for Watershed Protection, Spring 2012
- Peeking into the World of Private Source I/I Control, An Integrated Approach to SSO Control, KY/TN WEA Annual Conference, July 2011
- Sanitation District No.1 Partners with Development Community to Cost-Effectively Reduce Overflows into the Ohio River, WEF Collections System, 2008
- Backing Them Up - Staging Inline Storage and Green Infrastructure as Low Cost Steps Towards Controlling a Big CSO - Willow Run CSO, WEF Collections System, 2010

- Cleaning Large Diameter Interceptors: Everybody Knows They Need to Do It, But Doesn't Want to Admit It, WEF Collections System, 2010
- What if Industrial Flows Don't Make It to the Plant? Determining and Addressing Potential Water Quality Impacts of Non-Domestic Dischargers in a Combined Sewer System, WEF Collections System, 2010
- Knowing Your Pump Station's Stress Level, WEF Collections System, 2010
- Don't Let Your Model Sit on a Shelf: Are You Getting the Most Out of Your Model?, WEF Collections System, 2010 (Co-author)
- Understanding Tunnel Operation: The Use of Transient Analysis in the Planning and Design of the Northern Kentucky Western Regional Tunnel, WEFTEC, 2008
- Floatables Control is Surfacing Again, What Can You Do? WEFTEC, 2008
- Accurate Representation of Inflow and Infiltration in Separate Sewer System Models, Revolutionizing Infrastructure Sizing, WEF Collections System, 2007
- Developing an Accurate Model to Support Cost-Effective Collection System Design Solutions: Methods and Benefits, WEF Collections System, 2006
- Practical Applications of a System-Wide Model, KY-TN Water Professionals Conference, 2005
- Providing Sanitary Sewer Service Across the Great Miami River, WEFTEC, 2004
- How Should You Remove Your Nitrogen and Phosphorus? A Nutrient Removal Study for the City of Dayton, Ohio Advanced Wastewater Treatment Facilities (AWTF), OWEA Annual Conference, Dayton, Ohio, 2001
- Chlorine Risk Reduction Through the Use of Chlorine Gas Scrubbers, A Chlorine Risk Reduction Study for the City of Dayton, Ohio Water Treatment Plants, AWWA Southwest District, Ohio Section Meeting, 2000
- "Proving that Bladder Surge Tanks Cured Excessive Surge Conditions in a 30" Force Main," WEFTEC, 2011
- "When Good Water's Gone Bad: Prevention and Control of Sewer System Overflows. SD1's Watershed Approach to Water Quality Improvement and Compliance with the Consent Decree," WEFTEC, 2011
- "SD1's Watershed Approach," WEFTEC, 2009
- "Integration of Field Inspection Data and Automated Analysis Streamlines Sewer System O&M and Rehabilitation Work for SD1," WEFTEC, 2009
- "Implementing a Sewer Overflow Consent Decree through Watershed Management," WEFTEC, 2008
- "Western Regional Conveyance and Storage Tunnel," KSPE Annual Conference, 2008
- "Steps to Implementing an Early Warning and Predictive Water Quality Monitoring Program," KY/TN AWWA/WEA Annual Conference, 2004

Matt Wittern APR, PMP

Manager

PROFILE

Matt has a 25+ year public relations career serving clients and customers in the local government, public utility, engineering, and construction sectors. He excels at designing and implementing strategic communications campaigns that incorporate stakeholder input to inform, advocate and achieve behavior change. His specialty is successfully translating complex subjects and concepts into messages that are easily understood by target audiences. At Raftelis he manages strategic communications planning and implementation, as well as stakeholder engagement initiatives. Prior to joining Raftelis, Matt managed a variety of public affairs efforts at Denver Water, which included designing the public engagement and public information strategies for nearly a billion dollars' worth of infrastructure projects, spearheading the public process for the utility's policy decision regarding Community Water Fluoridation, and led development of processes to gain stakeholder support for preventative maintenance on critical infrastructure. He earned a B.A. in journalism, is Accredited in Public Relations (APR) from the Public Relations Society of America (PRSA) and achieved status as a Project Management Professional (PMP) from the Project Management Institute. Matt has presented at national conferences including the American Water Works Association's ACE and the City-County Communications and Marketing Association's (3CMA) Annual Conference. Matt's work has earned prestigious Gold Pick Awards from the Colorado Chapter of PRSA and SAVVY Awards from 3CMA.

KEY PROJECT EXPERIENCE

Denver Water (CO): Government and Stakeholder Relations

Matt served for many years in Denver Water's Public Affairs Division, where he managed community outreach and public information initiatives from small water main replacement projects impacting neighborhoods all the way up to strategic communications for the half-billion-dollar project to raise Gross Reservoir Dam to increase the facility's storage capacity. Matt also spearheaded the public process to evaluate alternatives related to the Denver Water Board of Water Commissioners' Community Water Fluoridation policy.

Madera County (CA): Solid Waste Management Study Stakeholder Engagement and Communications

Matt served as lead strategist and facilitator for this solid waste management study in 2023. There were significant challenges, as a highly vocal and organized group in the east part of Madera County had sued the government about past solid waste management practices. Using stakeholder engagement techniques, Matt and the team at Raftelis brought all stakeholders to the table for discussions on what the best solution would be for them – providing value for the dollar, while also conforming to new more stringent state regulations. The study also benefitted from strong key messaging and use of myriad county-owned publications and earned media coverage. In the end, Raftelis was able to show where input



Specialties

- Strategic communication planning
- Stakeholder engagement
- Public involvement
- Community outreach
- Primary & secondary research
- Expert positioning
- Media relations
- Social media
- Art direction
- Reputation management
- Coalition building
- Advocacy campaigns

Professional History

- Raftelis: Manager (2023-present); Senior Consultant (2019-2022)
- Denver Water: Senior Community Relations Specialist/Communications Manager (2015-2019)
- Communication Infrastructure Group: Counselor (2006-2015)
- CollegeInvest: Marketing Communications Manager (2005-2006)
- Transportation Expansion (T-REX) Project: Community Relations Manager (2002-2005)
- LawsComm: Client Service Coordinator (1998-2002)

Education

- Bachelor of Arts in Technical Journalism (Public Relations) - Colorado State University (1999)

Professional Memberships

- Public Relations Society of America: Accredited in Public Relations (APR)
- Project Management Institute - Project Management Professional (PMP)
- International Association of Public Participation (IAP2) - Certified in Public Participation
- WEF
- AWWA

from stakeholders greatly influenced the recommendations of the study, which was adopted by the County Board of Supervisors.

Tuolumne Utilities District (CA): Stakeholder Engagement and Proposition 218 Compliance

Matt was the project manager on an engagement to build stakeholder awareness of and support for the District's efforts to acquire its own water rights. The rights – some dating back to the Gold Rush era – are owned by power provider PG&E. While PG&E was offering the rights and associated water collection infrastructure at a good price, the acquisition would require customer water rates to increase. Starting with in-depth interviews of community leaders and individuals who were skeptical of the acquisition, Raftelis designed a multi-pronged campaign designed to create a fact-based community conversation about the opportunity and anticipated bill impacts. As the community became more aware, sentiments from one-on-one conversations and coverage in local media started to change. Unfortunately, just as the District sent out a Proposition 218 notice to cement its legal ability to close the deal, leadership at PG&E changed and the utility pulled out of the deal. The campaign is on indefinite hold until PG&E returns to the negotiating table.

Charlotte Water (NC): Bill Payment Plan Communications

Matt was the project manager for the team that designed and implemented a campaign that help Charlotte Water reduce the number of past-due accounts by promoting the utility's payment assistance program. Raftelis created a nine-month, measurable promotional campaign that included in-person events, posters placed in local businesses, direct mail, paid digital ads, transit advertising, social media, Spotify ads, billing inserts, newsletter articles, website updates, and direct emails to account holders.

Water Environment Federation: Biosolids Communication Toolkit

WEF hired Raftelis to develop a communication toolkit to help wastewater agencies communicate confidently about biosolids. Matt was on the copywriting team that researched biosolids media coverage and interviewed agencies with successful outreach programs; then wrote a comprehensive guide and training module that walks readers through the steps needed to develop and execute a successful biosolids communication effort. The toolkit includes guidance for making the business case for proactive outreach, it covers best practices for handling a "hit piece," for managing pushback from the community, using social media and much more, including downloadable imagery, infographics, social media posts and templates. The team also supported WEF with training on the use of the toolkit.

Fairfax County/City (VA): Community Redevelopment Communications and Engagement

Matt played a support role in implementing the strategic communications and engagement plan for the joint redevelopment of the Sherwood-Willard health and community center. The Raftelis team guided a large, multi-disciplinary team of city and county employees through a discovery and planning process to assure key stakeholders are informed of the project and opportunities to provide input into the design.

EPIC: Water Quality Communications (CCR Report Template)

Matt was on a multi-disciplinary team of writers, graphic designers and data visualists to develop an award winning entry into the Environmental Policy and Innovation Center's contest to reimagine the Consumer Confidence Report. Raftelis' team created an online and print template for the CCR that improved its accessibility to all audiences, using the CDC Clear Communication Index, the Flesch-Kincaid reading scale, and best-in-class design. Raftelis was selected through a competitive process to also design a national template for the CCR. That project is underway now.

Augusta County Service Authority (VA): Water Quality Communications (CCR Report)

Based on their first-place win on the CCR contest sponsored by EPIC, Raftelis was invited by The Virginia Health Catalyst to help them develop a CCR template to be used by Augusta County Service Authority. That project is underway now, with Matt serving as project manager.

City of Port Hueneme (CA): Water Rate Change Stakeholder Engagement and Communications

A rate study had not been performed for some time for this small coastal city, and the City Council stressed that affordability was a key factor for their approval. They also stressed the importance of transparency, especially as it related to ensuring the community's significant population of individuals for whom English was not their primary language. As the strategic communications project coordinator, Matt conducted public outreach efforts for the City of Port Hueneme (City) that included the development of an infographic that explains the City's rate structure changes, a Proposition 218 notice, and facilitated three public workshops to explain the changes. All materials were translated into Spanish-language versions to enable communication across a potential language barrier. Raftelis' recommended rates were subsequently adopted by City Council.

Montecito Water District (CA): Water Rate Change Communications

This coastal community faced the opportunity to reduce its reliance on surface water sources that are becoming less and less certain due to the effects of climate change and drought. Their solution was to switch over to a guaranteed source using a state-of-the-art desalination plant. This change modified the cost structure paid by customers, but also came with benefits that were not obvious at first glance. Matt managed the implementation of a strategic communications plan that included development of a variety of communication tools and pieces that effectively made the case for why the changes planned will provide long-term community benefits. Raftelis' recommended changes were subsequently adopted by the board of directors, who also voiced appreciation for the communications and outreach performed in the months leading up to their vote.

Bullhead City (AZ): Water Utility Acquisition Communications

In a bid to take over the City's privately-owned water utility and make it owned by its customers, Raftelis was engaged by Bullhead City to develop a defensible valuation. The owners of the utility were resistant to the idea and launched a public relations campaign in a bid to scuttle the effort. Raftelis developed a series of communication tools that refuted the existing disinformation campaign and set the record straight. In the end, voters in Bullhead City approved the vision and authorized the City to continue down the path of purchasing the utility.

Cucamonga Valley Water District (CA): Water Rate Change Communications

The Cucamonga Valley Water District, in California's Inland Empire, was updating its rates and fees to account for a modified pass-through fee for State Water Project water, along with aligning its tiered rate structure to more closely follow the varied costs of different sources of water. In addition, CVWD's financial plan and Capital Investment Plan called for infrastructure upgrades to its aging water infrastructure before costly breaks and outages became more common. Matt coordinated the implementation of a strategic communications and outreach plan that included communication tools such as bill stuffers, FAQs, a fact sheet/infographic, and Proposition 218 notice. Misinformation about the proposed rate increase was quickly rebutted and the board of directors unanimously approved Raftelis' rate recommendation in 2021.

Crestview-Lake Arrowhead Water Agency (CA): Proposition 218 Compliance

Crestview-Lake Arrowhead Water Agency (CLAWA) had not had a rate increase in 26 years and needed to ensure compliance with California's Proposition 218 requirements. CLAWA sought specialized assistance communicating the purpose and need for rate increases to customers on a strict implementation timeline. Matt provided strategic

communications assistance, including guidance on messaging strategy and tactics, resulting in a successful adoption of the recommended rate adjustment.

Amador Water Agency (CA): Water Rate Change Stakeholder Engagement and Communications

Amador Water Agency (AWA or “Agency”) provides treated water, untreated water, and wastewater collection and treatment services to approximately 10,000 customers across 568 square miles in Amador County. Over the years, the Agency has absorbed a variety water and wastewater systems that collectively make up its current system. These systems joined Amador Water Agency in various states of repair – often operating below industry standards and best practices. Prior rate adjustments were difficult, and the Agency struggled to perform maintenance and make improvements on its systems to raise levels of service. Raftelis was engaged early in the rate study process, and Matt developed a customized strategic communications plan and messaging that helped the agency tell its story effectively. Using a suite of communications tools, the Agency successfully made the case for the need for rate adjustments and set itself on a path to success.

City of Santa Cruz (CA): Water Rate Change Stakeholder Engagement and Communications, Proposition 218 Compliance

Residents of this popular tourist destination are some of the most water wise in the entire country, and pride themselves on their low per-capita water usage. Raftelis was engaged to perform a detailed water rates study that included a concurrent public involvement component. Over a period of 18 months – and made more difficult by the COVID-19 pandemic – Matt and colleagues at Raftelis provided strategic communications counsel and facilitated stakeholder outreach and engagement activities that informed the rate study process. This process included development of an online engagement community from scratch, multiple community presentations and strategic communication tools. Further, Matt led development and provided art direction on the Proposition 218 Notice, which is a legal requirement before City Council votes to adopt rate change recommendations.

City of St. Helena (CA): Water Efficiency Communications

Like many of its neighbors, the City of St. Helena is working to combat the effects of climate change. For this community in California’s wine country, customers needed to dramatically curtail their water usage to avoid more painful water restrictions. But with a modest in-house staff, the city asked Raftelis to jump in to help communicate a suite of conservation messages. Within just a period of days, Matt developed conservation messaging, social media content, infographics, newsletter articles, giveaways, fact sheets, and other tools to raise awareness among the city’s water customers, which helped result in considerable water conservation.

Western Municipal Water District (CA): Expert Positioning

Following a successful water rate study and after defeating a court challenge, the District hired Raftelis to draft an article to share its story with other nearby providers on the tricky issue of water budgets. Working closely with the District Manager and legal counsel, Matt authored a piece and developed accompanying graphics that was published in *Journal AWWA* and subsequently won an award at ACE 2023.

City of Newport Beach (CA): Water Rate Change Communications and Proposition 218 Notice

The City of Newport Beach (City) Utilities Division provides water service to more than 86,000 people over 50 square miles. A high-income community composed of primarily single-family residential properties, there was significant resistance to past water rate increases. For the past four years, City Council declined to increase rates, but with costs such as purchasing supplemental water rising by 75% in recent years, the time had come for action. Matt was on the Raftelis team charged with developing a comprehensive strategic communications plan, messages and communications tools, including a Proposition 218 notice. The effort communicated the great need for

infrastructure improvements to ensure continued deliver of high-quality drinking water and water for fire protection. City Council voted to increase rates at the end of 2019.

PRESENTATIONS

- “Strategic Communications Bootcamp” 2023 Raftelis Performance Academy
- “Building Support For That Thing You Want to Do” 2023 City/County Communications and Marketing Annual Conference
- “Building Support For That Thing You Want to Do” 2023 NACWA StratCom Conference
- Panelist, 2023 NACWA Winter Conference
- "Developing Water Conservation Communication Campaigns That Aren't All Wet" 2022 North Texas Water Conservation Symposium
- “Is This Working? Determining Utility Communications Success” 2022 NACWA Strategic Communications H2O Workshop
- “Internal Communications: How to Effectively Talk with Your Own Employees” 2022 NACWA Strategic Communications H2O Workshop
- “Building Support for Water Rate Increases” AZ Water Association 2022 Annual Conference
- “Building Support for Water Rate Increases” Colorado Municipal League 2021 Annual Conference
- “Biosolids Communication Toolkit Workshop” Water Environment Federation
- “Re-imagining Engagement: Harvesting what we’ve learned about virtual public engagement for the future” ACE ’21 Annual Conference
- “Re-imagining Engagement: Harvesting what we’ve learned about virtual public engagement for the future” Arizona Water Association 2021 Annual Conference
- “It’s Human Nature: Using Social Science to Enhance Your Communications,” RMSAWWA/RMWEA, 2020
- “Ensuring Public Process Legitimacy Through the Lens of The Community Water Fluoridation Issue,” AWWA ACE Conference, 2016

PUBLICATIONS

- “Protecting Against Water Rate Challenges With the Equivalent of Bear Spray”, Article, Journal AWWA, 2022 (Earned award at ACE)
- “Leverage Social Media in Times of Crisis”, Article, Journal AWWA, 2020

Lundyn Harrelson

Senior Consultant

PROFILE

Lundyn is a Senior Consultant in the Austin branch. She has completed various water, wastewater, electric, solid waste, data, and technology projects in her time at the firm. Prior to her role at Raftelis, Lundyn was a consultant through her master's program at Louisiana State University and gained experience working with clients, data, and deadlines. With a bachelor's degree in actuarial science and a master's degree in Analytics, she uses her analytical and statistical expertise to be a trusted advisor and deliver lasting solutions.

KEY PROJECT EXPERIENCE

Cleveland Public Power (OH): Electric Utility Financial Plan and Cost of Service Study

As lead analyst, Lundyn lead a financial planning and cost of service study for a major municipally owned energy utility. The team has already completed the development of a robust five-year financial planning model for their Electric division. This comprehensive model forecasts revenue adjustments, thoroughly projects expenses, and manages all capital and related debt obligations, specifically engineered for intuitive usability and long-term sustainability by the utility's internal staff. Furthermore, the team successfully reviewed and established cost based ancillary fees to address client-identified cost recovery needs.

Raftelis is currently completing a comprehensive cost of service study and strategic rate design analysis, aiming to optimize cost recovery across customer classes and align the rate structure with the utility's core objectives. The project will culminate with assistance in developing a strategic communications plan tailored to effectively present these vital study results to the Mayor, City Council, and key public stakeholders, acknowledging the critical need for transparent engagement in municipally-governed environments. Concurrently with the cost of service analysis, the team performed an AMI demand analysis for larger customers, identifying peak shaving opportunities to reduce electric capacity costs from the purchased power provider. This involved cross-referencing purchased power peak forecasts (from demand emails) with granular AMI consumption data to understand customer usage during critical periods.

City of Aspen (CO): Water and Electric Financial Planning and Cost of Service Study

To assist the utility in tracking revenues and usage, Lundyn created an excel based data model that automates billing data analysis with the appropriate outputs from discussion with staff. A key deliverable was the creation of a robust, user-friendly Excel-based data model designed to automate billing data analysis. This intuitive tool allows City of Aspen staff to seamlessly drop in raw data, enabling immediate analysis of complex consumption and revenue patterns with a single click – demonstrating commitment to providing practical, staff-usable solutions.

Additionally, Lundyn acted as staff consultant on a water and electric financial planning and cost of service study. The cost-of-service analysis designed rates based on cost of service results, and transitioned the city into those rates to mitigate the rate shock to classes. The City's water rate structure is based on Equivalent Capacity Units (ECU's)



Specialties

- Data analysis
- Rate design
- Forecasting
- Cost of service
- Excel

Professional History

- Raftelis: Senior Consultant (2025-present); Consultant (2023-2024); Associate Consultant (2020-2022)
- National Insurance Company: Consultant (2020)
- Statewide Community College Association: Consultant (2020)

Education

- Master of Science in Analytics - Louisiana State University (2021)
- Bachelor of Science in Actuarial Science - Louisiana State University (2020)

Professional Memberships

- AWWA: Texas Section

and scales charges to customers based on their ECU's. The electric rate structure follows the traditional structure. Both rate structures were analyzed and adjusted to better represent the behavior of the City's customers.

Beyond core financial and cost-of-service work, Lundyn led various special projects addressing emerging challenges. This included a detailed examination of the cost impact of solar customers on the utility system and the development of equitable rates for solar prosumers, as well as providing research on other utility approaches to solar customers.

New Braunfels Utility (TX): Electric, Water, and Wastewater Financial Plan and Rate Design

As the lead analyst, Lundyn completed financial plan and rate design study for the City of New Braunfels, Texas. The project encompasses three essential utility services—electric, water, and wastewater. Lundyn's role included developing financial planning models that ensure the long-term financial stability of each utility. This requires a deep analysis of historical financial data, projected expenses, and anticipated capital investments. A critical component of this study was the rate design phase, where the rate structures were crafted to align with the priorities and invaluable feedback provided by a Citizen Advisory Panel. This community-centric approach ensured that the final rate structure reflects shared community needs and values, highlighting a commitment to transparent stakeholder engagement and consensus-driven solutions for public utilities.

City of San Diego (CA): Financial Plan and Cost of Service Model

Lundyn served as the lead consultant for the City of San Diego's wastewater department. In this role, she oversaw financial planning and analysis for the City and conducted cost of service analyses to ensure that all customer classes appropriately recover their costs. This analysis includes a thorough review of strength loadings and inflow and infiltration (I&I) allocations for each class. Given the diversity of wastewater customers, the cost of service analysis is highly detailed to ensure accuracy and validity in the results.

City of Oklahoma City (OK): Water and Wastewater Cost of Service Study and Financial Plan

Lundyn was staff consultant that updated the City's financial plan and cost of service study for water and wastewater. This comprehensive study included a general financial review as well as an evaluation of capital infrastructure projects, focusing on their priority, timing, and funding sources. Oklahoma City serves a diverse customer base, with various classes of customers both inside and outside of the city limits, in addition to providing wholesale and raw water to multiple entities. At the city's request, Lundyn conducted a detailed analysis of the residential rate structure, with special attention to how fluctuations in individual residential account usage affect overall consumption. She also helped design a surcharge system for peak usage months to encourage water conservation.

Valley Water (CA): Affordability Analysis

Lundyn is the lead analyst for Valley Water's affordability analysis, a crucial project aimed at evaluating the financial burden of water services on its customers. Raftelis is developing an affordability framework based on the joint effort of NACWA, AWWA, and WEF, providing a structured method for assessing the affordability of water and wastewater services. This analysis will be integrated into a Customer Affordability Dashboard, which reacts to various capital planning scenarios and enables Valley Water leadership to monitor the financial impact of different strategies. The dashboard will provide key metrics that are crucial for maintaining regulatory compliance and ensuring that affordability remains a central focus as the utility plans for capital improvements and other initiatives. This tool will also support leadership's discussions with regulators, helping Valley Water balance financial health with customer affordability.

City of Whittier (CA): Cost of Service Study and Financial Plan

Lundyn is the staff consultant for a financial plan and cost of service study for Whittier Utility Authority. The Authority provides water to over 50% of the City of Whittier, and can provide water to outside Cities. The sewer

system is collection only and the wastewater is conveyed to Los Angeles County Sanitation District for treatment. The study will ensure financial stability of the Authority, and evaluate the current rates charged to customer classes and outside city customers.

City of Healdsburg (CA): Cost of Service Study and Financial Plan

As the staff consultant for the City of Healdsburg's water and wastewater utility, Lundyn led the financial plan and cost of service study aimed at ensuring the financial health of the city's utility services. A central focus of this study was the changing water consumption behavior due to ongoing conservation efforts, which required a detailed forecast of water demands and consumption trends. By analyzing historical consumption patterns and projecting future demand, Lundyn was able to align projected revenues with these new consumption levels. The study also included an equity-focused cost of service analysis to ensure that different customer classes, such as residential, commercial, and industrial users, were paying rates proportional to the cost of service. In doing so, Lundyn helped the city maintain financial stability while promoting fairness across the customer base. Her recommendations included adjusting rate structures to better reflect actual usage patterns, minimizing revenue volatility, and ensuring that Healdsburg's water utility remains sustainable in the face of conservation challenges.

City of Scottsdale (AZ): Cost of Service Study and Financial Plan

Lundyn acted as staff consultant for the financial plan and cost of service study for the city of Scottsdale water utility. The study includes an in depth evaluation of their current rate structure. This evaluation includes but is not limited to level of recovery between customer classes and level of variations within classes, out of city surcharge rates, and cost impacts of source water costs due to drought, wholesale increases, etc.

City of Glendale (AZ): Water and Wastewater Cost of Service and Rate Design

The City of Glendale, Arizona, has engaged Raftelis to conduct a financial plan and cost of service study for its water and wastewater utilities. Lundyn plays a key role in this project, focusing on creating actionable financial plans that meet the financial needs of the utility while minimizing the impact on customers. She ensures that the cost of service is carefully evaluated for each utility, providing the city with data-driven insights that inform decisions about equitable rate structures. By assessing operational expenses, capital needs, and the projected demands on the utility, the study aims to ensure that all customer classes pay rates in line with the actual cost of service. Lundyn is also instrumental in ensuring that these plans accommodate future growth and regulatory requirements, providing Glendale with a long-term roadmap for financial sustainability.

City of Gretna (LA): Water and Wastewater Financial Plan

Lundyn developed a comprehensive financial plan for the City of Gretna's water and wastewater utilities. The plan addressed several critical financial initiatives, including efforts to increase employee salaries, enhance repair and replacement operations, issue municipal debt, and secure grant funding. Given the scope of the city's goals, Lundyn's financial plan provided detailed strategies for managing these various initiatives, balancing short-term operational needs with long-term capital investment. Her plan also included recommendations for rate adjustments, designed to ensure the financial sustainability of the utility while maintaining affordability for residents. The study produced a report for the State of Louisiana to help Gretna improve its water grade and meet regulatory requirements, providing a pathway for the city to continue investing in its water infrastructure.

City of New Orleans (LA): Drainage and Feasibility Study, Revenue Forecast

Lundyn served as the staff consultant for a drainage feasibility study and revenue forecast for the City of New Orleans. This study focused on assessing the potential for implementing a drainage fee to support additional operational and capital needs within the city. The project involved evaluating various scenarios of tax revenue generated by the city and examining how a drainage fee could offset some of the financial pressures on the existing

infrastructure. Lundyn's analysis provided New Orleans with a clear understanding of the operational and financial impacts of implementing such a program, offering recommendations that balanced the need for revenue generation with the city's broader financial goals. In addition to this, Lundyn is currently leading a project that involves projecting future revenue for the city's water, wastewater, and drainage utilities. This includes benchmarking New Orleans' revenues and rates against nearby entities, ensuring that the city's utilities remain competitive and financially viable while meeting the growing demands of the population.

City of Boulder City (NV): Water, Wastewater, Electrical, and Solid Waste Model

Lundyn completed the update of the water, wastewater, electrical, and solid waste model for Boulder City. The study focused on updating the existing financial planning model and presenting various rate design alternatives. These rate design alternatives aim to provide equity across the various classes and recover appropriate revenues for the utilities.

City of Pocatello (ID): Water, Wastewater, and Sanitation Rate and Fee Study

Raftelis has provided the City of Pocatello with utility rate studies for over a decade. On the most recent study, Lundyn acted as lead consultant to complete the water and sanitation cost of service and financial plan. Lundyn worked closely with staff and project management to perform a comprehensive revenue sufficiency with various operational and capital scenarios to determine appropriate revenue adjustments for the utilities.

City of Laramie (WY): Water, Wastewater, and Solid Waste Cost of Service and Landfill Closure Analysis

Lundyn has been supporting the City of Laramie with the water and wastewater utility consulting service since 2022. Prior engagements with the City consisted of financial planning updates. Currently, Lundyn is lead consultant in creating a new financial model for the City and conducting a cost of service analysis for the water and wastewater utilities. This study will provide the City insight on required revenue adjustments, equity among classes, and a custom built financial model that was developed according to City input and data systems.

Lundyn is also assisting the City with a formal cost of service rate study and financial plan for the solid waste utility. This study requires performing comprehensive revenue sufficiency and cost of service evaluations for the solid waste system resulting in the proposed collection, disposal, recycling, and tip charges that support operational and capital needs of the City. In addition, the study will also evaluate the landfill closure costs and ensure that the proposed revenue adjustments support the closure costs relating to the landfill.

Alexandria Renew Enterprises (VA): Billing and Customer Service Transition

Lundyn aids in project management and system testing for a billing and customer service transition coordination project with Alexandria Renew Enterprises (AlexRenew). She collaborates with AlexRenew's staff and an outsourced CSS provider to implement the replacement of their existing system.

City of Seattle (WA): Long-term Water Demand Forecast

Raftelis was engaged by Seattle, WA to create a long-term water demand forecast that considers demographic, weather, conservation, and economic scenarios to help plan for the future. Lundyn acts as staff consultant and provides data analysis expertise to the city. A variety of time series and regression forecasts were designed to forecast future water demand levels for Seattle. Seattle provides water to the City itself and has over 20 wholesale customers, so it is essential for water supply and infrastructure planning to be able to plan for the future appropriately.

City of Steamboat (CO): Water and Wastewater Cost of Service and Financial Plan

Lundyn serves as lead analyst for a comprehensive water and wastewater rate study for the City of Steamboat Springs (City). Separate water and wastewater financial planning models are created to evaluate current and potential funding sources to support each utility operation over the next 10 years including future adjustments necessary to fund operations and the annual capital project requirements (including regulatory driven and capacity expansion improvements) and maintain a financially viable utility. A cost-of-service evaluation will be completed for each utility. In addition, Raftelis will update the plant investment fee schedule. The findings and recommendations will be presented to City Council and summarized in a report issued at the completion of the study.

RELEVANT PROFESSIONAL EXPERIENCE

National Insurance Call Center (2020)

Lundyn served as a consultant to assist client in determining internal variances in their call metrics (i.e frequency and duration) following the Stay-At-Home order in response to COVID-19 pandemic. Specifically, as a consultant she used her skills to statistically compare a baseline of 2.5 years of historical call data to the first six months data of work-from-home inbound, outbound, and internal (extension to extension) call data to find descriptive differences in terms of call frequency and duration. Using the pre- and post-Stay-at-Home order metrics, as well as calculating the fixed and variable costs of the Cost Centers, the consultants were able to conclude visuals for change in Cost Center frequency, duration, and cost as well as the efficiency of the fixed cost of a cost center in relation to the variable cost.

Statewide Community College Association (2020)

Consulted the clients in identifying areas of improvement for the course scheduling process (i.e classroom efficiency, course times, course retention, course success rate, advising. etc) for students. The analysis aims to increase overall efficiency of the college and success of students. One deliverable of the analysis was a Market Basket Analysis, which is a data mining approach that identifies relationships between products. The classes taken per semester per student are the “products” they purchase. The relationship between required classes for majors based on a degree flowchart was compared with courses taken per semester per student. The college could assess, on average, how many courses a student should be enrolled in to complete their degree vs what they were enrolled in. Additionally, the availability of classes that need to be taken together was data mined and results were shown to indicate “class competition”. “Class competition” refers to the set of classes a student needs to take per their degree path being offered at competing times. To help minimize class competition, an excel based model was generated that used the Solver functionality. The Solver functionality assessed the sets of classes a student needs to take per semester per their degree chart and suggested course scheduling that minimized the competition between courses that need to be taken together.

Nicki Bartak

Senior Consultant

PROFILE

Nicki has 6 years of experience in the water and utility industry in both the private and public sectors. She joined Raftelis after three years with the San Francisco Public Utilities Commission, where she focused on understanding utility needs and problem-solving processes. As a real estate analyst, she facilitated Project Review, working to streamline review processes with internal and external stakeholders. In addition, she developed a proactive research tool for wastewater engineers to determine maintenance and access rights, researching and mapping sewer easements in a spatial database. Prior to that, she was an investment analyst at a boutique private equity firm specializing in water resources. Through modeling water rights transactions across the western United States, Nicki gained an in-depth understanding of water valuation and resource planning. In addition to building models and writing documents used to underwrite transactions, she evaluated municipal supply portfolios vulnerable to shortage and developed an internship program. Her professional interests are centered around using data to drive decisions, especially from the perspective of municipal water supply.



Specialties

- Financial modeling
- Water rights & pricing
- GIS analysis

Professional History

- Raftelis: Senior Consultant (2025-present); Consultant (2023- 2024)
- San Francisco Public Utilities Commission: Senior Administrative Analyst (2019- 2022)
- Water Asset Management: Associate (2018- 2019); Investment Analyst (2016- 2018)

Education

- Bachelor of Science in Environmental Economics & Policy - University of California, Berkeley (2016)
- Bachelor of Arts in Geography - University of California, Berkeley (2016)

Professional Memberships

- AWWA: Rocky Mountain Section

KEY PROJECT EXPERIENCE

City of Prescott (AZ): Impact Fee and Rate Study

Nicki served as the staff consultant developing non-utility impact fees for the City of Prescott's Police, Fire, and Streets enterprises. We worked with the City to develop a Land Use Assumption (LUA), Infrastructure Improvements Plan (IIP), and Development Impact Fee (DIF) study to update the City's non- development impact fees for compliance with Arizona Revised Statutes (ARS §9-463.05).

City of Thornton (CO): Water and Wastewater Financial Plan, Cost of Service, and Rate Study

Nicki is the staff consultant for a comprehensive water and wastewater utility financial planning, connection fee and rate study for the City of Thornton. The water utility study is evaluating the revenue needs to support the construction and upgrades to new and existing water treatment plants, infrastructure to support anticipated growth and meet PFAS treatment requirements, and anticipated system repair and replacement requirements. Raftelis developed a long-range financial plan completing multiple capital funding scenario in support of anticipated debt issuances to fund capital expansions and improvements. In addition, Raftelis developed water system, water resource, and wastewater system connection fees to support the expansion and construction of these new facilities.

Town of Erie (CO): Water, Wastewater, and Stormwater Financial Plan, Cost-of-Service, Rate Design, and Tap Fee Study

Nicki is the staff consultant for an ongoing water, wastewater, and stormwater financial plan, cost of service, rate design, and tap fee study for the Town of Erie. The Town retained Raftelis to update comprehensive financial plans, cost-of-service analyses, rate designs, and tap fees for its water, wastewater, and stormwater utilities. Raftelis is updating the separate financial plans for each utility as part of the 2024 study. Subfunds were created for each utility to monitor activities associated with ongoing operations and growth-related activities. This separation of funds

allowed the Town Council to see how growth revenues were able to fund projects and whether rate revenue was required to make up deficiencies.

City of Ventura (CA): Financial Plan Update and Connection Fee Study

Nicki is the staff consultant on a financial plan update and connection fee study for the City of Ventura. The City is evaluating various financing options to construct a large water reuse project, however construction delays and inflation have resulted in costs doubling from initial estimates. Raftelis was retained to evaluate the recommended rate increases from a prior rate study in this escalating cost environment and to provide support for financing applications. In addition, Raftelis is providing support on an overhaul of connection fees, which have not been updated since 2009. Raftelis is working closely with City staff to develop connection fees with different structures, tailored to better fit the unique demands of development in the City.

City of Big Bear Lake (CA): Department of Water and Power

Nicki was the staff consultant for a capacity, administrative, and service installation fee update for the City of Big Bear Lake, Department of Water and Power (DWP). DWP had most recently updated capacity fees in 2009, and engaged Raftelis to conduct a study to examine the existing approach against alternatives that may better reflect current community conditions, system characteristics, and policy objectives. Raftelis worked collaboratively with DWP staff with DWP leading analyses internally and Raftelis providing high level insight, analyses review, proposing alternatives for evaluation, and vetting recommended fees.

Fort Collins-Loveland Water District (CO): Financial Plan, Cost of Service and Rate Study

Nicki was the lead consultant for a water financial plan, cost of service, and rate study that also includes a tap fee update for Fort Collins-Loveland Water District (FCLWD). The District retained Raftelis to evaluate rate increases to fund deferred maintenance and an aggressive growth-related CIP totaling over \$1B throughout the study period. Raftelis developed several financial planning options to meet Board pricing objectives and a variety of financing scenarios, working closely with Staff. In addition, Raftelis updated the tap fee schedule with changing raw water prices and scaled by actual customer billing data and use trends.

Town of Firestone (CO): Water Financial Plan, Cost of Service and Rate Study

Nicki was the staff consultant for a water financial plan, cost of service and rate study for the Town of Firestone. Like many northern Colorado communities, Firestone is experiencing significant growth and rising expenses. In particular, Firestone's wholesale treated water provider raised rates 18%, with additional increases forecasted in following years. Firestone retained Raftelis to evaluate the efficacy of its rate structure to meet these rising costs and pay for its CIP that included the construction of a new water treatment plant. Raftelis provided guidance on O&M costs based on AWWA benchmarks, as well as assisting in the development of a pass-through rate structure for the Town's water purchases. Raftelis's financial plan tracked growth-related capital spending separately from operations to assuage Board concerns about current ratepayers subsidizing growth. After working closely with Staff and the Board, Raftelis provided six rate alternatives, one of which was adopted at the end of 2023.

El Toro Water District (CA): Financial Plan, Cost of Service and Rate Update

Nicki was the staff consultant on a financial plan, cost of service, and rate update for El Toro Water District's Water, Wastewater, and Recycled Water enterprises. Nicki worked closely with Staff to ensure that Raftelis's modeling matched the District's internal modeling to provide defensible rate updates and a technical memorandum detailing methodology on a tight timeline.

RELEVANT PROFESSIONAL EXPERIENCE

San Francisco Public Utilities Commission: Senior Administrative Analyst (2019-2020)

Nicki joined SFPUC to gain exposure to the municipal perspective as a stakeholder in water supply issues and understand large utility operations. As a Senior Administrative Analyst for the Real Estate Services Division of SFPUC, Nicki worked closely with Wastewater Enterprise engineers to determine access rights and maintenance responsibilities. She progressively mapped her research in GIS to create a proactive, user-friendly tool for staff. In addition, she facilitated the In-City Project Review Committee, which worked with internal enterprises (Water, Power, Sewer, and overhead/support services) to review projects affecting SFPUC land or infrastructure. She also performed a spatial analysis using data from multiple departments to identify where inter-departmental agreements were needed on City property. During the City's COVID-19 emergency response, she developed an inventory tracking system and managed the distribution of Personal Protective Equipment to congregate living sites.

Water Asset Management: Associate (2016-2019)

Water Asset Management is a boutique private equity firm specializing in water resource investments throughout the western United States. As the only analyst for the team, Nicki developed and maintained financial models for water rights transactions throughout Arizona, California, Colorado, Nevada, New Mexico, and Texas. Her work included crop economic analyses, comparable evaluation, competitor identification, and data-driven analytics. In addition, she performed GIS analyses to identify and prioritize key attributes of water rights to target potential investment regions. She also developed high-level summary documents and presentations for external stakeholders and policymakers unfamiliar with water rights development.

PUBLICATIONS

- “Water scarcity and fish imperilment driven by beef production,” Nature Sustainability, 2020

PROJECT LIST

- Town of Firestone (CO) – Financial Plan, Water Rate, and Cost of Service Study
- Town of Dacono (CO) – Financial Plan and Water Rate Study
- Town of Eaton (CO) – Water, Wastewater, and Irrigation Financial Plan, Cost of Service, and Rate Study; Tap Fee Update
- City of Thornton (CO) – Water and Wastewater Financial Plan, Cost of Service, and Rate Study
- Fort Collins-Loveland Water District (CO) – Water Financial Plan, Cost of Service, and Rate Study
- Big Bear Lake Department of Water and Power (CA) – Capacity and Miscellaneous Fees
- City of Ventura (CA) – Financial Plan Update and Connection Fees
- El Toro Water District (CA) – Rate Study Update, Water, Sewer and Recycled Water
- Imperial Irrigation District (CA) – Water Cost of Service Study
- City of Prescott (AZ) – Impact Fee and Rate Study

**CITY OF SAN BERNARDINO
MUNICIPAL WATER DEPARTMENT**

**WATER BOARD
STAFF REPORT**

TO: Miguel J. Guerrero, P.E., General Manager 
FROM: Steve R. Miller, Director of Water Utility
SUBJECT: **AUTOMATIC ANNUAL WATER CAPACITY CHARGE INCREASE FOR FISCAL YEAR 2026/2027**
DATE: October 2, 2025
COPIES: Cynthia Mouser (w/attach), Warren Huang (w/attach), Miriam Sifuentes (w/attach)

BACKGROUND:

Rule and Regulation No. 5 (attached) requires that:

"On July 1 of each calendar year, the Water Capacity Charge shall automatically increase in proportion to the published twelve-month increase measured in September each year in the Construction Cost Index. This index is published in 'Engineering News Record,' a publication of McGraw-Hill, Inc. The Water Board may, at its option, determine by resolution adopted prior to November 1, that such an increase shall not be effective for the next succeeding fiscal year (always starting on July 1). In the event the Construction Cost Index has not changed or has decreased, the charge shall not be changed."

The "Engineering News Record (ENR)" Construction Cost Index (attached) shows a 2.2 percent increase for the period of September 2024 through September 2025 (September 2024 ENR = 13,632, September 2025 ENR = 13,928 change $(13928-13632)/13632 = 2.2$ percent).

The setting of capacity charges is exempt under CEQA per CEQA Guidelines section 15061(b)(3).

GOALS AND OBJECTIVES:

This annual Water Capacity Charge increase aligns with the Department's Strategic Plan under Goal #5: Ensure Financial Health & Transparency. This supports the specific action to implement rate structure and updates resulting from rate studies.

Miguel J. Guerrero, P.E., General Manager

Page 2

October 2, 2025

**SUBJECT: AUTOMATIC ANNUAL WATER CAPACITY CHARGE INCREASE FOR
FISCAL YEAR 2026/2027**

FISCAL IMPACT:

None at this time.

RECOMMENDATION:

It is recommended that the Water Board consider the following motion or the alternate resolution for approval:

A motion to allow the automatic ENR increase of 2.2 percent to the water capacity charges in Rule and Regulation No. 5 to become effective July 1, 2026, and direct staff to provide notification to current and future project holders of the effective date and amount of water capacity charge increases.

or

A motion adopting a resolution foregoing the automatic annual increase in water capacity charges for the 2026/2027 fiscal year period, as set forth in Rule and Regulation No. 5 of the Water Board of the City of San Bernardino.

Respectfully submitted,



Steve R. Miller (Oct 2, 2025 16:44:56 PDT)

Steve R. Miller

Director of Water Utility

SRM:vg

Attach.

- Resolution
- Water Capacity Charge Increase Spreadsheet
- Construction Economics from ENR
- Rule & Regulation No. 5

RESOLUTION NO. _____

**RESOLUTION OF THE WATER BOARD OF THE CITY OF
SAN BERNARDINO, CALIFORNIA, APPROVING THE
FOREGOING OF THE AUTOMATIC ANNUAL INCREASE
IN WATER CAPACITY CHARGES FOR THE 2026/2027
FISCAL YEAR PERIOD, AS SET FORTH IN WATER
DEPARTMENT RULE AND REGULATION NO. 5.**

WHEREAS, in accordance with Section 603 of the City Charter, the Water Board is responsible for oversight and management of the City's water supply, recycled water, wastewater collection and treatment functions; and

WHEREAS, water rates are set forth in the Rules and Regulations of the Water Board; and

WHEREAS, the current rates set forth in Rule and Regulation No. 5 for Water Capacity Charges are sufficient to cover the costs of Water Capacity Service charges.

BE IT RESOLVED BY THE WATER BOARD OF THE CITY OF SAN BERNARDINO AS FOLLOWS:

SECTION 1. The above recitals are true and correct and are incorporated herein by this reference.

SECTION 2. That the annual automatic rate increase set forth in Rule and Regulation No. 5, of the City of San Bernardino Municipal Water Department, Water Capacity Charges, attached hereto, incorporated herein as though fully set forth at length, shall not be implemented for the 2026/2027 fiscal year (commencing on July 1, 2026).

SECTION 3. CEQA. The Water Board finds this Resolution is not subject to the California Environmental Quality Act (CEQA) in that the activity is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty, as in this case, that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.

SECTION 4. Severability. If any provision of this Resolution or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications, and to this end the provisions of this Resolution are declared to be severable.

SECTION 5. Effective Date. This Resolution shall become effective immediately.

APPROVED and **ADOPTED** by the Water Board and signed by the President of the Water Board and attested by the Deputy City Clerk & Ex Officio Secretary of the Water Board this ____ day of _____, 2025.

Toni Callicott, President
City of San Bernardino Water Board

Attest:

Robin Ohama
Deputy City Clerk & Ex Officio Secretary of the Water Board

CERTIFICATION

STATE OF CALIFORNIA)
COUNTY OF SAN BERNARDINO) ss
CITY OF SAN BERNARDINO)

I, Robin Ohama, Deputy City Clerk & Ex Officio Secretary of the Water Board, hereby certify that the attached is a true copy of Resolution No. ____ adopted at a regular meeting held on the ____ day of _____, 2025 by the following vote:

<u>Water Board Members:</u>	<u>AYES</u>	<u>NAYS</u>	<u>ABSTAIN</u>	<u>ABSENT</u>
CALLICOTT	_____	_____	_____	_____
HENDRIX	_____	_____	_____	_____
MLYNARSKI	_____	_____	_____	_____
BRICKLEY	_____	_____	_____	_____
JOHNSON	_____	_____	_____	_____

WITNESS my hand and official seal of the City of San Bernardino this ____ day of _____, 2025.

Robin Ohama
Deputy City Clerk & Ex Officio Secretary
of the Water Board

FY 2026/27 Water Capacity Charge Increase (ENR 2.2%)

ENR % Calculation	SIZE OF SERVICE	CURRENT (2025/2026) WATER CAPACITY CHARGE	REVISED WATER CAPACITY CHARGE	REVISED (2026/2027) WATER CAPACITY CHARGE	DIFFERENCE
09/2024 ENR = 13,632 09/2025 ENR = 13,928 Percentage Increase = (13928-13632)/13632 2.20%(2024to2025Incrs)	5/8" X 3/4"	\$6,790	\$6,939.38	\$6,940	\$150
	3/4" X 3/4"	\$10,190	\$10,414.18	\$10,410	\$220
	1"	\$16,960	\$17,333.12	\$17,330	\$370
	1½"	\$33,960	\$34,707.12	\$34,710	\$750
	2"	\$54,340	\$55,535.48	\$55,540	\$1,200
	3"	TBD	TBD	TBD	TBD
	4"	TBD	TBD	TBD	TBD
	6"	TBD	TBD	TBD	TBD
	8"	TBD	TBD	TBD	TBD
	10"	TBD	TBD	TBD	TBD
	12"	TBD	TBD	TBD	TBD

CONSTRUCTION ECONOMICS

ENR's 20-city average cost indexes, wages and materials prices.
Historical data for ENR's 20 cities can be found at [ENR.com/economics](https://enr.com/economics)

Construction Cost Index

+2.2%

ANNUAL INFLATION RATE

SEPT. 2025

1913=100	INDEX VALUE	MONTH	YEAR
CONSTRUCTION COST	13927.75	+0.1%	+2.2%
COMMON LABOR	26318.55	+0.1%	+3.1%
WAGE \$/HR.	50.01	+0.1%	+3.1%

The Construction Cost Index annual escalation rose 2.2%, while the monthly component increased 0.1%.

Building Cost Index

+2.5%

ANNUAL INFLATION RATE

SEPT. 2025

1913=100	INDEX VALUE	MONTH	YEAR
BUILDING COST	8616.58	+0.2%	+2.5%
SKILLED LABOR	12365.59	+0.3%	+4.7%
WAGE \$/HR.	68.63	+0.3%	+4.7%

The Building Cost Index was up 2.5% on an annual basis, while the monthly component rose 0.2%.

Materials Cost Index

0.0%

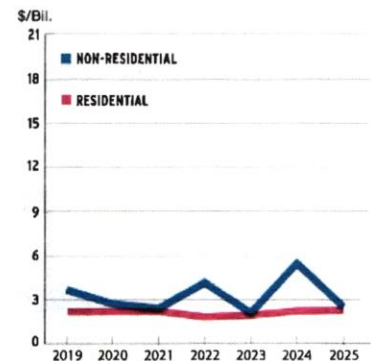
MONTHLY INFLATION RATE

SEPT. 2025

1913=100	INDEX VALUE	MONTH	YEAR
MATERIALS COST	6333.39	0.0%	0.0%
CEMENT \$/TON	304.16	+0.3%	+6.6%
STEEL \$/CWT	119.14	-1.1%	+9.2%
LUMBER \$/MBF	798.90	+0.8%	-14.6%

The Materials Cost Index showed no change for the month or year.

Construction starts in the Detroit metro area are expected to fall 38.8% in 2025, to \$4.6 billion, according to Dodge Construction Network. Dodge predicts a 55.1% decrease in non-residential starts, while residential is expected to rise 2.4%. Retail starts are expected to increase, while education and health care starts will see the largest drops.



SOURCE: DODGE CONSTRUCTION NETWORK

ENR's Cost Indexes by City

1913=100
1967=100
R=REVISED

	CONSTRUCTION COST		BUILDING COST		COMMON LABOR		SKILLED LABOR		MATERIALS	
	SEP 25: 1913	% CHG. YEAR	SEP 25: 1913	% CHG. YEAR	SEP 25: 1967	% CHG. YEAR	SEP 25: 1967	% CHG. YEAR	SEP 25: 1967	% CHG. YEAR
ATLANTA	8920.91	+3.1	7169.73	+6.9	825.83	0.0	829.31	+7.7	1639.70	+6.4
BALTIMORE	10761.77	+1.6	7503.94	+3.6	1236.74	0.0	1041.21	+2.6	1333.88	+4.6
BIRMINGHAM	9089.68	+2.6	6533.96	+5.0	978.68	0.0	894.48	+3.0	1302.28	+6.6
BOSTON	18573.60	+4.7	10625.94	+3.6	1848.09	+5.2	1691.22	+4.2	1357.33	+2.8
CHICAGO	20693.67	+1.4	10954.89	+4.6	1859.31	0.0	1583.08	+3.1	1348.03	+6.8
CINCINNATI	12703.19	-0.8	7507.84	+1.4	1141.92	0.0	1036.64	+5.8	1295.63	-2.6
CLEVELAND	14793.81	+3.6	8224.78	+2.7	1147.66	+4.8	1039.87	+5.0	1318.16	+0.3
DALLAS	7752.88	-3.5	6436.90	-3.1	742.23	0.0	761.92	+3.2	1318.95	-6.6
DENVER	9203.55	-3.5	7579.74	-2.9	818.18	0.0	1075.16	+3.0	1282.77	-8.1
DETROIT	13824.43	+1.3	8251.11	+2.6	1125.91	+2.7	1178.73	+6.8	1030.40	-2.9
KANSAS CITY	13738.01	0.0	8044.92	+1.5	1413.02	0.0	1349.22	+2.8	1129.21	-0.2
LOS ANGELES	15993.96	+4.0	9596.63	+8.9	1287.67	0.0	1272.99	+3.4	1522.91	+15.9
MINNEAPOLIS	16910.08	+14.2	8999.82	+2.6	1638.77	+22.4	1529.95	+11.4	1165.97	-8.2
NEW ORLEANS	8003.59	-2.8	6682.43	-2.4	749.82	0.0	870.91	+2.6	1364.42	-5.7
NEW YORK CITY	22916.38	+2.8	12074.93	+2.5	1721.88	+3.5	1638.55	+4.1	1290.42	-1.0
PHILADELPHIA	16677.36	+6.4	9776.47	+7.0	1733.73	+5.9	1539.43	+6.3	1330.71	+8.1
PITTSBURGH	12507.68	-3.9	7817.72	-6.1	1178.28	0.0	1114.12	0.0	1023.34	-13.2
ST. LOUIS	15096.42	+9.1	8686.50	+10.4	1179.98	+6.1	1129.67	+4.4	1477.81	+17.6
SAN FRANCISCO	15351.03	-0.2	10878.97	+1.8	1076.13	0.0	1339.65	+3.7	1649.09	-0.5
SEATTLE	15238.55	-3.0	8984.42	-1.6	1314.48	0.0	1443.67	+10.8	1393.27	-15.6

CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT

1350 South "E" Street
San Bernardino, CA 92408
P.O. Box 710, 92402

RULE AND REGULATION NO. 5 NEW SERVICE INSTALLATION AND WATER CAPACITY CHARGES

1.0 REQUEST FOR SERVICE:

There are two (2) categories of requests for service:

1. Request for service through an existing service connection; or
2. Application for a new service connection.

Requests for services will fall into the following subcategories:

1. Domestic Service
2. Landscape Service
3. Fire Service
4. Combination Domestic/Landscape Service
5. Combination Domestic/Fire Service
6. Fire Hydrant (Public)

The Water Department will require any Applicant requesting service to complete an Application for domestic waterservice located in **Exhibit A** and sign appropriate forms provided by the Water Department, and to pay all required fees, and charges. The Applicant may request a water commitment for service in the form of a Will Serve Letter. If a Will Serve Letter is desired, the Application located in **Exhibit A** shall be completed by the Applicant.

A separate landscape irrigation meter shall be required for all new service connections that serve a parcel containing more than 5,000 square feet of irrigated landscape area for all commercial and industrial developments.

Notwithstanding any provision in the Rules and Regulations, payment of fee or construction of water facilities at a developer or Water Department's expense, the Water Department may deny any request for a water commitment or request for a service connection if the Water Department has an inadequate amount of water supply, or there are physical limitations in the system capacity to serve the proposed Applicant and simultaneously maintain an adequate

level of service to existing customers, or compromises public health and welfare.

1.1 Inaccurate/Insufficient Information

In the event information provided by the Applicant is found to be inaccurate or insufficient after work has commenced or service has been turned on, the Applicant will pay any and all costs and/or fees, and charges, necessary to effect corrective action and Rule and Regulation compliance. The above will also apply in instances of onsite changes necessitating corrective action or modification to the service connection.

1.2 Application/Request For Information (RFI) Fee

All Applicants will be required to pay the appropriate Application/Request For Information (RFI) fee prior to the Water Department processing any such RFI or Application. The Application/RFI form is attached to the end of this Rule and Regulation as **Exhibit A** or can be retrieved on-line at:

<http://www.sbmwd.org/>

2.0 WATER DEPARTMENT-INSTALLED SERVICES:

At time of application and payment of application fee, the Applicant shall request the size and type of service(s) desired and location(s) by address and Assessor's Parcel Number (APN). Customer Service will send receipt of application payment to Engineering where an Applicant service installation cost in the form of a work order invoice will be generated documenting total service installation costs by Water Department personnel to be paid by the Applicant.

Applicant shall pay the application fee required in Section 1.2 of this Rule and Regulation at the Water Department Customer Service prior to Water Department Engineering preparing the service work order invoice. The Applicant shall pay the fee documented on the service work order invoice at Water Department Customer Service for such service connection prior to service installation.

3.0 DEVELOPER-INSTALLED SERVICES:

The Applicant may, upon Water Department approval, have the service(s) installed by a licensed contractor acceptable to the Water Department if the Applicant will be entering into a Developer-Installed Agreement with the Water Department for water main extensions per Rule and Regulation No. 20. The Applicant for **developer-installed** services shall obtain

On July 1 of each year the Water Capacity Charge will automatically increase in proportion to the published 12-month increase measured in September each year in the Construction Cost Index, unless the Water Board determines that such an increase shall not be effective for the next succeeding fiscal year, or if the index does not increase or change.

and adhere to the guidelines of the Developer-Installed Agreement (includes contractor insurance requirements, bonding, city street cut permit, Water Department's *Standards For Design and Construction For Water System Improvements (Design Standards)*, Water Department's *Standard Specifications and Drawings for Construction of Domestic Water Systems (Standards)*, and inspection by Water Department personnel or assigned designee and pay all associated administration and engineering fees, capacity charges (except when a Payment Bond is posted in the amount of 25 percent of the capacity charge in advance per Rule and Regulation No. 20), and meter cost as established within this Rule and Regulation.

All developer-installed domestic, landscape, or any combination of meter services installed within dedicated City/Water Department right-of-way shall be conveyed fee-title to the Water Department prior to or at the time of service activation and shall conform to Water Department's Standards.

A. WATER CAPACITY CHARGE

1. The water Capacity Charge will apply to all new domestic and landscape meter service applications and/or service diameter increases and is based upon the instantaneous water demand that each service size imposes on the municipal water system.
2. Multiple family dwelling units, as defined in Rule and Regulation No. 1, shall be charged based on a 0.50 equivalent meter unit ratio (EMU), equivalent to 50 percent of the capacity charge for a single 5/8" x 3/4" service per dwelling unit or by meter size if property is to be master-metered, whichever is the greater amount.
3. All capacity charges shall be paid prior to any water service connection or at the time of application for any new construction and shall be in addition to all other charges imposed by the Water Department, except when entering into a developer-installed agreement per Rule and Regulation No. 20 and a Payment Bond is posted to cover 25 percent of the total water capacity charge in advance of the execution of the developer-installed agreement.

**WATER CAPACITY CHARGE DOMESTIC AND
LANDSCAPE SERVICES⁽¹⁾**

SIZE OF SERVICE	EMU	MAX FLOW (GPM)	WATER CAPACITY CHARGE 7/01/25 ⁽²⁾
5/8"	1.00	20.00	\$6,790.00
3/4"	1.50	30.00	\$10,190.00
1"	2.50	50.00	\$16,960.00
1-1/2"	5.00	100.00	\$33,960.00
2"	8.00	160.00	\$54,340.00
3"	25.00	500.00	To Be Determined
4"	50.00	1,000.00	To Be Determined
6"	80.00	1,600.00	To Be Determined
8"	140.00	2,800.00	To Be Determined
10"	275.00	5,500.00	To Be Determined
12"	275.00	5,500.00	To Be Determined

(1) Capacities for meters 3-inches and above are for the Department standard high-velocity meters. There are several applicable factors that are considered for site specific large meter installations, and since these specific operating criteria may affect the maximum meter capacity, the Water Capacity Charges for the 3-inch and larger installations are to be determined on a case-by-case basis.

(2) On July 1 of each calendar year, the Water Capacity Charge shall automatically increase in proportion to the published twelve-month increase measured in September each year in the Construction Cost Index. This index is published in "Engineering News Record," a publication of McGraw-Hill, Inc. The Water Board may, at its option, determine by resolution adopted prior to November 1, that such an increase shall not be effective for the next succeeding fiscal year (always starting on July 1). In the event the Construction Cost Index has not changed or has decreased, the charge shall not be changed.

B. WATER CAPACITY CHARGE CREDIT

1. When an existing water service is increased in size, the amount of water capacity charge due is calculated from the difference between the requested larger capacity charge minus the existing service size capacity charge. Any existing capacity charge credit available for the parcel requesting upsizing may be utilized to offset the capacity charge amount due. If credit is larger than the amount due for the upgrade, the amount left over will remain indefinitely. If the credit does not cover the amount due, then the

On July 1 of each year the Water Capacity Charge will automatically increase in proportion to the published 12-month increase measured in September each year in the Construction Cost Index, unless the Water Board determines that such an increase shall not be effective for the next succeeding fiscal year, or if the index does not increase or change.

difference is calculated and due prior to installation. For existing services that were installed prior to November 1, 2019, capacity charge credit will not exceed the EMU (previously referred to as EDU) of when the service was originally installed.

2. When an existing water service is decreased in size, the capacity charge credit is calculated by the difference in the current capacity charge of the larger service to the smaller service. This credit shall remain with the parcel indefinitely. However, the Department will not be solely responsible for tracking any remaining capacity charge credit. If the Department is unable to verify an existing credit, the owner shall be responsible for providing evidence of any remaining capacity charge credit balance.
3. The capacity charge credit may only be used to offset capacity charges for water service upgrades. No refunds of capacity charges will be made, no exceptions.
4. Capacity charge credits may only be applied toward the parcel utilizing the service and is non-transferable to other parcels held by the same or different owners.
5. Capacity charge credits from two or more separate parcels may be applied toward one parcel capacity charges if the individual parcels were legally merged into the one parcel.
6. All domestic, and landscape, service capacity credits are to be considered interchangeable within the same parcel when requesting a new service and utilizing any capacity credit.

DEVELOPER-INSTALLED SERVICE(S) FEES & CHARGES

Developer-installed service applications will only be considered with tract or parcel map developments with Developer-installed Agreements per Rule and Regulation No. 20. All other service requests will be installed by the Water Department.

C. DEVELOPER-INSTALLED SERVICES GENERAL RULES

1. Domestic, Landscape, or Fire Service Meter - Developer shall purchase meter from Water Department, no exceptions.
2. Capacity charge based upon size of meter being installed, except when multiple family dwelling units require service as listed in paragraph A of this Rule and Regulation.
3. Capacity charge for combination domestic/fire shall be based upon size of domestic meter as listed in paragraph A of this Rule and Regulation.
4. Minimum fire service meter size is 1".
5. Capacity charge for combination domestic/landscape service shall be based upon size of largest meter being installed.
6. If an extension of the Department's Network Water Distribution System is required through private property, an easement by separate instrument will be required. The applicant shall have a California-licensed Civil Engineer or Land Surveyor prepare the required easement documents for the Water Department's review and approval. This will also require the applicant to pay the \$1,180.00 Easement by Separate Instrument application fee listed within the fee table on page 2 of **Exhibit A** of this Rule & Regulation No. 5. An easement example is available on SBMWD's website within the Engineering Standards section.

DEPARTMENT-INSTALLED SERVICE(S) FEES & CHARGES

D. DEPARTMENT-INSTALLED SERVICES

1. Water Service shall be executed by completing the attached Application/RFI Form in **Exhibit A** and payment of the application fee and total installation cost per the attached tables at Water Department Customer Service. If a service requested is not listed on the attached tables or has a total cost stated as "To Be Determined (TBD)", a work order will be issued to Water Department Engineering to calculate the total service installation fees and charges and provide a service work order invoice to the Applicant per Note 2 below.
2. Water Department Engineering shall prepare a service installation cost invoice documenting service

On July 1 of each year the Water Capacity Charge will automatically increase in proportion to the published 12-month increase measured in September each year in the Construction Cost Index, unless the Water Board determines that such an increase shall not be effective for the next succeeding fiscal year, or if the index does not increase or change.

installation costs and unusual installation conditions, all applicable standard drawings and provide to the applicant. Applicant shall pay all applicable fees outlined in the invoice at Customer Service. Customer Service shall issue a work order for service installation upon payment of fees in full.

3. Department-Installed Services - Cost includes all labor, equipment, materials, administration, and engineering fees and capacity charges.
4. Capacity charge based upon size of meter and cannot be deferred.

DEPARTMENT-INSTALLED DOMESTIC METER SERVICE

<u>Size of Service</u>	<u>Installation Cost</u>	<u>Water Capacity Charge</u>	<u>Total Cost</u>
5/8" X 3/4"	TBD	\$6,790.00	TBD
3/4" X 3/4"	TBD	\$10,190.00	TBD
1"	TBD	\$16,960.00	TBD
1-1/2"	TBD	\$33,960.00	TBD
2"	TBD	\$54,340.00	TBD
3"	TBD	TBD	TBD
4"	TBD	TBD	TBD
6"	TBD	TBD	TBD
8"	TBD	TBD	TBD
10"	TBD	TBD	TBD
12"	TBD	TBD	TBD

DEPARTMENT-INSTALLED LANDSCAPE METER SERVICE

<u>Size of Service</u>	<u>Installation Cost</u>	<u>Water Capacity Charge</u>	<u>Total Cost</u>
5/8" X 3/4"	TBD	\$6,790.00	TBD
3/4" X 3/4"	TBD	\$10,190.00	TBD
1"	TBD	\$16,960.00	TBD
1-1/2"	TBD	\$33,960.00	TBD
2"	TBD	\$54,340.00	TBD
3"	TBD	TBD	TBD
4"	TBD	TBD	TBD
6"	TBD	TBD	TBD
8"	TBD	TBD	TBD
10"	TBD	TBD	TBD
12"	TBD	TBD	TBD

On July 1 of each year the Water Capacity Charge will automatically increase in proportion to the published 12-month increase measured in September each year in the Construction Cost Index, unless the Water Board determines that such an increase shall not be effective for the next succeeding fiscal year, or if the index does not increase or change.

**DEPARTMENT-INSTALLED COMBINATION
DOMESTIC - LANDSCAPE METER SERVICE**

<u>Size of Service</u>	<u>Installation Cost</u>	<u>Acquisition of Service Charge</u>	<u>Total Cost</u>
5/8" x 3/4" Domestic x 5/8" x 3/4" Landscape	TBD	\$6,790.00	TBD
3/4" x 3/4" Domestic x 3/4" x 3/4" Landscape	TBD	\$10,190.00	TBD
1" Domestic x 1" Landscape	TBD	\$16,960.00	TBD
1-1/2" Domestic x 1-1/2" Landscape	TBD	\$33,960.00	TBD
2" Domestic x 2" Landscape	TBD	\$54,340.00	TBD
3" Domestic x 3" Landscape	TBD	TBD	TBD
Others	TBD	TBD	TBD

**DEPARTMENT-INSTALLED COMBINATION
DOMESTIC - FIRE SERVICE**

<u>Size of Service</u>	<u>Installation Cost</u>	<u>Water Capacity Charge</u>	<u>Total Cost</u>
5/8" x 3/4" Domestic x 1" Fire	TBD	\$6,790.00	TBD
3/4" x 3/4" Domestic x 1" Fire	TBD	\$10,190.00	TBD
1" Domestic x 1" Fire	TBD	\$16,960.00	TBD
Others	TBD	Use Domestic Capacity Charge	TBD

On July 1 of each year the Water Capacity Charge will automatically increase in proportion to the published 12-month increase measured in September each year in the Construction Cost Index, unless the Water Board determines that such an increase shall not be effective for the next succeeding fiscal year, or if the index does not increase or change.

DEPARTMENT-INSTALLED FIRE SERVICE

<u>Size of Service</u>	<u>Installation Cost</u>	<u>Acquisition of Service Charge</u>	<u>Total Cost</u>
1" Fire Service	TBD	Not Applicable	TBD
1-1/2" Fire Service	TBD	Not Applicable	TBD
2" Fire Service	TBD	Not Applicable	TBD
3" Fire Service	TBD	Not Applicable	TBD
4" Fire Service	TBD	Not Applicable	TBD
6" Fire Service	TBD	Not Applicable	TBD
8" Fire Service	TBD	Not Applicable	TBD
10" Fire Service	TBD	Not Applicable	TBD
12" Fire Service	TBD	Not Applicable	TBD

DEPARTMENT-INSTALLED FIRE HYDRANT

<u>Size of Service</u>	<u>Installation Cost</u>	<u>Acquisition of Service Charge</u>	<u>Total Cost</u>
6" Fire Hydrant (Recommended For Industrial Use)	TBD	Not Applicable	TBD
6" Fire Hydrant (Recommended For Residential Use)	TBD	Not Applicable	TBD

**DEPARTMENT-INSTALLED INDUSTRIAL
FIRE HYDRANT REPAIRS**

<u>Size of Hydrant</u>	<u>Installation Cost</u>	<u>Acquisition of Service Charge</u>	<u>Total Cost</u>
All Types of Fire Hydrant Repairs	TBD	Not Applicable	TBD

**DEPARTMENT-INSTALLED INDUSTRIAL
FIRE HYDRANT REPAIRS**

<u>Size of Hydrant</u>	<u>Installation Cost</u>	<u>Acquisition of Service Charge</u>	<u>Total Cost</u>
All Types of Fire Hydrants Repairs	TBD	Not Applicable	TBD

On July 1 of each year the Water Capacity Charge will automatically increase in proportion to the published 12-month increase measured in September each year in the Construction Cost Index, unless the Water Board determines that such an increase shall not be effective for the next succeeding fiscal year, or if the index does not increase or change.

**DEPARTMENT-PERFORMED SERVICE
ABANDONMENT ****

<u>Size of Service</u>	<u>Total Cost</u>
All Service Sizes	TBD

**Note: Department-performed service abandonments are for upgrades only. Costs for all other abandonments are to be determined.

**DEPARTMENT PERFORMED MAIN TIE-IN FOR
DEVELOPER-INSTALLED MAIN EXTENSION
PER W3.5 AND W4.6**

<u>Size of Tap/Tie-in</u>	<u>Total Cost</u>
All size Tie-ins	TBD

Approved by Water Board: October 22, 2024
Effective: July 1, 2025
Supersedes: July 1, 2024

On July 1 of each year the Water Capacity Charge will automatically increase in proportion to the published 12-month increase measured in September each year in the Construction Cost Index, unless the Water Board determines that such an increase shall not be effective for the next succeeding fiscal year, or if the index does not increase or change.



EXHIBIT A
RULE AND REGULATION NO. 5

WATER SERVICE APPLICATION
REQUEST FOR INFORMATION
Water Utility Engineering
San Bernardino Municipal Water Department

SBMWD USE ONLY

Assigned to: _____

By: _____

Please complete by: _____

Eng WF# _____

EPM Tracking# _____

SERVICE/REQUEST FEASIBLE

☐ Yes ☐ No

- ☐ Date of the Request: _____
- ☐ Project Title: _____
- ☐ Address of Property to be Served: _____

PROJECT INFORMATION:

Name of Lots/Units: _____ Gross Acres: _____ Number of Services: _____

- ☐ Individual Meters ☐ Master Metered

Irrigated Landscape Area: _____ Sq. Ft.

Is this property served by a well or other source of water? ☐ Yes ☐ No

(If yes, is well to be abandoned?) ☐ Yes ☐ No

Commercial ☐ Industrial ☐ Residential ☐

APPLICANT INFORMATION:

☐ Name of Applicant: _____

☐ Contact Name: _____ Contact Phone: (____)____-____

☐ Mailing Address: _____

☐ Phone: _____ Fax: _____

☐ E-mail: _____

☐ Assessors Parcel Number of Parcel to be Served: _____

☐ Does Parcel Currently have a Water Service? ☐ Yes ☐ No ☐ Don't know

If Yes, SBMWD Account No. _____

PROPERTY OWNER INFORMATION:

☐ Name of Property Owner: _____

☐ Address of Property Owner: _____

☐ Phone Number of Property Owner: (____)____-____

CONTRACTOR INFORMATION:

☐ Name of Contractor: _____

☐ Address of Contractor: _____

☐ Phone Number of Contractor: (____)____-____

On July 1 of each year the Water Capacity Charge will automatically increase in proportion to the published 12-month increase measured in September each year in the Construction Cost Index, unless the Water Board determines that such an increase shall not be effective for the next succeeding fiscal year, or if the index does not increase or change.



**EXHIBIT A
RULE AND REGULATION NO. 5
(CONTINUED)**

TYPE OF REQUEST*:

CATEGORY (check all that apply):

- ☐ Request For Service Through An Existing Service Connection
☐ Application for a New Service Connection

Service Categories: If either of the two boxes is checked above, please indicate service category: For domestic/landscape services 1-1/2" and greater, please attach service demand calculations signed and stamped by a registered engineer/architect.

- ☐ Domestic Service: Requested Service Size _____ inch Quantity Desired: _____ Service Demand: _____ GPM
☐ Landscape Service: Requested Service Size _____ inch Quantity Desired: _____ Service Demand: _____ GPM

☐ Combination Domestic/Fire Service: Requested Service Size _____ inch Quantity Desired: _____
☐ Combination Domestic/Landscape Service: Requested Service Size _____ inch Quantity Desired: _____
☐ Fire Service: Requested Service Size _____ inch Quantity Desired: _____
☐ Fire Hydrant (Public): Quantity Desired: _____

☐ Service Abandonment Size _____ Quantity Desired _____
☐ Service Relocation Size _____ Quantity Desired _____
☐ Fire Flow Request
☐ Will-Serve Letter

☐ Other (Explain) _____

***A nonrefundable fee will be required to process all requests as listed in the schedule of fees below. Applicants shall fill out this form and submit payment to: SBMWD Customer Service for payment at 1350 "E" Street, San Bernardino, CA 92408. Upon receipt of payment, Customer Service shall issue a work order to SBMWD Engineering to initiate processing of the application. SBMWD will not process any request(s) without receipt of payment and confirmation of same by SBMWD Customer Service.**

- ☐ What is the intended use of the information being requested?

- ☐ Please indicate a desired media:

- ☐ Hard Copy ☐ Computer file (CD Rom) ☐ Email Copy

SCHEDULE OF APPLICATION/RFI FEES

SERVICE SIZE (IN)	APPLICATION FEE	OTHER CATEGORIES	APPLICATION FEE
5/8" thru 3"	\$180.00	Will Serve Letter	\$180.00
4" thru 12"	\$445.00	Fire Flow Test (Modeled)	\$175.00
Public Fire Hydrant	\$445.00	Fire Flow Test (Field)	\$330.00
Easement by Separate Instrument	\$1,180.00	Service Relocation	\$180.00
		Service Abandonment	\$180.00

Note: Payment for service is not a guarantee of service until service feasibility is verified by SBMWD. If a request is deemed infeasible, all fees shall be refunded to the Applicant except for nonrefundable application fee.

On July 1 of each year the Water Capacity Charge will automatically increase in proportion to the published 12-month increase measured in September each year in the Construction Cost Index, unless the Water Board determines that such an increase shall not be effective for the next succeeding fiscal year, or if the index does not increase or change.

**CITY OF SAN BERNARDINO
MUNICIPAL WATER DEPARTMENT**

**WATER BOARD
STAFF REPORT**

TO: Miguel J. Guerrero, P.E., General Manager 

FROM: Kevin T. Stewart, P.E., Director of Water Reclamation

SUBJECT: **CONTRACT NO. 1729 - INFRASTRUCTURE ENGINEERING CORPORATION, AN ARDURRA COMPANY - CHANGE ORDER NO. 3 THIRD PARTY CONSTRUCTION MANAGEMENT AND INSPECTION SERVICES PROJECTS (PROJECT NO. C17000194)**

DATE: October 7, 2025

CC: J. Hanford, T. Mendenhall, J. Branch, W. Huang, R. Lindberg, J. Laureano, Laserfiche

BACKGROUND:

On May 12, 2020, the Water Board approved Contract No. 1729 with Infrastructure Engineering Corporation, an Ardurra Company (IEC) to provide Professional Third-Party Construction Management and Inspection Services (CM) for multiple simultaneous projects at the Water Reclamation Plant (WRP). The project was expected to end with the completion of construction of the projects which were anticipated to be completed by March 31, 2022.

However, the construction projects have encountered various delays ranging from scarcity of material supply, manufacturing design challenges with the flares, and completion of requirements for permitting of the Tertiary Treatment System Project (TTS). As such, IEC had to extend their efforts throughout the contractor delays.

The TTS project duration was revised from 12 months to 18 months, requiring an additional 1,198 calendar days of CM services. To maintain compliance with strict variance deadlines, overruns in several task items were reallocated from Task 4 – TTS Project. However, this left a shortfall in the original Task 4 budget. Of the \$822,850 originally budgeted, \$41,320 had been spent, leaving \$781,530. The remaining balance in Task 4 was \$372,911.88, resulting in a funding gap of \$408,618.12. This reallocation of funds is addressed under Change Order No. 1 to Contract No. 1729 approved on October 30, 2023.

During the 1110.2 Resultant Projects (Specification 1722), IEC provided significant additional services related to Southern California Edison's incentive program, including 8 weeks of records research and certifiable documentation not included in the original scope. Following the project's Notice of Completion on October 17, 2022, an operational problem was identified with the Ultra-Low Emission Flare (ULE) due to a faulty manufacturer design. The necessary corrective work involves trenching, piping, electrical, programming, and material procurement, requiring public bidding. Additional CM services to manage these tasks are presented under Change Order No. 2 to Contract No. 1729 in the amount of \$860,300.00 approved on October 30, 2023.

Miguel J. Guerrero, P.E., General Manager

October 7, 2025

Page 2

SUBJECT: CONTRACT NO. 1729 – INFRASTRUCTURE ENGINEERING CORPORATION, AN ARDURRA COMPANY – CHANGE ORDER NO. 3 THIRD PARTY CONSTRUCTION MANAGEMENT AND INSPECTION SERVICES PROJECTS (PROJECT NO. C17000194)

In February 2025, IEC notified the Department that funds under the existing agreement were nearly depleted, though significant work remained. IEC submitted Amendment Request No. 3 for additional Construction Management Services under Contract No. 1729. Despite invoices being submitted monthly from March through July 2025, they were not processed due to insufficient funds.

The construction contractor continued work beyond the dates identified in Construction Agreement Change Order No. 4, requiring uninterrupted CM services by IEC. These services were necessary and performed at full-time capacity but were not formally covered under the executed agreement. Change Order No. 3 seeks ratification of these services and payment for outstanding invoices already submitted.

A time extension of fifty-one (51) calendar days is recommended to be added to the contract time. Upon Water Board approval, the revised contract end date will be July 31, 2025.

Change Order No. 3 in the amount of \$289,841.00 has been prepared for the extra work to be performed by IEC under Contract No. 1729. A complete summary of each of the Change Order items prepared by the Department's Contracts section is attached.

GOALS AND OBJECTIVES:

This change order aligns with the Department's Strategic Plan under Goal #2 Modernize and Secure Critical Infrastructure, Subgoal #2.3 Deliver Priority Capital Projects.

FISCAL IMPACT:

The funding source for this project is the FY 2025/2026 Sewer Treatment Fund Capital Improvement Project titled *CWWF-Phase 4 Tertiary Treatment Project* (Project No. C1700194) which currently has a total of \$571,880.82 in unencumbered funds.

RECOMMENDATION:

Staff recommends that the Water Board make the following motion:

- Ratify Change Order No. 3 to Contract No. 1729 with Infrastructure Engineering Corporation, an Ardurra Company in the amount of TWO HUNDRED EIGHTY-NINE EIGHT HUNDRED FORTY-ONE AND 00/100 DOLLARS (\$289,841.00); and authorize the General Manager to execute the change order.

Respectfully submitted,



Kevin T. Stewart, P.E.
Director of Water Reclamation

Attachments – Change Order No. 3
sdm

CONTRACT NO. 1729
CHANGE ORDER NO. 3

DATE: September 24, 2025

OWNER: City of San Bernardino Municipal Water Department

CONTRACTOR: INFRASTRUCTURE ENGINEERING CORPORATION, AN
ARDURRA COMPANY

PROJECT: THIRD PARTY CONSTRUCTION MANAGEMENT AND
INSPECTION SERVICES PROJECT (PROJECT NO. C1700194)

You are hereby requested to make the following described changes and/or additions to the project scope of work:

Item No.	Description Changes and/or Additions	Decrease Contract Price (Contract Time)	Increase Contract Price (Contract Time)
1	Additional CM Services		\$289,841.00
	TOTAL		\$289,841.00
Original Contract Amount			\$3,049,450.40
Net Increase Due To Change Order No. 1			\$408,618.12
Net Increase Due To Change Order No. 2			\$860,300.00
Contract Amount Prior To This Change Order			\$4,318,368.52
Net Increase Due To This Change Order			\$289,841.00
Net Contract Amount, Including This Change Order			\$4,608,209.52
Net Change in Contract Price			10%

The additional work contained with this Change Order can be performed incidental to the prime work and any Change Order work issued to date and is able to be completed concurrently with remaining work to be performed under the items of the Contract, without interference or delay to the Contractor. The work required by the Change Order can be completed within the time allotted for the original Contract plus the extensions to the Contract time made by this and any previously issued Change Orders.

The amounts indicated above shall be compensation in full for the work described including all direct and indirect, incidental or consequential costs or expenses, including but not limited to, extended overhead and other impact costs that have been or will be incurred by the Contractor.

The total Contract is extended by fifty-one (51) calendar days. The Contract completion date is now July 31, 2025.

Contract No. 1729
Change Order No. 3

ACCEPTED BY: _____ DATE: _____
REPRESENTATIVE
INFRASTRUCTURE ENGINEERING CORPORATION,
AN ARDURRA COMPANY

RECOMMENDED BY: _____ DATE: _____
REPRESENTATIVE
CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT

RECOMMENDED BY: _____ DATE: _____
DIRECTOR OF WATER RECLAMATION
CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT

APPROVED BY: _____ DATE: _____
GENERAL MANAGER
CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT
(or)
PRESIDENT, WATER BOARD
CITY OF SAN BERNARDINO

**CONTRACT NO. 1729
CHANGE ORDER NO. 3
ITEM NO. 1 BREAKDOWN**

Description: Additional CM Services for Tertiary Treatment System (TTS)

Reason: Ardurra Group, Inc. submitted Amendment Request No. 3 for additional Construction Management Services under Contract No. 1729. In February 2025, Ardurra notified the Department that funds under the existing agreement were nearly depleted, though significant work remained. Despite invoices being submitted monthly from March through July 2025, they were not processed due to insufficient funds.

The Contractor continued work beyond the dates identified in Construction Agreement Change Order No. 4, requiring uninterrupted CM services by Ardurra. These services were necessary and performed at full-time capacity but were not formally covered under the executed agreement. Amendment No. 3 seeks ratification of these services and payment for outstanding invoices already submitted.

This Change Order Request increases the Agreement by the amount invoiced for work completed through July 31, 2025, extending the Contract Completion period to that date. The price includes all labor, equipment, and materials required to perform the continuous CMS work.

Prior Approval: Robert Lindberg; Kevin Stewart; Miguel Guerrero

Contractors

Proposed Cost: \$289,841.00

Total Cost: \$289,841.00

Time Extension: 51 Calendar Days

**CITY OF SAN BERNARDINO
MUNICIPAL WATER DEPARTMENT**

**WATER BOARD
STAFF REPORT**

TO: Miguel J. Guerrero, P.E, General Manager 

FROM: Kevin T. Stewart, P.E., Director of Water Reclamation

SUBJECT: **TRANSFER OF FUNDS AND APPROVAL OF CHANGE ORDER NO. 4 WITH INFRASTRUCTURE ENGINEERING CORPORATION, AN ARDURRA COMPANY (CONTRACT 1729) FOR THE THIRD-PARTY CONSTRUCTION MANAGEMENT SERVICES OF THE TERTIARY TREATMENT SYSTEM PROJECT (CO 00194)**

DATE: October 6, 2025

CC: C. Mouser, S. Morrison, W. Huang, R. Lindberg, F. Lopez, J. Hanford, T. Mendenhall, J. Branch, Laserfiche

BACKGROUND:

On May 12, 2020, the Water Board approved Contract No. 1729 with Infrastructure Engineering Corporation, an Ardurra Company (IEC), to provide Professional Third-Party Construction Management and Inspection Services (CMS) for multiple simultaneous projects at the Water Reclamation Plant (WRP). The project was expected to end with the completion of construction of the projects, which were anticipated to be completed by March 31, 2022.

However, the construction projects have encountered various delays ranging from scarcity of material supply, manufacturing design challenges with the flares, and completion of requirements for permitting of the Tertiary Treatment System Project (TTS). As such, IEC had to extend its efforts throughout the contractor delays.

The TTS project duration was revised from 12 months to 18 months, requiring an additional 1,198 calendar days of CM services. To maintain compliance with strict variance deadlines, overruns in several task items were reallocated from Task 4 – TTS Project. However, this left a shortfall in the original Task 4 budget. Of the \$822,850 originally budgeted, \$41,320 had been spent, leaving a balance of \$781,530. The remaining balance in Task 4 was \$372,911.88, resulting in a funding gap of \$408,618.12. This reallocation of funds was addressed in Change Order No. 1 to Contract No. 1729, which was approved on October 30, 2023.

During the 1110.2 Resultant Projects (Specification 1722), IEC provided significant additional services related to Southern California Edison's incentive program, including 8 weeks of records research and certifiable documentation not included in the original scope. Following the project's Notice of Completion on October 17, 2022, an operational issue was identified with the Ultra-Low Emission Flare (ULE) due to a faulty design by the manufacturer.

October 6, 2025

SUBJECT: TRANSFER OF FUNDS AND APPROVAL OF CHANGE ORDER NO. 4 WITH INFRASTRUCTURE ENGINEERING CORPORATION, AN ARDURRA COMPANY (CONTRACT 1729) FOR THE THIRD-PARTY CONSTRUCTION MANAGEMENT SERVICES OF THE TERTIARY TREATMENT SYSTEM PROJECT (CO 00194)

The necessary corrective work involves trenching, piping, electrical work, programming, and material procurement, all of which require public bidding. Additional CM services to manage these tasks were presented under Change Order No. 2 to Contract No. 1729 in the amount of \$860,300.00, approved on October 30, 2023.

IEC submitted Amendment No. 3 for additional Construction Management Services under Contract No. 1729. In February 2025, IEC notified the Department that funds under the existing agreement were nearly depleted, though significant work remained. Despite invoices being submitted monthly from March through July 2025, they were not processed due to insufficient funds.

The construction contractor continued work beyond the dates identified in Construction Agreement Change Order No. 4, requiring uninterrupted CM services by IEC. These services were necessary and performed at full-time capacity but were not formally covered under the executed agreement. Change Order No. 3 seeks ratification of these services and payment for outstanding invoices already submitted.

IEC communicated with the Department at the end of February 2025 that they were nearly out of funds on their Contract No. 1729 and still had a lengthy period of outstanding work. Work continued by IEC in excess of their Agreement through the current date. Change Order No. 3 addressed work performed through July 31, 2025.

Change Order No. 3 in the amount of \$289,841.00 has been prepared for the extra work to be performed by IEC under Contract No. 1729. A time extension of fifty-one (51) calendar days is recommended to be added to the contract time. Upon Water Board approval, the revised contract end date will be July 31, 2025.

IEC proposes to provide full-time CMS services throughout August 2025, prior to the General Construction Contractor placing the project on suspension pending the delivery of equipment. During this suspension period, certain CMS overhead costs will continue to accrue and/or are necessary. These costs include construction trailer rental, a document control system, and labor costs associated with the Resident Engineer, Inspector, Document Controller, and Scheduler. It is anticipated that these part-time costs will persist through the end of November 2025. In December 2025, full-time costs are expected to resume as the General Contractor concludes their contractual obligations.

Change Order No. 4 in the amount of \$215,980.00 has been prepared for the extra work to be performed by IEC under Contract No. 1729. A time extension of one hundred and fifty-three (153) calendar days is recommended to be added to the contract time. Upon Water Board approval, the revised contract end date will be December 31, 2025. A complete summary of each of the Change Order items prepared by the Department's Contracts section is attached.

Approval provides for the continuation of CMS services until the completion of the TTS Project.

October 6, 2025

SUBJECT: TRANSFER OF FUNDS AND APPROVAL OF CHANGE ORDER NO. 4 WITH INFRASTRUCTURE ENGINEERING CORPORATION, AN ARDURRA COMPANY (CONTRACT 1729) FOR THE THIRD-PARTY CONSTRUCTION MANAGEMENT SERVICES OF THE TERTIARY TREATMENT SYSTEM PROJECT (CO 00194)

GOALS AND OBJECTIVES:

The TTS Project aligns with the Department's Updated Strategic Plan under Goal 2: Modernize & Secure Critical Infrastructure, Subgoal 3: Deliver Priority Capital Projects. This Project supports the specific goal by identifying and resolving critical vulnerabilities to modernize infrastructure, increase efficiencies, optimize operational performance, ensuring reliability and sustainability of water and wastewater services.

FISCAL IMPACT:

While insufficient funds are available in C.O. 000194 for the project to cover the cost of the third-party construction management services, staff proposes transferring funds from the project titled *Clean Water Factory – Phase 4 – Tertiary Treatment Design (C.O. 00138)*.

Staff requests a budget transfer in the amount of \$250,000.00 from the *Clean Water Factory Project – Phase 2 – Tertiary Treatment Design (C.O. 00138)* to the *Clean Water Factory Project – Phase 4 – Tertiary Treatment Construction (C.O. 00194)*.

RECOMMENDATION:

It is recommended that the Water Board make the following motions:

- Approve the transfer of \$250,000.00 from the *Clean Water Factory Project-Phase 2-Tertiary Treatment Design (C.O. 00138)* to the *Clean Water Factory Project-Phase 4-Tertiary Treatment Construction (C.O. 00194)*; and
- Approve Change Order No. 4 to Infrastructure Engineering Corporation, an Ardurra Company, in the amount of TWO HUNDRED FIFTEEN THOUSAND NINE HUNDRED EIGHTY AND 00/100 DOLLARS (\$215,980.00); and authorize the General Manager to execute the change order.

Respectfully submitted,



Kevin T. Stewart, P.E.
Director of Water Reclamation

Attachment:

- Change Order No. 4

KTS:RLL:vg

CONTRACT NO. 1729
CHANGE ORDER NO. 4

DATE: September 30, 2025

OWNER: City of San Bernardino Municipal Water Department

CONTRACTOR: INFRASTRUCTURE ENGINEERING CORPORATION, AN
ARDURRA COMPANY

PROJECT: THIRD PARTY CONSTRUCTION MANAGEMENT AND
INSPECTION SERVICES PROJECT (PROJECT NO. C1700194)

You are hereby requested to make the following described changes and/or additions to the project scope of work:

Item No.	Description Changes and/or Additions	Decrease Contract Price (Contract Time)	Increase Contract Price (Contract Time)
1	Additional CM Services through December 2025		\$215,980.00
	TOTAL		\$215,980.00
Original Contract Amount			\$3,049,450.40
Net Increase Due To Change Order No. 1			\$408,618.12
Net Increase Due To Change Order No. 2			\$860,300.00
Net Increase Due To Change Order No. 3			\$289,841.00
Contract Amount Prior To This Change Order			\$4,608,209.52
Net Increase Due To This Change Order			\$215,980.00
Net Contract Amount, Including This Change Order			\$4,824,189.52
Net Change in Contract Price			7%

The additional work contained with this Change Order can be performed incidental to the prime work and any Change Order work issued to date and is able to be completed concurrently with remaining work to be performed under the items of the Contract, without interference or delay to the Contractor. The work required by the Change Order can be completed within the time allotted for the original Contract plus the extensions to the Contract time made by this and any previously issued Change Orders.

The amounts indicated above shall be compensation in full for the work described including all direct and indirect, incidental or consequential costs or expenses, including but not limited to, extended overhead and other impact costs that have been or will be incurred by the Contractor.

The total Contract is extended by one hundred fifty-three (153) calendar days. The Contract completion date is now December 31, 2025.

Contract No. 1729
Change Order No. 4

ACCEPTED BY: _____ DATE: _____
REPRESENTATIVE
INFRASTRUCTURE ENGINEERING CORPORATION,
AN ARDURRA COMPANY

RECOMMENDED BY: _____ DATE: _____
REPRESENTATIVE
CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT

RECOMMENDED BY: _____ DATE: _____
DIRECTOR OF WATER RECLAMATION
CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT

APPROVED BY: _____ DATE: _____
GENERAL MANAGER
CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT
(or)
PRESIDENT, WATER BOARD
CITY OF SAN BERNARDINO

**CONTRACT NO. 1729
CHANGE ORDER NO. 4
ITEM NO. 1 BREAKDOWN**

Description: Additional CM Services through December 2025

Reason: The General Contractor continued work beyond the dates identified in Construction Agreement Change Order No. 4, requiring uninterrupted CM services by Ardurra. These services were necessary and performed at full-time capacity but were not formally covered under the executed agreement. Ardurra will provide full-time Construction Management Services (CMS) through August 31, 2025.

During the General Contractor's anticipated suspension period (September 1 – November 30, 2025), the Consultant will reduced staffing; full-time CMS will resume on December 1, 2025, and continue through Project completion, estimated by December 31, 2025. The price includes all labor, equipment, and materials required to perform the continuous CMS services from August through December 2025.

Prior Approval: Robert Lindberg; Kevin Stewart; Miguel Guerrero

**Contractors
Proposed Cost:** \$215,980.00

Total Cost: \$215,980.00

Time Extension: 153 Calendar Days

**CITY OF SAN BERNARDINO
MUNICIPAL WATER DEPARTMENT**

Received 10-06-25
SBMWD AS
General Manager

**WATER BOARD
STAFF REPORT**

TO: Miguel J. Guerrero, P.E., General Manager 

FROM: Kevin T. Stewart, P.E., Director of Water Reclamation

SUBJECT: **CONTRACT NO. 1723 – MEYERS AND SONS CONSTRUCTION, LLC -
CHANGE ORDER NO. 7 – TERTIARY TREATMENT SYSTEM PROJECT
(PROJECT NO. C1700194)**

DATE: October 6, 2025

CC: S. Morrison, W. Huang, R. Lindberg, Laserfiche

BACKGROUND:

On April 25, 2023, the Department entered into Contract No. 1723 with Myers & Sons Construction, LLC (Myers), for the construction of the Tertiary Treatment System Project. The Project consists of construction of a 5.0 Million Gallons Per Day (MGD) facility to treat and convey recycled water.

Change Order No. 1 in the amount of \$15,387.80 was approved by the General Manager, on November 15, 2023, because of underground utilities which conflicted with the proposed design.

Change Order No. 2 in the amount of \$7,696.05 was approved by the General Manager on April 9, 2024, to install kick plates for hand railings above the existing Tertiary Reservoir.

Change Order No. 3 in the amount of \$216,272.76 was approved by the General Manager on June 10, 2024, for additional work provided by Myers, including asbestos pipe removal, concrete block removal not previously shown on the plans, and a change in depth on excavation of a manhole. In addition, Ardurra, the Construction Management Firm for the project, was notified of a significant delay in procurement of the Eaton Transformer required for the Project. After several meetings and design discussions with Ardurra and the Engineer of Record, AECOM, it was agreed that the Project should move forward with a temporary transformer to allow for start-up and testing of the system without further delay and loss of equipment warranties. Upon the Department's request, additional repairs to the existing Tertiary Reservoir were made by the Contractor.

Due to the delayed electrical procurement of the Eaton Transformer and Eaton Motor Control centers, additional contractual time to install the permanent transformer was necessary. As a result, Change Order No. 4 was approved by the General Manager on September 5, 2024, extending the contractual time by thirty-seven (37) days. There was no cost increase associated with this extension.

Change Order No. 5 in the amount of \$238,233.83 was approved by the General Manager on January 28, 2025, for additional work provided by Myers, including: redesign work to accommodate the UV supplier; installation of tracer wire details and valve cans; floor repair at the tertiary reservoir; upsizing of the disc filter concrete slabs; two cost credits; and a fifty-seven (57) calendar day time extension.

October 6, 2025

**SUBJECT: CONTRACT NO. 1723 – MEYERS AND SONS CONSTRUCTION, LLC -
CHANGE ORDER NO. 7 – TERTIARY TREATMENT SYSTEM
PROJECT (PROJECT NO. C1700194)**

The specifications noted that the PLC programming and modification to existing SCADA HMI would be completed by the Department's System Integrator. This was not discovered until late in the Project. The Department did not have a Systems Integrator under contract at the time of discovery, and as such could not complete the work internally. As a result, Change Order No. 6 in the amount of \$153,772.50 was approved by the Water Board on March 5, 2025, to complete the PLC Programming and Modification work in accordance with Specification No. 1723.

During a field inspection of the new duct bank by Department staff, the need for two (2) additional tracer wires and four (4) additional access points/termination points was confirmed. As such, the Contractor installed the additional tracer wires and access points on the duct bank to facilitate future use and discovery. Upon the Department's request, the Contractor will also add additional tracer wire, valve cans, and termination points around the Project site. The additional areas of installation include the FIPS, FEPS, Disc Filters, and the UV Channels.

Upon the Department's request, the Contractor installed a valve prior to the tie-in point of the Plant Water Line.

The pipe support, as shown on the drawing, cannot be installed on the pre-stressing zone of the tank. The Engineer of Record, AECOM, directed the Contractor to install supports below that zone and weld U-bolts to the top support along with neoprene gaskets.

The north wall of the deck does not allow the gate frame to extend above the deck. As a result of a Request for Information (RFI), the deck design was revised. The gate then required field modifications to the gate frame and the addition of an actuator pedestal.

The instrumentation drawings showed two (2) separate Motor Operated Valves (MOVs). These were not shown on the electrical drawings. In addition, the drawings showed the conduit schedule as a single run. As a result, additional conduit and wire had to be run along with a new control strategy provided.

During finalization of the Contractor's grading plan, near the completion of structural construction, the Department directed the Contractor to remove concrete curb islands that could conflict with future work. While completing survey work, the Contractor discovered multiple discrepancies in the horizontal coordinates listed in the design drawings. As such, the Contractor's surveyor had to implement revisions to the grading plan for the Contractor to relocate the trench drain.

The original drawings show the local controls for the disc filters inside the Electrical Building. In addition to these controls, the Department requested the Contractor include local controls on the walkway of the disc filters and the actual work area. Due to a delay in the procurement of the local control panels, a time extension was required to capture submittal times, the above-grade electrical installation, pulling and terminating of the wire, and all related shop drawings. Since this delay was outside of both the Contractor and the Department's control, the time extension is non-compensable.

The trolley doors that open and close adjacent to the Disc Filters, were not designed to accommodate the trolley crane as it comes out of the trolley doors. As such, the Contractor had to revise the doors to allow for the trolley crane to operate.

Miguel J. Guerrero, P.E., General Manager

Page 2

October 6, 2025

**SUBJECT: CONTRACT NO. 1723 – MEYERS AND SONS CONSTRUCTION, LLC -
CHANGE ORDER NO. 7 – TERTIARY TREATMENT SYSTEM
PROJECT (PROJECT NO. C1700194)**

A non-compensable time extension of one hundred thirty-nine (139) calendar days is recommended to be added to the contract time. Upon Water Board approval, the revised contract end date will be August 6, 2025.

Change Order No. 7 in the amount of \$185,732.16 has been prepared for this extra work to be performed by Meyers under Contract No. 1723. A complete summary of the Change Order items prepared by the Department's Contracts section is attached.

GOALS AND OBJECTIVES:

This change order aligns with the Department's Strategic Plan under Goal #2 Modernize and Secure Critical Infrastructure, Subgoal #2.3 Deliver Priority Capital Projects.

FISCAL IMPACT:

The funding source for this project is the FY 2025/2026 Sewer Treatment Fund Capital Improvement Project titled *CWTF-Phase 4 Tertiary Treatment Project* (Project No. C1700194) which currently has a total of \$571,880.82 in unencumbered funds.

RECOMMENDATION:

Staff recommends that the Water Board make the following motion:

- Approve Change Order No. 7 to Contract No. 1723 with Meyers & Sons, LLC in the amount of ONE HUNDRED EIGHTY-FIVE THOUSAND SEVEN HUNDRED THIRTY-TWO AND 16/100 DOLLARS (\$185,732.16); and authorize the General Manager to execute the change order.

Respectfully submitted,



Kevin T. Stewart, P.E.
Director of Water Reclamation

Attachment – Change Order No. 7 to Contract No. 1723

sdm

CONTRACT NO. 1723
CHANGE ORDER NO. 7

DATE: September 22, 2025

OWNER: City of San Bernardino Municipal Water Department

CONTRACTOR: MYERS AND SONS CONSTRUCTION, LLC

PROJECT: TERTIARY TREATMENT SYSTEM PROJECT (CO 00194)

You are hereby requested to make the following described changes and/or additions to the project scope of work:

Item No.	Description Changes and/or Additions	Decrease Contract Price (Contract Time)	Increase Contract Price (Contract Time)
1	Tracer wire and access points		\$20,484.00
2	Slide gate modifications		\$3,418.17
3	Valve at Plant Water Line		\$5,956.70
4	Tertiary Reservoir pipe supports		\$1,727.69
5	Conduit and wire runs for M OV		\$34,966.89
6	Tracer wire 2.0		\$10,981.46
7	Revised grading plan		\$13,035.14
8	Sign lettering layout		\$1,880.81
9	Additional input/output modules for valve controls		\$9,257.44
10	Change in local controls and AC		\$61,915.81
11	Cable for pump heaters		\$1,674.76
12	Infill wall cover plates		\$2,931.33
13	Trolley door modifications		\$17,501.96
	TOTAL		\$185,732.16
Original Contract Amount			\$13,844,000.00
Contract Amount Prior To This Change Order			\$14,475,362.94
Net Increase Due To Change Order No. 1			\$15,387.80
Net Increase Due To Change Order No. 2			\$7,696.05
Net Increase Due To Change Order No. 3			\$216,272.76
Net Increase Due To Change Order No. 4			\$0.00
Net Increase Due To Change Order No. 5			\$238,233.83
Net Increase Due To Change Order No. 6			\$153,772.50
Net Increase Due To This Change Order			\$185,732.16
Net Contract Amount, Including This Change Order			\$14,661,095.10
Net Change in Contract Price			1.34%

Contract No. 1723
Change Order No. 7

The additional work contained with this Change Order can be performed incidental to the prime work and any Change Order work issued to date and is able to be completed concurrently with remaining work to be performed under the items of the Contract, without interference or delay to the Contractor. The work required by the Change Order can be completed within the time allotted for the original Contract plus the extensions to the Contract time made by this and any previously issued Change Orders.

The amounts indicated above shall be compensation in full for the work described including all direct and indirect, incidental, or consequential costs or expenses, including but not limited to, extended overhead and other impact costs that have been or will be incurred by the Contractor.

The total Contract time is extended by 139 Calendar Days; the Contract Completion Date remains as August 6, 2025. However, when considering suspension periods, the Final Contract completion is anticipated for March 8, 2026.

ACCEPTED BY: _____ DATE: _____
REPRESENTATIVE
MYERS AND SONS CONSTRUCTION, LLC

RECOMMENDED BY: _____ DATE: _____
REPRESENTATIVE
CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT

RECOMMENDED BY: _____ DATE: _____
DIRECTOR OF WATER RECLAMATION
CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT

APPROVED BY: _____ DATE: _____
GENERAL MANAGER
CITY OF SAN BERNARDINO MUNICIPAL WATER DEPARTMENT
(or)
PRESIDENT, WATER BOARD
CITY OF SAN BERNARDINO

**CONTRACT NO. 1723
CHANGE ORDER NO. 7
ITEM NO. 1 BREAKDOWN**

Description:	Tracer wire and access points
Reason:	During field inspection of the duct bank by Department, it was discovered that two (2) additional tracer wires and four (4) additional access points/termination points on the bank would be necessary. These points will facilitate future use and discovery. The price includes all labor, equipment, and materials to perform the work.
Prior Approval:	Robert Lindberg; Kevin Stewart; Miguel Guerrero
Contractors	
Proposed Cost:	\$20,484.00
Total Cost:	\$20,484.00
Time Extension:	0 Calendar Days

**CONTRACT NO. 1723
CHANGE ORDER NO. 7
ITEM NO. 2 BREAKDOWN**

Description:	Slide gate modifications
Reason:	The deck design was revised in response to Request for Information (RFI) No. 019. The revised design does not allow for the gate frame to extend above the deck at the north wall. As such, the gate required field modifications to its frame and the addition of an actuator pedestal. The price includes all labor, equipment, and materials to perform the work.
Prior Approval:	Robert Lindberg; Kevin Stewart; Miguel Guerrero
Contractors Proposed Cost:	\$3,418.17
Total Cost:	\$3,418.17
Time Extension:	0 Calendar Days

**CONTRACT NO. 1723
CHANGE ORDER NO. 7
ITEM NO. 3 BREAKDOWN**

Description:	Valve at Plant Water Line
Reason:	The drawings did not show a valve at the tie-in point of the Plant Water Line. Upon the Department's request, the Contractor procured and installed a valve to be installed prior to the tie-in at that location. The price includes all labor, equipment, and materials to perform the work.
Prior Approval:	Robert Lindberg; Kevin Stewart; Miguel Guerrero
Contractors Proposed Cost:	\$5,956.70
Total Cost:	\$5,956.70
Time Extension:	0 Calendar Days

**CONTRACT NO. 1723
CHANGE ORDER NO. 7
ITEM NO. 4 BREAKDOWN**

Description:	Tertiary Reservoir pipe supports
Reason:	The pipe support for the Tertiary Reservoir could not be installed on the pre-stressing zone of the tank. The Engineer of Record, AECOM, directed the Contractor to install supports below that zone and weld U-bolt nuts to the top support. In addition, installation of ½” U-bolts and neoprene gaskets was necessary. The price includes all labor, equipment, and materials to perform the work.
Prior Approval:	Robert Lindberg; Kevin Stewart; Miguel Guerrero
Contractors Proposed Cost:	\$1,727.69
Total Cost:	\$1,727.69
Time Extension:	0 Calendar Days

**CONTRACT NO. 1723
CHANGE ORDER NO. 7
ITEM NO. 5 BREAKDOWN**

Description: Additional conduit and wire runs for MOV-500

Reason: The instrumentation drawings show two (2) separate Motor Operated Valves (MOVs). These were not shown on the electrical drawings. In addition, the electrical drawings showed a single run on the conduit schedule. As such, additional conduit and wire had to be run by the Contractor. A new control strategy was also provided. The price includes all labor, equipment, and materials to perform the work.

Prior Approval: Robert Lindberg; Kevin Stewart; Miguel Guerrero

Contractors

Proposed Cost: \$34,966.89

Total Cost: \$34,966.89

Time Extension: 0 Calendar Days

**CONTRACT NO. 1723
CHANGE ORDER NO. 7
ITEM NO. 6 BREAKDOWN**

Description:	Additional tracer wire 2.0
Reason:	Upon the Department's request, the Contractor added additional tracer wire, valve cans, and termination points around the project site. The areas included in this added installation are the FIPS, FEPS, Disc Filters, and the UV Channels. The price includes all labor, equipment, and materials to perform the work.
Prior Approval:	Robert Lindberg; Kevin Stewart; Miguel Guerrero
Contractors Proposed Cost:	\$10,981.46
Total Cost:	\$10,981.46
Time Extension:	0 Calendar Days

**CONTRACT NO. 1723
CHANGE ORDER NO. 7
ITEM NO. 7 BREAKDOWN**

Description: Revised grading plan

Reason: During finalization of the Contractor's grading plan, the Department directed the Contractor to remove the concrete curb islands that would create unnecessary conflicts for future work. During the Contractor's survey work, they discovered numerous discrepancies in the horizontal coordinates as listed in the design drawings. A credit was issued to the Department for deletion of the concrete islands. This credit matched the added cost for the additional asphalt in the center of the islands. The cost for this item is for the implementation of the revisions to the grading plan and for relocation of the trench drain. The price includes all labor, equipment, and materials to perform the work.

Prior Approval: Robert Lindberg; Kevin Stewart; Miguel Guerrero

**Contractors
Proposed Cost:** \$13,035.14

Total Cost: \$13,035.14

Time Extension: 0 Calendar Days

**CONTRACT NO. 1723
CHANGE ORDER NO. 7
ITEM NO. 8 BREAKDOWN**

Description:	Sign lettering layout
Reason:	Upon the Department's request, the Contractor added additional lettering to the project signs to reflect the designation of the area accurately. The price includes all labor, equipment, and materials to perform the work.
Prior Approval:	Robert Lindberg; Kevin Stewart; Miguel Guerrero
Contractors Proposed Cost:	\$1,880.81
Total Cost:	\$1,880.81
Time Extension:	0 Calendar Days

**CONTRACT NO. 1723
CHANGE ORDER NO. 7
ITEM NO. 9 BREAKDOWN**

Description: Additional Input/Output modules

Reason: The subcontractor, Northern Digital, furnished and installed two (2) additional Input/Output modules in the Programable Logic Controller Panel (PLC) for the Tertiary Treatment System and the Tertiary Pump Station PLC Control Panel. This system will provide distinct open and close digital outputs for the slide gates and valve control actuators. The price includes all labor, equipment, and materials to perform the work.

Prior Approval: Robert Lindberg; Kevin Stewart; Miguel Guerrero

Contractors

Proposed Cost: \$9,257.44

Total Cost: \$9,257.44

Time Extension: 0 Calendar Days

**CONTRACT NO. 1723
CHANGE ORDER NO. 7
ITEM NO. 10 BREAKDOWN**

Description: Revision to local controls and A/C

Reason: The original drawings showed the local controls for the disc filters inside the Electrical Building. In addition to these controls, the Department requested local control on the walkway of the disc filters in the actual work area. This change included credit for the air conditioning (AC) unit removals inside the Disc Filter Control Panel. The procurement of the local control panels for the Disc Filters took longer than anticipated. In addition, ongoing delays in equipment deliveries, including the Disc Filters Control Panels, the TIA, added to the delay. The resulting delay was outside of the control of both parties. As such, a non-compensable time extension of one hundred thirty-nine (139) days was agreed upon by both parties. The price includes all labor, equipment, and materials to perform the work.

Notwithstanding anything in the Contract, Contractor's warranty, guarantee and defect obligations under the Contract shall commence after the installation of the permanent electrical transformer, completion of the 30-day start up and testing and acceptance of the Project by the Department.

Prior Approval: Robert Lindberg; Kevin Stewart; Miguel Guerrero

**Contractors
Proposed Cost:** \$61,915.81

Total Cost: \$61,915.81

Time Extension: 139 Calendar Days

**CONTRACT NO. 1723
CHANGE ORDER NO. 7
ITEM NO. 11 BREAKDOWN**

Description: Cable for pump heaters

Reason: The drawings did not show conduits or cables for the space heaters to all three (3) pumps. As such, the Contractor had to run additional conduit and cables to pumps P-501, P-502, and P-503. The price includes all labor, equipment, and materials to perform the work.

Prior Approval: Robert Lindberg; Kevin Stewart; Miguel Guerrero

Contractors

Proposed Cost: \$1,674.76

Total Cost: \$1,674.76

Time Extension: 0 Calendar Days

**CONTRACT NO. 1723
CHANGE ORDER NO. 7
ITEM NO. 12 BREAKDOWN**

Description: Infill wall cover plates

Reason: The drawings did not show any type of covers where the Bard AC Units are inside the Tertiary Building. The Contractor had to procure and install sheet metal plates to fill the voids. The price includes all labor, equipment, and materials to perform the work.

Prior Approval: Robert Lindberg; Kevin Stewart; Miguel Guerrero

Contractors

Proposed Cost: \$2,931.33

Total Cost: \$2,931.33

Time Extension: 0 Calendar Days

**CONTRACT NO. 1723
CHANGE ORDER NO. 7
ITEM NO. 13 BREAKDOWN**

Description:	Trolley door modifications
Reason:	The trolley doors that open and close adjacent to the Disc Filters, were not designed to accommodate the trolley crane as it comes out of the trolley doors. As such, the Contractor had to revise the doors to allow for the trolley crane to operate. The price includes all labor, equipment, and materials to perform the work.
Prior Approval:	Robert Lindberg; Kevin Stewart; Miguel Guerrero
Contractors Proposed Cost:	\$17,501.96
Total Cost:	\$17,501.96
Time Extension:	0 Calendar Days