

**NOTICE OF REGULAR MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
ENGINEERING COMMITTEE
February 19, 2026
8:30 a.m.**

Physical Address	Remote Address
34156 Del Obispo Street Dana Point, CA 92629	El Toro Water District Office: 24251 Los Alisos Blvd. Lake Forest, CA 92630

NOTICE IS HEREBY GIVEN that a Regular Meeting of the South Orange County Wastewater Authority (SOCWA) Engineering Committee was called to be held on **February 19, 2026, at 8:30 a.m.** SOCWA staff will be present and conducting the meeting at the SOCWA Administrative Office located at 34156 Del Obispo Street, Dana Point, California.

THE SOCWA MEETING ROOM IS WHEELCHAIR ACCESSIBLE. IF YOU REQUIRE ANY SPECIAL DISABILITY RELATED ACCOMMODATIONS, PLEASE CONTACT THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY SECRETARY'S OFFICE AT (949) 234-5400 AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO THE SCHEDULED MEETING TO REQUEST SUCH ACCOMMODATIONS. THIS AGENDA CAN BE OBTAINED IN ALTERNATE FORMAT UPON REQUEST TO THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY'S SECRETARY AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO THE SCHEDULED MEETING. MEMBERS OF THE PUBLIC HAVE THE OPTION TO PARTICIPATE IN AND MAY JOIN THE MEETING REMOTELY VIA VIDEO CONFERENCE FOR VISUAL INFORMATION ONLY (USE ZOOM LINK BELOW) AND BY TELECONFERENCE FOR AUDIO PARTICIPATION (USE PHONE NUMBERS BELOW). THIS IS A PHONE-CALL MEETING AND NOT A WEB-CAST MEETING, SO PLEASE REFER TO AGENDA MATERIALS AS POSTED ON THE WEBSITE AT www.socwa.com. ON YOUR REQUEST, EVERY EFFORT WILL BE MADE TO ACCOMMODATE PARTICIPATION. FOR PARTIES PARTICIPATING REMOTELY, PUBLIC COMMENTS WILL BE TAKEN DURING THE MEETING FOR ORAL COMMUNICATION IN ADDITION TO PUBLIC COMMENTS RECEIVED BY PARTIES PARTICIPATING IN PERSON. COMMENTS MAY BE SUBMITTED PRIOR TO THE MEETING VIA EMAIL TO ASSISTANT SECRETARY LYNDA MAY AT LMAY@SOCWA.COM WITH THE SUBJECT LINE "REQUEST TO PROVIDE PUBLIC COMMENT." IN THE EMAIL, PLEASE INCLUDE YOUR NAME, THE ITEM YOU WISH TO SPEAK ABOUT, AND THE TELEPHONE NUMBER YOU WILL BE CALLING FROM SO THAT THE COORDINATOR CAN UN-MUTE YOUR LINE WHEN YOU ARE CALLED UPON TO SPEAK. THOSE MAKING PUBLIC COMMENT REQUESTS REMOTELY VIA TELEPHONE IN REAL-TIME WILL BE ASKED TO PROVIDE YOUR NAME, THE ITEM YOU WISH TO SPEAK ABOUT, AND THE TELEPHONE NUMBER THAT YOU ARE CALLING FROM SO THE COORDINATOR CAN UN-MUTE YOUR LINE WHEN YOU ARE CALLED UPON TO SPEAK. ONCE THE MEETING HAS COMMENCED, THE CHAIR WILL INVITE YOU TO SPEAK AND ASK THE COORDINATOR TO UN-MUTE YOUR LINE AT THE APPROPRIATE TIME.

AGENDA ATTACHMENTS AND OTHER WRITINGS THAT ARE DISCLOSABLE PUBLIC RECORDS DISTRIBUTED TO ALL, OR A MAJORITY OF, THE MEMBERS OF THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY ENGINEERING COMMITTEE IN CONNECTION WITH A MATTER SUBJECT FOR DISCUSSION OR CONSIDERATION AT AN OPEN MEETING OF THE ENGINEERING COMMITTEE ARE AVAILABLE FOR PUBLIC INSPECTION IN THE AUTHORITY ADMINISTRATIVE OFFICE LOCATED AT 34156 DEL OBISPO STREET, DANA POINT, CA ("AUTHORITY OFFICE") OR BY PHONE REQUEST MADE TO THE AUTHORITY OFFICE AT 949-234-5400. IF SUCH WRITINGS ARE DISTRIBUTED TO MEMBERS OF THE ENGINEERING COMMITTEE LESS THAN SEVENTY-TWO (72) HOURS PRIOR TO THE MEETING, THEY WILL BE AVAILABLE IN THE RECEPTION AREA OF THE AUTHORITY OFFICE AT THE SAME TIME AS THEY ARE DISTRIBUTED TO THE ENGINEERING COMMITTEE AND SENT TO ANY REMOTE PARTICIPANTS REQUESTING EMAIL DELIVERY OR POSTED ON SOCWA'S WEBSITE. IF SUCH WRITINGS ARE DISTRIBUTED IMMEDIATELY PRIOR TO, OR DURING, THE MEETING, THEY WILL BE AVAILABLE IN THE MEETING ROOM OR IMMEDIATELY UPON VERBAL REQUEST TO BE DELIVERED VIA EMAIL TO REQUESTING PARTIES PARTICIPATING REMOTELY.

**THE PUBLIC MAY PARTICIPATE REMOTELY BY VIRTUAL MEANS. FOR AUDIO OF MEETING USE
THE CALL IN PHONE NUMBERS BELOW AND FOR VIDEO USE THE ZOOM LINK BELOW.**

Join Zoom Meeting
<https://socwa.zoom.us/>

Meeting ID: 894 1549 9335
Passcode: 330280

One Tap Mobile
+16694449171,, 89415499335#,,, *330280# US
+16699006833,, 89415499335#,,, *330280# US (San Jose)

Engineering Committee Meeting
February 19, 2026

AGENDA

1. Call Meeting to Order
2. Public Comments

THOSE WISHING TO ADDRESS THE ENGINEERING COMMITTEE ON ANY ITEM LISTED ON THE AGENDA WILL BE REQUESTED TO IDENTIFY AT THE OPENING OF THE MEETING AND PRIOR TO THE CLOSE OF THE MEETING. THE AUTHORITY REQUESTS THAT YOU STATE YOUR NAME WHEN MAKING THE REQUEST IN ORDER THAT YOUR NAME MAY BE CALLED TO SPEAK ON THE ITEM OF INTEREST. THE CHAIR OF THE MEETING WILL RECOGNIZE SPEAKERS FOR COMMENT AND GENERAL MEETING DECORUM SHOULD BE OBSERVED IN ORDER THAT SPEAKERS ARE NOT TALKING OVER EACH OTHER DURING THE CALL.

3. Approval of Committee Member Request for Remote Participation (Standing Item)

Recommended Action: Committee Discussion/Direction/Action.

PAGE NO.

4. Approval of Minutes.....1
• Engineering Committee Minutes of January 22, 2026

Recommended Action: Staff requests that the Engineering Committee approve the subject Minutes as submitted.

5. General Manager's Report5

Recommended Action: Information Item.

6. Operations Report

Recommended Action: Information Item.

7. Capital Improvement Construction Projects Progress and Change Order Report (February)
[Project Committees 2 and 5]10

Recommended Action: Information Item

8. JBL Energy Building Roof Repair [Project Committee 2]24

Recommended Action: Staff recommends that the Engineering Committee recommend that the PC 2 Board of Directors:

1. Authorize execution of a construction contract with Pacific Hydrotech in the amount of \$174,241.
2. Approve a contract contingency of \$17,424, for a total project authorization of \$191,665, to address any unforeseen conditions encountered during the work.

9. CTP Storm Drain System Upgrades Construction Contract [PC 15]41

Engineering Committee Meeting
February 19, 2026

Recommended Action: Staff recommends that the Engineering Committee recommend that the PC 15 Board of Directors:

1. Authorize execution of a construction contract with T.E. Roberts in the amount of \$570,059.00.
2. Approve a contract contingency of \$57,000, for a total project authorization of \$627,059 to address any unforeseen conditions encountered during the work.

10. CTP Facility Planning Assessment Contract 46

Recommended Action: Staff recommends that the Engineering Committee recommend that the PC 15 Board of Directors:

1. Authorize the General Manager to execute a contract with AECOM in the amount of \$494,821 upon the CTP Regional Flow Study reaching Project Element 4, and
2. Approve a contract contingency of \$49,482, for a total project authorization \$544,303, to address any unforeseen conditions encountered during the work.

11. CTP Regional Flow Study Contract 107

Recommended Action: Committee Discussion/Direction/Action.

12. On-Call Third Party Construction Management RFP 203

Recommended Action: Staff requests the following actions from the Engineering Committee:

1. Review and comment on the proposed process for the use of as-needed construction management services
2. Review and comment on the proposed list of construction management firms to receive the as-needed construction management services request for proposals

13. Draft Capital Improvement Program Budget for Fiscal Year 2026-27 219

Recommended Action: Committee Discussion/Direction/Action.

14. Adjournment

I hereby certify that the foregoing Notice was personally emailed or mailed to each member of the SOCWA Engineering Committee at least 72 hours prior to the scheduled time of the Regular Meeting referred to above.

I hereby certify that the foregoing Notice was posted at least 72 hours prior to the time of the above-referenced Engineering Committee meeting at the usual agenda posting location of the South Orange County Wastewater Authority and at www.socwa.com.

Dated this 11th day of February 2026.



Lynda May, Assistant Secretary
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

**MINUTES OF REGULAR MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY**

Engineering Committee

DRAFT

January 22, 2026

The Regular Meeting of the South Orange County Wastewater Authority (SOCWA) Engineering Committee was held on January 22, 2026, at 8:30 a.m. in-person and via teleconferencing from the Administrative Offices located at 34156 Del Obispo Street, Dana Point, California. The following members of the Engineering Committee were present:

MIKE DUNBAR
HANNAH FORD
ROBERT GRANTHAM
MARC SERNA

Emerald Bay Service District
El Toro Water District [Zoom]
Santa Margarita Water District
South Coast Water District

Absent:

DAVE REBENSDORF
MARK MCAVOY

City of San Clemente
City of Laguna Beach

Staff Present:

AMBER BOONE
RONI GRANT
JIM BURROR
BRIAN PECK
MATT CLARKE
LYNDA MAY

General Manager
Capital Improvement Program (CIP) Manager
Deputy GM/Chief Engineer
Project Manager
Chief Technology Officer
Administrative Assistant/Assistant Secretary

1. Call Meeting to Order

Ms. Roni Grant, Capital Improvement Program (CIP) Manager, called the meeting to order at 8:39 a.m.

2. Public Comments

None.

3. Approval of Committee Member Request for Remote Participation (Standing Item)

Ms. Hannah Ford participated via Zoom.

4. Approval of Minutes

- Engineering Committee Minutes of November 13, 2025.

ACTION TAKEN

A motion was made by Mr. Grantham and seconded by Mr. Dunbar to approve the Engineering Committee Minutes for November 13, 2025.

Motion carried:	Aye 4, Nay 0, Abstained 0, Absent 2
Mr. McAvoy	Absent
Ms. Ford	Aye
Mr. Dunbar	Aye
Mr. Grantham	Aye
Mr. Serna	Aye
Mr. Rebensdorf	Absent

5. General Manager's Report

Ms. Amber Boone, General Manager, provided an update of the Master Schedule for CTP and JBL planning efforts. A discussion on the recent CASA General Manager Workshop ensued with a briefing on AB 339, with potential procedural templates being looked at currently. Mr. Dunbar commented on a session that covered customer base messaging, and the importance of using proper wording. Ms. Boone agreed and noted that a consistent vernacular will help the process on the investment side.

This was an information item; no action was taken.

6. Operations Report

Mr. Jim Burror, Deputy GM/Chief Engineer, gave a report on Operations, starting with status updates of the O&M budgets and the Cogeneration system service. A brief discussion ensued on the cost impact of the Cogeneration system being off with Mr. Burror concluding that the board will be informed of any budgetary issues associated with the Operations budget.

This was an information item; no action was taken

7. Capital Improvement Construction Projects Report and AQMD Permit Status

A discussion was opened with Ms. Grant briefing on the CTP access road project being put out to bid. Mr. Grantham requested schematics for the upcoming budget to show an overview of unit processes, and how they are needed to keep the plant operational. Ms. Boone suggested a look at the color-coded linking system used by OC Sanitation for NPDES assessments.

This was an information item; no action was taken

8. JBL Flare and Underground Piping Project (Project Committee 2)

An open discussion followed a presentation by Brian Peck, Project Manager, on the JBL Flare and Piping Relocation project. Mr. Grantham inquired on the timing and urgency and if it should be delayed until the Master Plan upgrades takes place. Mr. Burror emphasized the safety hazard of the current temporary setup, with Ms. Boone noting the pressure from AQMD with their new rule to replace the flare. After discussing the risks and technical considerations, the committee and staff agreed on the need to move forward.

This was an information item; no action was taken.

9. Contract Award for Coastal Treatment Plant Personnel Building Phase 2 Upgrades [Project Committee 15]

A brief discussion ensued on the necessary upgrades to the Personnel Building with Mr. Burror noting cold weather exposure, and vector issues.

ACTION TAKEN

A motion was made by Mr. Dunbar and seconded by Mr. Serna to 1) authorize execution of a construction contract with T.E. Roberts in the amount of \$649,848 and 2) approve a contract contingency of \$97,500 to address any unforeseen conditions encountered during the work.

Motion carried:	Aye 2, Nay 0, Abstained 0, Absent 1
Mr. Dunbar	Aye
Mr. Serna	Aye
Mr. McAvoy	Absent

10. CTP Storm Drainage Modifications [Project Committee 15]

An open discussion ensued on the potential compliance risks for delaying the storm drain improvements, with a consensus to bring the project back with more detail at the next Engineering Committee meeting.

This was an information item; no action was taken.

11. Effluent Transmission Main Reach B Techite Replacement Final Design [Project Committee 21]

An open discussion ensued on the scope of work with Ms. Ford updating the committee on El Toro Water District's current evaluation. The committee and staff agreed to proceed with the two firm interviews scheduled for the next week.

This was an information item; no action was taken.

12. CTP Facility Planning Assessment Project Update [Project Committee 15]

Ms. Grant updated the Engineering Committee on the proposals received from AECOM and Hazen. A discussion ensued regarding the interviewing and selection process with a suggestion for a secondary scoring method for interviews.

This was an information item; no action was taken.

13. Draft Capital Improvement Program Budget for Fiscal Year 2026-27

Mr. Burror provided a presentation of the Fiscal Year 2026-27 Budget and CIP Ten Year Plan, highlighting the anticipated cash requests, project allocations and providing calculations for agency billing purposes. Ms. Boone noted they will bring this back in February for more reviewing. Mr. Burror briefed on the status of CIP projects being planned including Digesters 3 and 4, IT infrastructure, and the golf course road repairs.

This was an information item; no action was taken.

14. Engineering Cost Estimate Update

An open discussion ensued on methods for more accurate cost estimating, including working with outside contractors and other agencies on their estimation processes. Mr. Grantham suggested using firms that have a variety of local projects that are current and related, such as a construction management firm. Mr. Serna suggested looking at recent bids from member agencies to compare to estimates. Ms. Ford also shared their methodology and offered to share their cost data with any future cost estimates. Ms. Boone also discussed options for cost estimating tools that utilize regional data.

16. Capacity and Flow Analysis

An open discussion ensued on the analysis of flows and loads at PC 2, and PC 15, comparing agreed-upon capacities and actual flows. Ms. Boone updated the committee on the template being created, and the O&M Budget being ready for the finance committee to review in February. Mr. Grantham commented their support on using the previous year's flows as a basis for the upcoming year. The discussion concluded with a suggestion for a quarterly update on any significant deviations from the agreed-upon capacities.

15. Cost Allocation Policy

A brief discussion ensued with Ms. Boone updating the committee on policy's progress with the board, finance committee, and audit. Ms. Boone requested committee members to look at their own Project Committee sections in the draft policy and in the Operational Cost Distribution report by Carollo to bring back in February.

17. Adjournment

There being no further business, Ms. Grant adjourned the meeting at 9:08 a.m.

I HEREBY CERTIFY that the foregoing Minutes are a true and accurate copy of the Minutes of the Regular Meeting of the South Orange County Wastewater Authority Engineering Committee of January 22, 2026, and approved by the Engineering Committee and received and filed by the Board of Directors of the South Orange County Wastewater Authority.

Lynda May, Assistant Secretary
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

Agenda Item

5

Legal Counsel Review: No

Meeting Date: February 19, 2026

TO: SOCWA Engineering Committee

FROM: Amber Boone, General Manager

SUBJECT: General Manager's Report

Master Schedule for CTP and JBL Master Planning Efforts

SOCWA has started three (3) separate efforts as part of the overall master planning effort. The following is a master schedule for the three efforts, which includes workshops and Board of Director meetings.

EVENTS	PROJECT	DATE
Deadline for Questions and Supplemental Information	CTP Regional Flow Study	January 8, 2026
Kick-Off Meeting	JBL FPA	January 14, 2026
Task 1 - Project Management (start)	JBL FPA	January 14, 2026
Proposal Submission Deadline	CTP FPA	January 15, 2026
Workshop 1	JBL FPA	January 27, 2026
Interviews	CTP FPA	January 29, 2026
Proposal Submission Deadline	CTP Regional Flow Study	January 29, 2026
SOCWA Board Meeting		February 5, 2026
Interviews	CTP Regional Flow Study	February 9-10, 2026
Engineering Committee - Contract Award Review	CTP FPA/ Regional Flow Study	February 12, 2026
SOCWA Board Meeting – Contract Award Review	CTP Regional Flow Study and CTP FPA	March 5, 2026
Kick-Off Meeting	CTP Regional Flow Study	March 11, 2026
Workshop 2	JBL FPA	March 17, 2026
Project Element 1 Due	CTP Regional Flow Study	March 26, 2026
Task 2 - Existing Facility Evaluation	JBL FPA	March 31, 2026
Kick-Off Meeting	CTP FPA	April 1, 2026
Task 1 - Project Management (start)	CTP FPA	April 1, 2026
SOCWA Board Meeting		April 2, 2026
Project Element 1 Due	CTP Regional Flow Study	April 12, 2026
Workshop 3	JBL FPA	April 23, 2026

Task 4 - Effluent Utilization Evaluation	JBL FPA	April 30, 2026
Project Element 2 Due	CTP Regional Flow Study	April 30, 2026
SOCWA Board Meeting		May 14, 2026
Project Element 3 Due	CTP Regional Flow Study	May 30, 2026
SOCWA Board Meeting		June 4, 2026
Task 2 - Existing Facility Evaluation	CTP FPA	June 15, 2026
Task 3 - Wastewater Treatment Alternatives	JBL FPA	June 30, 2026
Project Element 4 Due	CTP Regional Flow Study	June 30, 2026
SOCWA Board Meeting		July 9, 2026
Project Element 5 Due	CTP Regional Flow Study	July 31, 2026
SOCWA Board Meeting		August 13, 2026
Task 5 - Develop Project Alternatives	JBL FPA	August 31, 2026
Task 6 - Facility Planning & Assessment	JBL FPA	August 31, 2026
SOCWA Board Meeting		September 3, 2026
Task 3 – Wastewater Treatment Alternatives	CTP FPA	October 1, 2026
Task 4 – Recycled Water Facilities and Effluent Utilization Evaluation	CTP FPA	October 1, 2026
SOCWA Board Meeting		October 1, 2026
SOCWA Board Meeting		November 5, 2026
Task 5 - Develop Project Alternatives	CTP FPA	December 8, 2026
SOCWA Board Meeting		December 10, 2026
Task 6 - Facility Planning & Assessment	CTP FPA	January 4, 2027
SOCWA Board Meeting		January 7, 2027

Please note that Workshop 4 for the JBL FPA is tentatively scheduled for May 20th-21st or 27th-28th and Workshop 5 is June 23rd-25th.

SOCWA DRAFT Goals

To support the development of the FY 26-27 Budget and efficiency measures at SOCWA, staff created a draft list of organizational goals. SOCWA staff are bringing these draft goals to the February Engineering Committee for additional input. These goals are based on a Results-Oriented Work Environment (ROWE) which emphasize evaluating employees based on outcomes and achievements rather than hours worked, granting flexibility in how and when tasks are completed as long as goals are met. This approach fosters autonomy, accountability, and efficiency, reducing micromanagement while boosting morale and productivity through clear, measurable objectives. These draft goals represent performance targets and a long-term sustainability pathway for South Orange County, aligned with SOCWA's mission statement, emphasizing environmental stewardship, public trust, and positive community optics.

Goal 1: Employee Wellbeing and Team Cohesion

Implement weekly team lunches across all facilities (CTP, JBL, Lab) to promote care and support among employees, targeting 100% voluntary participation per week (measured by attendance logs). Conduct monthly reviews to enhance morale, collaboration, and retention within the ROWE framework, starting from a January 2026 baseline of 0% (pre-implementation).

Goal 2: Compliance and Safety Excellence

Achieve zero excursions, complaints, spills, odors, noise issues, regulatory violations, and safety incidents across all facilities for the fiscal year, measured monthly against a baseline of 0 events reported in November 2025, to ensure 100% regulatory compliance, minimize environmental impact, and prioritize employee safety. Any excursion will be promptly identified, investigated, and addressed through corrective actions to prevent recurrence, reinforcing ethical accountability and encouraging timely reporting.

Goal 3: Effluent Quality Optimization

Maintain effluent BOD below 6 mg/L, TSS below 7 mg/L, and turbidity below 3 NTU, averaged across all plants, with at least 95% removal efficiency from influent levels (based on November 2025 averages of 3.2-7.4 mg/L BOD, 5.9-8.7 mg/L TSS, and 2.0-4.5 NTU turbidity). Track quarterly to enhance treatment performance and support water reuse initiatives, while reducing chemical additions (e.g., bleach and ferric).

Goal 4: Maintenance Efficiency

Increase the ratio of preventive maintenance tasks to corrective maintenance tasks to 10:1 or better (improving from November 2025's 343:39 ratio), measured by total tasks completed per month, to reduce equipment downtime and critical repairs (e.g., 21 at JBL and 5 at CTP). Staff will utilize Project Work Orders for enhanced project tracking and resource planning, reducing duplicate work orders. Complement by tiering equipment by risk and consequence, identifying training gaps, and ensuring parts redundancy.

Goal 5: Resource Utilization Reduction

Reduce overall utility consumption—including power, water, and natural gas—by 10% from the November 2025 baseline (e.g., 417,923 kWh total power), while maintaining or increasing cogeneration output (241,093 kWh) and optimizing digester gas usage (e.g., prioritizing engine and boiler over flares at ratios similar to 3,357,583 scfm to engine vs. 2,394,800 scfm to flares). Evaluate annually to lower operational costs and energy footprint, with success reinvested in staff, tools, and training. Focus on O&M-tracked reductions, accounting for current engine issues.

Goal 6: Outfall Discharge Minimization

Decrease total ocean outfall discharges by 5% from the 12-month running average of 25,510 AF (equivalent to 28.83 mgd in November 2025), focusing on expanding recycled water production beyond the 0.27 mgd average and 8.09 million gallons total. Monitor monthly to promote sustainable water management and align with agency reuse planning.

SOCWA staff will support this by maintaining 100% runtime reliability (based on SCWD demand) at facilities like CTP and identifying interim opportunities for efficiency gains.

Goal 7: Capital Improvement Project (CIP) Execution

Achieve CIP spending (large and small projects) of 75% or more of the original fiscal year budget. Prioritizing projects critical to plant operations and avoid holding excess cash to benefit member agencies. Complete the Coastal Treatment Plant and JB Latham Feasibility Planning Assessment Phase 1 Master Plans and the Regional Flow study by the end of 2026.

Goal 8: Business Efficiency

Eliminate unnecessary tasks by encouraging staff to recommend non-essential duties within their own roles (not others). Supervisors will evaluate pros and cons, present findings to management for approval, and implement changes to streamline operations.

Goal 9: Cybersecurity Resilience

Conduct a comprehensive cybersecurity assessment and implement resilience measures, including regular vulnerability scans, employee training on cyber threats, and multi-factor authentication across all systems. Achieve zero successful cyber incidents for the fiscal year, measured quarterly against a November 2025 baseline of 0 reported incidents, to protect critical infrastructure, ensure operational continuity, and comply with industry standards for water utilities.

Goal 10: AI for Efficiency Enhancement

Streamline administrative processes through automation and digitization of reporting, budgeting, and compliance documentation. Achieve a 20% reduction in administrative processing time (e.g., for reports and approvals), tracked quarterly from a January 2026 baseline, to enhance productivity, reduce paperwork burdens, and support ROWE principles by allowing more focus on high-value outcomes.

Engineering Cost Estimates Update

The Engineering and Finance Committees met to review Engineering Cost Estimates as a follow-up to the January SOCWA Board item. The Finance Committee wanted to be apprised of the potential updates but did not think they needed to be included in the governance system. The Engineering Committee recommended working through the Orange County Water Association to convene a panel to discuss this industry trend. SOCWA will work with OCWA on convening the panel and will bring the lessons learned back to SOCWA.

Cost Allocation Policy

SOCWA staff requested feedback on the cost allocation distributions from the PC2 & PC17 Engineering Committee Members. SOCWA brought the updated government affairs/public relations portion of the cost allocation policy to the SOCWA Board of Directors on February 5, 2026. SOCWA staff are also working with the SOCWA Finance Committee on potential updates to the Cost Allocation Policy based on the Annual Financial Audit. SOCWA staff anticipates

bringing the draft Cost Allocation Policy to the March Engineering Committee based on comments received.

PC2 Trailer

The staffing trailer at the JB Latham facility was removed at the termination date at the end of January 31, 2026. Staff are now in the administration building at JB Latham. The move reduces ongoing operations costs of the trailer and provides more space for future construction activities.



Agenda Item

7

Engineering Committee Meeting
Meeting Date: February 19, 2026

TO: Engineering Committee
FROM: Roni Grant, Capital Improvement Program Manager
SUBJECT: Capital Improvement Construction Projects Progress and Change Order Report (February) [Project Committees 2 and 15]

Overview

This agenda item provides a status update on active construction projects, including any associated change orders. Updated Capital Improvement Program (CIP) reports are attached for reference.

Project Updates

JBL Electrical Upgrades

Pre-purchasing activities for the Motor Control Center (MCC) and Plant 1 Generator are currently underway. Construction is anticipated to be completed by December 2026, contingent upon the issuance of the AQMD permit to construct for the generator.

JBL Effluent Pump Station and Energy Building Upgrades

Construction is currently in progress. Construction is anticipated to be completed by July 2026.

JBL Plant 2 Headworks Rehabilitation

Construction is currently in progress. Construction is anticipated to be completed by July 2026.

JBL Old Effluent Pump Station Storage and Staging

Construction is currently in progress. Construction is anticipated to be completed by July 2026.

CTP Aeration Deck Grating Replacement

Construction was completed by the end of 2025.

CTP West Primary and Secondary Scum Skimming System

Construction is currently in progress. Construction is anticipated to be completed by July 2026.

CTP Personnel Building Phase 2 Reconstruction

The construction contract has been approved; construction is anticipated to be completed by July 2026.

CTP Grit Tanks Coating Upgrades

The first phase of the construction has been completed. Phase 2 will be combined with the Foul Air System Upgrades project.

CTP Storm Drain Improvements

The bids are currently under review. Construction is anticipated to be completed by July 2026.

Recommended Action: Information only.

SCAQMD Permit Status Updates for Upcoming CIP Projects

JBL Plant 1 Generator (A/N 654624)				
Application Date	Communication Dates from SCAQMD	Information requested from SCAQMD	Information provided to SCAQMD	Response Dates from SOCWA
08/01/24	9/11/24	CG18 gas engine technical data	Provided technical data	9/25/24
	10/8/24	Serial number and model year	Serial number and model year not available, confirmed flapper type rain cap	10/9/24
	10/17/24	Maintenance and testing requirements	Confirmed requirements	10/18/24
	1/15/25	Confirmed receipt of serial number and model year	Provided serial number and model year	1/13/25
	4/25/25	Requested to confirm EPA family code	Confirmed EPA family code and provided EPA certificate	4/25/25
JBL Flare System (A/N 657267)				
Application Date	Communication Dates from SCAQMD	Information requested from SCAQMD	Information provided to SCAQMD	Response Dates from SOCWA
12/13/24	1/8/25	Requested additional fee	Paid online	1/21/25
	1/24/25	Requested voucher or receipt from the online payment	Provided voucher payment and receipt number	1/24/25
	4/1/25 and 4/18/25	Requested clarification on facility ownership	Clarified the facility ownership	4/23/25
	5/14/25	Additional information needed on the flare Varec 244E unit	Provided additional information	5/19/25
	5/21/25	Requested specifications on the flare retention time and temperature	Provided additional information	5/22/25
	8/7/25	Additional questions regarding the existing flare and proposed flare system	Responses provided	8/14/25

CTP Odor Scrubber System (A/N 656320)				
Application Date	Communication Dates from SCAQMD	Information requested from SCAQMD	Information provided to SCAQMD	Response Dates from SOCWA
10/2/24	11/8/24	Additional information needed	Design intent clarified	11/19/24
	7/15/25	Additional information needed	Additional information provided	7/18/25
	1/28/2026	Permit to Construct Issued		

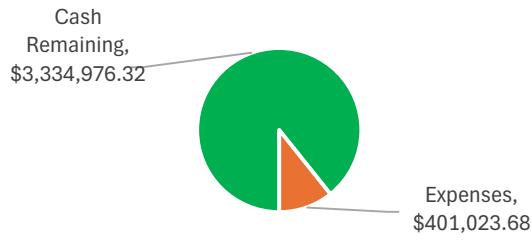
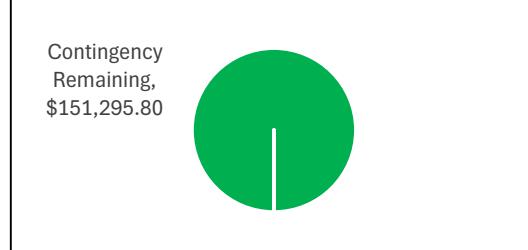
Recommended Action: Information only.

Project Financial Status

Project Committee	2
Project Name	Effluent Pump Station and Energy Building Upgrades
Project Description	Replacement of effluent valves and piping; installation of monorail, roof, safety upgrades and seismic retrofit in the Energy Building

Data Last Updated

February 5, 2026

Cash Flow**Contingency****Cash Flow**

Collected	\$ 3,736,000.00
Expenses	\$ 401,023.68

Project Completion

Schedule	40%
Budget	10.73%

Construction Contracts

Company	PO No.	Original	Change Orders	Amendments	Total	Costs to Date
Pacific Hydrotech	21280	\$ 3,093,900.00	\$ 3,399.20		\$ 3,097,299.20	\$ 323,898.58
Carollo Engineers	20453	\$ 119,316.00			\$ 119,316.00	\$ 29,758.40
Project Partners	21283	\$ 12,500.00			\$ 12,500.00	
SOCWA Staff Time	32226L/32225S/3216					\$ 47,366.70
		\$ 3,225,716.00	\$ 3,399.20	\$ -	\$ 3,229,115.20	\$ 401,023.68

Construction Contingency

Area	Project Code	Amount	Change Orders	Total Remaining	Percent Used
Liquids/Solids/Common	32226L/32225S/3216	\$ 154,695.00	\$ 3,399.20	\$ 151,295.80	2.2%
		\$ 154,695.00	\$ 3,399.20	\$ 151,295.80	2.2%

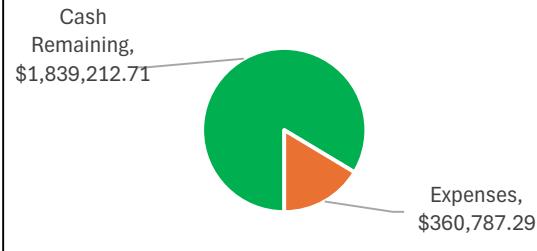
Change Order No.	Vendor Name	Project ID	Description	Status Date	Days	Amount
1	Pacific Hydrotech	32225S	Energy Building Guardrail mounting plate anchor conflicts	12/11/2025	0	\$ 31,955.35
2	Pacific Hydrotech	32226L	Effluent Pump Station Manifold Tee Addition	12/23/2025	0	\$ 9,432.35
3	Pacific Hydrotech	32226L	Effluent Pump Station Line Stop Deduct	12/23/2025	0	\$ -37,988.50
						\$ 3,399.20

Project Financial Status

Project Committee	2
Project Name	Plant 2 Headworks Rehabilitation - 32243L
Project Description	Plant 2 Headworks building roof replacement, channel concrete repair and cover replacement, and electrical modification

Data Last Updated

February 5, 2026

Cash Flow**Contingency**

Contingency Remaining, \$50,400.00

Cash Flow

Collected	\$ 2,200,000.00
Expenses	\$ 360,787.29

Project Completion

Schedule	25%
Budget	16.38%

Construction Contracts

Company	PO No.	Original	Change Orders	Amendments	Total	Costs to Date
Pacific Hydrotech		\$ 2,149,600.00			\$ 2,149,600.00	\$ 323,898.58
Dudek Engineers	20250	\$ 47,858.00			\$ 47,858.00	\$ 8,642.50
Project Partners	21283	\$ 5,000.00			\$ 5,000.00	
SOCWA Staff Time	32243L	\$ 2,202,458.00	\$ -	\$ -	\$ 2,202,458.00	\$ 28,246.21
						\$ 360,787.29

Construction Contingency

Area	Project Code	Amount	Change Orders	Total Remaining	Percent Used
Liquids	32243L	\$ 50,400.00		\$ 50,400.00	0.0%
		\$ 50,400.00	\$ -	\$ 50,400.00	0.0%

Project Financial Status

Project Committee	2
Project Name	Effluent Pump Station Storage and Staging Area (32241L)
Project Description	Demolition of the existing Effluent Pump Station and Repurpose into parking and storage area

Data Last Updated

February 5, 2026

Cash Flow

Cash
Remaining,
\$840,949.26



Expenses,
\$9,050.74

Contingency

Contingency
Remaining,
\$39,585.00

**Cash Flow**

Collected	\$ 850,000.00
Expenses	\$ 9,050.74

Project Completion

Schedule	10%
Budget	1.11%

Construction Contracts

Company	PO No.	Original	Change Orders	Amendments	Total	Costs to Date
Pacific Hydrotech		\$ 791,700.00			\$ 791,700.00	
Z&K/Ardurra	21446	\$ 26,640.00			\$ 26,640.00	
SOCWA Staff Time	32241L					\$ 9,050.74
		\$ 818,340.00	\$ -	\$ -	\$ 818,340.00	\$ 9,050.74

Construction Contingency

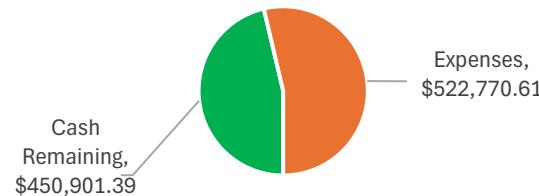
Area	Project Code	Amount	Change Orders	Total Remaining	Percent Used
Liquids	32241L	\$ 39,585.00		\$ 39,585.00	0.0%
		\$ 39,585.00	\$ -	\$ 39,585.00	0.0%

Project Financial Status

Project Committee	2
Project Name	Electrical System Upgrades - 3252
Project Description	Electrical System upgrades including MCC and Plant 1 Generator

Data Last Updated

February 5, 2026

Cash Flow**Contingency**

Contingency Remaining, \$65,396.50

Cash Flow

Collected	\$ 973,672.00
Expenses	\$ 522,770.61

Project Completion

Schedule	40%
Budget	64%

Construction Contracts

Company	PO No.	Original	Change Orders	Amendments	Total	Costs to Date
Quinn Power	20975	\$ 414,940.00			\$ 414,940.00	\$ 264,999.15
Pacific Parts	20561	\$ 239,025.00			\$ 239,025.00	\$ 56,331.22
Hazen	14331	\$ 164,350.00			\$ 164,350.00	\$ 149,354.49
SOCWA Staff Time	3252					\$ 52,085.75
		\$ 818,315.00	\$ -	\$ -	\$ 818,315.00	\$ 522,770.61

Construction Contingency

Area	Project Code	Amount	Change Orders	Total Remaining	Percent Used
Liquids	3252	\$ 65,396.50		\$ 65,396.50	0.0%
		\$ 65,396.50	\$ -	\$ 65,396.50	0.0%

Project Financial Status

Project Committee	15
Project Name	Grating Replacement on Aeration/Secondary Deck - 35245L
Project Description	Replacement of grating on west aeration/secondary deck

Data Last Updated

February 5, 2026

Cash FlowExpenses,
\$184,631.96**Contingency**Contingency
Remaining,
\$29,817.53Change
Orders,
\$23,056.47**Project Completion**

Collected	\$ 200,000.00
Expenses	\$ 184,631.96

Schedule	95%
Budget	92%

Construction Contracts

Company	PO No.	Original	Change Orders	Amendments	Total	Costs to Date
SS Mechanical	20588	\$ 147,126.00	\$ 23,056.47		\$ 170,182.47	\$ 161,673.35
Project Partners	20877	\$ 25,000.00			\$ 25,000.00	\$ 9,759.00
Steve Andrews	20332	\$ 2,818.00			\$ 2,818.00	\$ 483.00
SOCWA Staff Time	35245L					\$ 12,716.61
		\$ 174,944.00	\$ 23,056.47	\$ -	\$ 198,000.47	\$ 184,631.96

Construction Contingency

Area	Project Code	Amount	Change Orders	Total Remaining	Percent Used
Liquids	35245L	\$ 52,874.00	\$ 23,056.47	\$ 29,817.53	43.6%
		\$ 52,874.00	\$ 23,056.47	\$ 29,817.53	43.6%

Change Order No.	Vendor Name	Project ID	Description	Status Date	Davs	Amount
1	SS Mechanical	35245L	316L SST angle in lieu of 304L SST angle at the Step-Feed Channel	1/8/2025	94	\$ 2,235.25
2	SS Mechanical	35245L	Change Secondary effluent grating from 1-inch to 1.5"	1/31/2025	89	\$ 8,639.53
3	SS Mechanical	35245L	Removal and Replacement of Rebar without proper edge clearances	7/9/2025	90	\$ 12,181.69
						\$ 23,056.47

Project Financial Status

Project Committee	15
Project Name	Personnel Building Reconstruction - 3525
Project Description	Personnel building reconstruction including fixtures, lightings, ceiling, tiles and minor electrical

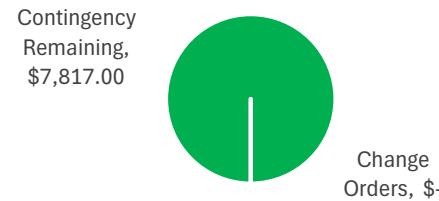
Data Last Updated

February 5, 2026

Cash Flow



Contingency



Cash Flow

Collected	\$ 911,586.00
Expenses	\$ 167,407.64

Project Completion

Schedule	100%
Budget	18%

Construction Contracts

Company	PO No.	Original	Change Orders	Amendments	Total	Costs to Date
T.E. Roberts	20930	\$ 78,165.00			\$ 78,165.00	\$ 78,165.00
Project Partners	20877	\$ 35,000.00			\$ 35,000.00	\$ 26,633.50
ProjectLine	19827	\$ 31,150.00				\$ 30,266.50
SOCWA Staff Time	3525					\$ 32,342.64
		\$ 144,315.00	\$ -	\$ -	\$ 113,165.00	\$ 167,407.64

Construction Contingency

Area	Project Code	Amount	Change Orders	Total Remaining	Percent Used
Liquids	3525	\$ 7,817.00		\$ 7,817.00	0.0%
		\$ 7,817.00	\$ -	\$ 7,817.00	0.0%

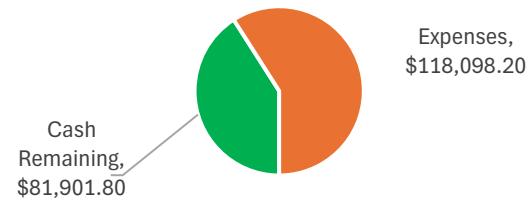
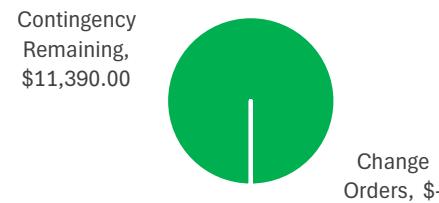
Change Order No.	Vendor Name	Project ID	Description	Status Date	Days	Amount
						\$ -

Project Financial Status

Project Committee	15
Project Name	Grit Tanks Coating Upgrades (35242L)
Project Description	Coating of grit tanks

Data Last Updated

February 5, 2026

Cash Flow**Contingency****Cash Flow**

Collected	\$ 200,000.00
Expenses	\$ 118,098.20

Project Completion

Schedule	50%
Budget	59%

Construction Contracts

Company	PO No.	Original	Change Orders	Amendments	Total	Costs to Date
Murphy Coating	21425	\$ 113,894.00			\$ 113,894.00	\$ 113,984.00
SOCWA Staff Time	35228L					\$ 4,114.20
		\$ 113,894.00	\$ -	\$ -	\$ 113,894.00	\$ 118,098.20

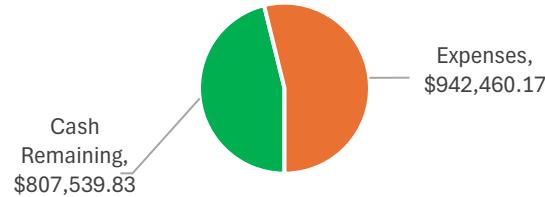
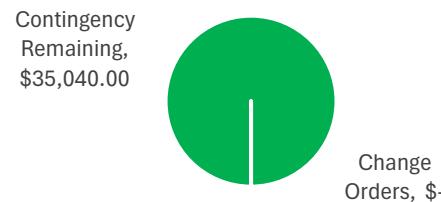
Construction Contingency

Area	Project Code	Amount	Change Orders	Total Remaining	Percent Used
Liquids	35242L	\$ 11,390.00		\$ 11,390.00	0.0%
		\$ 11,390.00	\$ -	\$ 11,390.00	0.0%

Project Financial Status**Data Last Updated**

February 5, 2026

Project Committee	15
Project Name	West Primary and Secondary Sludge Skimming System - 35246L/35239L
Project Description	Replacement of west primary and secondary sludge skimming system

Cash Flow**Contingency****Cash Flow**

Collected	\$ 1,750,000.00
Expenses	\$ 942,460.17

Project Completion

Schedule	50%
Budget	54%

Construction Contracts

Company	PO No.	Original	Change Orders	Amendments	Total	Costs to Date
Filanc		\$ 784,000.00			\$ 784,000.00	
Brentwood	20496	\$ 930,960.00			\$ 930,960.00	\$ 930,960.00
Z&K/Ardurra	21446	\$ 39,860.00			\$ 39,860.00	
SOCWA Staff Time	35246L/35239L					\$ 11,500.17
		\$ 970,820.00	\$ -	\$ -	\$ 1,754,820.00	\$ 942,460.17

Construction Contingency

Area	Project Code	Amount	Change Orders	Total Remaining	Percent Used
Liquids	35246L/35239L	\$ 35,040.00	\$ -	\$ 35,040.00	0.0%
		\$ 35,040.00	\$ -	\$ 35,040.00	0.0%

Change Order No.	Vendor Name	Project ID	Description	Status Date	Days	Amount

Agenda Item

8

Engineering Committee Meeting

Meeting Date: February 19, 2026

TO: Engineering Committee

FROM: Roni Grant, Capital Improvement Program Manager

SUBJECT: JBL Energy Building Roof Repair [Project Committee 2]

Overview

Pacific Hydrotech is currently working on the JBL Effluent Pump Station and Energy Building Upgrades. During the course of structural repairs and upgrades on the Energy Building roof, a section of the roof was exposed, and the contractor discovered several load-bearing trusses exhibiting significant damage. The deterioration appears to be caused by termite activity and/or prolonged moisture exposure.

The damaged trusses compromise the structural integrity of the roof system. Working this area cannot proceed safely without a plan to reinforce or brace the affected members. Carollo, the design engineer, recommended replacing the damaged wood trusses in kind with new trusses.

This work was not originally budgeted or included as part of the JBL Effluent Pump Station/Energy Building Upgrades project. The necessary repair totals \$174,241. Given the time sensitivity of the work and the existing subcontractors' established familiarity with the site, scope, and ongoing construction activities, proceeding with the current subcontractor team is the most efficient and cost-effective approach. This minimizes delays, reduces coordination risks, and ensures continuity in project execution.

Cost Allocation

A summary of the cost allocation by member agency are in Table 1.

Table 1 –Cost Allocation by Member Agency

Agency	PC 2 Common
South Coast Water District	\$81,492.52
Santa Margarita Water District	\$92,748.48
Total	\$174,241.00

Budget

The budget for the JBL Energy Building Roof Upgrades (32225C-000) has a budget of \$542,000. Staff are requesting a 10% contingency, in the amount of \$17,424, for a total project authorization of \$191,665, to address any unforeseen conditions encountered during the work.

Recommended Action

Staff recommends that the Engineering Committee recommend that the PC 2 Board of Directors:

1. Authorize execution of a construction contract with Pacific Hydrotech in the amount of \$174,241.
2. Approve a contract contingency of \$17,424, for a total project authorization of \$191,665, to address any unforeseen conditions encountered during the work.

Attachment: JBL Energy Building Roof Repair quote

PACIFIC HYDROTECH CORPORATION

314 E 3rd Street
Perris, CA 92570
(951) 943-8803

EXTRA WORK

DESCRIPTION: CO#03 - BUILDING ROOF IMPROVEMENTS
PROJECT NAME: JBL EFFLUENT PUMP STATION & EMERGENCY BUILDING UPGRADES
JOB #: C2519
DATE: 1/7/2026

Equipment Total Cost
Material Total Cost
Subcontracts Total Cost
Labor Total Cost
Subtotal
Bond
Insurance
TOTAL COSTS

\$ 2,654.66
\$ 4,397.05
\$ 147,797.65
\$ 15,974.40
\$ 170,823.76
1% \$ 1,708.24
1% \$ 1,708.24
\$ 174,240.24



CHANGE ORDER REQUEST

Sylvester Roofing Co. inc.

25-205.001 - Pacific Hydrotech - JBL Effluent Pump Station SC-C2519-
003

Page 1

DATE: 1/06/2026

PCO#: 3

To: Daniele Terrones
Pacific Hydrotech Corporation

From: Anthony Zaffuto
Sylvester Roofing Co. inc.
306 West El Norte Pkwy. Suite-N.#371
Escondido, CA 92026
Phone: 760.743.0048
Fax: 760.743.4152
Email: tony@sylvesterroofing.com

Phone:
Fax:
Email: DTerrones@pachydro.com
CC:

Below is the detail for our proposal to complete the following changes in contract work:

- Pending Change Order: removal and patching of roofing at 600 sft location
 - Proposed Scope of Work: removal and patching of roofing at 600 sft location.
- The prices below are valid until

PCO Item	Status	Change (in Days)	Quantity	UM	Unit Price	Amount
1 : removal and patching of roofing at 600 sft location	Beginning		0.000	LS	0.00000	21053.85
removal and patching of roofing at 600 sft location						

Submitted By:

Approved By:

1/06/2026

Anthony Zaffuto

Date

Danielle Terrones
Pacific Hydrotech Corporation

Date

CO Description: Price to remove roofing and install new roofing at

600 sft Cost Issue #: PCO 4

Subcontractor Name: Sylvester Roofing

Date: 1/6/2026

Pac Hydro / JBL

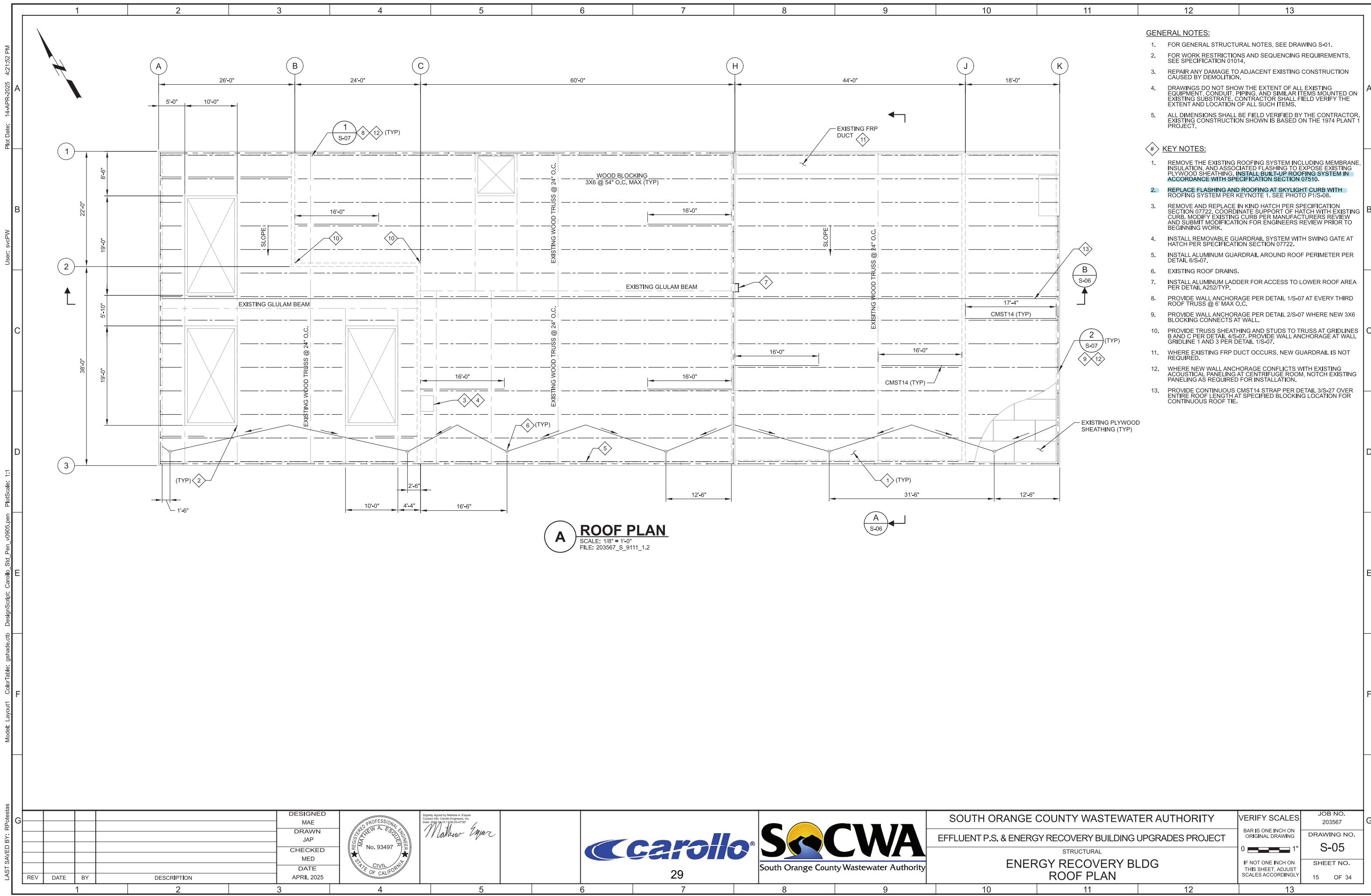
#	Description	Units		Labor		Materials		Equipment		Subcontract	
		Qty.	Unit	\$/Unit	Total	\$/Unit	Total	\$/Unit	Total	\$/Unit	Total
1	Labor for tear off	40	hr	\$ 112.00	\$ 4,479.87	\$ -	\$ -	\$ -	\$ -	---	---
2	Labor for Installation of roofing at 3 large units	96	ea	\$ 112.00	\$ 10,752.00	\$ -	\$ -	\$ -	\$ -	---	---
3	base	6	ea	\$ -	\$ 62.00	\$ 372	\$ -	\$ -	\$ -	---	---
4	Torch smooth	6	ea	\$ -	\$ 118.00	\$ 708	\$ -	\$ -	\$ -	---	---
5	Torch cap	6	ea	\$ -	\$ 137.00	\$ 822	\$ -	\$ -	\$ -	---	---
6	Primer	1	ea	\$ -	\$ 83.54	\$ 84	\$ -	\$ -	\$ -	---	---
7	cant strip	1	ea	\$ -	\$ 168.77	\$ 169	\$ -	\$ -	\$ -	---	---
8	fasteners	1	ea	\$ -	\$ 103.00	\$ 103	\$ -	\$ -	\$ -	---	---
9	Q-Panels	6	ea	\$ -	\$ 22.00	\$ 132	\$ -	\$ -	\$ -	---	---
10	mastic	1	can	\$ -	\$ 87.55	\$ 88	\$ -	\$ -	\$ -	---	---
11	Foremen Truck with Propane	3	dy	\$ -	\$ -	\$ -	\$ 115.00	\$ 345	\$ -	---	---
12				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
13				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
14				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
15				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
16				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
17				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
18				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
19				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
20				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
21				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
22				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
23				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
24				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
25				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
26				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
27				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
28				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
29				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
30				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
31				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
32				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
33				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
34				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
35				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
36				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
37				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
38				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
39				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
40				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
41				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
42				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	---	---
Subtotal				\$ 15,232		\$ 2,477		\$ 345		\$ -	
Sales Tax (Material & Equipment Only)		9.00%				\$ 222.92		\$ 31.05			
Subtotal				\$ 15,231.87		\$ 2,699.78		\$ 376.05		\$ -	

Mark-ups	Labor	Materials	Equipment	Subcontract
Bond (if not CDI)	0.000%	\$ -	0.000%	\$ -
OH&P	15.000%	\$ 2,284.78	15.000%	\$ 404.97
Subtotal		\$ 2,284.78		\$ 404.97

COSTS	
Direct Costs (L, M & E)	\$ 18,307.70
Subcontractor Costs	\$ -
Subtotal	\$ 18,307.70

MARK-UPS	
BOND	\$ -
OH&P	\$ 2,746.15
Subtotal	\$ 2,746.15

TOTAL	\$ 21,053.85
--------------	--------------



CHANGE ORDER REQUEST

Attn: Daniel Terrones	COR #: 03
Company: Pacific Hydrotech Corporation	Job Name: JBL Effluent Pump Station & Energy Bldg Upgrades
Address: 314 E 3rd St	Address: 34152 Del Obispo St
City: Perris, CA 92570	City: Dana Point, CA 92629
Phone: 951-822-2559	Date: 11/10/2025
Email: Dterrones@pachydro.com	GRAND TOTAL: \$74,205.82

Scope: Shore up existing roof trusses for safe demo, remove plywood from underside of effected trusses, remove existing plywood and wood curb, remove and replace one 3ply truss and two single trusses, re-install all roof members that had been removed, install plywood at underside, all catalog hardware. Work required by others for us to complete scope; demo roofing, demo skylight, demo plaster from underside of roof structure, install scaffolding from below roof structure to install in plywood.

ITEM	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
1	4x12x20' PTDF #2	2	EA	\$ 293.93	\$ 587.86
2	4x12x12' PTDF #2	2	EA	\$ 176.36	\$ 352.72
3	2x4x16' DF #2	14	EA	\$ 13.46	\$ 188.44
4	4x14x12' DF #1	2	EA	\$ 208.75	\$ 417.50
5	3x6x12' DF #2	22	EA	\$ 22.54	\$ 495.88
6	2x6x12' DF #2	10	EA	\$ 14.25	\$ 142.50
7	4x6x20' DF #2	6	EA	\$ 51.63	\$ 309.78
8	2x6x20' DF #2	30	EA	\$ 23.75	\$ 712.50
9	2x4x20' DF #2	20	EA	\$ 16.80	\$ 336.00
10	Wood Trusses	1	LS	\$ 3,125.00	\$ 3,125.00
11	4'x8'x5/8" Struc 1 CDX Plywood	24	EA	\$ 41.17	\$ 988.08
12	4'x8'x1/2" Struc 1 CDX Plywood	32	EA	\$ 27.96	\$ 894.72
13	4'x10'x1/2" Struc 1 CDX Plywood	8	EA	\$ 61.04	\$ 488.32
14	HU414	4	EA	\$ 32.50	\$ 130.00
15	HU210	8	EA	\$ 14.30	\$ 114.40
16	H2.5	80	EA	\$ 2.60	\$ 208.00
17	LTP4	120	EA	\$ 2.52	\$ 302.40
18	3 1/2" x .162 HDG Gun Nails	1	BOX	\$ 181.30	\$ 181.30
19	3 1/4" x .162 HDG Gun Nails	1	BOX	\$ 156.21	\$ 156.21
20	3" x .148 Gun Nails	3	BOX	\$ 87.05	\$ 261.15
21	1 1/2" x .131 PR Gun Nails	1	BOX	\$ 49.04	\$ 49.04
22	2 1/2" x .148 PR Gun Nails	1	BOX	\$ 54.60	\$ 54.60
23	12K Reach Forklift	1	MO	\$ 4,700.00	\$ 4,700.00

24	Truss Boom	1	MO	\$ 260.00	\$ 260.00
25	Truck & Fuel	12	DAY	\$ 110.00	\$ 1,320.00
26	Foreman Labor	96	HR	\$ 101.88	\$ 9,780.48
27	Carpenter Labor	384	HR	\$ 98.88	\$ 37,969.92

SUBTOTAL	\$ 64,526.80
OHP&I 15%:	\$ 9,679.02
TOTAL:	\$ 74,205.82

RFI RESPONSE FORM

Owner:	South Orange County Water Authority	Date:	10/22/2025
Contractor:	Pacific Hydrotech Corporation	Project No.:	C2519
Project Name:	JBL Effluent Pump Station & Energy Building Upgrades	RFI No.:	014
RFI Title:	Structural Roof Truss Damage	Spec/Dwg. Reference:	06100; S-05

Information or Interpretation and Reason Requested

Structural Roof Truss Damage – Request for Reinforcement/Bracing Plan

During the course of structural repairs and upgrades on the roof, we opened a section and discovered several load-bearing trusses exhibiting significant damage. The deterioration appears to be caused by termite activity and/or prolonged moisture exposure.

The damaged trusses compromise the structural integrity of the roof system. Work in this area cannot proceed safely without a plan to reinforce or brace the affected members.

Please provide a structural plan or detail for reinforcing or bracing the damaged trusses to restore adequate load-carrying capacity. Include any material specifications, connection details, and installation requirements.

Attachments:

Photos of damaged trusses

Existing roof framing plans

Authored By: Daniel Terrones

Date Submitted: 10/22/2025

Response to Request:

It is recommended that the damaged trusses be removed and replaced.

The Contractor shall provide pricing options for two replacement options:

1. Replace damaged wood trusses in kind with new truss.
2. Replace damaged wood trusses with engineered lumber. For costing purposes, contractor shall assume LVL minimum 1-3/4" x 24" deep. Additional information shall be provided as required.

Installation requirements shall be as required to match existing installation with modifications for seismic anchorage per the Contract Drawings.

In the event Contractor believes the RFI response does or will cause a change to the requirements of the Contract, Contractor shall immediately give written notice stating that Contractor considers the response to be a Change Order.

Firm Name: Carollo Engineers, Inc

Date Returned: 10/31/2025

Response By: Mathew Esquer

MJ Plastering, Inc.

License Number 942132

10944 Cypress Ave
Riverside, CA 92505

Phone (714) 834-1600
Fax (714) 834-1601
Email: general@mjplasteringinc.com

PROPOSAL & CONTRACT

ATTENTION: Daniel Terrones
NAME: Pacific Hydrotech Corp.
ADDRESS: 314 E 3rd
CITY: Perris, CA 92570
PHONE: (951) 943-8803
FAX: (951) 943-1093

DATE: November 26, 2025
JOB ADDRESS: 34156 Del Obispo Street
CITY: Dana Point, CA
JOB NAME: C2519 JBL Interior Soffit

ITEMS INCLUDE IN OUR SCOPE OF WORK:

- 1) Demo of stucco on soffit
- 2) Rib lath on soffit
- 3) Milcor, weep screed, staples, corner aid, and lathing accessories and control joint.
- 4) Bituthene on non vertical surfaces
- 5) Plastic protection over doors and windows
- 6) Scaffold platform installation and dismantle
- 7) 16/20 sand float finish
- 8) All clean up of plaster trash and debris, Haul off and dumpster provided by GC

NOTE: PLASTER FINISHES WILL CRACK AND CHECK. THERE IS NO GUARANTEE AGAINST CRACKING AND CHECKING. MJ PLASTERING, INC. CAN RE DO WALLS AT OWNER OR GENERAL CONTRACTORS EXPENSE.

ITEMS EXCLUDE FROM OUR SPECIFIC SCOPE OF WORK:

- 1) Painting or accent color.
- 2) Dumpster or haul-off.
- 3) Framing gypsum board, plywood and sheathing.
- 4) Sealants or anti-graffiti coating

NOTE: This estimate is valid for a period of 30 days.

NOTE: This is a Prevailing wage project.

All of above work to be completed in a substantial and workmanlike manner according to job walk performed by Alvaro Jacobo and Daniel Terrones for the sum of \$35,000.00

Payment schedule: Billings to be submitted consisting of 20% after Scaffold, 30% after Lath application, 25% after Brown application, and 25% after Stone Veneer application. Any alteration from the above specifications involving extra cost of material or labor will only be executed upon written orders for same and will become an extra charge over the sum mentioned in this contract. All agreements must be made in writing.

SUBMITTED BY: Miguel Jacobo Jr, Vice President

ACCEPTED BY: _____

DATE: November 26, 2025

DATE: _____

Solos Construction LLC

Solos Construction LLC
8422 Aqueduct Ave, North Hills, Ca. 91343
OFFICE (951) 940-7676
LIC #1087874

THIS AGREEMENT was made on the 26th day of December, 2025, by and between **Pacific Hydrotech Corporation**, Hereafter called the Lessee, and Solos Construction LLC, hereafter called the Lessor. Lessee and Lessor, for the consideration hereafter named, agree as follows: Under the General Conditions of Lease attached to this sheet, Lessor hereby leases to Lessee all Equipment named and identified in the following "List of Equipment," for use at such location and at such rental rate for approximately such time as is therein stated. Lessor shall furnish such equipment in operative conditions.

34152 Del Obispo St, Dana Point, Ca. 92629

Scaffold Rental \$10,500 (Description: Scaffolding platform roughly 35' by 20'. Platform above Andritz machine #2)

There needs to be access (parking) close to the working area to at least 1 truck per day if not we 6 would have to cancel and charge a trip charge.

Initial _____

DESCRIPTION OF EQUIPMENT:

Scaffold installation and dismantle.

SCAFFOLD RENTAL IS FOR: 1 to 60 Days

Rental Rate Pass Agreement Times After 60 days

\$1,800 per each month

Initial _____

PAYMENT IS AS FOLLOWS:

50% of the contract amount is due and payable on the day of installation. Remaining 50% is due 14 days after scaffold installation. If payment is not paid within 30 days there will be 10% late charge unless discussed otherwise with Owner's Initial _____

There will be a minimum trip charge of \$900.00 per truck on all jobs when scaffold has to be moved, reset and or cannot be completed due to adverse job conditions out of our control.

Initial

If payment is not received on time as mentioned by contract and Lien needs to be in force, you will be billed for this action amount of \$350.00 no exceptions Initial

Upon Solos Construction LLC confirming scaffolding installed is Cal-OSHA compliant by both parties, the contractor is solely responsible for the daily inspections and maintenance required to keep all erected scaffolding safe for workers to access. Daily maintenance shall be done by a qualified or competent person in scaffolding erection certified by a recognized training organization or union. All maintenance and repairs must meet or exceed manufacturer's recommendations, Cal OSHA, and Federal OSHA regulations. At any time, the contractor does not meet these requirements Solos Construction reserves the right to charge time. Equipment, and labor for having to correct all items that may be out of compliance. If Contractor elects Solos Construction to return for Maintenance there will be a trip fee each time of \$800 in addition to any frames, time, labor fees if applicable as mentioned above prior to returning to the project's location. If Cal OSHA or any regulatory agency Federal or state issues any fines because of any non-compliance or injury, the contractor will be responsible for OSHA fines and legal fees incurred by Solos Construction.

GENERAL CONDITIONS OF EQUIPMENT RENTAL AGREEMENT (LEASE)

The conditions of lease here below stated, together with the Agreement set forth on the reverse side of this sheet, constitute a contract between the parties therein named which contract is hereafter referred to as "this Agreement"

- 1) RENTAL PERIOD. The Rental period shall cover all time consumed in the transportation the Equipment, including the date of legal delivery to a public carrier for transit to Lessee and upon return of the Equipment, the date of legal delivery by such carrier to Lessor, or if no public carrier is used, shall include the date upon which transit to Lessee and the date upon which transit from Lessee ends at the Lessor's unloading point.
- 2) RENTAL CHARGES. Lessee shall pay rental for the entire Rental Period mentioned above for article Equipment named in the list of descriptions in accordance with the following: Pass rental agreement there will be an additional extra charge per day or month as mentioned on the rental fees.
- 3) PAYMENT: The rent for any and every item of Equipment described in the List of Equipment shall be paid unless stated otherwise in full no later than two weeks after receipt of invoice.
- 4) NO RETENTION OR DISCOUNTS shall be deducted from any payments made by the Lessee to the Lessor.

¹

5) FEES, ASSESSMENTS, AND TAXES PAID BY LESSEE. Lessee shall pay all license fees, assessments, and sales, use, property and excise, and other taxes or hereafter imposed, and relating to Lessee's use or possession of the equipment.

6) RECALL NOTICE: Lessor may recall any or all Equipment upon ten (10) day written notice to

Lessee and the Lessee may return any or all Equipment upon a like notice to Lessor.

7) MAINTENANCE AND OPERATION: Lessee shall not remove, alter, disfigure any scaffold already installed nor cover up any numbering, lettering, or insignia displayed upon the Equipment, and shall see that the Equipment is not subject to careless, unusually or needlessly rough usage, and Lessee shall at his own expenses maintain the Equipment and its appurtenances in good repair and operative conditions, and return it in such condition to Lessor, ordinary wear and tear resulting from proper use thereof alone expected.

8) REPAIRS: The expenses of all repairs made during the Rental period, including labor, Equipment, parts, and other items shall be paid by Lessee.

9) DISCLAIMER OF WARRANTIES: LESSOR, BEING NEITHER THE MANUFACTURER, NOR A SUPPLIER, NOR A DEALER IN THE EQUIPMENT, MAKES NO WARRANTIES, EXPRESSES OR IMPLIED, AS TO ANY MATTER WHATSOEVER, INCLUDING, WITHOUT LIMITATION, THE CONDITION OF THE EQUIPMENT, ITS MERCHANTABILITY, ITS DESIGN, ITS CAPACITY, ITS PERFORMANCE, ITS EQUIPMENT, ITS WORKMANSHIP, ITS FITNESS FOR ALL PARTICULAR PURPOSE, OR THAT IT WILL MEET THE REQUIREMENTS OF ANY LAWS, RULES, SPECIFICATIONS, OR CONTACTS WHICH PROVIDE FOR SPECIFIC APPARATUS OR SPECIAL METHODS. LESSOR FURTHER DISCLAIMS ANY LIABILITY WHATSOEVER FOR LOSS, DAMAGE, OR INJURY TO LESSEE OR THIRD PARTIES AS A RESULT OF ANY DEFECTS, LATENT OR OTHERWISE, IN THE EQUIPMENT. AS TO LESSOR, LESSEE LEASES THE EQUIPMENT "AS IS". LESSOR SHALL NOT BE LIABLE IN ANY EVENT TO LESSEE FOR ANY LOSS, DELAY, OR DAMAGE OF ANY KIND OR CHARACTER RESULTING FROM DEFECTS IN, OR INEFFICIENCY OF, EQUIPMENT HEREBY LEASES OR ACCIDENTAL BREAKAGE THEREOF.

10) INDEMNITY: Lessee shall indemnify Lessor against, and hold Lessor harmless from, all claims, actions, suits, proceedings, cost, expensive, damages, and liabilities, including attorney fees, arising out of, connected with, or resulting from the equipment or the Lease, including without limitation, the manufacture, selection, delivery, leasing, renting, control, possession, use, operation, maintenance or return of the Equipment. Lessee shall further indemnify Lessor and hold Lessor harmless from all loss damage to the Equipment during the rental period. Lessee recognizes and agrees that including in this indemnity clause, but not by way of limitation, is Lessee's assumption of all liability for injury: disability and death of workmen and other persons caused by the operation, use, control, handling, or transportation of the Equipment during the Rental Period.

11) RISK OF LOSS: Lessor shall not be responsible for loss or damage to property, Equipment, or equipment belonging to Lessee, its agents, employees, suppliers, or anyone directly or indirectly employed by Lessee while said Equipment property, or equipment is in Lessor's care, custody, and control or under Lessor's physical control. Lessee is encouraged to obtain appropriate equipment, Equipment, or installation floater insurance against such risk of loss. Lessee and its insurers waive all rights of subrogation against Lessor for such losses.

12)

INSPECTION: CONCLUSIVE PRESUMPTIONS. Lessee shall inspect the Equipment within three (3) business days after receipt thereof. Unless Lessee within said period gives written notice to Lessor, specifying and defect in or other proper objection to the Equipment. Lessee agrees that it shall be conclusively presumed, as between Lessor and Lessee, that Lessee has fully inspected and acknowledged that the Equipment is in full compliance with the terms of this agreement, in good condition and repair, and that Lessee is satisfied with and has accepted the Equipment in such good condition and repair. Lessor shall have the right at any time to enter the premises occupied by the Equipment and shall be given free access thereto and afforded necessary facilities for the purpose of inspection.

13) INSURANCE: Lessee shall keep the Equipment insured against all risks of loss or damage from every cause whatsoever for not less than the full replacement value thereof: and shall carry public liability and property damage insurance covering the Equipment and its operation and handling.

14) OWNERSHIP: Lessor shall always retain ownership and title of the Equipment. Lessee shall give Lessor immediate notice if any of said Equipment is levied upon or is about to become liable or is threatened with seizure, and Lessee shall indemnify Lessor against all loss and damages caused by such action.

15) DEFAULT; REMEDIES. If (a) Lessee shall default in the payment of any rent or in making any other payment hereunder when due, or (b) Lessee shall default in the payment when due of any indebtedness of Lessee to Lessor arising independently of this lease, or (c) Lessee shall default in the performance of any other covenant herein and such default shall continue for five days after written notice hereof to Lessee by Lessor, or (d) Lessee because insolvent or makes an assignment for the benefit of creditor, or (e) Lessee applies for or consents to the appointment of a receiver, trustee, or liquidator of Lessee or of all or a substantial part of the assets of Lessee under the Bankruptcy Act, or any amendment thereto (including, without limitation, a petition for reorganization, arrangement, or extension) or under any other insolvency law or law providing for the relief of debtors, then, if and to the extent permitted by applicable law. Lessor shall have the right under any other insolvency law or law providing for the relief of debtors, then, if and to the extent permitted by applicable law. Lessor shall have the right to exercise any one or more of the following remedies. a) To declare the entire amount of rent hereunder immediately due and payable as to any or all items of the Equipment, without notice or demand to Lessee.

b) To sue for and recover all rents, and other payments, then accrued or thereafter accruing, with respect to any or all items of the Equipment.

c) To take possession of any or all items of the Equipment without demand, notice, or legal process, wherever they may be located. Lessee hereby waives all damages occasioned by such taking of possession. Any said taking of possession shall not constitute a termination of this lease as to any or all items of Equipment unless Lessor expressly so notifies Lessee in writing.

d) To terminate this lease as to any or all items of Equipment.

e) To pursue any other remedy at law or in equity. Notwithstanding any said repossession or any other action which Lessor may take, Lessee shall be and remain liable for the full performance of all obligations on the part of Lessee to be performed under this Lease. All such remedies are cumulative and may be exercised concurrently or separately.

16) NO SUBLetting ASSIGNMENT: No Equipment shall be sublet by Lessee, nor shall he assign or transfer any interest in this Agreement without written consent of the Lessor. Lessor may assign this Agreement without notice. Subject to the foregoing, this Agreement insures to the benefit of, and is binding upon, the heirs, successors, and assigns of the parties hereto.

17) REMEDIES CUMULATIVE: NO WAIVER, SEVERAL ABILITY: All remedies of Lessor hereunder are cumulative and may, to the extent permitted by law, be exercised concurrently or separate, and the exercise of any one remedy shall not be deemed to be an election of such remedy or to preclude the exercise of any other remedy. No failure on the part of the Lessor to exercise and no delay in exercising, any right or remedy, hereby shall operate as waiver thereof, nor shall any signal or partial exercise by Lessor of any right or remedy hereunder preclude any other or further exercise thereof or the exercise of any other right or remedy. If any term or provision of this lease is found invalid, it shall not affect the validity and enforcement of all remaining terms and provision of this lease.

18) EXPENSES: Lessee shall pay Lessor all cost and expenses, including attorney's fees, incurred by Lessor in exercising any of its rights or remedies hereunder or enforcing any of the terms, conditions, or provisions hereof.

19) ENTIRE AGREEMENT: This instrument constitutes the entire agreement between Lessor and Lessee; and it shall not be amended.

20) Contract between Solos Construction LLC and Pacific Hydrotech Corporation is not dependent upon funding from Owner "Prime Contract" with General Contractor or Pacific Hydrotech Corporation Contract with General Contractor Pacific Hydrotech Corporation is fully responsible for payment in full for scaffold rental.

PLEASE SEND RENTAL AGREEMENT SIGNED VIA FAX OR EMAIL:
denice@silospros.com

Lessor and Lessee, for themselves, their successor, executors, administrators, and assigns, agree to the full performance of the covenants herein contained. This contract price is valid for 60 days

IN WITNESS WHEREOF, they have executed this Agreement the day and year first above written

Lessor,
By: Alfonso Ceja 818-926-1321

Silos Construction LLC

Lessee,

By:

Company Name:

Company Address:

Print Name:

Agenda Item

9

Engineering Committee Meeting

Meeting Date: February 19, 2026

TO: Engineering Committee

FROM: Roni Grant, Capital Improvement Program Manager

SUBJECT: CTP Storm Drainage Modifications [Project Committee 15]

Overview

The existing configuration of the Coastal Treatment Plant (CTP) remains largely the same since the expansion of the plant and the construction of the tertiary treatment system in the 1980's. A large storm water channel passes through the center of the treatment plant ultimately discharging to Aliso Creek. This channel is intended to carry flows from the tributary area uphill from the CTP. There are series of smaller drainage channels that allow diversion of surface flows within the treatment plant back into the plant's main treatment process. However, there remain a number of plant areas where storm flows can still discharge into Aliso Creek.

The management of storm flows from surfaces within the CTP are addressed in the Industrial General Permit issued by the State of California Regional Water Quality Control Board. This Permit seeks to eliminate storm flows carrying various pollutants from discharging into Aliso Creek. SOCWA retained the engineering firm Tetra Tech to design modifications to the CTP storm drainage system to provide compliance with the Industrial General Permit.

The Tetra Tech design includes modifications to drain channels and installation of new catch basins and drainage pipe. A weir structure will be added to the main storm channel to capture dry weather flows which will then diverted to the main plant process stream through a sump pump system. These modifications are largely located in the southern area of the treatment. Limited storm drainage modifications in the northern area of the treatment will included in the bid package for the Drainage Pump Station Phase I Improvements which is expect to be issued in the summer of 2026.

The bid results for this project were presented at the SOCWA Engineering Committee Meeting on January 22, 2026. The Committee requested additional information prior to making a recommendation.

Project Location and Function

Figure 1 shows the four areas of the plant where the improvements will take place. These areas are all located at the south end of the treatment plant away from the main process area. Three areas are associated with the plant roadways; the fourth area is restricted to the main storm channel. The functions of the storm drainage improvements are summarized in Table 1.

Figure 1 – Location of Storm Drainage Improvements

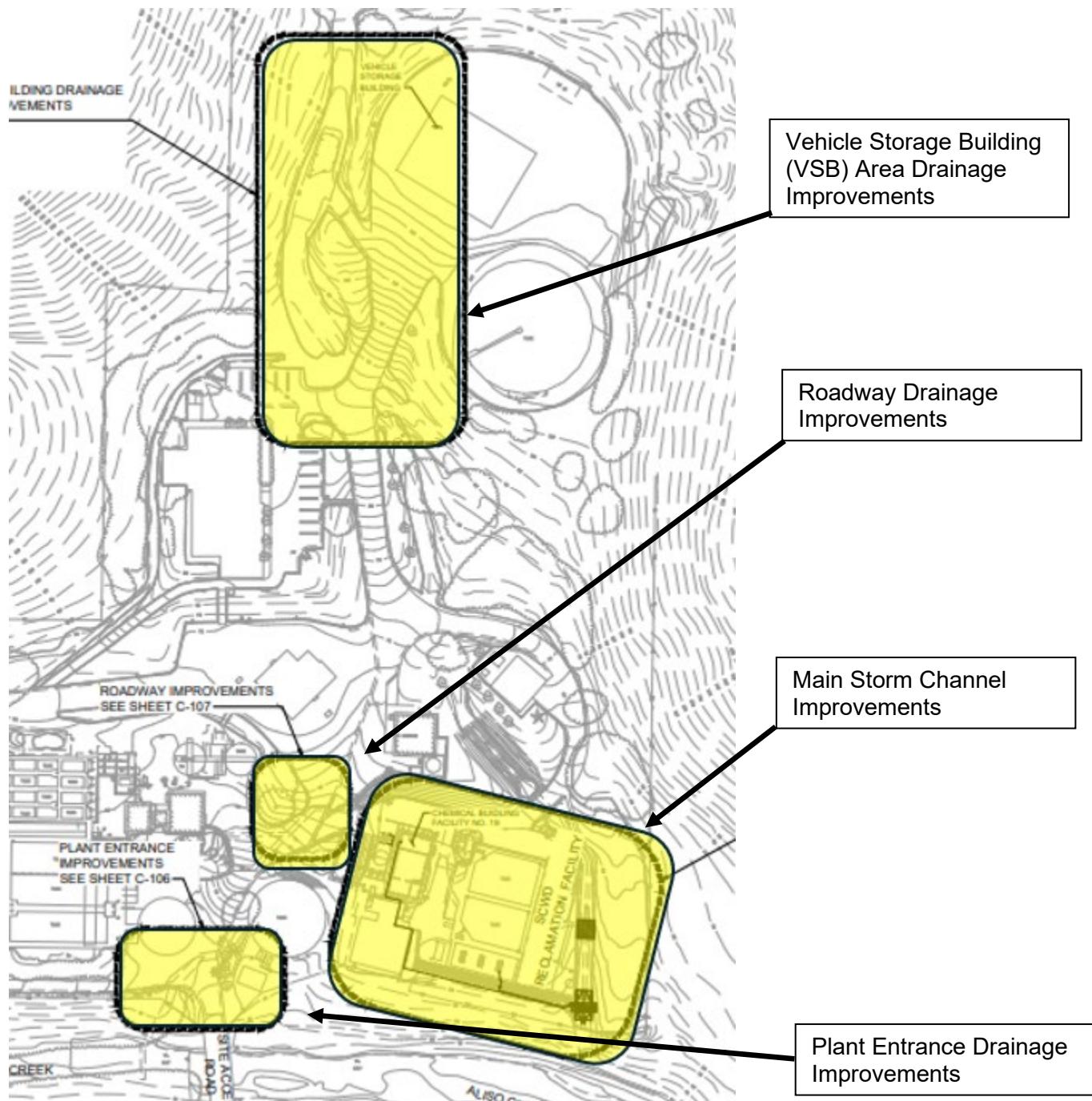


Table 1 – Summary of Storm Drainage Improvements By Area

AREA	FUNCTION
VSB Area	(1) Direct drainage from building area and roadway away from Main Storm Channel into drainage system already connected to main plant process.
Roadway Drainage	(1) Direct drainage from roadways into drainage system already connected to main plant process.
Plant Entrance	(1) Direct drainage from roadways into drainage system already connected to main plant process; (2) install curbs system to prevent high storm flows from overflowing road and draining to Aliso Creek; (3) repair deteriorate concrete gutters.
Main Storm Channel	(1) Repair damaged channel concrete; (2) Install weir structure and sump pump system to direct dry weather flows away from Aliso Creek into main plant process.

Bids

On November 18, 2025, SOCWA issued a formal solicitation for bids by way of the PlanetBids platform. Qualified contractors were invited to participate in the procurement process for the construction of the storm water modifications. Bid submissions were due by January 8, 2026. SOCWA received four bids as summarized in Table 2.

Table 2 – Summary of Bids

Item No.	Description	T.E. Roberts	Filanc	Pacific Hydrotech	S.S. Mechanical
1	Mobilization /Demobilization	\$30,066	\$65,000	\$245,500	\$37,000
2	Trapezoidal Channel Improvements	\$18,570	\$128,000	\$113,000	\$25,835
3	Stop Log Structure	\$265,926	\$507,000	\$279,100	\$258,765
4	Sump Pump and Piping	\$11,183	\$15,000	\$8,100	\$17,425
5	South Site Drainage Improvements	\$39,430	\$14,000	\$28,400	\$38,150
6	Electrical Improvements	\$36,216	\$73,000	\$30,600	\$27,410
7	Vehicle Storage Bldg Area Improvements	\$109,223	\$282,000	\$282,900	\$167,590

Item No.	Description	T.E. Roberts	Filanc	Pacific Hydrotech	S.S. Mechanical
8	Plant Entrance Drainage Improvements	\$28,077	\$100,000	\$29,300	\$59,970
9	Roadway Drainage Improvements	\$30,868	\$131,000	\$66,400	\$81,075
10	All Other Work	\$500	\$41,000	\$100	\$27,900
	Total Bid	\$570,059	\$1,356,000	\$1,083,400	\$741,120
Subcontractors					
Electrical		JBM Electrical	Hydrotech Electric	Southern Contracting	Southern Contracting
Concrete		CMB Structures Inc.		Southwest Ditch	
Demolition			Graham Crackers Demo		
Paving			Hardy & Harper	Wheeler Paving	Beach Paving
Rebar			Amber Steel		

There is a significant disparity in the amount of the four bids. Of note the area of the largest disparity among the three lowest bids are in the items related to the Vehicle Storage Area, the Plant Entrance Area and Roadway Corridor. Each of these areas involves removal and replacement of the asphalt road surfaces. The apparent lower bidder T.E. Roberts is self performing this work; the other bidders are using subcontractors.

The apparent low bid amount of \$570,059 by T.E. Roberts is approximately 25% higher than the Engineer's Estimate of Probable Cost of \$450,000. The Estimate of Probable Cost was prepared by TetraTech in the spring of 2025.

Cost Allocation

A summary of the cost allocation by member agency are in Table 3.

Table 3 – Cost Allocation by Member Agency

Agency	PC 15 Liquids (L)
City of Laguna Beach	\$309,542.04
Emerald Bay Service District	\$17,101.77
South Coast Water District	\$243,415.19
Total	\$570,059.00

Budget

The budget for the CTP Storm Drainage Improvements was included as part of the \$4,200,000 line item budget for the Drainage Pump Station Rehabilitation (35220L) for Fiscal Year 2025/26. The budget impact for award of the construction contract will involve the related expenses as shown in Table 4.

Table 4 – Budget Impacts of Construction Cost Award

Cost Item	Percentage of Construction Contract	Cost
Construction Contract		\$570,059.00
Construction Contingency	10%	\$57,000.00
Construction Services	10%	\$57,000.00
Total		\$684,059.00

Recommended Action

Staff recommends that the Engineering Committee recommend that the PC 15 Board of Directors:

1. Authorize execution of a construction contract with T.E. Roberts in the amount of \$570,059.00.
2. Approve a contract contingency of \$57,000, for a total project authorization of \$627,059 to address any unforeseen conditions encountered during the work.

Agenda Item

10

Engineering Committee Meeting

Meeting Date: February 19, 2026

TO: Engineering Committee

FROM: Amber Boone, General Manager
Jim Burror, Deputy General Manager/Chief Engineer

SUBJECT: CTP Facility Planning Assessment [Project Committee 15]

Overview

The CTP Facility Planning Assessment (FPA) is intended to be a forward-looking framework for facility modernization and long-term reliability. Key goals include completing a 30-year capacity utilization and peaking analysis, conducting high-level process-by-process evaluations of existing assets, and identifying opportunities for capacity right-sizing. The effort will also assess facility resiliency and reliability under varying flow and loading conditions, regulatory uncertainty, flooding risks, and operational constraints, while evaluating biosolids management options, energy efficiency improvements, resource recovery opportunities, and long-term regulatory compliance needs.

The project CTP master planning program is structured as a two-phase approach, with this solicitation limited to Phase 1: the Facility Planning Assessment. Phase 1 will focus on identifying and evaluating viable, high-level project alternatives and associated regulatory considerations to inform decision-making and determine whether to advance to Phase 2. Phase 2, if pursued in the future, would build upon the Phase 1 findings to develop a comprehensive Facility Master Plan, including recommended improvements and implementation strategies. Firms responding to this request may propose refinements to the Phase 1 scope based on their professional judgment and experience, and participation in Phase 1 will not preclude eligibility for Phase 2.

Proposals

SOCWA solicited proposals through PlanetBids on November 7, 2025. Fifteen (15) firms were contacted during this process (in alphabetical order):

- AECOM Technical Services, Inc.
- Arcadis
- Black & Veatch
- Brown and Caldwell
- Carollo Engineers
- CDM Smith
- Civiltech
- Dudek
- Hazen and Sawyer
- HDR Engineering, Inc.

- JACOBS
- MKN & Associates, Inc
- Tetra Tech
- TYLin
- West Yost Associates

Two (2) proposals were received. The proposals and associated labor efforts are attached here.

A summary of proposals and SOCWA's staff ratings is in Table 1.

Table 1 – Summary of Proposals (in alphabetical order)

Firm	AECOM	Hazen and Sawyer
Project Manager	Ganesh Rajagopalan	Hallie Thornburrow
Labor Hours(*)	2,160	3,092
Proposed Fee	\$494,821	\$723,445
Staff Ratings	95	80

*Subconsultants' hours are included in the total hours.

Initial Proposal Review for Minimum Requirements

An initial review of the proposals determined that both submissions were responsive to the Request for Proposals. Based on the proposals' content, SOCWA staff recommended that both firms advance to the interview stage. Interviews were conducted during the first week of February.

Rating of Responsive Proposals

The firms were rated using the following weighted criteria:

- Understanding of the Work - 25%
- Approach to the Project - 30%
- Experience and Technical Competence - 25%
- Completeness of Proposal - 20%

Table 1 – Proposal Average Score Ratings (in alphabetical order)

Firm	Understanding (up to 25%)	Approach (up to 30%)	Experience (up to 25%)	Completeness (up to 20%)	Total (up to 100%)
AECOM	24.0	27.5	23.5	20.0	95.0
H&S	20.0	20.0	20.0	15.0	75.0

- Understanding of the Work: AECOM demonstrated the strongest understanding of SOCWA's objectives, constraints, and long-term regulatory, operational, and resiliency considerations. The proposal reflected a clear grasp of the complexities associated with facility planning, regulatory compliance, future system uncertainties, and the interdependencies among treatment, biosolids management, and beneficial reuse.
- Approach to the Project: AECOM proposed the most comprehensive and well-structured methodology aligned with SOCWA's planning needs and project objectives. The approach

incorporates advanced technical analyses, including integration of digital and AI-enabled tools and modeling techniques, and presents a logical, phased framework to support informed decision-making and future implementation.

- Experience and Technical Competence: AECOM's proposed team demonstrated superior qualifications and depth of expertise in advanced wastewater treatment processes, solids and biosolids management, regulatory compliance, and large-scale facility planning. The firm's relevant project experience, estimated hours, and the expertise of key personnel directly align with the technical complexity and scope of services required.
- Completeness of Proposal: AECOM submitted a clear, thorough, and well-organized proposal that fully addressed all elements of the Request for Proposals. The proposal included a detailed work plan, defined management structure, schedule controls, and quality assurance measures, providing confidence in the firm's ability to deliver the project within the required timeframe.

Thus, the Selection Committee determined that AECOM is the most qualified firm to perform the requested professional services. Following this determination, the proposed fees were evaluated and found to be fair, reasonable, and commensurate with the scope of services, representing the best overall value to SOCWA.

The following are the cost allocations for the contract costs by Member Agency in Table 2.

Table 2 - Cost Allocation by Member Agency

Agency	PC 15 Liquids
City of Laguna Beach	\$268,687.80
Emerald Bay Service District	\$14,844.63
South Coast Water District	\$211,288.57
Total	\$494,821.00

CTP Regional Flow Study Coordination

The scope of work under this contract is dependent on key inputs and decision points from the ongoing CTP Regional Flow Study. As such, SOCWA staff recommends that this contract commence when the CTP Regional Flow Study reaches Project Element 4, at which point initial draft analyses and recommendations are anticipated to be available.

SOCWA staff coordinated with AECOM regarding a delayed start of services, aligned with the completion of Project Element 4, currently anticipated near the end of May 2026. AECOM confirmed its ability to accommodate a contract start date aligned with this milestone.

Prior Related Project Committee or Board Action(s)

None

Budget

The CTP FPA effort will be funded using PC-15 non-cap engineering funds. Staff is also requesting a 10% contingency, in the amount of \$49,482, for a total project authorization of \$544,303 to address any unforeseen conditions encountered during the work.

Recommended Action

Staff recommends that the Engineering Committee recommend that the PC 15 Board of Directors:

1. Authorize the General Manager to execute a contract with AECOM in the amount of \$494,821 upon the CTP Regional Flow Study reaching Project Element 4, and
2. Approve a contract contingency of \$49,482, for a total project authorization \$544,303, to address any unforeseen conditions encountered during the work.

Attachments: AECOM proposal and fee
Hazen proposal and fee



PROPOSAL

Coastal Treatment Plant (CTP) Facility Planning Assessment Effort

January 15, 2026

AECOM

Prepared for: South Orange County Wastewater Authority



Table of Contents

Cover Letter.....	ii
Identification of Responder.....	1
Project Understanding and Approach to the Work	1
Experience and Technical Competence.....	12
Key Personnel and Sub-Consultants	17
Pricing	20
Conflicts of Interest.....	20
Non-Collusion Affidavit	
Certifications	

Appendix A - Resumes

Appendix B - Attachment A and Assumptions, Clarifications, and Other General Conditions

Cover Letter

January 15, 2026

Ms. Roni Young Grant
Capital Improvement Program Manager
South Orange County Wastewater Authority
34156 Del Obispo Street
Dana Point, CA 92629



999 Town & Country Road
Orange, CA 92868
aecom.com

Re: Coastal Treatment Plant Facility Planning Assessment Effort (ENG 25-08)

Dear Ms. Grant and Members of the Selection Committee:

SOCWA is proactively planning for upgrading and right-sizing of aging coastal wastewater treatment plant (CTP) infrastructure to provide high quality effluent for reuse and ocean discharge while ensuring long-term regulatory compliance, environmental protection, and operational resilience. AECOM Technical Services, Inc. (AECOM) understands your challenges and views this as an opportunity to work side by side with you, leveraging the collective expertise of our experienced team.

Why AECOM?

Unbiased Fresh Perspective. With a fresh, independent perspective, AECOM offers a flexible roadmap that builds on CTP's existing processes while preparing not only for future challenges but also future opportunities. Our holistic approach includes evaluation of innovative but proven concepts as for example, nutrient removal at low DO (i.e. low energy) to take advantage of plant capacity, right sizing the plant for process efficiency, use of any excess aeration tank capacity for solids treatment and innovative approaches for salinity removal to increase reuse.

Multidisciplinary Expertise. Our fully in-house experienced team consisting of local staff ably supported by national leaders delivers end-to-end capabilities in all aspects of the project. This enables seamless communication, greater adaptability, and efficient execution tailored to SOCWA's specific needs.

Tailored Expertise for SOCWA's Success. CTP's unique features include remote location, narrow access road, limited space, high salinity water, and flow lower than design capacity. AECOM's seasoned team will tailor global best practices into customized strategies for SOCWA. Our multidisciplinary team assesses each solution's full impact to align with plant operations and regulatory goals.

Project Management and Local Experience. AECOM has selected Ganesh Rajagopalan as Project Manager based on his more than 20 years of local experience planning and right-sizing wastewater and water treatment facilities. His familiarity with regulatory agencies and established working relationships with SOCWA will support efficient coordination and a collaborative, well-informed planning process.

AECOM is very excited for this opportunity to work with SOCWA. We have a long history of working with small and large utilities in southern California, and we will use these experiences to support SOCWA's mission "to collect, treat, beneficially reuse and dispose of wastewater in a manner that protects and respects the environment, maintains the public's health, and meets local, state and federal regulations." AECOM has worked with SOCWA in the past, and we look forward to this opportunity to become your trusted consultant for planning for the future of CTP.

Ganesh Rajagopalan, PhD, PE, BCEE
Project Manager
M: 949.697.7748
E: ganesh.rajagopalan@aecom.com

Jagadish (Jack) Gundarla Halli, PE
Vice President | Principal-in-Charge
M: 562.843.4183
E: jagadish.gundarlahalli@aecom.com

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

ADDENDUM No. 1

TO: REQUEST FOR PROPOSAL

FOR CTP FACILITY ASSESSMENT PLANNING

THE PROPOSER SHALL EXECUTE THE CERTIFICATION AT THE END OF THE ADDENDUM AND SHALL ATTACH THE ADDENDUM TO THE PROPOSAL (NOT TO BE INCLUDED AS PART OF THE PAGE COUNT).

1. The proposal page limit is 20 pages, not including the cover letter or attachments.
2. See the attachment for the directions to CTP.
3. See the attachment for the Pre-Proposal Meeting sign-in sheet.
4. See the attachment for the Pre-Proposal Meeting presentation.

DATED: 11/20/2025

Roni Young Grant

Roni Grant
CIP Manager

BIDDER'S CERTIFICATION

I acknowledge receipt of the foregoing Addendum No. 1 and accept all conditions contained herein.

DATED: 12/30/25

BIDDER: AECOM Technical Services, Inc.
BY: Jack Gundarlahalli, PE, Vice President

J. Gundarlahalli

Identification of Responder

AECOM Technical Services, Inc. (Corporation)

Corporate Office:
300 South Grand Avenue, Suite 900
Los Angeles, CA 90071

Local Office:
999 Town and Country Road
Orange, CA 92868

Point of Contact:
Ganesh Rajagopalan, Project Manager
949.697.7748
ganesh.rajagopalan@aecom.com

Project Understanding and Approach to the Work

Project Understanding

South Orange County Wastewater Authority (SOCWA) is proactively planning for upgrading and right-sizing of aging coastal wastewater treatment plant (CTP) infrastructure to provide high quality effluent for reuse and ocean discharge while ensuring long-term regulatory compliance, operational efficiency, environmental protection, and operational resilience.

CTP, located in Laguna Niguel was built in 1983. The plant has a design capacity of 6.7 million gallons per day (MGD). Due to recent changes in its membership, CTP currently receives a daily average flow of approximately 3.2 MGD and it appears that little additional growth will occur within the CTP's service area. Briefly, the process consists of chemically enhanced primary treatment, activated sludge for carbonaceous removal, secondary clarification, advanced water treatment (AWT) consisting of sand filters and disinfection for partial flow for non-potable reuse. A portion of the AWT effluent is further treated through the Aliso Creek Water Reclamation Facility (ACWRF) consisting of ultrafiltration (UF) and reverse osmosis (RO) processes to blend with remaining AWT effluent for salinity reduction of the reuse water. The primary and secondary solids are thickened in a dissolved air floatation (DAF) and pumped to Moulton Niguel Regional Treatment Facility where it is anaerobically digested.

Facility Planning Study Goals and Objectives

The ultimate goal of this planning effort for SOCWA is to develop a phased roadmap for upgrading and right-sizing CTP that is realistic to implement; provides confidence to SOCWA, its member agencies and their rate payers regarding long-term (30 year) regulatory compliance; operational efficiency and resilience; and environmental protection. In particular, SOCWA is interested in finding answers to the following questions:

- How can CTP economically implement nutrient removal to produce high quality effluent for reuse and ocean discharge?
- What is the most cost and energy efficient way to increase the quality and quantity of recycled water?
- How best to right size the plant for the reduced flow to minimize operational inefficiencies?
- How can the above goals be achieved in an energy efficient and cost effective manner?

- Can solids be treated on-site to produce Class B or better biosolids for beneficial use?
- What measures are needed to address the resiliency of CTP?
- The proposed study (Phase 1) will focus on identifying and evaluating a range of project alternatives. The next phase (Phase 2) will build on Phase 1 findings to develop a detailed facility master plan.

Considerations of CTP-specific Features and Requirements during Facility Planning

From our discussions with SOCWA staff during multiple site visits AECOM has understood some key CTP-specific operational features and requirements. CTP's several unique features and conditions must be carefully considered in the planning for future. Some of these features are listed below:

- The secondary treatment at CTP operates at a mixed liquor suspended solids (MLSS) of just 400 to 600 mg/L which is significantly lower than that at typical wastewater treatment plants (~ 2000 to 3500 mg/L). Hence, there is inherent capacity flexibility and creativity available with existing basin assets.
- CTP receives wastewater through two force mains. The wastewater from some sources is "aged" due to collection system/lift station configurations and is likely to have different characteristics (e.g. higher odor) than typical wastewater influents.
- The salinity of CTP wastewater (~1,200 mg/L) is higher than typical wastewaters, which limits water reuse. Elimination of chemical use could help to minimize any additional TDS added to the effluent.
- CTP has excess capacity compared to the flow and loads received. This could be advantageously used to identify treatment processes with lower energy needs and higher nutrient removal potential.
- CTP desires to have some residual ammonia in the treated effluent for chloramine residual generation for water reuse. New dosing strategies can be explored that allow substantial nitrogen removal while retaining chloramine disinfection.
- The remoteness of the plant and access road conditions may render options involving frequent trucking of chemicals and waste products challenging to implement. Evaluation of treatment alternatives during planning can weigh this as a decision criteria driver.
- CTP is located in a fire-prone, wooded area. It needs special considerations in the resiliency plan.

CTP Water Quality

The typical COD and ammonia levels in CTP influent are approximately 250 and 35 mg/L, respectively. The effluent BOD and ammonia levels are approximately <10 mg/L and 20 mg/L, respectively. Discharge permit levels for cBOD are 25 (average month) and 40 mg/L (average week). In addition, the permit has discharge limits for Total Suspended Solids, Oil & Grease, turbidity and pH. Currently, there are no discharge limits for ammonia. Another parameter of significance is the total dissolved solids (TDS). The TDS in the plant flow is approximately 1,200 mg/L. While currently in compliance with discharge limits, SOCWA is interested in lowering effluent ammonia and TDS levels to improve the quality of effluent discharged to the ocean and to increase the recycled water use.

Exhibit 1 summarizes the objectives and key features of this study. It also presents our understanding of key CTP-specific issues, challenges, and available opportunities for innovations during facility planning for the next 30 years.

Exhibit 1 – Some Key Features, Challenges and Opportunities to Consider for Facility Planning of CTP

1 CTP has aging infrastructure

Need facility planning to meet demand, current & future regulations, risks, and operational resilience.

2 Secondary Treatment needs to be right-sized and reconfigured for nutrient removal

Flow lower than design capacity. Need to right-size to improve process efficiency. Longer SRT, lower energy nutrient removal process can be considered to take advantage of excess capacity. Current MLSS of 400 – 600 mg/L significantly lower than typical concentration. Implementation of nutrient removal may increase MLSS and hence, solids production.

3 On-Site Solids Treatment for Resource Recovery and Long-term Security

Approximately 1 acre available for solids treatment. Need considerations for higher truck traffic, recent/impending CARB rules limiting biogas use, higher O&M requirements. Centrate from anaerobic digestion may increase ammonia load to the plant. Any unused capacity from aeration tanks may be repurposed for aerobic digestion.

4 ACWRF – High Energy and Low Yield due to High TDS

Very high TDS (1200 – 1400 mg/L) in CTP flows, resulting in high energy use & low permeate yield. Needs energy efficient treatment that produces more recycle water.

5 Primary Treatment Uses CEPT

Currently uses ferric chloride for suspended particle and organics (BOD) removal. If nutrient removal is implemented, the ferric chloride dosing may have to be lowered to deliver more BOD to secondary.

6 Review Existing Odor Control System

The existing odor control system is sized to treat the entire headworks building. With covers on the screens and channels, odor control can be limited to the odor sources. Conventional ventilation of the building will reduce the demand on the odor control system, with lower energy use and chemical requirements.

7 Sand Filters May Need to be Replaced Soon

The existing sand filters have a large footprint, and require separate backwash system, air scour and media replacement. New technologies like cloth disc filtration have a small footprint, low head loss, and integral backwashing capability. They can provide equal performance with less maintenance.

8 Disinfection – Consider Potential for adding UV to Decrease TDS level and allow for Increased Ammonia Removal

Potential for incorporation of UV as primary disinfection strategy will be evaluated. Use of UV in lieu of chloramination will lower incremental TDS levels and allow for additional ammonia removal. This can also reduce truck traffic for chemical delivery.



9 CTP is Located in伍ooded Area

CTP is located in a somewhat remote and wooded area. Careful consideration is needed to protect the plant from potential fire and other hazards. Risks regarding flare for anaerobic digesters or high temperature processes such as THP need to be carefully addressed.

10 Community Considerations:

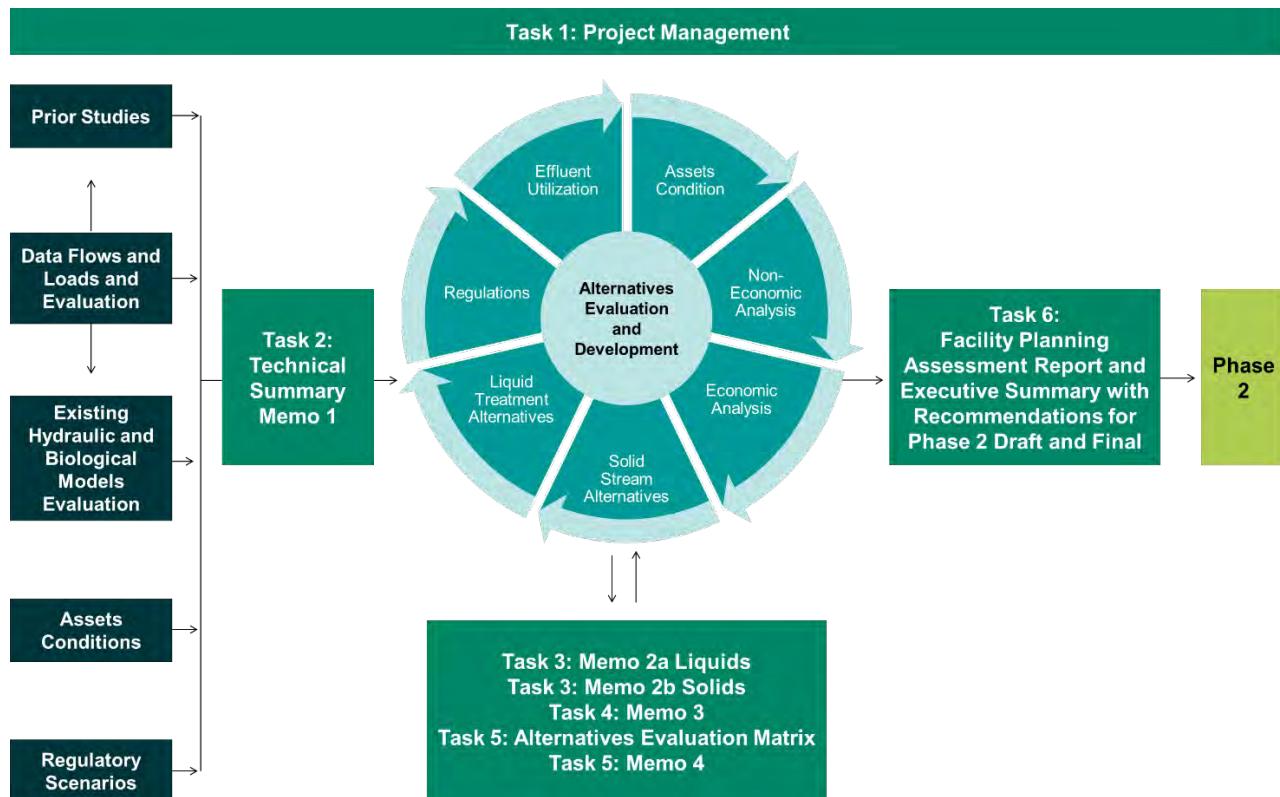
- Desire to improve quality of effluent discharged to ocean
- Increase recycled water production and use
- Truck traffic to CTP
- Construction Impact
- More resilient treatment

Project Approach

Overall Approach

The Phase 1 Facility Planning Assessment (FPA) for CTP will be executed through a structured, collaborative, and decision-focused planning process to address the plant's needs for the next 30 years, as shown in **Exhibit 2**.

Exhibit 2 – Overview of Project Approach



Task 1. Work will begin with project initiation and management, including development of a Project Control Plan, detailed report outline, schedule, and communication protocols to align the work with SOCWA and PC 15 Member Agencies on objectives, decision points, and deliverables.

Task 2. Our team will establish a baseline by evaluating existing facilities, reviewing prior studies, analyzing historical and projected flows and loads, updating hydraulic and process models, and performing a high-level condition assessment of major treatment assets. These efforts will define current and future capacity constraints, asset condition, and operational risks.

Tasks 3 and 4. Assessment from Task 2 will form the basis for treatment alternatives evaluation for the future. This Task will start with setting treated water quality goals based on current and future regulations and end uses. **Liquid, solids and recycled water treatment are interdependent and hence, will be performed concurrently.** For example, implementing nutrient removal will increase solids production; anaerobic digestion, if selected for solids treatment will deliver nutrient rich centrate to headworks. Hence, concurrent evaluation enables **holistic understanding** of process alternatives. Alternatives evaluation will include considerations for **resource recovery, resilience, vulnerability and future regulations**.

Tasks 5 and 6. Findings from all tasks will then be integrated into up to four combined, planning-level project alternatives with layouts, cost estimates, and triple-bottom-line evaluation. The effort will conclude with the preparation of a comprehensive Facility Planning Assessment Report to support informed decision-making and transition to Phase 2 Master Planning.

Existing Facility Evaluation

The first step in developing upgrade alternatives for the Coastal Treatment Plant (CTP) is establishing projected influent flows and pollutant loadings consistent with SOCWA's 30-year planning horizon and Member Agency growth projections. AECOM will develop influent design criteria that reflect anticipated changes in population, land use, wastewater generation rates, and regulatory drivers, while capturing the full range of operating conditions required to support reliable treatment, operational flexibility, and long-term compliance.

Influent flows and loadings will be evaluated using a structured, three-step approach: (1) statistical analysis of historical CTP flow records to characterize diurnal, seasonal, wet-weather, and peak conditions; (2) evaluation of historical influent mass loadings, including biological oxygen demand (BOD), total suspended solids (TSS), total nitrogen (TN), and total phosphorus (TP); and (3) comparison with regional wastewater data and SOCWA planning assumptions to validate trends and projected growth. The resulting flow and load projections will be paired with hydraulic and biological modeling of the existing and future CTP facilities to assess capacity constraints, process performance, and operational flexibility under projected conditions.

AECOM subject matter lead will perform a walkthrough of the plant and discuss and receive input from plant staff for preliminary assessments on the condition of structural, process, electrical and instrumentation and mechanical aspects of major units. Preliminary assessment of the upgrades needed, and their useful life will be made, and this will be used as a criterion in identifying treatment alternatives.

Treated effluent from the upgraded CTP is anticipated to be managed through a combination of ocean discharge and recycled water uses. AECOM will account for applicable permit requirements, including monthly, weekly, daily, and instantaneous limits, and will evaluate treatment alternatives for compliance across the full range of projected flow and loading conditions. Statistical evaluation of historical data, combined with hydraulic and biological model results, will be used to define the Basis of Design conditions, ensuring that recommended alternatives provide sufficient capacity, resilience, and compliance reliability throughout the planning horizon.

Wastewater Treatment Alternatives Evaluation

Alternatives evaluation for wastewater liquid and solids streams (as well as recycled water) treatment will involve a structured multi-criteria decision matrix and will be compared with the existing baseline condition. This framework will support a transparent, consistent, and defensible outcome and will be used to identify the most promising alternatives for advancement to Phase 2 of the project.

The evaluation criteria will be tailored to SOCWA's planning and operational objectives and will reflect the key attributes required for a reliable and resilient wastewater treatment system. Criteria will address, as applicable, regulatory risk and compliance flexibility, system resilience, treatment performance and process robustness, capacity and peaking considerations, opportunities for process optimization, operational complexity and performance, footprint, resource recovery and the condition and adaptability of existing assets within each alternative. Social and environmental considerations will be incorporated to support a comprehensive triple-bottom-line assessment. **In order to prepare CTP for the next 30 years, we will also include Artificial Intelligence (AI)-ready infrastructure as a criterion for evaluation.**

Alternatives will be evaluated using a comparative ranking approach in which each option is assessed relative to the other alternatives for each criterion. Weighting factors developed using input from SOCWA staff will be applied to reflect the relative importance of individual criteria, allowing the evaluation to focus on the attributes most critical to SOCWA's long-term objectives. This approach provides a clear audit trail from qualitative and quantitative inputs to the final ranking outcomes.

This evaluation methodology has been successfully applied by AECOM on comparable wastewater planning and technology selection efforts for LABOE/LASAN, Metropolitan Water District, and East County–Padre Dam and other projects. The approach is inherently flexible and can be refined to incorporate any SOCWA-preferred scoring conventions or decision-making frameworks. Evaluation

criteria and weighting factors will be developed collaboratively with the SOCWA working group to ensure alignment with agency goals, regulatory context, and stakeholder priorities.

Liquid Stream Evaluation

The current liquid treatment train at SOCWA has excess capacity. SOCWA is interested in lowering the nutrient levels and right-sizing the liquid stream treatment process. **CTP's excess capacity can be beneficially used for nutrient removal at a lower energy use and/or repurposed for solids treatment, storage or other beneficial uses.** The liquid stream alternative evaluation will holistically investigate all liquid stream process units (primary, secondary and tertiary treatment). A high-level visual condition assessment will be performed and needed upgrades will be identified, and their impact will be included in the multi-criteria decision matrix. **Exhibit 3** presents a representative list of nutrient removal processes, their benefits, limitations and their suitability to CTP. While these and other treatment process alternatives will be evaluated during the study.

Exhibit 3 – Representative Liquid Stream Treatment Alternatives for Nutrient Removal

Option	Benefits	Limitations	Suitability to SOCWA
Conventional Biological Nutrient Removal (MLE) with Primary Treatment	<ul style="list-style-type: none"> No new construction Simple operation 	<ul style="list-style-type: none"> Energy for mixed liquor (ML) pumping May need alkalinity addition 	<ul style="list-style-type: none"> Able to meet nutrient goals Right-sizes treatment to existing capacity
Conventional Biological Nutrient Removal (MLE) without Primary Treatment	<ul style="list-style-type: none"> No new construction Less sludge and no primary sludge Retains alkalinity for secondary 	<ul style="list-style-type: none"> Energy for ML pumping Needs better grit removal 	<ul style="list-style-type: none"> Able to meet nutrient goals Right-sizes treatment to existing capacity Less solids for on-site treatment
Low DO with Primary Treatment	<ul style="list-style-type: none"> No new construction No ML recycle Lowest energy 	<ul style="list-style-type: none"> Complex to operate Requires tight DO control Slight sludge settleability issues 	<ul style="list-style-type: none"> Able to meet nutrient goals Right-sizes treatment to existing capacity
Membrane Bioreactors	<ul style="list-style-type: none"> High-quality effluent Easy transition to DPR Repurpose excess clarifier volumes 	<ul style="list-style-type: none"> High energy demand and very high capital costs Operational complexity Requires fine screening 	<ul style="list-style-type: none"> Likely not needed if nutrient reduction is the only goal Does not right-size treatment to capacity Very Expensive
Sequencing batch reactors without Primary Treatment	<ul style="list-style-type: none"> Flexible operation Repurpose existing primary/Sec clarifier Retains alkalinity for secondary 	<ul style="list-style-type: none"> Complex process controls More mechanical equipment Needs better grit removal 	<ul style="list-style-type: none"> Repurpose excess capacity in aeration tanks for solids treatment
Aerobic granular sludge	<ul style="list-style-type: none"> Process intensification Repurpose existing primary/Sec clarifier 	<ul style="list-style-type: none"> Needs deeper tanks for granulation More complex operation 	<ul style="list-style-type: none"> Need to identify simpler configurations
MBBR	<ul style="list-style-type: none"> Process intensification Robust and simpler operation 	<ul style="list-style-type: none"> Increased screening Needs higher DO Higher energy demand 	<ul style="list-style-type: none"> Need to identify simpler configurations
Tertiary PdNA in Deep Bed Filters	Process intensification	<ul style="list-style-type: none"> Complex upstream aeration control Requires supplemental carbon 	<ul style="list-style-type: none"> Fit only if effluent nitrogen goal < 10 mg N/L

Option	Benefits	Limitations	Suitability to SOCWA
Sludge densification with hydrocyclones	<ul style="list-style-type: none"> Process intensification 	<ul style="list-style-type: none"> Cost of hydrocyclones 	<ul style="list-style-type: none"> Does not right-size treatment
Calcium carbonate buffering with hydrocyclones	<ul style="list-style-type: none"> Maintain optimum bicarbonate for maximum nitrification rates 	<ul style="list-style-type: none"> Cost of hydrocyclones 	<ul style="list-style-type: none"> Minimize acidification impact on receiving waters Adaptable to all potential CTP nutrient removal configurations
Mobile biofilms	<ul style="list-style-type: none"> Process intensification 	<ul style="list-style-type: none"> Cost of media and retention mechanism 	<ul style="list-style-type: none"> Does not right-size treatment

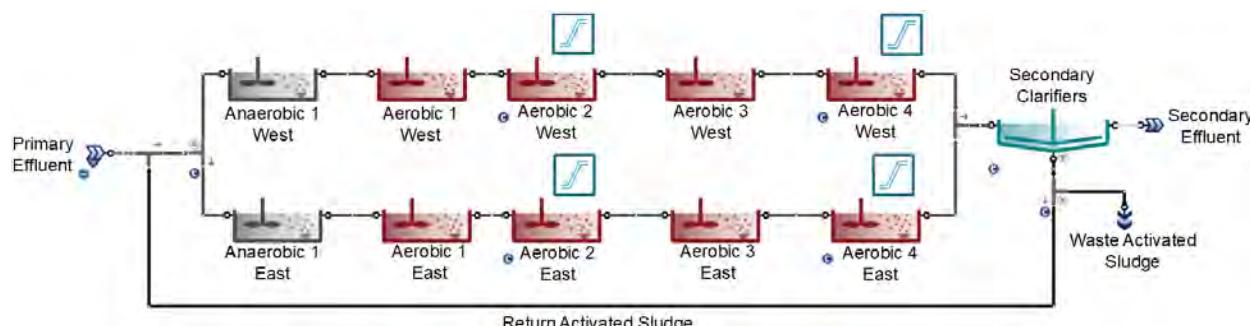
In order to address future regulations and demand, as appropriate, a phased implementation strategy for liquid stream treatment will be developed. AECOM adopted this strategy for wastewater treatment planning for the Nancy Wright Water Reclamation Facility, Desert Hot Springs, CA. The initial treatment plant for the 1.5 mgd facility was designed as a sequencing batch reactor (SBR) facility with percolation pond disposal. As the need for reuse grows, the plant was designed for conversion to a 3.0-mgd MBR facility with Title 22 reuse capability.

Process modeling will be used to support SOCWA's planning and decision-making by providing a practical, science-based means to evaluate and optimize biological treatment performance before capital investments are made. The models will be calibrated using available plant data and informed by **input from CTP operations staff** to make reasonable, transparent assumptions where data gaps exist and to identify performance limitations or knowledge gaps. Modeling will be applied to inform facility and master planning by defining process sizing, layout, and phasing under realistic operating conditions, and by optimizing reactor volumes, aeration demand, recycle flows, chemical usage, and energy consumption. **Hydraulic modeling will be used alongside biological modeling to assess system capacity, identify bottlenecks, and refine process performance.** Applied early in the planning process, this integrated modeling approach will reduce technical risk, support right-sizing of infrastructure, and enable flexible, cost-effective solutions that can adapt to future regulatory requirements, water reuse objectives, and climate-driven variability.

An example of our process modeling approach is the preliminary SUMO model we built previously for CTP to evaluate a potential conversion to low dissolved oxygen (DO) operation. Low DO operation could be well suited for SOCWA, as it enables right-sizing of the wastewater treatment infrastructure while significantly reducing aeration energy demands by as much as 50%. In addition, this approach eliminates the need for mixed liquor recycle, which is typically required to achieve nutrient removal objectives. **Exhibit 4** shows the process configuration for the Low DO process for CTP developed from preliminary SUMO modeling.

Low DO operation can potentially right-size CTP, reduce energy use and reduce nutrient levels.

Exhibit 4 – CTP Low DO SUMO Model Used for Water Research Foundation Proposal with SOCWA



A preliminary layout of several treatment process options, their suitability and impacts to CTP are shown in **Exhibit 5**.

EXAMPLE LIQUID STREAM OPTIONS



High SRT Extended Aeration

- Bypass Primary Tanks
- Extended Aeration
- 6 Secondary Clarifiers



Low DO BNR

- All Primary Tanks in Use
- A/O activated sludge
- 7 Secondary Clarifiers



Sequencing Batch Reactors

- No Primary Tanks
- SBR activated sludge
- No Secondary Clarifiers



EXAMPLE SOLIDS STREAM OPTIONS



Anaerobic Digestion and Dewatering (Class B)

- Thickening
- Anaerobic Digestion
- Dewatering
- Energy Recovery



Aerobic Digestion and Dewatering (Class B)

- Thickening
- Aerobic Digestion
- Dewatering



Chemical Conversion (Class A)*

- Sludge Storage
- Dewatering
- Thermal/Chemical Conversion
- Fertilizer Production

* - Sizing provided by vendor

All highlighted tanks except grey are active.

Solids Stream Treatment

CTP currently thickens the primary and secondary sludge in the DAF unit to about 1% solids and pumps approximately 100,000 gallons per day (gpd) to the MNWD Regional Treatment plant. However, SOCWA is interested in evaluating on-site sludge treatment options for CTP to potentially take ownership of its solids handling process, provide long-term reliability and avoid accidental raw sewage spills (leakage) in the neighborhood from the main during transmission. SOCWA has identified approximately one acre of open area at the north side of the plant as potential site for installation solids handling facility. SOCWA would like to consider opportunities for production of Class B (or better) biosolids, that have potential for resource recovery.

Alternatives for solids treatment should consider short and long-term regulatory impacts and options for **phased development of biosolids treatment**. For example, while currently there are no regulations regarding PFAS in biosolids, PFAS regulations may be implemented in the future. Further, technologies to destroy PFAS are still emerging and are lacking widespread installation and long-term operational details. If PFAS regulations are eventually implemented, depending on the regulatory levels and implementation timeline, a phased biosolids treatment approach may be needed for CTP. For example, traditional technologies such as aerobic or anaerobic digestion may be selected for near-term treatment. In the future, integration of emerging technologies such as gasification or supercritical water oxidation that can destroy PFAS can be considered.

Exhibit 6 shows a representative range of technologies that can be used for sludge treatment and their current state of development. However, **selection of biosolids treatment option must include CTP-specific considerations**. For example, the relatively smaller size of the plant may pose challenges with the cost of installation and operation of several advanced technologies. Further, the plant is in a remote wooded location with narrow access roads which may introduce challenges to trucking chemicals and treated biosolids to or from the plant.

While a wide range of technologies will be evaluated for screening and selection of solids treatment at CTP, based on AECOM's experience, some technologies that are suitable for sludge treatment and handling for plants of comparable size to SOCWA include:

- Dewatering and sludge drying
- Aerobic digestion
- Anaerobic digestion (including options such as organic waste co-digestion, high solids digestion)
- Alkaline treatment (e.g. Lystek)
- Drying with or without pyrolysis

Exhibit 7 presents the suitability as well as limitations of various technologies at CTP. Technologies for solids treatment will be benchmarked against CTP's existing practice of pumping sludge to MNWD Regional Plant. **Exhibit 5** (page 8) shows the layout of few potential technologies on the site identified at CTP for solids treatment.

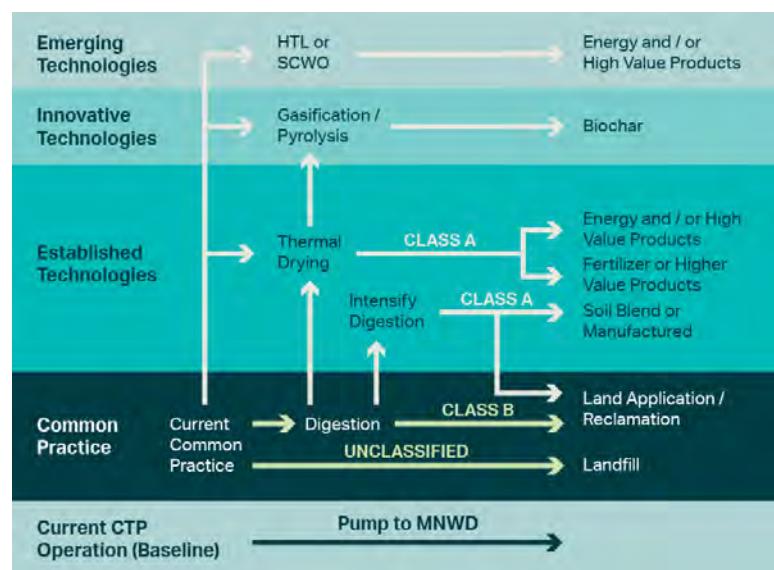


Exhibit 6 - Representative Range of Technologies and Development Status for Biosolids Treatment

Exhibit 7 - Select Benefits, Limitations and Suitability to SOCWA of Typical Sludge Treatment and Handling Processes

Option	Benefits	Limitations	Suitability to SOCWA
Pump sludge to MNWD RTP (Baseline)	<ul style="list-style-type: none"> No new construction Less operational challenges 	<ul style="list-style-type: none"> Long-term reliability issues 	<ul style="list-style-type: none"> Good for short-term Higher % solids may lower pumping volume
Dewatering and Drying	<ul style="list-style-type: none"> Less complex operation 	<ul style="list-style-type: none"> No Class B products. 	<ul style="list-style-type: none"> Available area may not be sufficient. Need to verify.
Aerobic Digestion	<ul style="list-style-type: none"> Suitable for smaller plants Can produce Class B biosolids 	<ul style="list-style-type: none"> Requires energy Higher cost than current operation Future PAFS regulation Transport of cake solids 	<ul style="list-style-type: none"> Viable option Possible to repurpose unused aeration tanks
Anaerobic Digestion (Organic Waste Co-digestion)	<ul style="list-style-type: none"> Produces Class B sludge Biogas recovery Possible organic waste co-digestion 	<ul style="list-style-type: none"> Higher cost/ more infrastructure More O&M Air quality permit Cake solids transport Organic waste management issues 	<ul style="list-style-type: none"> High cost due to smaller size Biogas flare near wooded area Organic waste management issues
Alkaline Treatment (e.g. Lystek)	<ul style="list-style-type: none"> Can produce Class A product 	<ul style="list-style-type: none"> Chemical treatment More unit processes Requires product storage 	<ul style="list-style-type: none"> Wider application of Class A product. No biogas cleaning or co-gen Pumpable product.

Resiliency Assessment of Alternatives

AECOM will perform a vulnerability and resilience assessment of shortlisted alternatives and develop a resilience plan addressing hazards such as fire, flooding, earthquakes, and other risks. A structured **Hazard-Risk-Contingency methodology** will be used to identify threats to critical process trains, evaluate operational, regulatory, and safety impacts, and assess the likelihood and severity of potential failures. **The resilience plan will prioritize** critical functions and recommend backup systems and process controls based on review of plant data, design documents, site investigations, and **input from SOCWA staff. ArcGIS Survey123 or similar tools** will be used to assess vulnerabilities and prioritize upgrades, with recommendations organized into urgent, near-, and long-term improvements.

Our Resilience Assessment Lead, **Grant Davies** co-authored the **NIST Resilience Guidance Manual**.

AECOM has successfully used this approach at LASAN's Hyperion Water Reclamation Plant. **AECOM's Resilience Assessment Lead, Grant Davies—water sector technical lead for NIST (National Institute of Standards and Technology) resilience guidance**—will apply this experience to develop a robust and defensible resilience plan for the CTP.

Incorporation of Digital/AI Compatibility in Alternatives Assessment

The 30-year planning horizon for the Coastal Treatment Plant presents a critical opportunity to **evaluate for compatibility with the digital optimization/AI technologies rapidly transforming water-sector operations**. AECOM's Facility Planning Assessment will evaluate each alternative for compatibility with advanced monitoring, data-driven decision support, and automated process control, ensuring recommended improvements are adaptable, implementable, and do not constrain future operational or technological upgrades.

Liquid and solids treatment alternatives will be assessed for their ability to support **real-time operational optimization** of aeration, chemical dosing, and biological processes under varying influent conditions. AECOM will evaluate the applicability of digital twin and scenario modeling tools—building on SOCWA's existing aeration cost optimization efforts—to support capacity validation, stress-testing of projected flows and loads, and reduction of capital and operational risk before implementation. **These considerations will be incorporated into the alternatives evaluation matrix alongside established criteria**, including performance, lifecycle cost, reliability, operability, and maintainability.

Consistent with SOCWA's emphasis on practical and scalable solutions, AECOM's recommendations will focus on targeted use cases that enhance operational efficiency, maintenance planning, and workforce effectiveness. Drawing on experience with SCADA modernization, predictive maintenance, and process optimization for wastewater agencies, AECOM will identify solutions that are feasible, cost-effective, and aligned with SOCWA's operational capabilities. The result will be a Facility Planning Assessment that supports near-term decision-making while preserving long-term adaptability and resilience for CTP. AECOM has successfully implemented these strategies for City of Thousand Oaks (CA), City of Akron (OH), Hampton Road Sanitation District (VA), South Essex Sewerage District (MA) among others.

Recycle Water Facilities Evaluation

Our team will evaluate recycled water operations and future opportunities at CTP, beginning with a review of existing Title 22 facilities, their integrated operation with the ACWRF, and the need to construct a new AWT to support IPR or DPR. **The evaluation will assess current recycled water infrastructure, existing uses, operational performance, and key constraints, while accounting for potential changes in influent and product water quality (such as increasing salinity), regulatory requirements, and water reuse objectives.** Based on this assessment, the analysis will identify capital improvements needed to maintain compliance with current commitments and to support future recycled water demands. **Exhibit 8** - shows the general area of the recycled water treatment.

As part of this effort, **the project will evaluate reverse osmosis (RO) process alternatives with a focus on operational simplicity, site and system constraints, and opportunities to reduce energy consumption.** The findings will support the selection of a RO process that is efficient, resilient, and practical for long-term operation. Strategies and improvements required to address identified impacts will be incorporated into the FPA project alternatives.

Reuse alternatives to be considered will include Title 22 tertiary treated water for unrestricted use, indirect potable reuse (IPR), and direct potable reuse (DPR), including any enhancements required to the AWT and/or ACWRF systems. **Each alternative will be evaluated for technical feasibility, regulatory requirements, environmental impacts, and cost-effectiveness, considering existing plant operations, applicable regulations, required infrastructure improvements, and life-cycle cost implications.** **Exhibit 9** provides an overview of recycled water use and key considerations for SOCWA.



Exhibit 8 -General area - currently occupied by tertiary filters, chlorine contact tanks, and RO - available for a future AWT.

Exhibit 9 – Overview of Recycled Water Use

Reuse Alternative	SOCWA-Specific Application / Baseline	Applicable Treatment Configuration (AWT / ACWRF)	Key Regulatory Status & Permitting Considerations
Title 22 Tertiary Treated Water (Unrestricted Use)	<ul style="list-style-type: none"> Existing and expanded non-potable reuse applications 	<ul style="list-style-type: none"> Secondary biological treatment at CTP Tertiary filtration and disinfection consistent with Title 22 requirements 	<ul style="list-style-type: none"> Title 22 recycled water criteria Requires RWQCB recycled water permit compliance and updates Ongoing compliance with pathogen log-reduction and reliability requirements
Indirect Potable Reuse (IPR)	<ul style="list-style-type: none"> Advanced treated recycled water for augmentation of potable supplies via an environmental buffer 	<ul style="list-style-type: none"> AWT: Ultrafiltration (UF), Reverse Osmosis (RO), and UV/AOP ACWRF: UF and RO for salinity management and treatment of Aliso Creek flows Post-treatment stabilization 	<ul style="list-style-type: none"> Title 22 Advanced Water Treatment RWQCB permitting for discharge to the environmental buffer Evolving IPR regulations and monitoring requirements
Direct Potable Reuse (DPR)	<ul style="list-style-type: none"> Advanced treated recycled water for potable reuse 	<ul style="list-style-type: none"> AWT: UF, RO, UV/AOP as core advanced treatment ACWRF: UF and RO for salinity management and treatment of harvested Aliso Creek flows Post-treatment stabilization Additional monitoring and control systems 	<ul style="list-style-type: none"> Subject to California DPR regulatory Requires enhanced reliability, multiple barriers, and continuous monitoring Extensive DDW review and approval process Additional permitting, public outreach, and environmental review requirements
Salinity Management (for Title 22 Irrigation Application)	<ul style="list-style-type: none"> Management of increasing salinity in recycled water 	<ul style="list-style-type: none"> ACWRF: UF and RO for salinity reduction Integration of operations for blending and operational flexibility 	<ul style="list-style-type: none"> Subject to RWQCB effluent limitations and basin plan objectives

Develop Project Alternatives and Recommendations for Phase 2

Using the findings developed through the liquid treatment, solids treatment, recycled water, and ocean discharge evaluations, AECOM will complete **Task 5 – Develop Project Alternatives** by developing and evaluating a range of future project alternatives for CTP. The treatment trains will be conceptualized considering the interdependency and impact of liquid, solids and recycled water treatment on each other process. This effort will summarize both immediate and future treatment needs by comparing current and projected flows and loadings with the capacity of each process unit, including liquid treatment, solids treatment, energy, and other supporting systems. Risk and resilience elements, potential impacts from regulatory requirements, treatment technologies, capacity needs, peaking, process optimization, operational performance, and the condition of existing assets will be considered.

Alternatives will be evaluated, screened, and a maximum of four combined alternatives will be selected using technical, economic, social, and environmental criteria, including a triple bottom line evaluation.

Planning-level facility descriptions, layouts, site plans, cost estimates, and preliminary design criteria will be developed. **Task 6 – Prepare Facility Planning Assessment Report and Documents**, will document the results, culminating in a comprehensive FPA report and executive summary that summarizes key findings, recommendations, and conclusions, and provides SOCWA and the PC 15 Member Agencies with a clear, defensible basis for advancing selected alternatives into **Phase 2** of the project.

Project Management Approach

Project Schedule Management.

AECOM's project management approach will be focused on adherence to the project schedule and proactive management of the critical path. A detailed critical path schedule will be developed at project initiation and refined following the kickoff meeting with SOCWA to incorporate agency input and priorities. The schedule will be updated regularly with actual completion dates to track progress against the baseline and forecast upcoming activities. This approach allows the project team to identify potential schedule risks early and implement mitigation measures immediately to avoid impacts to key milestones. Our proposed project schedule (**Exhibit 10**) will serve as the primary tool for coordinating tasks, monitoring progress, and maintaining schedule discipline throughout the project.

Budget Control and Quality Management.

Project budgets will be monitored and tracked using AECOM's in-house Oracle accounting system, which generates weekly cost reports broken down by work item and activity. These reports provide real-time visibility into cumulative expenditures and comparisons to the approved project budget, supporting accurate forecasting and timely, transparent invoicing. In parallel, AECOM will implement its ISO 9001-certified Quality Management System to ensure that all deliverables meet uniform standards of quality. A project-specific QA/QC Plan will be developed to define roles, coordination protocols with SOCWA, milestone reviews, and procedures for comment resolution and closure. Designated quality management personnel will perform independent reviews of deliverables to confirm completeness, consistency, and compliance with quality requirements before submittal.

Exhibit 10 – Proposed Project Schedule – This schedule was developed considering a project duration of up-to twelve months as suggested in the RFP. This can be expedited to meet any SOCWA's requirements.

	2026												2027				
	Q2			Q3			Q4			Q1		Q2					
	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR				
KICK OFF MEETING	▲ 4/1/26																
1 PROJECT MANAGEMENT													4/1/26 - 4/1/27				
1.1 Project Control Plan													4/1/26 - 4/21/26				
1.2 Project Meetings and Communication													4/1/26 - 4/1/27				
2 EXISTING FACILITIES EVALUATION													4/1/26 - 7/13/26				
Task 2 Technical Summary of Findings (TM 1) - Draft													▲ 6/15/26				
Task 2 Technical Summary of Findings (TM 1) - Final													▲ 7/13/26				
2.1 Description of Existing Facilities													4/1/26 - 5/5/26				
2.2 Review Existing Reports and Models													4/1/26 - 5/5/26				
2.3 Flow and Loading Analysis													4/1/26 - 5/5/26				
2.3.1 Historical Wastewater Flows and Loading													4/1/26 - 5/5/26				
2.3.2 Projected Wastewater Flows and Loads													4/1/26 - 5/5/26				
2.4 Existing Facilities Analysis													4/22/26 - 6/1/26				
2.4.1 Establish Planning and Design Criteria													4/29/26 - 6/1/26				
2.4.2 Hydraulic Capacity Evaluation													4/29/26 - 6/9/26				
2.4.3 Process Model Configuration													4/1/26 - 5/12/26				
3 WASTEWATER TREATMENT ALTERNATIVES													4/1/26 - 11/2/26				
Task 3 Technical Summary of Findings (TM 2a and 2b) - Draft													▲ 10/1/26				
Task 3 Technical Summary of Findings (TM 2a and 2b) - Final													▲ 11/2/26				
3.1 Identify and Develop Treatment Alternatives																	
3.1.1 Liquid Treatment Alternatives													6/15/26 - 11/2/26				
3.1.2 Solids Treatment and Disposal Alternatives													6/15/26 - 11/2/26				
3.1.3 Evaluate Electrical Distribution, Instrumentation, and Control Systems													7/24/26 - 11/2/26				
3.1.4 Evaluate Energy Recovery Facilities													6/15/26 - 11/2/26				
3.1.5 Support Processes and Facilities													8/28/26 - 11/2/26				
3.1.6 Site Planning Evaluation													8/28/26 - 11/2/26				
3.2 Risk and Resilience Planning Elements													6/15/26 - 11/2/26				
3.2.1 Resilience Adaptation Planning													6/15/26 - 11/2/26				
3.2.2 Vulnerability Planning													6/15/26 - 11/2/26				
3.2.3 Evaluate Regulatory Scenarios													4/1/26 - 11/2/26				
4 RECYCLED WATER FACILITIES AND EFFLUENT UTILIZATION EVALUATION													6/15/26 - 11/2/26				
Task 4 Technical Summary of Findings (TM 3) - Draft													▲ 10/1/26				
Task 4 Technical Summary of Findings (TM 3) - Draft													▲ 11/2/26				
4 Recycled Water Facilities and Effluent Utilization Evaluation													6/15/26 - 11/2/26				
5 DEVELOP PROJECT ALTERNATIVES													8/28/26 - 1/12/26				
Task 4 Technical Summary of Findings (TM 4) - Draft													▲ 12/8/26				
Task 4 Technical Summary of Findings (TM 4) - Final													▲ 1/12/27				
Alternative Evaluation Matrix													▲ 11/2/26				
5.1 Identify Proposed Project Alternatives															8/28/26 - 1/12/27		
6 PREPARE FACILITY PLANNING ASSESSMENT REPORT AND DOCUMENTS													11/12/26 - 2/16/27				
Draft Facility Planning Assessment													▲ 1/4/27				
Final Facility Planning Assessment													▲ 2/16/27				
6 Prepare Facility Planning Assessment Report and Documents													11/2/26 - 2/16/27				
▲ Milestone																	

Experience and Technical Competence

The benefits of AECOM's management and technical team are the range of skills, experience, and expertise available to SOCWA for efficient project administration, strong technical and quality control direction, and focused attention on your requirements and needs.

Our primary professional focus is to present a multi-disciplinary team that provides creativity and technical expertise for optimum benefit to SOCWA. This approach is based on our core values of integrity (we keep our commitments), innovation (we continually look for better ways to apply our expertise to our work), and excellence (we pride ourselves on bringing outstanding results to everything we do).

Relevant Experience

AECOM has completed numerous projects for clients locally and nationally that cover the scope of work elements requested by SOCWA. A demonstration of our successes is reflected in the signature projects descriptions below - 1, 2 and 3 and additional relevant AECOM projects presented in **Exhibit 11**.

Client References

During SOCWA's evaluation, we invite the Selection Committee to contact our references for the following three relevant projects.

1 WWTP No. 2 and No. 3 Upgrade and Expansion Evaluations

Bakersfield, California

Client	Services Provided	Key Team Members	Client Reference
City of Bakersfield	Hydraulic Capacity Analysis Process Analysis Odor Evaluation Condition Assessment Deficiencies Determination	Ganesh Rajagopalan Nick Cooper Simon Baker Grant Davies Alex Franchi	Evette Roldan, Wastewater Manage City of Bakersfield 6901 Mc Cutchin Road Bakersfield, California, 93313 E: eroldan@bakersfieldcity.us T: (661) 326-3249
Start Date	August 2025		
Completion Date	March 2026		
Overall Value	Study Only		
Fee Value	\$1.05M		

Description. The City of Bakersfield has initiated a comprehensive long-term planning effort to shape the future of its wastewater treatment facilities. This evaluation and accompanying feasibility study represent the first phase of a multi-year program aimed at rehabilitating, expanding, and developing new treatment capacity to meet community needs for decades to come.



The City currently operates two treatment facilities. Wastewater Treatment Plant No. 2, a 25-mgd trickling filter plant producing secondary effluent stored in dams for agricultural irrigation. Solids are processed through anaerobic digesters and drying beds, yielding Class B biosolids applied to City-owned farmland. Current influent flow is approximately 12-mgd.

Wastewater Treatment Plant No. 3 is a 32-mgd activated sludge facility producing both secondary and tertiary effluent. Secondary effluent is directed to percolation ponds for agricultural irrigation, while tertiary effluent is stored in a 3 MG above-ground tank for landscape irrigation and limited on-site use. Solids are treated in anaerobic digesters and dewatered via centrifuges, producing Class B biosolids for land application on City property. Current influent flow is approximately 21-mgd.

AECOM completed condition assessments and is currently developing alternative options for upgrade and expansion of Plants 2 and 3 with multiple liquid stream processes. Additionally, a preliminary planning report for a potential future Plant 4 is being developed.

2 Nancy Wright Water Reclamation Facility Planning and Design

Desert Hot Springs, California

Client	Fee Value	Key Team Members	Client Reference
Mission Springs Water District	\$2.7M	Nick Cooper Alex Franchi Allen Randall	Steve Ledbetter, PE, Program Manager Mission Springs Water District 6675 2nd Street Desert Hot Springs, CA 92240 T: 951.680.0440 E: sledbetter@tkeengineering.com
Start Date	July 2017		
Completion Date	April 2024		
Overall Value	\$44M		

Description. The Mission Springs Water District provides water and sewer services to Desert Hot Springs and adjacent communities. This area is expected to undergo major development over the next 15 years. To accommodate future growth and development, the District retained AECOM to provide planning, design, and construction services for a new water reclamation facility (WRF). Initial needs were for the relief of the existing wastewater treatment plant and the expansion of service area capacity. Ultimately, the plant will provide reclaimed water for groundwater replenishment and new developments and commercial interests in the area.



AECOM prepared a master site plan for the ultimate build-out of the site as a 20-mgd Membrane Bioreactor (MBR) wastewater treatment plant. A phased conceptual plan was developed for the WRF to address the initial projected flows up to 3 mgd.

The initial treatment plant is a 1.5-mgd sequencing batch reactor (SBR) facility, designed to be converted to a 3.0-mgd MBR facility. The new facility, sited on 60 acres, is compact and encompasses one acre of the site. An administration/operations building provides offices, electrical, aeration blowers, dewatering systems, chemical storage and maintenance areas.

The initial treatment plant includes an influent pump station, screening and grit removal, four SBR tanks, a decant channel, and gravity discharge to three percolation ponds. No disinfection is required for discharge to the ponds, but nutrient removal provides nitrate concentrations less than 8 mg/L. Waste biosolids are aerated in storage tanks before dewatering in a belt filter press. The capacity of the aerobic digesters will provide Class B stabilization.

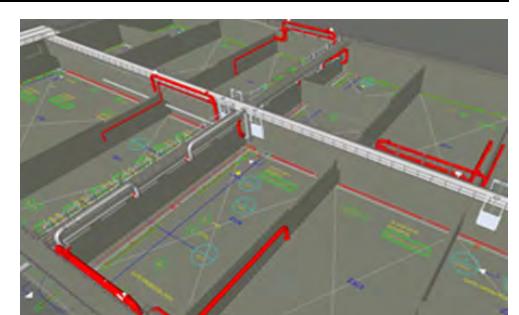
Additional facilities include plant water (3W) pumping and distribution for irrigation and process needs. Chemicals are provided for supplemental alkalinity and disinfection of 3W water.

3 Regional Water Reclamation Facilities Aeration Diffuser Replacement Study and Design

Perris, California

Client	Overall Value	Key Team Members	Client Reference
Eastern Municipal Water District (EMWD)	\$40M	Alex Franchi Ganesh Rajagopalan Allen Randall Nick Cooper	William Chen, PE, Project Manager EMWD 2270 Trumble Road Perris, CA 92572-8300 E: chenw@emwd.org T: 951.928.3777
Start Date	\$3.5M		
Completion Date	2023		
Overall Value			

Description. AECOM led a comprehensive aeration system planning effort to define future capacity needs and support phased capital improvements at four of the District's Regional Water Reclamation Facilities (RWRFs). The effort focused on modeling projected flows and loadings to inform long-term aeration requirements and establish a defensible basis for project definition and design.



The first step was the completion of the Diffuser Replacement Study, which evaluated aeration diffuser technologies for each facility within the context of future conditions. Using updated BioWin process models, AECOM projected plant-specific flow and loading scenarios and assessed aeration performance under ultimate planning conditions. This master-planning analysis evaluated diffuser alternatives based on future capacity requirements, oxygen transfer efficiency, constructability, reliability, lifecycle cost (20-year), serviceability, and long-term availability, allowing EMWD to prioritize investments and sequence implementation across facilities.

Based on the planning results, AECOM advanced full design for aeration diffuser replacement and control system upgrades at four step-feed BNR facilities ranging between 9 and 13 mgd.

Design services included updating and calibrating BioWin models for all facilities, developing future-condition aeration demand calculations, and defining infrastructure upgrades required to meet projected loads. The designs addressed extensive piping reconfiguration and were delivered using coordinated 3-D modeling to support constructability and phasing.

Basin-specific condition assessments of structural, mechanical, electrical, and instrumentation systems were conducted to support risk management, constructability, and lifecycle cost control for the proposed upgrades.

At the Perris Valley RWRF, the master-planning effort identified additional future aeration capacity needs beyond diffuser replacement. As a result, AECOM incorporated the design of a new single-stage process blower and associated piping upgrades into the Perris Valley contract, ensuring the facility is positioned to reliably meet projected future flows and loadings. Construction of diffuser replacements across all four facilities is currently ongoing.

Exhibit 11 – Additional Relevant AECOM Projects (#1, 2, 3 detailed above)

Project Name/Client	Planning	Design	Liquid Stream	Solids Stream	Reuse
① WWTP No. 2 and No. 3 Upgrade and Expansion Evaluations City of Bakersfield	●	●	●	●	●
② Nancy Wright Water Reclamation Facility Mission Springs Water District	●	●	●	●	●
③ Regional Water Reclamation Facilities Aeration Diffuser Replacement Study and Blower Addition Design Eastern Municipal Water District (EMWD)	●	●	●		
WWTP Recycled Water Upgrades PDB 2025-2027 - Phase I Design & GMP Development City of Banning	●	●	●	●	●
East County Advanced Water Purification Project Progressive Design-Build (PDB) and Pilot Testing Padre Dam Municipal Water District	●	●	●	●	●
Davis Wastewater Treatment Plant Secondary and Tertiary Improvements Design Build City of Davis	●	●	●	●	
S1 Wastewater Treatment Plant Improvements Project Rialto Water Services	●	●	●	●	
Tertiary Treatment Facility San Bernardino Municipal Department	●	●	●		●
OneWater Nevada Advanced Purified Water Facility City of Reno	●	●	●		●
Sacramento Tertiary Treatment Facility Sacramento Sewer	●	●	●		●
Needs Assessment and Upgrades Kern Sanitation Authority	●	●		●	●
SLC Water Reclamation Facility Salt Lake City	●	●	●	●	

Key Personnel and Sub-Consultants

We recognize that the foundation of a successful project is a committed, cohesive, and fully available team aligned by a shared vision and work ethic. AECOM is proud to provide a highly accessible and responsive project team, supported by a deep bench of multidisciplinary specialists who are ready to meet project demands and quickly address urgent needs. AECOM will provide end-to-end support for this project with no sub-consultants.

Project Manager



Leading the AECOM team is our **Project Manager, Ganesh Rajagopalan, PhD, PE, BCEE**, who will serve as SOCWA's primary point of contact. Ganesh and key team members have already visited CTP multiple times and met with SOCWA management and plant staff, building strong familiarity with site operations and priorities. This proactive engagement ensures a smooth start and informed decision-making. **Ganesh's**

collaborative management style promotes stakeholder alignment and delivers tailored, results-driven solutions that meet SOCWA's goals.

Ganesh is a seasoned professional engineer with nearly 35 years of experience leading complex, multidisciplinary initiatives in the water and wastewater sectors. He brings in-depth expertise in facilities planning, nutrient removal, biosolids and wastewater management, and resource recovery. He was the technical lead for the City of Lompoc facility planning study to comply with the stringent California Toxicity Rule limits for 10 metals. He is also the project manager for an ongoing Department of Energy-funded project to develop engineering design for energy efficient, low footprint nutrient removal process, and partial denitrification deammonification (PdNA).

Ganesh was the technical lead for the centrate equalization study for the Eastern Municipal Water District to manage nutrient load to the secondary from centrate (daytime-only dewatering). He was the Project Manager/technical lead for multiple studies (Santa Margarita Water District, Orange County Sanitation District, City of Petaluma, Silicon Valley Clean Water) to enhance energy recovery through co-digestion.

Ganesh's strategic leadership has driven successful outcomes for utilities navigating emerging regulations, contaminants, and innovative technologies.

Key Personnel

To ensure seamless project execution, Ganesh has selected key personnel with the availability, capacity, and commitment to prioritize this contract. AECOM's team integrates strong local knowledge with national technical depth, providing the specialized expertise required for this project. As shown in **Exhibit 12 – AECOM Key Personnel** and **Exhibit 13 - Organization Chart**, the team is structured to be responsive, flexible, and positioned to deliver the highest level of technical support to SOCWA. Resumes for all personnel are included in **Appendix A**. It is not anticipated that specialized subconsultants will be necessary at this time.

Nick Cooper, PE*, BCEE - Wastewater Analyses Lead. Nick's experience includes biological nutrient removal, water reclamation, and biosolids management for municipal facilities for 50 years. He has designed more than 15 new wastewater treatment facilities and upgraded more than 30 others. He has been Design / Project Manager for nutrient removal, filtration, ultraviolet (UV) disinfection and membrane bioreactors (MBR) facilities. He directs AECOM's Water Academy course in wastewater treatment design.

Terry Goss, PE* – Solids Stream Analyses Lead. Terry is AECOM Global Biosolids Practice Lead. He has more than two decades of hands-on experience with biosolids process design. Terry specializes in equipment integration, project delivery, and plant commissioning. He assisted with updating the biosolids chapters for the 5th edition of the Metcalf & Eddy / AECOM *Wastewater Engineering* textbook.

Grant Davies, PE - Resiliency Evaluation Lead. Grant has nearly forty years of experience and he has provided expert guidance and solutions for major clients across the country addressing aging infrastructure challenges coupled with evolving regulations to meet level of service needs with increased resiliency from hazards and climate change. He was a contributing editor to the Metcalf & Eddy / AECOM *Wastewater Engineering*, 5th Edition textbook, and a co-author for NIST Resilience Guidance Manual.

Alex Franchi, Ph.D., PE, BCEE - Recycle Water Analyses Lead. Alex brings over 30 years of experience in the water / wastewater industry, specifically, in the planning, design, and management of water/wastewater treatment, and recycled water. Alex was the lead designer for East County's Advanced Water Purification Program. Alex has written more than 30 professional publications and papers on various aspects of water treatment and energy recovery from wastewater.

Sarah Schoepflin – Nutrient Removal Evaluation. Sarah has six years of experience in wastewater treatment and research. For her graduate thesis she did extensive research on advanced nutrient removal processes at Hampton Road Sanitation District. She has a strong practical background in project design, operation, and data analysis.

Brett Wagner, Ph.D., PE* – Nutrient Removal Evaluation. Brett is a wastewater process engineer with extensive experience in research, design, and analysis of wastewater treatment. Brett is skilled in process

modeling, field studies and greenhouse gas quantification. His work has focused on anammox processes, MABRs, and life cycle analyses.

Jim McQuarrie, PE* – Technical Advisor: Jim brings nearly 30 years of hands-on operations and engineering experience split between public and private sector roles. His specialization is in wastewater facilities planning, process design, nutrient removal, and facility operations with a consistent emphasis on promoting creative solutions that leverage innovation to maximize the value of already existing assets.

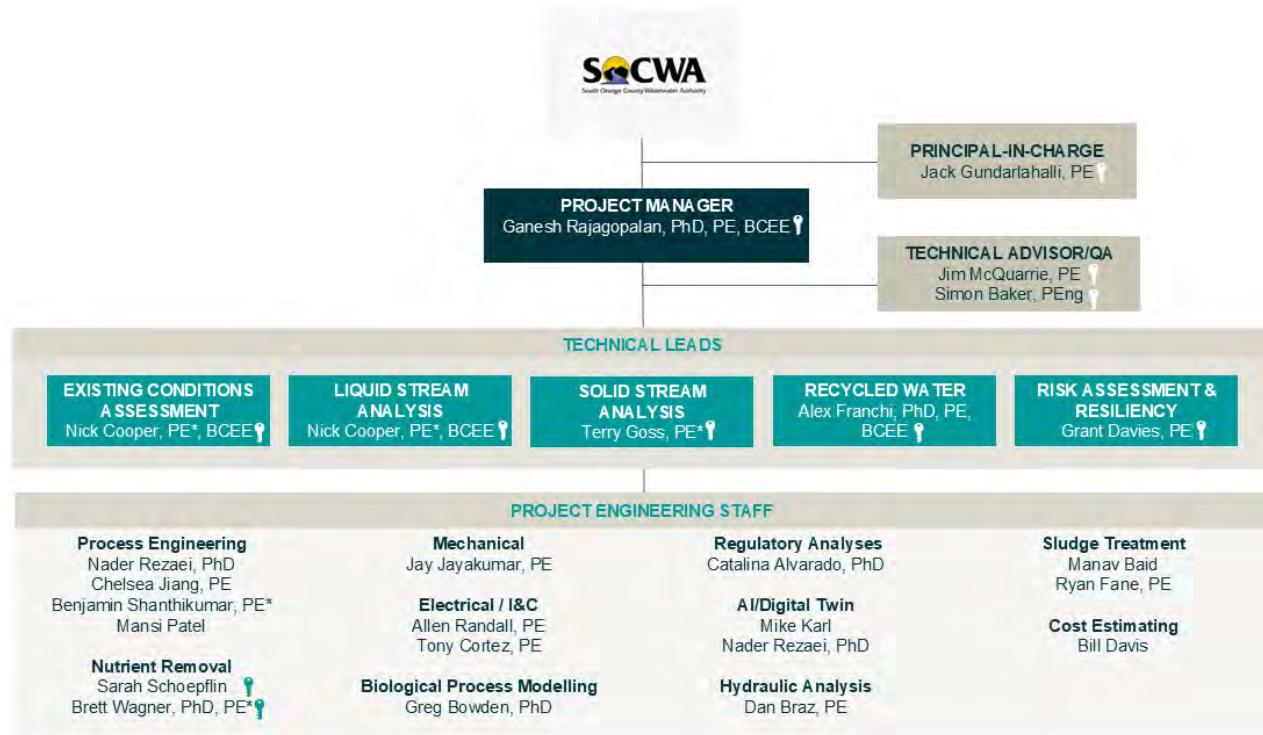
Simon Baker, P. Eng* – Technical Advisor: Simon is the Wastewater Community of Practice lead for AECOM. Simon is a process engineer and project manager with over 30 years of design, construction and commissioning experience of municipal wastewater treatment facilities. Simon brings his “lessons learned” from extensive treatment facility work and innovative technologies such as biological aerated filtration (BAF), moving bed biofilm reactors (MBBR), enhanced nutrient removal (ENR), and hydrolysis of solids.

Jack Gundarlahalli, PE - Principal in Charge: Jack has served in this role on numerous projects and is sensitive to the needs of LACSD. He delivers on their expectations for quality technical work, responsiveness and cost-effectiveness. He will be responsible for monitoring performance of the Team; legally obligating the corporation; and client satisfaction check-ins.

Exhibit 12 - AECOM Key Personnel

Key Team Members/Role ★	Yrs Exp. (Total AECOM)	Planning	Liquid Treatment	Solids Treatment	Reuse	Condition Assessment	Design	Regulatory Compliance
Ganesh Rajagopalan, PhD, PE, BCEE Project Manager	34 4	●	●	●	●			●
Nick Cooper, PE*, BCEE Existing Conditions Assessments; Liquid Stream Analysis	52 32	●	●	●	●	●	●	●
Terry Goss, PE* Solid Stream Analysis	21 14	●		●		●	●	●
Alex Franchi, PhD, PE, BCEE Recycled Water	34 9	●	●	●	●	●	●	●
Grant Davies, PE Risk Assessment & Resiliency	41 37	●	●	●	●	●	●	●
Sarah Schoepflin Nutrient Removal	6 3	●	●		●		●	●
Brett Wagner, PhD, PE* Nutrient Removal	4 4	●	●		●		●	●
Jim Mc Quarrie, PE* Technical Advisor/QA	26 2	●	●	●	●	●	●	●
Simon Baker, P.Eng* Technical Advisor/QA	34 25	●	●	●	●	●	●	●
Jack Gundarlahalli, PE Principal in Charge	33 33	●	●	●	●	●	●	●

Exhibit 13. Organization Chart



Pricing

We have provided our costs and fees in a separate file.

Conflicts of Interest

AECOM is unaware of any personal or organization conflicts of interest that would preclude us from providing the services proposed in this submittal.

Scope of Work (Attachment A)

A detailed scope of work provided by SOCWA is included in Appendix B. **AECOM's assumptions, clarifications, and other general conditions are provided at the end of Attachment A.**

Non-Collusion Affidavit

ATTACHMENT B
NON-COLLUSION AFFIDAVIT

The undersigned declares:

I am the Vice President of AECOM Technical Services, Inc., the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on 12/30/25, at Orange, CA.

Signature: J. Gundarka Hall

Title: Vice President, Principal-in-Charge

Certifications

AECOM certifies that it is not aware of any actual or potential conflict of interest that exists or may arise by executing the contract or performing the work that is the subject of this RFP.

AECOM certifies that it is willing and able to obtain all insurance required by the form contract included as Attachment C.

AECOM certifies that it has conducted a reasonable and diligent inquiry concerning the minimum and/or prevailing wages required to be paid in connection with the performance of the work that is the subject of this RFP and certifies that the proposed pricing includes funds sufficient to allow respondent to comply with all applicable local, state, and federal laws or regulations governing the labor or services to be provided.

AECOM acknowledges and agrees with all terms and conditions stated in the RFP. While there may be discussions between AECOM's Legal Group and the Authority about contract terminology, AECOM is fully committed to executing a contract with SOCWA.

AECOM certifies that all information provided in connection with its proposal is true, complete, and correct.



FEE PROPOSAL

Professional Services - CTP Facility Planning Assessment Effort Fee Proposal

January 15, 2026

AECOM

Submitted to: South Orange County Wastewater Authority



SOCWA - Professional Services – CTP Facility Planning Assessment Effort Fee Proposal

Task No.	Task Description	AECOM Labor Hours and Fee																													
		PIC/Technical Advisor		Project Manager		Technical Leads		Senior Project Engineer		Mechanical / Electrical Principal Engineer		Engineer II		Engineer I		Cost Estimator		Drafter/CADD		Admin Assistant		Total Hours - AECOM		Total Labor AECOM		Other Direct Costs		Total AECOM		TOTAL	
		Hourly Billing Rate		\$335	\$336	\$321	\$220	\$330	\$182	\$165	\$237	\$123	\$135																		
	Task 1 - Project Management																														
1.1	Project Control Plan	1	8	8															4	22	\$ 6,131		\$ 6,131	\$ 6,131							
1.2	Project Meetings and Communications	4	96	32															32	164	\$ 48,188	\$ 6,000	\$ 54,188	\$ 54,188							
	Task 1 - Subtotal	5	104	40	0	0	0	0	0	0	0	0	36	186	\$ 54,319	\$ 6,000	\$ 60,319	\$ 60,319	\$ 60,319	\$ 60,319	\$ 60,319	\$ 60,319									
	Task 2 - 3 Existing Facilities Evaluation																														
2.1	Description of Existing Facilities		4	4															48	\$ 9,228		\$ 9,228	\$ 9,228	\$ 9,228							
2.2	Review Existing Reports and Models		4	4	16														68	\$ 13,408		\$ 13,408	\$ 13,408	\$ 13,408							
2.3	Flow and Loading Analysis	2	8	8	16								24						4		62	\$ 13,898		\$ 13,898	\$ 13,898						
2.4	Existing Facilities Analysis		4	8	16								24						16		68	\$ 13,360		\$ 13,360	\$ 13,360						
2.5	Condition Assessment of Major Unit Processes		8	16		32							16						8		80	\$ 22,008		\$ 22,008	\$ 22,008						
	Task 2 - Subtotal	2	28	40	48	32	0	148	0	28	0	326	\$ 71,902	\$ -	\$ 71,902	\$ 71,902	\$ 71,902	\$ 71,902	\$ 71,902												
	Task 3 - Wastewater Treatment Alternatives																														
3.1	Identify and Develop Treatment Alternatives																			\$ -		\$ -	\$ -	\$ -							
3.1.1	Liquid Treatment Alternatives	4	12	44	36			84	154	30									364	\$ 75,224		\$ 75,224	\$ 75,224	\$ 75,224							
3.1.2	Solids Treatment and Disposal Alternatives	4	44	34	44								74	24					224	\$ 54,616		\$ 54,616	\$ 54,616	\$ 54,616							
3.1.3	Evaluate Electrical Distribution, Instrumentation, and Control Systems		4			16	20	32					8						80	\$ 16,528		\$ 16,528	\$ 16,528	\$ 16,528							
3.1.4	Evaluate Energy Recovery Facilities	2	12	16	12		40						44						40		112	\$ 21,228		\$ 21,228	\$ 21,228						
3.1.5	Support Processes and Facilities		4	24									54	36	40				168	\$ 34,650		\$ 34,650	\$ 34,650	\$ 34,650							
3.1.6	Site Planning Evaluation		6	32									40						56	\$ 11,796		\$ 11,796	\$ 11,796	\$ 11,796							
3.2	Risk and Resilience Planning Elements		4	12									32						52	\$ 11,760		\$ 11,760	\$ 11,760	\$ 11,760							
3.2.1	Resilience Adaptation Planning		4	16									36						58	\$ 13,062		\$ 13,062	\$ 13,062	\$ 13,062							
3.2.2	Vulnerability Planning		4	18									36						60	\$ 14,376		\$ 14,376	\$ 14,376	\$ 14,376							
3.2.3	Evaluate Regulatory Scenarios		8	16			36																								
	Task 3 - Subtotal	10	102	212	92	16	180	466	90	88	0	1,256	\$ 272,998	\$ -	\$ 272,998	\$ 272,998	\$ 272,998	\$ 272,998	\$ 272,998												
	Task 4 - Recycled Water Facilities and Effluent Utilization Evaluation																														
4.1	Recycled Water Facilities and Effluent Utilization Evaluation		4	36	32			44	56	20	16							209	\$ 43,896		\$ 43,896	\$ 43,896	\$ 43,896								
	Task 4 - Subtotal	0	4	36	32	0	44	56	20	16	0	209	\$ 43,896	\$ -	\$ 43,896	\$ 43,896	\$ 43,896	\$ 43,896													
	Task 5 - Develop Project Alternatives																														
5.1	Identify Proposed Project Alternatives	1	12	32									40						86	\$ 21,239		\$ 21,239	\$ 21,239	\$ 21,239							
	Task 5 - Subtotal	1	12	32	0	0	0	40	0	0	0	86	\$ 21,239	\$ -	\$ 21,239	\$ 21,239	\$ 21,239	\$ 21,239													
	Task 6 - Prepare Facility Planning Assessment Report and Documents																														
6.1	Prepare Facility Planning Assessment Report and Documents	1	12	40		0	0	0	44	0	0	0	97						97	\$ 24,467		\$ 24,467	\$ 24,467	\$ 24,467							



Proposal for
**Coastal
Treatment
Plant Facility
Planning
Assessment**

January 15, 2026

Hazen

Table of Contents

Cover Letter

Project Understanding and Approach to Work

Experience and Technical Competence

Key Personnel and Sub-Consultants

Pricing

Conflicts of Interest

Non-Collusion Affidavit

Certifications

Resumes

January 15, 2026

Roni Young Grant
Capital Improvement Program Manager
South Orange County Wastewater Authority
34156 Del Obispo Street
Dana Point, CA 92629

Re: Request for Proposals for Coastal Treatment Plant Facility Planning Assessment Effort ENG-25-08

Dear Roni,

Hazen is pleased to submit our proposal for the Coastal Treatment Plant Facility Planning Assessment Effort. We appreciate the opportunity to partner with SOCWA on this critical initiative and. We are teaming with Dudek to bring our combined unmatched proven expertise of the Coastal Treatment Plant to support your long-term vision for resiliency, sustainability, and operational excellence.

Our team offers a unique combination of experience, technical depth, and local presence that sets us apart.

The Hazen team highlights include:



Extensive SOCWA Experience: A proven track record of successful collaboration with SOCWA, including prior work at the Coastal Treatment Plant, and other facilities ensuring familiarity with your systems and priorities.



Comprehensive Master Planning Expertise: Proven methodology for condition assessments, capacity analysis, and phased improvements tailored to SOCWA's strategic objectives.



Innovative and Sustainable Solutions: Advanced treatment technologies and energy efficiency strategies that deliver resilient, future-ready infrastructure.



Local Presence and Collaborative Approach: A dedicated Southern California team committed to responsiveness, transparency, and stakeholder engagement. We have demonstrated this approach at several other local utilities like Long Beach, San Bernardino Water Department and Encina Water Authority.

We look forward to the opportunity to work closely with SOCWA and deliver a master plan that is practical, defensible, and aligned with your long-term goals. Please feel free to contact Hallie Thornburrow at (760) 223-5666 or HThornburrow@hazenandsawyer.com with any questions or to discuss our approach further.

Thank you for considering Hazen for this effort.

Hallie Thornburrow, PE
Associate

Cindy Miller, PE
Vice President

Legal Name and Address

Hazen and Sawyer, PC
498 Seventh Avenue, 11th Floor
New York, NY 10018
(212) 777-8400

Local Office

11260 El Camino Real, Suite 102
San Diego, CA 92130
(858) 764-5521

Project Understanding and Approach to Work

Project Understanding and Approach to the Work

Hazen's approach to this project will leverage unmatched institutional knowledge of the Coastal Treatment Plant Treatment Process. This assessment will take a broad approach to assess a wide range of alternatives in order to anticipate the unknowns and plan for the future. This forward-looking approach will incorporate continual collaboration with all SOCWA Stakeholders, to receive input from all parties to make sure all options are properly vetted.

COMPREHEND

Unmatched Institutional Knowledge Lays Foundation for Project Success



Dave Jones, project technical advisor,
on-site with CTP operations staff

Project Confidence



Our prior work at the Coastal Treatment Plant, our existing process models, and our time spent in the field with your operators will be supplemented with conditions assessments to fully **COMPREHEND** your facility and the drivers for this project.

We hit the ground running and deliver project confidence

BioWin Models

CTP Future Alternatives Feasibility Study

On site time spent with Operations

Secondary Treatment Evaluations and Design

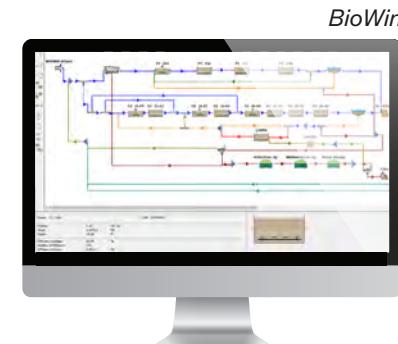
This prior work **sets the foundation** for our proposed approach, highlighted on this page, to efficiently evaluate treatment plant alternatives and provide a roadmap for Phase 2 of the Master Plan.

EXPLORE

A Combination of Collaboration and Innovative Thinking will Identify Best Value Alternatives

We will **EXPLORE** the world of alternatives that can achieve your capacity and treatment goals using powerful modeling tools and, most importantly, your input on the success criteria. Those criteria may include:

- Delayed Capital Investments
- Process Complexity
- Robustness
- Capital and O&M costs
- Redundancy
- Flexibility for Future Changes in Flows



Innovation



Hazen workshop



CONVERGE

Approach to Final Screening of Alternatives

Armed with the results from our analysis and your input on success criteria, we will **CONVERGE** upon the most beneficial solution.

To be proactive, we have already progressed technical evaluations of multiple alternatives, as noted in our past project experience.

Solutions



The Hazen Approach

World of Alternatives

- On-Site Biosolids Treatment
- Secondary Treatment Upgrades
- Redirection of Flows away from CTP

Leverage Extensive Prior Work

Supplemental Evaluations and Initial Screening

- Update Models
- Support Condition Assessment of Critical Facilities

Process Modeling Combined with Hazen's SolidsProModel

Understand Whole Plant Impacts and Evaluate Alternatives

Alternative Screening and Recommendations

Streamlined Path Forward for the Phase 2 Master Plan

CONTINUAL SOCWA TEAM COLLABORATION

Our Approach to Facility Planning

Hazen brings a unique headstart to this project through the delivery of the CTP Future Alternatives Feasibility Study Plan project work delivered in 2021. Through this project, Hazen developed facility alternatives for the future CTP upgrades, focused on addressing aging infrastructure, increasing water reuse, and preparing the CTP for the pending ocean nutrient regulations. This work included site plan development, historical data review, high-level process modeling, and cost estimation. The tools (initial process model, calculations, etc) enable Hazen to deliver an alternative evaluation that is comprehensive, consistent, and aligned with SOCWA and stakeholder agency goals and objectives.

The purpose of the Coastal Treatment Plant Facility Planning Assessment (Phase 1) is to provide the technical foundation to support a complete the master plan to be completed in Phase 2. The key components of Phase 1 are a comprehensive condition assessment of the facility, optimization of the secondary treatment process and evaluation of solids treatment/disposal and effluent reuse alternatives. We will follow the Hazen Comprehend-Explore-Converge approach for this project. The previous CTP Alternatives Feasibility Study will serve as a solid basis to update the treatment process evaluation. The diagram to the left provides an overview of evaluation of the solids treatment and disposal alternatives.

We will use our proven process for facility planning to ensure comprehensive evaluation and inclusion of current/near-term needs, as well as future needs, and the identification of triggers for the potential future scenarios.

Project Initiation

The Project Initiation phase is designed to ensure the process starts with a fully aligned team. The outcome of this phase is accepted clear expectations about objectives, project schedule and well-defined lines of communication



Comprehend

This will establish the foundation for a successful Facility Plan.

Leveraging Our Understanding of the Facility Means No Ramp Up Time

A solid comprehension of the existing facilities by the consultant team is paramount to complete an effective plant roadmap, documenting the existing conditions will set the stage for the next phase of the Master Plan. Hazen will conduct site visits that will include all boots on the ground to properly understand the condition of the plant to feed into the alternative evaluation.

Hazen and Dudek both have dedicated asset management groups with SOCWA experience and several other local facilities that will be performing the condition assessment and work hand-in-hand with the discipline experts to develop a plan to recommended upgrades and any specialized condition assessments as part of Phase 2.

Our planned on-site work will combine with Dudek's recent exhaustive report to establish conditions and consequence of failure. Hazen's and Dudek's combined first hand knowledge of the CTP will inform and accelerate solutions to address aging infrastructure.

The Importance of O&M Considerations

While the priority of the condition assessment is to understand and document the feasibility of reusing existing assets, we also understand operational ease and accessibility for maintenance is a very important consideration. We will report tight areas and other qualitative input from the operators. Proper maintenance will extend the life of equipment and a properly designed plant with operations in mind means happy operators, both are key to the successful longevity of a plant.



The sludge pump area at the CTP includes many O&M constraints, we will identify other locations for O&M redesigns.

Hazen has a Diverse in House Staff. In addition to the Civil/Environmental all support disciplines mentioned in this proposal are part of the direct Hazen team. We have experience with this consistent team which saves schedule and budget.



The Dudek team will be leading the general mechanical portion of the facilities assessment. Dudek's team will document the current condition, criticality, and estimated remaining useful life of equipment expected to remain in service under potential project alternatives. This analysis will provide concise, actionable inputs to support risk assessment, resiliency planning, and lifecycle cost evaluations

Capacity Assessment and Deficiencies

Hazen's previous work with SOCWA included a high-level process model evaluation of the liquid treatment process. This institutional knowledge will be applied to expand upon the previous hydraulic and loading capacity assessment. Through Hazen's work and review of RFP materials, we understand well the previously performed condition assessments. Once this understanding has been developed, we will combine the asset assessments with our updated calibrated process models to identify bottlenecks and risks while developing preliminary alternatives.



Hazen's goal for this Task is to LEAF where beneficial for the CTP. We will incorporate this approach during the alternatives evaluation to highlight solutions that:

- Can be implemented with existing infrastructure
- Are synergistic with long term solutions
- Increase capacity
- Reduce cost and operator complexity

Condition Assessment

Following the high -level facilities evaluation, initial functional evaluation of the processes, and risk assessment, we will develop a “Focused” visual condition assessment plan in collaboration with SOCWA’s O&M staff. Unlike traditional approaches that assess every asset regardless of criticality, our methodology strategically prioritizes the assessment effort. The focused assessment will concentrate exclusively on critical assets that are considered high risk for plant operations.



This approach maximizes value to SOCWA by directing resources toward assets that genuinely require attention, reducing assessment costs and timeline, and delivering actionable information for evaluating alternatives.

Explore

This phase ensures best-fit holistic solutions are identified.

Planning for the Unknowns

Our team understands that there are several uncertainties which could affect the planning trajectory for the Coastal Treatment Plant, but a plan needs to start somewhere. Our Approach is to develop a plan for the future around the current design approach, but accommodate ‘decision trigger points’ in the event of anticipated unknowns. Some of these unknowns could include political decisions, new regulations, stakeholder changes, etc.

Hazen and Dudek will take the baton from the programming team and start conceptual design of the upgrades. Our leads will work very closely together to ensure consistency between the project phasing, design features, and controls. This will result in the new treatment facilities operating smoothly and logically according to operator preferences and in a manner that reduces overall O&M.

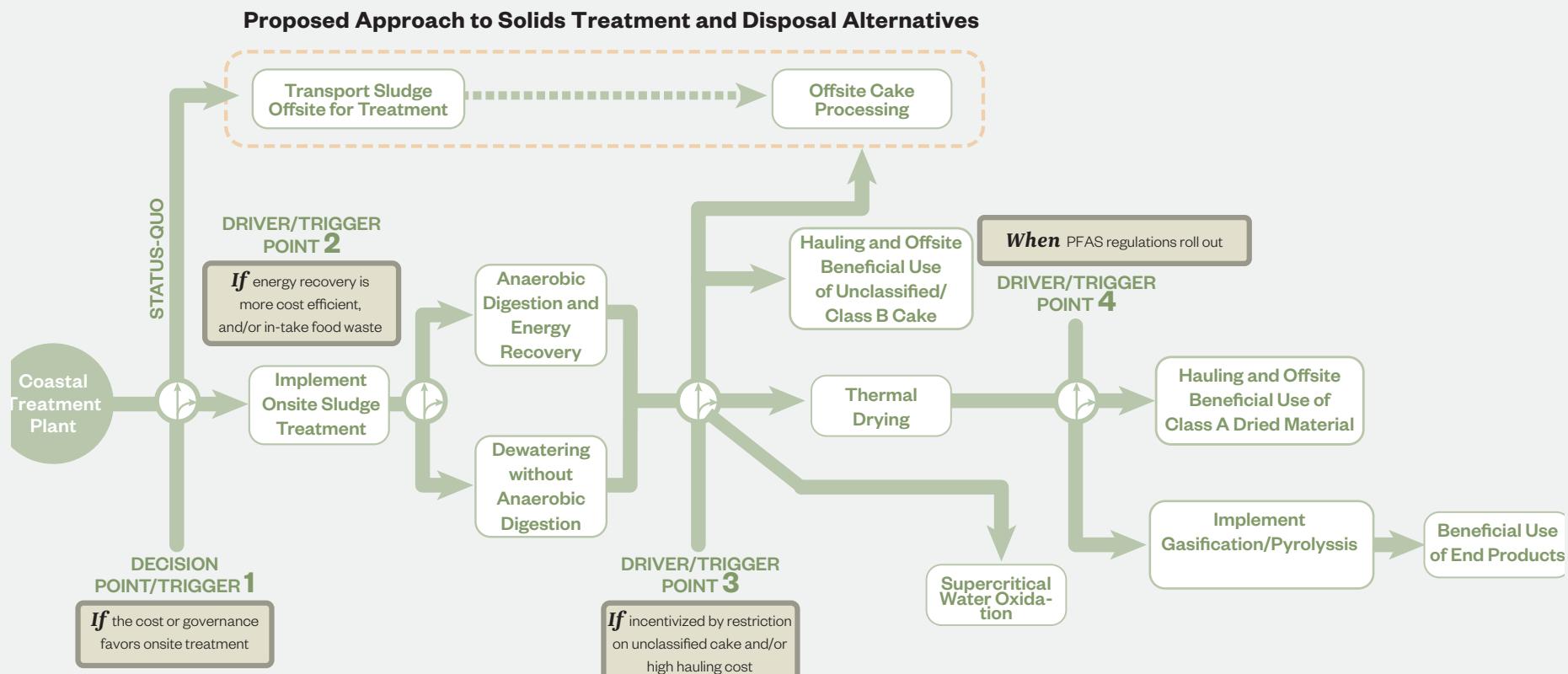


Biosolids Assessment

Definition of the biosolids project requires a comprehensive evaluation of the current wastewater solids systems and processes from SOCWA. We applied our current understanding of your facility to develop a preliminary trigger based roadmap for the solids facility. This is the type of graphic that we will develop for each of the major streams at the CTP.

Recycled Water Facilities and Effluent Evaluation

Similar to Task 3, a baseline scenario will be created for the existing AWT (tertiary filtration and disinfection) and the ACWRF (UF/RO) to support SOCWA's current and projected recycled water. The baseline will evaluate the impacts of water quality such as potential salinity increase and regulatory changes, and identify capital improvements necessary to ensure facility capacity to meet existing and future recycled water demands while addressing impacts. An analysis of additional beneficial reuse of treated effluent will include IPR (lead by the Dudek team) and DPR (lead by the Hazen team) alternatives for the purpose of maximizing recycled water utilization and minimizing or eliminated discharge to the ocean. The analysis will include various technical, regulatory, environmental, cost, and other suitable factors as part of a multi-criteria evaluation and comparison of the alternatives against the baseline scenario. Technical feasibility will need to address multibarrier treatment requirements, brine handling and discharge, energy use and availability, use of existing treatment system where possible, and other factors. The Task will focus on treated effluent utilization at the existing CTP, AWT, and ACWRF.

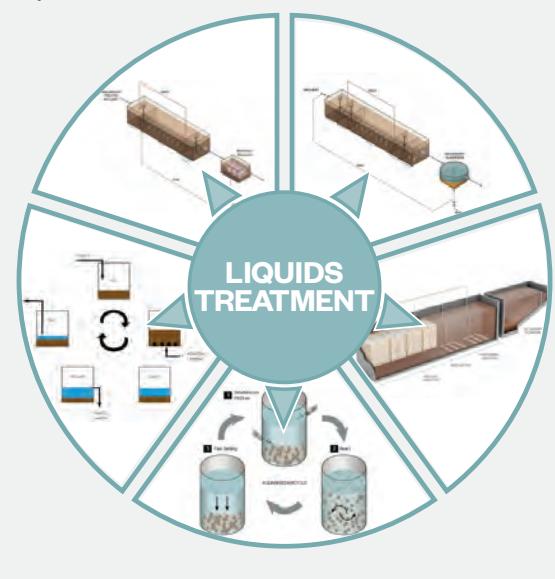


Liquids Assessment

Hazen brings a unique headstart to this project through the delivery of the CTP Future Alternatives Feasibility Study Plan project work delivered in 2021. Through this project, Hazen developed facility alternatives for the future CTP upgrades, focused on addressing aging infrastructure, increasing water reuse, and preparing the CTP for the pending ocean nutrient regulations. This work included site plan development, historical data review, high-level process modeling, and cost estimation. The tools (initial process model, calculations, etc) enable Hazen to deliver an alternative evaluation that is comprehensive, consistent, and aligned with SOCWA and stakeholder agency goals and objectives.

Pulling together the key findings from the Feasibility study previously completed by Hazen, nutrient removal upgrade alternatives, we will develop a overall liquids train roadmap developed as part of the Converge Phase. This roadmap outlines the SOCWA's long-term effluent strategy, including baseline upgrades and triggers for future expansion to the secondary treatment system related to nutrient removal. Definition of the biosolids project requires a comprehensive evaluation of the current wastewater solids systems and processes from SOCWA.

Previous Feasibility Study completed an In-depth investigation of Liquid Treatment Alternatives



Public Outreach (Optional)

While public outreach is not specifically mentioned in the RFP, we present this an optional task for consideration. It is essential that the shortlisted alternatives receive buy in from the SOCWA member agencies, key stakeholders and the public in order for the project to become a success and to avoid delays. Hazen has an internal communications team with decades of public outreach experience for water and wastewater projects throughout the US. While Report Executive summaries are a useful tool to communicate the key ideas to the public, however Hazen has internal staff to take this one step further. Our communication team can create a brochure specifically tailored to the project to communicate the shortlisted project alternatives and increase stakeholder and public buy in.

We build & manage Public Outreach Programs

Support Can Be At Any Point Throughout The Project's Life Cycle

Strategic Communications Planning	<input checked="" type="checkbox"/>
Communication plans, engagement schedules, key messages, brand and logo development	<input checked="" type="checkbox"/>
Outreach Materials	<input checked="" type="checkbox"/>
Writing and editing, graphic design, videos, website interactives, animation	<input checked="" type="checkbox"/>
Website and Social Media Content	<input checked="" type="checkbox"/>
Content and posts, videos, updates, recommendations	<input checked="" type="checkbox"/>
Event Coordination	<input checked="" type="checkbox"/>
Logistics planning, agenda development, recommendations	<input checked="" type="checkbox"/>
Stakeholder Engagement	<input checked="" type="checkbox"/>
Meetings workshops, events, school partnerships, public information lines, construction relations	<input checked="" type="checkbox"/>

Project Management

Hallie Thornburrow will serve as Hazen's Project Manager, collaborating closely with the Technical Advisors, Dave Jones and Bryce Danker, to develop and execute the project in accordance with the Project Management Plan (PMP). The PMP will define success criteria and establish project controls essential for achieving our goals.

Project Controls, Budget, and Schedule Tracking

The Hazen Project Management Dashboard provides an easy means to understand overall project health (e.g. budget, schedule, risks, meetings, etc.) at a glance and can be tailored to the specific needs of SOCWA.

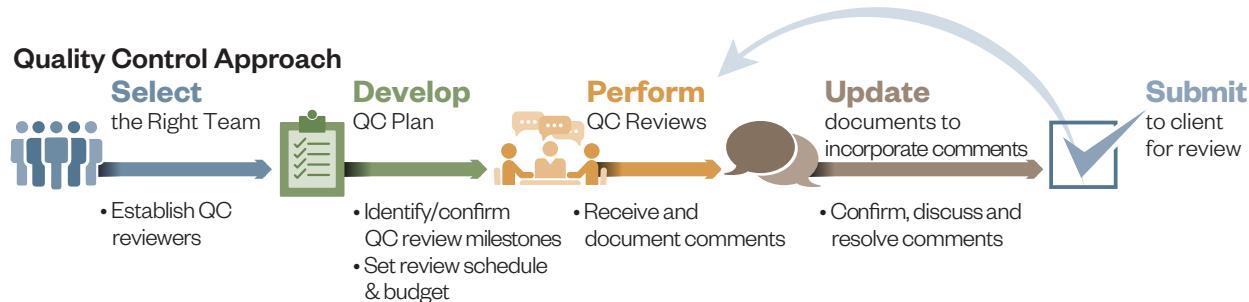
We can utilize this dashboard during this project if desired by the SOCWA team.

Quality Assurance/Quality Control

At Hazen, a commitment to Quality Assurance (QA) and Quality Control (QC) is integral to our project delivery ethos. We have developed comprehensive Quality Control and Quality Assurance Manuals to ensure effective project completion with the highest standards of quality. This framework emphasizes early engagement of experts and robust collaboration throughout all project phases.

Strong collaboration, facilitated through meetings and workshops, will capture input and preferences from your engineering, operations, maintenance, safety, and compliance teams. Our QA/QC process guarantees high-quality deliverables, with responsive handling of feedback from SOCWA staff.

We prioritize the early identification of qualified reviewers who will actively participate in project development from initial evaluation through final deliverables. QC protocols ensure that technical reviews are conducted by experienced staff before each milestone submission, with thorough incorporation of client feedback.



Schedule

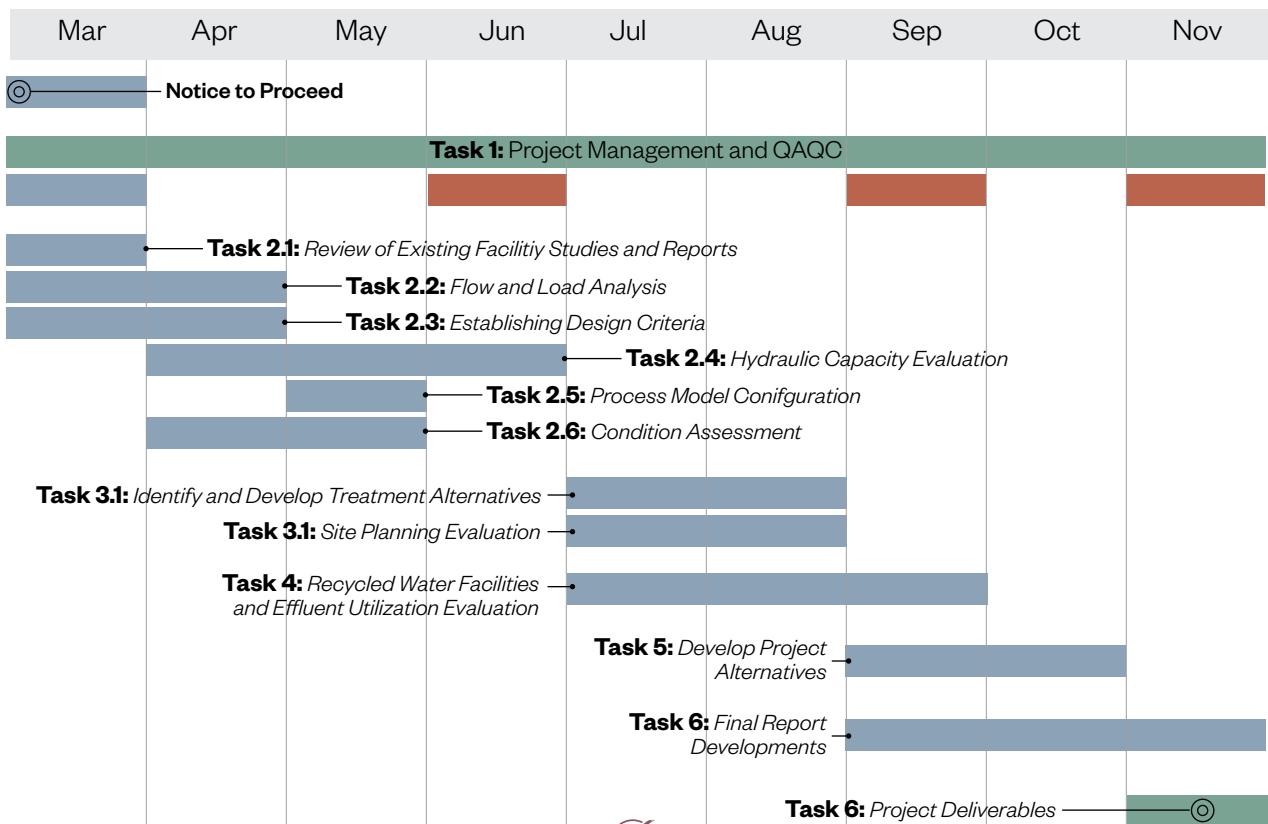
We understand efficient delivery of this facility plan is crucial to the future of the Coastal Treatment Plant Facility.

Our preliminary project schedule aims to balance project efficiency with technical thoroughness to set a solid foundation for Phase 2 of the Master Plan. This schedule relies on the efficient delivery of submittal milestones in order to maximize review time such that all stakeholder voices can be accommodated. This optimized schedule is possible thanks to Hazen's institutional knowledge and industry-leading experience.

Project Schedule

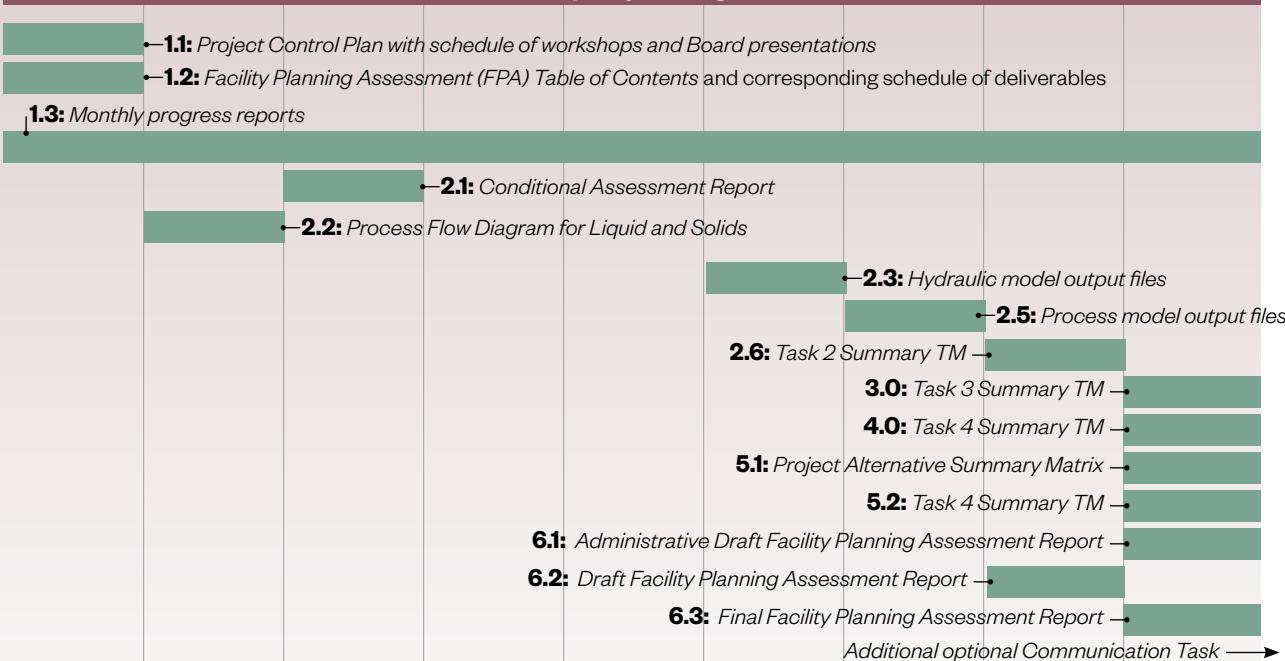
2026

Workshop Board Presentation Meeting & Workshop Task Overview Subtask Deliverable



PROJECT DELIVERABLES

Monthly Project Progress

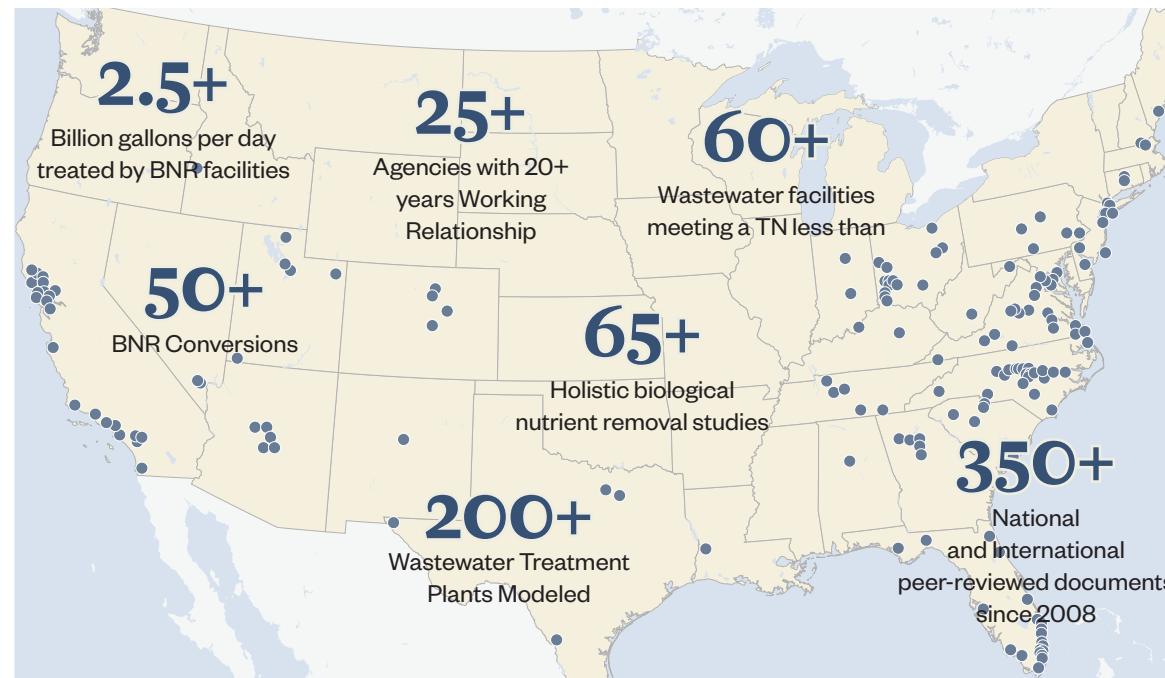


Experience and Technical Competence

Experience and Technical Competence

Hazen is an industry leader in wastewater evaluations and designs.

This sampling of projects demonstrates a long history of successfully applying a holistic look to determine the full suite of impacts and costs to support clients in selecting the best alternative to meet their unique challenges and drivers. SOCWA can leverage our decades of experience, covering all aspects of this project, to have full confidence in selecting the best value solution for your WWTP.



Our Past Experience ensures an efficient path forward to the future. The Hazen team spent extensive time reviewing historical data and developing a conceptual design basis for the liquids treatment upgrades. We have already worked with your team to develop alternatives and performed an evaluation to choose the best option. We will apply what we learned during our past projects to eliminate the learning curve and hit the ground running.

Experience with South Orange County Wastewater Authority



CTP Facility Improvements Design

SOOWA hired Hazen in 2017 to upgrade the CTP, a conventional activated sludge plant with a 6.7 MGD secondary treatment capacity. The project aimed to enhance safety, reliability, and performance by replacing outdated equipment and facilities. Key improvements included aeration system upgrades, electrical and instrumentation enhancements, ferric chloride system updates, headworks improvements, structural upgrades, and plant-wide fall protection measures.

CTP Feasibility Study

Hazen provided support for a comprehensive planning study to identify and evaluate potential future secondary treatment alternatives for the CTP. This work included historical data review, process modeling and potential alternatives, conceptual sizing and layouts, cost estimations and future considerations. Alternatives included MBR, AGS, Five-Stage BNR, MABR, and SBR. This document sets the foundation for this new planning effort that will be delivered as part of this project.

CTP Aeration Improvements

Hazen was selected to provide the detailed design documents and services during construction for this project. This work included development of demolition and mechanical plans to replace the existing Parkson Panels with new 9-inch disk diffusers. Hazen provided a forward thinking design, including separate zones to enable transition to nutrient removal efficiently, as identified in the CTP Feasibility Study. This forward thinking saves SOOWA significant time and capital costs.



PLANT	CAPACITY (mgd)	WORK PERFORMED
Joint Water Pollution Control Plant, Carson, CA	450	■ ■ ■ ■ ■
Robert W. Hite TF, Denver, CO	220	■ ■ ■ ■ ■
Plant No 1. & Plant No. 2, Fountain Valley, CA	180	■ ■ ■ ■ ■
Bowery Bay WPCP, New York, NY	150	■ ■ ■ ■ ■
North Regional WWTP, Broward County, FL	95	■ ■ ■ ■ ■
26th Ward WWTP, New York, NY	85	■ ■ ■ ■ ■
Neuse River WRF, Raleigh, NC	75	■ ■ ■ ■ ■
Henrico County WRF, Richmond, VA	75	■ ■ ■ ■ ■
East Central Regional WRF, West Palm Beach, FL	70	■ ■ ■ ■ ■
Valley Creek, Jefferson County, AL	60	■ ■ ■ ■ ■
T.Z. Osborne WRF, Greensboro, NC	56	■ ■ ■ ■ ■
Roanoke WPCP, Roanoke, VA	55	■ ■ ■ ■ ■
Plum Island WWTP, Charleston, SC	36	■ ■ ■ ■ ■
Nansemond Treatment Plant (HRSD), Suffolk, VA	30	■ ■ ■ ■ ■
Northern TP, Denver CO	28	■ ■ ■ ■ ■
T.P. Smith WRF, Tallahassee, FL	26.5	■ ■ ■ ■ ■
Eastside WWTP High Point, NC	26	■ ■ ■ ■ ■
Arlington East WWTP, Jacksonville, FL	25	■ ■ ■ ■ ■
Alvarado Wastewater Treatment Plant, Union City, CA	22	■ ■ ■ ■ ■
South Durham WRF, Durham, NC	20	■ ■ ■ ■ ■
East End WWTF, Portland, ME	19.6	■ ■ ■ ■ ■
Plantation Regional WWTP, Plantation, FL	19	■ ■ ■ ■ ■
Broad Run WRF, Ashburn, VA	16.5	■ ■ ■ ■ ■
Crooked Creek WRF, Gwinnett County, GA	16	■ ■ ■ ■ ■
Napa Sanitation District, Napa, CA	10	■ ■ ■ ■ ■

**Napa Sanitation District****Wastewater Treatment Master Plan**

NapaSan engaged Hazen to develop a 20-year Master Plan for the Soscol Water Recycling Facility, addressing short-term decisions and long-term strategies. The plan covers condition assessment, capacity, nutrients, biosolids, energy, recycled water, and climate vulnerabilities. It includes integrated biosolids and energy roadmaps, leading to the installation of the first Mainspring Linear Generator at a wastewater facility using biogas from anaerobic digestion.

Client Contact:

Matt Lemmon, PE
Engineering Director
(707) 258-6004
mlemmon@napasan.com

Date Initiated:

2020

Date Completed:

2022

San Bernardino Municipal Water Department**Water Reclamation Plant (WRP)****Facilities Assessment and Master Plan**

SBMWD selected Hazen to develop a dynamic, data-driven master plan for its 33-MGD Water Reclamation Plant, originally built in 1958. Facing aging infrastructure, stricter regulations, and reduced flows and revenue from an upstream scalping plant, Hazen is integrating asset management into the planning process. The approach includes asset inventory, risk and condition assessments, remaining useful life analysis, valuation, and interactive dashboards to guide short- and long-term improvements.

Client Contact:

Francisco Lopez-Jiminez
Associate Engineer
(909) 453-6169
Francisco.Jimenez@sbmwd.org

Date Initiated:

2019

Date Completed:

2020

Delta Diablo Sanitation District**Wastewater Treatment Master Plan**

Delta Diablo's 31-mgd Resource Recovery Facility serves 214,000 customers in Antioch, Pittsburg, and Bay Point. Facing aging infrastructure and future regulatory demands, the District engaged Hazen to develop a comprehensive master plan covering all treatment processes, biosolids, and recycled water systems. The plan will deliver a trigger-based roadmap for near- and long-term capital improvements, ensuring strategic, cost-effective investments aligned with future needs.

Client Contact:

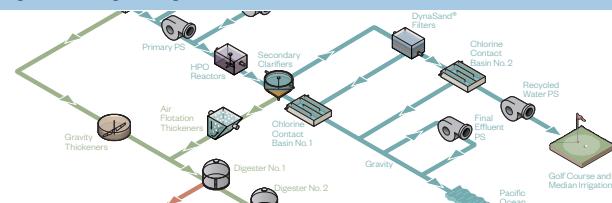
Mr. Vince De Lange
General Manager
(925) 756-1920
vinced@deltadiablo.org

Date Initiated:

2020

Date Completed:

2022

City of Daly City**NSMCSD Wastewater Treatment Facility Master Plan**

NSMCSD operates a 6.0 mgd wastewater treatment facility serving the San Francisco Peninsula. Hazen is developing the first Facilities Master Plan, assessing aging infrastructure and planning major upgrades to meet future flows and regulatory needs. The plan will provide a 10-year capital improvement roadmap plus a long-term outlook for resource and compliance planning.

Client Contact:

Greg Krauss
Chief of Operations
(650) 991-8204
gkrauss@dalycity.org

Date Initiated:

2023

Date Completed:

Ongoing

**Client Contact:**

Taryn Kjolsing, PE
 Director of Engineering
 tkjolsing@scwd.org
 949-342-1154

Date Initiated:

2022

Date Completed:

2022

Recycled Water Roadmap

Dudek developed the South Coast Water District (SCWD) Recycled Water Roadmap to advance the District's recycled water program, originally outlined in its Integrated Water Resources Plan (IWRP) with a goal of full system expansion by 2035. The District had prioritized existing potable water irrigation customers for conversion to recycled water in six phases, with Phases 0, 1, and 2 implemented or scheduled between 2020 and 2025. Dudek's work focused on planning the timing and implementation strategy for Phases 3 through 6, scheduled for 2026 through 2035.

Dudek updated recycled water hydraulic model demands and scenarios, confirmed pipeline sizing and delivery pressures, evaluated infrastructure needs and timing, and prepared planning-level cost estimates. The roadmap identified phased infrastructure improvements, evaluated alternative storage scenarios, including contingency plans for potential loss of the Joint Reservoir, and recommended pipeline and facility upgrades to ensure reliable service delivery.

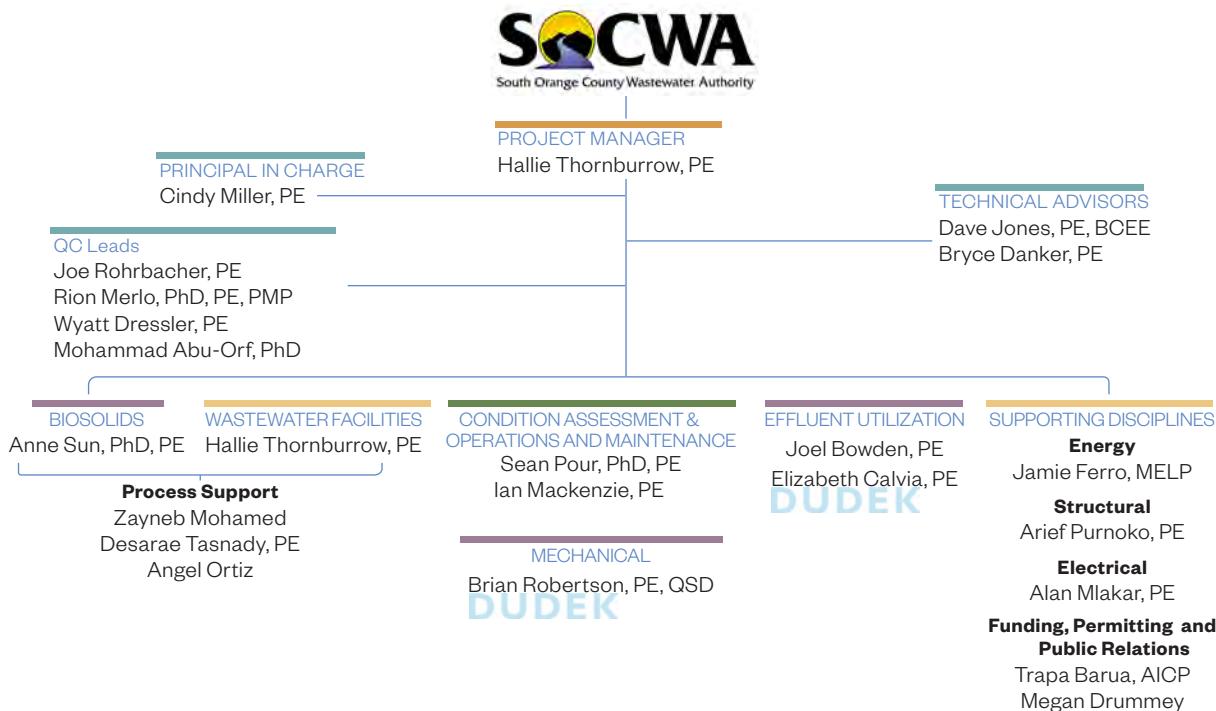
Key Personnel and Sub-Consultants

Section No.

Key Personnel and Sub-Consultants



We have assembled an accomplished and cohesive team of experts that will form a collaborative partnership with SOCWA to map out multiple pathways to achieve your short- and long-term objectives



Hallie Thornburrow, PE

Project Manager

Hallie brings 15 years of experience as a resourceful engineer, with a proven ability to solve problems. She has planned and designed wastewater infrastructure, blending technical expertise with business analysis and pragmatism. She also has extensive technical expertise and will serve a technical role leading the hydraulic modeling and flows and loads analysis.

Hallie is an enthusiastic, local, technical Project Manager. Her knowledge of Southern California's unique challenges promotes quick, informed decisions.



Cindy Miller, PE

Principal-in-Charge

Cindy is a seasoned leader in water infrastructure, known for guiding complex projects with technical expertise and clear vision. Her experience and collaborative approach drive successful outcomes for clients and communities.



Dave Jones, PE, BCEE

Technical Advisor

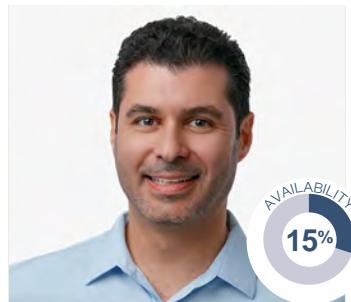
Dave is an expert in wastewater treatment and facility planning, with decades of experience advising on complex infrastructure projects. Combined with his extensive experience at the CTP, his technical insight supports innovative and practical solutions tailored to the needs of the Coastal Treatment Plant.



Bryce Danker, PE

Technical Advisor

Bryce specializes in process engineering and system optimization for water and wastewater facilities. His hands-on approach and deep technical knowledge help drive efficiency and reliability throughout project delivery. He was led the CTP Alternative Feasibility Study and Aeration Improvements projects.



Sean Pour, PhD, PE

Condition Assessment

Sean specializes in prioritizing critical assets and integrating condition data into digital platforms for real-time decision-making. Sean has delivered condition assessment programs for major California utilities, ensuring actionable insights that drive CIP development and long-term reliability. remaining asset life calculation, risk assessment, life cycle cost projection, and project validation and prioritization.



Joe Rohrbacher, PE

QC Lead - Liquid Stream

Joe brings a strong background in quality control and regulatory compliance for large-scale water projects. His attention to detail and commitment to best practices safeguard project integrity from planning through execution. He has worked closely with Bryce on all the treatment process evaluations at the CTP.



Wyatt Dressler, PE

QC Lead - Structural

Wyatt is known for his expertise in quality assurance and process improvement. He leverages his experience to maintain high standards and deliver consistent, dependable results for every phase of the project.



Mohammad Abu-Orf, PhD

QC Lead - Solids

Mohammad combines advanced technical expertise with a rigorous approach to quality management. His leadership in research and practical application ensures robust solutions and continuous improvement for complex water infrastructure projects.



Jamie Ferro, MELP

Energy

Jamie specializes in energy optimization for water and wastewater facilities. With a background in sustainable systems, Jamie develops strategies that reduce operational costs and environmental impact, supporting efficient performance at the Coastal Treatment Plant.



Anne Sun, PhD, PE

Biosolids

Anne has extensively worked on applied research on life cycle analysis and greenhouse gas emission from innovative biosolids treatment technologies, and fate of contaminants of emerging concerns. Her particular area of expertise involves biosolids process master planning and design, technology piloting and evaluation, and process modeling.



Ian Mackenzie, PE

Wastewater Facilities

Ian brings extensive experience in the planning and design of wastewater treatment plants. His technical expertise and practical approach contribute to reliable, high-performing facility upgrades and expansions. He was the Project Engineer on the CTP Facilities Improvement Design Project.



Trapa Barua, AICP

Permitting

Trapa's particular focus is on all aspects of environmental quality review and grant funding including: air permitting, and various environmental audits.

Acknowledgment of Addenda

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

ADDENDUM No. 1

TO: REQUEST FOR PROPOSAL

FOR CTP FACILITY ASSESSMENT PLANNING

THE PROPOSER SHALL EXECUTE THE CERTIFICATION AT THE END OF THE ADDENDUM AND SHALL ATTACH THE ADDENDUM TO THE PROPOSAL (NOT TO BE INCLUDED AS PART OF THE PAGE COUNT).

1. The proposal page limit is 20 pages, not including the cover letter or attachments.
2. See the attachment for the directions to CTP.
3. See the attachment for the Pre-Proposal Meeting sign-in sheet.
4. See the attachment for the Pre-Proposal Meeting presentation.

DATED: 11/20/2025

Roni Young Grant

Roni Grant
CIP Manager

BIDDER'S CERTIFICATION

I acknowledge receipt of the foregoing Addendum No. 1 and accept all conditions contained herein.

DATED: 1/15/2026

BIDDER: Hazen and Sawyer

BY: *Cindy*

Cindy Miller, PE
Vice President

Conflicts of Interest

Hazen

Hazen confirms there are no actual, apparent, direct or indirect, or potential conflicts of interest that may exist with respect to our firm, employees, or other persons identified in the Proposal relative to the services to be provided under the Agreement Services to be awarded pursuant to this RFP.

Non-Collusion Affidavit

ATTACHMENT B
NON-COLLUSION AFFIDAVIT

The undersigned declares:

I am the Vice President of Hazen and Sawyer, the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on 1/14/26[date], at Irvine [city], California[state].

Signature: 

Title: Vice President _____

Certifications

Certifications

1. Respondent certifies that it is not aware of any actual or potential conflict of interest that exists or may arise by executing the contract or performing the work that is the subject of this RFP.
2. Respondent certifies that it is willing and able to obtain all insurance required by the form contract included as Attachment C.
3. Respondent certifies that it has conducted a reasonable and diligent inquiry concerning the minimum and/or prevailing wages required to be paid in connection with the performance of the work that is the subject of this RFP and certifies that the proposed pricing includes funds sufficient to allow respondent to comply with all applicable local, state, and federal laws or regulations governing the labor or services to be provided.
4. Respondent acknowledges and agrees with all terms and conditions stated in the RFP.
5. Respondent certifies that all information provided in connection with its proposal is true, complete, and correct.

Authorized Signature:

A handwritten signature in blue ink, appearing to read "Cindy" followed by a surname.

Cindy Miller - Vice President



Fee Proposal for
**Coastal
Treatment
Plant Facility
Planning
Assessment**

January 15, 2026

Hazen

Hazen and Sawyer										
	Vice President	Senior Associate	Associate	Senior Principal Engineer	Principal Engineer	Engineer	Senior Administrator	Designer		
	\$430	\$370	\$290	\$235	\$220	\$180	\$155	\$215		
1. Project Management									Hours	Labor
1.1 Project Control Plan	7	4	16	0	0	0	3	0	30	\$ 9,595
1.2 Project Meetings and Communications	72	134	69	16	32	72	0	0	395	\$ 124,310
Facility Planning Assessment (FPA) Table of Contents and corresponding schedule of deliverables	5	2	4	0	0	0	0	0	11	\$ 4,050
Monthly progress reports	8	0	24	0	0	0	0	0	32	\$ 10,400
TASK 1 TOTALS	92	140	113	16	32	72	3	0	468	\$ 148,355
									ODCs	Dudek Hous
									Dudek Fee	Total
2. Existing Facilities Evaluation										
2.1 Description of Existing Facilities	0	16	8	0	0	48	0	8	80	\$ 18,600
2.2 Review of Existing Reports and Models	0	0	8	0	16	24	0	0	48	\$ 10,160
2.3 Flow and Loading Analysis	8	12	12	0	0	74	0	0	106	\$ 24,680
2.4 Existing Facilities Analysis	0	16	24	0	8	100	0	0	148	\$ 32,640
2.5 Condition Assessment of Major Unit Processes	0	64	24	0	0	0	0	0	88	\$ 30,640
Task 2 Summary TM	2	56	16	0	0	16	8	0	98	\$ 30,340
QAQC of TM2	28	0	0	0	0	0	0	0	28	\$ 12,040
TASK 2 TOTALS	38	164	92	0	24	262	8	8	596	\$ 159,100
									1,000	81
									\$ 20,695	\$ 180,795
3. Wastewater Treatment Alternatives										
3.1 Identify and Develop Treatment Alternatives	46	160	24	0	40	72	0	16	358	\$ 111,140
3.2 Risk and Resilience Planning Elements	0	48	0	80	0	72	0	0	200	\$ 49,520
Task 3 Summary TM	16	72	8	0	0	48	8	0	152	\$ 45,720
QAQC of TM3	0	0	0	0	0	0	0	0	0	\$ -
	0	0	0	0	0	0	0	0	0	\$ -
TASK 3 TOTALS	62	280	32	80	40	192	8	16	710	\$ 206,380
									-	\$ 206,380
4. Recycled Water Facilities and Effluent Utilization Evaluation										
Determine Current and Projected Recycled Water Uses	0	0	0	0	0	0	0	0	0	\$ 6,130
Identify Offsite Alternative Options	0	0	0	0	0	0	0	0	0	\$ 11,420
Develop Effluent Utilization Alternatives	0	0	0	0	0	0	0	0	0	\$ 15,040
Develop Onsite Utilization Alternatives	0	60	8	0	0	24	0	0	92	\$ 28,840
Task 4 Summary TM	0	16	4	0	0	24	8	0	52	\$ 12,640
QAQC of TM4	8	4	0	0	0	0	0	0	12	\$ 4,920
TASK 4 TOTALS	8	80	12	0	0	48	8	0	156	\$ 46,400
									-	\$ 47,930
									173	\$ 94,330
5. Develop Project Alternatives										
5.1 Identify Proposed Project Alternatives	0	4	0	0	0	0	0	0	4	\$ 1,480
Project Alternative Summary Matrix	0	12	8	0	0	8	0	0	28	\$ 8,200
Summary TM	0	0	8	0	0	24	8	0	40	\$ 7,880
QAQC of TM 5	16	0	0	0	0	0	0	0	16	\$ 6,880
TASK 5 TOTALS	32	176	40	0	0	128	24	0	400	\$ 24,440
									-	\$ 24,440
6. Prepare Facility Planning Assessment Report and Documents										
Administrative Draft Facility Planning Assessment Report	6	32	8	0	8	24	8	0	86	\$ 24,060
Draft Facility Planning Assessment Report	0	16	8	0	0	24	8	0	56	\$ 13,800
Final Facility Planning Assessment Report	0	0	8	0	0	0	8	0	16	\$ 3,560
Report	22	16	8	0	0	0	0	0	46	\$ 17,700
TASK 6 TOTALS	28	64	32	0	8	48	24	0	204	\$ 59,120
									-	\$ 59,120
TASKS 1-6 GRAND TOTALS	260	904	321	96	104	750	75	24	2534	\$ 643,795
									4,000	\$ 279
									\$ 75,650	\$ 723,445

Agenda Item

11

Engineering Committee Meeting

Meeting Date: February 19, 2026

TO: Engineering Committee
FROM: Amber Boone, General Manager
Jim Burror, Deputy General Manager/Chief Engineer
SUBJECT: CTP Regional Flow Study [Project Committee 15]

Overview

The CTP Regional Flow Study is intended to be a high-level evaluation of the technical feasibility of region-wide wastewater flow redirection options associated with the potential decommissioning of the Coastal Treatment Plant (CTP). The evaluation will assess alternatives for redirecting incoming wastewater flows from the City of Laguna Beach (CLB), South Coast Water District (SCWD), and Emerald Bay Services District (EBSD) to other regional treatment facilities, including the Orange County Sanitation District (OCSAN), the Regional Treatment Plant (RTP), and the J.B. Latham Treatment Plant (JBL).

The analysis will incorporate key regional considerations, including the SCWD Tunnel Stabilization and Sewer Pipeline Replacement Project, current and projected recycled water demands in South Orange County, and potential funding mechanisms related to the North Coast Interceptor (NCI) associated with the City of Laguna Beach.

The primary objectives of this SOW are to:

- Assess technical feasibility at a conceptual level, identifying major opportunities, constraints, and fatal-flaw risks associated with regional flow redirection alternatives.
- Develop high-level planning cost estimates for decommissioning activities, required infrastructure modifications, and operational transitions.
- Integrate regional and programmatic considerations, including coordination with ongoing capital projects, recycled water objectives, and applicable funding strategies.
- Provide actionable, decision-support recommendations to inform policy discussions and determine whether more detailed technical, environmental, or financial studies are warranted.

Proposals

SOCWA solicited proposals through PlanetBids on November 20, 2025. Sixteen (16) firms were contacted during this process (in alphabetical order):

- AECOM
- ARCADIS U.S., Inc.

- Ardurra
- Black & Veatch
- Brown and Caldwell
- Carollo Engineers
- CDM Smith
- Civiltech
- Dudek
- Hazen and Sawyer
- HDR Engineering, Inc.
- JACOBS
- MKN & Associates, Inc
- Tetra Tech
- YTLin
- West Yost

Three (3) proposals were received. The proposals and associated labor efforts are attached here.

A summary of the proposals is in Table 1.

Table 1 – Summary of Proposals Elements by Firm (in alphabetical order)

Firm	ARCADIS	Dudek	MKN
Project Manager	Ryan Hejka	Brian Robertson	Ryan Gallagher
Labor Hours(*)	328	298	388

*Subconsultants were not proposed.

The proposals were distributed to the evaluation committee on February 2, 2026.

Initial Proposal Review for Minimum Requirements

An initial review of the proposals determined that all three (3) submissions were responsive to the Request for Proposals. Based on the proposals' content, SOCWA staff recommended that all three (3) firms advance to the interview stage. Interviews were conducted on February 11, 2026.

The average preinterview ratings are shown in Table 2.

Table 2 – Summary of Proposal Preinterview Ratings (in alphabetical order)

Firm	Max Score	ARCADIS	Dudek	MKN
Average Rating	100	75.3	89.0	84.7

Interview Results

After the interviews, the selection committee evaluated the proposers. The average postinterview ratings are shown in Table 3.

Table 3 – Summary of Proposals (in alphabetical order)

Criteria	Max Score	ARCADIS	Dudek	MKN
Understanding of the Work	25	17.50	18.75	24.25
Approach to the Project	30	21.25	23.25	29.00
Experience and Technical Competence				
- Key Team Members	15	9.50	11.50	14.25
- Firm	10	7.50	8.25	8.25
Completeness and thoroughness	20	17.00	16.75	18.75
Proposed Fee (post interview scoring)	20	20.00	20.00	15.00
Total	120	92.75	98.50	109.50

ARCADIS

ARCADIS submitted a detailed proposal with a strong modeling approach to develop cost estimates. The team has solid experience working on large wastewater projects in the Los Angeles area. Their technical work was thorough and well prepared.

However, the panel felt the approach was more suited for a full design project rather than a focused planning study. The panel was also concerned that the proposal did not clearly show enough experience working within SOCWA's specific multi-agency structure. This was felt to be important because coordination among member agencies is necessary to keep the project on schedule, which raised concerns about project delivery.

Dudek

Dudek's proposal followed the Scope of Work and clearly explained its approach. The team is currently involved in modeling efforts with SOCWA member agencies, which was viewed as a benefit.

However, the panel did not see enough examples of leading large projects involving multiple agencies working together. Since this project requires coordination among several agencies, the panel wanted stronger evidence of senior-level leadership in that area. This raised some concern about meeting the project's schedule.

MKN

MKN received the highest overall rating. The panel believed MKN best understood both the technical work and the coordination needed among agencies. The proposal clearly explained how engineering analysis, cost development, and communication would work together.

The proposed project manager is also an executive at the firm. The panel viewed this as a strength because it means the project would have strong leadership and direct access to company resources, reducing the risk of delays.

Based on qualifications, understanding of the project, and lower schedule risk, the panel determined that MKN provided the strongest overall value to SOCWA.

Post Interview Rating Cost Evaluation

After the selection team submitted their ratings, the proposal costs were provided to the selection team members. The proposal fees are shown in Table 4.

Table 4 – Summary of Proposal Fees (in alphabetical order)

Firm	ARCADIS	Dudek	MKN
Proposed Fees	\$79,999	\$80,000	\$89,401

MKN remained the highest-rated firm after the proposal fee score was added to the firm's post-interview score, see Table 3 above. Thus, the selection committee considers MKN the best value for SOCWA.

Budget

The project budget is \$80,000, and an increase of \$9,401 is necessary.

Recommended Action: Staff recommends that the Engineering Committee recommend that the PC15 Board of Directors: 1) approve a project budget increase of \$20,000 for a total of \$100,000; 2) authorize the General Manager to execute a contract with MKN for a fee not to exceed \$89,401.00; and 3) approve a project contingency of \$10,599 for unforeseen changes in scope.

Attachments (in alphabetical order):

ARCADIS Proposal and Hours

Dudek Proposal and Hours

MKN Proposal and Hours



Proposal



South Orange County Wastewater Authority

CTP Regional Flow Study

ENG-25-10

JANUARY 2026



Jim Burror
 Deputy General Manager/Chief Engineer
 South Orange County Wastewater Authority
 34156 Del Obispo Street
 Dana Point, CA 92629
 Phone: (949) 234-5410

January 29, 2026

Re: Proposals for CTP Regional Flow Study ENG-25-10

Dear Mr. Burror:

Arcadis is pleased to submit our proposal to conduct the CTP Regional Flow Study, supporting South Orange County Wastewater Authority (SOCWA) in evaluating alternative regional wastewater flow strategies. Our team brings a proven track record in delivering high-level, effective feasibility analyses for complex water and wastewater projects throughout Southern California.



Leverage Team Efficiency and Alternative Analysis Expertise

Our team's experience managing multi-agency alternative analyses ensures a streamlined, responsive approach. We have recently completed similar studies for regional wastewater, potable water and recycled water projects, providing actionable recommendations that help clients balance cost, risk, and regional integration.



Sewer System Hydraulic Expertise

Arcadis is recognized for its expertise in sewer system hydraulics, including flow forecasting, pipeline and lift station evaluation, and tunnel projects. Our specialists bring deep technical knowledge of system interconnections, operational transitions, and high-level feasibility assessments—ensuring robust, defensible findings for this study.



Effective Member Agency Engagement

We excel at building consensus among diverse stakeholders. Our approach emphasizes collaboration and transparent communication with each member agency, ensuring that all voices are heard and project objectives are unified.

Identification of Responder

- Legal Name: Arcadis U.S., Inc.
- Parent Company: Arcadis N.V. (parent company, headquartered in Amsterdam, Netherlands)
- Principal Address: 630 Plaza Drive, Suite 200, Highlands Ranch, CO 80129
- Local Office: 18401 Von Karman Avenue, Suite 300, Irvine, CA 92612
- Contact: Ryan Hejka PE, Project Manager, (626) 342-1191, Ryan.Hejka@Arcadis.com

Should you have any questions or need additional information, please contact Mr. Hejka.

Sincerely,
 Arcadis U.S., Inc.



Christine Cotton, PE
 Principal-in-Charge
 Christine.Cotton@arcadis.com |  213.797.5304



Ryan Hejka, PE
 Project Manager
 Ryan.Hejka@arcadis.com |  626.342.1191

A. Project Understanding and Approach to the Work

Our Understanding

The Coastal Treatment Plant (CTP) Regional Flow Study requires a high-level engineering evaluation of alternatives for redirecting wastewater flows following CTP decommissioning. The study addresses the City of Laguna Beach (CLB), South Coast Water District (SCWD), and Emerald Bay Service District (EBSD), focusing on feasible options for redirecting influent to Orange County Sanitation District (OCSAN), Regional Treatment Plant (RTP), and JB Latham Treatment Plant (JBL).

Key Objectives

- Technical Feasibility: Assess viability of flow redirection, identifying major opportunities, constraints, and risks.
- Cost Evaluation: Develop high-level cost estimates for decommissioning, infrastructure modifications, and operational transitions.
- Regional Integration: Ensure alignment with ongoing projects (e.g., SCWD Tunnel Stabilization & Sewer Pipeline Replacement), water resource management goals, and funding strategies (e.g., North Coast Interceptor (NCI) by CLB).
- Actionable Recommendations: Provide guidance for decision-making and future studies.

Upon reviewing the project requirements and regional context, we have identified several key challenges and considerations that will shape the feasibility evaluation and ultimate success of the CTP Regional Flow Study:

• Complex Flow Patterns

The involvement of multiple agencies CLB, SCWD, and EBSD introduces significant variability in flow volumes, wastewater quality, and seasonal fluctuations. Each agency's unique infrastructure, operational protocols, and historical flow data must be thoroughly analyzed to ensure that redirection scenarios are technically viable and equitably address the needs of all stakeholders. Additionally, maintaining appropriate flow allocations and understanding the interdependencies between agencies will be critical to developing actionable recommendations.

• Infrastructure Compatibility

Recipient facilities, including OCSAN, RTP, and JBL, have distinct capacities, treatment capabilities, and integration requirements. Assessing the compatibility of existing infrastructure such as pipelines, tunnels, and lift stations with proposed flow redirection scenarios will be essential. Potential upgrades, extensions, or new connections may be required to accommodate redirected flows without compromising operational reliability or service levels. Integration with concurrent projects, like the SCWD Tunnel Stabilization & Sewer Pipeline Replacement Project, adds further complexity and requires a coordinated approach to avoid redundancy and maximize cost efficiencies.

• Recycled Water Demands

SOCWA's reliance on recycled water for irrigation and other non-potable uses underscores the importance of maintaining or expanding recycled water production amid flow redirection. Evaluating the potential impacts on tertiary effluent availability, distribution systems, and regional water balance is necessary to prevent service disruptions and to continue meeting established sustainability and water reuse targets. The study must consider how changes in raw and treated wastewater flows could affect recycled water supply and future demands.

• Funding & Cost-Sharing

A multi-agency project of this scope requires careful evaluation of funding mechanisms and cost-sharing strategies, particularly regarding the North Coast Interceptor (NCI) and other major infrastructure investments. The study must identify equitable approaches to allocating capital and operational costs, taking into account agency-specific contributions, benefit distribution, and potential cost offsets from leveraging existing projects (e.g., the SCWD tunnel improvements). Ensuring financial transparency and buy-in from all stakeholders is essential for project advancement.

• Regulatory Compliance

The project must be evaluated within the context of a complex regulatory environment. Preliminary reviews of the Clean Water Act, California Environmental Quality Act (CEQA), permitting requirements, and property access needs are critical to identifying potential obstacles early in the process. Consideration must also be given to local and regional planning requirements, environmental mitigations, and possible future regulatory changes that could affect project feasibility or timeline.

• Stakeholder Impacts

Redirecting flows and decommissioning CTP will have far-reaching impacts on communities, businesses, and ongoing regional initiatives. Potential construction activities, changed flow paths, or service transitions could affect public right-of-way, business operations, and local traffic. Early and ongoing engagement with all relevant stakeholders including the PC 15 Member Agencies, OCWD, SOCWA, and the broader community will be necessary to anticipate concerns, minimize disruptions, and foster project support.

Our Approach

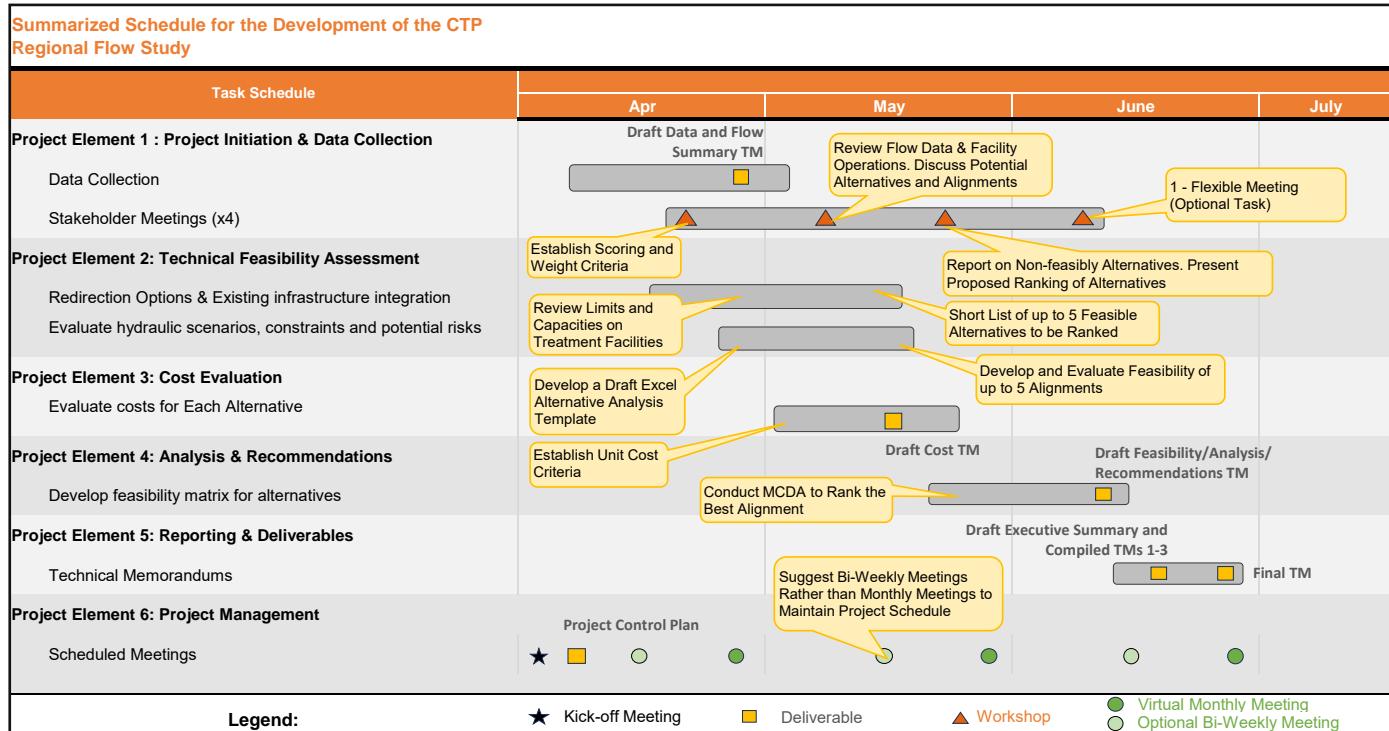
Arcadis will deliver the CTP Regional Flow Study through a structured, phased methodology that aligns with the Project Elements outlined in the RFP. Our approach combines technical rigor, robust project management, and innovative practices, ensuring the study is completed on time and within budget. This section details our approach, anticipated challenges and solutions, schedule, and the core strengths we bring to the project.

Technical and Management Considerations

Our team leverages proven project management frameworks to coordinate multi-agency efforts, maintain clear communication, and proactively manage risks. Key considerations include:

- Effective Stakeholder Engagement: Early and continuous collaboration with all member agencies and stakeholders to facilitate data sharing and consensus-building.
- Quality Assurance: Robust internal review processes and clear documentation standards.
- Resource Optimization: Applying lessons learned from recent alternative analyses to streamline data collection, evaluation, and reporting.
- Schedule Control: A detailed project schedule and routine progress tracking to ensure timely delivery of all milestones.

The schedule below details the work to be performed to deliver this study within 12 weeks following the kick-off meeting. For the demonstration of the feasibility and approximate time required for each task it is assumed the kickoff meeting will commence the first week of April 2026. The critical path in this schedule is the scheduling and meeting with the SOCWA's Member Agencies. It is assumed that these workshops can be facilitated in a timely matter and will take place between April to June. Ultimately the final study will be delivered before the Beginning of July 2026.



This study will focus on a "fatal flaw" conceptual analysis rather than detailed design. A description of Arcadis' methodology for each Project Element is summarized below.

Project Element 1: Project Initiation & Data Collection

- Arcadis will gather and review all relevant documentation, including flow diagrams, as-builts, permits, and historical records. We will document, summarize, and tag each file in an internal Excel database, enabling team members to perform keyword searches and easily access project materials. This centralized approach allows one reviewer to efficiently summarize and distribute key findings to each project element lead. This data request is summarized in the Required Data List on page 5.
- We will conduct stakeholder interviews through forms and email, engaging representatives from CLB, SCWD, EBSD, OCSAN, RTP, JBL, OCWD, and SOCWA. Arcadis will provide standardized forms to an email list of stakeholders, streamlining the data gathering process. We will summarize flow and operations data and present our findings for review in a group virtual meeting with all stakeholders.
- Arcadis and SOCWA will establish a data collection cutoff date to keep the project on schedule.

- We will develop internal flow charts and Excel spreadsheets to summarize and track flow data from each agency.
- Arcadis will facilitate three stakeholder meetings to support project communications:
 1. A meeting to establish scoring criteria.
 2. A meeting to review flow data, facility operations, and discuss potential future alignments proposed by both Arcadis and stakeholders.
 3. A meeting to report on the feasibility of alternatives and propose the top five alternatives, along with their initial rankings.
- Arcadis has also included a fourth, optional stakeholder meeting, to be scheduled if and when the need arises during project delivery. This flexible approach draws on our experience with multi-agency projects, ensuring we can address emerging issues, clarify technical findings, or facilitate additional consensus-building at key decision points. By offering this meeting as an as-needed resource, we help ensure that all stakeholder concerns are addressed proactively and that project momentum is maintained.

Project Element 2: Technical Feasibility Assessment

- Arcadis will review operational data to determine the feasibility of redirection options for each agency. We will consider flow equalization, inflow and infiltration (I&I), impacts of aging pipelines, and potential sewer return flows as part of evaluating the decommissioning of CTP and flow redirection scenarios.
- We will review available data from stakeholders for existing infrastructure, available capacity and use USGS contours to evaluate ground elevations for proposed alignments.
- We will assess integration with current infrastructure, including the NCI and SCWD Tunnel Project. Our team will review existing drawings and evaluate modifications or capacity needs of tunnels and pipelines to determine the feasibility of using these assets as alternative alignments.
- Arcadis will develop a skeletonized hydraulic model for up to 10 proposed alignment alternatives to support the feasibility analysis in Project Element 2. This streamlined model will allow us to efficiently evaluate hydraulic performance, including minimum and maximum slope requirements, the need for lift stations, and potential upsizing of conveyance infrastructure. Using InfoWorks ICM, we will manage and compare multiple alternative scenarios. The top five alternatives, as determined through the feasibility assessment, will be advanced to Project Element 4 for multi-criteria decision analysis (MCDA), where detailed hydraulic and operational evaluations will inform the final recommendations.
- We will extract data from the hydraulic model to develop cost estimates using the unit costs established in Project Element 3. In addition, we will incorporate environmental, regulatory, and other qualitative data aligned with the MCDA parameters. All information will be documented in Excel-based hydraulic spreadsheet, providing a streamlined platform for efficient and transparent alternative analysis.
- We will develop a feasibility matrix for alternatives and identify risks, including system disruptions, climate vulnerabilities, and maintenance/ access issues.

Project Element 3: Cost Evaluation

- Arcadis will use regional databases and recent local project examples to develop a unit cost Technical Memorandum (TM). We will submit this TM for SOCWA's review and use it to estimate capital and operational costs for each alternative.
- We will compare strategies using industry benchmarks and conduct sensitivity analyses.
- Arcadis will assess cost-sharing and buy-in estimates for redirected flows.

Project Element 4: Analysis & Recommendations

- Arcadis will develop scoring and weighting criteria for the MCDA analysis, working with SOCWA to define the major goals and considerations for each alternative.
- We will expand our Excel-based hydraulic spreadsheet to include alternative analysis, costs, and MCDA rankings. This template will allow for the quick evaluation of up to five alternative alignments.
- Arcadis will provide recommendations for next steps, integrate regional goals and alignment with ongoing projects, and supply implementation timelines.

Project Element 5: Reporting & Deliverables

- Arcadis will deliver technical memorandums and the final report in MS Word via SharePoint or Bluebeam Sessions, allowing multiple authors to edit documents simultaneously. This collaborative approach streamlines the review process and ensures all stakeholders can provide input efficiently. We will submit draft Technical Memorandums to SOCWA within one week after completion of each project element. Three TMs will be provided: TM 1 (Project Element 1), TM 2 (Project Elements 2 and 4), and TM 3 (Project Element 3).

Project Element 6: Project Management

- Arcadis will develop a Project Control Plan (PCP) as a preliminary deliverable, providing a unified management framework for all project activities.
- We will conduct a project kick-off meeting and monthly meetings, and provide monthly invoices with bullet-style progress reports.

- In addition, Arcadis proposes to add six bi-weekly meetings to the project schedule, supplementing the monthly meetings required by the RFP. This will allow our project managers and SOCWA's project management team to more closely monitor progress and address issues promptly, ensuring the project stays on track for its accelerated timeline.

Addressing Anticipated Challenges

We recognize that each Project Element presents unique challenges. The table below summarizes key anticipated obstacles and our proactive approaches to overcoming them:

Table 1. Approach to Overcoming Foreseen Project Challenges

PROJECT ELEMENT	CHALLENGES	APPROACH TO OVERCOME CHALLENGES
1. Project Initiation & Data Collection	<ul style="list-style-type: none"> Incomplete or inconsistent data from member agencies Scheduling conflicts for stakeholder interviews 	<ul style="list-style-type: none"> Early and regular coordination with agency contacts Develop a data request matrix and track responses Submit forms to solicit feedback
2. Technical Feasibility Assessment	<ul style="list-style-type: none"> Variability in infrastructure condition and compatibility Uncertainty in flow projections and system interdependencies 	<ul style="list-style-type: none"> Use conservative assumptions and sensitivity analysis Validate findings through cross-agency technical workshops
3. Cost Evaluation	<ul style="list-style-type: none"> Limited cost data for new infrastructure High variability in market prices and contingencies 	<ul style="list-style-type: none"> Employ industry benchmarks and parametric estimating Conduct sensitivity analysis and provide cost ranges
4. Analysis & Recommendations	<ul style="list-style-type: none"> Complex trade-offs between alternatives Potential for stakeholder disagreement on preferred options 	<ul style="list-style-type: none"> Develop an objective feasibility matrix Facilitate consensus-building workshops with clear criteria
5. Reporting & Project Management	<ul style="list-style-type: none"> Ensuring clarity and accessibility of technical reports Coordinating timely reviews and approvals across agencies 	<ul style="list-style-type: none"> Utilize clear executive summaries and visual aids Set interim deadlines and follow-up on review status
6. Project Management Project Management	<ul style="list-style-type: none"> Maintaining alignment between all agencies Managing schedule risks due to unforeseen issues 	<ul style="list-style-type: none"> Implement a Project Control Plan with clear roles/ responsibilities Track progress closely and hold regular PM meetings

Required Data List

Historical and current influent flow data for CLB, SCWD, and EBSD	Stakeholder contact information and availability for interviews (CLB, SCWD, EBSD, OCSAN, RTP, JBL, OCWD, SOCWA)
Wastewater quality parameters for each agency (e.g., BOD, TSS, nutrients)	Funding and cost-sharing documentation for major assets, such as NCI funding strategies and cost allocation agreements
As-built drawings and GIS shapefiles of sewer, pump station, tunnel, and pipeline infrastructure, including NCI and SCWD Tunnel	Records of maintenance or capital improvement projects affecting the studied facilities
Recycled water production and demand data	Information on recycled water agreements and interagency transfers
Infrastructure capacity and operational data for recipient facilities (OCSAN, RTP, JBL)	Available studies or records on community and business impacts related to wastewater or recycled water projects
Documentation for ongoing and planned regional projects, such as the SCWD Tunnel Stabilization & Sewer Pipeline Replacement Project	Any other data, reports, or studies relevant to environmental constraints, property needs, or permitting for proposed alternatives
Permits, regulatory compliance documentation, and relevant planning reports	

Arcadis will coordinate closely with SOCWA to refine this list at project initiation and ensure all required data is obtained efficiently and securely.

B. Project Experience and Technical Competence

At Arcadis, we have extensive experience providing high-level evaluations of wastewater collection and treatment systems, including the technical feasibility assessments crucial for projects like the CTP Regional Flow Study. Our teams have led and supported numerous projects across the United States, where we routinely assess opportunities, constraints, and risks associated with redirecting wastewater flows, estimating high-level costs, and integrating regional considerations. For example, we have managed large, multi-stakeholder partnerships, such as the Lehigh County Authority's Sewer Capacity Assurance and Rehabilitation Program (SCARP), where we successfully brought together different communities to evaluate capacity, assess flow impacts, and implement phased corrective action plans aligned with regulatory requirements and future needs.

Our approach emphasizes the integration of existing data, stakeholder input, and cross-disciplinary collaboration to deliver innovative and practical solutions. For instance, in previous projects, we have coordinated closely with clients to ensure alignment with ongoing infrastructure upgrades, water resource management goals, and funding strategies—much like what is required for SOCWA's study. We are adept at managing the full scope of work, from initial high-level feasibility analysis to developing cost estimates for infrastructure modifications and operational transitions. Our track record includes mobilizing expert teams on short notice to address client needs, conducting fatal flaw analyses, and navigating preliminary regulatory requirements, such as those under the Clean Water Act and CEQA. This depth of experience positions Arcadis as a trusted advisor capable of supporting SOCWA through the complexities of this critical regional flow study. An overview of our experience is provided in the table below. Detailed project descriptions and references are presented on the following pages.

CLIENT	STUDY AREA (ACRES)	Alternative Analysis						
		Pump Stations	Tunnel Analysis	Storage Facilities	Treatment Planning	Operation & RTC	Source Control	CP/Cost Development
City of Santa Monica, CA	5,000	●		●	●	●		●
Laguna Beach County Water District, CA	5,000	●			●			●
Glendale Water and Power, CA	19,000	●		●	●			●
Gwinnett County, GA	279,500	●	●	●	●	●		●
Milwaukee Metropolitan Sewerage District, WI	271,000		●			●		●
City of Columbus, OH	180,000	●	●	●	●	●	●	●
City of Houston, TX	72,500	●	●	●	●	●	●	●
North Texas Municipal Water District, TX	1,400,000	●		●	●	●	●	●
Allegheny County Sanitary Authority, PA	76,000	●	●	●	●		●	●
Buffalo Sewer Authority, NY	71,000	●		●				●
Cincinnati MSD, OH	70,000	●		●		●	●	●
Citizens Energy Group, IN	202,000	●				●	●	
Lehigh County Authority, PA	31,000						●	●
Evansville Water Sewer District, IN	30,280	●	●	●	●	●	●	●
National Water Company, KSA	106,000	●				●		●

Eastside Conveyance System Preliminary Design Analysis

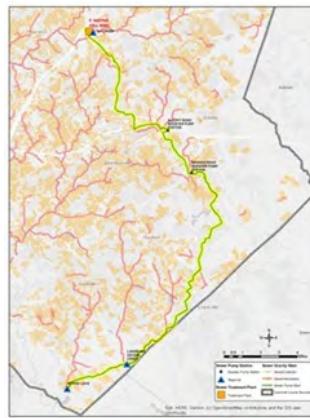
Gwinnett County Department of Water Resources, Gwinnett County, GA

The Eastside Conveyance System (ECS) Capacity Preliminary Design Analysis (PDA) is a project commissioned by the Gwinnett County Department of Water Resources (DWR) to address the capacity limitations of the ECS force main, which has reached its maximum design flow capacity of 34.5 million gallons per day (mgd) during peak storm events. The ECS consists of three regional submersible pump stations and two in-line booster pump stations, all sharing a 36-inch ductile iron force main extending over 28 miles to discharge at the F. Wayne Hill Water Resources Center (FWHWRCC).

The project aims to select an optimal strategy for identifying infrastructure improvements, including strategies for implementing a new WRC within the planning horizon. The project included EPA Augmented Alternatives Analysis (AAA) methods, which include triple bottom-line scoring, cost, social and environmental factors, and relevant cost/benefit ratios. The analysis documented current capacity limitations and identified infrastructure improvements and operation strategies through hydraulic modeling. The analysis reviewed previously defined alternatives and identified new preferred strategies for further evaluation to address hydraulic limitations within the ECS.

Several alternatives were evaluated, including providing additional operational storage, diverting flows to areas with perceived capacity, and increasing force main capacity. The project also considers the anticipated growth throughout the eastern corridor of the county, which will result in additional loading on the ECS.

The ECS PDA was a critical initiative to ensure the system can handle future demands and maintain adequate service. The project involves collaboration between various Arcadis and DWR engineering departments, as well as DWR Operations, to provide optimal strategies.



Client Contact

Ron Miller, P.E
Project Manager
Ronald.Miller@gwinnettcounty.com

Contract Term / Completion Date

2024 - 2025

Total Value

\$160,000

Key Personnel

Chris Adams, PE

Relevancy

- Capacity Assessment
- Alternatives Analysis
- Growth Projections
- Hydraulic Modeling
- Preliminary Design
- Financial Impact
- Cost Benefit Analysis

Domestic Water and Sanitary Sewer Master Plan Updates

City of Santa Monica, CA

Arcadis supported the City of Santa Monica, a leader in sustainability and water conservation, with updating its Domestic Water and Sanitary Sewer Master Plans and hydraulic models to analyze current and projected service levels for its water and wastewater systems. The project included a detailed review of existing and future water sources, water usage, and system configuration, and involved updating and calibrating hydraulic models with field data. Through scenario analysis and collaboration with ongoing City initiatives, the project identified major opportunities, constraints, and risks related to system performance, alternative water supplies, and compliance with emerging water quality regulations.

The study culminated in the development of a Capital Improvement Program through 2045, utilizing hydraulic modeling to estimate high-level costs for infrastructure upgrades and operational changes. Arcadis integrated regional considerations by synchronizing demand projections with other master planning efforts and aligning with broader water resource management and funding strategies. The project provided actionable recommendations, including comprehensive model reference materials and staff training, to support informed decision-making and guide future detailed studies and long-term operational planning.



Client Contact

Dinaz Kureishy, PE
Project Manager
2500 Michigan Avenue, Building 1
Santa Monica, CA 90404
310.458.2220
Dinaz.Kureishy@santamonica.gov

Contract Term / Completion Date

2024

Total Value

\$910,000 (total fees/cost)

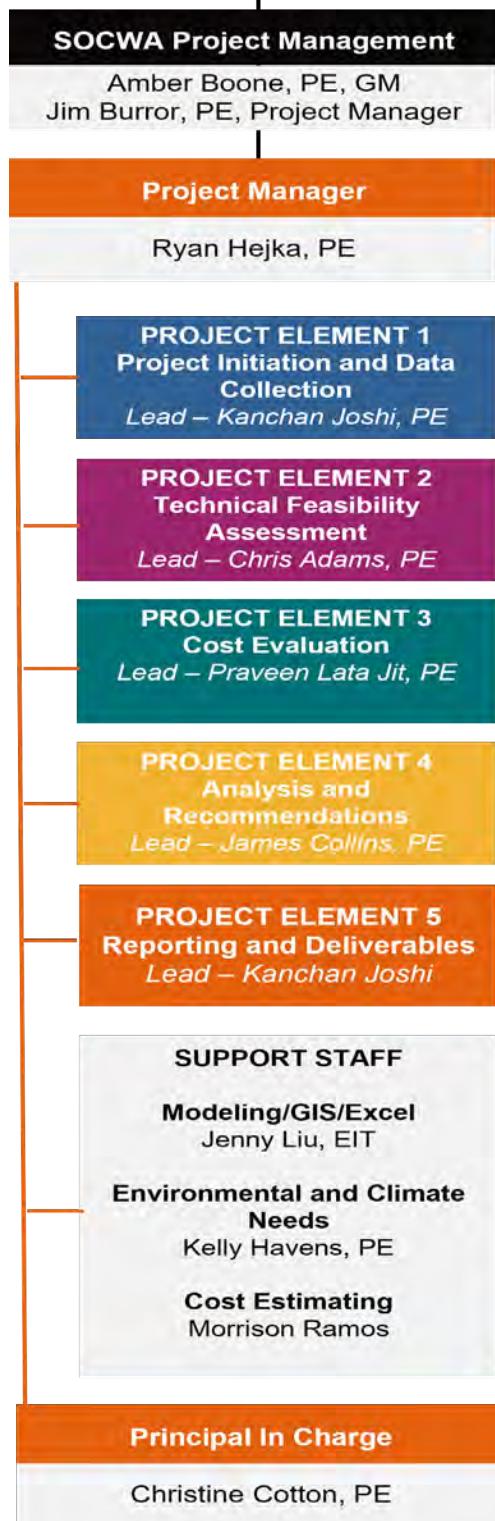
Key Personnel

Christine Cotton, PE
Jenny Liu, EIT
Ryan Heka, PE
James Collins, PE

Relevancy

- Domestic water master plan
- Demand forecasting
- Capital improvement planning
- Alternative supply evaluations

C. Key Personnel and Sub-Consultants



At Arcadis, our team for the SOCWA CTP Regional Flow Study is composed of industry-recognized experts in feasibility analysis, hydraulic modeling, alternatives evaluation, environmental compliance, and cost estimating. Our project leadership and technical staff have delivered high-level assessments and innovative solutions for regional wastewater and water resource challenges across California and the United States. Our team is committed and will be available as required for the successful completion of the project within SOCWA's 12-week duration. Arcadis does not intend to use any sub-consultants for this project. Brief team highlights are provided below with resumes further detailing our team's qualifications provided in the resume appendix.



Project Manager/Primary Contact – Ryan Hejka, PE

"I take pride in proactive planning, client collaboration, and the agility to pivot as needed all to achieve successfully on-time delivery"

As Project Manager, Ryan will serve as the main point of contact and have full oversight on project delivery, coordination, and quality assurance. Ryan specializes in hydraulic modeling and master planning, with expertise in sewer, water, and recycled water systems across the western US. His recent leadership of the Glendale Water Master Plan and experience with complex alternatives analysis ensures a proactive, responsive approach. Ryan's strong relationships with project element leads and support staff underpin a "well-oiled team" dynamic, proven on similar multi-agency projects.

Ryan is committed to providing the time and attention necessary for the success of the SOCWA CTP Regional Flow Study, with approximately 45% of his professional availability dedicated to this project between March and September. This ensures direct involvement at all major milestones, timely responses to SOCWA's needs, and effective leadership throughout the project's critical phases. Supported by a highly qualified team, Ryan's availability and proactive management approach will keep the project on track and responsive to emerging issues.



Principal-in-Charge – Christine Cotton, PE

Ms. Cotton brings nearly three decades of experience managing master plans, advanced water treatment, and large-scale infrastructure programs throughout Southern California. As Principal-in-Charge, she will provide executive oversight, ensure project quality, and attend monthly meetings as needed to support the team and client. Christine's extensive background in contract management and regional water quality projects positions her to ensure that project deliverables meet the highest standards.

Project Element Leads

Our Project Element Leads are recognized specialists in their respective fields and will be directly responsible for delivering the technical work, analysis, and recommendations for each major phase of the SOCWA CTP Regional Flow Study. Their deep subject matter expertise and experience in collaborative, multi-agency planning ensure each project element is addressed thoroughly and efficiently:



Kanchan Joshi | Project Initiation & Data Collection / Reporting and Deliverables

Ms. Joshi will spearhead the launch of the study by coordinating data requests, managing the collection and review of existing documentation, and ensuring stakeholder interviews are conducted efficiently and comprehensively. She will lead the organization and cataloging of all acquired data, establishing the foundation for technical analysis in later phases. Kanchan's expertise with GIS and data management will streamline the integration of diverse datasets, maps, and historical records from the various participating agencies. As the lead for Reporting & Deliverables, she will oversee the assembly, synthesis, and quality control of all technical memoranda and the final report, ensuring clarity, accuracy, and consistency throughout. Her track record in delivering comprehensive, actionable deliverables makes her instrumental to project documentation and knowledge transfer.



Chris Adams, PE | Technical Feasibility Assessment

Mr. Adams will lead the high-level assessment of technical feasibility for all flow redirection scenarios. He will develop and review the creation of an excel based hydraulic model to simulate potential flow paths, evaluate the compatibility of existing pipelines, tunnels, and lift stations, and identify any constraints or fatal flaws. Chris will coordinate with the team to assess the implications of various alternatives on system reliability, maintenance, and operational flexibility. His experience in alternatives analysis for complex municipal systems will ensure that all options are rigorously vetted for technical soundness, operational risk, and future adaptability.



Praveen Lata Jit | Cost Evaluation

Ms. Jit is responsible for leading the cost evaluation, bringing industry-leading expertise in estimating capital, operational, and maintenance costs for infrastructure alternatives. She will develop high-level comparative cost analyses for each redirection scenario, working closely with technical leads to ensure estimates reflect actual project conditions and likely construction/operational realities. She will also perform sensitivity analyses to capture variability in materials, labor, and contingencies, and support the team in developing clear, transparent cost comparisons that will be critical to stakeholder decision-making.



James Collins, PE | Analysis & Recommendations

Mr. Collins will synthesize inputs from the technical and cost teams to develop a robust feasibility matrix that compares alternatives across technical, operational, environmental, and financial criteria. He will facilitate workshops with the project team and stakeholders to review findings, build consensus, and identify preferred alternatives. Drawing on his experience with advanced treatment and regulatory compliance, James will ensure that recommendations are actionable and fully aligned with regional water resource management goals, regulatory requirements, and long-term sustainability objectives.

Supporting Staff

Our supporting staff provide essential technical and analytical resources that underpin the success of each project phase. They bring targeted skills in modeling, GIS, environmental assessment, and cost analysis, ensuring the study is comprehensive and robust:



Jenny Liu, EIT

Ms. Liu will support all technical phases with her skills in hydraulic modeling, GIS analysis, and data visualization. She will be instrumental in developing and refining hydraulic models, preparing spatial analyses to illustrate flow paths and system constraints, and supporting the interpretation of technical results. Her previous work with several team leads on master planning and alternatives analysis projects ensures efficient communication and seamless workflow integration.



Kelly Havens, PE

Ms. Havens will support the feasibility assessment by evaluating environmental and climate vulnerability considerations for each alternative. She will analyze environmental compliance requirements, assess the climate resilience of proposed infrastructure modifications, and identify potential environmental permitting or mitigation needs early in the process. Her experience managing multi-benefit stormwater and climate adaptation projects will help the team proactively address regulatory and sustainability challenges.



Morrison Ramos

Mr. Ramos will work closely with Praveen to gather cost data, benchmark estimates, and document assumptions. He will support the preparation of cost tables and sensitivity analyses, helping ensure that all cost evaluations are accurate, transparent, and defensible. Morrison's familiarity with large-scale infrastructure projects will help the team navigate the complexities of multi-agency cost allocation and value engineering.



Forms and Certifications



Conflict of Interest

Arcadis affirms that, to the best of our knowledge, the participation of our employees in this proposal and any resulting contract does not constitute a conflict of interest or potential conflict of interest pursuant to California Government Code Sections 1090 et seq., the Political Reform Act, or any other applicable laws and regulations.

ATTACHMENT B
NON-COLLUSION AFFIDAVIT

The undersigned declares:

I am the Senior Vice President of Arcadis U.S., Inc. the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on January, 29, 2026 at Los Angeles, California.


Signature: Christine Cotton, PE

Title: Senior Vice President

January 29, 2026

1. Respondent certifies that it is not aware of any actual or potential conflict of interest that exists or may arise by executing the contract or performing the work that is the subject of this RFP.
2. Respondent certifies that it is willing and able to obtain all insurance required by the form contract included as Attachment C.
3. Respondent certifies that it has conducted a reasonable and diligent inquiry concerning the minimum and/or prevailing wages required to be paid in connection with the performance of the work that is the subject of this RFP and certifies that the proposed pricing includes funds sufficient to allow Respondent to comply with all applicable local, state, and federal laws or regulations governing the labor or services to be provided.
4. Respondent acknowledges and agrees with all terms and conditions stated in the RFP.
5. Respondent certifies that all information provided in connection with its Proposal is true, complete, and correct.



Christine Cotton, PE
Principal-in-Charge
✉️ Christine.Cotton@arcadis.com | ☎️ 213.797.5304



Resumes



Christine Cotton, PE

Principal-in-Charge

Ms. Cotton has 29 years of experience in water quality, planning, design, and facility startup projects. She has served as Arcadis' Contract Manager for our Los Angeles Department of Water and Power (LADWP) On-Call Engineering Services, Water Quality, and Disinfection and Treatment contracts over the last 12 years, collaborating with LADWP on water quality, advanced treatment, design, asset management, and information technology projects. Ms. Cotton has managed complex programs over her career, including programming master plans, stakeholder development, large capital improvements designs, and facilities start-up.

Education/Qualifications

- MS, Civil and Environmental Engineering University of Texas, 1996
- BS, Civil and Environmental Engineering University of Texas, 1994

Years of Experience

Total – 29
With Arcadis – 29

Professional Registration/ Certifications

- Professional Engineer – AZ

Relevant Experience

Engineering Services for Water Treatment Facilities; Conveyance and Distribution Facilities; and Large Rotating Equipment

Metropolitan Water District of Southern California, CA

Contract Manager for Arcadis' on-call engineering services to support planning, design, construction, and as-builts for new and existing treatment, conveyance, storage, and distribution facilities.

Professional and Technical Engineering and Architectural Design Services LADWP, Los Angeles, CA

Contract Manager for Arcadis' on-call engineering contract. A total of 43 task orders were executed under the last two Engineering On-Call contracts resulting in approximately \$27.5 million in support services during the three- and five-year contracts, from 2012 to 2015 and 2016 to 2021, respectively.

Professional and Technical Services for Ultraviolet and Chloramine Facilities and Disinfection Integration

LAWDP, Los Angeles, CA

Contract Manager for the Los Angeles Reservoir Ultraviolet Facility. The projected added ultraviolet disinfection facilities and converted from chlorine to chloramine residual disinfectant to comply with the Stage 2 Disinfectants and Disinfection By-Products Rule (D-DBPR) and the Long Term2 Enhanced Surface Water Treatment Rule (LT2ESWTR).

Owner's Agent - San Fernando Basin (SFB) Groundwater Remediation LAWDP, Los Angeles, CA

Engineering Manager and ultraviolet (UV) treatment expert for the Owner's Agent team, providing the full range of expert professional engineering and consulting services to assist in the initiation, planning, designing, permitting, procurement, alternate delivery, construction, commissioning, and operations of the SFB remediation and drinking water treatment facilities program.

Division of Drinking Water (DDW) Permitting Lead for the Program, performance testing, and start-up activities and has assisted LADWP to get DDW agreement on critical treatment and start-up elements.

Los Angeles Aqueduct (LAA) and Source Water Treatment Evaluation and Fairmont Treatment Plant Design

LAWDP, Los Angeles, CA

Technical Lead for the evaluation of the current treatment strategies and operational practices for source waters conveyed through the LAA, and source waters from the State Water Project East Branch and West Branch. Through a collaborative effort, LADWP was able to effectively utilize the technical results to make long-term decisions on the future of various treatment facilities serving the LAA, including the construction of a new water treatment plant utilizing plate settler technology near the Fairmont Reservoir. After the source water treatment and location were selected, she was the water quality and treatment lead to develop the design criteria and to complete the 30% design. Also assisted LADWP in development of liquidated damages and performance criteria for the FSP project.

Program Management Framework Development

LAWDP, Los Angeles, CA

Contract and Project Manager for project to assist the Water System with developing Program Management Framework to be rolled out to the Water System. The Program management framework includes the Strategic alignment, Governance & Organization, People, Processes, Tools, Reporting & Communications, Guidelines, Templates, Tools & SOPs Development, staff training, Reporting Systems & Digital Tools, and internal communication strategy. Part of the Program Management roll out is to conduct a program management pilot with the Water System's nitrification control projects.

LAAFiltration Plant and Los Angeles Reservoir UV Disinfection Facilities

LAWDP, Los Angeles, CA

Program Manager and UV Expert for the design of two ultraviolet disinfection facilities. The project added ultraviolet disinfection facilities and converted the distribution system from chlorine to chloramine residual disinfectant to comply with the Stage 2 Disinfectants and Disinfection By-Products Rule and the Long Term 2 Enhanced Surface Water Treatment Rule. Led the DDW coordination over the 12-year project period and provided technical leadership and oversight for the monthly DDW reports and start-up and commissioning activities.

Asset Management Services

LAWDP, Los Angeles, CA

Project Manager assisting LADWP increased awareness of the benefits of Asset Management through workshops. Presented functionalities of Maximo and the process to develop a business case and prioritize projects prior to inclusion in CIP list. Develop and led brainstorming sessions, exercises, and training materials for engaging in Asset Management training for LADWP staff. Evaluating and updating current LADWP asset management reports for main lines, pump stations and regulatory stations. Analysis of existing data for each asset classes and conducted a respective gap analysis to identify missing data and coordinate with LADWP to collect necessary missing information.

Water Information Network Phase I

LAWDP, Los Angeles, CA

Contract Manager, Facilitator, and Technical Assistance for the Water Information Network Data User Requirements Study and Long-Term Growth and Operation Plan with the purpose of evaluating water system integration needs to create an accessible and easy-to-use data exchange framework and user interface under using PI Server by OSIsoft, LLC.

Sustainable Water Infrastructure Program

City of Santa Monica, CA

DDW Regulatory Lead and UV Advanced Oxidation Process (AOP) and UV Disinfection Technical Lead for Arcadis' planning, design, performance testing, and start-up services to support a modular reverse osmosis unit at Santa Monica Urban Runoff Recycling Facility to treat stormwater and brackish groundwater; and the UV AOP (UV/chlorine) treatment element of the below grade Advanced Water Treatment Facility at the Civic Center Parking Lot. Led the development of the UV AOP specification that included water quality constraints for bromate and liquidated damages associated with not meeting performance requirements. In addition, the project principal for Arcadis, including coordination with contractors and subconsultants to assist with overall project progress and communication.



Ryan Hejka, PE

Project Manager

Mr. Hejka is an experienced Project Manager and Hydraulic Modeling Specialist with a proven track record delivering water, wastewater, and recycled water planning and design projects for municipal clients throughout the western United States. He has successfully managed and delivered fast-paced, high-impact projects, including the Laguna Beach County Water District Recycled Water Feasibility Study Update, where he led a team to provide regulatory evaluation, alternatives analysis, updated cost estimates, and stakeholder engagement under tight deadlines. Ryan's expertise spans feasibility studies, master planning, and the design of reservoirs, pump stations, and pipelines, as well as the development and calibration of complex hydraulic models. He excels at guiding multidisciplinary teams, maintaining clear communication with clients, and ensuring that deliverables are completed on schedule and in alignment with client objectives. Ryan is skilled in integrating regulatory requirements and technical design considerations, making him a trusted leader for both planning and infrastructure design assignments.

Education/Qualifications

- BS, Civil Engineering, California State Polytechnic University Pomona, 2012

Years of Experience

Total – 12
With Arcadis – 2

Professional Registration/Certifications

- Professional Engineer – CA

Relevant Experience

2025 Water and Recycled Water Master Plan

[Glendale Water and Power, Glendale, CA](#)

Project Manager for the 2025 Water and Recycled Water Master Plan, developing a future focused strategy to secure reliable and sustainable water supplies for the region. Responsibilities include leading water reuse opportunity assessments, evaluating indirect and direct potable reuse alternatives, and identifying high-priority projects for implementation. Implemented multi-criteria decision analysis (MCDA) to compare supply and reuse options, balancing technical feasibility, regulatory compliance, environmental benefit, cost effectiveness, and community values. Led the Arcadis and City's team in coordinating inter-agency collaboration and worked with our outreach subconsultant to engage stakeholders to align regional objectives and foster public support. Oversaw the task to conduct detailed gap analyses of projected demands versus supply and perform facility condition assessments to guide capital improvements and support plan implementation. Additionally, he guided his team through a potable and recycled water hydraulic modeling evaluation to plan and optimize hydraulic improvements for the City.

2024 Recycled Water Feasibility Study Update

[Laguna Beach County Water District, Laguna Beach, CA](#)

Served as Project Manager for the successful and expedited delivery of the LBCWD Recycled Water Feasibility Study Update. This \$30K project was completed in a few months and provided critical guidance for LBCWD's future recycled water planning. Led a focused team to review and update irrigation demands, evaluate current potable reuse regulations, and assess a new alternative for connecting with Moulton Niguel Water District (MNWD) to meet local water needs. The scope also included preparing updated cost estimates for

the new alternative, ensuring that financial implications are clearly understood for decision making. The evaluation provided an overview of MNWD's planned reuse projects, and all alternatives were assessed using previously established criteria. Facilitated all client communications, including a project kick-off and a review meeting with LBCWD, and oversaw the preparation of both draft and final technical memoranda as an amendment to the 2016 Recycled Water Feasibility Study. This project demonstrated the ability to deliver concise, actionable recommendations (including updated costs) under accelerated timelines, with an emphasis on regulatory awareness and regional collaboration.

Various IEUA Hydraulic Modeling Tasks

Inland Empire Utility Agency, Chino, CA

Most recently he was the replacement PM for the recent RP-4 sewer manhole surcharge study. However, in the past five years has worked on multiple recycled water studies and analysis using IEUA's recycled water model. This work involved projecting seasonal recycled water demand and spreading use; sizing future pipelines for potential future recycled water customers; sizing potential future pump stations; analyzing pressures and velocities in the recycled water system throughout multiple planning years.

Henry J. Mills Finished Water Reservoir #1 and #2 Rehabilitation

Metropolitan Water District, Los Angeles, CA

Serves as Design Manager for the rehabilitation of the Henry J. Mills Reservoirs, overseeing both preliminary and final design phases. After leading the preliminary design report including reservoir cover and slide gate replacements, vault and flow meter upgrades, and multidisciplinary team coordination's leadership resulted in Arcadis' selection for final design. The expanded scope includes major site investigations, stakeholder engagement, regulatory and dam safety coordination, and comprehensive rehabilitation and upgrades for reservoir liners, floating covers, gates, dewatering systems, instrumentation, electrical systems, and site security. Manages all aspects of project delivery, including schedule, budget, quality, and constructability reviews, while facilitating regular meetings and workshops. Also includes technical oversight of CFD modeling for mixing improvements and integration of robust QA/QC processes to ensure regulatory compliance and operational excellence for one of Southern California's most critical water storage facilities.

Owner's Agent - Fairmont Sedimentation Plant

Los Angeles Department of Water and Power, Los Angeles, CA

Hydraulics Lead for the design of the Fairmont Sedimentation Plant. Used InfoWorks ICM to verify the hydraulic Impacts that the FSP design will have on Los Angeles Aqueducts 1 and 2. Reviewed and verified the CFD Modeling of the inlet structure of the FSP as well as confirmed the hydraulics of the FSP. Assisted LADWP in the development of their CAD Manual and 3D drafting standards. Part of a team that is developing the project management plan which outlines the review process between LADWP and the progressive design builder. Assisted LADWP in pilot testing the Revizto design review software.

One Water Los Angeles 2040 Plan

Los Angeles Sanitation District, Los Angeles, CA

Engineer for the Mass Balance Model for the One Water LA 2040 Plan, this project looks at the integration of all the City's water assets. Responsible for the development of a custom mass balance planning model that tracks all major flows in the City of Los Angeles in annual time steps from 2015 through 2020 under normal, wet, and dry year conditions. The modeled flow components include imported water, groundwater, wastewater, recycled water, stormwater, and discharges to the LA River and ocean. This model also includes a cost module and will be utilized in the alternative supply portfolio analysis of the One Water LA 2040 Plan.

Sepulveda Feeder Pump Station Preliminary Design and Owner Agent Support

Metropolitan Water District, Los Angeles, CA

Assistant Project Manager for Metropolitan Water District of Southern California's Sepulveda Feeder Pump Station. This project consisted of a preliminary design for a progressive design build of two massive 30 cfs pump stations with a construction cost of \$100 million. This was a fast-paced design that required coordination with multiple permitting agencies as well as multiple engineering disciplines. Responsible for delivering this design to the client in less than one year to accelerate the District's schedule to build this emergency drought pump station as quickly as possible. Lead the coordination of the workshops with the client, which frequently exceeded 30 or more attendees.



Kanchan Joshi

Project Initiation and Data Collection / Reporting and Deliverables – Lead

Ms. Joshi is a hydraulic modeler and civil engineer with over 7 years of experience in water and wastewater infrastructure planning across North America. She specializes in advanced hydraulic modeling and master planning using Innovyze and Bentley platforms, supporting capital improvements for large-scale sewer systems. Kanchan has delivered training programs, automated data and model analysis, and integrated GIS-based spatial analysis to streamline planning processes. Her work includes Sewer System Management Plans, developer impact studies, 2D flood modeling, risk analysis, and redundancy recommendations, consistently meeting Arcadis standards of excellence. She holds a master's in environmental engineering from Georgia Tech and a bachelor's in civil engineering from Sardar Patel College of Engineering.

Education/Qualifications

- MS, Environmental Engineering, Georgia Institute of Technology
- BS, Civil Engineering, Sardar Patel College of Engineering

Years of Experience

Total – 8

With Arcadis – 1

Professional Registration/Certifications

- Engineer in Training

Relevant Experience

City of Atlanta Program

City of Atlanta GA

Supported the program management team by developing and calibrating sewer modeling for the City using InfoWorks ICM. Supported the program management team on capital planning as well as training city staff on using data automation tools. Project included working as a part of the program management team and conducting several analyses on the hydraulic models that helped the City with capital planning projects.

City of Carlsbad On-Call Sewer Modeling

City of Carlsbad, CA

Supported the On-Call Sewer modeling for City of Carlsbad by hydraulic analysis on the system to evaluate the impact of new developments in the area because of state regulations to boost housing capacity in the region. Led data collection, development of hydraulic models and impact on downstream trunk sewers as well as proposing any necessary improvements.

Sewer System Management Plans

Various Location

Supported the development of Sewer System Management Plans (SSMP) for various utilities in Southern California, specifically with system evaluation, capacity assurance and capital improvements. Led the data collection to determine strategies used by various utilities and deliver the findings in a final report, ensuring clarity, accuracy, and consistency throughout.



Chris Adams, PE, CPM

Technical Feasibility Assessment – Lead

Mr. Adams is a professional engineer with 25 years of experience specializing in hydraulic analysis using computer-aided modeling platforms. His experience includes the development and operation of water and wastewater system hydraulic models, pump station design, transient analysis, sewer evaluation studies involving Rainfall Derived Inflow and Infiltration (RDII) analysis, developing and evaluating flow monitoring programs, quality control, and project management for hydraulic and modeling-related projects.

Education/Qualifications

- BS, Civil Engineering, Georgia Institute of Technology, 2000

Years of Experience

Total – 25
With Arcadis – 3

Professional Registration/Certifications

- Professional Engineer – GA

Relevant Experience

New Castle County Collection System Modeling Quality Control Advisory

New Castle County, DE

Led a comprehensive assessment of the county's wastewater hydraulic modeling framework, including evaluation of existing capacity analysis tools, flow monitoring programs, and alternative modeling platforms. Developed strategic recommendations for model calibration, flow metering, and long-term infrastructure planning using industry-standard methodologies. Provided expert guidance to enhance system scalability, usability, and regulatory compliance, supporting proactive utility management and capital investment planning.

City of Santa Monica Sewer System Master Plan

Santa Monica, CA

Technical Lead for developing and calibrating a collection system model for the city and developing capital improvement projects over the planning horizon. Responsibilities also included developing and implementing a flow monitoring program to support calibration and managing the flow meter contractor.

Preliminary Design Analysis

Gwinnett County, GA

Hydraulics Lead for evaluating the hydraulic alternatives for improving the hydraulics along the Eastside Conveyance System. The system consisted of approximately 15 miles of sewer forcemain, three regional pump stations, and two inline booster stations conveying 45-MGD to the F. Wayne Hill WRF. Alternatives included increasing pumping capacity, installing new forcemains, and implementing storage alternatives.

Calibration of Plant 1/Plant 2 Hydraulic Model

Orange County Sanitation District, CA

Led the update and calibration of hydraulic models for OCSAN's Plants 1 and 2 to simulate peak flow conditions, including a combined inflow of 565 MGD. Integrated complex logic to represent combined plant capacity and interplant diversion infrastructure. Developed and evaluated alternatives for replacing aging conveyance systems from headworks to primary and secondary treatment, ensuring performance under peak and average flow conditions.

Additional responsibilities included: Designing a localized flow monitoring program and conducting capacity analysis for the Browning Sub-Trunk and Knott Interceptor/Miller Holder Sub-Trunk Sewer Relief pipelines.

Takoma Park Basement Backup Investigation

Takoma Park, MD

Technical Advisor for updating and recalibrating the Takoma Park basin hydraulic model to identify rehabilitation/replacement projects for eliminating basement backups. The model recalibration used the “Model at Source” approach to identify rainfall-dependent inflow and infiltration sources entering the sewer. Alternatives for increasing the hydraulic capacity by rehabilitating each RDII source and through capital projects were developed.

Sanitary Sewer Model Development and Calibration

Miami-Dade Water and Sewer Department, FL

Project Lead for Arcadis supporting the development and calibration of the WASD sewer system. Primary responsibilities included QAQC for the Arcadis team in evaluating model connectivity through as-builts, developing flow schematics, reviewing and processing flow data for model inputs, and developing preliminary WWF calibration metrics.

Regional Wastewater System Capacity Analysis

North Texas Municipal Wastewater District (NTMWD), TX

Technical Lead for developing and executing a flow monitoring program for 56 meters covering the NTMWD Southern System. Project responsibility included coordinating with flow monitoring contractors, QAQC of the flow data, and rainfall analysis.

Harford County Sewer Modeling

Harford County, MD

Technical Lead for updating and recalibrating the Harford County sewer model. The model recalibration is supplemented with 30 temporary flow monitors, 12 pump station flow meters, and three WWTP flow meters. Additional responsibilities included identifying the location of flow monitors and providing preliminary flow data. Developed flow data analysis protocols, which include Power BI and spreadsheet tools for providing QAQC of ongoing flow data and identifying various components of sanitary flow, including DWF, Base infiltration, and RDII. The project is ongoing and will proceed with model recalibration upon completion of the flow data collection period.

Lehigh County Authority Planning Model

Allentown, PA

Hydraulic Model Technical Lead for alternatives analysis for a 50-year CIP. Responsibilities included optimizing the model development of alternatives, developing priority source reduction plans based on model calibration, and reviewing the modeling input and output. Several custom SQL queries were developed to optimize QAQC, allowing the project to increase efficiency.

Wet Weather Management Program

City of Chattanooga, TN

Member of the modeling Team used first to develop and calibrate the initial hydraulic model of the combined and sanitary sewer system. As part of the ongoing program since 2010, responsibilities have included QAQC and Technical Lead for continued hydrologic and hydraulic modeling for finalizing production of model updates, training mid-level and entry-level staff on the use of the model, updating complex controls, and supporting facility design for CSO operations as well as flow data analysis for over 120 flow monitors used for calibration.

Sanitary Sewer Overflow Reduction Program

City of Bellevue, WA

Modeling and Hydraulics Technical Leader responsible for reviewing sanitary flow data and developing calibrated models and recommendations for eliminating SSOs for the City's wet weather design events up to 100-year events. These projects included developing and analyzing temporary flow monitoring programs for model calibration, updating hydraulic models to reflect current conditions, and providing alternatives for eliminating SSOs within the system. Newport, Fairweather, Somerset, and Medina Basins have been completed. The Newport Basin model was used to design a wet weather pumping station to divert flows to system areas with available capacity.

Modeling Alternatives to Address Lift Station and Collection System

Gainesville Regional Utilities, GA

Modeling Lead responsible for developing and modeling alternatives to address lift-station and collection system improvements for projected flows and design events for the LS1 basin. Additional responsibilities included flow data analysis for developing design events and updating their collection system model, which included 165 pump stations and 130 miles of forcemain. The model update was developed to allow various levels of analysis, including a focus on the pressurized portion of their system and the gravity portions of the system.



Praveen L. Jit

Cost Evaluation – Lead

Ms. Jit is an experienced project estimator with a thorough understanding of architectural, structural, and civil scope of work for multiple projects in the academic, healthcare, aviation, sports, commercial and infrastructure sectors. She also has experience in the field of streetcar and light rail projects. She applies this comprehensive cost perspective to the most complex elements of any project with precision and accuracy. From programming to complete construction documents, she uses her expertise to manage project costs within budget while meeting the owner's and designer's expectations. Her experience encompasses construction phase activities; real-time cost reporting to support decision making, and cost auditing and recommendations on proposed construction change directives and change orders. Her skills includes design management, early budget cost advice, design phase cost management, value engineering and sustainability cost analysis. During reconciliation with contractors, she serves as an advocate for the owner with results that translate into cost savings.

Education/Qualifications

- BC, Quantity Surveying, UNITEC Institute of Technology, 2001

Years of Experience

Total – 16
With Arcadis – 6

Professional Registration/Certifications

- Certified Project Manager – Arcadis Project Management Program
- Royal Institution of Chartered Surveyors - Assessment of Professional Competence Member

Relevant Experience

50th Street Station

Valley Metro, Phoenix, AZ

Project Lead and Electrical and Systems Estimator for a 0.4-mile route with one new platform station. This new station along the existing Valley Metro Rail system serves the communities and future development near 50th and Washington streets.

The station provides access to the Ability360 facility and neighboring business community, as well as supports transit-oriented development planned for the area.

Gilbert Road Light Rail Extension

Valley Metro, Mesa, AZ

Electrical and Systems Estimator for 1.9 miles of light rail on Main Street from Mesa Drive to Gilbert Road in Mesa. Also provided change order reviews during construction. The extension includes two stations, a transit center with bus services, and a car park and ride. It also included the light rail system's first roundabout at Horne and Main Streets, two TPSS buildings, and one signal house. This extension was executed using the CMAR delivery method. Construction began in October 2016 and completed in May 2019.

Northwest Extension Phase 2

Valley Metro, Phoenix, AZ

Project Lead and Electrical and Systems Estimator for a 1.6-mile light rail extension. Major elements included relocation and reconstruction of wet utilities, demolition and reconstruction of roadway pavements, two at-grade platform

stations, one elevated station, and one park-and-ride area. The elevated station was the first in Valley Metro's light rail system. Adjacent to the elevated station is a four-story park-and-ride garage. The project also included two TPSS buildings and one signal house. It also includes public art, the reconstruction of two canal bridges, a mechanically stabilized earthen (MSE) wall, and one elevated bridge over the I-17 freeway. Northwest Extension Phase II was executed using the CMAR delivery method. Construction began in August 2020 and completed in January 2024.

The project was over budget by approximately \$60M. Helped in GMP negotiation and saved Valley Metro approximately \$57M. Some of these savings were due to value-engineered items and some due to negotiation in labor productivity, equipment, and material rates. The two estimates were within 1% at the end of GMP negotiation.

Peoria Park-and-Ride

Valley Metro, Peoria, AZ

Project Lead and Civil Estimator for Peoria Park and Ride at Old Town. The project included 67 regular and four ADA size parking spaces, six secured bicycle parking spaces with bike lids, two electrical vehicle charging stations, security cameras, and timed awning lights for increased night visibility. The project also included a structural steel canopy. Peoria Park and Ride were executed using the JOC delivery method. Construction started in mid-2019 and completed in late 2019.

South Central Avenue Light Rail Extension

Valley Metro, Phoenix, AZ

Project Lead and Electrical and Systems Estimator for 5.5 miles of light rail extension. Major work included relocation and reconstruction of wet utilities, demolition and reconstruction of roadway pavements, construction of two roundabouts, nine platform stations, and one park-and-ride area. The project also includes six TPSS buildings, eight signal houses, and track improvements at McKinley Street. It also included public art from 18 artists and reconstruction of four bridges. The project was executed using the CMAR delivery method. Construction began in 2019 and is expected to be complete Spring of 2025. The total project cost is \$654M for the South-Central Extension and \$94M for Downtown Hub Utilities.

Tempe Streetcar

Valley Metro, Tempe, AZ

Project Lead and Electrical and Systems Estimator for 3.0 miles of in-street running track. Major work included

relocation and reconstruction of wet utilities, demolition and reconstruction of roadway pavements, construction of 14 streetcar stops. It also included four TPSS buildings, four signal houses and upgrading of existing manual interlocking to full, vitally controlled interlocking. The design also includes off-wire operations through downtown on Mill Avenue and at gateway intersections, primarily shared roadways with vehicle traffic, landscaping, and public art. Tempe Streetcar is executed using the CMAR delivery method. Construction began in 2018 and completed in 2021.

1111 East Fir Housing Development

Seattle Housing Authority, Seattle, WA

Project Estimator for 85 apartment units in five stories of wood-framed construction and six apartment units in one-story of concrete construction with 13 parking stalls and storage areas. Below grade is one-level parking with 49 parking stalls and utility spaces.

Academy of Entertainment and Technology

Santa Monica College, Santa Monica, CA

Project Estimator for expansion of The Academy of Entertainment and Technology (AET), a new facility to house the KCRW radio station, and a new additional AET building. AET houses Santa Monica College's curriculum in animation, game development, graphic design, post-production, and visual effects. Phase 1 of the project was a new 126,000 SF, 440-space parking structure.

ADA Upgrade

Huntington Beach Civic Centre, Huntington Beach, CA

Project Estimator for an 84,907 SF renovation of the civic centre, including ADA upgrades. Upgrades include ramps and rails on the site to access the building and parking areas and interior upgrades in council chamber, conference rooms, offices, restrooms, kitchen, stairs, and elevator.

Athletic Fields and Facilities

Athletic Fields and Facilities, Van Nuys, CA

Project Estimator for new 34,702 SF construction of a stadium field house and a baseball/softball field house including two baseball dugouts, four softball dugouts, concrete bleachers, new synthetic turf baseball and softball field, and associated site work.



James Collins, PE

Analysis and Recommendations – Lead

Mr. Collins is a technical expert who specializes in the fields of water and reuse treatment and regulations. He has more than 20 years of experience in treatment evaluations, design, start-up and operations, and regulatory compliance for facilities from 10 gpm to more than 2,000 mgd and specializes in advanced treatment technologies including UV, advanced oxidation technologies and granular activated carbon. He has over 15 years of experience working with water reuse projects in Arizona, Texas, and California.

Education/Qualifications

- MS Civil Engineering, University of New Hampshire, 2005
- BS Environmental Conservation, University of New Hampshire, 2003

Years of Experience

Total – 20
With Arcadis – 15

Professional Registration/ Certifications

- Professional Engineer – NH, MA

Relevant Experience

Pure Water Los Angeles Master Plan

[Los Angeles Department of Water and Power \(LADWP\), Los Angeles, CA](#)

Task Leader evaluating treatment and integration locations for incorporating recycled wastewater into LADWP's potable water system. Master plan includes evaluating indirect and direct potable reuse options based on regulatory requirements, system limitations, additional treatment, as well as community benefits.

Domestic Water and Sanitary Sewer Master Plan Updates

[City of Santa Monica, CA](#)

Task Leader identifying and evaluating alternative water supplies for increasing the City's water self-sufficiency. Lead technical evaluation of alternatives and conducted screening evaluation to rank groundwater, desalination, and direct potable reuse options.

Recycled Water Feasibility Plan

[Laguna Beach County Water District \(LBCWD\), Laguna Beach, CA](#)

Technical Lead for updating LBCWD's Recycled Water Feasibility Study to evaluate options for integrating recycled water to supplement existing water supplies and reduce imported water. Evaluation includes coordinating with local partners to identify collaboration opportunities.

Water and Recycled Water Master Plans

[Glendale Water and Power \(GWP\), CA](#)

Technical Advisor assisting the GWP with evaluating new water supplies through expanded recycled water sources, groundwater, indirect and direct potable reuse, and local partnerships. Assisted with identifying water sources and prioritizing project siting and selection.

Advanced Purified Water Treatment Plant (WTP) for Direct Potable Reuse

El Paso Water Utilities, El Paso, TX

Technical advisor for the ultraviolet (UV) advanced oxidation and granular activated carbon (GAC) concept design and pilot testing for a 10-million gallons per day (MGD) advanced purified water treatment plant that will treat plant influent from the secondary clarifier effluent of the Roberto Bustamante Wastewater Treatment Plant (WWTP) in El Paso to potable water quality for distribution to the drinking water customers of the City of El Paso.

Advanced WTP Expansion

City of Scottsdale, AZ

Project engineer for the design of an expansion of an existing advance water recycling facility, including the addition of UV advanced oxidation for N-Nitrosodimethylamine (NDMA) treatment. Led evaluation of 1) identifying NDMA sources throughout the WWTP, 2) identifying changes to the existing treatment processes to limit formation and included both bench-scale and full-scale testing of NDMA mitigation techniques, 3) NDMA treatment technologies.

Tujunga and North Hollywood Central Treatment Facilities

LADWP, Los Angeles, CA

Technical Reviewer for 25- and 38-MGD UV Advanced Oxidation Process (AOP) and GAC facility for treatment of 1,4-dioxane and VOCs in contaminated wellfield. Process lead for the 30% design and reviewer of final design, construction and start-up

North Hollywood West Water Treatment Facilities

LADWP, Los Angeles, CA

Process and mechanical design lead for implementation of 18-MGD UV AOP and GAC facility for treatment of 1,4-dioxane and Volatile Organic Compounds (VOC) in contaminated wellfield. Responsible for development and review of bench-scale testing, design criteria, specifications and process mechanical design lead for detailed design

Los Angeles Reservoir UV Facility

LADWP, Los Angeles, CA

Technical Advisor for the design, programming and start-up of a 650-MGD UV disinfection plant for the Los Angeles Reservoir. Responsible for control strategy and start-up and testing planning and review.

Los Angeles Aqueduct (LAA) Filtration Plant UV Facility

LADWP, Los Angeles, CA

Project Manager for programming and start-up of a 600-MGD UV disinfection plant for the LAA Filtration Plant. Responsible for client planning and completion of testing; control strategy development, review and implementation; and regulatory coordination. Developed and conducted equipment, regulatory and controls training for operations and maintenance staff.

Fairmont Sedimentation Plant

LADWP, Los Angeles, CA

Task Manager as Owner's Agent for a 460-MGD sedimentation plant being delivered through progressive design build. Directed tasks related to bench-testing and water quality evaluations, development of design standards and bridging documents.

Advanced Oxidation Handbook

American Water Works Association (AWWA)

Primary Author for the Advanced Oxidation Handbook published by AWWA. The handbook introduces the concepts related to the fundamentals, design, and operation of advanced oxidation technologies (AOTs) including UV and ozone based AOTs. It is designed to help the beginner and to provide important reference material for those experienced with AOTs.

New York State Center for Clean Water Technologies (previous firm)

Suffolk County Water Resource Authority, NY

Technical Advisor for evaluating emerging technologies for 1,4-dioxane treatment in partnership with Suffolk County Water Authority. Project included pilot-scale evaluation of medium pressure UV/chlorine and ozone/peroxide for 1,4-dioxane treatment. Results were compared to full-scale UV/peroxide system.

1,4-Dioxane Pilot Testing and Facility Design

Tucson Water, Tucson, AZ

Led the technical evaluation of advanced oxidation treatment technologies for 1,4-dioxane treatment. Responsible for detailed evaluation focused on UV and ozone advanced oxidation. Process/Mechanical Design Lead for detailed design of an 8.3-MGD UV advanced oxidation facility with GAC quenching for hydrogen peroxide.



Jenny Liu, EIT

Modeling / GIS / Excel – Support

Ms. Liu is an environmental engineer at Arcadis with a bachelor's degree in environmental engineering and a minor in City and Regional Planning from California Polytechnic State University. In her time with Arcadis, she has worked on a variety of projects for both Arcadis' Environment and Water divisions. Ms. Liu led start-up commissioning field events and drafted proposals and preliminary analysis reports. She also managed projects for Chevron and BP Foxglove sites and prepared key reports for the client as part of the Environment division. Most recently, Ms. Liu led the alternative analysis for the Santa Monica Domestic Water Master Plan and assisted in a pressure transient analysis for the Goleta distribution system.

Education/Qualifications

- BS, Environmental Engineering, California, Polytechnic State University, 2022

Years of Experience

Total – 2

With Arcadis – 2

Professional Registration/Certifications

- Engineer in Training
- Certified California Water Audit Validator
- Envision Sustainability Professional

Relevant Experience

Domestic Water and Sanitary Sewer Master Plan

[City of Santa Monica, CA](#)

The City of Santa Monica set a goal to reduce its reliance on Metropolitan imported water by expanding its local supply. Arcadis conducted a preliminary analysis of new supply sources and production alternatives to guide the City's future planning efforts. Led the analysis of alternatives divided into three categories: (1) groundwater, (2) desalination, and (3) direct potable reuse. Coordinated with Arcadis technical experts and engaged in stakeholder workshops to meet the City's needs. Conducted research, performed supply and demand analysis on the Santa Monica water portfolio, conducted high-level cost analysis, moderated workshop meetings, and drafted the technical memorandum on the alternative analysis findings.

Goleta Distribution System Pressure Transient Analysis

[City of Goleta, CA](#)

Arcadis led a pressure transient analysis to help the City of Goleta improve the monitoring and maintenance of its distribution system. Pressure transient events cause damage to the piping systems and increase repair costs if they reoccur. Reviewed the City's existing pressure data and the monitoring system configuration. Identified potential pressure transient events at all the City's monitoring locations, determined specific locations with high-pressure transient frequency, and suggested key action items the City can take to optimize its pressure transient monitoring.

Laguna Beach County Water District (LBCWD) Recycled Water Study Update

[LBCWD, Laguna Beach, CA](#)

LBCWD conducted a recycled water study in 2016 and wanted to explore new indirect and direct potable reuse projects. Led junior staff to complete the recycled water demand study update and research of new indirect and direct

reuse opportunities in Orange County. Completed cost analysis and drafted the technical memorandum summarizing findings.

State Water Project Dependent Area Workshops

Metropolitan Water District of Southern California (MWDSC), Los Angeles, CA

Arcadis assists MWDSC in hosting a workshop series with its member agencies to develop a portfolio of drought mitigation actions. These projects are intended to prepare MWDSC and its member agencies for future drought scenarios. Assisted in workshop moderation, provided technical support for MWD member agencies, and coordinated with stakeholders to obtain workshop feedback. Assisted in creating an accessible SharePoint website for different stakeholders to access material required for the workshops and prepared for discussions on drought planning goals. Drafted and oversaw the completion of the summary report that detailed the objectives and deliverables of each workshop.

Chino Basin Water Bank Development

Inland Empire Utilities Agency (IEUA), Chino, CA

IUEA investigated a potential water bank proposal between its member agencies. Arcadis drafted the water bank proposal, which was intended to provide resilience in drought scenarios. Authored the Watermaster regulations and framework section for the Water Market Strategy Document, which detailed the proposed water bank in the Chino Water Basin regulatory setting. Drafted potential Chino Water Basin participant profiles to provide a better understanding of the agencies' water sources, customer profiles, and goals. Designed brochures and fact sheets as part of marketing tools for the Chino Basin Water Bank.

San Francisco Public Utilities Commission (SFPUC)

Level 1 Validation

SFPUC, City of San Francisco, CA

Urban retail water suppliers must submit a validated distribution system audit to the California Department of Water Resources annually. Reviewed the SFPUC water audit documents and conducted a validation interview with SFPUC staff. Made sure that the water audit inputs were aligned with the updated American Water Works Association Water Audit Software Version 6, recommended suggestions on data validation score improvement, and prepared water audit validation notes and reports.

Santa Monica Urban Runoff Recycled Facility (SMURRF)

City of Santa Monica, CA

The City of Santa Monica upgraded the existing SMURRF with a new reverse osmosis treatment unit to treat dry-weather urban runoff, stormwater, and brackish groundwater. Monitored key performance parameters of the facility and collected samples along the treatment train during the 14-day Acceptance Test. Drafted the Acceptance Test Engineering Report to document the field observations, analytical results, and trends in performance parameters and determine compliance with Acceptance Test standards.

Sterling Natural Resource Center (SNRC)

East Valley Water District, Highland, CA

The SNRC is a wastewater reclamation facility aiming to boost the region's drought resiliency. The treatment facility is currently completing its pre-commissioning activities in preparation for the system startup. Conducted site visits and drafted a plant overview training module for the operators. Assisted in presenting the training model and will be providing oversight during the system startup.

Los Angeles Perchlorate and Volatile Organic Compounds (VOCs) Cleanup Project

Water Replenishment District (WRD), Vernon, CA

The WRD installed a treatment system to remove perchlorate and VOC at an industrial site. Oversaw the start-up operations of the Fluidized Bed Reactor and Ultraviolet Trojan system and assisted in troubleshooting the system before initiating continuous flow operation. Performed compliance sampling, prepared updated field forms, and managed sample bottle inventories.

Chevron Environmental Management Company Sites

Washington and California

Assistant Project Manager for at least four Chevron sites. Managed tasks between field staff, international resources, subcontractors, and technical experts. Trained new staff members to complete planning tasks and lead field events remotely.



Kelly Havens, PE

Environmental and Climate Needs – Support

Ms. Havens is an innovative water resources engineer supporting business development, client and project management, and team building for climate resilience, stormwater management, green stormwater infrastructure, and integrated water resources practices. She has worked as a stormwater engineering consultant for over 16 years, serving as project manager of multi-consultant teams on projects for municipal and private clients focused on stormwater and climate resilience infrastructure planning, design, technical guidance, and funding and financing strategy. Ms. Havens has expertise in green stormwater infrastructure and multi-benefit stormwater capture projects. She has experience assisting clients with National Pollutant Discharge Elimination System (NPDES) municipal separate storm sewer (MS4) permit requirements throughout California. Ms. Havens has worked with many clients on funding strategies for stormwater, grant applications, and development of innovative funding programs. She served as consultant lead for the development of the Contra Costa County Regional Alternative Compliance (RAC) System, an off-site stormwater quality credit trading program. Ms. Havens is a member of the California Stormwater Quality Association (CASQA) and recently co-led the Funding Subcommittee.

Education/Qualifications

- Master of Science in Civil Engineering, UCLA, 2008
- Bachelor of Science in Engineering Geology, UCLA, 2007

Years of Experience

Total – 16
With Arcadis – 1

Professional Registration/Certifications

- Professional Engineer – CA

Relevant Experience

Funding Options Memorandum and P3 Partnership Opportunities

Los Angeles County Public Works (LACPW), Los Angeles County, CA

Drafted a memorandum to examine funding and financing approaches to support stormwater capture project development. The memorandum described potential funding that could supplement Safe, Clean Water Program funding, including public agency partnerships (for example, water supply agencies), state and federal grants, other local taxes and fees, and other funding options. The memorandum also examined financing options, including bonds, the state revolving fund, Water Infrastructure Finance and Innovation Act, and private financing. Explored innovative smaller-scale public-private partnership opportunities as part of the work. This included conceptual level site identification, facility selection, and sizing for multi-benefit stormwater capture and infiltration projects.

Stormwater Technical Support, Descanso Gardens

Rios Clementi Hale Studios, Los Angeles County, CA

Served as Technical Advisor on stormwater management related work for Descanso Gardens in support of a Safe, Clean, Water Program grant application for the Winery Canyon Channel/ Descanso Gardens Measure W Stormwater Capture and Reuse Project, including providing advising on hydrologic modeling. Separately wrote a Water Quality Technical Report for California Environmental Quality Act, examining potential water quality impacts of the Descanso Gardens

Master Plan, designed to meet National Pollutant Discharge Elimination System permit requirements and considering applicable Total Maximum Daily Loads, 303(d) listings and Enhanced Watershed Management Programs.

Contra Costa County Regional Alternative Compliance System and Clean Watersheds for All
Contra Costa Clean Water Program, Contra Costa County, CA

Managed a multi-consultant team to develop a treated stormwater crediting program for Contra Costa County municipalities, led by the City of San Pablo (RAC System). Led dozens of meetings with municipal agencies, regulators, technical experts, lawyers, developers, and the public to develop the System Summary Report, which was approved for use as alternative compliance by the San Francisco Bay Regional Water Board. Managed the Clean Watersheds for all projects to identify opportunities, prepare concept designs, and develop a funding and delivery roadmap for multi-benefit regional stormwater capture projects in Contra Costa County. Through a separate contract, Wrote the scope for the successful Environmental Protection Agency grant application that funded the project.

Advancing Regional Stormwater-Scale Stormwater Management and One Watershed Project

City/County Association of Governments of San Mateo County, CA

Managed a project to advance regional-scale multi-benefit stormwater management projects in San Mateo County, including development of goals and objectives, a business case for regional stormwater management, a funding strategy, including a stormwater credit trading program concept. The analysis and program plan were captured in white paper. Managed a project to develop a framework ("OneWatershed Framework") to assess climate vulnerability of water-based infrastructure assets on a watershed basis, incorporating the lived experience of local communities, and identify solutions including passive stormwater treatment, detention, and retention.

Monterey Peninsula Stormwater Resource Plan
Monterey One Water, Monterey, CA

Managed a successful state grant and the resulting development of the Monterey Peninsula Stormwater Resource Plan and Monterey Peninsula Water Recovery Study, including planning and design of multi-benefit water capture and supply projects, and stakeholder and Technical Advisory Committee meetings.

Kellogg Resiliency Project

Fairfield Suisun Sewer District, CA

Managed a project that produced plans, specifications, and estimates for a resilience solution in Suisun City, including green stormwater infrastructure, flood basin retrofits, and improvements at the pump station. Managed pre-design efforts including the drainage model.

Clean Water Program Support

City of Oakland, City of Palo Alto, City of Dublin, City of Walnut Creek, City of San Pablo, City of Santa Clara, C/CAG, Contra Costa County, Alameda Countywide Clean Water Program, CA

Managed and supported several projects with California municipalities and clean water programs focused on technical guidance, watershed planning, funding opportunities and program development, stormwater drainage master plan support, and design of multi-benefit stormwater capture and climate resilience facilities.

Sea Level Rise Adaptation Plan

LACPW, Los Angeles County, CA

Managed a Sea Level Rise Adaptation Plan for a large stormwater culvert in response to California Coastal Commission Development Permit requirements, including a drainage model and concept designs for alternatives. Managed the development of the plan and presented it to the Coastal Commission.

City of Oakland Storm Drain Master Plan and Green Stormwater Infrastructure Guidance

City of Oakland, CA

Managed a subcontract to update the City's Storm Drainage Master Plan (SDMP). Led desktop and field analyses to prioritize City sites for regional multi-benefit stormwater capture projects to address flooding and water quality, 10% concept designs for three sites, and led funding strategy discussions with the City and Caltrans. Managed a Lake Merritt Water Quality Recommendations Report and led a stakeholder outreach meeting as part of the project. Separately, managed the City's Green Stormwater Infrastructure (GSI) Plan implementation project, managing GSI guidance, City-specific GSI details, and existing GSI facility field assessments.



Morrison Ramos

Cost Estimating – Support

Morrison has more than 25 years of expertise in Mechanical Cost Estimating for Heating, Ventilating, and Air Conditioning (HVAC), Plumbing, Fire Protection, Site Utilities (Water, Sewer, Storm, Natural Gas Distribution and Private Irrigation), Pump Stations, Water and Wastewater Treatment Plant, Oil and Gas piping distribution, He is experienced in cost control, quantity surveying, contracts administration for both pre-contract and post-contract services including quantity surveying/cost estimating for various types of pre-construction development from program stages, conceptual, schematic, detailed design construction, preparation of bills of quantities, contractual procurement, preparation of bid documents, evaluation of bids and preparation of bid reports, value engineering, to post construction analysis, preparation and negotiation of variation change orders, conditions assessment, preparation of cost/financial reports, interim valuation, final accounts, property valuation and other cost related jobs. He specialized in various types of projects including laboratories and medical research buildings, hospitals, commercial structures, schools, libraries, industrial facilities, central plants, water and wastewater treatment plants, office buildings, high-rise residential, commercial reclamation, and land development.

Education/Qualifications

- BSc, Mechanical Engineering, Far Eastern University

Years of Experience

Total – 25
With Arcadis – 10

Relevant Experience

Edinger Pump Station

Orange County, CA

Mechanical Estimator. The scope of the project includes the construction of a new Electrical Building with a gross floor area (GFA) of 1,153 square feet, an underground Pump Station with a GFA of 2,076 square feet housing three pumps, and the abandonment of the existing pump station and utility work.

Jackson County Water Reclamation Project

Jackson County, MS

Mechanical Estimator. The project consists of an approximate 20 MGD Wastewater treatment plant with pretreatment, BNR basins, clarifiers, effluent reuse pump station, reject tank, UV disinfection, tertiary filters, and process buildings.

Bergen County Utilities Authority – Edgewater Pump Station

Edgewater, NJ

Mechanical Estimator. The project consists of a pump station building with five pumps at a capacity of 335 horsepower (HP) each. Included is a bar screen, HVAC, Plumbing, Process Mechanical, Electrical, and Process Instrumentation.

Formosa Wastewater treatment Plant

St. James Parish, LA

Mechanical Estimator. The project consists of approximate 709,370 SF site construction of a wastewater treatment plant with moving bed biofilm reactor (MBBR), membrane bioreactor (MBR), Inorganic Clarifier, Water Reuse Reverse Osmosis, Blowers, Mixers, Disc Thickener, and Screw Press.

Ohio Creek Watershed Project

City of Norfolk, VA

Mechanical Estimator. The project consists of two main Pump Station as Ballentine with 3-300 HP vertical line shaft pumps and Haynes Creek with 4-100 HP vertical line shaft pumps. Provided a cost estimate for mechanical and process mechanical, pumps including sluice gates.

Pittsburgh Water and Sewer Replacement

Pittsburgh, PA

Mechanical Estimator. The project consists of Aspinwall water treatment plant intake replacement with installation of new, passive, cylindrical screens, located 200 feet from shore in the Allegheny River, through new gate house.

City of Greensboro

Greensboro, NC

Mechanical Estimator. The project includes installation of water utility distribution for four water booster stations.

Novelis Corporation

Oswego County, NY

Mechanical Estimator. The project consists of a new city water line for RCW improvements project. Water main pipeline alignment from Backflow Preventer Building no 1 to 2 with blowdown structure and channel well.

Hunt Highway Water Production Facility

Chandler, AZ

Mechanical Estimator. The project consists of installation discharge water piping, fittings, valves and specialties.

Capital Extension (CAPEX)

Valley Metro, Phoenix, AZ

Mechanical and Site Utilities Estimator. The Capitol Extension (CAPEX) project is a 0.8-mile project extending the existing Valley Metro light rail transit from downtown Phoenix to the area near the Arizona State Capitol. The project begins at Washington Street and 3rd Avenue connecting to the existing single-track couplet. The alignment continues running on Washington Street,

loops south onto 15th Avenue, and then returns east on Jefferson Street. Along Jefferson Street, the alignment extends from 15th Avenue to 3rd Avenue where it connects to the existing downtown alignment. The project includes two split platform stations (four total side loading platforms) along the route: 15th Avenue/Washington, 7th Avenue/ Washington, 15th Avenue/Jefferson, and 7th Avenue/Jefferson platforms. The platforms were designed according to Valley Metro's standards design criteria including all amenities like existing station platforms. Additionally, an operator facility was built near the 15th Avenue/Jefferson Street platform. Systems facilities include one new traction power substation (TPSS) and a signal building planned on the southeast corner of Jefferson Street and 12th Avenue. Traction power is provided by an overhead contact system (OCS).

Valley Metro South Central Light Rail Extension

Valley Metro, Phoenix, AZ

Mechanical and Site Utilities Estimator for a 5.5 mile of light rail extension. Major elements of work include relocation and reconstruction of wet utilities, demolition and reconstruction of roadway pavements, construction of two roundabouts, nine platform stations, and one park-and-ride area. The project also included six TPSS buildings, eight signal houses, and track improvements at McKinley Street. Also included was public art by 18 artists and reconstruction of four bridges. The project was executed using the CMAR delivery method. The total project cost was \$654 million for the South-Central Extension and \$94 million for Downtown Hub Utilities. Morrison also helped in GMP negotiation for Downtown Hub Utilities where the final two estimates were within 5% of direct construction cost. (2019 – 2024)

Valley Metro 50th Street Light Rail Station

Valley Metro, Phoenix, AZ

Mechanical and Site Utilities Estimator for a 0.4-mile route with one new platform station along the existing rail system. This new station serves the communities and future development near 50th and Washington streets. The station provided access to the Ability360 facility and neighboring business community, as well as supported transit-oriented development planned for the area. (2017- 2019). The total project cost was \$23 million.

Price Proposal
South Orange County Wastewater Authority
CTP Regional Flow Study

Task No.	Task Description	Arcadis Hours							\$	
		Technical Advisor	Senior Technical Manager	Principal Engineer/Scientist	Senior Engineer/Scientist	Project Engineer/Scientist	Project Assistant	Total Hours		
CTP Regional Flow Study										
1	Project Element 1 : Project Initiation & Data Collection	0	6	15	1	44	1	67		
2	Project Element 2: Technical Feasibility Assessment	0	8	24	8	32	0	72		
3	Project Element 3: Cost Evaluation	0	0	3	4	23	0	30		
4	Project Element 4: Analysis & Recommendations	2	6	12	0	22	0	42		
5	Project Element 5: Reporting & Deliverables	2	5	20	4	46	11	88		
6	Project Management	2	2	10	0	12	3	29		
PROJECT ELEMENTS 1 THROUGH 5 TOTAL		6	27	84	17	179	15	328		



PROPOSAL FOR
CTP REGIONAL FLOW STUDY
ENG-25-10

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
JANUARY 29, 2026

Cover Letter

January 29, 2026

Jim Burror
Engineering
South Orange County Wastewater Authority
34156 Del Obispo Street
Dana Point, California 92629

Subject: Coastal Treatment Plant Regional Flow Study

Dear Jim Burror:

Dudek is pleased to submit this proposal for the Coastal Treatment Plant (CTP) Regional Flow Study and appreciates the opportunity to continue supporting South Orange County Wastewater Authority (SOCWA) and its member agencies with resilient regional wastewater and recycled water planning solutions. Our team values its long-standing partnership with SOCWA and remains committed to delivering practical planning that supports effective decision-making.

Dudek brings unmatched regional experience to this effort. Since the early 2010s, we have supported SOCWA, the City of Laguna Beach, and South Coast Water District with planning, condition assessment, and design across the regional systems. Since 2020, we have completed over 10 projects with Laguna Beach and over 20 for South Coast Water District in addition to ongoing work at SOCWA's treatment plants. This background gives our team a clear understanding of the interconnected conveyance, treatment, and operational needs that will inform the Regional Flow Study.

This study comes at a critical time with SOCWA's CTP and J.B. Latham Treatment Plant Feasibility Study projects underway. Coordination across these efforts will be essential for consistent assumptions, aligned evaluation pathways, and a unified basis for future capital and operational planning. Our proposed approach builds on our experience evaluating diversion alternatives, tunneling and conveyance feasibility, and planning-level hydraulic and cost analyses across the Project Committee 15 systems.

We understand this project's purpose and are ready to begin immediately. For questions about our submittal, please contact Project Manager **Brian Robertson** at **760.479.4845** or **brobertson@dudek.com**.

Sincerely,

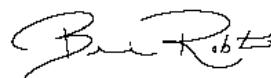


Mike Metts

Practice Director

Mike Metts is authorized to sign on behalf of Dudek

TABLE OF CONTENTS	
<i>Cover Letter</i>	1
<i>Identification of Responder</i>	2
<i>Understanding and Approach to Work</i>	2
<i>Experience and Technical Competence</i>	8
<i>Key Personnel</i>	9
<i>Pricing</i>	9
<i>Conflicts of Interest</i>	9
<i>Non-Collusion Affidavit</i>	10
<i>Certifications</i>	10
<i>Appendix A</i>	
<i>Resumes</i>	



Brian Robertson

Project Manager

1.3.1 Identification of Responder

Table 1. Dudek Information

Legal name, address, and form of company	Dudek; 687 S. Coast Highway 101, Suite 110, Encinitas, CA 92024 A proud California Corporation since 1980; C1210012
Parent companies	Dudek has no parent company.
Principal and local address	Main Office; 687 S. Coast Highway 101, Suite 110, Encinitas, CA 92024 Local Office; 27271 Las Ramblas, Suite 340, Mission Viejo, CA 92691
Contact information	Brian Robertson, PE, QSD, Project Manager 687 S. Coast Highway 101, Suite 110, Encinitas, CA 92024 760.479.4845; brobertson@dudek.com

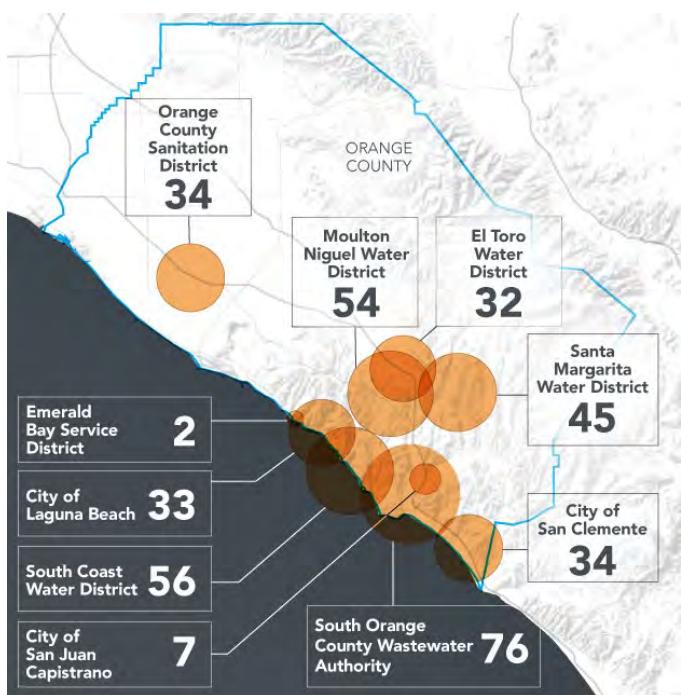


Figure 1. Dudek Project Inventory with Orange County Clients

Laguna Beach (CLB), the Emerald Bay Service District (EBSD), and the South Coast Water District (SCWD). The study will assess at a planning level regional hydraulic feasibility, infrastructure requirements, recycled water implications, environmental and permitting considerations, and planning-level capital and operations and maintenance (O&M) costs for redirecting flows to other treatment facilities operated by SOCWA, the Moulton Niguel Water District (MNWD), and the Orange County Sanitation District (OC San).

Evaluating the feasibility of CTP flow redirection requires a clear understanding of how wastewater from CLB, EBSD, and SCWD currently moves through the regional collection and conveyance systems. CLB and EBSD service area flows are conveyed primarily through the North Coast Interceptor (NCI), a critical corridor following Pacific Coast Highway (PCH) before turning east into Aliso Canyon. These flows rely on the Laguna SOCWA Lift Station (LSLS), the Bluebird Lift Station, and the downstream gravity and siphon system that outlets to CTP. Portions of NCI are aging and located within constrained, environmentally sensitive areas that present unique constructability and permitting challenges.

Firm Background

Dudek, established in 1980 in Encinitas, California, began as a civil engineering consulting firm serving San Diego County. Today, Dudek employs over 1,000 staff across 21 offices nationwide, offering services in energy, transportation, water, federal, municipal, education, and healthcare sectors.

In South Orange County, Dudek's Mission Viejo office provides specialized support for local infrastructure and environmental needs, focusing on responsive service and strong relationships with SOCWA member agencies. The team leverages local expertise to deliver tailored, sustainable solutions for regional water and wastewater challenges while meeting regulatory requirements.

1.3.2 Understanding and Approach to Work

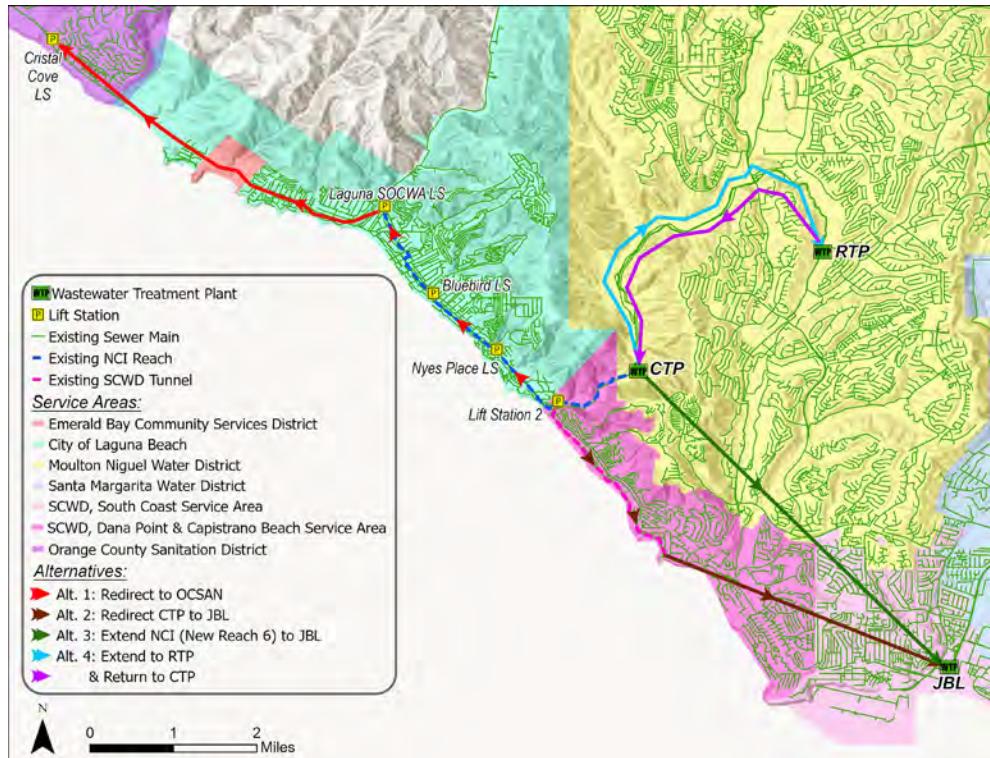
Project Understanding

SOCWA is conducting a high-level technical feasibility study to evaluate options for decommissioning the Coastal Treatment Plant (CTP) and redirecting wastewater flows from the City of

Laguna Beach (CLB), the Emerald Bay Service District (EBSD), and the South Coast Water District (SCWD). The study will assess at a planning level regional hydraulic feasibility, infrastructure requirements, recycled water implications, environmental and permitting considerations, and planning-level capital and operations and maintenance (O&M) costs for redirecting flows to other treatment facilities operated by SOCWA, the Moulton Niguel Water District (MNWD), and the Orange County Sanitation District (OC San).

Evaluating the feasibility of CTP flow redirection requires a clear understanding of how wastewater from CLB, EBSD, and SCWD currently moves through the regional collection and conveyance systems. CLB and EBSD service area flows are conveyed primarily through the North Coast Interceptor (NCI), a critical corridor following Pacific Coast Highway (PCH) before turning east into Aliso Canyon. These flows rely on the Laguna SOCWA Lift Station (LSLS), the Bluebird Lift Station, and the downstream gravity and siphon system that outlets to CTP. Portions of NCI are aging and located within constrained, environmentally sensitive areas that present unique constructability and permitting challenges.

SCWD's system introduces additional regional interdependencies. The South Coast Service Area conveys flows north toward Lift Station 2, while the Dana Point and Capistrano Beach areas convey flows south to the J.B. Latham Treatment Plant (JBL). Their system comprises approximately 140 miles of pipelines, 13 lift stations, multiple forcemains, and Tunnel C, a recently reconstructed 2-mile utility tunnel that plays a major role in potential redirection routing. Tunnel C's capacity, configuration, and elevation profile significantly influence whether flows can be routed efficiently to JBL, avoiding major disruptions to portions of PCH.



The feasibility of redirecting flows away from CTP (6.7 mgd permitted, 1.5 mgd average 2025 dry-weather) also depends on the capabilities and constraints of potential receiving facilities. JBL provides 13 mgd of secondary treatment capacity with ocean discharge through the San Juan Creek Outfall and may be expanded for tertiary treatment. MNWD's Regional Treatment Plant (RTP) shares the CTP outfall and provides 12 mgd of secondary treatment and 9 mgd of tertiary capacity, and currently receives export sludge from CTP. The OC San treatment system serves as a potential downstream receiving facility providing secondary treatment (190 mgd) and ocean discharge services, and supplies secondary effluent from both Plant 1 and 2 to the Orange County Water District (OCWD) Groundwater Replenishment System (GWRS). Each facility presents distinct hydraulic requirements, operational considerations, and constraints for new interties.

A critical regional driver is the need to maintain reliable recycled water supplies. CTP currently produces Title 22 recycled water that supports local distribution systems and is the main supply source for SCWD. Any redirection strategy must preserve recycled water reliability to meet the projected demands of SOCWA member agencies. Infrastructure configurations that influence tertiary treatment location, transfer capabilities, pressure zone interfaces, and seasonal recycled water demand need to be considered to assess how well redirection pathways align with long-term regional water reuse objectives.

Together, these conveyance characteristics, service area relationships, receiving facility capacities, and recycled water considerations establish the basis for evaluating feasible redirection pathways and outlining the opportunities, limitations, and interagency coordination needs that shape our proposed conceptual redirection strategies, presented in the Approach section.

Approach

To help SOCWA explore the range of possibilities for redirecting flows from the existing wastewater treatment plant while maintaining reliable Title 22 recycled water supplies, our team has outlined a set of preliminary conceptual alternatives. These alternatives are not intended to predetermine the final scope of analysis, but rather to demonstrate the breadth of considerations involved and to provide a structured starting point for discussion. For each concept, we will examine high-level hydraulic feasibility, potential facility and pipeline modifications, constructability constraints, recycled water production impacts, permitting requirements, O&M considerations, environmental sensitivities, and interagency coordination needs. Applying consistent evaluation criteria will allow us to highlight the opportunities, challenges, and tradeoffs associated with each

approach, and to identify the most promising pathways for a more detailed follow-up study. The preliminary alternatives and key issues to be assessed are summarized below.

Alternative 1 – Redirect Raw Sewage to OC San Service Area

This alternative diverts raw sewage from CTP into the OC San system by modifying SCWD Lift Station 2 to send flows north through the NCI to Bluebird and the Laguna SOCWA Lift Stations (LSLS), then via a new force main to an intertie near OC San's Crystal Cove Pump Station. Because the NCI would operate in reverse, hydraulic feasibility, including lift station capacity and gravity/siphon performance, must be evaluated. Interagency coordination is needed on NCI ownership, required flow splits, and SCWD recycled-water impacts. If capacity or recycled-water constraints arise, a reduced option could divert only CLB flows near Nyes Place.

Table 2. Alternative 1 Summary Table

Anticipated Infrastructure	Hydraulic/Operational Considerations	Permitting/Constraints
<ul style="list-style-type: none"> ▪ LS 2 reconfiguration for northbound diversion ▪ Bluebird Lift Station and LSLS reconfiguration for northbound pumping operation ▪ NCI pipeline removal/replacement, reuse as carrier pipe ▪ LSLS receipt/export header improvements. ▪ New export force main to intertie near OCSAN Crystal Cove Pump Station ▪ New metering, sampling, and isolation facilities at the intertie. 	<ul style="list-style-type: none"> ▪ Compatibility of LS2, Bluebird, and LSLS with northbound system head conditions ▪ Reverse direction flow in NCI gravity/siphon reaches ▪ EBSD connection (force main extension to new export force main) ▪ Preservation of CLB/EBSD flow allocations ▪ Operational and funding coordination between CLB, SCWD, EBSD and OCSAN 	<ul style="list-style-type: none"> ▪ Caltrans right-of-way (PCH) exposure; alternative inland routes or trenchless construction ▪ OC San annexation, acceptance criteria; available conveyance capacity from Crystal Cove through Newport Beach to Plant 2 ▪ Re-permitting dry weather diversions (25 in CLB, 30 in SCWD) ▪ Intertie siting

Alternative 2 – Redirect Raw Sewage to JBL

This alternative redirects CLB and SCWD South Coast Service Area flows to JBL using SCWD's Tunnel C corridor. Raw sewer flows from the upper reach of NCI and LS 2 would be intercepted at a new diversion manhole and, if hydraulically feasible, conveyed by gravity to the Tunnel C north portal. Recently reconstructed Tunnel would be used as gravity pathway to the southern outlet. Downstream, a new bored tunnel would connect to the JBL influent system, with an intermediate lift station to meet JBL hydraulic grade requirements. Under Alternative 2, it is anticipated JBL would be the new source of recycled water supply for the SCWD recycled water system.

Table 3. Alternative 2 Summary Table

Anticipated Infrastructure	Hydraulic/Operational Considerations	Permitting/Constraints
<ul style="list-style-type: none"> ▪ Diversion facility for NCI Reach 4/5 and LS 2 influent. ▪ Potential LS 2 decommissioning or repurposing. ▪ Buried pipe system to Tunnel C. ▪ Use of existing Tunnel C gravity carrier. ▪ New bored tunnel segment to JBL, intermediate lift station and tie-in to JBL influent gravity sewer 	<ul style="list-style-type: none"> ▪ Gravity/force main from new diversion point to north tunnel portal. ▪ LS 2 duty point modifications; surge and redundancy considerations. ▪ Flow transition and controls at Tunnel C entrance ▪ Additional pump station and force main from Tunnel C south portal to JBL. ▪ JBL compatibility with redirected flows and future expansion plans for new recycled water supply. ▪ Operational and funding coordination between CLB, EBSD, and SCWD. 	<ul style="list-style-type: none"> ▪ Tunnel construction requirements (launch/receive pits) ▪ Groundwater control, geotechnical stability, settlement risks ▪ Easements for new transfer pipe and pump station ▪ Environmental review for new JBL-bound tunnel segment/lift station, Coastal zone considerations

Alternative 3 – Extend NCI with New Reach 6 from CTP to JBL

Alternative 3 routes all wastewater now sent to the Coastal Treatment Plant (CTP) directly to the J.B. Latham (JBL) Treatment Plant via a new deep-bore tunnel (Reach 6). Existing CTP influent pipelines would be consolidated and redirected to a new lift station that pumps flows into the tunnel, where a large-diameter gravity carrier conveys wastewater toward JBL.

Reach 6 would be a deep tunnel constructed with TBM methods and aligned inland to avoid PCH and reduce surface impacts. It would require launch and receiving shafts, with possible intermediate shafts based on geology, distance, and ventilation needs. At JBL, flows could enter by gravity if grades allow; otherwise, a terminal lift station would be needed. The large-diameter (\approx 10-ft) TBM tunnel would provide space for multiple pipelines, supporting flexible conveyance of raw sewage, secondary, or tertiary flows from CTP to JBL.

Table 4. Alternative 3 Summary Table

Anticipated Infrastructure	Hydraulic/Operational Considerations	Permitting/Constraints
<ul style="list-style-type: none"> Consolidation and rerouting of existing CTP influent pipelines to a new CTP lift station. New CTP lift station designed for raw, secondary, or tertiary wastewater service. Large-diameter TBM-excavated Reach 6 gravity carrier tunnel with launch/receiving shaft and intermediate shaft(s) Launch and receiving shafts; possible intermediate shafts. Gravity or pumped tie-in to JBL influent system. 	<ul style="list-style-type: none"> Lift station head, screening, odor, and solids loading requirements. Gravity carrier access, ventilation, life-safety systems JBL hydraulic grade limitations for tie-in. JBL compatibility with redirected flows and future expansion plans Operational and funding coordination between CLB, EBSD, and SCWD. 	<ul style="list-style-type: none"> Deep tunneling (i.e. tunnel boring machine) with inland alignment to avoid PCH impacts. Groundwater and NPDES dewatering for shaft construction, muck handling/hauling plan Subsurface rights and easement acquisition. CEQA documentation for the new tunnel corridor, lift station, and associated facilities.

Alternative 4 – Redirect CTP Secondary Effluent to RTP; Return RTP Recycled Water to CTP for SCWD RW Connect.

Under Alternative 4, CTP would continue primary and secondary treatment, with secondary effluent sent to the Regional Treatment Plant (RTP) for tertiary treatment. The resulting recycled water would then return to CTP for connection to SCWD's recycled water system. New interconnecting pipelines would require careful environmental planning and a mix of open-cut and trenchless construction to minimize impacts along the Aliso Creek corridor.

Table 5. Alternative 4 Summary Table

Anticipated Infrastructure	Hydraulic/Operational Considerations	Permitting/Constraints
<ul style="list-style-type: none"> New effluent lift station at CTP and associated effluent channel/piping modifications for tie-in. New effluent force main system from CTP to RTP New recycled water pipeline from CTP back to CTP site Onsite recycled water handoff facility improvements for SCWD. 	<ul style="list-style-type: none"> Pump sizing and surge control in force main system. RTP tertiary treatment process and capacity compatibility. Integration with SCWD RW storage/pressure zones. Dual pipelines require coordinated operations among SCWD, SOCWA, and MNWD to manage daily flows, outages, and system balancing. Funding coordination and interagency agreements between MNWD and SCWD. 	<ul style="list-style-type: none"> Pipeline construction through and near the Aliso Creek corridor requires multi-agency environmental permitting (e.g., CDFW, RWQCB, USACE). Extensive environmental planning/permitting, environmentally sensitive areas Potential easement needs or access agreements for pipe reaches crossing County/regional parklands. Trail access, staging constraints, and construction window limitations.

Scope of Work

Dudek will implement the Project Element (PE) tasks per the ENG-25-10 RFP. The following clarifications, assumptions and limitations define the basis for effort and the boundaries of analysis.

Clarifications

PE 1, Data Collection: Dudek will leverage data gathered from Dudek's prior SOCWA and member agency work (i.e. City of Laguna Beach Sewer Master Plan, 2025; SCWD Sewer Model Calibration, 2022, SCWD Recycled Water Road Map, 2022; as-builts obtained for various CTP/AWT improvements projects) to summarize flow and loading criteria. Anticipated key data requests include: 1) SOCWA, CLB, EBSD, SCWD: flow monitoring logs and historical records of seasonal variations; 2) CLB: NCI funding planning records; 3) EBSD sewer atlas/maps or GIS, record drawings of major infrastructure (sewer mains, pump station, and force main); 4) OCSAN: non-point source control program materials and qualitative impact context; available capacity for Plant 2 and transfer facilities to OCWD GWRS; 5) SCWD: Tunnel Stabilization C & Sewer Pipeline Replacement as-builts; implementation status of planned potable to recycled water conversions, Phase 1 (2022) through Phase 6 (2035); and 6) Relevant planning information from concurrent JBL and CTP Feasibility Assessment Study projects

PE1, Stakeholder Meetings: Following initial data collection and review, Dudek will summarize and present findings and follow up questions in a series of virtual 30–60 minute interview sessions with CLB, SCWD, EBSD, OC San/OCWD, SOCWA/JBL/CTP, and MNWD/RTP to gather insights and follow up supporting background data.

PE2, Flow Redirect Development: Up to three (3) alternatives proposed will be assessed, based on close coordination with SOCWA and input from stakeholders.

PE2, Hydraulic Assessment: Hydraulic screening calculations (i.e. Manning's and Hazen-Williams calculations, FlowMaster, and Dudek internal sizing tools) will be used to conceptually estimate preliminary conveyance needs, pipe and pump sizing ranges, and routing feasibility for each alternative. The hydraulic models we developed for the CLB and SCWD systems will be used for context and may be used for proportional engineering adjustments; however model runs/updates will not be provided.

PE2, Infrastructure Needs: Infrastructure needs will be defined at a conceptual level, including pipelines, interties, lift station modifications, and required tunneling or trenchless segments. Schematic figures will be prepared for each alternative to show high-level pipe routes and key infrastructure nodes, using aerials and as-builts as backgrounds. These conceptual layouts will identify major feasibility constraints, access considerations, and property or easement limitations to support comparison of alternatives.

PE2, Risk and System Reliability Screening: We will identify the high-level risks associated with each alternative, such as bypass needs during cutover, PCH/Caltrans access and constraints, odor concerns, tunnel access issues, upstream pumping dependencies, and climate-related vulnerabilities (i.e. coastal corrosion environment, sea-level, flooding risks). Screening will focused on whether risks appear manageable at a conceptual level.

PE2, Environmental Considerations: Key environmental constraints and likely permitting requirements for each alternative will be identified through a meeting/consultation with our internal CEQA and permitting specialists, including water-quality compliance considerations, potential Coastal Zone impacts, environmentally sensitive areas (e.g., Aliso Canyon), major roadway crossings, and associated agency coordination needs.

PE3, Cost Development: Planning-level (AACE Class 5) costs will be prepared using order-of-magnitude quantities, regionally representative unit pricing, Southern California bid data, and Dudek's SOCWA-area conveyance/tunneling cost database, adapted from the approach used in the NCI Reliability Assessment & Analysis for CLB. Escalation will follow the ENR Construction Cost Index midpoint method. Capital costs will cover pipelines, tunnels, interties, lift station modifications, and soft costs (engineering, CM/inspection, environmental documentation, and administration).

PE4, Feasibility Analysis and Recommendations: Findings from the preceding elements will be consolidated into a planning-level feasibility matrix comparing the redirection alternatives across key differentiators such as operational reliability, maintainability, permitting considerations, constructability challenges, long-term cost exposure, and overall alignment with PC-15 agencies' service, regulatory, and recycled-water objectives. The matrix will identify feasible pathways along with major constraints and risks requiring early attention. Recommendations will outline the alternatives most suitable for advancement and will identify appropriate future planning and assessment studies including refined engineering assessments, hydraulic modeling, environmental/regulatory review, and interagency coordination with OC San, MNWD/RTP, and SCWD. High-level implementation timelines will illustrate anticipated sequencing for planning, permitting, design, and construction to support PC-15's long-term facility planning and investment decision-making.

PE5, Reporting and Deliverables: Technical Memorandums (TM) for PE1 and PE2 will be submitted in accordance with the RFP and approved prior to initiating PE3. A consolidated final report will be prepared at the conclusion of the study, including an executive summary, final Technical Memorandums for PEs 1–3, and all supporting digital files (PDF, Excel, or figures as applicable). Deliverables for all project elements are summarized below:

PE1: TM1: Letter-style TM with attached data/resource log, flow and recycled-water summaries, and supporting source files.

PE2: TM2: Letter-style TM describing redirection alternatives and screening results, with attached schematics, hydraulic tables, and risk/environmental notes

PE3: TM3: Letter-style TM presenting Class 5 Estimate of Construction costs for each alternative.

PE4: TM4: Letter-style summarizing feasibility findings, comparative evaluation with attached scoring tables.

PE5: Final Report with executive summary and appended TM-1 through TM-4 including executive summary, final TMs for PEs 1–3, and digital files in standard formats.

PE6: Project Control Plan (PCP); monthly progress updates; schedule and percent-complete tracking summaries.

PE6, Project Control and Management: A Project Control Plan (PCP) will be developed to establish project management procedures and establish a unified understanding of expectations, roles, decision pathways, planning criteria, and cost-basis assumptions among SOCWA and the PC-15 member agencies. The PCP will identify Dudek's designated points of contact for each Member Agency and outline coordination needs with concurrent SOCWA and PC-15 efforts. Project communications will include a kickoff meeting, monthly project management meetings, and routine check-ins with SOCWA staff. Monthly progress reports will summarize project status, schedule updates, and percent-complete by project element. The PCP will also include a 12-week baseline schedule presented with a week-by-week breakdown of major activities and review milestones.

Key Assumptions and Limitations

- Due to the constrained project budget, the scope of work is limited to planning-level screening consistent with AACE Class 5 practices and level of effort is limited to the hours included in the fee estimate breakdown. Detailed evaluations, modeling, engineering design, and field verification required for design-level decisions, permitting, or funding applications are outside the scope and may be provided as additional services.
- All findings, cost estimates, constraints, and recommendations generated through this study are intended solely for comparative feasibility screening and should not be used for design, permitting, or environmental documentation.
- Cost Evaluation will be limited to conceptual level cost estimates of infrastructure construction costs for each alternative. Additional elements of the RFP requesting cost savings, sensitivity analysis, and long-term O&M costs can be developed through contract amendment if desired by the District.
- Requested agency data will be provided within five business days of request. Delays due to agency availability or incomplete data may require schedule extensions or additional fee.
- Environmental and regulatory considerations will be accommodated through a single meeting with our CEQA and permitting team to discuss and identify potential issues and fatal flaw considerations, timelines, and vulnerabilities.
- Alternative concepts beyond those described herein may be submitted for initial screening. However, development efforts under PE 3 and PE 4 will be limited to a maximum of three alternatives.
- Stakeholder participation is assumed to include one interview session per agency (total of up to five sessions) plus limited email follow-up.
- SOCWA will provide singular package of consolidated review comments for Technical Memorandums and the draft Final Report.

1.3.3 Experience and Technical Competence

Dudek engineers are recognized experts in the design of wastewater treatment facilities. Our referenced engineering projects are chosen specifically for project similarities and team member involvement.

Table 6. Relevant Project Experience

Project Name, Client and Dates	Client Reference	Brief Scope	Relevance to CTP Regional Flow Study Project
Laguna Beach NCI Assessment & Reach 5 Replacement Final Design City of Laguna Beach 2022 - Ongoing	Ulises Escalona 949.497.3311 uescalona@lagunabeachcity.net	Completed reach-based evaluation of the 4.3-mile NCI, reviewing condition, siphon performance, hydraulic behavior, access constraints, and constructability for multiple alternatives. Reach 5 identified as highest-risk and advanced into replacement final design.	Directly informs regional redirection feasibility through detailed knowledge of NCI constraints, siphon hydraulics, lift-station dependence, and PCH corridor limitations. Provides understanding of diversion points, gravity/siphon transitions, and environmental access constraints central to evaluating CTP-bypass concepts.
Laguna Beach Wastewater Master Plan City of Laguna Beach 2024-2025	Ulises Escalona 949.497.0792 uescalona@lagunabeachcity.net	Completed the City's first comprehensive WMP, including 2024-25 flow monitoring, development/calibration of a new hydraulic model, and condition assessments for ~20 miles of pipe, 26 lift stations, and 25 dry-weather diversion structures. Developed unit flow factors, capacity results, and risk-based CIP recommendations.	Offers a current understanding of SCWD flow patterns, dry-weather diversion routing, lift-station operations, and system constraints—all foundational to evaluating SCWD's role in any CTP redirection scenario. Reduces uncertainty in regional screening by providing validated dry-weather behavior and realistic flow distributions.
Sewer Model Calibration South Coast Water District 2021-2022	Taryn Kjolsing 949.499.4555 ext. 317 tkjolsing@scwd.org	Updated/validated SCWD's sewer model using 2021-22 flow monitoring, potable-water-based allocation, updated pump controls, and basin diurnal curves. Identified surcharge locations through systemwide dry-weather stress testing.	Applicable to redirection alternatives involving JBL and CTP, providing insight into pump/pressure-zone constraints, transfer limitations, and recycled water reliability considerations. Clarifies system bottlenecks, intertie conditions, and hydraulic behavior that influence regional flow routing concepts.
Hydraulic Modeling Recycled Water Transfer from CTP to JBL South Coast Water District 2025 - Ongoing	Taryn Kjolsing 949.499.4555 ext. 317 tkjolsing@scwd.org	Evaluated SCWD's ability to transfer up to 4 MGD of recycled water from CTP to JBL under multiple demand scenarios; assessed pump capacities, pipeline velocities/pressures, storage interactions, and seasonal demand variability.	Directly applicable to redirection alternatives involving JBL and CTP, providing insight into pump/pressure-zone constraints, transfer limitations, and recycled water reliability considerations. Clarifies system bottlenecks, intertie conditions, and hydraulic behavior that influence regional flow routing concepts.

1.3.4 Key Personnel

Dudek will serve as the prime consultant providing overall management and engineering services. **Brian Robertson, PE, QSD**, will serve as your dedicated project manager and the main point of contact for SOCWA. He is a successful project manager with 19 years' experience providing wastewater and recycled water infrastructure design and master-planning-level studies for similar clients, including the Member Agencies. Brian will oversee the development and execution of the tasks, tracking budgets and schedules, and developing and executing the Project Control Plan. He understands the importance of good communication, efficient multitasking, and being solution oriented. He will facilitate the flow of information among the team and with the District's project manager. Supporting Brian will be **Russ Bergholz, PE, PMP**, serving as principal in charge. Russ has 30 years' experience managing, planning, and designing water infrastructure projects throughout Southern California and serves as Dudek's lead principal engineer.

Dudek does not anticipate the use of subconsultants under this contract. However, Dudek maintains a strong working relationship with many local subconsultants and is open to teaming with other firms, as required or requested by SOCWA.

Figure 2 illustrates the team organization and lines of communication. Focused resumes for Key Personnel are provided in **Appendix A**.



Figure 2. Organizational Chart

*Key Personnel

1.3.5 Pricing

In accordance with the proposal submission instructions, pricing has been submitted as a separate file.

1.3.6 Conflicts of Interest

Dudek confirms that the participation of its employees, agents, or subcontractors in the proposed contract does not constitute a conflict of interest or a potential conflict of interest pursuant to California Government Code Sections 1090 et seq., the Political Reform Act, and other applicable laws.

1.3.7 Non-Collusion Affidavit

ATTACHMENT B NON-COLLUSION AFFIDAVIT

The undersigned declares:

I am the CEO of Dudek, the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on 1/29/26, at Encinitas, CA

Signature: 

Title: Chief Executive Officer

1.3.8 Certifications

Dudek confirms all five certifications mentioned in the RFP.

Dudek respectfully requests the consideration of the following exceptions to the SOCWA Agreement for Design Services.

Section	Change	Suggested Language
4.3	Add a performance standard after the first sentence	<i>"Consultant shall perform the services with the skill and care ordinarily exercised by members of the same profession operating under similar circumstances in the same or similar locality at the time of performance."</i>
5.1	Change to "per claim"	<i>"Contractor and each of its subcontractors shall maintain throughout the term of this Agreement a professional liability policy of insurance having coverage of not less than One Million Dollars per claim."</i>
5.8	Add "Except for Professional Liability"	<i>"Except for Professional Liability, contractor hereby agrees to waive rights of subrogation against SOCWA and the Additional Insureds which any of Contractor insurers may acquire from Contractor by virtue of the payment of any loss."</i>
6.1.3	Add to the end	<i>"Notwithstanding the foregoing, with respect to any professional liability claim or lawsuit, this indemnity does not include providing the primary defense of SOCWA Indemnitees, provided, however, Engineer shall be responsible for SOCWA Indemnitees' defense costs to the extent such costs are incurred as a result of Engineer's negligence, recklessness or willful misconduct."</i>
8.1	Add to the end	<i>"Any reuse or modification of the work product beyond the original purpose for which it was created, by SOCWA or a third person or entity authorized by SOCWA, without written verification or adaptation by Contractor will be at SOCWA's sole risk and without liability or legal exposure to Contractor."</i>

Brian Robertson, PE, QSD

PROJECT MANAGER

Brian Robertson has 19 years' project engineering experience in the planning and design of infrastructure projects. Brian has developed a reputation for delivering high-quality work on time and within budget. He has extensive experience in water, wastewater, and drainage conveyance systems for cities and districts throughout Southern California, and has received recognition for his work preparing detailed analyses, reports, drawings, specifications, and cost estimates. Brian has developed an excellent rapport for seamless coordination with team members, various utilities, and essential governmental agencies. He brings a high level of professionalism while delivering project design packages with other services, including development review and staff augmentation.



Education

Cal Poly State University,
San Luis Obispo
BS, Civil Engineering,
2006

Certifications

California PE 77990
Certified QSD

Project Experience

Headworks Screening System Improvements, Olivenhain Municipal Water District, Encinitas, California. Served as a project engineer for condition assessment and improvements of the existing headworks facility, including installation of new mechanical bar screen units, grit classifiers, odor control system, slide gates, and influent channel improvements and lining. He guided the bypassing approach and will support it through the completion of the project.

CTP Foul Air System Reconstruction Final Design, South Orange County Wastewater Authority, Laguna Niguel, California. Serving as project manager for the final design of major odor control system upgrades at the Coastal Treatment Plant, including incorporation of a new packaged odor scrubber system (ORS-2) to treat high-strength foul air from the rotary screen, aerated grit tank, and sludge equalization processes, refurbishment of the existing chemical scrubber (ORS-1), and associated ductwork and interconnecting foul air conveyance modifications. The work includes design of new foul air interconnects to provide operational flexibility between ORS-1 and ORS-2, new air collection from the rotary screen, and improvements at the primary sedimentation tank (PST) and aerated grit tank (AGT) foul air sources. Responsibilities include development of detailed, multi-phase construction sequencing and bypass plans to maintain continuous odor control operations, preparation of work restriction and sequencing specifications, and coordination with SOCWA operations staff for maintaining compliance with SCAQMD requirements during construction.

Plant 2 Headworks Rehabilitation, J.B. Latham Treatment Plant (JBL), South Orange County Wastewater Authority, Dana Point, California. Serving as project manager for the rehabilitation of the Plant 2 Headworks facility, including replacement of the corroded roof structure, concrete repairs within the headworks channels, new channel covers, and electrical improvements associated with roof and conduit replacement. The project also includes development of temporary influent bypassing at the junction structure to maintain continuous plant operations and implementation of both temporary and permanent odor control system upgrades to improve ventilation and reduce corrosion. He led the development of construction sequencing, outage planning, and work restrictions to maintain 24/7 operability during rehabilitation and continues to support the project through engineering services during construction.

Santa Maria Wastewater Treatment Plant Headworks Upgrade, Ramona Municipal Water District, Ramona, California. Lead engineer for the civil and mechanical design of a new headworks facility at the Santa Maria wastewater treatment plant (WWTP). The plant's existing influent lift station and downstream processes have been affected by rags and grit due to a lack of headworks screening and grit removal for the plant. The project includes the relocation of an influent truck sewer, a new headworks structure with influent screw pumps, mechanical screenings equipment, grit removal, and a new emergency generator. Various project challenges include construction phasing, large equipment and structures, utility relocation, and connections to existing facilities.

Huston Creek WWTP Dewatering Building and Primary Clarifier, Crestline Sanitation District, Crestline, California. Project engineer for the final design of a new two-story biosolids dewatering building, sludge holding tank, and primary clarifier for the District's 1 MGD Huston Creek WWTP. The project includes new structures, pumps, a polymer feed system, an odor control system, channels, electrical systems, and a new emergency generator. Project site conditions required careful structural, civil, and mechanical design to support new facilities in challenging topographic conditions and other requirements to maintain plant operation during construction. His services included the preparation of final design packages and engineering services during bidding and construction.

WRF 1 Aeration System Improvements, City of Corona, California. Project manager for a new air piping supply system and new diffuser grid in aeration basins 1, 2, and 3 at WRF-1A. The improvements include relocating the existing air headers with a new overhead alignment, including a pipe bridge and other overhead structural support systems. Design plans and a sequence of construction specifications were developed to minimize construction costs and maintain plant operation and performance while installing the new diffusers. Project was awarded as a Best APWA 2025 Project.

Edinger Pump Station Rehabilitation Study, Orange County Sanitation District, Huntington Beach, California. Project engineer responsible for assessing and developing planning studies to determine feasible options for the rehabilitation, replacement, relocation, or abandonment of the Edinger Pump Station. Project elements included assessment of geotechnical, structural, hydraulic, and mechanical conditions. Multiple alternative pump station sites and configurations were developed and evaluated extensively with engineering and operations staff.

Highbury Pump Station Rehabilitation, Bureau of Engineering, Wastewater Conveyance Engineering Division, Los Angeles, California. Project engineer for the rehabilitation design of the existing pump station. Tasks included utility research, site design, pump system hydraulics, evaluation of new pumping and equipment options, preparation of the preliminary design report, workshop presentations, and preparation of the Plans, Specifications, and Estimates (PS&E) package.

Final Effluent Sampler and Building Area Upgrades (J-110), Orange County Sanitation District, Huntington Beach, California. Project engineer for a new final effluent water quality sampler facility; improvements to the ocean outfall system; and other miscellaneous mechanical, electrical, and instrumentation improvements for Plant No. 2. Responsibilities included development of a work plan to implement inspection of the 120-inch Short Ocean Outfall and other associated large diameter yard piping. Coordinated with subconsultants and operations staff, evaluated sampling and metering equipment options, evaluated pipeline rehabilitation alternatives, prepared civil site design, and prepared the preliminary design report and PS&E.

Golden Lantern/Stonehill Recycled Water Distribution Final Design, South Coast Water District, Dana Point, California. Served as a project engineer for a recycled water distribution project consisting of the replacement of approximately 3,700 feet of 6" recycled water main with 16 16-inch main in Stonehill Drive from Monarch Beach Drive to Golden Lantern Street. Responsibilities included alignment development, utility coordination, and mapping, preparation of sequencing and point of connection plans, and preparation of design drawings.

Russ Bergholz, PE, PMP

PRINCIPAL IN CHARGE

Russ Bergholz is a principal engineer with 30 years' experience. Russ manages Dudek's Water Infrastructure Group and is responsible for the management and engineering of water-/recycled water-related system Master Plans and design projects. His experience includes the development of numerous water, recycled water, and sewer Master Plans; pipeline design projects (including trenchless technology); and infrastructure rehabilitation projects for many Southern California cities and special districts. He has a documented track record of keeping projects within scope and budget while maintaining quality control and addressing the critical success factors of his clients' projects. As a project manager, Russ is responsible for the tracking, monitoring, team delegation, deliverable quality assurance, engineering guidance, accounting, and client and subconsultant coordination associated with each project, including final stamp and signature of project plans and specifications.

Project Experience

Infrastructure Design - Sewer

Mojave Regional Wastewater Treatment Plant Planning Study, VVWRA, Victorville, California. Serving as project manager. Following the completion of a comprehensive capacity analysis of the VVWRA interceptor system, the concept of construction of a regional plan was developed to offset the capacity by scalping current and future upstream flows. Dudek developed the planning study by identify and evaluating five alternative sites for the new treatment plant. The plant layouts accommodate both the installation of a membrane bioreactor-based 6 mgd plant with the space for increasing ultimate treatment capacity to 12 mgd. The evaluation process identified 14 weighted selection criteria to apply to each alternative, allowing for an objective and defensible approach to site selection.

North Coast Interceptor (NCI) Assessment, City of Laguna Beach, California. Served as project manager. A substantial sewer spill from the NCI in late 2019 necessitated the immediate investigation of mitigation measures to prevent such a spill in the future. Dudek was hired to evaluate the entire NCI, assess risk potential, and identify various options for replacement or realignment of the interceptor system. The NCI was divided into five segments and evaluated based on various combinations of options between all five segments, providing a wide range of potential solutions for consideration. The final report provided the City of Laguna Beach with the data to make an informed decision on the necessary improvements, along with the project costs to develop a rate increase to fund the work.

North Coast Interceptor (NCI) Reach 5 Inverted Siphon Replacement, Laguna Beach, California. Serving as project manager for the alternative analysis and final design of the City of Laguna Beach Reach 5 Interceptor



Education

University of California,
Davis
BS, Civil Engineering,
1995

Licenses and Certifications

Professional Civil
Engineer,
CA No. 59395

Project Management
Institute PMP
No. 1472209

Professional Affiliations
American Public Works
Association
California Water
Environment Association
Water Environment
Federation

replacement. After a series of pipe failures, the City hired Dudek to develop an in-depth evaluation of alternatives to mitigate additional risks to the NCI. Through the evaluation process, Reach 5, which extends from the Pacific Coast Highway to the South Orange County Wastewater Authority Coastal Treatment Plant, was considered the reach with the highest risk and potential damage if another failure were to occur. Considering the many stakeholders involved with this congested corridor, careful coordination and communication were imperative for successfully developing construction documents and permits and the eventual construction effort. The replacement pipeline will be a low-pressure inverted siphon and 100% redundant with approximately 5,200 linear feet of new dual 18-inch HDPE pipelines.

Bluebird South Orange County Water Authority Lift Station Rehabilitation, City of Laguna Beach, California. Served as project manager. The project included the preparation for comprehensive rehabilitation of the existing 31-year-old, 4 mgd sewer lift station. Improvements involved complete realignment of the 30-inch-diameter inlet gravity pipe, wet well relining, new dry well valves and bridge crane, permanent bypass suction and discharge pipe (500 linear feet of 14-inch HPDE), new concrete access ramp, and complete rewiring of the station power and controls. Assessment and full design package of the rehabilitation of this critical infrastructure was completed in 6 months.

Bayside Drive Trunk Sewer Improvements, OC San, City of Newport Beach, California. Served as lead design engineer. Dudek completed design and construction assistance for the Bayside Drive Trunk Sewer Improvements for OC San. The project included structural in situ CIPP structural liner replacement of an existing 24-inch-diameter DIP sewer. This pipe was originally designed for full pipe flow but was converted later to open channel flow. After operating in open channel flow conditions, the DIP severely corroded inside. The 3,000 feet of pipe is located within a winding and hilly section of Bayside Drive in the City of Newport Beach along the edge of Newport Harbor. The work included site investigation, odor control, traffic control, preparation of a preliminary design report, final plans and specifications, and assistance with permits including a City of Newport Beach Encroachment Permit. The project was managed under a tight budget and schedule, with successful completion of the design and construction within the deadline. All stakeholders were very pleased with the final product.

30-Inch Effluent Transmission Main Replacement at San Juan Creek, Moulton Niguel Water District, Laguna Niguel, California. Served as project manager. The effluent transmission main is main sewer effluent for the District and was undersized at the crossing of the San Juan Creek channel. Dudek was hired to design the upsize of this crossing. The project design included use of trenchless microtunneling construction methods for the new 30-inch-diameter PVC pipe inside a 48-inch-diameter steel casing across the 350-foot-wide channel. With the replaced and upsized effluent transmission main, the District's outfall has the capacity to accept increased sewer flows.

Hydraulic Modeling, Moulton Niguel Water District, Laguna Niguel, California. Project manager. The Moulton Niguel Water District was without an operating or calibrated water system hydraulic model since the last water Master Plan in 2014. Dudek was hired to assess and update the water system hydraulic model to reflect current water system operations, calibrate the model to current average day water demands, and create an entirely new systemwide hydraulic profile of the distribution system.

Recycled Water System Expansion Feasibility Study, South Coast Water District, Laguna Beach, California. Served as project manager. The planning study evaluated the potential recycled water sources and included hydraulic analysis to determine limitations and distribution system improvements and evaluated the impact on water quality. The resulting report provided specific current system improvements to reduce pressure issues and long-term improvements to take advantage of surface water runoff in order to support recycled water use during the summer months.

Neil Harper, PE

QA/QC

Neil Harper is a professional engineer (PE) with 27 years' experience in project management, engineering, planning, design, construction support services, and providing quality control for a variety of municipal and public agency clients. Specific areas of practice include water, wastewater, and water reuse systems, and relevant experience includes water distribution and treatment facilities, pumping facilities, and reservoirs.

He serves in various project roles that range from management and engineering to senior technical advisor, and performs quality assurance and control on a significant portion of Dudek's engineering projects. A key part of his approach includes evaluating the constructability and permitting aspects of the projects. The following are a range of projects that include his role in the project.

Project Experience

Mountain Avenue West Replenishment Basin, Eastern Municipal Water District, Riverside County, California. Served as project engineer for design of the flow control and pressure-regulating facilities to deliver both raw water and future water supplies to the site for percolation into the local groundwater basins. The raw water facilities included 800 linear feet of 36-inch-diameter cement mortar-lined and coated (CML&C) steel pipeline, a flow metering and control facility composed of two 18-inch trains of motor-operated butterfly valves arranged in series (this arrangement accommodated a wide range of flows and pressures and mitigated cavitation of the butterfly valves), and two basin inlet facilities with "air-gaps." The future water supply facilities included 2,100 linear feet of 30-inch-diameter PVC pipeline, a flow metering and control facility composed of two 12-inch trains each equipped with a Cla-Val-type control valve to provide flow and pressure control, and one basin inlet facility that includes an "air-gap." Additional facilities on site consist of several reinforced concrete diversion facilities composed of 36-inch sluice gates with PVC piping and level measurement equipment. Also included in the overall facility design for the 38-acre project were 11 monitoring walls (three multi-port wells and eight single-port wells) that were drilled to depths of up to 1,100 feet, and equipment with submersible level transducers and telemetry that communicates with the on-site Programmable Logic Controller/Supervisory Control and Data Acquisition (PLC/SCADA) panel.

North Trumble Recycled Water Storage Ponds, Eastern Municipal Water District, Riverside County, California.

Served as project engineer for design of nine 150-horsepower (hp) vertical turbine floating pump stations, five pressure sustaining, flow control, and flow metering inlet facilities to the five ponds, and five outlet metering stations. The project entailed multiple connections from the 24-inch-diameter inlet piping and 16-inch-diameter outlet piping to the 36-inch-diameter and 48-inch-diameter recycled water transmission mains. Extensive coordination with SCE to provide electrical service for the nine floating pump stations was also required.



Education

*California Polytechnic State University, San Luis Obispo
BS, Bio-Resource and Agricultural Engineering*

Certifications

*Professional Civil Engineer (PE),
CA No. C63288*

Professional Affiliations
Orange County Water Association, 2002–present; Board of Directors (2014–2017); President (2017)

American Society of Civil Engineers

Wells 201–203 Centralized Treatment Facility, Eastern Municipal Water District, San Jacinto, California. Lead engineer for a team that performed a value engineering analysis and prepared a summary report that included cost reduction and project optimization options. The project consisted of the design of a water treatment plant that removes iron, manganese, and potential nitrates (future phase). The water treatment plant facility also includes a blending station, forebay, pump station, and other appurtenant facilities. A multi-day workshop provided the Eastern Municipal Water District and design team with 14 viable cost-reduction measures and project optimization options.

O'Neill Regional Park Sewer Conversion, Resource Development and Management Department (now called Orange County Public Works), City of Trabuco, Orange County, California. Served as project engineer for design of a 40-foot-deep submersible lift station, 12,000 feet of gravity sewer, 98 manholes, and 1,400 feet of forcemain. The project required a project concept report that developed and evaluated alternatives to septic tanks/leach fields to hold/treat sewage generated by O'Neill Regional Park's 14 restrooms and RV dump station. Alternatives included a variety of gravity and pressure sewer conveyance systems and on-site sewage holding tanks. A preliminary design report further developed the recommended concept that was a gravity sewer system and one pump station and forcemain. One challenging aspect of the project was a 35-foot-deep open cut crossing of Trabuco Creek; this was primarily due to permitting.

Prado Dam Utility Relocations, City of Corona, Riverside County, California. Served as project engineer for design of multiple sewer, effluent, and forcemain pipelines ranging from 4 inches to 48 inches in diameter that required reconstruction and/or rerouting to accommodate the large earthen dikes providing flood control in and around the Prado Dam area. Extensive coordination and planning was required between the U.S. Army Corp of Engineers, City of Corona, and County of Orange. Multiple bypass pumping plans were integral to this project.

Wastewater Treatment Plant No. 2 Lift Station Replacement, City of Corona Department of Water and Power, Riverside County, California. Served as project manager for design of the influent plant lift station, which included four 50-hp dry pit sewage pumps operated with VFDs, 35-foot-deep reinforced concrete dry pit with stairway, overhead crane, sluice gates, automation of existing sluice gates, rerouting of plant sewer piping (12- to 24-inch-diameter) and manholes.

Lift Station No. 2 Forcemain Contingency Plan, South Coast Water District, Laguna Beach, Orange County, California. Served as project manager for preparation of a forcemain contingency plan should the 20-inch-diameter forcemain that is more than 1 mile long become disabled or broken. Flow from the lift station ranges from 500 gpm to 3,300 gpm, and the station is located adjacent to sensitive environmental areas such as Aliso Creek and the Pacific Ocean.

Huston Creek Wastewater Treatment Plant Dewatering Building and Primary Clarifier, Crestline Sanitation District, Crestline, Riverside County, California. Served as senior technical advisor and performed quality assurance for submittals on a project that involved construction biosolids dewatering facilities located within a concrete masonry unit (CMU) building. The biosolids were dewatered using centrifuges. In addition, the project involved construction of a third primary clarifier that required a detailed construction phasing plan, including bypassing of raw sewage at the plant's headworks.

Secondary Feed to the 1050 Zone, Moulton Niguel Water District, Laguna Niguel, Orange County, California. Served as project engineer to develop and study alternatives for providing a secondary feed (in the form of a redundant pump station) for the existing 1050 pressure zone. The 1050 pressure zone is a hydraulically closed zone. Six alternatives were developed and evaluated. Two alternatives were selected for further evaluation and refinement. The project concluded with a recommended project that included adding a pump station at an existing pumping/storage facility and approximately 2,000 linear feet of 12-inch-diameter piping.

Elizabeth Caliva, PE

HYDRAULICS LEAD

Elizabeth Caliva is a professional engineer and seasoned project manager with over 23 years' experience leading water, wastewater, and recycled water planning efforts. She specializes in managing complex infrastructure Master Plans and planning studies, serving as both technical lead and project manager. Elizabeth is known for delivering high-quality projects on time and within budget, with a strong emphasis on clear communication, client collaboration, and team coordination. Her technical foundation includes extensive experience in hydraulic modeling and infrastructure planning. While she now leads teams and oversees project delivery, she maintains proficiency in key modeling platforms such as InfoSWMM (Innovyze), AquaTwin Sewer, and AquaTwin Asset (Aquanuity). Her project portfolio spans master planning, Sanitary Sewer Management Plans (SSMPs) and audits, condition assessments, and the design of treatment plants, pump stations, and pipelines. Elizabeth is known for her leadership in guiding multidisciplinary teams through complex infrastructure planning efforts, ensuring alignment between technical goals and client priorities.

Project Experience

Planning/Modeling

Wastewater Master Plan, City of Laguna Beach, California. Served as project manager for the City's first comprehensive Wastewater Master Plan, overseeing all aspects of planning, technical analysis, and project coordination. Led a multidisciplinary team, including three subconsultants, in conducting extensive field surveys, flow monitoring, and developing the City's inaugural sewer hydraulic model to evaluate system capacity. Directed condition assessments for 26 lift stations, 25 urban water diversion structures, 400 manholes, and 20 miles of pipeline. Developed a risk-based prioritization model to inform a phased 20-year capital improvement program. Delivered the project on time and within budget, providing the City with a strategic, data-driven roadmap to guide future infrastructure investments, improve system reliability, and support proactive asset management. Received positive feedback from the client for project quality and responsiveness.

Recycled Water Roadmap, South Coast Water District, Dana Point, California. Project manager. Developed and managed the comprehensive roadmap for a multi-phase expansion of South Coast Water District's recycled water system. Led cross-disciplinary teams in advanced hydraulic modeling, infrastructure assessment, and contingency planning to address future irrigation demands and system resilience. Delivered actionable recommendations for phased pipeline and facility upgrades, supporting the District's strategic goal to convert potable irrigation customers to recycled water. The plan optimized capital investments, enhanced long-term water reliability, and positioned the District for sustainable growth, with a projected investment of \$25 million–\$32 million.

Sewer Model Calibration and Update, South Coast Water District, Dana Point, California. Project manager. Managed the calibration and update of the District's sewer system hydraulic model to enhance the accuracy of capacity assessments and support future infrastructure planning. Oversaw the integration of recent flow monitoring data, coordinated with District operations staff, and directed technical analysis across three distinct



Education

University of California,
Berkeley
MS, Water Resources and
Water Quality
Engineering, 2003
BS, Environmental
Engineering, 1999

Certifications

Professional Civil
Engineer (PE),
CA No. 64331

Professional Affiliations

WateReuse Association

service areas. Led the allocation of sewer flows using potable water usage data, refined model parameters, and validated results through field data and advanced calibration techniques. Conducted a system-wide capacity stress test to identify potential risk areas and inform targeted monitoring and improvement strategies. Delivered a robust modeling platform that provides the District with greater confidence in system evaluations and supports data-driven decision-making for capital investments and operational planning.

Recycled Water Transfer from CTP to JB Latham—Hydraulic Analysis, South Coast Water District, Dana Point, California. Project manager. Leading the technical evaluation of South Coast Water District's recycled water system to assess the feasibility and requirements for transferring up to 4 mgd of recycled water from the SOCWA Coastal Treatment Plant (CTP) to the JB Latham Treatment Plant. Overseeing hydraulic modeling under multiple demand scenarios, coordinating system updates, and identifying operational constraints and infrastructure needs. Managing the analysis of pump station and pipeline capacities and developing phased improvement strategies to optimize system performance and support future expansion. Collaborating with District staff to deliver actionable recommendations for capital projects, ensuring reliable transfer operations and supporting long-term water resource planning. Project is currently in progress.

Sewer Master Plan Update, City of Corona, California. Serving as project manager for the City of Corona's 2025 Sewer Master Plan Update, overseeing planning, technical analysis, and environmental documentation for a complex municipal sewer system spanning 440 miles of pipelines and 15 lift stations. Leading a multidisciplinary team in conducting comprehensive capacity analysis and condition assessments to address aging infrastructure and support ongoing population growth. Coordinating the development of a Program Environmental Impact Report (PEIR) to facilitate future improvements. The updated master plan will provide the City with a strategic, phased roadmap for capital investments, regulatory compliance, and reliable sewer service across diverse neighborhoods and development patterns. The project is currently on schedule and within budget.

Water and Sewer Master Plan Updates, City of El Centro, California. Serving as project manager, leading the development of the City's first updated water and sewer master plans in over 17 years, managing all aspects of planning, technical analysis, and project coordination. Overseeing comprehensive infrastructure evaluations, including hydraulic modeling of the sewer trunk system, condition assessments of pipelines, lift stations, and the wastewater treatment plant, as well as capacity and condition analysis of the water distribution system and 21 mgd water treatment plant. Coordinating with subconsultants on rate studies to ensure financial sustainability. The master plans will deliver a realistic, strategic framework for guiding phased capital improvements and updated utility rates, aligning infrastructure investments with projected growth and improving system reliability. Project is currently on schedule and within budget.

Interceptor Risk Analysis 2020, Victor Valley Wastewater Reclamation Authority, Victorville, California. Project manager. Oversaw the evaluation of future interceptor system flows and infrastructure needs as a follow-up to the Authority's 2019 capacity study. Coordinated with member agencies to develop updated growth projections and leveraged the Authority's calibrated hydraulic model to assess system capacity through 2030. Directed field investigations and integrated closed-circuit television and sonar data to evaluate condition-limited areas, supporting the prioritization of over \$120 million in recommended projects. Facilitated the initiation of a regional inflow and infiltration (I/I) study to identify opportunities for capacity improvement prior to major upgrades. The analysis provided the Authority with a targeted investment strategy and actionable guidance for enhancing system performance and planning future improvements. Project delivered on schedule and within budget.

Brandon Lacap, PE

CONVEYANCE LEAD

Brandon Lacap is a professional civil engineer with 15 years' experience in engineering design, hydraulic analysis, condition assessment, and the management of water/wastewater infrastructure and capital improvements projects. Brandon has extensive experience designing and preparing plans and specifications for public and federal agencies; writing preliminary design reports; developing water and wastewater master planning documents; and performing hydraulic modeling/surge analysis of conveyance systems. Brandon specializes in sewer lift station, sewer pipeline, and mechanical piping design, with a focus on value engineering.

Project Experience

North Coast Interceptor Reach 5 Replacement, City of Laguna Beach, California. Served as senior engineer for the design for inverted sewer siphon improvements to replace a significant section of the City of Laguna Beach's existing 24-inch asbestos cement North Coast Interceptor (NCI) pipeline, which has been prone to failure over the past 50 years. The project includes several key components, most notably replacing the existing 24-inch NCI pipeline with approximately 5,200 LF of dual 18-inch high-density polyethylene (HDPE) pipelines, starting from Pacific Coast Highway and ending just outside of the entrance to the South Orange County Wastewater Authority Coastal Treatment Plant. This project will also incorporate trenchless technology, including approximately 1,500 LF of horizontal directional drilling in sensitive areas, while traditional open trenching will be used in less sensitive zones. The project also maintains the interconnection between the NCI and the South Coast Water District's Lift Station 2 (LS-2) emergency intertie system, allowing one of the new pipelines to be connected for emergency use, thereby enhancing operational flexibility and providing an additional layer of redundancy.

Wastewater Master Plan, City of Laguna Beach, California. Served as condition assessment task lead/lead engineer responsible for the comprehensive condition assessment of 21 of the City's aging sewer pump stations and force mains, as well as conducting field investigations and assessments of 24 of the City's stormwater diversion facilities. The stormwater diversion facilities included a number of stormwater pump stations, stormwater diversion vaults, and diversion overflow structures, as well as motor-operated stormwater diversion valve assemblies. This project included a review of record drawings, facility history, and maintenance reports; hydraulic analysis; a review of SCADA data for pump cycle timing and run time; and a field inspection of all pump stations and stormwater diversion facilities. The condition assessment was used to identify deficiencies and develop recommendations for a prioritized list of capital improvement projects to develop the City's 10-year Wastewater Master Plan CIP.

Wastewater Master Plan Update, Olivenhain Municipal Water District, 4S Ranch, California. Served as condition assessment task lead/lead engineer for the condition assessment and analysis task of both of the District's sewer collection systems: the Rancho Cielo Sewer Collection System and the 4S Ranch Sewer Collection System. These two collection systems combine approximately 66 miles of gravity mains, 1,215 manholes, 14 sewer lift



Education

San Diego State University
BS, Civil Engineering, 2009

Certifications

Professional Civil Engineer (PE),
CA No. 87211

stations ranging from 60 gpm to 1,700 gpm, and approximately 12 miles of force mains. Managed the comprehensive condition assessment of the District's three largest lift stations, including the hydraulic evaluation and field inspection of all mechanical, structural, electrical, and site/civil assets. The remaining 11 lift stations underwent a hydraulic evaluation, a review of previous improvement recommendations from the 2015 Sewer Master Plan, and Workshop discussions with operators to develop improvement projects for incorporation into the overall capital improvement program (CIP). Dudek prepared a condition assessment and prioritization technical memorandum that included descriptions of recommended improvement projects and planning-level project costs for all 14 lift stations. These costs were then prioritized and incorporated into a 10-year CIP budget to be documented in the District's Wastewater Master Plan Update Report.

North Coast Interceptor (NCI) Assessment, City of Laguna Beach, California. Served as senior engineer. A substantial sewer spill from the NCI in late 2019 necessitated the immediate investigation of mitigation measures to prevent such a spill in the future. Dudek was hired to evaluate the entire NCI, assess risk potential, and identify various options for replacement or realignment of the interceptor system. The NCI was divided into five segments and evaluated based on various combinations of options between all five segments, providing a wide range of potential solutions for consideration. The final report provided the City with the data needed to make an informed decision on the necessary improvements, along with the project costs to develop a rate increase to fund the work.

Lift Station No. 11 Rehabilitation, South Coast Water District, Dana Point, California. Served as project manager for the Lift Station No. 11 Rehabilitation project located at the Dana Point Harbor. This project focuses on critical upgrades to ensure the continued functionality of a key wastewater conveyance system serving Dana Point Harbor. Lift Station No. 11, responsible for pumping wastewater from the commercial harbor property and adjacent areas, faces operational challenges due to aging infrastructure and increased demand resulting from the ongoing Dana Point Harbor Revitalization Project. Given the potential for a new lift station within 3 to 4 years, the project recommendations included targeted improvements to maintain reliable operations in the short term. These included replacing the existing pumps with two new 7.5-horsepower, 350 gpm, constant-speed, dry-pit submersible pumps; upgrading the mechanical piping; rehabilitating the dry well's concrete structure; and making critical electrical upgrades to the motor control center, utility panel, and pump control panel.

Plant 3A Subsidence Odor Reduction Tower Pump Station and 3W Pump Station Demolition, Moulton Niguel Water District, Laguna Niguel, California. Served as senior engineer. The Plant 3A wastewater treatment plant was recently taken over by the Moulton Niguel Water District and had numerous deficiencies that needed to be addressed. Dudek was hired to develop improvement plans to mitigate soil subsidence along the western side of the site, along with the replacement of three sludge pump stations, replacement of electrical conduits, improvement of site drainage, and conveyance of filter water to the plant's Odor Reduction Tower (ORT) via a new ORT pump station. The improvement plans successfully conveyed a wide range of tasks to bidding contractors and provided substantial improvements in operational reliability and safety within the plant.

Sodium Hydroxide Chemical Storage and Feed Systems, Olivenhain Municipal Water District, Encinitas, California. Project manager for design improvements to the existing sodium hydroxide chemical storage and feed system process equipment at the David C. McCollom Water Treatment Plant. The improvements included upsizing on-site caustic bulk storage to 4,400 gallons, relocating and reconfiguring the caustic chemical injection system for the existing membrane clean-in-place system, relocating the existing citric acid supply system and bulk storage tank, and designing a new caustic metering pump system for chemical injection into the treatment plant's existing raw untreated water influent stream as well as the combined filter treated water effluent. Dudek was able to design a new system that repurposed existing, abandoned dual containment piping throughout the treatment plant, as well as utilize space in existing overhead pipe struts to minimize the impact on existing plant utilities.

Amanda Combs, PE

TUNNELING LEAD

Amanda Combs is a project manager with 23 years' experience leading high-quality water and wastewater projects from conceptual planning, preliminary design, and final design to construction-phase services for pipelines, pump stations, water storage, and treatment plants.



Project Experience

Infrastructure Planning and Design - Sewer Pipelines

Advanced Water Treatment Plant Filter Supply and Backwash Pump Replacement, South Orange County Wastewater Authority, Laguna Niguel, California. Project manager for the hydraulic analysis, pump selection, and design of pump, piping, and valve replacements at the South Orange County Wastewater Authority-operated Advanced Water Treatment Plant. The new pumps consisted of two new 15-horsepower (hp) horizontal solids-handling centrifugal pumps with a design point of 1,195 gpm at 25 feet TDH to replace existing, undersized filter supply pumps, and two new 10-hp vertical turbine pumps with a design point of 1,150 gpm at 12 feet TDH to replace oversized filter backwash pumps. The design also included new suction and discharge piping and flow and level instrumentation for pump control.

Aliso Creek Advanced Water Treatment Supply Enhancements and Urban Runoff Reuse, South Coast Water District, Dana Point, California. Project manager for the preparation of design-build solicitation documents, including the basis of design drawings and technical specifications, Request for Qualifications, and Request for Proposals, for a project to intercept and treat a portion of the urban runoff in lower Aliso Creek. The creek water will be treated by microfiltration and reverse osmosis to reduce total dissolved solids and will be blended with the tertiary treated effluent from the District's Advanced Water Treatment Title 22 recycled water effluent. The project expanded recycled water deliveries by producing a blended effluent with a TDS level more favorable for landscaping irrigation.

San Juan Creek 30-Inch Effluent Transmission Main Replacement, Moulton Niguel Water District, Laguna Niguel, California. Project engineer for designing a new pipe under San Juan Creek to replace the existing exposed crossing pipe. Work included an analysis of trenchless construction methods and creek scour depth, and the preparation of plans and specifications for the selected slurry microtunneling alternative. A design depth of 45 feet was selected for the approximately 300-foot-long tunnel under the Orange County Flood Control District channel. Due to the proximity of the concrete slope lining and flood control levees, shaft construction methods were limited to watertight and non-vibratory methods to protect the adjacent improvements.

6-20 Fairview Trunk Sewer Rehabilitation, Orange County Sanitation District, Fountain Valley, California. Serving as lead engineer providing engineering design services to rehabilitate the Fairview Trunk Sewer in Costa Mesa. After extensive alternative analysis and modeling, Orange County Sanitation District (OC San) identified the need to

Education

Virginia Polytechnic Institute and State University
MS, Environmental Engineering, 2001
Virginia Polytechnic Institute and State University
BS, Civil/Environmental Engineering, 1998

Certifications

Professional Civil Engineer, CA No. 67287

rehabilitate most of the older Fairview Trunk Sewer and spot repair the newer Fairview Relief Sewer. Dudek was selected to design the cured-in-place pipeline (CIPP) rehabilitation of the existing gravity sewer pipelines (12 inches to 27 inches in diameter) while mitigating numerous sewer lateral inflows. The preliminary design process has identified a 12-phase implementation plan with 14 pumped bypass setups and 19 specialized in-manhole flow diversions for allowing the CIPP process under dry pipe conditions. During the preliminary design stage, Dudek identified the potential for changing the project direction to save OC San over \$1.5 million in construction costs.

FE 20-80 Olive Sub Trunk Sewer Siphon Rehabilitation, Orange County Sanitation District, Fountain Valley, California. Served as project manager to provide engineering design services to rehabilitate the Olive Sub Trunk Sewer at the Santa Ana River crossing. OC San was forced to divert flow from the Olive Trunk Sewer inverted siphon in Anaheim due to both a major pipe failure and a buildup of sediment within the belly of the siphon. Dudek was hired to develop the design package to repair the 50 feet of failed pipeline and clean and rehabilitate the remaining 500 linear feet (LF) of the 24-inch pipeline that crosses the river. During the preliminary design phase, Dudek worked with OC San to select and size an 18-inch HDPE siphon for the siphon to increase cleansing velocities. Included in the project was the sizing and design of a 16-inch fiberglass reinforced plastic air jumper across the existing roadway bridge to transport foul air from the upstream to downstream manholes of the siphon. The project required permitting with the City of Anaheim, the City of Orange, Orange County Public Works, and Caltrans. Once complete, the rehabilitated inverted siphon and air jumper will be reinstated, with improved hydraulics and reduced risk of odor complaints.

Del Obispo Recycled Water Main Improvements, South Coast Water District, Dana Point, California. Project engineer for the design of approximately 5,000 LF of new 12-inch PVC recycled water main, with gate valves, 1- and 2-inch recycled water services, and ancillary appurtenances. The design includes multiple trenchless jack and bore construction locations, steel pipe casing beneath large culverts and Pacific Coast Highway, and a recycled water filling station.

Aufendkamp Connection Transmission Main, Santa Margarita Water District, Rancho Santa Margarita, California. Lead engineer for the relocation of approximately 2,400 LF of 42-inch cement mortar-lined and coated (CML&C) welded steel pipe at three locations to accommodate the widening of a portion of Interstate 5 by Caltrans. Dudek coordinated extensively with Caltrans, its design consultants, and other property and utility owners affected by the project to develop new alignments and complete the design documents. The design includes approximately 105 LF of new concrete-encased 42-inch CML&C pipe within the Aliso Creek channel at a maximum depth of 20 feet, 2,100 LF of new 42-inch CML&C pipe by open trench construction, and 250 LF of 60-inch steel casing installed by auger boring beneath Los Alisos Boulevard. The design also addressed creek diversion, groundwater dewatering, channel restoration, bike trail detour, encroachment permits, and California Department of Fish and Wildlife Streambed Alteration Agreement and U.S. Army Corps of Engineers Section 404 Permit compliance. Dudek also provided construction support and inspection services, assistance with encroachment and wetlands permitting, and assistance with easement acquisition.

California Department of Transportation Widening Pipeline Adjustments, Moulton Niguel Water District, Laguna Niguel, California. Project engineer. The project included water main relocation within a creek and under an Interstate 5 overpass, protection of an existing water main passing under a bridge being widened, a sewer casing extension, and numerous miscellaneous smaller conflicts along the project corridor. Design of all components required extensive coordination with the California Department of Transportation (Caltrans) and its design consultants. Construction work for the water main relocation was coordinated with the Caltrans overpass widening work, allowing the District's contractor to utilize the Caltrans access improvements to the site while reducing the required permits.



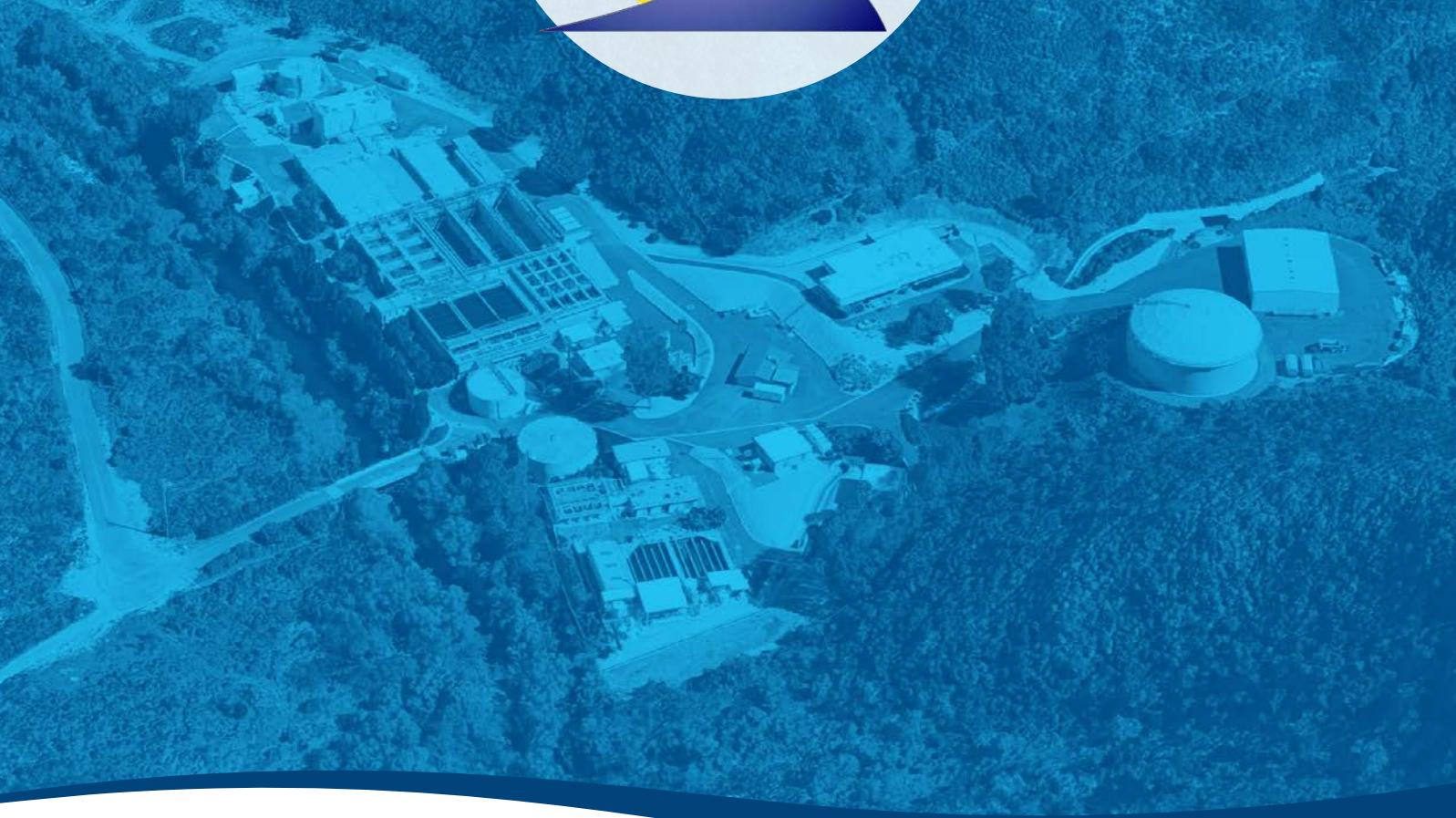
DUDEK

800.450.1818 | HELLO@DUDEK.COM

DUDEK.COM



Dudek Labor Hours and Rates										
Project Team Role:		PIC - QA/QC	Project Manager	Senior Engineer Hydraulics	Senior Engineer Hydraulics	Senior Engineer Conveyance	Project Engineer Conveyance	Env. Specialist	Project Coordinator	
Team Member:		R. Bergholz	B. Robertson	E. Caliva	J. Li	B. Lacap	S. Diaz	A. Hardy	M. Kinney	TOTAL DUDEK HOURS
Task PE 1	Data Collection and Review									
1.1	Flow Diagrams, As-builts, Permits, Historical Records		1				2			3
1.2	CLB, SCWD, and EBSD Flow, Volumes, Quality, Seasonal Variations		1	1	2					4
1.3	Recipient Facilities Details (OC San, RTP, JBL)		2				2			4
1.4	Review Regional Project Data									
1.4.1	SCWD Tunnel Stabilization C Sewer	1	1			2				4
1.4.2	Recycled Water Demand Projections from CTP		1	2	2					5
1.4.3	NCI Funding Planning Records	1	1			2				4
1.4.4	Stakeholder Interviews (up to 5)	5	5	2						12
	Subtotal Task PE 1	7	12	5	4	4	4			36
Task PE 2	Technical Feasibility Assessment									
2.1	CLB & EBSD Raw Sewage Flow Redirect to OCSAN (Alternative 1)	4	4	2	8	4				22
2.2	CTP Flow Redirect to JBL (Alternative 2 & 3)	4	4	2	8	6				24
2.3	CTP Flow to RTP, RTP Tertiary to SCWD (Alternative 4)	1	2			2	4			9
2.4	Environmental/Regulatory Considerations		1				4			5
2.5	Risk Identification	1	1	1		1				4
2.6	Listing of Potential Limitations to Future Projects	1	1	1		1				4
	Subtotal Task PE 2	11	13	6	16	14	4	4		68
Task 3	Cost Development									
3.1	Construction Cost Estimate (3 alternative alignments)	2	8			20	20			50
	Subtotal Task 3	2	8			20	20			50
Task 4	Analysis and Recommendations									
4.1	Feasibility Matrix	1	2	2	2	2	2			11
4.2	Recommendations for Future Study	1	2	2		2				7
4.3	Regional Integration	1	2	2		2				7
4.4	Project Alternatives Implementation Schedule	1	2	2		2				7
	Subtotal Task 4	4	8	8	2	8	2			32
Task 5	Reporting and Deliverables									
5.1	Tech Memo PE 1 - Data Collection and Review		2	2	2	1	2			9
5.2	Tech Memo PE 2 - Technical Feasibility	2	8	8	12	8	12	4		54
5.3	Tech Memo PE 3 - Cost Evaluation	2	4			2	4			12
5.4	Final Tech Memo	2	4				4	4		14
	Subtotal Task 5	6	18	10	14	11	22	4	4	89
Task 6	Project Management									
6.1	Kick-off Meeting	2	2							4
6.2	PM/Progress Meetings		4							4
6.3	Progress Reports and Invoicing		2					3		5
6.4	Project Control Plan		2							2
6.5	Tech Memo Review Meetings (3 total, 1 in-person)	4	4							8
	Subtotal Task 6	2	10					3		15
	Total Non-Optional Hours and Fee	36	73	29	36	57	52	8	7	298
	<i>Percent of Hours:</i>	12%	24%	10%	12%	19%	17%	3%	2%	100%



JANUARY 29, 2026 AT 2:00PM

PROPOSAL FOR

**COASTAL TREATMENT PLANT (CTP)
REGIONAL FLOW STUDY
ENG-25-10**

SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
ATTN: JIM BURROR, DEPUTY GENERAL MANAGER/CHIEF ENGINEER
34156 DEL OBISPO STREET, DANA POINT, CA 92629



January 29, 2026

South Orange County Wastewater Authority
Attn: Jim Burror
Deputy General Manager/Chief Engineer
34156 Del Obispo Street
Dana Point, CA 92629

Subject: Proposal for ENG-25-10 – CTP Regional Flow Study

Dear South Orange County Wastewater Authority Review Team,

We are pleased to submit our proposal for this regional flow study and are particularly enthusiastic about the opportunity because of our strong alignment with South Orange County Wastewater Authority's (SOCWA) goals, our extensive regional experience, and our early investment in understanding the challenges and decision drivers facing the stakeholders. We are confident that the MKN & Associates, LLP, an Ardurra Group Inc., company (MKN) team is uniquely positioned to deliver clear, actionable results for SOCWA.



POINT OF CONTACT

Ryan Gallagher, PE

Project Manager

rgallagher@mknassociates.us

714.213.9758

- **Experienced Team.** MKN brings deep, directly relevant experience spanning master planning, design, and interagency coordination to support both comprehensive analysis and expedited delivery. Our portfolio includes more than 120 hydraulic modeling efforts, 80+ lift stations, 90+ treatment facilities, and over 400 miles of pipeline, providing a strong technical foundation for this study.
- **Infrastructure and Stakeholder Understanding.** MKN's Project Manager has worked closely with nearly every key project stakeholder over a 20-year career, including SCWD, EBSD, OCWD, LBCWD, OCSAN and SOCWA. This familiarity with local systems, constraints, and agency priorities will be leveraged to accelerate coordination and reduce inefficiencies.
- **Relevant Interagency Experience.** MKN has recently delivered nearly two dozen interconnection and flow transfer projects, including the ongoing interagency transfer between Mesa Water District and the City of Newport Beach (with Laguna Beach County Water District participation). This experience is directly applicable to evaluating OCWD recovery and regional redirection options.
- **Collaborative, Stepwise Approach.** As outlined in our approach and schedule, MKN is committed to a rapid project start following Notice of Award, a robust kickoff with front-loaded confirmation of alternatives, and an efficient, chapter-based delivery strategy to streamline execution and decision-making.
- **Partnership-Focused Delivery.** While we believe our team provides exceptional value, we recognize the importance of fiscal stewardship. MKN is committed to working collaboratively with SOCWA to refine scope or phasing as needed to align with budget considerations while still achieving the study's core objectives.

MKN & Associates, LLP has received and acknowledges Addendum 1, released on December 3, 2025.

Please do not hesitate to contact me at **714.213.9758 or rgallagher@mknassociates.us** with any questions or to discuss this proposal further. We look forward to working with your team to expedite delivery of this project. Thank you for your consideration.

MKN & Associates, LLP

Ryan Gallagher, PE

Project Manager

1 IDENTIFICATION OF RESPONDER

MKN's Client-Centric Origins

MKN & Associates, LLP (MKN) is a consulting engineering firm originally founded in 2012. Since then, we've grown to more than 85 professional engineers, planners, construction managers/inspectors, and support staff across eight offices throughout California. In November 2025, MKN proudly joined Ardurra Group, Inc. (Ardurra), a nationally recognized firm providing engineering services since 1929. This allows MKN to maintain our core principles and continue delivering the same high level of quality and responsiveness our clients expect, while expanding our capabilities and resources to better serve public agencies' evolving needs.

Now with more than 2,000 employees nationwide, including 250 in California, we bring deep expertise in complex engineering and design services. Ardurra is ranked #75 on Engineering News-Record's (ENR's) Top 500 Design Firms list and is consistently among the top 20 firms in ENR's Water Sourcebook rankings for water and wastewater services.

Water Is Our Focus

MKN is deeply committed to water in all its forms, focusing exclusively on delivering professional services for water, wastewater, and recycled water projects. Our firm's expertise encompasses the full range of well and pump station projects, from planning and condition assessment to design, rehabilitation, and inspection. MKN's staff members are recognized leaders in industry organizations, actively contributing to the advancement of standards and best practices through research, presentations, and participation in professional forums. We continually innovate our engineering methods and deliverables to better serve our clients. With principals who have decades of experience in management and leadership roles at top engineering firms, MKN brings a proven track record and technical depth to every project, ensuring high-quality outcomes that align with the scope of work outlined in the RFP.



MKN's key project team members are located in our Irvine office, only 15 miles from SOCWA.

MKN Is Committed to OC

MKN is local to Orange County and committed to a long-term relationship with SOCWA.

MKN's staff have been working in Orange County for more than two decades and are committed to the local water industry. Our team has delivered successful projects for many of SOCWA's neighboring agencies. These include South Coast Water District, Irvine Ranch Water District, East Orange County Water District, City of Newport Beach, Yorba Linda Water District, City of Anaheim, Trabuco Canyon Water District, and Emerald Bay Service District.

Legal Name: MKN & Associates, LLP

Address/Local Office: 16310 Bake Parkway, Irvine, CA 92618

Parent Company: Ardurra Group, Inc.

Principal Place of Business:

1000 NW 57th Ct., Suite 800, Miami, FL 33126



19 Interconnection Projects



80+ Pump/
Lift Stations



90+ Water/Wastewater
Treatment Projects



120+ Hydraulic
Modeling Projects



400+ Miles of
Pipeline

2 PROJECT UNDERSTANDING AND APPROACH TO THE WORK

Our Team Understands Your Goals

SOCWA is approaching a pivotal moment, with parallel facility master planning efforts about to begin for both the JB Latham Treatment Plant (JBL) and Coastal Treatment Plant (CTP). This regional flow study is intended to provide a rapid, big-picture framework to inform and align those efforts before they advance independently. By quickly evaluating the technical feasibility of decommissioning CTP and redirecting regional flows, the study establishes a common understanding of viable options, key constraints, and regional interdependencies—allowing the JBL and CTP master plans to proceed with consistent assumptions and focus on realistic, supportable pathways.

The effort is deliberately high level, designed to support timely and well-informed decision-making without unnecessary detail. The scope emphasizes a “fatal flaw” assessment that identifies major technical, operational, regulatory, and cost drivers at a conceptual level, sufficient to compare alternatives and screen out infeasible concepts.

Project Element 1

Project Initiation and Data Collection

Given the critical-path nature of the initial data request, MKN will issue the data request within five (5) days of Notice of Selection (several critical data request items are noted in the Quick Start box). A dedicated SharePoint workspace will be established to facilitate document upload and coordination. All materials will be organized, labeled, and maintained in a manner that supports efficient review and seamless incorporation into SOCWA's final project records, consistent with the approved scope of work. In advance of the Project Kickoff Meeting, MKN will prepare and distribute the following materials no later than five (5) days prior to the workshop:

1. Kickoff Meeting Agenda

Confirmation of project objectives, scope, schedule, and budget.

2. Updated Data Request Tracker

Identification of outstanding items, clarification of data needs, and confirmation of a preliminary delivery schedule.

3. Draft Report Outline

Structured by **Project Elements 1 through 5**, with each element established as a dedicated report chapter to streamline integration into the final deliverable.

4. Preliminary Evaluation Criteria and Financial Assumptions

Including planning-level unit costs, escalation assumptions, inflation factors, and other key financial inputs.

5. Process Schematics

Illustrative schematics summarizing key system concepts (refer to following page).

MKN QUICK START

Several Data Request Items SOCWA can initiate:

- Current and Estimated CTP Influent (by Agency)
- Annual Average (MGD), Dry Weather and PWWF (gpm)
- SCWD and CLB Sewer Model and Sewer System GIS
- Current flows and capacity of lift stations noted in schematic
- Existing and Future RW Demand (if different from 2017 MP)
- Abandoned Coast Pipeline drawings and ownership
- SCWD Tunnel Project As-Builts (overall alignment and section view)
- NCI Rehabilitation Reports/ Capital Projects (alignment)
- As-Builts and Related Easements for CTP Sludge Export Force Main

By combining deep expertise in **master planning and infrastructure design with long-standing working relationships** across the SOCWA program stakeholders, MKN offers a uniquely integrated perspective on this effort. This combination positions our team to execute the full scope efficiently, manage interfaces effectively, and maintain schedule certainty.

MKN WILL FACILITATE A ROBUST PROJECT KICKOFF WORKSHOP

MKN intends to utilize the Kickoff Workshop to establish an accurate baseline and confirm key elements of each scenario. This is essential for finalizing Project Element 1 – and initiating Project Element 2 – Technical Feasibility Assessment. MKN has prepared initial schematics, as an example, but intends to update, expand, and improve them both prior to the Kickoff Workshop, and after utilizing information received as part of the data request, Kickoff Workshop and stakeholder interviews.

Examples of key information include average and maximum flow rates for impacted pipelines and current and maximum design flow rates at each impacted lift station and treatment plant. In addition, the CLB schematic will be expanded to include any additional flow inputs to the NCI and potentially include the SCWD tunnel infrastructure in the schematic to highlight how it is modified. Additional items will be discussed at the Kickoff Meeting.

MKN has strong relationships with management from both OCWD and OCSAN and can coordinate these interviews ahead of the Kickoff Meeting; this will assist in facilitating a robust Kickoff Meeting.

Project Element 2

Technical Feasibility Assessment

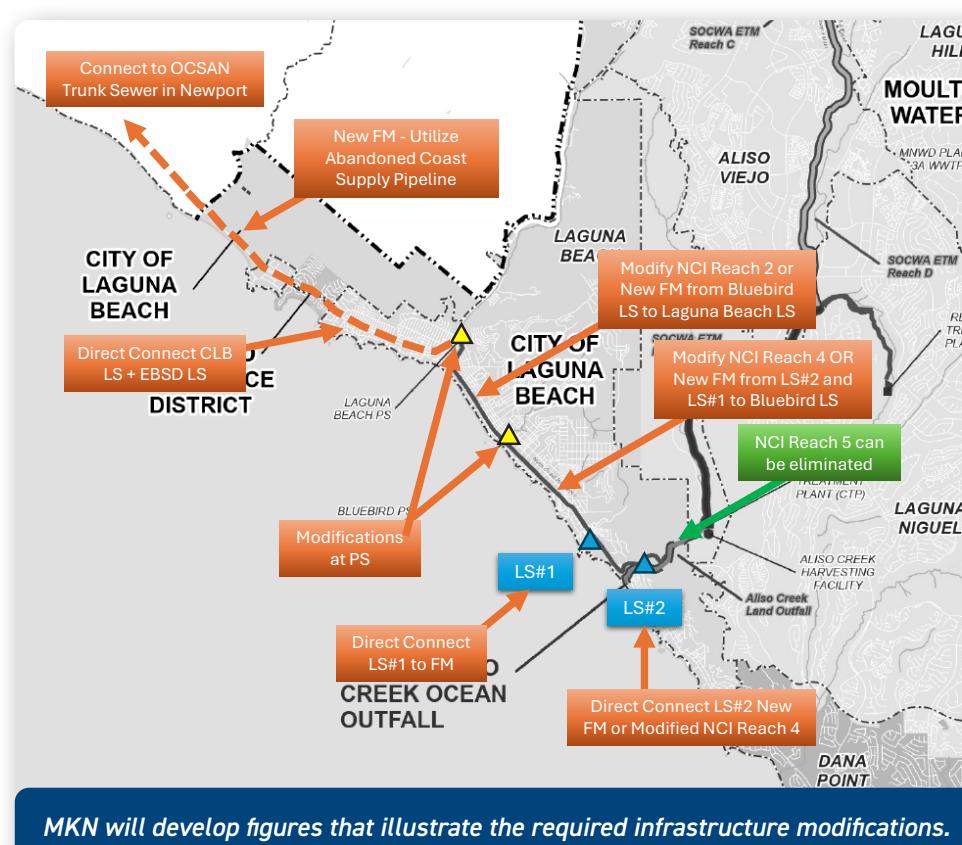
With the concepts approved as part of Project Element 1, Project Element 2 can proceed, which will focus on identifying the infrastructure required to achieve each scenario. For this phase, MKN will utilize GIS files to develop conceptual figures highlighting new and modified infrastructure (i.e., SCWD Tunnel). MKN will utilize the hydraulic models to confirm system understanding and corresponding modifications, as well as conduct high-level analysis where applicable. For conveyance infrastructure, standalone calculations will be completed based on maximum flows to develop conceptual-level sizes for purposes of the financial analysis. The GIS figures will be utilized to determine approximate pipeline lengths.

Any shared infrastructure will be identified and segmented where stakeholder flows may vary. A corresponding table will be developed to summarize each segment and corresponding stakeholder ownership (based on proportional flow allocation percentages).

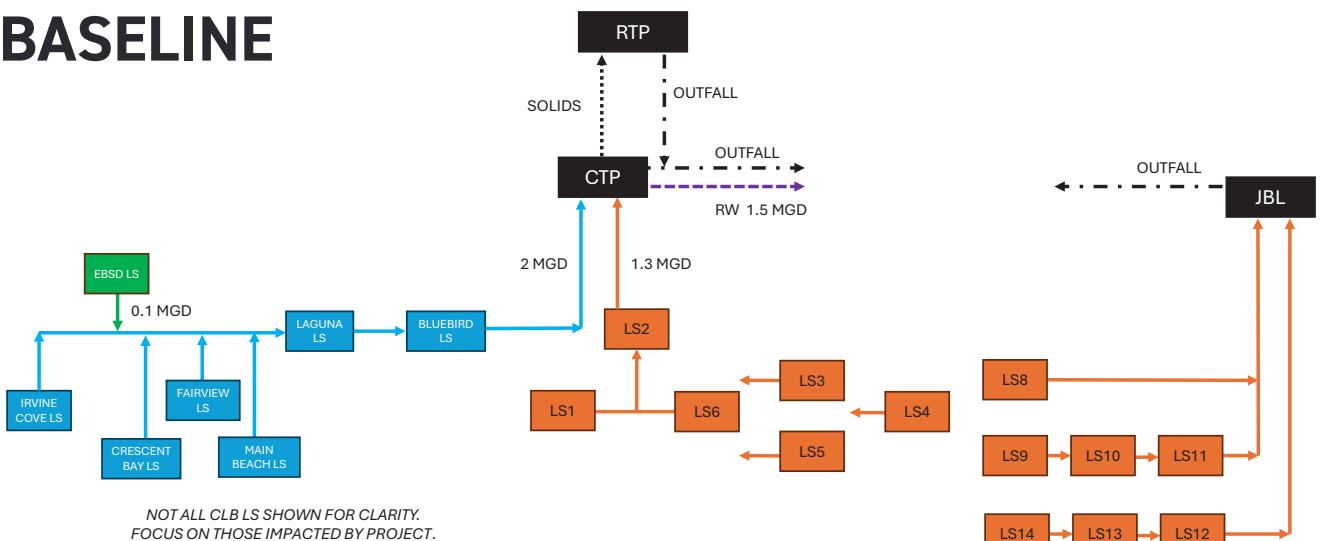
MKN will review impacts to the SCWD recycled water system and potential mitigation measures (i.e., supply from JBL). Potential project offsets will also be identified. For example, NCI Reach 5 would no longer be required for either the OCSAN or JBL raw water diversion scenarios.

As noted in the RFP, this effort will include an assessment of non-infrastructure-related elements such as environmental, regulatory, customer impacts, and potential for new water (i.e., OCWD basin).

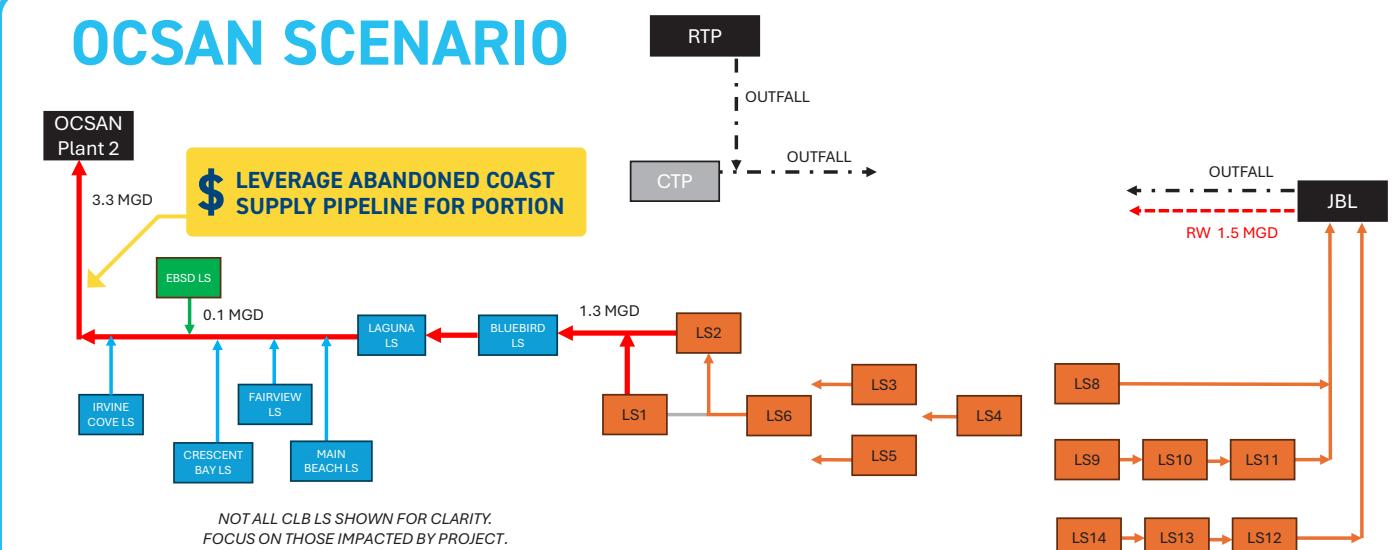
MKN will develop a matrix table that summarizes each scenario and the assessment results.



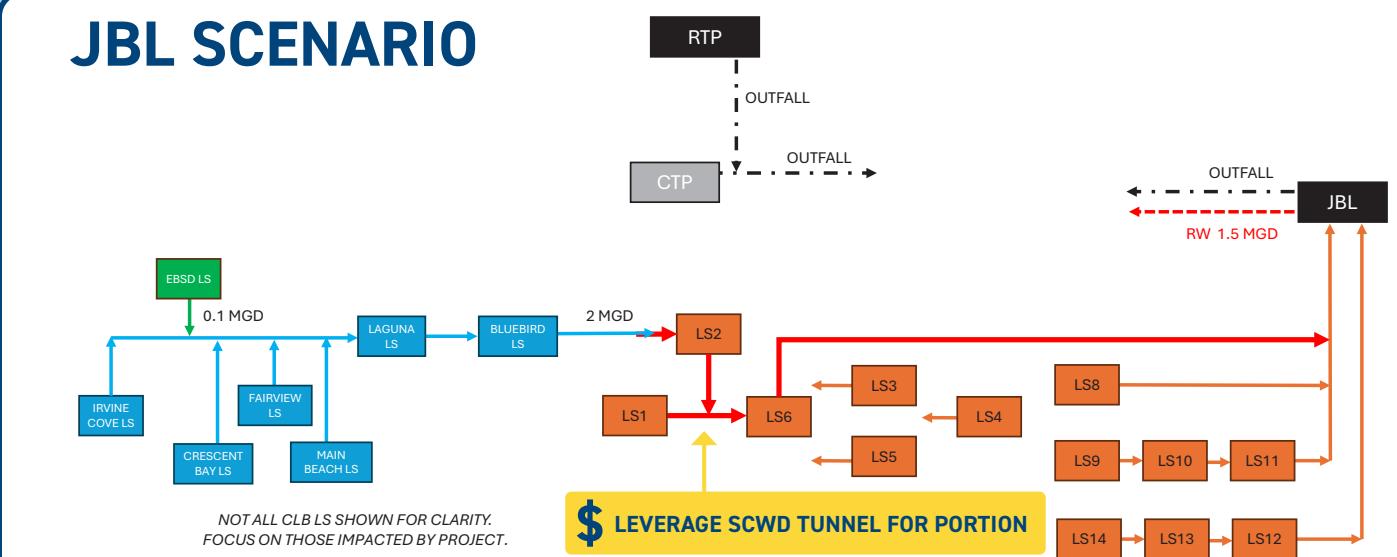
BASELINE



OCSAN SCENARIO



JBL SCENARIO



Project Element 3

Cost Evaluation

The cost evaluation will be based on planning-level unit costs and clearly defined assumptions that will be documented and submitted as part of Project Element 1 (initial deliverable). This approach is intended to allow SOCWA to review, validate, and confirm key assumptions prior to their application in the evaluation of project alternatives. Where available, MKN will utilize unit costs and assumptions from recent SOCWA and member agency planning documents (e.g., the Laguna Beach Wastewater Master Plan). In cases where agency-specific data are not available, industry-standard planning-level unit costs consistent with MKN's master planning practices will be applied.

While capital costs will be a primary evaluation factor, the analysis will also consider long-term operational and financial impacts associated with each alternative. For example, a connection to the Regional Treatment Plant (RTP) may result in materially different long-term operating costs compared to a connection to OCSAN. In addition, alternatives that enable resource recovery or beneficial reuse, such as converting wastewater into additional water supply (e.g., groundwater replenishment via the OCWD basin), may provide significant long-term value by offsetting imported water supplies. MKN will evaluate these cost drivers and potential savings over a 30-year planning horizon and present the results using net present value (NPV) to enable a consistent, apples-to-apples comparison of alternatives.

Project Element 4

Analysis and Recommendations

Similar to Project Element 3, MKN will provide proposed evaluation criteria with assumed weighting factors to SOCWA at the Kickoff Meeting. The criteria and weighting will be modified based on feedback provided by SOCWA and used for the initial alternative analysis.

The table provided below is from an MKN evaluation of effluent optimization conducted for City of Thousand Oaks as part of their WWTP Facility Master Plan. A similar approach can be utilized for SOCWA, providing a consolidated quantitative and qualitative analysis in a simple, clear summary table. The City ultimately decided to stay with the current use which was the highest rated.

EVALUATION CRITERIA					Cost	Regulatory Issues	Schedule	Stakeholder Complexity	New Water	Operational Ease	TOTAL SCORE
Alt #	Title	Capital Cost (\$M)	New Water (AFY)	NPV (\$M)							
1	No Change	0	0	9.90	2	3	3	3	1	3	15
2	Modify Existing	0	0	17.33	3	3	2	2	1	3	14
3	Santa Rosa IPR	73.45	0	-43.23	1	1	1	1	1	1	6
4	IPR via Lake Bard	98.22	5,152	-38.40	1	1	1	1	3	1	8
5	LV Reservoir IPR	31.49	1,625	16.83	3	2	1	1	3	2	12
6	RW Sales in City	13.23	350	8.32	2	1	2	3	2	2	12

Project Element 5

Reporting and Deliverables

To accelerate project delivery, MKN recommends that SOCWA consider receiving the Final Technical Memoranda (TMs) for Project Elements (PEs) 1–4 as a single consolidated Draft Final Report, rather than as individual Final TMs. This approach reduces redundancy, streamlines review, and supports more efficient integration across project elements.

MKN will submit the Draft Final Report accompanied by a comprehensive comment-tracking spreadsheet that links each SOCWA comment to a corresponding response and resolution status.

In addition, to further support schedule efficiency, MKN will deliver the draft Executive Summary concurrent with PE4, which represents the final TM contributing content to the Final Report. **As reflected in the proposed project schedule, this approach meets all SOCWA milestone dates while preserving full SOCWA review periods and MKN's internal quality control for each deliverable.**

Project Element 6

Project Management

MKN will use the Project Kickoff Meeting to establish a shared understanding of project expectations, roles, and responsibilities among the PC-15 member agencies—**City of Laguna Beach (CLB), South Coast Water District (SCWD), and Emerald Bay Service District (EBSD).**

At the Kickoff Meeting, MKN will propose and confirm four (4) structured review meetings, scheduled at approximately monthly intervals and aligned with the delivery of each Project Element. Establishing these meetings in advance—along with clearly defined deliverable dates and review expectations—will be critical to maintaining schedule discipline and ensuring timely, coordinated input from all PC-15 agencies.

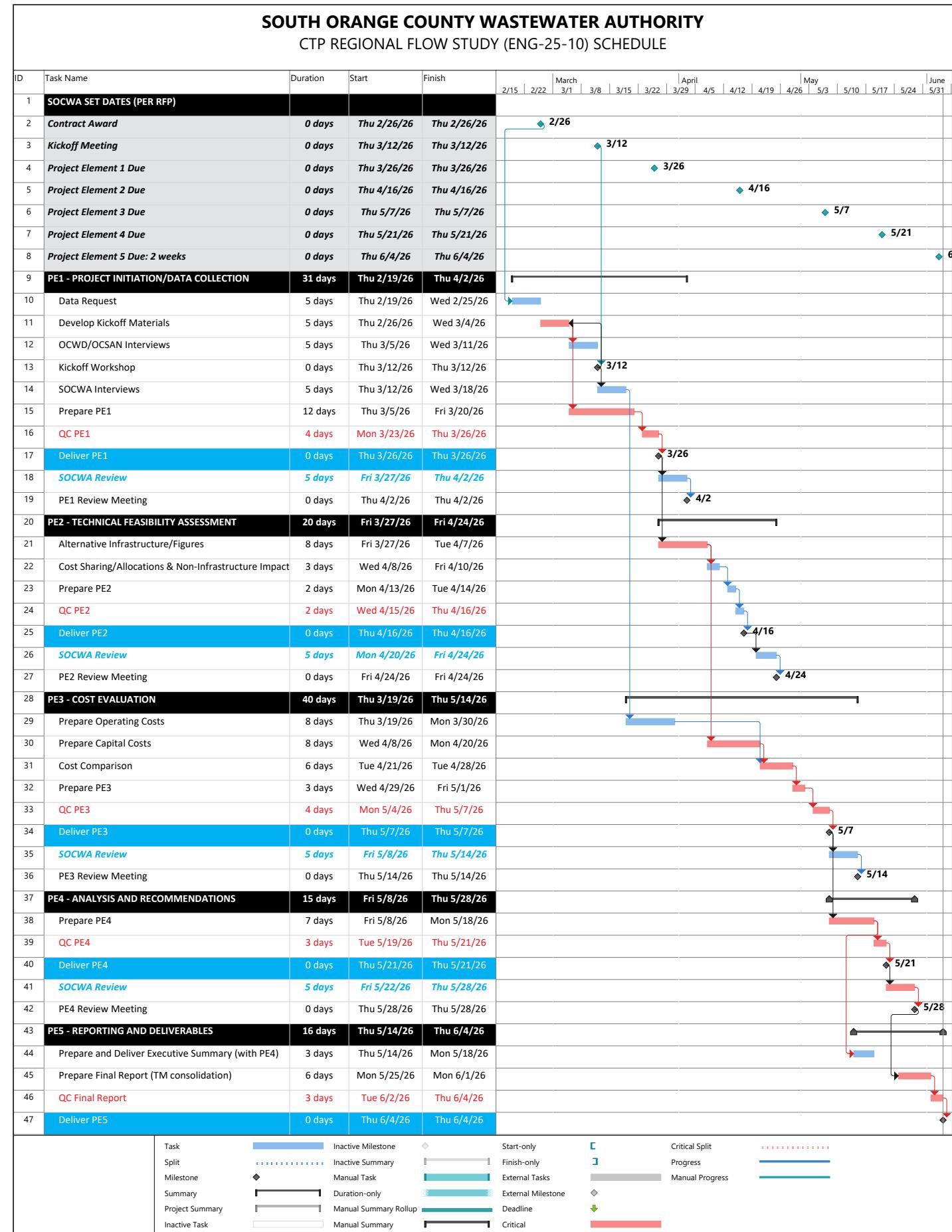
Optional Item

Two Board Workshops

SOCWA may elect to include up to two optional Engineering Committee and/or Board workshops to provide policy-level input at key milestones. The first workshop, held shortly after the Kickoff Meeting, would focus on confirming alternatives and evaluation criteria, while the second would occur following delivery of the Draft Final Report to review findings and preliminary recommendations. **These workshops would supplement regular staff review meetings**, allowing technical coordination to continue efficiently while providing a focused forum for Board-level guidance and inter-agency considerations.

Scope Assumptions

1. In lieu of TMs for Project Elements 1, 2, and 3, MKN will submit the draft chapter of the full report. Comments received for each chapter will be addressed and the updated chapter submitted as part of the full draft report.
2. Due to the limited scope and fast paced schedule, MKN assumes that the Project Control Plan can be achieved through the detailed Microsoft project schedule, and Kickoff Meeting Minutes documenting communication protocols.
3. Comments from SOCWA will be consolidated into a single document and delivered prior to the review meeting.
4. Project is 4 months based on dates provided by SOCWA; additional schedule will require budget augmentation. SOCWA will have 1 week for review.
5. Progress reports will be provided through emailed meeting minutes sent following the monthly Project Management coordination meeting.
6. Three alternatives are being evaluated, currently assumed to be: (1) Flow to JBL, (2) Flow to OCSAN, (3) Flow to RTP.



3 EXPERIENCE AND TECHNICAL COMPETENCE

Experience with Relevant Projects

MKN selected the following projects because they demonstrate experience with the infrastructure that will be assessed or utilized as part of the CTP Regional Study. Beyond these projects, MKN has relevant experience developed over 80+ pump/lift station projects, 120+ hydraulic modeling projects, and 400+ miles of pipeline.

Lift Station Condition Assessments

OWNER

Emerald Bay Service District

Developed standard condition assessment form for lift stations and performed field assessment of seven (7) lift stations for Emerald Bay Service District. Effort included collaboration with District Operators and resulted in a recommendation of 47 projects/improvements across all lift stations for a total of \$2.1M. Projects were prioritized over a 5-year implementation period. **(May 2021 - Aug. 2022)**

Lift Station Condition Assessments

OWNER

South Coast Water District

Developed standard condition assessment form for lift stations and performed field assessment of twelve (12) lift stations for South Coast Water District. MKN evaluated wet well capacity, pump efficiency, and operator interviews. Delivered detailed field inspection results and condition ratings for all lift stations and integrated them into an online ArcGIS platform. Provided a report with over 160 recommendations and a 10-year CIP for implementation based on a priority ranking system. **(Mar. 2021 - Aug. 2021)**

Hill Canyon Treatment Plant Master Plan

OWNER

City of Thousand Oaks

As Project Manager with a previous company (Gannett Fleming), MKN's Ryan Gallagher led development of a Master Plan for the Hill Canyon Treatment Plant, a 9-MGD tertiary WWTP. MKN, as a subconsultant to Gannett Fleming, developed an alternatives analysis evaluating various options for use of the facility effluent. These options included multiple beneficial reuse options and regional concepts.

(Feb. 2019 - Jan. 2020)

Mesa Water/ Newport Interagency Water Transfer

OWNER

Mesa Water District

MKN completed a feasibility study evaluating the concept of delivering excess capacity from the Mesa Water Reliability Facility (MWRF) to the City of Newport **and Laguna Beach County Water District** (via Newport). The project included a high-level conceptual analysis and cost evaluation. The project was presented to the Mesa Water Board and approved; MKN is currently in design for the interconnection. **(Aug. 2025 - Nov. 2025)**

CLIENT CONTACT

Mike Dunbar, PE
General Manager
600 Emerald Bay
Laguna Beach, CA 92651
mdunbar@ebservicedistrict.com
949.533.4052

CLIENT CONTACT

Taryn Kjolsing, PE
Director of Engineering
31592 West Street
Laguna Beach, CA 92651
tkjolsing@scwd.org
949.541.1327

CLIENT CONTACT

John Minkel
Deputy Public Works Director
2100 Thousand Oaks Blvd.
Thousand Oaks, CA 91362
jminkel@toaks.org
805.491.8121

CLIENT CONTACT

Nadia Boutros, PE
Civil Engineer
1965 Placentia Avenue
Costa Mesa, CA 92627
nadiab@mesawater.org
949.207.5451

2017 Infrastructure Master Plan

OWNER

South Coast Water District

For SCWD's 2017 Infrastructure Master Plan Update, MKN teamed with AECOM to perform the water, recycled water, and sewer infrastructure master plan updates for South Coast Water District. The updated master planning effort focused on identifying potential local-source development options; changes in the District's physical infrastructure due to redevelopment; changes in water demand, wastewater generation, and recycled water use; the analysis of demand patterns provided from the District's SCADA system and water meter records; and identifying new sources of supply for the water system. **(Jan. 2016 - Feb. 2018)**

CLIENT CONTACT

Taryn Kjolsing, PE
Director of Engineering
31592 West Street
Laguna Beach, CA 92651
tkjolsing@scwd.org
949.541.1327

MKN's Multi-Agency Interconnection Experience (Partial List)

MKN Interconnection Projects	Planning	Hydraulics	Design	Agreement Support
Mesa Water District/City of Newport	✓	✓	✓	
Channel Islands Beach CSD/City of Oxnard	✓	✓		
Channel Islands Beach CSD/City of Port Hueneme	✓	✓	✓	✓
Pleasant Valley CWD/United Water Conservation District	✓	✓		✓
Nipomo CSD/Santa Maria	✓	✓	✓	✓
Calleguas Mutual Water District/Ventura County Water Agency	✓	✓	✓	✓
Woodlands Mutual Water Company/Nipomo CSD	✓	✓	✓	
City of Pismo Beach/County of San Luis Obispo	✓	✓	✓	
Calleguas Mutual Water District/Crestview Water District	✓	✓	✓	
Nipomo CSD/Woodlands MWC	✓	✓	✓	
Nipomo CSD/Golden State Water Company - Primavera Service Area	✓	✓	✓	
Nipomo CSD/Golden State Water Company - Cypress Ridge Service Area	✓	✓	✓	
City of Thousand Oaks/California American Water			✓	
WMWD/RCWD Regional Intertie	✓	✓		✓
WMWD/RCWD Jefferson Avenue Interconnection	✓	✓	✓	✓
WMWD/RPU Magnolia Avenue Interconnection	✓	✓	✓	✓
Metropolitan Water District/Eastern Municipal Water District		✓	✓	
Cal Water/City of La HabraLa Bonita Park Water Facilities		✓	✓	
Corona/WMWD ADS Connection	✓	✓	✓	

4 KEY PERSONNEL AND SUBCONSULTANTS



PROJECT MANAGER

Ryan Gallagher, PE

QA/QC MANAGER

Henry Liang, PE

MKN PROJECT TEAM

HYDRAULIC MODELING

Chris Haugen, EIT

CONVEYANCE

Joseph (JJ) Reichmuth, PE

PLANNING

Alex Maher, PE

COST ESTIMATING

Chang Ye, PhD, PE, PMP,
CPE, QSD



Ryan Gallagher, PE

Project Manager

40% Availability

EDUCATION

BS, Civil Engineering, California Polytechnic State University, San Luis Obispo, CA

LICENSES & REGISTRATIONS

Professional Civil Engineer, CA No. 74805

Over his 20-year career, Ryan Gallagher has completed more than 130 projects with over 30 public agencies in Southern California, serving as the Project Manager for most of them. The estimated construction value of the projects that have been planned, designed, and/or constructed exceeds \$300M. Projects include planning through design for water, wastewater, and recycled-water conveyance, pumping, storage, and treatment. Ryan specializes in complex multi-agency water supply programs, alternative delivery, program management, master planning, and contract negotiations.



Henry Liang, PE

QA/QC Manager

35% Availability

EDUCATION

MBA, Craig School of Business, California State University, Fresno, CA

BS, Civil & Environmental Engineering, University of California, Berkeley, CA

LICENSES & REGISTRATIONS

Professional Civil Engineer, CA No. 68442

Henry Liang is a Principal with over 20 years of experience in planning and design of municipal water, wastewater and water resources projects ranging from planning to design of major transmission pipelines, pump stations, and wells including raw and treated water projects throughout California. His expertise includes detailed hydraulic modeling and transient analysis for a variety of water supply projects.

**YEARS EXPERIENCE**

5

EDUCATION

BS, Civil Engineering, California Polytechnic State University, San Luis Obispo, CA

LICENSES & REGISTRATIONS

Engineer-in-Training,
CA No. 178979
Certified Water Audit Validator
(WAV), CA-NV AWWA

Chris Haugen, EIT

Hydraulic Modeling

50% Availability

**YEARS EXPERIENCE**

27

EDUCATION

BS, Civil Engineering, California Polytechnic State University, San Luis Obispo, CA

LICENSES & REGISTRATIONS

Professional Civil Engineer,
CA No. 63124
Cured-in-Place Pipe (CIPP)
Certified, NASSCO ITCP
Manhole Rehabilitation Certified,
NASSCO ITCP

**Joseph (JJ)
Reichmuth, PE**

Conveyance

30% Availability

**YEARS EXPERIENCE**

13

EDUCATION

BS, Civil Engineering, California State Polytechnic University, Pomona, CA

LICENSES & REGISTRATIONS

Professional Civil Engineer,
CA No. 86584
Pipeline, Lateral, and Manhole
Assessment Certified (PACP/
LACP/MACP), NASSCO
No. U-0721-70402535

Alex Maher, PE

Planning

40% Availability

**YEARS EXPERIENCE**

21

EDUCATION

PhD, Civil Engineering, Missouri University of Science and Technology, Rolla, MO

MS, Applied Ecology, Chinese Academy of Sciences, Beijing, China

BS, Environmental Engineering, Zhejiang Agricultural University, Zhejiang, China

LICENSES & REGISTRATIONS

Professional Civil Engineer,
CA No. 68761
Project Management Professional
(PMP), No. 3709402
Certified Professional Estimator
(CPE), CA No. 310000-191-0919
Qualified SWPPP Developer
(QSD), CA No. 68761

**Chang Ye, PhD, PE,
PMP, CPE, QSD**

Cost Estimating

25% Availability

5 PRICING

As requested in the RFP, costs and fees have been submitted in a separate file.

A APPENDIX A - REQUIRED FORMS AND STATEMENTS

This appendix contains all statements and forms as required per the RFP.

6. Conflicts of Interest

MKN & Associates, LLP does **not** have any conflicts of interest or potential conflicts of interest pursuant to California Government Code Sections 1090 et seq., the Political Reform Act, and other applicable laws.

7. Non-Collusion Affidavit

MKN & Associates, LLP does **not** have any conflicts of interest or potential conflicts of interest pursuant to California Government Code Sections 1090 et seq., the Political Reform Act, and other applicable laws.

ATTACHMENT B NON-COLLUSION AFFIDAVIT

The undersigned declares:

I am the Project Manager of MKN & Associates, LLP, the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on January 29, 2026, at Irvine, CA.

Signature: 
Title: Project Manager

8. Certifications

MKN & Associates, LLP certifies that it is not aware of any actual or potential conflict of interest that exists or may arise by executing the contract or performing the work that is the subject of this RFP.

MKN & Associates, LLP certifies that it is willing and able to obtain all insurance required by the form contract included as Attachment C.

MKN & Associates, LLP certifies that it has conducted a reasonable and diligent inquiry concerning the minimum and/or prevailing wages required to be paid in connection with the performance of the work that is the subject of this RFP and certifies that the proposed pricing includes funds sufficient to allow it to comply with all applicable local, state, and federal laws or regulations governing the labor or services to be provided.

MKN & Associates, LLP acknowledges and agrees with all terms and conditions stated in the RFP.

MKN & Associates, LLP certifies that all information provided in connection with its proposal is true, complete, and correct.



Ryan Gallagher, PE

Project Manager

B APPENDIX B - RESUMES

Resumes for key staff members are included in the following pages.



RYAN GALLAGHER, PE

PROJECT MANAGER

EDUCATION

- BS, Civil Engineering, California Polytechnic State University, San Luis Obispo, CA

LICENSES & REGISTRATIONS

- Professional Civil Engineer, CA No. 74805

PROFESSIONAL ASSOCIATIONS

- American Public Works Association (APWA), Ventura County Chapter (President 2014)
- American Society of Civil Engineers (ASCE), Santa Barbara-Ventura Branch (Younger Member Forum President 2012)
- Association of Water Agencies of Ventura County (AWAVC) (Board of Directors 2010–2016, President 2013)
- Orange County Sanitation District (OC San) (Board of Directors 2021–Present, Vice Chair 2022–2024, Board Chairman 2024–2026)
- Orange County Water Association (OCWA) (President 2020 and 2021)
- Tustin City Council (2020–2028, Mayor Pro Tem 2024)

YEARS OF EXPERIENCE

- 6 with MKN
- 20 Total

Over his 20-year career, Ryan Gallagher has completed over 130 projects with 30+ public agencies in Southern California, serving as the Project Manager for the majority. The estimated construction value of the projects that have been planned, designed and/or constructed exceeds \$300M. Projects include planning through design for water, wastewater, and recycled-water conveyance, pumping, storage, and treatment. Ryan specializes in complex multi-agency water supply programs, alternative delivery, program management, master planning, and contract negotiations.

[Long Beach Water Reclamation Plant Optimization | Water Replenishment District of Southern California \(WRD\), Long Beach, CA](#)

Task Lead. The project involved the review of water supply conditions at the Long Beach Water Reclamation Plant, owned and operated by Los Angeles County Sanitation Districts. The evaluation included review of supply and operational data, existing agreements and on-site investigations in support of developing alternatives for increasing the supply of tertiary water to the adjacent advanced water purification facility, owned by WRD and operated by Long Beach Water Department (LBWD). Conducted additional analysis of recommended projects including a site assessment, sizing and cost estimate for an injection well, and a condition assessment for the El Dorado Backup Pump Station and the South Lake Pump Station, both owned by LBWD.

[Newport Water Supply Conceptual Evaluation | Mesa Water District & City of Newport Beach, Newport Beach, CA](#)

Project Manager. The project consisted of a conceptual study assessing surplus Mesa Water capacity to supply Newport Beach. Work included supply-demand analysis, evaluation of six interconnections, infrastructure alternatives, and financial comparison of imported versus local supply. The study confirmed technical and financial feasibility for long-term regional reliability.

[Regional Wastewater Conveyance and Treatment Agreement Negotiation | Channel Islands Beach Community Services District, Oxnard, CA](#)

Project Manager. This project involved conducting an analysis of existing wastewater service agreements between Channel Islands Beach Community Services District and City of Oxnard. The effort included an evaluation of multiple service agreements dating back to 1966, development of scenarios for a new cost and service structure between the agencies, and preparation of schematics and figures illustrating the complex integration of the two systems within the Channel Island Harbor and surrounding areas.

Water, Sewer, and Recycled Water Rate Study Support | Inland Empire Utilities Agency, Chino, CA

Project Manager. MKN provided staff augmentation for implementation of new water, sewer and wastewater rates for IEUA. Duties included development of a scope and RFP, consultant outreach and overall project management of the consultant procurement process. Prepared an overall program schedule, coordinated with IEUA staff to identify critical issues, and developed a strategy for engaging agency stakeholders.

Wastewater Rate Study RFP Development | City of Beaumont, CA

Project Manager. This project to prepare a wastewater rate study request for proposal (RFP) for the City of Beaumont included interviews with staff and development of a scope of work, project schedule, and procurement document. The effort included providing assistance in the review of the final proposals for consistency with contract scope of work.

Wastewater Rate Study | Channel Islands Beach Community Services District, Channel Islands Harbor, CA

Project Manager. This update to the District's wastewater service rate and connection fees included support in negotiating a revised service contract with the City of Oxnard. This effort, identified by the team during development of the study, is expected to result in significant savings to the District.

Lift Station Condition Assessment (7 Lift Stations) | Emerald Bay Service District, Laguna Beach, CA

Project Manager. The project involved a condition assessment of seven lift stations for Emerald Bay Service District. Efforts included development of a field evaluation of all lift stations, preparation of observations and condition ratings, and preparation of a 5-year CIP for implementation of project recommendations based on prioritization and collaboration with District operations staff. The recommendations included 47 projects/improvements for a total of \$2.1M.

Lift Station Condition Assessment (7 Lift Stations) | Channel Islands Beach Community Services District, Oxnard, CA

Project Manager. The project evaluated seven existing raw wastewater lift stations in the District service area. Prepared a report with recommended improvements covering mechanical, structural, electrical, and instrumentation.

Lift Station Condition Assessment (12 Lift Stations) | South Coast Water District, Laguna Beach, CA

Project Manager. The project involved a condition assessment of 12 lift stations for the South Coast Water District. Efforts included development of a standard condition assessment form, field evaluation of all lift stations, preparation of observations and condition ratings, and uploading data and form into online ArcGIS platform. Results were used to establish over 160 projects and a 10-year implementation plan based on prioritization ranking and collaboration with District operations staff.

2020 Water and Sewer Master Plan | Channel Islands Beach Community Services District, Oxnard, CA

Project Manager. The project developed a combined water and sewer master plan for a service area consisting of approximately 4,000 residents. The effort included updating current and future supply and demands, capacity assessment, water and sewer hydraulic models, and development of a 5-year capital improvement plan (approximately \$8M).

Hill Canyon Treatment Plant Master Plan | City of Thousand Oaks, CA

Project Manager. The project team developed a master plan of a 9-MGD wastewater treatment plant. The plan includes three major components: process evaluation, energy evaluation, and water resource assessment. Efforts included a condition assessment, biological modeling, evaluation of FOG and food waste, biosolids drying alternatives, and advanced treatment for using plant effluent.

Ventura County Harbor Wastewater Modeling | City of Oxnard, CA

Project Manager. This project to develop a wastewater hydraulic model using SewerCAD included providing land use duty factors, model development, flow monitoring, calibration, and analysis. The hydraulic system was integrated into the City of Oxnard's wastewater model.

Infrastructure Review (Multiple) | Channel Islands Beach Community Services District, Oxnard, CA

Project Manager. The project team developed a water and sewer hydraulic modeling analysis of developments planned in District service areas, including Fisherman's Wharf, Casa Sirena, and Marina.



HENRY LIANG, PE

QA/QC MANAGER

EDUCATION

- MBA, Craig School of Business, California State University, Fresno, CA
- BS, Civil & Environmental Engineering, University of California, Berkeley, CA

LICENSES & REGISTRATIONS

- Professional Civil Engineer, CA No. 68442

PROFESSIONAL ASSOCIATIONS

- American Council of Engineering Companies (ACEC), California Water Resources Committee (Chair), California Scholarship Foundation (Trustee)
- American Society of Civil Engineers (ASCE)
- Cal Alumni Association, Club of Fresno (Vice President)
- California State University, Fresno, Lyles College of Engineering (Part-time Faculty)

YEARS OF EXPERIENCE

- 9 with MKN
- 25 Total

Henry Liang is a Principal and Operations Manager of MKN's Fresno, California office. He has extensive experience in water, wastewater, and water resources projects. Since 2001, he has gained experience in planning and design of municipal water and wastewater systems, water transmission pipelines, wells, pump stations, and water treatment plants. Henry has recently served as a project manager on several large multi-disciplinary projects for the Cities of Fresno, Merced, Reedley, Westlands Water District, Valley Children's Healthcare, UC Merced and the United States Bureau of Reclamation. In addition to his project work, Henry is heavily involved in promoting the engineering industry through his active involvement in the American Society of Civil Engineers and American Council of Engineering Companies. He currently serves as the chair of the ACEC California Water Resources Committee.

Sewer and Recycled Water Master Plan Updates | South Coast Water District, Orange County, CA

Project Manager. The project involved the water, recycled water, and sewer infrastructure master plans for the South Coast Water District. The updated master planning effort focused on identifying potential local source development options; changes in the District's physical infrastructure due to redevelopment; changes in water demand, wastewater generation, and recycled water use; an analysis of demand patterns provided from the District's SCADA system and water meter records; and new sources of supply into the water system, including increasing treated groundwater, recycled water system expansion, Dana Point ocean desalination, and indirect potable reuse. The project included updating the model, an analysis of the existing and future utility systems, identifying deficiencies, and recommending solutions. An in-depth analysis also included analyzing water demands, evaluating storage requirements, analyzing different desalination plant locations, and optimizing interconnections with adjacent systems.

Campus Lift Station Improvements | University of California, Merced, CA

Project Manager. Led comprehensive lift station capacity modeling, alternatives analysis, and preliminary through final design for campus wastewater infrastructure improvements. Managed multi-disciplinary project team through complete project lifecycle from initial capacity validation and flow projections for incremental growth scenarios to construction administration and commissioning support. Developed up to three alternative layouts for new parallel lift station, coordinated utility conflict resolution, and established operational continuity strategies during construction. Delivered detailed engineering drawings across civil, mechanical, electrical, and structural disciplines, technical specifications at 30%, 75%, and 100% design phases, and construction cost estimates. Provided construction administration services including submittal reviews, contractor coordination, and final system commissioning to verify capacity under simulated operating conditions.

Infrastructure Capacity Assessment | Merced County Association of Governments (MCAG), Merced, CA

Project Manager. Led the assessment of public water and sewer systems within Merced County to support the Merced County Association of Governments' efforts under California's Regional Early Action Planning (REAP) program. Conducted high-level analyses of each city's water distribution and sewer collection systems to identify capacity deficiencies and support housing growth targets as per the Regional Housing Needs Allocation (RHNA) Plan. Developed hydraulic models for each city's backbone system and evaluated multiple growth scenarios. Assessed water supplies and wastewater treatment capabilities, identified deficiencies, and proposed necessary improvements to meet future demands. Delivered a comprehensive Capital Improvements Project List detailing required enhancements for each city's water and sewer systems.

Avenue 13 Sewer Rehabilitation | City of Madera, CA

Principal-in-Charge. Oversaw the design and construction phases of the project, which included an analysis of repair methods and the design for a CIPP rehabilitation of more than 24,000 LF of 42-48" sewer main. The challenges for this project were agency coordination and managing three emergency repairs. The project included work in a county, irrigation district, and railroad right of ways. Between design and construction, the pipe suffered three different failures.

Various Sewer Pipeline Rehabilitation Projects | City of Fresno, CA

Project Manager. Managed the rehabilitation of approximately 4 miles of critical collector sewers in the City of Fresno's sewer collection system. Rehabilitation consisted of cured in place pipe (CIPP) lining of 12- to 24-inch concrete sewer pipe. Project requirements included preparation of plans, specifications, and cost estimates for the lining work. Design included development of bypass concepts and implementation of staging and traffic control requirements.

Wastewater Trunk Line Upsize Along Olson Ave to WWTP and Headworks Improvement | City of Reedley, CA

Principal-in-Charge. Oversaw the design of the replacement of an existing 21-inch sewer main including an inverted siphon. The new 36-inch sewer alignment avoided the need for a siphon. The project included two structures with non-rising stem stainless steel slide gates. Additionally, the wastewater treatment plant headworks lift station was rehabilitated by repairing concrete damage.

Gunner Ranch West Wastewater Improvements | Gunner Ranch, Inc., Madera, CA

Project Director. The project involves the construction of a membrane bioreactor wastewater treatment plant and over four miles of 27- to 30-inch sewer trunk line that will serve the 1,000+ acre Gunner Ranch West mixed-use development. Total construction value of the wastewater facilities exceeds \$10M. The wastewater facilities will become part of a Madera County Community Service Area and will be owned and operated by Madera County. Services include the design of the facilities; bidding support; performing on-going construction observation, materials testing, and inspection services; and ensuring construction contract compliance. In addition to managing the construction documents (submittals, RFIs), MKN is also serving as the Owner's Engineer, reviewing technical submittals for compliance with the design and contract documents.

Wastewater Treatment Plant Improvements and Performance Evaluation | Valley Children's Hospital, Madera, CA

Project Manager. Managed the design and performance evaluation of Valley Children's Hospital's (VCH) Wastewater Treatment Plant Improvements project. Designed improvements to help address the noncompliance issues associated with total nitrogen levels and treatment bypass. The improvements consisted of: new lift station, new oxidation reduction potential (ORP) sensor in the anoxic tank, new dissolved oxygen (DO) sensors in the aeration tank, new mixed liquor suspended solids (MLSS) sensor in the aeration tank, new flowmeters on the internal recycle (IR) pump discharge and the return activated sludge (RAS) pump discharge line, new lift station, electrical and instrumentation improvements to integrate the new instruments and pump station into the plant's process controls, piping modifications to send RAS from the secondary clarifiers to the anoxic tank, and a new emergency overflow pipeline to send excess flows to the emergency overflow pond.



CHRIS HAUGEN, EIT

HYDRAULIC MODELING

EDUCATION

- BS, Civil Engineering, California Polytechnic State University, San Luis Obispo, CA

LICENSES &

REGISTRATIONS

- Engineer-in-Training, CA No. 178979
- Certified Water Audit Validator (WAV), CA-NV AWWA

PROFESSIONAL ASSOCIATIONS

- Orange County Water Association (OCWA)

YEARS OF EXPERIENCE

- 5 with MKN
- 5 Total

Chris Haugen is an Assistant Engineer in MKN's Irvine, California office. His experience includes comprehensive water master plan development, water design, strategic planning, hydraulic modeling, and GIS integration. Chris Haugen consistently demonstrates exceptional problem solving, communication skills, and teamwork, contributing to the success of complex engineering and planning projects.

588 Pressure Zone Expansion | City of Ventura, CA

Assistant Engineer. The project involved the preliminary and final design for approximately 730 linear feet of water line replacement of a 6-inch-diameter asbestos watermain to a 8-inch-diameter PVC watermain. It also included the preliminary and final design of a new below-ground pressure-reducing station with 8-inch and 6-inch valves. Efforts included the preparation of construction documents, an opinion of cost for public bidding, and engineering services during the bidding period.

Golf Course Booster Pump Station and Wells Upgrade Project | City of Ventura, CA

Assistant Engineer. The project involved the preparation of a technical memorandum that analyzed an existing potable water transmission main as part of proposed improvements to existing well sites. The work included a hydraulic analysis of the existing pipeline to verify the hydraulic capacity and determine the feasibility of routing additional flow through the pipeline without exceeding the pipeline's existing pressure ratings.

State Water Interconnect Modeling | City of Ventura, CA

Assistant Engineer. The project involved a hydraulic analysis to review various scenarios and summarize the results in a technical memorandum for the new 7-mile, 30-inch State Water Project Interconnection pipeline between the City of Ventura and Calleguas Municipal Water District. The pipeline would provide additional water supplies and would deliver the City's allocated State Water of 10,000 acre-feet per year. The project included updating the City's water hydraulic model to be consistent with the State Water Project and summarizing results in a technical memorandum.

Strategic Planning | Port Hueneme Water Agency, Port Hueneme, CA

Assistant Engineer. The project involved the two-part strategic planning process with the Port Hueneme Water Agency Board of Directors. The effort included preparation of background information, current operations, a water supply analysis, a summary of challenges/opportunities, and the development of a recommended work plan. The process included coordination with staff and two public workshops with the Board of Directors.

Water Master Plan | Yorba Linda Water District, Yorba Linda, CA

Assistant Engineer. The project consisted of a capacity evaluation of the District's existing water distribution system. Specific responsibilities included the evaluation of existing water production, storage, and distribution facilities; creation of a GIS-based hydraulic water model; review of water quality requirements and goals; development of potential future requirements and evaluation of equipment alternatives; identification of deficiencies under existing and future conditions; development of a water supply and optimization study; and development of a Capital Improvements Program and cost opinions for existing and future improvements.

Well Siting Evaluation | City of Newport Beach, CA

Assistant Engineer. The project involved the preparation of a well-siting study to identify a new potable groundwater well site within the vicinity of Fountain Valley. Specific responsibilities included coordination with staff, preparation of screening criteria, and the identification and evaluation of preferred locations and recommendations.

Water Master Plan | City of El Monte, CA

Assistant Engineer. The project consisted of a comprehensive Water Master Plan for the City's water distribution system, which consisted of nine groundwater wells, three emergency interconnections, two reservoirs, one booster pump station, and approximately 42 miles of pipeline. Specific responsibilities included the evaluation of water supply, storage, and distribution facilities; development of a calibrated hydraulic model with steady-state scenarios; identification of pressure, velocity, and fire flow deficiencies under existing and future conditions; and development of a phased Capital Improvements Plan including project prioritization and cost estimating.

Water Master Plan | Quartz Hill Water District, Quartz Hill, CA

Assistant Engineer. The project involved a comprehensive Water Master Plan for the District's water distribution system, including six pressure zones, 10 groundwater wells, two imported water connections, eight reservoirs, six booster pump stations, 21 pressure-reducing stations, and approximately 97 miles of pipeline. Specific responsibilities included forecasting long-term development and water demand; the review of the District's water supply portfolio; the evaluation of existing water supply, storage, and distribution; the development of a calibrated hydraulic model with steady-state scenarios; the identification of pressure, velocity, and fire flow deficiencies under existing and future conditions; and the development of a phased Capital Improvements Plan including project prioritization and cost estimating.

PFAS Remediation Program | Water Replenishment District of Southern California, Beaumont, CA

Assistant Engineer. The project provided technical and program support to the District's \$61M PFAS treatment program. The program provided funding and technical support to an estimated 20+ PFAS treatment systems throughout the groundwater basin. Efforts included establishing program forms and processes to develop the program elements, coordination with pumpers and consultant teams, and supporting the District Program Manager.

Urban Water Management Plan (UWMP) | City of Fillmore, CA

Assistant Engineer. In accordance with the Urban Water Management Planning Act of the California Water Code, agencies are required to prepare an update to their UWMP every five years. The updates would include change in legislation and the Water Code since the previous UWMP. This project incorporated the new code requirements, including updating the water shortage contingency plan, drought risk assessment, long-term forecast for each water supply source including climate change and supporting information, seismic risk assessment and mitigation plan, and energy analysis for extraction, conveyance, treatment, and the distribution system.

Water and Sewer System Master Plans: Water System Hydraulic Model Update | Templeton Community Services District, Templeton, CA

Assistant Engineer. The project involved evaluating the water system using the hydraulic model created by MKN in Bentley Systems WaterCAD. The updates accurately modeled the water distribution systems for current and future needs. MKN utilized the District's water meter records to update water demand allocations in the model.



JOSEPH (JJ) REICHMUTH, PE

CONVEYANCE

EDUCATION

- BS, Civil Engineering, California Polytechnic State University, San Luis Obispo, CA

LICENSES & REGISTRATIONS

- Professional Civil Engineer, CA No. 63124
- Cured-in-Place Pipe (CIPP) Certified, NASSCO ITCP
- Manhole Rehabilitation Certified, NASSCO ITCP

PROFESSIONAL ASSOCIATIONS

- American Society of Civil Engineers (ASCE)
- North American Society for Trenchless Technology (NASTT)

YEARS OF EXPERIENCE

- 12 with MKN
- 27 Total

Joseph J. Reichmuth is a Principal Engineer with over 25 years of design and field experience with an emphasis in pipeline and pump station design, ranging from condition assessment and rehabilitation to planning and design. His pipeline design experience includes rehabilitation of sewer force mains and trunk mains. Designs have included traditional dig- and replacement-type construction along with various trenchless construction methods, such as horizontal directional drilling, jack-and-bore, cured-in-place pipe, and pipe bursting.

[Calleguas-Crestview Interconnection Facility | Calleguas Municipal Water District, Thousand Oaks, CA](#)

Project Engineer. Performed design services for an interconnection facility to connect the Crestview Mutual Water Company (Crestview) with Calleguas Mutual Water District (Calleguas). This connection will provide Calleguas with an emergency source of water during outages of imported water from other sources. The interconnection facility consist of a subsurface vault with a flow meter, pressure reducing/sustaining valve, and associated piping. The vault is connected to Crestview's water distribution system and Calleguas' Springville Reservoir via 650 feet of 12-inch CML&C welded steel pipe.

[Lift Station Assessment | City of Atascadero, CA](#)

Project Engineer. Condition assessment of four lift stations. Work included site visits, condition ratings of all aspects of the facility, wet well capacity review and storage times, and review of pump efficiency. Evaluations were summarized and a list of potential projects with estimated costs were developed for use in planning future capital improvement projects.

[Lift Station Condition Assessments | Camrosa Water District, Camarillo, CA](#)

Project Engineer. This project involved the condition assessment of six lift stations to be used for development of a Near-Term Capital Improvements Program. Efforts included field evaluation of all lift stations and preparation of observations and condition ratings. Results were used to establish future projects based on prioritization ranking and collaboration with District operations staff.

[Lift Station Condition Assessment \(12 Lift Stations\) | South Coast Water District, Laguna Beach, CA](#)

Project Engineer. The project involved the condition assessment of 12 lift stations, including development of a standard condition assessment form, field evaluation of all lift stations, preparation of observations and condition ratings, and uploading data and form into online ArcGIS platform. Results were used to establish over 160 projects and a 10-year implementation plan based on prioritization ranking and collaboration with District operations staff.

18th Street Lift Station Replacement Project | Selma-Kingsburg-Fowler County Sanitation District, Kingsburg, CA

Project Engineer. This project replaced an existing lift station that was constructed in the 1940s as the headworks structure to the previous wastewater treatment plant. Project elements included design of a new submersible lift station and pumps, odor control facilities, force main, removal of existing wetwell and concrete block building structures, installation of piping, and installation of new generator, electrical, SCADA, and motor control center. Responsible for design of new lift station including pumps and associated piping, odor control facility, emergency overflow structure, and connection to the existing gravity sewer.

Creek Sewer Rehabilitation Project | City of Arroyo Grande, CA

Project Engineer. Developed construction documents for the rehabilitation of 2,400 feet of aging sewer main for the City of Arroyo Grande. Due to the close proximity of the sewer main to the Arroyo Grande Creek, Cured-in-Place Pipe (CIPP) was proposed. Construction phase services were also performed for the City.

Arroyo Grande Lift Station No. 1 Repair Project | City of Arroyo Grande, CA

Project Engineer. Developed construction documents for the repair of an incoming gravity sewer main into Lift Station No. 1. Construction phase services were also performed for the City.

Sewer and Storm Drain Rehabilitation Project | City of Arroyo Grande, CA

Project Engineer. Developed construction documents for the rehabilitation of 1,000 feet of vitrified clay sewer main and 900 feet of corrugated metal storm drainpipe for the City of Arroyo Grande. Due to accessibility constraints, the use of Cured-in-Place Pipe (CIPP) was proposed.

Calle Joaquin and Laguna Lift Station Replacements | City of San Luis Obispo, CA

Project Engineer. Assisted in the design to replace two City sewer lift stations including 2500 feet of force main. Provide assistance with engineer's opinion of cost, and plans and specifications for public bid; bid phase services; and office engineering construction phase services.

Cal Poly State University Student Housing South Lift Station | WebCor Builders, San Luis Obispo, CA

Project Engineer. MKN was retained by WebCor Builders to perform design/build and construction phase services for a new lift station on the California Polytechnic State University Campus. Design of the new lift station required development of anticipated flows, development of a hydraulic model to evaluate capacity of existing collection system, and flow monitoring to confirm existing flows. Special consideration was given to managing emergency flows and to address potential odors.

Highland Way Sewer Line Project | City of Grover Beach, CA

Project Manager. Developed construction documents for installation of 1,300 linear feet of new sewer line for the City of Grover Beach. This new extent of the sewer collection system is intended to service customers within the City limits and to eliminate on-site wastewater disposal systems. Project included coordination with proposed construction plans for future development along the alignment.

Downtown Master Sewer Study | City of Bakersfield, CA

Project Engineer. The goal of Downtown Master Sewer Study was to develop a comprehensive collection system evaluation report (including updated GIS mapping) of the existing sewer collection system within the Downtown Bakersfield area in support of the Downtown Vision Plan and other potential future development within the Study Area. Provided condition assessment of existing lift stations and limited number of sewer manholes within Study Area and development of Capital Improvements Program and cost opinions for existing and future improvements.

Sewer Master Plan | City of Grover Beach, CA

Project Engineer. Project consisted of a condition assessment and capacity evaluation of the City of Grover Beach sewer collection system. Provided evaluation of existing gravity pipelines, lift stations, and force mains and assisted in development of a Capital Improvements Program and cost opinions for existing and future improvements.



ALEX MAHER, PE

PLANNING

EDUCATION

- BS, Civil Engineering, California State Polytechnic University, Pomona, CA

LICENSES & REGISTRATIONS

- Professional Civil Engineer, CA No. 86584
- Pipeline, Lateral, and Manhole Assessment Certified (PACP/LACP/MACP), NASSCO No. U-0721-70402535

PROFESSIONAL ASSOCIATIONS

- American Society of Civil Engineers (ASCE)
- Orange County Water Association (OCWA)

YEARS OF EXPERIENCE

- 1 with MKN
- 13 Total

Alex Maher specializes in the design and preparation of construction plans, specifications, and cost estimates for large water and wastewater pipelines, pumping stations, pressure-reducing stations, and reservoirs. Alex has experience in providing construction support services for major water facilities throughout southern California. His experience in preparing planning documents related to water and wastewater infrastructure projects includes water supply assessments, water and wastewater master planning studies, Developmental Disability Waivers (DDW), and hydraulic analyses for various public- and private-sector clients. He is proficient in several hydraulic modeling platforms. Alex has also conducted numerous conditions assessments for municipal water companies and for military installations in California and Utah.

Master Plan Studies and Hydraulic Modeling Services | Mesa Water District, Costa Mesa and Newport Beach, CA

Task Manager/Hydraulic Modeler. The project involved providing hydraulic modeling services, including Master Plan updates, for proposed developments within the Mesa Water District distribution system. Mesa Water's distribution system consists of more than 300 miles of pipeline, approximately 11,000 junctions, two storage reservoirs, two booster pump stations, and seven groundwater wells. Five master planning efforts for Mesa Water District were successfully completed and results for Master Plan Updates were delivered for land areas up to 9 acres, developments with 250 attached units, and developments with 177 detached units. Other hydraulic modeling services conducted for Mesa Water District included an on-call fire flow analysis to determine system reliability, system operational adjustments, utilizing model results to assist with Water Loss Audits, water age and water source analyses to aid in a Nitrification Study, and continuous hydraulic model updates, per Mesa Water's direction.

Tustin Legacy Specific Plan Amendment, Sub Area Master Plan | City of Tustin, CA

Project Manager. The project involved developing master planning reports for the Tustin Legacy Specific Plan Amendment, Sub Area Master Plan (TLSP SAMP) and subsequent amendments to the SAMP. The TLSP is comprised of more than 20 distinct planning areas, totaling 723 acres, located in the City of Tustin and bound by Barranca Parkway to the south, Redhill Avenue to the west, Edinger Avenue to the north, and Jamboree Road to the east. Recent development areas for which SAMP Updates were performed include Staybridge Suites, Brookfield, Neighborhood D-South, and Neighborhood G.

Orange Heights Development Water and Wastewater Master Planning | The Irvine Company (TIC), Orange, CA

Task Manager. The project involved providing master planning analysis and reports for potable water, non-potable water, and wastewater collection systems for a planned community containing approximately 1,180 single-family residential homes, 115 multi-family residential homes, parks, and other community facilities. The analysis also included a backwash analysis of the Irvine Ranch Water District Zone C+ Tank.

Master Plan Update and Hydraulic Modeling | Shopoff Realty Investments, Anaheim, CA

Project Engineer. The project involved providing professional hydraulic modeling and analysis for a new residential development. The proposed development, located on a 20-acre site, consisted of 546 dwelling units and 232,276 square feet of irrigated public-use space. The dwelling units were a combination of single-family homes, townhomes, and multi-level apartment buildings. Water demands for the proposed development were determined using Anaheim's water-demand factors. On-site hydraulic models were created and fire hydrant flow tests were coordinated to aid in model calibration. The analysis included three unique analyses for existing conditions, proposed max-day conditions, and proposed max-day plus fire flow.

Water System Master Plan and Geographic Information System (GIS) | New Home Company, Thousand Oaks, CA

Project Engineer. The project involved providing engineering services for the development of a comprehensive water system master plan and GIS in the City of Thousand Oaks. The City encompasses an area of approximately 56 square miles with over 14,000 acres designed as open space. What was provided included a capital improvement program, hydraulic model, GIS, condition assessment of each water facility, corrosion study, structural analysis, water quality evaluation, computer maintenance management system, evaluation of the city's remote facility control system, and vulnerability assessment. The effort also included scrubbing as-builts, digitizing, and data entry for various attributes in the new GIS.

Newhall Utility Corridor Project | FivePoint and Newhall Land and Farming C/O, Santa Clarita, CA

Project Engineer. The project involved completing the preliminary and final design for the construction of approximately 22,000 linear feet of 36-inch fiberglass reinforced polymer mortar gravity sewer and approximately 13,450 linear feet of dual 18-inch HDPE sewer force mains along CA-126. Proposed pipelines were designed within a dual-purpose utility corridor and bike trail. The project included crossing Castaic Creek designed as horizontal directional drilling, as well as crossings of Chiquita Channel and San Martinez Grande Channel designed as jack-and-bore. Complete design and calculation services were performed per Los Angeles County Sanitation Districts (LACSD) requirements as the ultimate owner, for both pipeline systems as well as site civil engineering services for grading and construction of the proposed bike trail. The scope of services included extensive coordination with Caltrans, providing easement documentation, and permitting with LACSD.

Recycled Water Delivery System | Ontario Municipal Utilities Company, Ontario, CA

Project Engineer. The project involved preparing plans, specifications, and estimates for the City's new backbone recycled water distribution system. The system includes over 10 miles of recycled water PVC pipeline ranging in size from 8-inch to 24-inch diameter, a new irrigation system booster pump to irrigate the Euclid Avenue center median, a new recycled water booster pump station required to deliver recycled water from Inland Empire Utilities Agency's 1059 Zone to the City's new recycled water distribution high zone, preparation of a Title 22 Supplemental Engineering Report and CEQA documentation, and bidding and construction-phase engineering support.

Master Plan Update and Hydraulic Modeling | Shopoff Realty Investments, Village of Taos Ski Valley (VTSV), NM

Project Manager. The project involved conducting site selection with VTSV for a new 250,000-gallon reservoir within VTSV's Blue Pressure Zone. Following Engineer recommendations, the VTSV conducted a hydraulic analysis to verify that their existing water system, including the proposed 250,000-gallon reservoir, could accommodate resort facilities that include 90 hotel rooms, 52 multi-room villas, and relaxation spa facilities. The project included hydraulic model developments and all facilities within VTSV's Blue Pressure Zone. Water demands for the proposed facilities were developed using demand data published by other similar mountain communities. Fire flow requirements were determined using the International Fire Code and the building's construction materials, gross floor area, and proposed fire suppression system. The project also included an evaluation of the village's potential future natural gas utility needs based on available lots within the village limits.



CHANG YE, PHD, PE, PMP, CPE, QSD

COST ESTIMATING

EDUCATION

- PhD, Civil Engineering, Missouri University of Science and Technology, Rolla, MO
- MS, Applied Ecology, Chinese Academy of Sciences, Beijing, China
- BS, Environmental Engineering, Zhejiang Agricultural University, Zhejiang, China

LICENSES & REGISTRATIONS

- Professional Civil Engineer, CA No. 68761
- Project Management Professional (PMP), No. 3709402
- Certified Professional Estimator (CPE), CA No. 310000-191-0919
- Qualified SWPPP Developer (QSD), CA No. 68761

PROFESSIONAL ASSOCIATIONS

- American Society of Professional Estimators (ASPE)
- American Water Works Association (AWWA) (Water Main Rehabilitation Committee; Water Reuse Committee; Inorganic Contaminants Research Committee)
- Project Management Institute (PMI)

YEARS OF EXPERIENCE

- 1 with MKN
- 21 Total

Chang Ye has been gaining industrial experience in civil engineering since 2005. He has designed and managed over 200 civil infrastructure projects in Southern California, including potable water reservoirs, water wells, pump and lift stations, water, sanitary sewer, and recycled water pipelines, stormwater drainage systems, treatment facilities, on-site treatment systems, airports, railroads, and site gradings and developments.

Chang's expertise includes developing Plans, Specifications, Estimates and bid documents; providing construction management and support; developing water, sewer, and recycled water system models with various modeling tools and GIS; conducting hydraulic and hydrology analysis; preparing various master plans and emergency response plans; developing Stormwater Pollution Prevention Plan (SWPPP), Low Impact Development (LID), Water Quality Management Plan (WQMP), and various environmental compliance programs and reports; and assisting in developing standards and specifications for agencies.

[Replacement of Lift Station Pumps and Pump Hardware at Gateway of the Americas Sewer Lift Station No. 1 | County of Imperial, CA](#)

Lead Engineer. This project involved replacing two lift station pumps and associated pump hardware at the Gateway of the Americas Sewer Lift Station No. 1. As Lead Engineer, Chang conducted hydraulic calculations, assessed pump performance, selected appropriate pumps, and provided engineering solutions. He also developed detailed plans, specifications, cost estimates, and bid documents to ensure successful project implementation and alignment with operational requirements.

[Replacement of Lift Station Pumps and Pump Hardware at Gateway of the Americas Sewer Lift Station No. 2 | County of Imperial, CA](#)

Project Engineer. This project involved site renovation and the replacement of two lift station pumps at the Gateway of the Americas Sewer Lift Station No. 2. As Project Engineer, Chang conducted site investigations, pump assessments, hydraulic calculations, and the pump selection. He also provided engineering solutions and developed comprehensive plans, specifications, cost estimates, and bid documents to ensure the successful execution of the project.

[Regional Lift Station Modifications and Enhancements | Jurupa Community Services District, Jurupa Valley, CA](#)

Project Engineer. This project involved modifications to the Jurupa Community Services District's Regional Lift Station, including the replacement of sanitary pumps. As Project Engineer, Chang conducted hydraulic calculations and prepared preliminary and final plans and specifications, ensuring the project met technical and operational requirements.

Lift Station No. 6 Replacement | Running Springs Water District, Running Springs, CA

Project Engineer. This project involved the demolition and replacement of Sanitary Lift Station No. 6 in Running Springs Water District. As Project Engineer, Chang led the site design, which included the pump selection, wet well and piping design, building and floodwall design, and the preparation of specifications, cost estimates, and bid documents, ensuring a seamless and efficient replacement aligned with operational needs.

Lift Stations No. 1, 2, and 3 Replacement | Running Springs Water District, Running Springs, CA

Project Engineer. This project involved the demolition and replacement of three sanitary lift stations in Running Springs Water District. As Project Engineer, Chang's responsibilities included conducting hydraulic calculations, the pump selection, designing wet wells and piping systems, pump building design, and preparing specifications, cost estimates, and bid documents, ensuring the successful modernization of the lift stations.

Lake Pump Station Replacement | Big Bear Area Regional Wastewater Agency, Big Bear Lake, CA

Lead Designer. This project involved constructing a pump station with a maximum capacity of 5,000 gpm and a 300-hp pump to facilitate stormwater infiltration into the sanitary sewer system. As Lead Designer, Chang conducted a feasibility study, selected pumps, designed the wet well and piping systems, developed building designs, and prepared specifications, cost estimates, and bid documents, ensuring the project's feasibility and alignment with operational goals.

Sky Country Trunk Sewer Improvement Project | Jurupa Community Services District, Jurupa Valley, CA

Project Engineer. The Sky Country Trunk Sewer Improvement Project involved the construction of approximately 8,900 linear feet of 8-inch- to 18-inch-diameter VCP and PVC trunk sewer, addressing complex existing utility conditions. As Project Engineer, Chang conducted hydraulic calculations, performed utility research, developed preliminary and final designs, presented alternative alignments, prepared detailed specifications, and provided construction management support, ensuring the project's successful delivery and alignment with operational requirements.

San Bernardino National Forest Sycamore Fire Station No. 32 Sewer Tie-in Project | United States Forest Service, San Bernardino, CA

Project Engineer. This project involved constructing approximately 400 linear feet of 8-inch-diameter sewer main on Glen Helen Parkway to connect sewer service to a fire station. As Project Engineer, Chang provided project coordination, conducted utility research, and prepared construction plans, specifications, and cost estimates, ensuring a seamless tie-in and alignment with project requirements.

Regional Force Main Segment 3 Sewer Plans | Jurupa Community Services District, Jurupa Valley, CA

Lead Engineer. This project involved constructing 2,100 linear feet of 24-inch-diameter gravity sewer line and 2,500 linear feet of 24-inch-diameter sewer force main to the wastewater treatment plant. As Lead Engineer, Chang provided engineering alternatives, conducted hydraulic modeling and siphon calculations, and prepared detailed construction plans, specifications, and cost estimates, ensuring the project's technical accuracy and alignment with operational requirements.

Route 18 Outfall Line Realignment | Big Bear Area Regional Wastewater Agency, Big Bear Lake, CA

Project Engineer. This project involved the realignment of a 12- to 18-inch-diameter reclaimed water outfall line along State Route 18 to the Lucerne Valley Discharge Site. As Project Engineer, Chang conducted hydraulic calculations, provided engineering solutions, and developed final plans and specifications, ensuring the project met operational and regulatory requirements effectively.

Water Line Replacement in Limonite and Pedley Area | Jurupa Community Services District, Mira Loma, CA

Lead Designer. The Limonite and Pedley Area Water Line Replacement Project involved constructing 6,500 linear feet of 8- to 12-inch-diameter cement mortar-lined steel water pipelines to replace aged and leaking water pipes. The project also included evaluating engineering alternatives to enhance system loops and relocating several water services for existing business properties. As the Lead Designer, Chang contributed to the preliminary and final design phases by preparing engineering reports, plans, specifications, and cost estimates, ensuring a reliable and efficient water distribution system.



Bakersfield

1800 21st Street, Suite C
Bakersfield, CA 93301

Fresno

8405 North Fresno Street, Suite 120
Fresno, CA 93720

Irvine

16310 Bake Parkway
Irvine, CA 92618

Oceanside

301 Mission Avenue, Suite 202
Oceanside, CA 92054

San Jose

100 Century Center Court, Suite 670
San Jose, CA 95112

San Luis Obispo

354 Pacific Street
San Luis Obispo, CA 93401

Santa Clarita

25101 The Old Road, Suite 115
Santa Clarita, CA 91381

Ventura

121 North Fir Street, Suite G
Ventura, CA 93001

mkn

AN  ARDURRA COMPANY

www.mknassociates.us

5 PRICING

The pricing below will remain fixed throughout the duration of the project

	Principal Engineer	QA/QC	Senior Engineer II	Assistant Engineer II	Assistant Engineer I	Technical Writer	Total Hours (MKN)
Project Element 1: Project Initiation and Data Collection							
Data Request and Review	6			16			22
Process Schematics/Cost Assumptions/Eval Criteria	6			16			22
Kickoff Workshop	6	2	2	8			18
Interviews (8 total/virtual)	8			8			16
PE1 Deliverable (Draft)	5			10		2	17
Subtotal	31	2	2	58	0	2	95
Project Element 2: Technical Feasibility Assessment							
Alternatives Figures (4)	8			16	8		32
Infrastructure Calculations/Summary			8	12	4		24
Cost Sharing/Savings (i.e., NCI, flow allocation)				4	4		8
OCWD Water Supply	4						4
Recycled Water Impacts				5	5		10
Non-Infrastructure Impacts/Risks	3		3	3			9
SCWD Tunnel Evaluation	2		2	2			6
PE2 Deliverable (Draft)	2			8		2	12
Subtotal	19	0	13	50	21	2	105
Project Element 3: Cost Evaluation							
Capital Costs	4	4	6	8			22
Operating Costs	2		2	8			12
Cost Comparison (30-year Present Day)	5			8	4		17
PE3 Deliverable (Draft)	4			6	4	2	16
Subtotal	15	4	8	30	8	2	67
Project Element 4: Analysis and Recommendations							
Alternative Analysis	4		2	6	4		16
Recommendations/Regional Integration	4			6	4		14
Implementation Timeline	3			6		2	11
Subtotal	11	0	2	18	8	2	41
Project Element 5: Reporting and Deliverables							
Assemble Report/Executive Summary	3			5		2	10
QA/QC (5 deliverables)			16				16
Draft/Final Report	6			8	2	2	18
Subtotal	9	16	0	13	2	4	44
Project Element 6: Project Management							
Project Management (4 months)	12						12
Monthly Coordination Meeting/Progress Reports (4)	4			4			8
Deliverable Review Meetings (4 total)	8			8			16
Subtotal	24	0	0	12	0	0	36
TOTAL BUDGET							
Optional Board Workshops (2)	8	4		16			28

CTP Regional Flow Study Scope of Work

1. Project Overview

This Scope of Work (SOW) outlines the professional engineering services required to conduct a high-level evaluation of the technical feasibility and associated costs for potential redistribution of all or portions of wastewater and/or recycled water that currently are treated at the SOCWA Coastal Treatment Plant (CTP), along with any associated right sizing of existing infrastructure. Currently incoming wastewater flows at the CTP are collected from the City of Laguna Beach (CLB), South Coast Water District (SCWD), and Emerald Bay Service District (EBSD), then treated to both secondary levels for ocean discharge and Title 22 quality irrigation used by SCWD. Options for redistribution of wastewater flows and/or recycled water to alternative facilities, include the Orange County Sanitation District (OCSAN), Regional Treatment Plant (RTP), ~~and~~ JB Latham Treatment Plant (JBL), and the Proposed Aliso Creek Restoration Project. The evaluation will incorporate key considerations including, but not limited to existing CTP assets, current and future wastewater treatment needs, current and future agency recycled water demands and reuse objectives, and existing and planned major conveyance infrastructure such as the SCWD Tunnel Stabilization & Sewer Pipeline Replacement Project, pumping and force main facilities, and future planned improvements of the North Coast Interceptor (NCI).

The primary objectives of this SOW are to:

- Assess the technical viability of flow redistribution at a conceptual level, identifying major opportunities, constraints, and risks.
- Estimate high-level costs for redistribution of wastewater and/or recycled water flows entering CTP for each alternative to be considered
- Potential related rightsizing, infrastructure modifications, and operational transitions, resulting from redistribution alternatives considered
- Integrate regional considerations to ensure alignment with ongoing projects, water resource management goals, and funding strategies.
- Provide actionable recommendations to guide decision-making and potential detailed future studies.

This SOW focuses on a high-level analysis and does not include detailed design, permitting, or implementation. It assumes access to relevant data from the Client, Member Agencies, and stakeholders, including flow records, infrastructure maps, and stakeholder inputs. Compliance with regulations such as the Clean Water Act, California Coastal Act, and the California Environmental Quality Act (CEQA) will be considered at a preliminary level.

2. Scope of Services

The Firm shall perform the following tasks in accordance with professional standards from the American Society of Civil Engineers (ASCE) and relevant regulatory guidelines. Services are divided into phases for structured execution.

Project Element 1: Project Initiation and Data Collection

- Gather and review existing documentation, including CTP operational data, flow diagrams, as-built drawings, permits, and historical records.
- Gather and review existing documentation related to the status of the Aliso Creek Restoration Project, including water flow needs for the estuary.
- Collect information on current flows from CLB, SCWD, and EBSD, including volumes, quality parameters, and seasonal variations.
- Obtain details on recipient facilities (OCSAN, RTP, JBL), such as capacity, treatment capabilities, and integration requirements.
- Review regional projects and data, including, but not limited to:
 - SCWD Tunnel Stabilization & Sewer Pipeline Replacement Project documentation (e.g., tunnel enlargement and new pipeline, pump station, and agency intertie installation in the Laguna Beach area).
- Recycled water demand projections for South Orange County (e.g., local agency reports indicating X% of demand met by recycled water).
- Funding planning records for the North Coast Interceptor (NCI), a key conveyance pipeline operated by CLB.
- Conduct virtual or in-person interviews with stakeholders from CLB, SCWD, EBSD, OCSAN, RTP, JBL, and relevant agencies (e.g., OCWD, SOCWA) to gather insights.
- Potential community and business for impacts from OCSAN non-point source control program (qualitative listing of the requirements only), including, but not limited to, dry weather diversions, chemicals of reasonable concern used by business, etc.

Deliverables: A listing of all attained resources and a copy of all received electronic and paper files.

Project Element 2: Technical Feasibility Assessment

Evaluate the high-level feasibility of either right sizing CTP, or portions of the CTP and redistributing and/or redirecting all or portions of flows, with a focus on technical, operational, and environmental aspects. Assessments will include:

1. Wastewater Flows from City of Laguna Beach (CLB) and Emerald Bay Services District:
 - a. Assess redirection options to sending raw sewage to OCSAN, considering NCI's role as the primary conveyance system, sending raw sewage or secondary to JBL, and secondary effluent flows from CTP to RTP.
 - b. Evaluate integration with CLB's NCI funding and maintenance strategies, including potential cost-sharing for upgrades.
 - c. Evaluate integration with EBSD's facilities, as well as EBSD contributions in the NCI cost-sharing for upgrades.
 - d. Maintain the flow allocation percentages between CLB and EBSB for allocating costs under Project Element 3
2. Wastewater Flows from South Coast Water District (SCWD):
 - a. Analyze compatibility with the recently completed SCWD Tunnel Stabilization & Sewer Pipeline Replacement Project, assessing how tunnel improvements (e.g., enlarged structure and 24-inch pipeline) could facilitate or constrain redirections.

- b. Identify synergies, conflicts, and additional facility requirements (pumping capacity, pipelines, etc.) for SCWD's to 1) convey raw sewage from CTP to OCSAN, 2) convey raw sewage or secondary from CTP to JBL, and 3) convey surplus secondary effluent to RTP. These options must also include any additional facilities, agreements, etc. to maintain recycled water services within the SCWD service area.

3. Recycled Water Flows used by South Coast Water District (SCWD):

- e.a. Assess opportunity to continue production of Title 22 Recycled Water at CTP for distribution within SCWD's existing recycled water system.
- d.b. Assess opportunity to redistribute wastewater flows for Title 22 recycled water production at alternative treatment sites.
- c. Assess options to utilize alternative available recycled water sources for incorporation into SCWD's Title 22 distribution system.

4. Tertiary Treatment Flows used by the CLB

- e. a. Assess the opportunity for live-stream discharge of the CLB flows to Aliso Creek to support the Aliso Creek Restoration Project.

Overall feasibility analysis will cover:

- Hydraulic assessment at a conceptual level to simulate redirection scenarios.
- Infrastructure needs, such as pipeline extensions, lift station upgrades, pump upgrades, or metering.
- Environmental and regulatory considerations, including water quality compliance and effects on SCWD's recycled water production (e.g., maintaining supplies for irrigation in parks, golf courses, and green belts to meet X% of South County demands).
- Risk identification, such as system disruptions during transition or climate-related vulnerabilities.
- A listing/description of potential limitations to future projects including, but not limited to, for each option:
 - a. Permits
 - b. New property needs
 - c. Maintenance access concerns limitations (i.e., maintenance access in PCH, city traffic islands, heavy traffic intersections, etc.)
 - d. Other local agency limitations/restrictions (i.e., moratoriums on street construction, limited hours for construction/maintenance access (i.e. PCH may be night only and/or outside the summer months), local agency requirements for additional paving outside the trench zone, local business signage and outreach requirements during construction, bikeway impact restrictions, etc.)

Project Element 3: Cost Evaluation

- Develop high-level cost estimates for key components, including:
 - a. CTP redistribution and/or decommissioning (e.g., shutdown, site remediation, asset disposition).
 - b. Flow redistribution/redirection infrastructure (e.g., pipelines, pumps, controls).
 - c. Operational transitions and monitoring.

- d. Incorporate cost implications of considerations:
- e. Potential cost savings from utilizing SCWD's tunnel project investments to reduce redirection costs.
- f. Potential savings or offsets from enhanced recycled water utilization in South County.
- g. Funding contributions from CLB and EBSD for NCI enhancements, drawing from city budgets or loans (e.g., historical allocations for NCI replacement phases).
- h. Use industry benchmarks and parametric estimating methods for accuracy at this level.
- i. Perform sensitivity analysis on variables like material costs, labor, and contingencies.
- j. A listing only or other considerations including, but not limited to, environmental mitigations, supplement fees/charges (i.e. OCSAN annexation fees), LAFCO processes (annexation or out of area sewer service agreements), lower flow impacts to the Aliso Creek Ocean Outfall, etc.

Project Element 4: Analysis and Recommendations

- Synthesize findings into a feasibility matrix, highlighting viable redirection options, risks, and mitigation strategies.
- Provide recommendations on next steps, such as detailed studies or pilot testing.
- Address regional integration, including how the project alternatives align with the three PC15 Agencies goals, ongoing capital -projects, potential to avoid other capital costs or difficult projects, continuation or expansion of recycled water uses, and NCI funding by CLB/EBSD.
- Develop estimated implementation timelines for each of the project alternatives.

Project Element 5: Reporting and Deliverables

- Technical Memorandums must be submitted and approved for Elements 1 and 2 prior to proceeding with Project Element 3.
- Deliver a final report including:
 - Executive summary. (An initial draft will be submitted for review and approval prior to inclusion in the final report.)
 - Final Technical Memorandums for Project Elements 1 through 3.
 - Provide digital files in standard formats (e.g., PDF, Excel).

Project Element 6: Project Management

A Project Control Plan (PCP) will be developed by the Consultant to establish clear project management procedures and strategies so that the Consultant and PC 15 Member Agencies are unified in the understanding of expectations, roles, and responsibilities. The PCP should include decision-making processes, confirmation of planning criteria to be used, the basis for project cost estimates, coordination needs with concurrent projects, coordination with SOCWA and the PC 15 Member Agencies.

Project Meetings and Communications

The project will have at a minimum:

- Kick-off meeting
- Monthly PM meetings
- Up to 3 Individual Agency meetings
- At least 3 workshops The Consultant shall provide progress reports that include project updates, schedules, and track percent completed by project element at the monthly PM meetings.

Assumptions and Exclusions

- Assumptions:
 - a. Client provides timely access to data and stakeholders.
 - b. No major changes in regulatory requirements or flow characteristics during the study.
 - c. High-level estimates based on available data; accuracy within ±30-50%.
- Exclusions:
 - a. Detailed engineering design or construction documents.
 - b. Full CEQA environmental impact assessments.
 - c. Financial modeling is beyond high-level costs (e.g., no rate studies).

Legal advice on funding or inter-agency agreements.

Schedule

The project shall commence upon agreement execution and be completed within [X] months, with milestones as follows:

- Phase 1: [X] weeks from start.
- Phase 2: [X] weeks following Phase 1.
- Phase 3: [X] weeks following Phase 2.
- Phase 4: [X] weeks following Phase 3.
- Phase 5: [X] weeks following Phase 4, including reviews.

Agenda Item

12

Engineering Committee

Meeting Date: February 19, 2026

TO: Engineering Committee

FROM: Roni Grant, Capital Improvement Program Manager

SUBJECT: As Needed Construction Management Services For Capital Improvement Projects (PCs 2, 5, 15, 21 and 24)

Overview

The South Orange County Wastewater Authority (SOCWA) is seeking to contract with three to five construction management firms to provide as-needed construction management services to support the construction of capital improvement projects. These services may include but are not limited to resident engineering, construction document management, scheduling review, cost analysis, general inspection and specialty inspection such as electrical and coatings. These functions are separate and distinct from the engineering services during construction (shop drawing review, request for information response, completion of as-built drawings) typically provided by the design firm. The selection of as needed construction management firms is to be done through a Request for Qualifications (RFQ) process. The draft RFQ is addressed at Attachment A. Agreements will be for a three (3) year term and have a not-to-exceed limit of \$300,000 per agreement.

Background

SOCWA has traditionally procured construction management services on a project-by-project basis for larger projects such as the Coastal Treatment Plant (CTP) Facility Improvements Project. Oversight of smaller construction projects has typically been left to either the SOCWA Engineering or Operations & Maintenance staff members. SOCWA staff members typically do not have the specialty skills needed for inspection work. Therefore the use of as needed construction management firms is proposed to maintain quality control in the delivery of capital improvement projects.

Project Description

Construction Management Firm will provide general construction management and administration to facilitate the completion of projects. Work is to involve on-going interaction with SOCWA staff.

Construction Management Firm is to perform consulting construction management and inspection services (Services) on an "as-needed" basis for projects assigned by SOCWA via written Task Order. The Services to be performed for the projects may include but shall not be limited to the Task Descriptions provided below.

When Services are required, SOCWA will issue a request for proposal for project- specific Services including the required scope of work, schedule for completion and other project requirements. Construction Management Firm shall submit, within the time stated in the request for proposal, a Task Order proposal indicating the cost, task completion schedule and other information requested by SOCWA. If accepted by SOCWA, SOCWA shall issue a Task Order to Construction Management Firm to proceed with the work.

For each specific Task Order that may be performed by the Construction Management Firm, services may include any of the following scope items:

1. Pre-Construction Services.
 - a. Constructability Reviews, which may include review of all project drawings
 - b. and specifications prior to release for bidding.
 - c. Review of cost estimates and schedules.
 - d. Assistance in assembling a list of pre-qualified contractors for the project.
 - e. Assistance at pre-bid meetings.
 - f. Assistance in preparation of bid addendums.
 - g. Assistance in review of bids and recommendation of contract award.
 - h. Assistance in preparation of conformed set of plans and specifications for construction of the project.
2. Construction Management
 - a. Planning and Scheduling
 - i. Pre-Construction Meeting
 - ii. Construction Schedule
 - iii. Contractor Safety Program
 - iv. Document Management
 - v. Pre-construction photos/videos
 - vi. Permitting requirements
 - vii. Weekly meetings
 - b. Contract Administration
 - i. Review shop drawings, submittals and samples for strict conformance with contract documents
 - ii. Progress Payments
 - iii. Budget Projections
 - iv. Requests for Information (RFIs) and Requests for Clarification (RFCs)
 - v. Weekly Meetings
 - vi. Contract Change Orders
 - vii. Photo and Video documentation
 - viii. Claims
 - ix. Coordination with design engineer, which may include preparation of revisions to contract drawings and specifications to resolve conflicts.
 - x. Correspondence
 - xi. Substitution requests
 - xii. Shut down requests
 - xiii. Schedule Impact Analysis
 - c. Inspection and Quality Control

Provide inspection services which may include but shall not be limited to the following:

- i. Inspection
- ii. Daily Reports/Documentation
- iii. Construction deficiency reports
- iv. Construction Coordination for surveying, 3rd party testing, outside agency inspections, etc.
- v. Mitigation measures
- vi. Traffic control
- vii. Factory testing
- viii. Storm Water Pollution Prevention

d. Final Acceptance and Contract Close-Out

Assist the construction contractor and SOCWA in, which may include but shall not be limited to the following:

- i. Startup and commissioning
- ii. Development of project punch lists
- iii. Delivery of project-related documentation, including warranties, guarantees, operations & maintenance manuals, permit closure documents
- iv. Prepare record drawing set based on the red-line drawings submitted by the construction contractor. Record drawings shall be prepared in the latest version of AutoCAD (or version agreed to by District staff) and PDF formats.

3. Specialty Inspections

Provide specialty inspectors, as requested, which may include but shall not be limited to the following:

- a. Structural
- b. Electrical
- c. Mechanical
- d. Instrumentation
- e. Welding
- f. Compaction
- g. Coatings
- h. Environmental
- i. Equipment testing and startup
- j. Other specialty inspections as needed
- k. Inspectors shall be OSHA confined space entry trained and certified as appropriate

4. Additional Services

Provide additional services during construction, as requested by the District, which may include but shall not be limited to the following:

- a. Assistance with permitting
- b. Public relations or outreach

Expected Request For Qualification Recipients

The following firms are projected as recipients the As Needed Construction Management Services Request for Qualifications

- Arcadis
- HDR
- Lee and Ro
- MBI
- Ardurra/MKN
- MWH
- Richard Brady
- AKM
- Butier
- Dudek
- Carollo Engineers
- Hazen
- TYLin
- Harper & Associates
- CSI Coating Inspection

Budget

There is no budget assigned for the as-needed construction management services. The budget will be set on a case by case basis as the task orders are assigned. Table 1 shows currently budgeted projects for the current and the following budget years. Projects with construction costs over \$1 million may merit specific selection processes for construction management services. Projects shown in Table 1 with estimated construction costs below \$1 million have a total budget of \$2,671,000. Application of a simple 10% yield expected construction management services of \$267,000. These are the as-needed construction management fees that may be expected over the next two fiscal years.

Table 1 – Budgeted Capital Improvement Projects with Construction Elements For Fiscal Years 2025/26 and 2026/27

		SOCWA CIP Workplan				Jul - Sep	Oct - Dec	Jan - Mar	Apr - Jun	Jul - Sep	Oct - Dec	Jan - Mar	Apr - Jun
Project Number	Project Name	Project Budget	FY 2025/2026				FY 2026/2027						
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
PC 2 - J.B. Latham Treatment Plant													
3215/3252	MCC M and Plant 1 Generator Replacement	\$ 4,406,903	D	D	D	B&A	C	C	C	C			
3285	Main Plant Drain Line Reconstruction	\$ 500,000	D	D	B&A	C	C	C					
32262L	DAF Polymer System Upgrade	\$ 741,000	P	P	D	D	D	B&A	C	C			

32232S	Buried Digester Gas and Flare Piping Improvements	\$ 125,000	D	D	D	D	B&A	C	C	C
32234S	Heat Exchanger 4 Pipe Replacement	\$ 75,000	D	D	D	D	B&A	C	C	C
32231S	Gas Flare Replacement	\$ 2,000,000	D	D	D	D	B&A	C	C	C
32261S	Odor Control Scrubber No. 2 Replacement	\$ 2,000,000	P	P	D	D	D	B&A	C	C
32244S	Buried Digester Piping Reconstruction	\$ 250,000	D	D	D	D	B&A	C	C	C
322236S	Digester 3 and 4 Upgrades and Coating	\$ 500,000	P	P	D	D	B&A	C	C	C
PC15 - Coastal Treatment Plant										
35247L	Aeration Blower System Upgrades	\$ 142,657	P	P	D	D	B&A	C	C	C
35229L/35235L	Odor Control Scrubber/Foul Air System Reconstruction	\$ 1,650,000	D	D	D	B&A	C	C	C	C
3522AL	Drainage Pump Station	\$ 4,200,000	D	D	D	B&A	C	C	C	
15817	EQ Tank Liner Rehabilitation	\$ 300,000					D	B&A	C	C
PC 21 - Effluent Transmission Main										
3107/3108	Air Valve Replacement	\$ 911,424	D	ENV	ENV	B&A	C	C		
	TOTAL	\$ 17,801,984								

Recommended Action

Staff requests the following actions from the Engineering Committee:

1. Review and comment on the proposed process for the use of as-needed construction management services.
2. Review and comment on the proposed list of construction management firms to receive the as-needed construction management services request for proposals.

Attachment: Draft RFQ for As Needed Construction Management Services

ATTACHMENT A

REQUEST FOR QUALIFICATIONS

FOR

AS-NEEDED CONSTRUCTION MANAGEMENT SERVICES

Issue Date: February 25, 2026

South Orange County Wastewater Authority
34156 Del Obispo Street
Dana Point, CA 92629

**REQUEST FOR QUALIFICATIONS
FOR
AS-NEEDED CONSTRUCTION MANAGEMENT SERVICES**

1. INTRODUCTION

1.1 Purpose

The South Orange County Wastewater Authority (SOCWA) is seeking Statements of Qualifications (SOQ) from qualified Firms capable of performing as-needed construction management services for SOCWA's Engineering Department. Potential services to be provided on an as-needed basis are described in Attachment "A" – General Scope of Work.

This Request for Qualification (RFQ) describes the potential Scope of Work, the minimum information that must be included in the SOQ, and the Consultant evaluation and selection process. Failure to submit information in accordance with this RFQ's requirements and procedures may be cause for disqualification. For purposes of the RFQ the terms Consultant, Firm, and Proposer are interchangeable.

It is anticipated that up to five (5) Firms may be awarded Agreements to provide as-needed services on a Task Order basis to help implement the SOCWA's Capital Improvements Program. Agreements will be for a three (3) year term and have a not-to-exceed limit of \$400,000 per agreement.

1.2 Due Date and Delivery

Proposals must be received via the SOCWA's electronic bidding system on or before:

Time: 4:00 pm
Date: March 26, 2026
Location: Online submission through Planet Bids

Proposals received after this time or at any other location will not be accepted. Hardcopy proposals will not be accepted.

1.3 Questions Concerning Proposals

All respondents may submit questions related to this RFQ via SOCWA's electronic Bidding System, Planet Bids, throughout the RFQ process, ***but the last opportunity to submit questions is no later than 5:00 p.m., PDT, March 12, 2026.***

Questions submitted and the written responses will be sent via Planet Bids to all Proposers or interested parties who are registered in Planet Bids for this solicitation.

Questions submitted after 5:00 p.m. on March 12, 2026 will not receive a response.

Questions will not be taken by phone. In the interest of fairness to all Respondents, SOCWA has determined that Respondents and their agents shall only communicate directly to the SOCWA Capital Projects Manager and **shall not** communicate directly to other SOCWA officers, directors, agents or employees regarding the RFQ. Only the SCWD Contracts Manager will respond to direct communications, and attempts to communicate directly to other SOCWA officers, directors, agents or employees may be grounds for disqualification from the RFQ in the sole discretion of SOCWA.

SOCWA is subject to the California Public Records Act and, therefore, the respondent's submissions, including questions and responses, may be made available to requesting parties if such information is requested from SOCWA in accordance with the California Public Records Act. Respondents should exclude from submittal any information considered confidential and/or proprietary.

1.4 Project Schedule

The solicitation, receipt and evaluation of proposals and the selection of the provider of Professional Services will correspond to the following schedule:

Release of RFQ:	February 25, 2026
Question Deadline:	March 12, 2026
Proposal Due Date:	March 26, 2026

(Note: dates are subject to change)

2. BACKGROUND

The South Orange County Wastewater Authority (SOCWA) is a Joint Powers Authority responsible for providing wastewater treatment, effluent and biosolids disposal, and water recycling at regional facilities in the southern part of Orange County. SOCWA was formed by the following six member agencies: the City of Laguna Beach, the City of San Clemente, El Toro Water District, Emerald Bay Service District, Santa Margarita Water District, and South Coast Water District. SOCWA owns two treatment plants: the J.B. Latham Treatment Plant and the Coastal Treatment Plant; two ocean outfalls: The Aliso Creek Ocean Outfall and

the San Juan Creek Ocean Outfall; four effluent transmission mains: Reaches B, C, D and E.

The J. B. Latham Treatment Plant (JBL) is a conventional activated sludge treatment plant with a secondary treatment design capacity of 13 MGD. The liquid handling portion of the treatment plant is normally operated as two separate plants referred to as the 9 MGD (Plant 1) side and the 4 MGD (Plant 2) side. The main wastewater treatment processes are screening, aerated grit removal, primary sedimentation, activated sludge aeration and secondary sedimentation. The plant has sodium hypochlorite feed facilities that are used for plant biological control and disinfection of the plant water (however, the main effluent discharge from the plant is not chlorinated).

The Coastal Treatment Plant (CTP) is a conventional activated sludge treatment plant with a secondary treatment design capacity of 6.7 million gallons per day (MGD). The main wastewater treatment processes are screening, aerated grit removal, primary sedimentation, activated sludge aeration and secondary sedimentation. Construction of the modern CTP began with the first phase in 1967 consisting of primary clarifiers, aeration basins and secondary clarifiers. In 1982, the main plant was expanded from 2.5 MGD to its current capacity. The advanced wastewater treatment (AWT) facility was also constructed during 1982 and expanded in 1988.

SOCWA owns and operates two ocean outfalls including the 1.5-mile long Aliso Creek Ocean Outfall and 2.2-mile long San Juan Creek Ocean Outfall. In addition, SOCWA provides multiple programs to meet the needs of its member agencies and the requirements of the Clean Water Act and applicable National Pollutant Discharge Elimination System (NPDES) permits.

SOCWA owns buried utilities at various locations within the Aliso Creek watershed and identified four sites (Reaches B, C, D and E) along the creek and lower portion of Sulphur Creek near its confluence with Aliso Creek as the critical infrastructure in need of protection against potential channel scour and erosion.

SOCWA is seeking to establish a list of qualified consulting firms (consultants) to perform as-needed project management services for the three treatment plants, two outfalls, and four ETMS.

3. PROJECT DESCRIPTION

Under this RFQ, SOCWA is seeking as-needed construction management firms to assist its Engineering Department with expediting the CIP and other general engineering projects by performing a variety of construction management and inspection services on a Task Order basis.

The selected Consultant(s) will enter into as-needed consulting services agreement with SOCWA. Consultant's services will be provided to SOCWA via written Task Order. A sample Task Order is attached as Attachment "B". Task Orders will vary in size, scope and fee, however, the sum of all Task Orders shall not exceed the overall contract price. Task Orders will be competed between more than one as-needed Consultant.

The Task Order process is generally described below:

- SOCWA will provide a request for proposal/scope of work for the potential Task Order to each as-needed Consultant(s).
- Consultant(s) will submit a succinct but complete proposal for the Task Order including technical approach, detailed scope of work, key personnel, project schedule, and deliverables. Consultant shall also provide a fee estimate by task including hours and rates (using the rate sheets set forth in the Consulting Agreement), other direct costs, and any subconsultants.
- Task Orders will be awarded based on the evaluation of competitive solicitations between as-needed Consultants or as deemed appropriate by staff.
- Consultant shall not deviate from the written Task Order scope, budget, or schedule with a written Task Order amendment from SOCWA.
- SOCWA does not guarantee a certain minimum amount of work under this Contract.
- SOCWA reserves the right to solicit proposal for any potential Capital related project or engineering/operations services outside the as-needed consulting agreements as deemed necessary by SOCWA.

4. MINIMUM CONSULTANT QUALIFICATIONS

The minimum Consultant qualifications include experience, education, and general/specific training and licensing required to execute the General Scope of Work as designated in Attachment "A".

5. SCOPE OF SERVICES

The Scope of Work (Services) for as-needed Services is set forth in Attachment "A" of the RFQ, which is an integral part of this RFQ. At the request of SOCWA and as issued via Task Order, Consultant(s) shall perform Services on an as-needed basis for projects identified during the term of the Agreement.

6. CONFLICT OF INTEREST

Consultant must submit a disclaimer statement disclosing interest, ownership, or remuneration of any type that has been received or is anticipated from any manufacturer, supplier, or distributor which may be recommended on the Project. This disclaimer must be included in the Proposal Letter required in Section 8.3.

7. ACKNOWLEDGEMENT OF CONTRACT AGREEMENT

The Consultant shall enter into a contract with SOCWA by signing the SOCWA's Professional Design Services Agreement. A sample copy of the Agreement is attached (Attachment "C"). Consultant shall acknowledge acceptance of the terms and conditions described in the sample copy of the Agreement. If there are any exceptions to the terms and conditions those exceptions must be included in the Proposal Letter described in Section 8.3.1 below.

8. PROPOSAL FORMAT

8.1 Respondents shall submit a Submittal that is clear, concise, complete, and demonstrates the qualifications and experience applicable to the Scope of Work.

- Submittals shall have a cover page with the Project Title, Project Number, SOQ due date, name, address and telephone number of Firm submitting the Submittals.
- Submittals shall include a table of contents with a clear listing of headings and pages.
- Submittals shall use a 10-point font, at a minimum, and shall be a maximum of 20 pages excluding the fee proposal and resumes of key personnel. The purpose of these restrictions is to minimize costs of proposal preparation and to ensure the response is fully relevant to the Project.
- Submittals shall be stapled not bound. Minimize the use of photographic, glossy or other non-recyclable paper and content.
- Proposer shall submit one [1] copy of the Submittal. A Rate and Fee Sheet shall be submitted in a separately.
- Submittals shall follow the order listed in 8.3.

8.2 Failure to submit information in accordance with the RFQ's requirements and procedures may be cause for disqualification.

8.3 Proposal Inclusions and Order

8.3.1 Submittal Letter: Submittal letter must be completed and executed by an authorized representative of the Proposer. Letter should include: the legal name of business; form of business (corporation, partnership, or other); location and address; telephone and fax numbers, e-mail address and name of contact person for SOCWA's correspondence; acknowledgement of any addenda to RFQ; any Proposer exceptions to RFQ and/or Consulting Agreement, if any; and disclaimer of conflict of interest as required in Section 6, above.

8.3.2 Firm Overview: Provide an overview of the Firm, including the major services provided, the size of the firm, a summary of the corporate organization, location and size of branch offices at which work may be performed. Clearly indicate which office will have the primary responsibility for providing these services or execution of the work.

8.3.3 Firm Experience:

Describe your Firm's experience in completing the Services listed in the Scope of Work.

Provide a matrix summary of current and past relevant projects that Proposer has performed within the past five (5) years:

- Include the project name, contact name and phone number, dates of contract performance, summary of services provided, and value of the contract (including any amendments) for each project.
- Identify how each listed project relates to the Scope of Work for this Project.
- Projects listed should be those that key personnel named for this Project participated in.
- Provide the names and current contact information of three references having direct knowledge of the Firm's work related to this RFQ. The listed reference contacts must be project or task managers who have knowledge of day to day activities.

SOCWA reserves the right to check other references. Recent prior experience with SOCWA may be used as a reference check. References must verify Proposer's representation.

8.3.4 Project Team:

Provide an organizational chart of the proposed team.

Describe the professional qualifications and experience of the project manager and key project team members in performing projects and providing services similar to those required under this RFP.

Include a description of the work each team member would perform, his or her level of responsible, education, active licenses, work experience in years, and special skills or expertise as it relates to the Scope of Services

State the availability of the project manager and key personnel including commitment from senior management regarding availability of staff listed in this proposal through the term of this contract.

Consultant's evaluation will consider its entire team, therefore no changes in team composition will be allowed without prior written approval of the SOCWA.

8.3.5 If subconsultants will be used for a portion of this work (for example, traffic control, survey, corrosion, electrical, modeling, etc.) then provide firm profile, project team, and relevant experience of subconsultant.

*** A firm may not be used as a subconsultant if proposing as a prime consultant.**

8.3.6 Project Management: Describe your approach to managing the proposed team. Describe management procedures to direct work, meet budgets and schedules, and communicate with SOCWA. Provide a description of the Firm's quality control program.

Describe how you will be able to meet the SOCWA's need for Services on an "on-call" basis in a timely manner.

8.3.7 Cost Proposal: Provide a Fee Schedule showing hourly rates for the proposed personnel by classification. Include all expected fees for Other Direct Costs (ODCs), subconsultant rates, and other specific fees. All subcontractor and material costs shall be at actual cost with a 5% mark-up. Any reimbursable expenses shall be in accordance with the SOCWA Travel Reimbursement Policy.

8.4 Additional Inclusions: No supplemental information will be accepted.

8.5 Addenda: The Proposer shall confirm the receipt of all addenda issued under this RFQ in the Proposer Letter. Proposer is not required to include copies of the addenda with the Proposal.

8.6 Signature: All documents requiring signature shall be signed by an individual or individuals authorized to execute legal documents on behalf of the party(ies) represented.

9. EVALUATION CRITERIA

9.1 Firms will be evaluated by the SOCWA according to the following criteria and weightings:

9.1.1 Firm Overview (15%):

9.1.2 Firm Experience (35%):

9.1.3 Project Team (35%)

9.1.4 Reasonableness of Fees (5%)

9.1.5 Compliance to RFQ (5%)

9.1.6 Specific method and techniques to be employed by the Firm on the Scope of Services (5%)

References (not rated)

10. CONSULTANT SELECTION PROCESS

10.1 To be eligible for consideration, Submittals must meet the requirements stated in this RFQ.

10.2 Assigned SOCWA staff will evaluate eligible Submittals and rank Submittals in accordance with stated Evaluation Criteria to determine the most-qualified Firms.

10.2 SOCWA staff may elect to interview a short list of qualified Firms based on the Submittals submitted in response to the RFQ.

10.3 SOCWA will submit results of the evaluation to the General Manager to request authorization to begin negotiations with the most-qualified Proposer.

11. CONTRACT NEGOTIATION

11.1 SOCWA staff will negotiate an on-call contract for the desired services with one or more of the most-qualified Firms at compensation the staff determines is fair and reasonable to SOCWA.

11.2 Should SOCWA staff be unable to negotiate a satisfactory contract with the selected Firm, negotiations with that Firm will be formally terminated. SOCWA will then undertake negotiations with the next most qualified Firm. Failing to reach an accord with the second most-qualified Firm, SOCWA will terminate negotiations with that Firm and continue the negotiation process with the next most-qualified Firm until an agreement is reached.

11.3 After negotiating a proposed agreement that is fair and reasonable, SOCWA staff will obtain authorization to award from either the SOCWA's Board or General Manager according to SOCWA's Procurement Policy.

Award of an on-call contract does not guarantee the assignment of work.

12. PUBLIC DISCLOSURE

Under the California Public Records Act (California Government Code Section 6250 et seq.) records in the custody of a public entity generally have to be disclosed unless the information being sought falls into one or more of the exemptions to disclosure set out in the code (Government Code Sections 6254 through 6255.) Any information you deem proprietary or confidential should be labeled as such on the proposal. You may not label the entire proposal as proprietary or confidential. In addition, the Letter of Interest should contain a paragraph that states that your proposal (does contain/does not contain) information that falls into one of the exemptions of Government Code Sections 6254 through 6255 and that you (assert/do not assert) a privilege of nondisclosure. In the absence of a declaration, SOCWA will be obligated to disclose your proposal to any party that requests it. Documents marked proprietary or confidential information will be returned to proposers not selected to contract with SOCWA.

13. TERMS AND CONDITIONS

13.1 This RFQ does not commit SOCWA to award a contract, to defray any costs incurred in the preparation of a response to this request, or to procure or contract for services. SOCWA may investigate the qualifications of any Proposer under consideration, require confirmation of information furnished by Proposer or require additional evidence or qualifications to perform the services described under the RFQ.

13.2 SOCWA reserves the right to revise the RFQ prior to the date the Submittals are due. Revisions to the RFQ shall be mailed via Addendum to all RFQ holders of record.

13.3 SOCWA reserves the right to extend the date by which the Submittals are due.

13.4 SOCWA reserves the right to cancel, in part or in its entirety, this RFQ including but not limited to: selection schedule, proposal due date, and

proposal requirements. If SOCWA cancels or revises the RFQ, all Proposers of record will be notified in writing by SOCWA.

13.5 SOCWA reserves the right to reject all Submittals. Selection is dependent upon the negotiation of a mutually acceptable Agreement with the successful Proposer. SOCWA reserves the right to negotiate with any, all, or none of the Proposers and award any agreement or portion of the work to one or more Proposers.

13.6 All Submittals become the property of SOCWA and public records, and as such may be subject to public review.

13.7 SOCWA reserves the right to request additional information and/or clarifications from any or all respondents to this RFQ.

13.8 SOCWA reserves the right to approve or disapprove the use of a particular subconsultant.

13.9 Proposer may withdraw its proposal before the proposal submission date by submitting a written request to SOCWA's Capital Program Manager.

... End of Request for Qualifications ...

Agenda Item

13

Engineering Committee Meeting
Meeting Date: February 19, 2026

TO: Engineering Committee

FROM: Jim Burror, Deputy General Manager/Chief Engineer
and Roni Grant, Capital Improvement Program Manager

SUBJECT: Draft Capital Improvement Program Budget for Fiscal Year 2026-27

Overview

An initial draft of the Fiscal Year 26-27 Capital Improvement Program (CIP) budget was presented at the January 2026 Engineering Committee. SOCWA staff met with agencies, if requested, since the January meeting. The draft CIP was updated based on the input received. Changes were primarily focused on Project Committee 21, Effluent Transmission Main, and were based on recent developments related to several ongoing and planned capital projects. The updated CIP was transmitted to the member agencies for their ongoing reviews.

Recommended Action: Committee Discussion/Direction/Action.