AGENDA

18700 Ward St.
Fountain Valley, CA 92708
(714) 378-3200

WATER ISSUES COMMITTEE MEETING
WITH BOARD OF DIRECTORS *
ORANGE COUNTY WATER DISTRICT
Wednesday, September 10, 2025 12:00 p.m., Boardroom

*The OCWD Water Issues Committee meeting is noticed as a joint meeting with the Board of Directors for the purpose of strict compliance with the Brown Act and it provides an opportunity for all Directors to hear presentations and participate in discussions. Directors receive no additional compensation or stipend as a result of simultaneously convening this meeting. Items recommended for approval at this meeting will be placed on the **September 17** Board meeting Agenda for approval.

This meeting will be held in person. As a convenience for the public, the meeting may also be accessed by Zoom Webinar and will be available by either computer or telephone audio as indicated below. Because this is an in-person meeting and the Zoom component is not required, but rather is being offered as a convenience, if there are any technical issues during the meeting, this meeting will continue and will not be suspended.

Computer Audio: Join the Zoom Webinar by clicking on the following link:
https://ocwd.zoom.us/j/98592928069

Webinar ID: 985 9292 8069

Telephone Audio: (213) 338 8477

Teleconference Sites:
10382 Bonnie Drive, Garden Grove
20 Civic Center, Santa Ana
1454 Madison Street, Tustin
100 S Main Street, Los Angeles
15691 Brookhurst Street, Westminster
303 W. Commonwealth Ave., Fullerton
1502 North Broadway, Santa Ana
6151 Baja Drive, Anaheim
* Members of the public may attend and participate at all locations.

PLEDGE OF ALLEGIANCE

ROLL CALL

ITEMS RECEIVED TOO LATE TO BE AGENDIZED

RECOMMENDATION: Adopt resolution determining need to take immediate action on item(s) and that the need for action came to the attention of the District subsequent to the posting of the Agenda (requires two-thirds vote of the Board members present, or, if less than two-thirds of the members are present, a unanimous vote of those members present.)

VISITOR PARTICIPATION

Time has been reserved at this point in the agenda for persons wishing to comment for up to three minutes to the Board of Directors on any item that is not listed on the agenda, but within the subject matter jurisdiction of the District. By law, the Board of Directors is prohibited from taking action on such public comments. As appropriate, matters raised in these public comments will be referred to District staff or placed on the agenda of an upcoming Board meeting.

At this time, members of the public may also offer public comment for up to three minutes on any item on the Consent Calendar. While members of the public may not remove an item from the Consent Calendar for separate discussion, a Director may do so at the request of a member of the public.

CONSENT CALENDAR (ITEMS NO. 1 – 13)

All matters on the Consent Calendar are to be approved by one motion, without separate discussion on these items, unless a Board member or District staff request that specific items be removed from the Consent Calendar for separate consideration.

1. MINUTES OF WATER ISSUES COMMITTEE MEETING HELD AUGUST 13, 2025

   RECOMMENDATION: Approve minutes as presented

2. PURCHASE SOLAR MIXER FOR SANTIAGO BASIN

   RECOMMENDATION: Agendize for September 17 Board meeting: Authorize issuance of Purchase Order to IXOM Watercare for $70,758 to purchase a solar mixer for Santiago Basin

3. AWARD CONTRACT NO. A-2025-1 to TE ROBERTS, AUTHORIZE AGREEMENT TO MKN FOR CONSTRUCTION MANAGEMENT AND INSPECTION SERVICES, AUTHORIZE AMENDMENT NO. 2 TO AGREEMENT 1681 WITH MKN, AND BUDGET INCREASE

   RECOMMENDATION: Agendize for September 17 Board meeting:

   1. Receive and file Affidavit of Publication of Notice Inviting Bids for Contract A-2025-1 Anaheim Lake Valve Vault Project;
   2. Ratify issuance of Addendum 1 to Contract No. A-2025-1;
   3. Approve request for withdrawal of bid by Minako America Corporation without penalty due to clerical error in filling out the bid;
   4. Accept bid and award contract A-2025-1 to the lowest responsive and responsible bidder, TE Roberts, in the amount of $3,246,910;
   5. Authorize Amendment No. 2 to Agreement 1681 with MKN for a not-to-exceed amount of $416,216 and;
   6. Increase project budget by $1,160,845 for a total project budget in the amount of $4,175,000

4. ANNEX BUILDING FLOORING REFURBISHMENT – PUBLICATION OF NOTICE INVITING BIDS

   RECOMMENDATION: Agendize for September 17 Board meeting: Authorize publication of Notice Inviting Bids for Annex Building Flooring Refurbishment Project

5. REJECT BIDS FOR CONTRACT NO. PB-2025-1 PRADO BASIN SHORT TERM SEDIMENT REMOVAL COMPLIANCE PROJECT

   RECOMMENDATION: Agendize for September 17 Board meeting:

   1. Receive and file Affidavit of Publication of Notice Inviting Bids for PB-2025-1 Prado Basin Short Term Sediment Removal Compliance Project – Phase I;
   2. Ratify issuance of Addendum No. 1;
   3. Reject all bids for Contract PB-2025-1 Prado Basin Short Term Sediment Removal Compliance Project – Phase I

6. AWARD CONTRACT NO. FUL-2025-1 FULLERTON MAIN PLANT (WELLS 5, 6 & 8) PFAS WATER TREATMENT PLANT PROJECT TO PACIFIC HYDROTECH

RECOMMENDATION: Agendize for September 17 Board meeting:

1. Receive and file Affidavit of Publication of Notice Inviting Bids for Contract FUL-2025-1, Fullerton Main Plant (Wells 5, 6 & 8) PFAS Water Treatment Plant Project;
2. Ratify issuance of Addenda 1 & 2;
3. Accept bid and award contract FUL-2025-1 to the lowest responsive bid and responsible bidder, Pacific Hydrotech Corporation, in the amount of $8,765,900;
4. Ratify Work Order No. 1B to Agreement No. 1581 to Tetra Tech, Inc. for a not-to-exceed amount of $102,804; and,
5. Establish the Fullerton Main Plant (Wells 5, 6, & 8) PFAS Water Treatment Plant Project budget in the amount of $12,442,399

7. CONTRACT NO. LAB-2024-1 AUTHORIZE NOTICE OF COMPLETION AND RATIFY CHANGE ORDERS

RECOMMENDATION: Agendize for September 17 Board meeting:

1. Ratify issuance of Change Order No. 2 to RBA for a total amount of $12,996; and
2. Accept completion of work and authorize filing a Notice of Completion for Contract No. LAB-2024-1: Laboratory Washroom Refurbishment

8. AUTHORIZE AGREEMENT WITH BROWN AND CALDWELL FOR FLOW REVERSAL REVERSE OSMOSIS RETROFIT CONSTRUCTABILITY STUDY

RECOMMENDATION: Agendize for September 17 Board meeting: Authorize issuance of Agreement to Brown and Caldwell for an amount not to exceed $199,415 to provide professional consulting services for the development of a Flow Reversal Reverse Osmosis Retrofit Constructability Study

9. CONTRACT NO. ORA-2022-1 CITY OF ORANGE WELLS 20, 21 & 22: CHANGE ORDER RATIFICATION AND BUDGET INCREASE

RECOMMENDATION: Agendize for September 17 Board meeting:

1. Ratify issuance of Change Order Nos. 1-7; and
2. Increase project budget by $498,899 for a total Project budget in the amount of $14,654,959

10. AGREEMENT TO YELLOW JACKET DRILLING SERVICES FOR MONITORING WELL SC-4 REDEVELOPMENT, AND INCREASE PURCHASE ORDER AMOUNT TO WESTBAY FOR EXTENDED SPECIALIZED TOOL RENTAL

RECOMMENDATION: Agendize for September 17 Board meeting:

1. Authorize issuance of a Services Agreement to Yellow Jacket Drilling Services, LLC for an amount not to exceed $96,800; and
2. Increase purchase order to Westbay Instruments by $3,982 for specialized Westbay tool rental

11. EXPENSE CHARGES TO C16001 BURRIS BASIN BOOSTER PUMP STATION

RECOMMENDATION: Agendize for September 17 Board meeting: Authorize staff to expense $28,985 charged to capital project C16001 for the Burris Basin Booster Pumps Station and Outlet due to the District terminating that project

12. CONTRACT NO. IRWD-2021-1 AUTHORIZE NOTICE OF COMPLETION, RATIFY CHANGE ORDERS, AND AUTHORIZE TRANSFER

RECOMMENDATION: Agendize for September 17 Board meeting:

1. Ratify issuance of Change Order No. 9 and Authorize issuance of Change Order No. 10 to Innovative Construction Solutions for a total amount of $216,642;
2. Accept completion of work and authorize filing a Notice of Completion for Contract No. IRWD-2021-1: IRWD Well OPA-1PFAS Water Treatment Plant;
3. Authorize the General Manager to transfer the IRWD Well OPA-1 PFAS Water Treatment Plant to the Irvine Ranch Water District effective the date of filing the Notice of Completion and quitclaim any property rights obtained for the project

13. RATIFY CHANGE ORDERS AND AUTHORIZE BUDGET INCREASE TO CONTRACT NO. SA-2022-1 CITY OF SANTA ANA PFAS WATER TREATMENT PLANT WELL NO. 38

RECOMMENDATION: Agendize for September 17 Board meeting:

1. Ratify issuance of Change Order Nos. 1-3; and
2. Increase project budget by $430,200 for a total project budget of $7,336,771

END OF CONSENT CALENDAR

MATTERS FOR CONSIDERATION

14. CALIFORNIA WATER FOR ALL COALITION

RECOMMENDATION: Agendize for September 17 Board meeting: Take action as appropriate

15. SANTA ANA SUCKER TRANSLOCATION

RECOMMENDATION: Agendize for September 17 Board meeting: Enter into an Agreement with San Bernardino Valley Municipal Water District (SBVMWD) to complete a translocation of the Santa Ana sucker for $935,000 over 7 years

INFORMATIONAL ITEMS

16. EMERGENCY WATER SUPPLIES TO SOUTH ORANGE COUNTY UPDATE

17. BASIN STORAGE UPDATE FOR WATER YEAR 2024-25

CHAIR DIRECTION AS TO ITEMS IF ANY TO BE AGENDIZED AS MATTERS FOR CONSIDERATION AT THE SEPTEMBER 17 BOARD MEETING

DIRECTORS' ANNOUNCEMENTS/REPORTS

GENERAL MANAGER'S ANNOUNCEMENTS/REPORTS

ADJOURNMENT

WATER ISSUES COMMITTEE MEMBERS

Committee Members
Cathy Green – Chair
Erik Weigand – Vice Chair
Roger Yoh
Van Tran
Dina Nguyen

Alternates
Valerie Amezcua
Fred Jung
Natalie Meeks
Steve Sheldon
Denis Bilodeau

In accordance with the requirements of California Government Code Section 54954.2, this agenda has been posted at the guard shack entrance and in the main lobby of the Orange County Water District, 18700 Ward Street, Fountain Valley, CA and on the OCWD website not less than 72 hours prior to the meeting date and time above. All written materials relating to each agenda item are available for public inspection in the office of the District Secretary. Backup material for the Agenda is available at the District offices for public review and can be viewed online at the District's website: www.ocwd.com

Pursuant to the Americans with Disabilities Act, persons with a disability who require a disability-related modification or accommodation in order to participate in a meeting, including auxiliary aids or services, may request such modification or accommodation from the District Secretary at (714) 378-3234, by email at cfuller@ocwd.com by fax at (714) 378-3373. Notification 24 hours prior to the meeting will enable District staff to make reasonable arrangements to assure accessibility to the meeting.

As a general rule, agenda reports or other written documentation has been prepared or organized with respect to each item of business listed on the agenda and can be reviewed at www.ocwd.com. Copies of these materials and other disclosable public records distributed to all or a majority of the members of the Board of Directors in connection with an open session agenda item are also on file with and available for inspection at the Office of the District Secretary, 18700 Ward Street, Fountain Valley, California, during regular business hours, 8:00 am to 5:00 pm, Monday through Friday. If such writings are distributed to members of the Board of Directors on the day of a Board meeting, the writings will be available at the entrance to the Board of Directors meeting room at the Orange County Water District office.

MINUTES OF BOARD OF DIRECTORS MEETING
WATER ISSUES COMMITTEE
ORANGE COUNTY WATER DISTRICT
August 13, 2025 @ 12:00 p.m.

Director Green called the Water Issues Committee meeting to order at 12:00 p.m. in the Boardroom. Public access was also provided via Zoom webinar. The Secretary called the roll and reported a quorum as follows:

Committee Members		OCWD
Cathy Green		John Kennedy – General Manager
Erik Weigand		Chris Olsen – Executive Director
Roger Yoh	(member of public)	Mehul Patel – Executive Director
Van Tran	(absent)	Jason Dadakis – Executive Director
Dina Nguyen		Lisa Haney – Executive Director
		Randy Fick – Treasurer/CFO
Alternates		Jeremy Jungreis – General Counsel
Valerie Amezcua		Christina Fuller – District Secretary
Fred Jung		
Natalie Meeks	(absent)	
Steve Sheldon		
Denis Bilodeau		

CONSENT CALENDAR

The Consent Calendar was approved upon motion by Director Weigand, seconded by Director Amezcua and carried [5-0], as follows:

Ayes: *Green, Weigand, Nguyen, Amezcua, Jung*

1. Minutes of Water Issues Committee Meeting

The Minutes of the Water Issues Committee meeting held July 9, 2025, were approved as presented.

2. Agreement to Bender/CCP for GWRS Product Water Pump A01 Vertical Turbine Pump Inspection and Rehabilitation

Recommended for approval at August 20 Board meeting: Authorize issuance of an Agreement to Bender/CCP Inc. for an amount not to exceed $150,000 and establish the Product Water A01 Vertical Turbine Pump Inspection and Rehabilitation project in the amount of $150,000.

3. Agreement to Bender/CCP for GWRS Reverse Osmosis Pump E03 Vertical Turbine Pump Inspection and Rehabilitation

Recommended for approval at August 20 Board meeting: Authorize issuance of an Agreement to Bender/CCP Inc. for an amount not to exceed $150,000 and establish the Reverse Osmosis E03 Vertical Turbine Pump Inspection and Rehabilitation project in the amount of $150,000.

4. Agreement to Bender/CCP for Reverse Osmosis Transfer Pump B01 Vertical Turbine Pump Inspection and Rehabilitation

Recommended for approval at August 20 Board meeting: Authorize issuance of an Agreement to Bender/CCP Inc. for an amount not to exceed $150,000 and establish the Product Water B01 Vertical Turbine Pump Inspection and Rehabilitation project in the amount of $150,000.

5. Purchase Two Anaheim Lake Pumps

Recommended for approval at August 20 Board meeting: Authorize issuance of Purchase Order to Xylem Water Solutions for $779,252 to purchase two replacement submersible pumps for Anaheim Lake and authorize additional funds in the amount of $190,000 for R&R account R25025.

6. Amendment to Agreement with Besst, Inc. to Prepare a Work Plan and Technical Specifications for Additional Testing at Buena Park's Linden Well to Reduce PFAS Concentrations

Recommended for approval at August 20 Board meeting: Amendment to Agreement with Besst, Inc. to Prepare a Work Plan and Technical Specifications for Additional Testing at Buena Park's Linden Well to Reduce PFAS Concentrations.

7. Emergency Repair Work Order Ratification and Budget Increase

Recommended for approval at August 20 Board meeting:

1. **Ratify Work Order Nos. 11 and 12 of Agreement No. 1451 and payment to W.A. Rasic, Inc. for emergency repairs totaling $130,150;**
2. **Ratify Work Order No. 10 of Agreement No. 1452 and payment to T.E. Roberts, Inc. for emergency repairs totaling $69,928;**
3. **Ratify payment to the City of Newport Beach in the amount of $6,561; and**
4. **Increase the project budget allocation by $31,342, for a total of $331,342 to close out FY 24-25 emergency repair work orders.**

8. Agreement to Brown and Caldwell Inc. for Technical Support on the GWRS Microfiltration and Reverse Osmosis Operations (MF/RO)

Recommended for approval at August 20 Board meeting: Authorize issuance of Agreement to Brown and Caldwell Inc. for an amount not to exceed $125,000 to provide consulting services on a time and material bases for the GWRS MF and RO membrane processes through August 31, 2026.

9. Authorize Issuance of Request for Proposals for Granular Activated Carbon Procurement, Delivery and Installation at the Fullerton Main Plant

Recommended for approval at August 20 Board meeting: Authorize Issuance of Request for Proposals for Granular Activated Carbon Procurement, Delivery and Installation at the Fullerton Main Plant.

10. Annual Santa Ana River Streamgaging Joint Funding Agreement with the United States Geological Survey

Recommended for approval at August 20 Board meeting:

1. **Approve and authorize Joint Funding Agreement with USGS to conduct streamgaging of the Santa Ana River below Prado Dam and Santiago Creek at Santa Ana for the period of October 1, 2025 to September 30, 2026; and**
2. **Authorize payment of $52,110 to the USGS for OCWD's share of costs for these services.**

11. MOU with Golden State Water Company Regarding Methodology to Manage and Distribute PFAS Litigation Settlement Proceeds

Recommended for approval at August 20 Board meeting: Authorize the General Manager to negotiate final language of and execute a Memorandum of Understanding between OCWD and Golden State Water Company regarding methodology to manage and distribute PFAS litigation settlement proceeds with concurrence of General Counsel amount not to exceed $20,000.

12. Purchase Order to Agilent Technologies for One Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES)

Recommended for approval at August 20 Board meeting: Authorize issuance of a Purchase Order to Agilent Technologies for the total amount of $122,817, includes shipping and taxes, for one Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES), recirculating chiller, and ADS autosampler.

13. Reject Bid Protest and Award Contract No. GSWC-2024-1 Sherrill Well PFAS Water Treatment Plant to RE Chaffee Construction Inc and Budget Increase

Recommended for approval at August 20 Board meeting:

1. **Receive and file Affidavit of Publication of Notice Inviting Bids for Contract GSWC-2024-1 Sherrill Well PFAS Water Treatment Project**
2. **Ratify issuance of Addenda 1 and 2;**
3. **Reject the bid protest of Cora Constructors Inc. (Cora) and accept bid and authorize award of Contract GSWC-2024-1 to the lowest responsive bid and responsible bidder, RE Chaffee Construction, Inc. (RE Chaffee), in the amount of $1,981,000.00; and**
4. **Increase project budget by $570,000 for a total project budget in the amount of $3,070,000**

MATTERS FOR CONSIDERATION

14. Booky Oren Global Water Technologies Professional Services Agreement

General Manager John Kennedy stated that the District has worked with Booky Oren Global Water Technologies (BOGWT) since 2020 to explore and assist in making operational improvements. He reported that BOGWT has relationships with water utilities around the world and facilitates meetings where the District can learn about new ideas and technologies. He advised that the existing agreement with BOGWT expires on November 1, 2025. Mr. Kennedy noted that staff refined its participation in this program in FY2024-25, which led to reducing the contract with BOGWT from $90,000 to $60,000.

Mr. Booky Oren provided an overview of BOGWT's program which attempts to identify strengths and weaknesses of organizations, makes comparisons with other organizations and then distills the information and commonalities to come up with potential solutions that would improve operational efficiencies. He advised that the BOGWT program known as "Knowledge to implementation" (K2i)

also involves putting together agencies from around the world to share experiences on common areas of interest.

The Committee asked for more information on specific implemented benefits of this program that resulted in cost savings to the District.

Director Green made a motion to approve the recommended action, which was seconded by Director Weigand. The motion failed with only one yes vote.
Yes- Green
Noes – Weigand, Nguyen, Amezcua, Jung

After a lengthy discussion, the Committee agreed to revisit this item at the October 8 Water Issues Committee meeting with staff to provide additional information as requested by the Directors.

Upon motion by Director Amezcua, seconded by Director Weigand and carried [5-0], the Committee recommended for approval at the August 20 Board meeting: Return the item to the October 8 Water Issues Committee meeting with additional information as requested by Directors.

Ayes: Green, Weigand, Nguyen, Amezcua, Jung

15. Award Contract No. TAL-2024-2 Talbert Barrier Injection Wells I-24 & I-25 Control Valve Project to Vicon Enterprise

Engineering Director Ryan Bouley advised that injection wells I-24 and I-25 have been non-operational since 2020 and 2022, respectively. He reported that upgrading these wells to the Modern Well standards will provide greater flexibility to the operations of the GWRS and replacing these valves will increase GWRS production by up to approximately 3.7 MGD. Mr. Bouley stated that three construction bids were received on July 29, 2025, for the Talbert Barrier Injection Wells I-24 and I-25 Control Valve Replacement project, Contract No. TAL-2024-2. He stated that staff recommends awarding the construction contract to Vicon Enterprise as the lowest responsive and responsible bidder in the amount of $3,200,500.

Upon motion by Director Weigand, seconded by Director Amezcua and carried [5-0], the Committee recommended for approval at the August 20 Board meeting: 1) Receive and file Affidavit of Publication of Notice Inviting Bids for Contract TAL-2024-2 Talbert Barrier Injection Wells I-24 and I-25 Control Valve Replacement Project 2) Ratify issuance of Addendum #1 and Addendum #2 3) Accept and award Contract TAL-2024-2 to the lowest responsive and responsible bidder, Vicon Enterprise, in the amount of $3,200,500; and 4) Establish Project budget in the amount of $3,590,525.

Ayes: Green, Weigand, Nguyen, Amezcua, Jung

CHAIR DIRECTION AS TO ITEMS IF ANY TO BE AGENDIZED AS MATTERS FOR CONSIDERATION AT THE AUGUST 20 BOARD MEETING

ADJOURNMENT

There being no further business, the meeting was adjourned at 12:50 p.m.

Cathy Green, Chair

AGENDA ITEM SUBMITTAL

Meeting Date: September 10, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: M. Patel / B. Smith

Budgeted: Yes
Budgeted Amount: $90,000
Cost Estimate: $70,758
Funding Source: New Equipment
Program/ Line Item No. E25.17110.1060
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A

Subject: PURCHASE SOLAR MIXER FOR SANTIAGO BASIN

SUMMARY

Santiago Basin provides over half of the forebay's recharge storage but faces water quality issues due to limited mixing. Staff recommends purchasing a solar-powered SolarBee mixer for Bond Basin to improve circulation and evaluate its effectiveness before adding additional units.

Attachments: Quote and Letter from IXOM Watercare

RECOMMENDATION

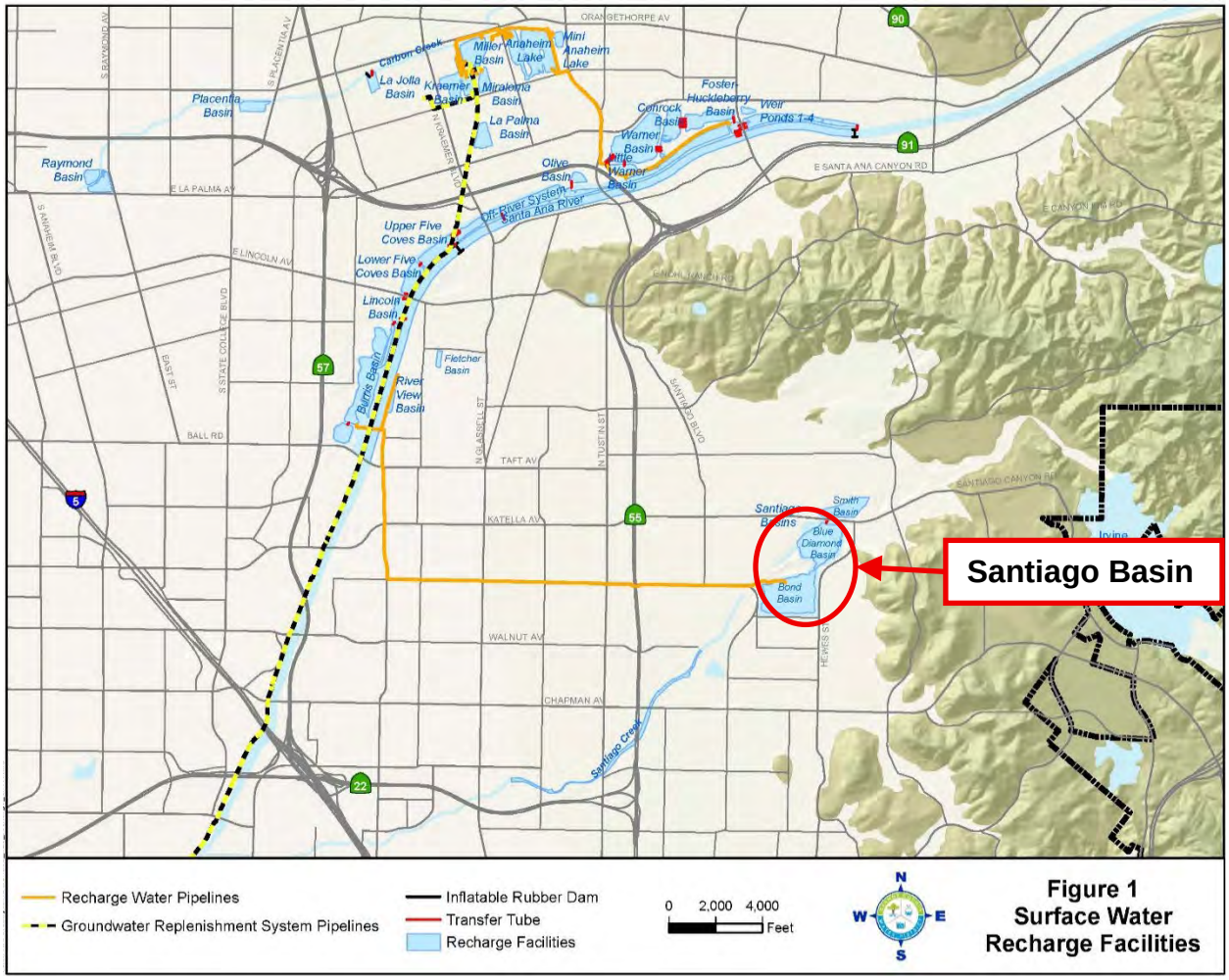
Agendize for September 17 Board meeting: Authorize issuance of Purchase Order to IXOM Watercare for $70,758 to purchase a solar mixer for Santiago Basin.

BACKGROUND/ANALYSIS

Santiago Basin, which includes the Bond, Blue Diamond, and Smith Basins (see Figure 1), is a critical component of the forebay's surface water recharge system. With a combined storage capacity of approximately 14,000 acre-feet, which is more than 55% of the system's total, Santiago Basin plays a vital role in groundwater replenishment. When full, it exhibits high percolation rates. Due to its prior use as a quarry, the basin is about 140 feet deep and its floor contains significant silt and clay deposits. At lower water levels, this depth and sediment buildup result in substantially reduced percolation rates.

As the largest storage basin in the recharge system, Santiago Basin is optimally managed by filling it during periods of abundant stormwater and emptying it during other times to create capacity for future capture. The recent repair of the Santiago Pump Station now allows staff to actively drain the basin rather than relying solely on percolation. Lowering water levels can impact water quality parameters such as dissolved oxygen, algae growth, temperature, and overall fish health. Mixing is the primary method to mitigate these effects, but Santiago's steep sidewalls limit natural circulation. While existing aeration systems improve dissolved oxygen and provide localized mixing, additional circulation is needed to reduce issues like algae blooms and fish mortality. Installing further mixing technologies is challenging due to limited power availability and the large size of the three interconnected basins.

Figure 1: Santiago Basin Location



To address these challenges, staff identified a solar-powered mixer designed for large water bodies and collaborated with IXOM Watercare to develop a solution known as the SolarBee Mixer. IXOM is uniquely positioned to provide this scale and combination of technology, as outlined in the attached letter. The District is already familiar with the SolarBee system, which is successfully operating in the GWRS Secondary Effluent Storage Equalization (SEFE) tanks to prevent settling and anoxic conditions. For Santiago's Bond Basin, IXOM recommends installing at least two mixers; however, staff proposes a more cautious approach by purchasing a single unit to evaluate its effectiveness in this application. If proven successful, additional SolarBee mixers could be deployed at other locations, including Blue Diamond, Burris, and Warner Basins.

Staff recommends issuing a purchase order to IXOM Watercare for $70,758 to procure a new SolarBee mixer. This cost includes vendor installation as well as one year of technical and field support.

PRIOR RELEVANT BOARD ACTION(S)

N/A

IXOM Watercare Inc.
3225 Hwy 22, Dickinson ND 58601
866-437-8076 •
watercare@ixom.com

Purchase Quotation: Reservoir Circulation Equipment for Bond Basin

Date: August 8, 2025 **Proposal Expiration Date:** November 6, 2025

Project #: 79216

To: Ben Smith
OCWD
4060 E. La Palma Ave, Anaheim CA
bsmith@ocwd.com • 714-378-3211

From: Tim Hartman, IXOM Regional Manager, San Diego, CA
tim.hartman@ixom.com • 951-970-8456

John "Gilbert" Menard, IXOM Sales and Service Dept., Dickinson, ND
john.menard@ixom.com • 866-437-8076

Location Information

Reservoir Name: Bond Basin

GPS: 33.80134823750558, -117.81003457750597

Reservoir Address: 821 Prospect St, Orange, CA

Deepest Depth (Feet): 145'

Primary Function: Stormwater Capture and Recharge

Customer Objectives

Hypolimnetic Circulation: To continuously bring up and expose bottom waters to the oxygen-rich epilimnion and atmosphere in order to improve deep-water dissolved oxygen levels.

IXOM Recommendation / System Design for this Project

Solar-Powered Mixing: We recommend the placement of one (1) SB5000 v20 machine, placing the machine as indicated in the aerial photo below.

• To achieve optimal DO distribution for the reservoir, an additional SB5000 mixer would be necessary.

Notes:
• Hose intakes should be set for hypolimnetic circulation at approximately 1-2' from bottom when reservoir depth is 40' or less
• Minimum operating depth for SB: 4'

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Proposed Machine Placement

The machines are not drawn to scale, and final placement will be determined prior to deployment.

Equipment Cost

Pricing for Solar-Powered Machines:

PN	Qty	Equipment Description	Equipment Total
101796	1	SB5000 v20 SolarBee Mixer: Including High torque, direct drive (no gearbox), low voltage brushless D.C. motor, and SCADA brain-board with six outputs.	Included
101754	1	16''x20' Diameter Intake Hose Assemblies:	Included
101754	1	Additional Sections of 16''x20' Intake Hose:	Included
12501200	1	Deep Water Mooring Systems:	Included
100523	9	Anchor Chain, priced in 20' increments:	Included
		Equipment Subtotal:	**$52,510**
		Applicable Taxes:	To Be Determined
		Factory Delivery, Placement and Startup:	$12,748
		Optional *Service Plan:	$5,500
		Project Total:	**$70,758**

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*** Service Plan:** The Service Program gives you access to our Customer Service Department, all replacement parts/components, and onsite equipment inspection and maintenance during the coverage period. This is an all-inclusive program which allows our customers to take advantage of our equipment, experience, and training to maintain and protect their investment in water quality. Ixom service technicians will be on-site a minimum of once a year at each location guaranteed via the contract. If any concerns/issues arise outside of the scheduled service stops, we will have our scheduling team dispatch the next available service crew in the area to resolve the issue onsite at no additional cost.
Please click here for more details: https://www.ixomwatercare.com/documents/brochure-beekeeper-service-program/download

Options for Solar Models	
SCADA Outputs	All SB v20 and reconditioned models come standard with a SCADA brain-board with six outputs. All GF models come standard with a SCADA brain-board with four outputs. For additional SCADA Accessories please request a price sheet.
IXOM Service Program	This program is specialty coverage which includes the utilization of Factory Crews to service and maintain proprietary designed equipment. Details available at: https://www.ixomwatercare.com/beekeeper *Please contact us for pricing options.*

Proposal Expiration: This proposal expires in 90 days, or on the date of any new proposal for this project, whichever is sooner.

Equipment Delivery Time: Delivery time varies depending on delivery method selected. Equipment shipments are typically dispatched from our warehouse 3-6 weeks from order date, while factory delivery and placement usually takes 8-12 weeks after receiving the signed scheduling letter and an approved submittal when a submittal is required.

Warranty: IXOM has the best parts and labor warranties that we are aware of in the industry. The details of the warranty which applies to this project are either attached to this document or are available at: https://www.ixomwatercare.com/warranty

General Terms & Conditions of Sale

These terms and conditions (collectively, "Terms and Conditions") govern all sales of products, equipment, and services (collectively, "Goods") agreed to be supplied by IXOM Watercare Inc ("Seller") to any person to whom any quotation is made or who is offering to contract with the Seller ("Buyer"). The Terms and Conditions are incorporated into any order, offer, arrangement or understanding between the Seller and the Buyer (including pursuant to a quotation or letter of offer accepted by the Buyer) as well as any quotation or invoice or any other document to which they are attached (individually and collectively "Order"). All purchases by Buyer are expressly limited and conditioned upon acceptance of the Terms and Conditions and without limiting any other mode of acceptance, Buyer's acceptance of the Goods manifests Buyer's assent to the Terms and Conditions and the credit terms offered by Seller. Seller objects to and rejects any provision additional to or different from the Terms and Conditions that may appear in Buyer's purchase order, acknowledgement, confirmation, writing or in any prior or later communication from Buyer to Seller, unless Seller expressly agrees to such provision in a written amendment signed by Seller. An Order together with these Terms and Conditions are herein referred to as "Contract".

1. Prices; Taxes; Payment Terms; Default: (a) Prices for Goods and any adjustments to such prices shall be determined in accordance with Seller's final pricing letter or offer forming part of the Contract which has been accepted by Buyer ("Price").
(b) Prices do not include any sales, use, excise, privilege, or other taxes or assessments imposed on the Goods sold hereunder and unless Buyer provides proof of exemption satisfactory to Seller, such may be added to the price of the Goods.
(c) Subject to Section 1(e) and unless otherwise agreed in writing, payment terms are net 30 days from date of invoice. Payments not received when due shall incur service charges at the rate of 1.5% per month (18% per annum) until paid, compounded on a daily basis.
(d) If any of the events set out in this Section 1(d)(i) through (v) below occur, Seller reserves the right, among other remedies, to delay or suspend further shipments or require full or partial cash payment in advance until all sums due have been paid. Buyer shall be liable for all costs and expenses incurred by Seller in collecting any overdue amounts, including without limitation reasonable attorneys' fees.

(i) Buyer defaults in any payments or is unable or states that it is unable to pay its debts as and when they fall due.
(ii) Buyer commits an act of bankruptcy, files a voluntary petition in bankruptcy or has filed against it an involuntary petition in bankruptcy or has a trustee, receiver, liquidator, custodian, conservator, manager, controller or voluntary administrator appointed in respect of Buyer's estate or any part of Buyer's property or assets.
(iii) Buyer passes a resolution for its winding up or enters into liquidation or has an application for winding up filed against it.
(iv) Buyer makes an assignment for the benefit of its creditors.
(v) Buyer experiences any analogous event having substantially similar effect to any of the events listed above.

(e) Notwithstanding Section 1(a), Seller may at any time in its sole and unfettered discretion and without being under any duty or obligation to assign reasons, review, alter or terminate Buyer's credit limit or payment terms without notice. Without limiting the generality of the foregoing, the decision of Seller shall be final and Seller accepts no liability or responsibility for any loss, howsoever arising, incurred by Buyer due to the operation of this condition.

2. Service Delivery & Responsibility to Purchase: (a) Unless agreed otherwise in writing, all shipments are F.C.A. Seller's or its sub-contractor's warehouse. Shipping dates are estimates only and are subject to Seller's lead time policy. Seller shall make all reasonable efforts to have Goods delivered to Buyer on or about the date or within the time frame of the Order but Seller shall not be liable for any failure or delay in delivery for any reason. Buyer is responsible for disposing of all non-returnable containers and shipping materials.
(b) Purchase orders issued by Buyer and placed with Seller are irrevocable and Buyer is contractually obliged to take delivery and pay for all Goods ordered and supplied or made available by Seller pursuant to such purchase order. If Seller does not receive forwarding instructions sufficient to enable it to dispatch Goods within fourteen (14) days after notice to Buyer that such Goods are ready, Buyer shall be deemed to have taken delivery from such date and shall be obliged to pay reasonable storage charges payable on demand. Unless otherwise agreed upon by the parties in writing, if Buyer does not accept delivery or collect Goods from Seller when made available at the agreed delivery point in accordance with the Contract, Buyer also will pay Seller for SLC-7548174-2 storage costs and reimburse Seller for any demurrage, transport or futile delivery costs incurred by Seller.

3. Title; Risk of Loss or Damage: Title to and risk of loss of the Goods shall pass to Buyer upon delivery to the carrier at point of shipment.

4. Inspection; Acceptance: Buyer shall promptly examine the Goods for any damage or shortage or failure of the Goods to comply with the Seller's standard sales specifications or the specifications contained in or referenced in the Contract. All claims for damage or shortage of Goods shall be deemed waived unless made in writing and received by Seller within 30 days of delivery of the Goods. If Buyer finds that any of the Goods do not comply with the specifications, Buyer may, at its option, reject that portion of the Goods that fail to comply by providing Seller with a notice made in writing and received by the Seller within 30 days of delivery of the Goods. Failure to timely deliver written notice of any such claim or rejection of the Goods within the warranty period specified in this clause 4 shall be deemed an absolute and unconditional waiver of such claim for damage or shortage or a right to reject such Goods and all claims related there to and shall constitute an unqualified acceptance of such Goods, irrespective of whether the facts giving rise to such claim shall have then been discovered or of whether use or application of the Goods shall have then taken place.

5. Returns: Returned Goods shall not be accepted unless Buyer obtains prior written approval and transportation instructions from Seller. All Goods returned to Seller must be in full containers or cases, unopened and in the same condition as when delivered. If a return is approved by Seller, Goods may be returned for exchange or credit only. Seller shall give no cash refunds for returned Goods. Approved returned Goods are subject to a restocking charge of 15% of the invoiced value of such Goods and Buyer shall pay all transportation charges.

6. Limited Warranty: (a) Subject to Section 6(e) and Section 7 below, Seller warrants title and that the Goods shall conform to Seller's standard sales specifications in effect at the time of manufacture or the specifications agreed by the parties in writing and contained or referenced in the Order. Equipment components not manufactured by Seller which are incorporated in the Goods may, if specified elsewhere in the Contract, be subject only to warranties of Seller's vendors and Seller hereby assigns to Buyer all such rights in such vendor's warranties and will provide reasonable assistance in enforcing such rights.
(b) Buyer is solely responsible for determining that the Goods and their specification and scope are appropriate for Buyer's intended use. Any advice or recommendations by Seller with respect to the Goods or the use of the Goods are provided in good faith based on tests or experience believed to be reliable, but such advice or recommendations are not warranted. Buyer agrees that it is responsible for ensuring that Goods that comply with the warranties in Section 6(a) are fit and suitable for its purposes, requirements, processes, plant and equipment.
(c) To the maximum extent permitted by law, Seller makes no other representation or warranty of any kind, and hereby expressly disclaims all other representations or warranties, express, implied, statutory or arising from a course of dealing, usage of the trade or otherwise, including without limitation any representation or warranty as to merchantability, fitness for a particular purpose, or any other matter with respect to the goods, whether used alone or in combination with any other goods, substances processes or materials or services.
(d) In the event the exclusion of some or all of such warranties under section 6(c) for certain goods subject to this contract would be illegal, any additional warranty would be limited to the warranty required by applicable law and to the extent permitted by such law, would be subject to section 6(e) and section 7, and is conditioned upon use in accordance with label directions under normal conditions reasonably foreseeable to seller with buyer assuming the risk of any use contrary to label directions, under abnormal conditions or under conditions not reasonably foreseeable to seller.
(e) Seller's sole liability and Buyer's sole remedy for breach of warranty are specifically limited to the repair of the goods (or re-performance of services when applicable) or the cost thereof where Seller fails to perform such repair necessitate by a breach of warranty, and such liability and remedy re exclusive of all other liabilities and remedies. Should these remedies be found inadequate or to have failed of their essential purpose for any reason whatsoever, Buyer agrees that the return of the amount paid by buyer to seller for the purchase of the goods which fail to conform with the warranties set forth in section 5.7 shall be considered a fair and adequate remedy and prevent the remedies from failing of their essential purpose.

7. Limitation of Liability: (a) The liability of Seller and its affiliates to Buyer under and in connection with the Contract is limited to the price allocable to the Goods giving rise to the claim and in no event shall the cumulative liability of Seller howsoever arising, whether under warranty, contract, tort, negligence, strict liability, indemnification, defense or any other cause or combination of causes whatsoever, exceed the total

payments received from Buyer under the Contract in connection with the Goods.
(b) To the extent permitted by law and not withstanding any provision to the contrary in the contract, Seller shall not be liable for special, indirect, incidental, or consequential damages, including without limitation, and loss of profits. Loss of business revenues, loss of capital, failure to realize expected profits or savings, overhead costs, loss by reason of service interruption or increased expense of operation, loss of goodwill, loss of reputation, loss of value in any intellectual property, damages or liquidated sums payable pursuant to other agreements or to other third parties, other economic losses, whether arising under warranty, contract; negligence (including negligent misrepresentation) or other tort, strict liability, breach of statute, indemnification, or any other cause or combination of causes, including any theories of concurrent liability arising from a duty of care by operation of law or otherwise.

8. Safe Storage Handling & Use; Assumption of Risk; Indemnification: Buyer acknowledges that it is familiar with the risks associated with the storage, handling and use of Goods and any waste resulting therefrom. Accordingly and notwithstanding anything to the contrary set forth in the Contract, Buyer covenants and warrants and shall ensure that (i) that it and its employees, agents, carriers and customers are familiar with and adhere to all necessary and appropriate precautions and safety measures to safely store, handle or use the Goods; (ii) it and its employees, agents, carriers and customers shall comply with all applicable Laws, including without limitation, environmental laws and regulations pertaining to the storage, handling and use of Goods; (iii) shall obtain and comply with all required permits and licenses. Seller takes no responsibility for, and Buyer assumes all risks associated with waste characterization, regulatory status and chemical composition of any product, process, material, waste or substance into which the Goods are incorporated or applied. Without limiting the foregoing, Buyer shall further ensure that all storage tanks, vessels, and pipes, hoses and valves and other components used by Buyer or its employees, agents, carriers and customers to store, handle and transfer Goods which are bulk chemicals are properly installed and maintained to prevent injury, death or loss of containment during storage, handling and transfer of such Goods. If Buyer resells or distributes Goods to third parties, Buyer assumes responsibility for ensuring that it provides detailed instructions to such third parties regarding safe storage, handling and use of those Goods and any Storage Items or packaging in which such Goods are stored. To the maximum extent allowed by law, Buyer assumes all risks and liability whatsoever for all injuries, losses and damages to persons or property or otherwise and shall indemnify, defend and hold harmless Seller and Seller's employees and agents against all claims, damages, losses, costs, liabilities, and other expenses (including investigation and attorneys' fees) that Seller incurs or may be obligated to pay as a result of (i) Buyer's, its employees', agents', carriers' or customers' handling, possession, further processing, storage, use treatment, transportation, disposal, sale or other use or disposition of the Goods, whether used alone or in combination with other products, materials, substances or wastes, (ii) Buyer's, its employees', agents', carriers' or customers' violation or alleged violation of any Law, or (iii) Buyer's breach of any of its obligations set forth herein.

9. Force Majeure: Shipments or deliveries may be totally or partially suspended or delayed by Seller during any period in which the Seller may be prevented or hindered from manufacture, delivery, or supply through any circumstances outside Seller's reasonable control or where such manufacture, delivery or supply is rendered materially more expensive by such circumstances. Circumstances beyond Seller's reasonable control shall include, without limitation, strikes, lockouts or other labor difficulty; acts of carriers; acts of God; acts of civil or military authorities; acts or omissions of Buyer; war; riot; fire; explosion; acts of terrorism; flood; any inability to obtain or lack of any necessary or adequate materials, inputs, fuel, power, labor, equipment, containers, facilities or services on usual terms; power or water shortage; accidents or breakdowns or failures of plant or machinery or apparatus; delays, congestions or blockages at sea ports or transport depots or software, hardware or communication network; changes in applicable Laws; or any other event, whether or not enumerated herein, beyond the reasonable control of Seller that makes impractical the manufacture, transportation or shipment of the Goods or of a material or other resource upon which the manufacture, transportation or shipment of the Goods depends. Seller shall not incur any liability to Buyer in respect of such suspension.

10. Intellectual Property: Seller is the sole and exclusive owner of the Intellectual Property in the Goods and processes incorporated in such Goods, and the rights attached to that Intellectual Property. Nothing herein grants to Buyer any right, title or interest in or to any of the Intellectual Property in the Goods. Buyer shall not claim to have acquired any right, title or interest to the Intellectual Property in the Goods by virtue of purchasing Goods sold hereunder. Buyer shall not deconstruct, reverse compile or reverse engineer the Goods in any way for the purpose of deciphering or replicating the chemical composition of the Goods. As used herein, "Intellectual Property" means any intellectual or industrial property right anywhere in the world including, without limitation, any patent, patent application, utility model, copyright (including copyright in manuals, databases, and promotional materials), registered design and other design rights, unpatented secrets and innovations, confidential information, and any other rights that may subsist anywhere in the world in improvements, inventions and other manufacturing processes or technical and other information of Seller. Buyer shall not resell, distribute or supply the Goods to any third party for any reason without Seller's prior written consent.

11. Confidentiality; Entire Agreement; Amendments; Changes to Terms & Conditions: (a) All information that Buyer acquires from Seller hereunder, directly or indirectly, and all information that arises out of the sale of the Goods hereunder, concerning such Goods and/or proprietary processes involved, including information concerning Seller's current and future business plans, information relating to Seller's operations, know-how, and other.
Seller-furnished information shall be deemed Seller's "Proprietary Information". Buyer shall (a) hold Seller's Proprietary Information in strictest confidence, (b) not disclose it to others, (c) use it solely for purposes of this Agreement and (d) upon Seller's request, either promptly deliver to Seller all such Proprietary Information that is in written, electronic or other form, including copies and summaries, or, at Seller's option, destroy such Proprietary Information and provide Buyer certification of such destruction. The obligations under this Section shall survive the expiration or termination of the Contract.
(b) The Contract constitutes the entire agreement of the parties with respect to the purchase and sale of Goods and supersedes and excludes all prior and other discussions, representations (contractual or otherwise) and arrangements relating to the supply of Goods, including but not limited to, those relating to the performance of Goods or results that ought to be expected from using the Goods.

12. Governing Law: The rights and duties of the parties and any dispute regarding the sale of Goods covered hereby shall be resolved according to the laws of the state of Colorado, without regard to its conflicts of law provisions. Buyer hereby agrees to submit to the non-exclusive jurisdiction of the courts in the state of Colorado. Any controversy or claim arising out of or relating to the sale of Goods or the dealings between the parties shall be settled exclusively by arbitration in Denver, Colorado by a single arbitrator pursuant to the American Arbitration Association's Commercial Arbitration rules then in effect, and judgment upon the award shall be entered in any court having jurisdiction thereof. The prevailing party in any arbitration proceeding shall be entitled to recover its reasonable attorneys' fees and costs, in addition to any other relief obtained.

13. Waiver: No failure to exercise nor any delay or omission in exercising any right, power or remedy by Seller operates as or constitutes a waiver. A single or partial exercise by Seller of any right, power or remedy does not preclude any other or further exercise by it of that or any other right, power or remedy. A waiver is not valid or binding on Seller unless made in writing. No failure by Seller to exercise, nor any delay or omission by Seller in exercising any right, power, or remedy nor any representation made, or conduct carried out by Seller under the Contract or in connection with the supply of Goods or any of them shall constitute or provide grounds for a common law or equitable estoppel.

14. Severance: If any provision of the Terms and Conditions or its application to any person or circumstances is or becomes invalid, illegal or unenforceable, the provision shall so far as possible be read down to such extent as may be necessary to ensure that it is not invalid, illegal or unenforceable. If any provision or part of it cannot be so read down, the provision or part of it shall be deemed void and severable and the remaining provisions of the Terms and Conditions shall not in any way be affected or impaired.

Accept This Quotation

To order the equipment, please issue a purchase order to IXOM Watercare Inc, 3225 Hwy. 22, Dickinson, ND 58601. The purchase order can be mailed to the address above, faxed to 866-662-5052, or emailed to the home office at orderprocessing@ixom.com.

A. Ixom Watercare, Inc. is a Material Supplier of portable equipment. No contracting or construction work of any type is being offered or will be performed by Ixom Watercare, Inc. at the jobsite or at any Ixom Watercare, Inc. location or factory for this project.

1) To order the materials the purchaser should use the same type of purchase order as would be used to order other materials; for example, a desk or a forklift. Please do not order the equipment quoted here with a "contractor" or "subcontractor" agreement of any sort, because Ixom Watercare, Inc. is a material supplier.

2) The US Department of Labor defines a Material Supplier, such as Ixom Watercare, Inc. and its allowable activities. All activities by Ixom Watercare, Inc. factory personnel to transport, place and start up the Ixom Watercare, Inc. portable equipment are incidental to Ixom Watercare, Inc. being a Material Supplier, and Ixom Watercare, Inc. will not perform contracting or construction work of any type for this project.

This IXOM quotation should be attached to the purchase order, and the purchase order should refer to the IXOM quotation by date, and should accept the quotation in its entirety. Acceptable language on the purchase order would be " Quantity: 1. Description: "Equipment per the attached quotation from IXOM dated _____, including all terms shown on that quotation. " If there is any language missing, or extra language in the purchase order such as a referral to specifications, then IXOM will not be able to accept the purchase order.

If a purchase orders is not utilized, please sign and date below, provide billing information, and fax to 866-662-5052 or email to orderprocessing@ixom.com.

Go to www.ixomwatercare.com/subscribe to sign up for periodic email updates & information including videos, case studies, and other valuable content from Ixom Watercare!

Signing below acknowledges acceptance of this quotation.

Proposal Date: August 8, 2025

Proposal Expiration Date: November 6, 2025

Project #: 79216

SolarBee Solar-Powered Circulator

- ☐ Equipment, Factory Delievery and Placement, and Startup
- ☐ Optional Service Plan

Signature _____ Date _____

Printed Name _____ Title _____

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IXOM Watercare
3225 Highway 22, Dickinson, ND 58601
1-866-437-8076 • www.ixomwatercare.com

July 23rd, 2025

Benjamin Smith
Orange County Water District
4060 East La Palma Ave
Anaheim, CA 92807

Benjamin,

This letter is to certify that the SolarBee Model SB5000 water circulation equipment that Orange County Water District is considering purchasing is only available at Ixom Watercare Inc of Dickinson, North Dakota.

Ixom Watercare Inc. is the exclusive manufacturer of this equipment sole licensee of this technology, which encompasses 13 or more patents with 50+ patent claims, plus some additional patents pending and the sole licensee of this technology. A list of granted patents are available at: https://www.ixomwatercare.com/documents/patents/download.

The purchase price presented for this equipment is the same price charged to all U.S. agencies and other organizations, after allowing for small differences in delivery and placement charges based on quantity and mileage differences between projects.

Sincerely,

Jeffrey Ballew

Jeff Ballew

Head of Global Sales, Watercare

AGENDA ITEM SUBMITTAL

Meeting Date: September 10, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: R. Bouley/L. Esguerra

Budgeted: Yes
Budgeted Amount: $3,014,155
Cost Estimate: $4,175,000
Funding Source: R&R Fund
Program/Line Item No.: R24032
General Counsel Approval: N/A
Engineers/Feasibility Report: NA
CEQA Compliance: Cat. Ex.

Subject: AWARD CONTRACT NO. A-2025-1 TO TE ROBERTS, AUTHORIZE AMENDMENT NO. 2 TO MKN FOR CONSTRUCTION MANAGEMENT AND INSPECTION SERVICES AND ENGINEERING SUPPORT DURING CONSTRUCTION, AND BUDGET INCREASE

SUMMARY

A total of eight construction bids were received on August 7, 2025, for the Anaheim Lake Valve Vault Project, Contract No. A-2025-1. The apparent low bidder, Minako America Corporation, has requested their bid be withdrawn due to a clerical error in filling out the bid. Staff recommends allowing Minako America Corp. to withdraw their bid and awarding a construction contract to the second lowest bidder, TE Roberts, in the amount of $3,246,910.

A total of four proposals were received on August 6, 2025, for Construction Management and Inspection Services for the Anaheim Lake Valve Vault Project. Based on staff's evaluation of the proposals, MKN ranked first due to their experience and approach. Staff recommends authorizing Amendment No. 2 to Agreement 1681 with MKN to perform construction management and inspection services in the amount of $261,039 and engineering construction support services in the amount of $155,177 for a total Amendment No. 2 amount of $416,216 and increasing the overall project budget by $1,160,845.

Attachments:

- Affidavit of Publication for Notice Inviting Bids for Contract A-2025-1
- Minako America Corporation letter dated August 11, 2025
- MKN's Proposal for Construction Management and Inspection Services
- MKN's Proposal for Engineering Construction Support Services

RECOMMENDATION

Agendize for September 17 Board meeting:

1. Receive and file Affidavit of Publication of Notice Inviting Bids for Contract A-2025-1 Anaheim Lake Valve Vault Project;
2. Ratify issuance of Addendum 1 to Contract No. A-2025-1;
3. Approve request for withdrawal of bid by Minako America Corporation without penalty due to clerical error in filling out the bid;

4. Accept bid and award contract A-2025-1 to the lowest responsive and responsible bidder, TE Roberts, in the amount of $3,246,910;
5. Authorize Amendment No. 2 to Agreement 1681 with MKN for a not-to-exceed amount of $416,216 and;
6. Increase project budget by $1,160,845 for a total project budget in the amount of $4,175,000.

DISCUSSION

The Anaheim Lake pipeline distributes water to various locations including Anaheim Lake, Miller Basin, Kraemer Basin, Atwood Channel, and the Carbon Creek Diversion Channel. Several connections to the Anaheim Pipeline are directly buried within a small area just north of the spillway between OC-28 and Anaheim Lake and are inaccessible without deep excavation. These connections were constructed from the late 1980s to the early 1990s. The existing valves within the project limits are at the end of their expected lifespan and need replacement.

The Anaheim Lake Valve Vault Project will construct a new vault structure to house two 48-inch butterfly valves for the Warner Pipeline to the Anaheim Pipeline and one 72-inch valve for OC-28 to the Anaheim Pipeline. These valves will be equipment electric motor actuators allowing basin operators to open and close the valves remotely. The project will replace two existing manual 48-inch valves which release water from Anaheim Pipeline into the Atwood Channel and construct structural modifications to OC-28. The expected project schedule is shown in Table 1.

Due to specialty structural inspections and steel pipeline inspections required for construction, Staff recommends issuing a Request for Proposals for a construction management firm to oversee construction and perform inspections. The RFP scope of work will generally include overseeing overall construction activities for the District including conducting construction progress meetings; facilitating responses to submittals, RFIs, and change order requests; daily inspections to confirm the concrete vault, valves and piping are constructed per the plans and specifications; and material testing services the District cannot perform in-house such as fill material soil testing, soil compaction testing, concrete compressive strength testing, and special inspections for steel reinforcement and welded steel pipe.

The bid advertisement period for Contract No. A-2025-1 commenced June 25, 2025, and spanned 43 calendar days. Addendum No. 1 was issued on July 28, 2025, to provide revised specifications and responses to potential bidder's questions. Eight construction bids were received on August 7, 2025. All eight construction bids exceeded the previous construction estimate amount of $2,300,000. This initial estimate was based on information provided by Staff and the design consultant. The variance in costs can be attributed to the significant increase in raw materials costs for steel used for the large diameter valves, steel pipe, and reinforcement and site-specific construction constraints when working within deep excavations. Four construction bids were all within 10% which demonstrates that the level of effort from each bidder was commensurate with the scope of work for the project.

The apparent low bidder, Minako America Corp., claimed a clerical error that made their bid materially different than intended was made in filling out the bid, and they have requested to withdraw their construction bid. Minako America Corp. contacted the District in writing within five days, as required by the District's contract documents. Staff reviewed this request with District's legal counsel and recommends relieving Minako America Corp. of its bid.

A summary of the bids is shown below in Table 1.

Table 1: Anaheim Lake Valve Vault Project
Construction Bid Summary

Contractor	Bid Price
Minako America Corp.	$ 2,697,500
TE Roberts	$ 3,246,910
Big Ben Inc.	$ 3,422,338
MMC Inc.	$ 3,554,000
Environmental Construction	$ 3,597,152
Vicon Enterprise	$ 3,950,000
RE Chaffee Construction	$ 3,983,500
Myers & Sons Construction	$ 4,280,000

Staff is recommending award to the next second lowest bidder, TE Roberts. Staff reviewed the bid of TE Roberts, checked references, and confirmed that its contractor's license is current, active, and in good standing with the State of California. Staff recommends awarding the construction contract to TE Roberts. as the lowest responsive bidder in the amount of $3,246,910.

Due to specialty structural inspections and steel pipeline inspections required for construction, the Board authorized issuance of a Request for Proposal for a construction management firm to oversee construction and perform specialty inspections. The RFP scope of work generally includes overseeing overall construction activities for the District including conducting construction progress meetings; facilitating responses to submittals, RFIs, review of change order requests; daily inspections to confirm the concrete vault, valves and piping are constructed in conformance with the plans and specifications; and material testing services the District cannot perform in-house such as fill material soil testing, soil compaction testing, concrete compressive strength testing, and special inspections for steel reinforcement and welded steel pipe.

The RFP was issued June 25, 2025 to seven qualified firms and posted on the District website. Staff received four proposals on August 6, 2025 from Accenture, Harrocks, MKN, and MCM Consulting. The proposals were independently reviewed and scored by engineering staff, and the scoring of the proposals included evaluating each firm's experience and qualifications of the project team, approach and schedule, experience

on similar projects, commitment of key staff and estimated number of hours. Each proposal included an estimated fee in a separate sealed envelope and the fee from the top 3 highest scoring proposals were opened. See Table 2 for proposal rankings and proposed fee of the top 3.

Table 2:
Proposal Rankings and Proposed Fee

Rank	Frim	Proposed Fee
1	MKN	$322,183
2	Horrocks	$247,100
3	Accenture	$564,000
4	MCM Consulting	-

Staff's evaluation of the proposals and consideration of cost proposals resulted in a recommendation of MKN for Construction Management and Inspection Services for the Anaheim Lake Valve Vault Project for the following reasons:

- MKN's Project Team has experience with construction of pump stations and sewer lift stations which included cast-in-place concrete structures, installation of mechanical appurtenances, electrical, and control SCADA integration;

- MKN's Project Team comprises specialized inspectors needed for structural inspection, electrical inspection, and soils and material testing for the project;

- MKN's has a strong record of success performing construction management and inspection with agencies in Orange County; and

- MKN provided a detailed proposal which demonstrated a clear understanding of the scope for this project. Their proposal identified construction challenges specific to deep excavation construction and highlighted the importance of coordinating procurement of long lead items.

Staff met with MKN to discuss scope of services and their assumed level effort included in their original fee of $322,183. MKN agreed to revise their level of effort to align with the other proposals, and this reduced their fee by $61,144. The proposed MKN construction management and inspection team were not involved in design and the Construction Management Team and Design Teams are managed by a separate Project Managers. MKN is currently under contract with the District for Engineering Design Services for the Anaheim Lake Valve Vault and Staff recommends authorizing an amendment to original contract with MKN for a not-to-exceed amount of $261,039 for Construction Management and Inspection Services for the Anaheim Lake Valve Vault Project.

The original design of the Anaheim Valve Vault project was awarded to Gannett Fleming in 2018 and final design was completed in 2021. The project was placed on

hold to prioritize District resources and staff in the design and construction of PFAS treatment projects and the agreement with Gannett Fleming was closed. In October 2024 staff met with the Engineer of Record who completed design with Gannett Fleming, who is now employed at MKN, to provide a proposal to review and update the drawings to current structural and electrical code and provide bid phase services and The Board authorized an agreement with MKN in November 2024. MKN provided good work and completed the design in June 2025. Additional budget authorization is requested for MKN to address additional design changes requested by the District and to provide engineering design support during construction. Engineering design support during construction includes shop drawing technical reviews, responses to requests for information, attendance at technical meetings, plan revisions, and record drawings. Staff recommends authorizing an amendment to the original contract with MKN for a not-to-exceed amount of $155,177 to provide engineering construction support services for the Project.

Therefore, Staff recommends authorizing Amendment No. 2 to Agreement 1681 with MKN to perform construction management and inspection services ($261,039) and engineering construction support services ($155,177) in the not-to-exceed amount of $416,216.

The project budget for the Anaheim Lake Valve Vault Project, Contract A-2025-1, is summarized in Table 3.

Table 3: Anaheim Lake Valve Vault Project
Budget Summary

Description	Budget
Design, Construction Management, Permitting	
Design (Gannet Fleming)	$ 243,601
Design (MKN)	$ 62,854
Amendment No 1	$ 33,200
Amendment No 2	*$ 416,216*
Bid Advertisement and Permitting	*$ 10,000*
Design, Construction Management, Permitting Sub-Toal	*$ 765,871*
Construction	
Contract A-2025-1 (TE Roberts)	*$ 3,246,910*
Construction Sub-Total	$ *3,246,910*
Project Contingency	$ *162,219*
Total Project Budget:	$ 4,175,000

The expected project schedule is shown below in Table 4

Table 4: Anaheim Lake Valve Vault Schedule Summary

Description	Dates
Design	Aug 2018 – Jun 2025
Construction Contract	Sept 2025 – Dec 2026

PREVIOUS BOARD ACTIONS

6/18/25, R25-6-93: Authorizing Issuance of RFP for Construction Management and Inspection Services.

5/21/25, R25-5-72: Authorize filing of a Categorical Exemption in compliance of CEQA and authorize publication of Notice Inviting Bids.

2/19/2025, R25-2-21: Authorizing Amendment No.1 to Agreement No. 1681 with MKN for an amount not to exceed $33,200 for design services for the Anaheim Lake Valve Vault Project.

11/20/2024, R24-11-141: Authorizing issuance of agreement to MKN for design services for the Anaheim Lake Valve Vault Project.

3/20/2019, R19-3-38: Approving amendment to Gannett Fleming for Anaheim Lake Valve Vault Project.

10/17/2018, R18-10-145: Authorizing termination of agreement to KEH & Associates for design services for Anaheim Lake Valve Vault Project and awarding agreement to Gannett Fleming.

8/15/2018, R18-8-110: Authorize agreement to KEH & Associates for design services for Anaheim Lake Valve Vault Project.

12/20/2017, M17-170: Authorize Issuance of RFP for the Anaheim Lake Valve Vault Project.

THE ORANGE COUNTY
REGISTER
1920 Main Street, Suite 209
Irvine, California 92614
(714) 796-7000
legals@inlandnewspapers.com

Orange County Water District
18700 Ward Street
Fountain Valley, California 92708

Account Number:	5179533
Ad Order Number:	0011742710
Customer's Reference/PO Number:	
Publication:	The Orange County Register
Publication Dates:	06/25/2025
Total Amount:	$902.73
Payment Amount:	$0.00
Amount Due:	$902.73
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Invoice Text:	

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1920 Main Street, Suite 209
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18700 Ward Street
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PROOF OF PUBLICATION
(2015.5 C.C.P.)

STATE OF CALIFORNIA
County of Orange

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not party to or interested in the above-entitled matter. I am the principal clerk of the printer of The Orange County Register, a newspaper of general circulation, printed and published in the City of Irvine*, County of Orange, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of County of Orange, State of California, under the date of November 19, 1905, Case No.A-21046. The notice, of which the annexed is a printed copy (set in type not smaller than nonpareil), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

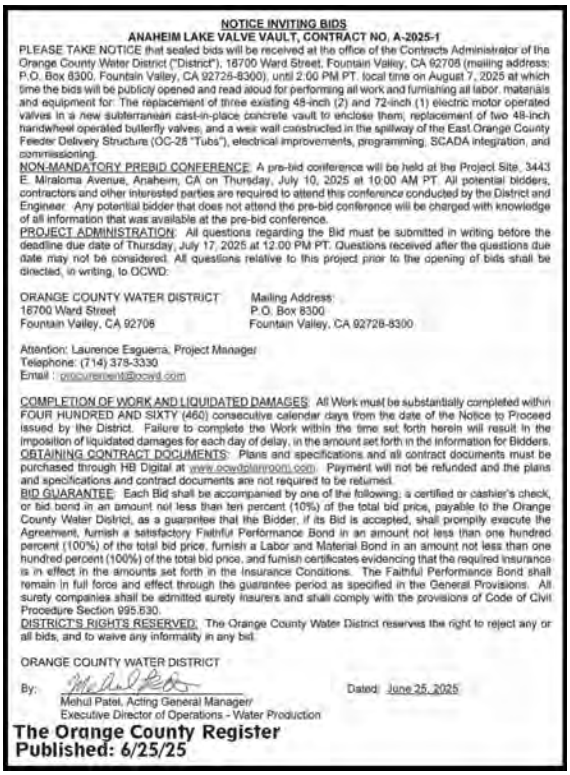
06/25/2025

I certify (or declare) under the penalty of perjury that the foregoing is true and correct.

Dated at Irvine, California

On this 25th day of June, 2025.

Sandra Campos
Signature



NOTICE INVITING BIDS
ANAHEIM LAKE VALVE VAULT, CONTRACT NO. A-2025-1

PLEASE TAKE NOTICE that sealed bids will be received at the office of the Contracts Administrator of the Orange County Water District ("District"), 18700 Ward Street, Fountain Valley, CA 92708 (mailing address: P.O. Box 8300, Fountain Valley, CA 92728-8300), until 2:00 PM PT, local time on August 7, 2025 at which time the bids will be publicly opened and read aloud for performing all work and furnishing all labor, materials and equipment for: The replacement of three existing 48-inch (2) and 72-inch (1) electric motor operated valves in a new subterranean cast-in-place concrete vault to enclose them; replacement of two 48-inch handwheel operated butterfly valves; and a weir wall constructed in the spillway of the East Orange County Feeder Delivery Structure (OC-28 "Tubs"), electrical improvements, programming, SCADA integration, and commissioning.

NON-MANDATORY PREBID CONFERENCE: A pre-bid conference will be held at the Project Site, 3443 E. Miraloma Avenue, Anaheim, CA on Thursday, July 10, 2025 at 10:00 AM PT. All potential bidders, contractors and other interested parties are required to attend this conference conducted by the District and Engineer. Any potential bidder that does not attend the pre-bid conference will be charged with knowledge of all information that was available at the pre-bid conference.

PROJECT ADMINISTRATION: All questions regarding the Bid must be submitted in writing before the deadline due date of Thursday, July 17, 2025 at 12:00 PM PT. Questions received after the questions due date may not be considered. All questions relative to this project prior to the opening of bids shall be directed, in writing, to OCWD:

ORANGE COUNTY WATER DISTRICT
18700 Ward Street
Fountain Valley, CA 92708

Mailing Address:
P.O. Box 8300
Fountain Valley, CA 92728-8300

Attention: Laurence Esguerra, Project Manager
Telephone: (714) 378-3330
Email : procurement@ocwd.com

COMPLETION OF WORK AND LIQUIDATED DAMAGES: All Work must be substantially completed within FOUR HUNDRED AND SIXTY (460) consecutive calendar days from the date of the Notice to Proceed issued by the District. Failure to complete the Work within the time set forth herein will result in the imposition of liquidated damages for each day of delay, in the amount set forth in the Information for Bidders.

OBTAINING CONTRACT DOCUMENTS: Plans and specifications and all contract documents must be purchased through HB Digital at www.ocwdplanroom.com. Payment will not be refunded and the plans and specifications and contract documents are not required to be returned.

BID GUARANTEE: Each Bid shall be accompanied by one of the following: a certified or cashier's check, or bid bond in an amount not less than ten percent (10%) of the total bid price, payable to the Orange County Water District, as a guarantee that the Bidder, if its Bid is accepted, shall promptly execute the Agreement, furnish a satisfactory Faithful Performance Bond in an amount not less than one hundred percent (100%) of the total bid price, furnish a Labor and Material Bond in an amount not less than one hundred percent (100%) of the total bid price, and furnish certificates evidencing that the required insurance is in effect in the amounts set forth in the Insurance Conditions. The Faithful Performance Bond shall remain in full force and effect through the guarantee period as specified in the General Provisions. All surety companies shall be admitted surety insurers and shall comply with the provisions of Code of Civil Procedure Section 995.630.

DISTRICT'S RIGHTS RESERVED: The Orange County Water District reserves the right to reject any or all bids, and to waive any informality in any bid.

ORANGE COUNTY WATER DISTRICT

By: _____ Dated: June 25, 2025
Mehul Patel, Acting General Manager/
Executive Director of Operations - Water Production

The Orange County Register
Published: 6/25/25

MINCO MINCO CONSTRUCTION

(877) BY-MINCO www.mincoconstruction.com

Date: August 11, 2025

To: Orange County Water District

18700 Ward Street, Fountain Valley, CA 92708

Re: Anaheim Lake Valve Vault Contract No. A-2025-1

Subject: Bid Withdrawal Request

Laurence Esguerra, PE

After the project has been reviewed, we found out that we made a mathematical error resulted in a quote/bid that was materially different from its intended bid, the mistake was made in filling out the bid.

The mistake was not due to error in judgment or to carelessness in inspecting the site of the work, or in reading the plans or specifications.

Refer to California Public Contract Code section 5103, please consider this letter as a request to withdraw Minako America Corporation dba Minco Construction bid for Anaheim Lake Valve Vault Contract No. A-2025-1.

Thank you for your consideration,

Respectfully,

Refaat Mina
President

522 E. AIRLINE WAY • GARDENA, CA 90248 • TEL: 310-516-8100 • FAX: 310-516-7404

AUGUST 6, 2025 AT 2:00PM

RESPONSE TO RFP-24-025

CONSTRUCTION MANAGEMENT AND INSPECTION SERVICES FOR ANAHEIM LAKE VALVE VAULT

PART 1 - STATEMENT OF QUALIFICATIONS

PETER BRENNAN, PE, CCM
PRINCIPAL-IN-CHARGE
PBRENNAN@MKNASSOCIATES.US
P: 661.425.6363 F: 805.904.6532

August 6, 2025

Orange County Water District
Administration Office Building
Attn: Ashlie Valencia - Contracts Administrator
18700 Ward Street
Fountain Valley, CA 92708

Subject: Construction Management and Inspection Services for Anaheim Lake Valve Vault

FIRM NAME
MKN CPM, LLC.

ADDRESS
16310 Bake Parkway,
Irvine, CA 92618

POINT OF CONTACT
Peter Brennan, PE, CCM
Principal-in-Charge
pbrennan@mknassociates.us
661.425.6363

Dear Ms. Valencia and Selection Committee,

Thank you for the opportunity to submit our proposal for Construction Management and Inspection Services for the Anaheim Lake Valve Vault project. MKN CPM, LLC is excited to respond to the Orange County Water District's (OCWD) Request for Proposals and eager to support OCWD's mission to deliver high-quality, reliable water to over 2.5 million residents and businesses in Orange County.

Founded in 2012, MKN is a Southern California-based engineering firm specializing in construction management and inspection (CM&I). With a team of over 80 professionals—including construction managers, inspectors, professional engineers, and planners—we bring extensive experience in water infrastructure projects, such as valve vaults, pipelines, and advanced treatment facilities. Our deep expertise and local presence make us well-suited to deliver exceptional results for the Anaheim Lake Valve Vault project.

The Anaheim pipeline and its infrastructure are vital to OCWD's groundwater replenishment operations. Our team is proficient in managing the construction of cast-in-place concrete vaults, installing large-diameter valves and actuators, and integrating electrical and instrumentation systems. We are committed to delivering the new vault structure, spillway weir wall, and all associated modifications safely, on schedule, and in full compliance with OCWD's rigorous standards and regulatory requirements.

MKN's approach emphasizes proactive communication, robust quality assurance/quality control (QA/QC) protocols, and a collaborative partnership with our clients. Our local team will provide rapid response and on-site support throughout the 18-month project, from October 1, 2025, to June 30, 2027, ensuring flexibility, accountability, and adherence to OCWD's performance and compliance expectations.

Our proven track record includes successful projects for agencies like the Nipomo Community Services District and FivePoint (for Los Angeles County Sanitation Districts), showcasing our ability to navigate complex water infrastructure challenges. We are confident that our expertise, local knowledge, and dedication to excellence will add significant value to this project.

Our Strengths

Commitment to Excellence

We are dedicated to delivering seamless project execution through exceptional service, clear communication, and proactive problem-solving. To ensure success, we have thoroughly reviewed the project documents to understand its scope, anticipate challenges, and identify areas requiring special attention.

Effective Communication & Coordination

We prioritize transparent, consistent communication to keep all stakeholders aligned. As OCWD's representative, we will serve as a key liaison with contractors and the public, providing timely updates, addressing concerns promptly, and ensuring smooth project progression with minimal disruptions.

Highly Experienced Personnel

Our proposed team collectively offers over 100 years of experience in water infrastructure projects across California. Key members include:

Peter Brennan, PE, CCM (Principal-in-Charge): With 39 years of industry experience, Peter brings seasoned leadership to ensure project success.

Jon Dahl, PE (Resident Engineer/Project Manager): Jon contributes 25 years of expertise in wastewater operations, construction management, and inspection.

Michelie Little (Assistant Resident Engineer): Michelie adds 6 years of hands-on experience in water and wastewater infrastructure.

Larry Lewis (Senior Inspector): With 45 years of experience, Larry specializes in inspection and structural oversight for water and wastewater projects, including treatment plants, pipelines, and pump stations.

This core team, supported by additional qualified staff, ensures technical expertise and commitment to OCWD's goals.

About MKN

MKN is a trusted CM&I firm serving public agencies across Central and Southern California. From our offices in Irvine, San Luis Obispo, Bakersfield, Fresno, San Jose, Ventura, Santa Clarita, and Oceanside, our multidisciplinary team provides comprehensive support across all project phases, from planning to construction management and inspection. Since 2012, we have built a reputation for responsive service, technical excellence, and long-term partnerships.

For any questions or additional information, please contact me at 661.425.6363 or pbrennan@mknassociates.us.

Thank you for considering MKN CPM, LLC. We look forward to the opportunity to contribute to the success of the Anaheim Lake Valve Vault project.

Sincerely,

Peter Brennan, PE, CCM
Principal-in-Charge
Authorized Signer

MKN CPM, LLC
16310 Bake Parkway
Irvine, CA 92618

0 CONTENTS

APPENDIX

1

SECTION

EXPERIENCE AND RECORD OF PAST PERFORMANCE

1 EXPERIENCE AND RECORD OF PAST PERFORMANCE

Experience and Record of Past Performance

The District requires construction consultants capable of providing a broad range of construction management and inspection (CM&I) services for water and wastewater projects. MKN brings a proven track record of delivering successful outcomes through an integrated approach—leveraging our expertise as both the design engineer and construction manager on numerous water infrastructure projects across California.

By serving in both roles, MKN is uniquely positioned to anticipate construction challenges, streamline design clarifications, and expedite issue resolution. Our seamless coordination between design and construction phases has led to improved constructability, reduced change orders, and on-time project delivery for agencies such as the East Orange County Water District, Pleasant Valley County Water District, and Nipomo Community Services District.

We have strategically assembled a team led by seasoned construction professionals who are well-versed in managing complex capital improvement projects and committed to protecting our clients' interests throughout the construction process. Our team understands the nuances of regulatory compliance, public agency coordination, and operational integration.

Peter Brennan, PE, CCM, our Principal-in-Charge, brings 39 years of construction management experience specifically focused on water resources infrastructure. He has managed projects ranging from $1 million to $190 million, including water and wastewater treatment plants, large-diameter pipelines, and pump station facilities. His recent experience includes serving as Construction Manager for the $55 million Pure Water Oceanside Advanced Water Purification Facility and the $87 million Valencia Advanced Wastewater Treatment Facility—both of which required intensive coordination with design engineers, contractors, and operations staff to achieve successful commissioning and startup.

MKN's extensive history of delivering high-quality CM&I services, combined with our firsthand design knowledge, equips us to provide OCWD with exceptional service.

Experience with Similar Projects

The following represent a sample of MKN's direct project experience where the services provided were the same or similar in nature to the services requested in the RFP:

DPW-2 Lift Station

OWNER
FivePoint (for Los Angeles County Department of Public Works)

CLIENT CONTACT
Bob Brazell, Vice President
2000 Fivepoint, 4th Floor
Irvine, CA 92618
661.510.1969
bob.brazell@fivepoint.com

CONTRACT AMOUNT
$760k

This project constructed new sewage lift stations for the Los Angeles County Department of Public Works. Construction elements included a total of seven new pumps, a control building, an emergency stand-by generator, a wet well, manholes, piping, instrumentation and controls, civil site works, and other appurtenances. MKN's proactive project management and scheduling reviews established mitigation measures to resolve material procurement delivery problems and other COVID-related delays.

DATE
03/2024-11/2025 (scheduled completion)

Barrett Pump Station

OWNER
East Orange County Water District

CLIENT CONTACT
Bobby Young, PE, Engineering Manager
185 N. McPherson Road
Orange, CA 92869
714.538.5815
byoung@eocwd.com

CONTRACT AMOUNT
$160k

MKN was selected by the East Orange County Water District for construction management and inspection services for the Barrett Pump Station Replacement Project.

The $1.5M project involved the demobilization of the existing pump station facility, followed by the installation of a temporary pumping system to ensure continuous operation throughout the construction period. Key aspects of the project included the replacement of the existing transformer and installation of a new pump station.

The new pump station building was designed to handle a flow rate sized for 1,500 gallons per minute (gpm) and featured a packaged pumping system complete with advanced controls, piping, and valving. MKN's role was critical in coordinating the complex logistics, ensuring compliance with regulatory standards, and minimizing operational disruptions.

DATE
11/2022-07/2024

Supplemental Water Project Interconnection Improvements

OWNER
Nipomo Community Services District

CLIENT CONTACT
Peter Sevcik, PE, Director of Engineering and Operations
148 S. Wilson St.
Nipomo, CA 93444
805.929.1133
psevcik@ncsd.ca.gov

CONTRACT AMOUNT
$200k

MKN provided construction management and inspection services for the Nipomo Community Services District's Supplemental Water Project Interconnection Improvements. The project included the construction of three new water system interconnection sites, each equipped with precast concrete vaults, flow control valves, flow meters, piping, electrical and instrumentation systems, and communication infrastructure. MKN's scope encompassed on-site construction and inspection services which included coordination of materials testing, facilitating special inspections for electrical and SCADA systems, and supporting District Operations staff with system shutdowns, bacteria sampling, and design modifications. MKN also assisted the District in implementing changes related to PG&E services at the project sites.

DATE
02/2024-06/2024

Recycled Water Connection Pipeline

OWNER
Pleasant Valley County Water District

CLIENT CONTACT
Jared Bouchard, General Manager
154 S. Las Posas Road
Camarillo, CA 93010
805.482.2119
jared@pvcwater.com

CONTRACT AMOUNT
$312k

MKN provided construction management and inspection services for the construction of the Pleasant Valley County Water District's Recycled Water Connection Pipeline project. This $4.5M project involved the open trench construction of approximately 8,900 linear feet of a new 18-inch interconnection pipeline, including the use of a horizontal directional drill (HDD) to cross under a creek bed. The project required coordination with stakeholders, ensuring minimal disruption to the surrounding agricultural environment and companies, along with maintaining and coordinating environmental clearances during bird nesting season throughout construction.

DATE
01/2024-11/2024

The MKN team offers diverse expertise in CM&I for a variety of water and wastewater infrastructure projects, including pipelines, pump stations, plant rehabilitation, and advanced treatment plant construction. Our Principal-in-Charge, Peter Brennan, PE, CCM, has managed 100+ projects, demonstrating our ability to handle projects of varying scopes and budgets. MKN CPM, LLC. has a proven track record of delivering successful services for clients with similar to Orange County Water District:

MKN CM&I Clients	Projects
City of Bakersfield	• 5 Wells Arsenic Removal Project • CBK-53 Arsenic Removal • On-Call Inspection for Public Works • Thomas Roads Improvements Projects • DAF Rehabilitation • Final Sedimentation Tanks Rehab • Sewer Lift Station Rehabilitation Projects
City of Camarillo	• Pump Station No. 3
City of Coalinga	• Derrick Reservoir Rehabilitation
East Niles Community Services District	• 1.5MG Concrete E. Niles Tank • 3.8MG Freeway Tank • College/FF to Country Club Improvements • Wells No. 18, 19, and 21 Arsenic Treatment • Freeway Tank Pump Station • Corner Tank Pump Station • Morning Drive Pump Station • Wells No. 21 and 23 TCP Treatment
East Orange County Water District	• Barrett Pump Station
Fallbrook Public Utilities District	• Rattlesnake Tank Site Rehabilitation
FivePoint ***(for Los Angeles County Sanitation Districts)***	• DPW-1 and DPW-2 Lift Stations
City of Fresno	• Various Recycled Water Pipeline Projects • Various Sewer System Rehabilitation and Replacement Projects
Los Angeles County Sanitation Districts	• Valencia Water Reclamation Plant Advanced Wastewater Treatment Facility • Recycled Water Pump Station and Storage Facilities
Nipomo Community Services District	• Blacklake Sewer Consolidation Force Main • Blacklake Sewer Consolidation Lift Stations • Supplemental Water Project Interconnection Improvements
City of Oceanside	• Pilgrim Creek Sewer Lift Station • Pure Water Advanced Water Treatment Facility • Jones Road Building Tenant Improvements
City of Paso Robles	• Water Treatment Plant
Pleasant Valley County Water District	• Recycled Water Connection Pipeline
Santa Clarita Valley Water Agency	• Well No. 201 VOC Treatment Project

2
SECTION

PROJECT TEAM AND QUALIFICATIONS

2 PROJECT TEAM AND QUALIFICATIONS

ORANGE COUNTY WATER DISTRICT

PROJECT TEAM

PRINCIPAL-IN-CHARGE
Peter Brennan, PE, CCM[1]

PROJECT MANAGER
Jon Dahl, PE[2]

ASSISTANT RESIDENT ENGINEER
Michelie Little[1]

INSPECTOR
Larry Lewis[2]

ADDITIONAL RESOURCES

INSPECTOR
Gary Bohnisch[2]

ELECTRICAL INSPECTOR
Ed Macias, Jr.[2]

SUBCONSULTANTS

GEOTECHNICAL
Ninyo & Moore

MKN Office Locations:
1 - Irvine; 2 - Varies

Peter Brennan, PE, CCM

Principal-in-Charge

50% Availability

Peter Brennan has gained experience since 1986 providing construction management and project management in the water resources industry. As an Engineering Consultant, Peter has been providing third-party construction management services to public agencies in California since 2013. Prior to that, Peter worked for over 22 years with the Los Angeles County Sanitation Districts where he administered construction contracts ranging from $1M to $190M. In this position, he served as a Construction Manager/Senior Engineer for various projects such as wastewater treatment plants, pipelines, pump stations, and landfill construction. He also worked for the City of Los Angeles with the Los Angeles World Airports-Airports Development Group where he was responsible for multiple aspects of project/construction management for airport infrastructure renovation and expansion.

MKN assures that the key individuals listed and identified in the Organization Chart will be performing the work and will not be substituted without the District's prior approval. Contact Information for individual Team Members will be provided upon award of contract. Project Team Members' current commitments are listed below.

Project	Client	Location	Project Team			
			Peter Brennan, PE, CCM	Jon Dahl, PE	Michelie Little	Larry Lewis
Well 201 VOC Treatment Improvements	Santa Clarita Valley WA	Valencia	√	√		
DPW-2 Lift Station	FivePoint (for LACSD)	Valencia	√	√		√
Sewer Lift Station Rehab at Eucalyptus Ave	City of Bakersfield	Bakersfield	√	√	√	
Sewer Lift Station Rehab at Romero Ave	City of Bakersfield	Bakersfield	√	√	√	
Sewer Lift Station Rehab at Ming and Grand Lakes	City of Bakersfield	Bakersfield	√	√	√	

Jon Dahl, PE
Project Manager
100% Availability

Jon Dahl, a Licensed Professional Engineer and Board-Certified by the American Academy of Environmental Engineers, brings over 20 years of specialized expertise in wastewater operations and construction management to this project. With a proven track record of leading complex initiatives, Jon has delivered innovative, cost-saving solutions while overseeing the design, construction, and operational enhancements for public utilities. His extensive experience in earthwork is unparalleled, having managed large-scale pond construction projects for the Los Angeles County Sanitation Districts. Complementing his technical proficiency, Jon's strategic leadership, honed through 30 years of distinguished service in the Air Force, equips him to navigate challenges with clarity and foresight, making him an invaluable asset to the team.

Michelie Little
Assistant Resident Engineer
50% Availability

Michelie Little is an Assistant Resident Engineer in MKN's Irvine office. She has 6 years of experience in the water/wastewater engineering field in California. She has a proven track record in construction management, design, and program management of water, wastewater, and recycled water projects. Michelie consistently demonstrates exceptional teamwork and communication skills, contributing to the success of complex construction and engineering projects.

Larry Lewis
Inspector
100% Availability

Larry Lewis is a water and wastewater industry veteran with 45 years of experience, including 25 years with the Los Angeles County Sanitation Districts, working on a variety of pumps, treatment plants, wells, pipelines, and rehab projects. Larry has excelled at his role as a Senior Construction Inspector through his dedication to quality assurance and in-depth knowledge of water and wastewater systems.

Gary Bohnisch
Inspector
100% Availability

Gary Bohnisch has 37 years of experience in providing construction inspection services for wastewater projects. For the past 25 years, Gary has specialized in inspecting new construction, rehabilitation, and site improvements for wastewater infrastructure projects. Prior to MKN, Gary worked for Safework, Inc. whose clients included the Sanitation Districts of Los Angeles County (LACSD). His experience gave him the opportunity to provide construction inspection for the Joint Water Pollution Control Plant, one of the largest wastewater treatment plants in the world, as well as other wastewater treatment plants under LACSD's jurisdiction.

Ed Macias, Jr.
Electrical Inspector
100% Availability

Ed Macias, Jr. specializes in electrical construction inspection services for water and wastewater treatment facility projects. Ed has over 27 years of experience providing electrical construction inspection services for water and wastewater treatment facilities projects. Ed has provided electrical inspections services for various clients such as the Los Angeles County Sanitation Districts (LACSD). He has extensive experience with electrical construction project management and design; electrical engineering startup and modifications of instrumentation and controls; control cabinet design and fabrication; third-party electrical point-to-point and functional system testing; various volt-free contacts (VFCs) installation; instrumentation and related accessory application, calibration, installation, and internal operation; conduit installation (underground and exposed); and service and repair of wastewater flowmeters and instrumentation. Ed is also experienced with AutoCAD and HMI/SCADA software.

Ninyo & Moore
Geotechnical
Subconsultant

Ninyo & Moore, an ENR Top 500 Design Firm, is a professional geotechnical and environmental consulting firm specializing in geotechnical engineering, materials testing, and specialty inspection services. Their expertise supports all phases of construction through geotechnical investigations, quality assurance testing, and inspection services. With decades of experience, Ninyo & Moore ensures safe, compliant, and cost-effective project delivery.

3
SECTION

PROJECT OVERVIEW AND APPROACH

3 PROJECT OVERVIEW AND APPROACH

MKN's Overview and Approach

MKN is committed to providing exceptional construction management and inspection services for the Anaheim Lake Valve Vault project, ensuring the Orange County Water District (OCWD) receives a high-quality, durable installation. Our team is well-equipped to manage all phases of the project—pre-construction, construction, and closeout—efficiently and in full compliance with the contract documents (Exhibits A-1 and A-2), as well as all applicable regulatory requirements.

This project involves the construction of a new cast-in-place concrete valve vault, a spillway weir wall, installation of two (2) 48-inch butterfly valves and one (1) 72-inch butterfly valve, associated appurtenances, and electrical and instrumentation improvements. We understand the critical role this work plays in protecting the integrity of OCWD's groundwater replenishment system and will approach each task with a high level of technical diligence and responsiveness.

Project Timeline and Delivery

We are aligned with OCWD's 18-month Construction Management Services Agreement, beginning October 1, 2025, and concluding June 30, 2027. Our team is committed to meeting all milestones throughout pre-construction, active construction, and final closeout. MKN brings extensive experience delivering similar mechanical and structural projects, including recent valve vault interconnection work and complex lift station construction. Notably, we've completed multiple cast-in-place concrete structures housing critical mechanical components—each on a tight schedule and with successful system tie-ins.

To remain responsive to project needs, MKN offers flexible staffing and can mobilize within 24 hours. Our local Irvine office ensures timely field presence and issue resolution.

Task Assignments

Work will be strategically delegated across our multidisciplinary team to optimize efficiency and communication:

- **Principal-in-Charge – Peter Brennan, PE, CCM** will provide executive oversight and serve as the **Quality Assurance/Quality Control (QA/QC) Manager**, ensuring project compliance with contract documents and industry standards. Peter will also support issue resolution and strategic coordination with OCWD leadership, as needed.
- **Resident Engineer (RE) – Jon Dahl, PE** will serve as the **Project Manager**, overseeing all tasks and maintaining direct coordination with OCWD's Project Manager.
- **Assistant Resident Engineer (ARE) – Michelie Little** will support the RE with document control, field coordination, submittal tracking, and change management support.
- **On-site Inspector – Larry Lewis** will perform **daily construction observation**, maintain photo documentation, and prepare detailed daily inspection reports.

Key responsibilities include:

- **Pre-Construction:** The RE will lead the kickoff meeting, oversee RFI processing, and ensure long-lead items (valves, steel) are prioritized. The ARE will assist with document preparation and regulatory submittals including the Notice of Intent (NOI).
- **Construction Management:** The RE will chair progress meetings, lead change order negotiations, and manage reporting. The ARE and Inspector will support daily inspections and reporting for excavation, concrete, and mechanical installations.
- **Specialty Testing:** MKN will coordinate all geotechnical and concrete testing with our subconsultant, Ninyo and Moore.
- **Closeout:** Our team will develop punch lists, coordinate final walkthroughs, and certify record drawings.

All deliverables—daily logs, monthly progress reports, and closeout summaries—will be reviewed by the RE and submitted electronically and in hard copy as preferred by OCWD.

Project Management and Communication

Strong communication is central to our project management approach. Jon Dahl, PE will serve as the primary point of contact. Weekly progress meetings will be led by our RE with agendas issued 48 hours in advance and meeting minutes delivered within two business days. We will implement a cloud-based project management platform (e.g., Procore) to centralize RFIs, submittals, correspondence, and schedules—accessible to OCWD, the contractor, and the design team. Monthly reports will include schedule updates, cost tracking, and field photos, and will be submitted by the 5th of each month to support OCWD's reporting needs.

Quality Assurance / Quality Control (QA/QC)

MKN follows a rigorous three-tiered QA/QC process to ensure contract compliance and construction excellence:

1. **Pre-Execution Review:** The team will review contract documents and technical specifications prior to construction start.
2. **Daily Oversight:** The RE and Inspector will perform continuous field inspections with photo documentation. Any nonconformances will be immediately addressed.
3. **Verification:** QA/QC Manager Peter Brennan, PE, CCM will perform weekly audits of testing logs, inspection reports, and as-builts before payment requests are approved.

All personnel are appropriately certified (e.g., ACI for concrete testing), and we uphold a zero-tolerance policy for non-conformance.

Technical Approach

Pre-Construction (Oct 2025–Jan 2026)

We will begin by requesting that the Contractor immediately send a Letter of Intent (LOI) to manufacturers for long-lead items, including the 72-inch and 48-inch butterfly valves and structural steel to speed up the procurement process. A pre-construction meeting will be scheduled in early November with OCWD and key stakeholders to align expectations and finalize early action items. MKN will assist with filing the NOI, review the Contractor's Dewatering and Shoring Plans, and coordinate with KDC for SCADA integration planning. Biweekly meetings will be used to track critical submittals, RFIs, and early procurement efforts.

Construction Phase – Phase 1 (Feb–May 2026)

Field activities during Phase 1 will focus on structural and civil work that can proceed prior to valve delivery. This includes site preparation, dewatering setup, excavation, shoring, and installation of the cast-in-place valve vault and spillway weir wall. Crews may also complete underground electrical conduit work and concrete encasement for the CMLC pipes. Our team will lead weekly construction meetings and provide daily inspection coverage, ensuring work progresses safely and in compliance with contract documents. Monthly reports will track CPM schedule progress, with any change orders submitted within 48 hours of identification.

Construction Phase – Phase 2 (Oct–Dec 2026)

Phase 2 will begin once long-lead items such as the butterfly valves are delivered—currently estimated for Fall 2026. This phase includes installation of the mechanical valves, vault piping, electrical panels, and instrumentation, followed by SCADA integration by KDC. MKN will coordinate closely with the Contractor and OCWD to verify readiness for startup, ensuring proper notice is given to KDC and fieldwork is sequenced efficiently. Should materials arrive earlier than expected, Phase 2 may be advanced accordingly.

Closeout (Jan–Feb 2027)

Punch lists will be developed at substantial completion. Final walkthroughs with OCWD, the Contractor, the Design Team, and Operations staff will occur prior to June 30, 2027. MKN will support preparation of certified record drawings and deliver a final executive summary that documents project performance, key metrics, and lessons learned.

Anticipated Constraints and Mitigation

MKN has reviewed the project documents along with the Geotechnical Report and is prepared to address the following challenges:

- **Groundwater/Dewatering:** Groundwater may be present at 20 feet below ground surface. Our team will enforce adherence to the Dewatering Plan, monitor performance daily, and coordinate with the City of Anaheim on permitting requirements.
- **Soft Soils/Shoring:** Native soils are soft and prone to caving. The Contractor will be required to submit a PE-stamped shoring plan, and MKN will ensure compliance during all excavations.
- **Foundation Coordination:** Two concrete-encased CMLC pipelines will remain independent of the mat foundation. Depending on field conditions, subgrade stabilization may be required. We will coordinate with the design team as needed.
- **Weather:** Rain may impact excavation and concrete work. We will monitor NOAA forecasts and adjust construction schedules to mitigate delays.
- **SCADA Integration:** KDC requires a minimum two-week notice prior to electrical substantial completion. We will ensure early engagement and documentation sharing to support seamless integration and startup.

MKN's approach combines technical strength, proven project delivery, and a strong local presence to ensure the Anaheim Lake Valve Vault project is delivered on time, within budget, and to OCWD's quality standards. We are fully prepared to manage this critical infrastructure project with professionalism, responsiveness, and a focus on long-term performance.

Scope of Work Summary

MKN will provide a dedicated **Resident Engineer (RE)**, supported by an **Assistant Resident Engineer (ARE)** and **Inspector**, to oversee daily construction activities, manage coordination with the Contractor and District, and ensure construction is completed in accordance with contract documents, quality standards, and schedule requirements. Our team will manage all aspects of construction oversight, communication, documentation, and project closeout.

1. **Pre-Construction Coordination -** Attend and support the pre-construction meeting, assist with Notice of Intent (NOI) filings, and coordinate early-phase logistics including utility and storm drain tie-ins.
2. **Daily Inspection -** Document daily construction activities, including labor, equipment, work performed, material deliveries, weather, and any site concerns.
3. **Photo Documentation -** Capture and organize daily photos to visually track construction progress and provide digital access to the District.
4. **Document Control -** Manage project documentation including RFIs, submittals, meeting minutes, change orders, and correspondence using the District's preferred system.
5. **Construction Progress Reports -** Submit monthly narrative reports summarizing progress, budget status, critical issues, and upcoming activities.
6. **Progress Meetings -** Lead weekly construction progress meetings, prepare agendas, track action items, and distribute meeting minutes.
7. **Schedule Review -** Review and track contractor's baseline and monthly CPM schedules to monitor progress and identify schedule risks.
8. **Pay Application Review -** Evaluate contractor pay requests for accuracy, verify quantities with field observations, and provide payment recommendations.
9. **Change Management -** Review, track, and provide recommendations for potential change orders, including scope justification, cost, and schedule impacts.
10. **Specialty Inspection Coordination -** Coordinate required testing services (e.g., concrete, soils, compaction, reinforcement) with certified subconsultants and review results for conformance.
11. **Field Issue Resolution -** Facilitate resolution of field conflicts by working with the Contractor, Inspector, District, and Design Team.
12. **Record Drawing Oversight -** Review and track contractor redlines and coordinate monthly updates to ensure accurate as-built documentation.
13. **O&M Manual Review -** Collect, review, and compile O&M manuals and warranty documentation in coordination with the Contractor and Design Engineer.
14. **Punch List Management -** Develop and track the completion of punch list items prior to project acceptance.
15. **Final Walkthrough -** Conduct a final site walkthrough with the District and stakeholders to verify punch list completion and identify any outstanding issues.
16. **Final Pay Application -** Submit final pay application following project completion and confirm all closeout documentation is received.
17. **Final Construction Report -** Prepare and submit a final report summarizing construction activities, issues, change orders, costs, and key milestones.
18. **Project Closeout Package -** Deliver all final records and reports (both hard copy and digital), including certified as-builts, within 60 days of Notice of Completion.

Supplemental Scope of Work

19. **Materials Testing Oversight -** Manage and coordinate geotechnical and materials testing including subgrade prep, trench backfill, concrete testing, and compaction testing.
20. **Safety Oversight -** Monitor field conditions to ensure compliance with Cal OSHA and site-specific safety protocols, including PPE, fall protection, confined space entry, and speed limits.
21. **Site Housekeeping -** Conduct daily site walks to maintain a clean and orderly work area and verify final cleanup at demobilization.

Estimated Project Schedule

Phase/Task	Start Date	End Date	Duration	2025 O	N	D	2026 J	F	M	A	M	J	J	A	S	O	N	D	2027 J	F	Key Deliverables/Notes
Pre-Construction Phase																					
Set up project management platform	10/01/25	10/03/25	3 days																		Implement Procore for RFIs, submittals, and schedule tracking
Early submittal – 72" BFV	10/03/25	9/01/26	48 weeks																		Approx. 11-month lead time
Early submittal – 48" BFV	10/3/25	06/01/26	36 weeks																		Approx. 8-month lead time
Pre-Construction Meeting	11/01/25	11/01/25	1 day																		CM Team, Contractor, and OCWD
Submittal/RFI coordination	10/15/25	12/20/25	~9 weeks																		Maintain logs and coordinate with design teams
Biweekly progress meetings	10/15/25	01/30/26	As-needed																		Agenda 48 hrs prior; distribute minutes within 1 day
Construction Phase – Phase 1 (Vault Construction and Sitework)																					
Estimated Duration: Feb. 3, 2026 – May 29, 2026																					
Mobilization and site prep	02/03/26	02/07/26	5 days																		Temp fencing, site layout, utility marking
Excavation	02/10/26	02/21/26	10 days																		Confirm subgrade, testing, inspection logs
Cast-in-place concrete vault	02/24/26	04/25/26	9 weeks																		Formwork, rebar, pours, waterproofing
Spillway weir wall and piping install	04/28/26	05/23/26	~4 weeks																		CMLC pipe tie-ins, embed coordination
Construction Phase – Phase 2 (Valve Installations + Startup)																					
Estimated Duration: Oct. 1, 2026 – Dec. 20, 2026																					
(Dates may be adjusted based on delivery of BFVs)																					
48" BFV installation	10/02/26	10/23/26	~3 weeks																		Flange prep, crane access, torque check
72" BFV installation	11/01/26	11/22/26	~3 weeks																		Heavy lift, gasket seal, field test
Start-up and commissioning	12/02/26	12/13/26	2 weeks																		Vendor support, SCADA integration, ops training
Ongoing CM Services During Construction																					
Weekly construction meetings	02/03/26	12/20/26	Weekly																		Coordination with Contractor and OCWD; will change to monthly during construction pause
Monthly progress reports	03/01/26	12/1/26	Monthly																		Narrative updates, photos, 3-week look-ahead
Daily inspections & reporting	02/03/26	12/20/26	Daily																		Work in place, weather, materials, safety logs
Specialty testing	02/03/26	12/13/26	As-needed																		Concrete, compaction, coatings, hydrostatic
Change order management	02/03/26	12/20/26	As-needed																		Schedule/cost impact reviews
Record drawing markups	02/15/26	12/20/26	Monthly																		Updated CAD markups submitted monthly
Closeout Phase																					
Punch list walkthrough	12/23/26	12/30/26	1 week																		CM, Contractor, OCWD walk-through
Final record drawings	01/05/26	01/12/27	1 week																		Stamped/Certified As-Builts
Final payment review	01/08/27	01/15/27	1 week																		Coordination with Contractor and OCWD
Demobilization & site cleanup	01/16/27	01/20/27	5 days																		Site restoration, BMP removal
Post-Completion																					
Final executive summary	01/21/27	02/28/27	~6 weeks																		Cost, schedule, and lessons learned summary report
Submit final project documents	01/21/27	02/28/27	~6 weeks																		Electronic + hard copies delivered to OCWD

4
SECTION

ADDITIONAL SERVICES

4 ADDITIONAL SERVICES

Additional Services

MKN CPM, LLC., has not identified any additional services that are necessary to complete the scope of work.

A

APPENDIX

RESUMES

PETER BRENNAN, PE, CCM

PRINCIPAL-IN-CHARGE

EDUCATION

- MS, Civil Engineering, Loyola Marymount University, Los Angeles, CA
- BS, Civil Engineering, Santa Clara University, Santa Clara, CA

LICENSES & REGISTRATIONS

- Professional Civil Engineer, CA No. 53110
  Issued: 2/10/95
  Expires: 6/30/27
- Certified Construction Manager, CMAA No. A2428

PROFESSIONAL ASSOCIATIONS

- American Society of Civil Engineers (ASCE)
- California Water Environment Association (CWEA)
- Construction Management Association of America (CMAA)

YEARS OF EXPERIENCE

- 5 with MKN
- 39 Total

HOME OFFICE

- Irvine

Peter Brennan has gained experience since 1986 providing construction management and project management in the water resources industry. As an Engineering Consultant Peter has been providing third party construction management services to public agencies in California since 2013. Prior to that Peter worked for over 22 years with the Los Angeles County Sanitation Districts where he administered construction contracts ranging from $1M to $190M. In this position, he served as a Construction Manager/Senior Engineer for various projects such as wastewater treatment plants, pipelines, pump stations, and landfill construction. He also worked for the City of Los Angeles with the Los Angeles World Airports-Airports Development Group where he was responsible for multiple aspects of project/construction management for airport infrastructure renovation and expansion.

Recycled Water Pump Station and Storage Facilities | Los Angeles County Sanitation Districts, Lancaster, CA

Construction Manager. The project involved extensive excavation, backfill, grading, and shoring to prepare the site. Crews constructed lined earthen embankments and reservoirs using high-density polyethylene geomembrane, and built new reinforced concrete structures, including a pump station, metering structures, screening facilities, and equipment foundations. Key features included vertical turbine pumps, screening equipment, a surge tank, slide gates, and a steel water storage tank. The work also encompassed piping, electrical and instrumentation systems, and facility modifications. All construction met or exceeded California codes and Los Angeles County regulations, delivering a fully operational, code-compliant recycled water system ready for service.

Rattlesnake Tank Site Improvements | Fallbrook Public Utilities District, Fallbrook, CA

Construction Manager. This site rehabilitation around Rattlesnake Tank included construction of a new reinforced concrete ring foundation under the existing steel tank, new asphalt concrete (AC) pavement, and a stem wall. Additional improvements included a concrete duct bank, utility relocation, and slope stabilization efforts.

Recycled Water Conveyance Pipeline | Pleasant Valley County Water District, Ventura County, CA

Construction Manager. Construction, preliminary, and final design of 7,900 feet of 18-inch HDPE pipeline in Ventura County. The project included acquiring a $5.25M Sustainable Groundwater Management Act (SGMA) Implementation Grant from the Department of Water Resources and completion of a Preliminary Design Report. Construction efforts include completion of bid advertising documents, coordinating on-site construction activities, weekly progress meetings, submittal review, progress payment requests, and contract change order requests.

Well 201 VOC Treatment Improvements | Santa Clarita Valley Water Agency, Valencia, CA

Construction Manager. This $7.7M project constructs a new Granular Activated Carbon (GAC) system for VOC treatment and a backwash system at an existing well site as part of the Santa Clarita Valley Water Agency Well 201 Treatment System. The GAC system consists

of two GAC vessels and a valve tree to facilitate operating in a parallel configuration. The backwash system includes a below grade backwash waste tank and submersible backwash waste pumps to pump the washwater to sewer. The project constructs a new chemical building at the site including all associated chemical storage and handling systems, a chemical injection station, removal of the existing well pump, and installation of a new well pump together with associated site work, fencing, water and washwater systems piping, electrical work, instrumentation, painting, and demolition.

Valencia Advanced Wastewater Treatment Facility (AWTF) | Los Angeles County Sanitation Districts, Valencia, CA

Construction Manager. LACSD is constructing a new AWTF at VWRP consisting of membrane filtration, nanofiltration, and reverse osmosis. The AWTF will produce "product" water with low chloride concentration to blend with the higher chloride plant effluent and achieve a blended concentration below the 100 mg/L limit. The project includes enhanced brine concentration and trucking of concentrated brine to an existing industrial facility. Peter led the MKN construction management team that joined the project in 2022 to assist Contractor OHL with schedule recovery and completion of the project.

Rehabilitation and Expansion of Lenain Water Treatment Plant | City of Anaheim, CA

Construction Manager. This $10M project expanded and rehabilitated the Lenain Water Treatment Plant for the City of Anaheim. Work included demolition, grading, retaining walls, replacement of reservoir inlet valves, installation of 1000 lineal feet of new 36-inch CML&C steel plant effluent piping, steel tank rehab, replacement of plate settlers, replacement of lamella plates, orifice plates, rapid mixer and flocculation mixer, washwater balance tank improvements, replacement of valves, actuators and chemical piping at the chemical feed facilities, electrical and instrumentation improvements and other appurtenant work.

CM and Inspection Services for Three Lift Stations | City of Oceanside, CA

Construction Manager. The three projects with a combined construction value of approximately $30M have been undertaken by the City of Oceanside to rehabilitate and improve the existing aging lift stations. Harbor Lift Station No. 3, Roja Lift Station, and Pilgrim Creek Lift Station had many combined problems resulting in operational and maintenance challenges, potential safety hazards and increased risk of sewage spills. The lift station projects consist of complete rehabilitation of all three lift stations. Work includes removing and replacing existing submersible pumps, concrete wet well repairs, and demolition of existing piping, pumps, valves, and appurtenances. Work also involved construction of new manholes, civil site work, new level control devices, various associated electrical and control system improvements, temporary bypass pumping, and groundwater dewatering. Electrical improvements include new conduits, conductors, and SCADA improvements. Peter is leading the MKN team as the Construction Manager for the projects. MKN is providing resident engineering and daily inspection including civil, mechanical, electrical and special inspections.

El Estero Wastewater Treatment Plant Secondary Process Improvements | City of Santa Barbara, CA

Construction Manager. This $22.6M project converted the existing conventional activated sludge process to biological denitrification. These improvements resulted in increased quality secondary effluent feed to the new ultrafiltration facility. Project work included modifying the aeration basin, including new inlet and outlet gates, baffle walls, aeration diffusers, mixers, and aeration piping as well as structural modifications; replacing return-activated sludge pumps and piping; replacing two aeration process air blowers; adding new concrete flume structure to distribute mixed liquor flow to the secondary clarifiers; modifying secondary clarifier, including replacing and modifying sludge collector mechanisms; adding new mixed liquor pumps and associated piping; adding new chemical facilities (ammonium sulfate, ferric chloride, and polymer) including tanks, pumps, and injection diffusers; adding secondary effluent recycle facility including diversion box and gate; and modifying associated 480V power upgrades.

Pure Water Advanced Water Purification Facility | City of Oceanside, CA

Construction Manager/Owner's Representative. The project involved modifications to the San Luis Rey Wastewater Plant in Oceanside, CA. Construction of this $55M project was recently completed and is designed to produce 4.5 MGD of fully advanced treated recycled water at an existing wastewater plant. Major works include nitrification-denitrification facilities, improvements to aeration blowers, the construction of a new advanced water purification building, a new ultra-filtration system, a new reverse-osmosis system, and ultraviolet light advanced oxidation. Included within these major scopes of work are all ancillary piping, instrumentation, SCADA programming, and process feed tanks.

JON DAHL, PE

PROJECT MANAGER

EDUCATION

- MS, Environmental Engineering, Stanford University, Stanford, CA
- BS, Civil Engineering, California State Polytechnic University, Pomona, CA

LICENSES & REGISTRATIONS

- Professional Civil Engineer, CA No. 65923
  Issued: 1/30/04
  Expires: 6/30/26
- GIAC Security Essentials Certification (GSEC)

SKILLS

- Wastewater Operations & Process Optimization
- Construction Management & Cost Control
- Sewer Rehabilitation & Infrastructure Design
- Project Oversight & Contract Management
- Program Development & Innovation Leadership
- Public Utilities & Partnership Development
- Private Pilot (Instrument Rated)

YEARS OF EXPERIENCE

- >1 with MKN
- 25 Total

HOME OFFICE

- Varies

Jon Dahl brings over two decades of experience providing construction management and project management in the water resources industry. He worked for over 20 years with the Los Angeles County Sanitation Districts where he administered construction contracts ranging from $0.5M to $50M. He acted as project construction manager for various projects such as wastewater treatment plants, pipelines, pump stations and landfill construction. Jon is a proven leader in managing complex projects, delivering cost-saving innovations, and overseeing design, construction, and operational improvements for public utilities. He combines technical proficiency with strategic thinking honed through 30 years of Air Force leadership experience.

Various Projects | Los Angeles County Sanitation Districts, Los Angeles, CA
Wastewater Construction Management and Operations Engineer (2012 – 2025). Provided lead engineering support for wastewater treatment plants and collections systems, managing design, construction, and implementation of facility upgrades, process improvements, and cost-saving initiatives. Jon spearheaded construction management for sewer rehabilitation projects, including the repair of corroded Non-Reinforced Concrete Pipe using cured-in-place pipe liners, ensuring timely completion and compliance. Jon designed and managed innovative projects, including the Biosolids Drying Program (saving $700K per year in hauling costs), Centrate Equalization System (reducing costs by $20K per year.), and Bisulfite Delivery and Controls System Redesign (saving $30K per year). He also engineered and installed a digester micro-aeration system, reducing sulfides, cutting chemical costs by thousands annually, and enhancing digester gas energy content. He oversaw the process control improvements, achieving greater nutrient removal and energy efficiency across facilities. Additional responsibilities included developing drawings, specifications, and cost controls for wastewater infrastructure projects, coordinating multidisciplinary teams and driving change management. Jon represented the agency at public outreach events and taught water treatment classes to high school AP students (three to four week-long sessions annually). He also prepared detailed Root Cause Analysis reports for incidents and equipment failures, ensuring operational reliability.

Various Projects | Los Angeles County Sanitation Districts, Los Angeles, CA
Construction Management Engineer (2009 – 2012). Managed $43M Recycled Water Pump Station project (including ~1 billion capacity reservoirs, pump station, and piping), overseeing contracts, schedules, change orders, design solutions, progress payments, and closeout. Jon also directed the $4M Lancaster Dewatering Building project, delivering on time and within budget through effective conflict resolution and coordination.

Various Projects | Los Angeles County Sanitation Districts, Los Angeles, CA
Landfill Site Engineer (2001 – 2009). Managed $2M cut/fill earthmoving landfill expansion, developing specifications and implementing an equipment operational pattern that completed the project on time and under budget—a first for the site. He oversaw $2M liner installation and gas collection improvements, coordinating between operations and contractors to achieve early completion. Enhancements to the operational efficiency included

improved gas collection infrastructure, reduced failures by 80%; reduced spills by 98% through inspection/PM programs and containment upgrades; and designed BMP facilities under SWPPP and SPCC programs, eliminating fine exposure and ensuring environmental compliance.

Los Angeles County Sanitation Districts | Los Angeles County Sanitation Districts, Los Angeles, CA

Assistant Construction Manager. Responsibilities included design consultation, constructability review, value engineering, plan and specification review, supervision of inspection and survey staff, quality assurance, project controls, document control, submittal and shop drawing review, RFIs, change management, CPM scheduling, monthly progress payments, claims management, dispute resolution and change order negotiation, start up and commissioning, and O&M manuals.

Lancaster Water Reclamation Plant Stage Five Expansion | Los Angeles County Sanitation Districts, Lancaster, CA

This $142M treatment plant expansion project constructed a new primary effluent pump station, aeration tanks, final sedimentation tanks, filters, blower building, emergency generator, digesters, sludge thickening air flotation units, chemical stations, pipelines, and other appurtenant work.

Lancaster Water Reclamation Plant Recycled Water Pump Station and Storage Facilities | Los Angeles County Sanitation Districts, Lancaster, CA

Construction Manager. This $42M recycled water pump station and storage facilities project included four 100-acre geomembrane- lined earthen embankment storage reservoirs, reinforced concrete structures, pump station, and HDPE piping.

Lancaster Water Reclamation Plant Stage Five Phase 1 Sludge Dewatering | Los Angeles County Sanitation Districts, Lancaster, CA

Senior Resident Engineer. This $4M sludge handling and dewatering facility project constructed a sludge dewatering building and installed four centrifuges along with all appurtenant work including electrical, mechanical, site civil, and supervisory control and data acquisition (SCADA) equipment. The State Revolving Fund (SRF) program funded this project.

Various Projects | United States Air Force, USA

Lieutenant Colonel, Air National Guard (1986 – 2024). Served 30+ years in various leadership roles, including Cyber Warfare and Communications Officer, overseeing up to 120 personnel. Managed joint operations, engineered communication systems, and led domestic response missions with zero incidents, achieving operational readiness and strategic goals.

MICHELIE LITTLE

ASSISTANT RESIDENT ENGINEER

EDUCATION

- MA, Water Resources & Environmental Engineering, Villanova University, Villanova, PA
- BA, Mathematics, Eastern University, St. Davids, PA

LICENSES & REGISTRATIONS

- Concrete Field Testing Technician, Grade 1, ACI No. 02325967
- OSHA 30, No. 26-607599197 *Issued: 11/7/24*
- Excavation & Trenching Safety Certification

PROFESSIONAL ASSOCIATIONS

- Orange County Water Association (OCWA) (Board of Directors 2024–Present)

YEARS OF EXPERIENCE

- 3 with MKN
- 6 Total

HOME OFFICE

- Irvine

Michelie Little is an Assistant Resident Engineer in MKN's Irvine office. She has 6 years of experience in the water/wastewater engineering field in California. She has a proven track record in construction management, design, and program management of water, wastewater, and recycled water projects. She has played a pivotal role in managing and coordinating on-site construction activities to ensure adherence to project plans and specifications, while also overseeing daily inspection reports, schedule tracking, and resource management, processing RFIs and submittals, and negotiating change orders. Known for her pragmatic approach to problem-solving, Michelie consistently demonstrates exceptional teamwork and communication skills, contributing to the success of complex construction and engineering projects.

Rattlesnake Tank Site Improvements | Fallbrook Public Utilities District, Fallbrook, CA

Assistant Resident Engineer. This site rehabilitation around Rattlesnake Tank included construction of a new reinforced concrete ring foundation under the existing steel tank, new asphalt concrete (AC) pavement, and a stem wall. Additional improvements included a concrete duct bank, utility relocation, and slope stabilization efforts.

Recycled Water Conveyance Pipeline | Pleasant Valley County Water District, Ventura County, CA

Assistant Resident Engineer. Construction, preliminary, and final design of 7,900 feet of 18-inch HDPE pipeline in Ventura County. The project included acquiring a $5.25M Sustainable Groundwater Management Act (SGMA) Implementation Grant from the Department of Water Resources and completion of a Preliminary Design Report. Construction efforts include completion of bid advertising documents, coordinating on-site construction activities, weekly progress meetings, submittal review, progress payment requests, and contract change order requests.

DPW-2 Sewage Pump Station | FivePoint (for Los Angeles County Sanitation Districts), Valencia, CA

Assistant Resident Engineer. Construction of LACSD's new sewage pump station. This project includes a total of four new pumps, a control building, an emergency storage concrete structure, wet wells, manholes, piping, instrumentation and controls, civil site works, and other appurtenances. MKN's proactive project management and scheduling reviews established mitigation measures to resolve material procurement delivery problems. Project on track to be completed on time and within budget.

Valencia WRP Advanced Wastewater Treatment Facility | Los Angeles County Sanitation Districts, Valencia, CA

Assistant Resident Engineer. Construction of LACSD's new advanced wastewater treatment facility (AWTF). The project includes, an AWTF at VWRP consisting of membrane filtration (MF), nanofiltration (NF), and reverse osmosis (RO). The AWTF will produce "product" water with low chloride concentration to blend with the higher chloride plant effluent and achieve a blended concentration below the 100 mg/L limit. The project includes enhanced brine concentration and trucking of concentrated brine to an existing industrial facility.

LARRY LEWIS

INSPECTOR

EDUCATION

- MA, Organizational Management, University of Phoenix (online)
- BS, Business Administration, University of Phoenix-Southern California Campus, Costa Mesa, CA
- AAS, Drafting & Design, Hinds Community College, Utica, MS

LICENSES & REGISTRATIONS

- Concrete Field Testing Technician, Grade 1, ACI No. 01014034
- Reinforced Concrete Certification, Los Angeles County No. 002827-22
- Reinforced Concrete Special Inspector, ICC No. 348460
- Structural Masonry Special Inspector, ICC No. 348460

YEARS OF EXPERIENCE

- 5 with MKN
- 45 Total

HOME OFFICE

- Varies

Larry Lewis is a water and wastewater industry veteran with 45 years of experience servicing a large array of pumps, treatment plants, wells, and rehab projects. Larry has held his role as a Senior Inspector through his dedication to quality assurance and in-depth knowledge of water and wastewater systems.

DPW-1 and DPW-2 Lift Stations | FivePoint (for Los Angeles County Department of Public Works), Valencia, CA

Senior Inspector. This project constructed a new sewage lift stations for the Los Angeles County Department of Public Works. Construction elements included a total of seven new pumps, control building, emergency stand by generator, wet well, manholes, piping, instrumentation and controls, civil site works, and other appurtenances. MKN's proactive project management and scheduling reviews established mitigation measures to resolve material procurement delivery problems and other COVID related delays. Project on track to be completed on time and within budget.

Valencia WRP Advanced Wastewater Treatment Facility | Los Angeles County Sanitation Districts (LACSD), Valencia, CA

Senior Inspector. Construction of LACSD's new advanced wastewater treatment facility (AWTF). The project includes, an AWTF at VWRP consisting of membrane filtration (MF), nanofiltration (NF), and reverse osmosis (RO). The AWTF will produce "product" water with low chloride concentration to blend with the higher chloride plant effluent and achieve a blended concentration below the 100 mg/L limit. The project includes enhanced brine concentration and trucking of concentrated brine to an existing industrial facility.

Pure Water Advanced Water Purification Facility | City of Oceanside, CA

Senior Inspector. Modifications to the San Luis Rey Wastewater Plant Oceanside, CA. Construction of this $55M project was recently completed and is designed to produce 4.5 MGD of fully advanced treated recycled water at an existing wastewater plant. Major works include nitrification-denitrification facilities, improvements to aeration blowers, construction of new advanced water purification building, new ultra-filtration system, new reverse-osmosis system, and ultraviolet light advanced oxidation. Included within these major scopes of work are all ancillary piping, instrumentation, SCADA programming, and process feed tanks.

Blacklake Sewer System and Force Main Consolidation Project | Nipomo Community Services District (NCSD), Nipomo, CA

Senior Inspector. This $4.7M project will divert flows from the District's Blacklake sewer collection system to the Town sewer system that flows to Southland wastewater treatment facility for treatment. MKN provided construction phase services for the new sewage force main system, which includes approximately 18,000 linear feet of new 6-inch diameter butt-fused HDPE sewer force main pipeline in open trench; approximately 1,600 linear feet of new 6-inch diameter butt-fused HDPE sewer force main installed via horizontal directional drilling methods; approximately 1,600 linear feet of new 12-inch diameter gravity sewer main

via open trench or using trenchless technology; new manholes; approximately 24,500 linear feet of new fiber optic conduit and handholes and vaults; new electrical conduits for future odor control equipment; new force main pump-outs and air release vault assemblies; pavement removals and replacements; and stockpiling of trench excavation material. The contractor is providing all necessary work plans, permits, and inspections necessary for complete turnkey installation.

Lancaster Water Reclamation Plant Installation of Membrane Bioreactor and Ultraviolet Disinfection Pilot Plant Equipment | Los Angeles County Sanitation Districts, Lancaster, CA

Senior Inspector. This $9.5M MGD MBR plant project included the construction of a complete standalone 1MGD Membrane bioreactor plant. The Zenon Membrane Bioreactor plant construction included grading, site work, concrete, tanks, mechanical, electrical, control system and other appurtenant work.

Lancaster Water Reclamation Plant Stage Four Expansion | Los Angeles County Sanitation Districts, Lancaster, CA

Senior Inspector. This $27M wastewater treatment plant expansion included new digesters, influent pumps, primary sedimentation basins, chemical stations, aeration pond improvements and other appurtenant work.

Lancaster Water Reclamation Plant Stage Five Expansion | Los Angeles County Sanitation Districts, Lancaster, CA

Senior Inspector. This $142M wastewater plant expansion project included placement of over 50,000 cubic yards of reinforced concrete. This was a four year construction project that hydraulically expanded an existing plant and converted the plant from secondary treatment using aerated ponds to activated sludge. Project elements included influent pumps, primary sedimentation tanks, aeration tanks, final sedimentation tanks, gravity tertiary filters, chlorine contact tanks, chemical stations, digesters, solids handling facilities, and associated mechanical, electrical, and instrumentation work.

Lancaster Water Reclamation Plant Recycled Water Pump Station, Storage Facilities, and Recycled Water Distribution Pipeline | Los Angeles County Sanitation Districts, Lancaster, CA

Senior Inspector. The program consisted of two construction projects. The pump station and storage facility project involved the construction of four 100-acre storage reservoirs, a pump station and a two million gallon steel reservoir for the storage and distribution of recycled water. The recycled water pipeline project involved the construction of over twenty miles of recycled water distribution pipeline. The pipeline included five miles of 36-inch cement mortar lined and coated steel pipe and 15 miles of 24-inch HDPE pipe. The work included open trenching within city streets and jack and bore installation beneath railroad and highway crossings.

Storage Facility Project highlights included over two million cubic yards of earthwork, 15 million square feet of geomembrane liner, reinforced concrete junction and metering structures, a pump station, a screening structure with screening equipment, vertical turbine pumping equipment, surge tank, slide gates, a 2MG steel water storage tank, piping, valves instrumentation and electrical work, five miles of 36-inch CML&C steel pipe and fifteen miles of 24-inch HDPE pipe.

Main Pumping Plant Influent Pump Replacement | Los Angeles County Sanitation Districts, Long Beach, CA

Senior Inspector. This $6M project replaced existing pumps and VFDs at a major LACSD pumping plant. Work included staged pump replacement, control system modifications, mechanical and electrical work.

Mission Village Pump Station and Force Main | FivePoint, Valencia, CA

Lead Inspector. The construction of this sewage pump station and force main at the Newhall Ranch project for Five Point. Work consisted of construction of a new sewage lift station including, excavation, structural concrete, mechanical piping and valves, masonry building, electrical and instrumentation and other appurtenant work.

Saugus Water Recycling Plant Nitrification Denitrification Retrofit | Los Angeles County Sanitation Districts, Saugus, CA

Senior Inspector. This $22M plant modification NDN conversion project included a new aeration tank, modifications to existing aeration tanks, new aeration blowers, odor control scrubbers, sodium hypochlorite station improvements, control system modifications and other appurtenant work.

Trunk F Replacement Sewer Section 1 | City of Lancaster, CA

Senior Inspector. This project involved a complex electrical switchboard replacement project.

GARY BOHNISCH

INSPECTOR

EDUCATION
- Business Coursework, University of La Verne, CA

YEARS OF EXPERIENCE
- 4 with MKN
- 37 Total

HOME OFFICE
- Varies

Gary Bohnisch has 37 years of experience in providing construction inspection services for wastewater projects. For the past 25 years, Gary has specialized in inspecting new construction, rehabilitation, and site improvements for wastewater infrastructure projects. Prior to MKN, Gary worked for Safework Inc. whose clients include the Los Angeles County Sanitation Districts (LACSD). His experience gave him the opportunity to provide construction inspection for the Joint Water Pollution Control Plant, one of the largest wastewater treatment plants in the world, as well as other wastewater treatment plants under LACSD's jurisdiction.

SCVWA Well 201 VOC Treatment Improvements | Santa Clarita Valley Water Agency (SCVWA), Valencia, CA

Construction Inspector. The project included adding a new Granular Activated Carbon (GAC) system for VOC treatment and a backwash system at an existing well site as part of the Santa Clarita Valley Water Agency Well 201 Treatment System. The GAC system consists of two GAC vessels and a valve tree to facilitate operating in a parallel configuration. The backwash system includes a below grade backwash waste tank and submersible backwash waste pumps to pump the washwater to the sewer. The project also includes the construction of a new chemical building at the site, including all associated chemical storage and handling systems, a chemical injection station, the removal of the existing well pump, and the installation of a new well pump; together with associated site work, fencing, water and washwater systems piping, electrical work, instrumentation, painting, and demolition.

Rehabilitation and Expansion of Lenain Water Treatment Plant | City of Anaheim, CA

Lead Inspector. A $10M project to expand and rehabilitate the Lenain Water Treatment Plant for the City of Anaheim. Work included demolition, grading, retaining walls, replacement of reservoir inlet valves, installation of 1,000 lineal feet of new 36-inch CML&C steel plant effluent piping, steel tank rehab, replacement of plate settlers, replacement of lamella plates, orifice plates, rapid mixer and flocculation mixer, washwater balance tank improvements, replacement of valves, actuators and chemical piping at the chemical feed facilities, electrical and instrumentation improvements and other appurtenant work.

Secondary Influent Pump Station Phases 1 and 2 – Joint Water Pollution Control Plant | Carson, CA

Lead Inspector. This two-phase, $5.6M project involved the following improvements: Phase 1 demolished and reinstalled District-furnished equipment, five 16-cylinder Waukesha natural gas-fired engines, Flowserve 81 PMR vertical pumps, and engine cooling radiators and continuous emission monitoring equipment. Phase 2 installed 18,000 gallon LPG storage tanks with fire protection systems as well as mechanical piping, valves, instruments and ABB local/remote controls.

Barrett Pump Station Replacement | East Orange County Water District (EOCWD), Tustin, CA

Construction Inspector. Construction of a pump station replacement. The project included preliminary and final design for the replacement of an existing pump station. The new

pump station was sized at 1,500 gpm and consisted of a package pumping system, associated piping, controls and valving. The construction included a temporary pumping system to allow for continued operation during construction and the replacement of an elevated transformer (SCE). The total construction cost for the project was $1.5M.

Lancaster Water Reclamation Plant Expansion, Stage 5 | Los Angeles County Sanitation Districts, Lancaster, CA

Lead Inspector. This $150M plant expansion involved construction of new reinforced concrete structures, tanks, pump stations, pipe galleries, digesters, and chemical stations; installation of a tertiary filtration system, sludge collection equipment, flare station, steam boiler room, process air compressors, dissolved air floatation equipment, fine bubble air diffusion equipment; installation of mechanical piping, valves, pumping equipment, instruments, and controls; and verification and acceptance of all mechanical installations, pressure testing and initial startup procedures.

Westlake Farm's Composting Facility Site Improvements | California Integrated Waste Management Board, CA

Construction Inspector. This $6.2M site improvements project was completed in two phases. Construction elements included: Line treated soil stabilization, grading and construction of roads onto site; installation of wick drains; and construction of 20" high pre-consolidation pile covering 17 acres. Additional elements included excavation/grading of borrow pits and double-lined storm water ponds.

Stage 3 Secondary Treatment Reactors and Clarifiers – Joint Water Pollution Control Plant | Los Angeles County Sanitation Districts, Carson, CA

Construction Inspector. This $91M project involved the construction of new reinforced concrete tanks, pipe galleries, and pump stations; installations of above and underground mechanical piping, valves, pumping equipment, instruments, and controls; and verification of all mechanical testing and startup.

Secondary Treatment Facility – Whittier Narrows Water Reclamation Plant | Whittier, CA

Construction Inspector. This $9M project constructed a new RAS pump station and pipe gallery; installed process air compresses and fine air diffusion; and involved mechanical piping, pumping equipment, power, and controls.

Rio Hondo River Diversion | City of Pico Rivera, CA

Construction Inspector. This $600K project required cutting into existing 10'x12' box culvert upstream of the river for construction of new reinforced concrete structure with inflatable rubber dam and 36" slide gate, level controls and instruments.

Carbon Scrubber and Bio-Trickling Odor Control Project | Joint Water Pollution Control Plant, Carson, CA

Construction Inspector. This $37M project involved construction of three independent systems to control odor from existing primary sedimentation tanks. Construction elements included construction of reinforced concrete structures; installation and support in place 72" to 6" FRP piping; installation of blower equipment, pumping equipment, instruments, and controls.

ED MACIAS, JR.

ELECTRICAL INSPECTOR

EDUCATION
- AS, Electronics Technology, Don Bosco Technical Institute, Rosemead, CA

LICENSES & REGISTRATIONS
- Water Distribution Operators Certification Course for Operators 1 and 2

YEARS OF EXPERIENCE
- 5 with MKN
- 27 Total

HOME OFFICE
- Varies

Ed Macias, Jr. specializes in electrical construction inspection services for water and wastewater treatment facility projects. Mr. Macias has over 26 years of experience providing electrical construction inspection services for water and wastewater treatment facilities projects. Ed has provided electrical inspections services for various clients such as the Los Angeles County Sanitation Districts (LACSD). He has extensive experience with electrical construction project management and design; electrical engineering startup and modifications of instrumentation and controls; control cabinet design and fabrication; third-party electrical point to point and functional system testing; various volt-free contacts (VFCs) installation; instrumentation and related accessory application, calibration, installation and internal operation; conduit installation (underground and exposed); and service and repair of wastewater flowmeters and instrumentation. Ed is also experienced with AutoCAD and HMI/SCADA software.

Rehabilitation and Expansion of Lenain Water Treatment Plant | City of Anaheim, CA

Electrical and Instrumentation Inspector. The $10M project was for the expansion and rehabilitation of the Lenain Water Treatment Plant for the City of Anaheim. Work included demolition, grading, retaining walls, replacement of reservoir inlet valves, installation of 1000 lineal feet Of new 36-inch CML&C steel plant effluent piping, steel tank rehab, replacement of plate settlers, replacement of lamella plates, orifice plates, rapid mixer and flocculation mixer, washwater balance tank improvements, replacement of valves, actuators and chemical piping at the chemical feed facilities, electrical and instrumentation improvements and other appurtenant work.

Owner's Agent/Owner's Engineer (OA/OE) Services for the Groundwater Reliability Improvement Program (GRIP) | Water Replenishment District of Southern California (WRD), CA

Electrical Inspector. Instrumentation and electrical start up and commissioning inspector. Ed was responsible for complete oversight of all aspects of the electrical work for this $120M design build project. WRD established the GRIP to find alternative sources of water to offset the imported water used for replenishment in the Montebello Forebay. As part of the GRIP, an advanced water treatment facility (AWTF) is being designed and constructed to treat 10,000 acre-feet per year of tertiary recycled water. The GRIP AWTF is located in a 5.2-acre lot, adjacent to the San Gabriel River in the City of Pico Rivera. Treatment processes include automatic strainer to protect downstream membrane treatments systems from large particles; microfiltration (MF) or ultrafiltration (UF) to reduce turbidity and silt density index (SDI) of reverse osmosis (RO) feed water; cartridge filtration to project downstream of the RO process; RO to remove salts, minerals, metal ions, organic compounds, and microorganisms; advanced oxidation with utraviolet light (UV) treatment using hydrogen peroxide in concert with UV to reduce N-Nitroso-Dimethylamine (NDMA) concentrations and provide additional disinfection; decarbonation to release excess carbon dioxide and stabilize the product water; and pH adjustment/corrosivity stabilization.

Vista Canyon Water Factory | City of Santa Clarita, CA

Construction Inspector. This $10M project constructed the Vista Canyon Water Factory - a tertiary wastewater treatment and recycling plant to treat wastewater generated from Vista Canyon Project in accordance with the requirements of California Code of Regulation, Title 22. During rainy weather, effluent will conveyed to downstream facilities of the Santa Clarita Valley Sanitation District (SCVSD) facilities. The Water Factory has a design capacity of 392,000 gallons per day (GPD), which generates 371,000 GPD of effluent to be recycled. The wastewater treatment process consists of influent pumping, screening, flow equalization, extended aeration activated sludge, disc filtration, and ultraviolet (UV) disinfection.

New Turn-Out Structures at the San Gabriel River Coastal Basin Spreading Ground | Water Replenishment District of Southern California, CA

Construction Inspector. The project entailed the construction of two new turn-out structures at the San Gabriel River Coastal Basin Spreading Grounds. The construction of the two new turn-out structures provided needed operational flexibility for the spreading of an additional 11,000 acre-feet per year (AFY) of tertiary recycled water and 10,000 AFY of advanced treated recycled water. Work included construction of the two new turn-out structures and associated discharge structures to the San Gabriel River.

EXPERIENCE

26 Years with N&M
38 Years Total

EDUCATION

MBA, 1998, University of California Davis
M.S., Geotechnical Engineering, 1989, University of California Berkeley
B.S., Civil Engineering, 1987, University of California Berkeley

REGISTRATIONS

PE 49665 (California)
GE 2509 (California)
Nuclear Gauge Operator Certification

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers

Garreth Saiki,

PE, GE

Principal Engineer

As a Principal Engineer for Ninyo & Moore, Mr. Saiki coordinates and conducts geotechnical evaluations for residential, commercial, and public facilities, including water infrastructure, highways, railroads, airports, public and private buildings, and bridges; performs slope stability analyses, flexible and rigid pavement design, and underground pipeline design; prepares and reviews geotechnical reports; and provides geotechnical design parameters and recommendations for shallow and deep foundations, retaining structures, in-situ ground remediation and earthwork; reviews laboratory results, project plans and specifications; Mr. Saiki also provides project coordination and oversees scheduling of field activities, supervises staff-level geologists and engineers, supervises field technicians and special inspectors, reviews project plans and specifications, and reviews laboratory test results for conformance with the project documents, including the Uniform Building Code (UBC), California Building Code (CBC), Federal Aviation Administration (FAA), State Department of Transportation (Caltrans), American Association of State Highway and Transportation Officials (AASHTO), and the Standard Specifications for Public Works Construction (Greenbook).

PROJECT EXPERIENCE

Orange County Water District/Santiago Valve Replacement, Orange, California: Principal-in-Charge providing oversight for geotechnical materials testing services during construction of Orange County Water District's (OCWD) Santiago Pipeline Butterfly Valve Replacement project located at the Santiago Basin in Orange, California. The project consisted of the replacement of the 66-inch butterfly valve, relocation of a vent pipeline, installation of a 12-foot-diameter precast manhole structure, and backfill of the excavation. The excavation is approximately 20 feet wide by 40 feet long and is approximately 30 feet deep. The scope of services consisted of observation and testing services during backfill of the structure.

Lift Station No. 2 Replacement project. Laguna Niguel, California: Principal-in-Charge providing oversight for geotechnical testing services during construction of the Lift Station No. 2 Replacement project. The project consisted of reconstructing the existing lift station facility. The project structures included a lift station, control building, generator building, garage building, SDG&E transformer pad, site walls, retaining walls, SCADA antenna tower, vaults and drainage structures. The lift station included cast-in place concrete well below existing grade. eotechnical services included observation and testing during compacted fill, structural and trench backfill, subgrade preparation and asphalt concrete placement. Field density testing was performed during fill placement to evaluate the contractor's compaction efforts. Materials testing services include concrete sampling and testing. Specialty inspection included concrete, masonry and

welding inspection. Laboratory testing included Proctor density, sieve analysis, sand equivalent and concrete compressive strength testing.

Ion Exchange PFAS Treatment System, Montebello, California: Mr. Saiki provided project coordination and management, including work scheduling and review of the project plans, specifications, geotechnical report and contract documents. He provided reinforced concrete deputy inspection services during structural reinforced concrete construction, including inspection during installation of rebar, formwork, anchor bolts, and plates, as well as continuous inspection during concrete placement, including sampling and testing of concrete and non-shrink grout. Ninyo & Moore geotechnical and materials testing and deputy inspection services pertaining to construction of the ION Exchange PFAS Treatment System project located at 344 East Madison in Montebello, California. The project consisted of upgrading the existing water treatment facility that includes areas of new utility pipeline, equipment pad, vault and exterior hardscape construction, as well as construction of a 45 feet wide x 72 feet long at grade Filter Vessel Treatment Pad Structure and a 18 feet wide x 27 feet long at grade chemical storage building.

Wells 21 and 22 Wellhead Facilities, Tustin, California: Mr. Saiki provided project coordination, management and technical support. Ninyo & Moore provided materials testing services during construction of the Wells 21 & 22 Wellhead Facilities and Pipelines project in Tustin, California. The project consisted of installing approximately 6,800 linear feet of untreated water pipeline, approximately 1,300 linear feet of well pump-to-waste pipeline, approximately 12,600 linear feet of product water pipeline and approximately 1,570 linear feet of non-reclaimable waste pipeline, as well as pavement replacement along the pipeline alignments, wellhead facility site improvements also included a new concrete vault, utilities, piping, concrete pads, asphalt pavement and block walls. Field services included sampling and testing of structural concrete, subgrade (SG), aggregate base (AB) and asphalt concrete (AC). Our services also included batch plant inspection during production of asphalt concrete.

Moulton Niguel Water District, Regional Lift Station Force Main, Laguna Niguel, CA, Principal-in-Charge provided project oversight for geotechnical testing services during construction of the Moulton Niguel Water District Regional Lift Station Force Main Replacement project. The project consists of installing 7,290 linear feet of 24-inch diameter dual force main pipe. The construction will also include connections at the Treatment Plant and Lift Station, 4-inch sludge main relocation, repurposing of the 24-inch force main and a temporary by-pass.

South Coast Water District, Lift Station No. 6, Dana Point, California: Principal Engineer for geotechnical testing services during construction of the Lift Station No. 6 Force Main Replacement Project in Dana Point, California. The project consisted of installation of a new asphalt leveling course, fabric, and rubberized asphalt paving along Pacific Coast Highway between Crown Valley Parkway and Point Monarch Drive. Services included project oversight, management and technical support including review of the project geotechnical reports, plans and specifications.

Inland Empire Utilities Agency, Lift Station at San Bernardino Avenue, Fontana, California: As Principal Engineer provided geotechnical consulting, materials testing, and deputy special inspection services during construction of the San Lift Station at San Bernardino Avenue project located at the Inland Empire Utilities Agency's Lift Station facility Fontana, California. The project consisted of construction of a new below grade reinforced concrete lift station structure, as well as a new above grade reinforced masonry electrical building. Our geotechnical services included review of project geotechnical reports, plans, and specifications. Our field services included density testing during the lift station and electrical building overexcavation and recompaction operations, as well as deputy special inspection services during the project reinforced concrete and masonry construction. Services were requested to ensure the construction operations were performed in accordance with the project plans and specifications.

EXPERIENCE

14 Years with N&M
30 Years Total

CERTIFICATIONS

ACI Field Testing Technician Grade I
City of Los Angeles Deputy Grading Inspector
Radiation (Nuclear Gauge) User Safety

Steve Eck

Senior Field Technician

As a Senior Field Technician for Ninyo & Moore, Mr. Eck performs field testing of concrete and asphalt concrete, inspection of asphalt and concrete batch plants, geotechnical laboratory testing, quality control for all laboratory procedures, including fulfilling requirements for ASTM, AASHTO, CALTRANS, ACI, and UBC Standards. Additionally, he provides geotechnical observation and testing services for earthwork projects. His field experience includes drill foundation, slope stability reconstruction, mass grading, and individual building pad overexcavation and recompaction; canyon clean-outs, retaining walls, structural, and trench backfills; caisson excavation and pile driving observation and documentation; roadway testing during subgrade, aggregate base, and asphalt concrete construction.

PROJECT EXPERIENCE

SA-5 Vault Modifications - Project No. 11-6413, Santa Ana, California: Served as Senior Field Technician providing geotechnical and materials testing services pertaining to construction of the SA-5 Vault Modifications The planned project consisted of installation of a combined total of approximately 275 linear feet of new 16-inch diameter and 18 inch diameter water main pipeline, as well as new flow control vault installation construction.

Irvine Ranch Water District/IRWD Fleming Reservoir and Pump Station Project, Irvine, CA: Served as Senior Field Technician providing geotechnical and materials testing services during construction of the Fleming Reservoir and Pump Station project. The project consists of a new 1.3MG Reservoir, a new RMS Building, Pump Station, Storage Building, and various site improvements. The reservoir is an 80-feet diameter DYK type design concrete tank with seismic cables, tensioning rods, shotcrete exterior over stressed strands and steel stairs. Other site improvements included yard piping, overflow vault, drain inspection vault, sewer holding tank, generator, retaining walls, storm drain system with biofiltration, surge tank, pipe support structures and asphalt concrete pavement. Geotechnical services included observation and testing during compacted fill, trench backfill and subgrade preparation. Field density testing was per-formed during fill placement to evaluate the contractor's compaction efforts. Materials testing services include concrete sampling and testing. Laboratory testing included Proctor density, sieve analysis, sand equivalent and concrete compressive strength testing.

IRWD/Syphon Reservoir Improvement, Irvine, CA: Served as Senior Field Technician providing geotechnical, materials testing and special inspection services during construction of the Syphon Reservoir Improvements project. The project consisted of constructing a new access road into the reservoir site. The improvements included a new retaining wall, soil nail wall, storm drain system asphalt concrete pavement, light poles, slurry seal and concrete sidewalks, curb & gutter, curb ramps and driveways.

Steve Eck,
Senior Field Technician

IRWD/ILP North Conversion Santiago Hills Reservoir, Orange, CA: Served as Senior Field Technician providing geotechnical and materials testing services during construction of the ILP North Conversion Santiago Hills Zone C+ Reservoir project. The project generally consisted of a new concrete reservoir, modifica-tion at the Rattlesnake Complex and modifications at the Orchard Hills Strainer Facility. The new reser-voir is a 2.4 MG buried prestressed concrete tank. Other project improvements included two geo-grid reinforced retaining walls, yard piping, buried concrete structures, concrete equipment and tank pads, and other various improvements. The earthwork for the tank pad preparation included over-excavation and recompaction to provide 3 feet of engineered fill and 12-inches of aggregate base below the tank.

IRWD/Orange Park Acres Well No. 1 Wellhead Facilities, Orange, California: Served as Senior Field Technician to provide geotechnical observation and testing services during construction of the proposed Orange Park Acres Well No. 1 Wellhead Facilities Project located in Orange, California. The project consisted of constructing a well/booster pump building including a 15 foot deep clear well, chemical building, surge tank & pad, concrete masonry unit site walls and associated site underground utilities and electrical service facilities, as well as site paving.

IRWD/Baker Water Treatment Plant, Lake Forest, CA: Served as Senior Field Technician providing geotechnical observation and testing during construction of the Baker Water Treatment Plant project located in Lake Forest, California. The project generally consisted of constructing several new structures, including a flow control facility, three pump stations, chemical building and treatment building. The project also included yard piping, overflow pipe and a product water line. The structures are supported by mat slabs and shallow spread footings. The site improvements also included retaining walls and new access roads. The earthwork for the building pad preparation included over-excavating up to 25 feet in depth. Site earthwork also included excavation for foundations, structural backfill, trench backfill and subgrade preparation.

IRWD/Woodbridge Recycled Water Pipeline, Irvine, CA: Senior Field Technician for geotechnical testing services during construction of the Woodbridge Reclaimed Water Main project. The project included 47,200 linear feet of new underground piping. The project also included new hardscape, and asphalt concrete pavement. Geotechnical services included observation and testing during trench backfill, subgrade preparation and asphalt concrete placement. Field density testing was performed to evaluate the contractor's compaction efforts. Laboratory testing included Proctor density, sand equivalent and Hveem stability & unit weight testing.

IRWD/ Wells 21 and 22 Desalter Facility, Irvine, CA: Senior Field Techncian providing soils and material testing services during construction of the Wells 21 and 22 Desalter project, located in Tustin, California. The project consisted of constructing a new Reverse Osmosis Treatment Plant Building. The project delivery method was design/build. Services included concrete sampling in the field and soils density testing during building pad preparation, subgrade, aggregate base, asphalt concrete, as well as during the trench and structural backfill operations.

Wilson Reservoir Replacement Project, South Pasadena, California: Senior Field Technician retained for materials testing and special inspection services during construction of Wilson Reservoir Replacement Project. The project consisted of replacing the existing reservoir and various improvements at the existing site. The new structures included new Pump Station and Operations buildings, as well as new Clearwell and Reservoir structures. Services included field observation and testing as well as provided as-needed reinforced masonry special inspection services for the areas of reinforced masonry construction. Services also included laboratory testing services that included sieve analysis, sand equivalent, proctor density, and asphalt concrete maximum density testing, as well as concrete, grout and mortar compressive strength testing and concrete shrinkage testing.

B
APPENDIX

REQUIRED STATEMENTS

B APPENDIX B REQUIRED STATEMENTS

Insurance Compliance

MKN CPM, LLC., will meet the insurance requirements that are listed in the Services Agreement as exhibited in Exhibit C of the RFP.

OCWD Standard Agreement

MKN CPM, LLC., acknowledges and accepts OCWD's form of Services Agreement as exhibited in Exhibit C of the RFP.

Billing

MKN CPM, LLC., will meet the minimum billing requirements specified in RFP, 6.1.10 – Billing.

Conflict of Interest

MKN CPM, LLC., individuals employed by MKN CPM, LLC., and firms employed by or associated with MKN CPM, LLC., do not have a conflict of interest with the Project. MKN CPM, LLC., shall exercise reasonable efforts to prevent any actions or conditions that could result in a conflict of interest.

Statement of Equal Employment Opportunity/Affirmative Action

MKN CPM, LLC., and all subconsultants/subcontractors shall not discriminate in the employment of persons on the work because of race, religious creed, color, national origin, ancestry, physical handicap, medical condition, marital status, sexual preference or sex of such persons.

MKN CPM, LLC., will maintain policies similar to those of the District regarding equal employment opportunities and affirmative action as set forth in the District's Administrative Policies.

C
APPENDIX

ATTACHMENT NO. 1

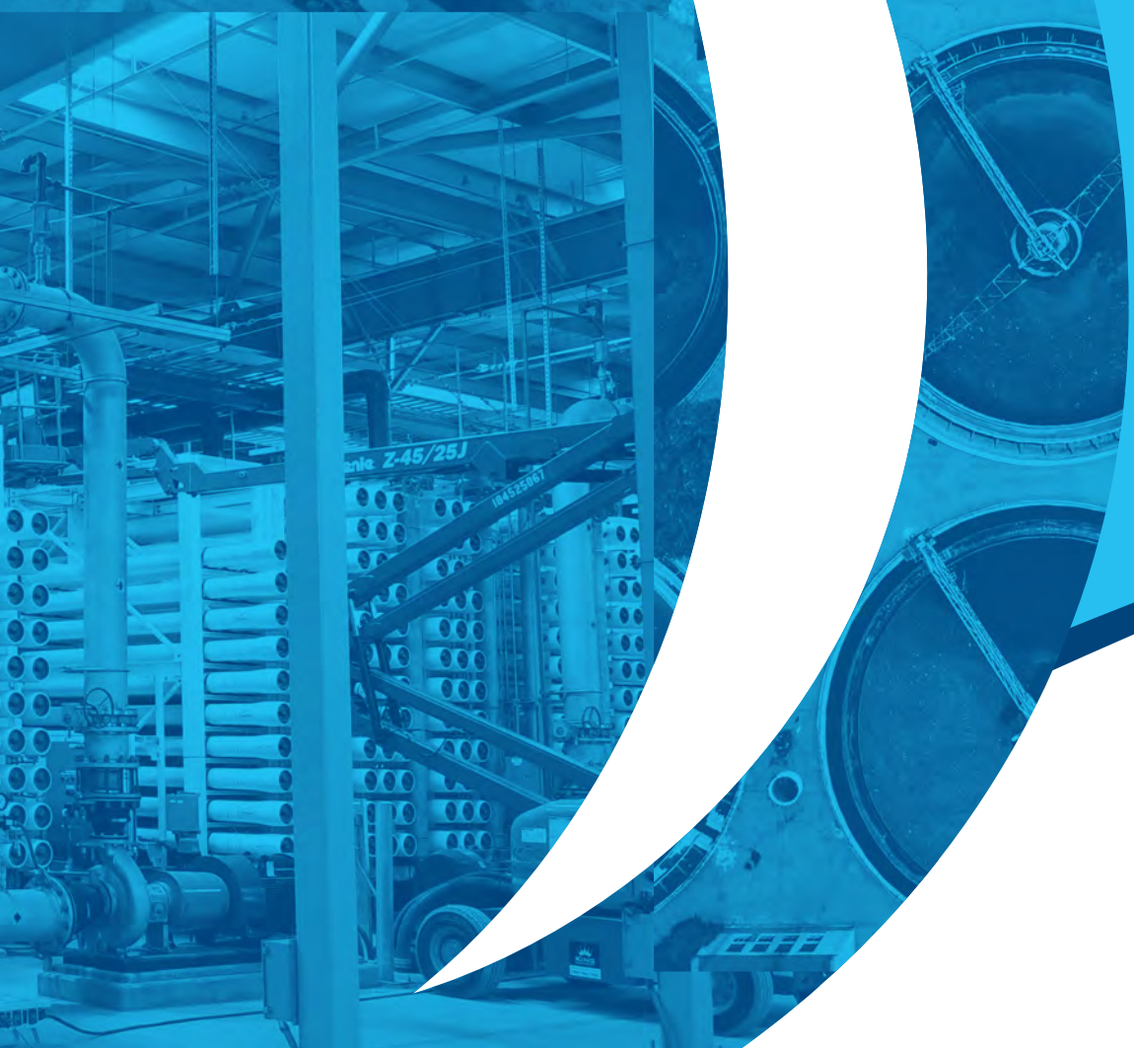
C APPENDIX C ATTACHMENT NO. 1

ATTACHMENT NO.1

Request for Proposals (RFP) Submittal Checklist

The following submittals shall be completed and submitted with each Proposal package (see table below for the "Required Submittal Checklist."). This table has been provided as a convenience for proposers to use as a reference only. Ultimately, it is the Bidder's sole responsibility to ensure that their Proposal complies with all requirements of the RFP, and all the required submittals are included in the Proposal package before it is formally submitted to OCWD. Bidders may be deemed non-responsive if they do not respond to all areas specified in the RFP.

Item No.	Required Submittal Checklist	Check (√)
1	Signed Proposal package including:	√
2	Title Page	√
3	Cover Letter	√
4	Experience and Record of Past Performance	√
5	Project Team and Qualifications	√
6	Project Overview and Approach	√
7	Statement of Insurance Compliance • A statement accepting the requirements stated in Section 6.1.8 of the RFP.	√
8	OCWD Standard Contract: • A statement accepting the requirements stated in Section 6.1.9 of the RFP.	√
9	Billing • A statement accepting the requirements stated in Section 6.1.10 of the RFP.	√
10	Conflict of Interest • A statement accepting the requirements stated in Section 6.1.11 of the RFP.	√
11	Equal Employment Opportunity and Affirmative Action Requirements • A statement accepting the requirements stated in Section 6.1.12 of the RFP.	√
12	Price Proposal (Separate Sealed Envelope)	√
13	Addenda Acknowledgement Forms (if applicable)	√



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
702 Civic Center Drive, Suite 104
Oceanside, CA 92054

San Jose
100 Century Center Court, Suite 670
San Jose, CA 95112

San Luis Obispo/Corporate Office
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

www.mknassociates.us

3 FEE PROPOSAL

	Peter Brennan, Principal-in-Charge	Jon Dahl, Resident Engineer	Michelie Little, Assistant Resident Engineer	Larry Lewis, Inspector	Ninyo & Moore (Sub-consultant)	Total Hours (MKN)	Total Fee (MKN)
Hourly Rates	272	212	200	200			
Budget Spread Among Relevant Tasks							
Task No. 1: Construction Management							
Task 1.1 Construction Management Plan	2	4	8	0	0	14	$2,992
Task 1.2 Meetings	6	24	24	0	0	54	$11,520
Task 1.3 Progress Reporting	4	6	12	0	0	22	$4,760
Task 1.4 Correspondence	2	16	8	0	0	26	$5,536
Subtotal	**14**	**50**	**52**	**0**	**0**	**116**	**$ 24,808**
Task No. 2: Construction Administration							
Task 2.1 Submittals and Requests for Information	0	20	20	0	0	40	$8,240
Task 2.2 Extra Work, Change Orders, and Disputes	4	20	20	0	0	44	$9,328
Task 2.3 Design Clarifications	0	6	2	0	0	8	$1,672
Task 2.4 Progress Payments	2	6	2	0	0	10	$2,216
Task 2.5 Record Drawings	0	6	2	0	0	8	$1,672
Task 2.6 Operations and Maintenance Manuals	0	6	2	0	0	8	$1,672
Task 2.7 Environmental and Regulatory Agency Compliance	2	10	2	0	0	14	$3,064
Subtotal	**8**	**74**	**50**	**0**	**0**	**132**	**$ 27,864**
Task No. 3: Inspections							
Task 3.1 Construction Inspections	0	0	0	540	0	540	$108,000
Task 3.2 Inspection Reports	0	0	0	72	0	72	$14,400
Task 3.3 Specialty Inspection Coordination	0	0	0	72	0	72	$14,400
Subtotal	**0**	**0**	**0**	**684**	**0**	**684**	**$ 136,800**
Task No. 4: Project Startup							
Task 4 Overall Project Startup	0	16	10	0	0	27	$5,511
Subtotal	**0**	**16**	**10**	**0**	**0**	**27**	**$ 5,511**
Task No. 5: Project Closeout							
Task 5 Overall Project Closeout	2	32	22	0	0	56	$11,728
Subtotal	**2**	**32**	**22**	**0**	**0**	**56**	**$11,728**
Task No. 6: Supplemental Services							
Task 6.1 Specialty Materials Testing	0	0	0	0	550	0	$42,128
Task 6.2 Safety & Site Housekeeping	0	0	0	36	0	36	$7,200
Subtotal	**0**	**0**	**0**	**36**	**550**	**36**	**$ 49,328**
Total Services	**24**	**172**	**134**	**720**	**550**	**1057**	**$256,039**
Task No. 7 Additional Services for the Benefit of the Project (Optional)							
Direct Expenses	0	0	0	0	0	0	$5,000
Alternate Tasks Subtotal	**0**	**0**	**0**	**0**	**0**	**0**	**$ 5,000**
Total with Alternate Tasks	**24**	**172**	**134**	**720**	**0**	**1057**	**$261,039**
TOTAL FEE + SUBCONSULTANTS	**24**	**172**	**134**	**720**	**0**	**1057**	**$261,039**

16310 Bake Parkway
Irvine, CA 92618
949-637-3999 PHONE

June 17, 2025

Larry Esguerra, P.E.
Senior Engineer
Orange County Water District
Sent Electronically

Re: Anaheim Lake Valve Vault —Amendment #2 Proposal

Dear Mr. Esguerra,

MKN & Associates, Inc. (MKN), is pleased to submit this amendment proposal to Orange County Water District (District) to provide engineering services during construction.

Project Background

MKN was contracted to complete the design documents related to improvements at the Anaheim Lake facility. The Project, referred to as the Anaheim Lake Valve Vault Project, includes replacement of existing valves and electrical equipment, and installation of a new buried vault to support future maintenance and replacement of these valves. The project is anticipated to bid Summer 2025.

MKN has prepared this scope of work to provide ongoing engineering services during construction.

Scope of Work

Task Group 4 – Engineering Services During Construction

Task 4.1 – Project Management

Overall project management, which includes supervision of in-house staff, planning and monitoring of contract budget and schedule, and coordination with the Agency and Consultant's project team will be conducted by the Consultant Project Manager. The Project Manager will review the status of budget, schedule, and relevant project issues with the Agency's Project Manager on a monthly basis via email or telephone. The construction phase is assumed to be 15 months. Consultant will provide senior technical review and implement our quality assurance and quality control (QA/QC) measures throughout the project.

Task 4.2 – Conformed Drawings

Consultant will compile Issued for Construction Documents (conformed drawings and specifications); one PDF copy.

Task 4.3 – Pre-Construction Meeting

Consultant will attend the pre-construction meeting for the Project. Consultant will provide input to the agenda, assumed to be prepared by the District's Construction Manager/Project Manager, and will provide meeting minutes. Attendance to this meeting is assumed to be in-person.

Task 4.4 – Construction Coordination Meetings

Consultant will attend construction meetings with the contractor, subcontractors, utility representatives, permit agencies, and District staff. Attendance at up to two meetings per month during initial procurement period (4 months), and weekly meetings for onsite construction period (4 months) is assumed; total of 30 construction meetings. These meetings are assumed to be virtual.

Task 4.5 – Contract Change Orders/Plan Revision

Analyze and make recommendations to District staff regarding contract change orders and plan revisions requested during the course of the construction project. Change orders will be evaluated from an engineering perspective. Up to three (3) are assumed.

Task 4.6 – Requests for Information

Review, coordinate with District staff and respond to contractor's Requests for Information (RFIs). When appropriate, suggestions and alternatives will be provided to the contractor and/or District staff. A log of RFIs will be maintained. Consultant has assumed a total of 20 RFIs.

Task 4.7 – Shop Drawing Review

Receive and review technical documents submitted by Contractor. Submittals will be reviewed by the Engineer for general conformance to the Contract Documents. Subsequent to Engineer's review, Engineer will return the submittal to the Contractor. Consultant will maintain a log of shop drawings that have been submitted, and the disposition; the log will only include submittals reviewed by the Consultant.

Consultant has assumed 30 submittals and resubmittals will be reviewed. Consultant anticipates that District Project Manager/ Construction Manager will review submittals for completeness and consistency with contract requirements (i.e. format), prior to issuing to Consultant for review.

Task 4.8 – Technical Site Visits

Consultant shall provide as-needed technical support, as requested by District. A maximum of 25 hours have beenassumed for up to three (3) site visits. Consultant can be onsite with 72-hour notice. Effort includes coordination with District/Contractor, review of relevant information and documentation of findings/observations.

Task 4.9 – Record Drawings

Prepare construction record drawings (AutoCAD) based on information (redline markups) supplied by thecontractor. Assumed final drawing set is 32 sheets. Record drawings will be provided as PDF to the District.

Task 4.10 – Additional Design Services

During final design, additional items were requested for modification which were outside the scope of the original and amended contract. These services include modification to ARV locations and access

points for both the 48-inch and 72-inch piping, update incomplete pipe support detail, update incomplete butt strap detail, working with CAD files that did not align with the 2019 PDF plans given, exporting the PDF specification sections, updating the front ends to current Project information, and updating and formatting twelve (12) additional specification sections.

Fee Estimate

MKN proposes to complete this work on a time and materials basis with a budget not to exceed $155,177, based on the 2025 MKN rate schedule, included as Exhibit A. The estimated level of effort is provided as Exhibit B.

Description	Value
Base Contract	$62,854
Amendment No. 1 – Additional Design	$33,200
Current Contact Authorization	$96,054
Amendment No. 2 - ESDC	$155,177
New Contract Total	$251,231

We look forward to continuing our work with the District to ensure the successful completion of the project, and we appreciate your consideration of this request. Should you have any questions or wish to discuss any of the information presented herein, please do not hesitate to contact me at your convenience. My phone number is (714) 213-9758 and email is rgallagher@mknassociates.us.

Sincerely,

Ryan Gallagher, PE
Principal

Enclosures:

1) Exhibit A – 2025 MKN Rate Schedule
2) Exhibit B – Proposal Fee

2025 FEE SCHEDULE

CATEGORY	POSITION	HOURLY RATE
Communications and Administrative	Administrative Assistant	$113
	Strategic Communications Coordinator	$126
	Strategic Communications Specialist	$168
Designers and Technicians	CAD Technician I	$152
	CAD Design Technician II	$173
	Senior Designer	$185
Planning	Assistant Planner I	$165
	Assistant Planner II	$184
	GIS Specialist	$184
	Planner I	$203
	Planner II	$218
	Senior Planner	$246
Engineers	Engineering Technician	$123
	Assistant Engineer I	$165
	Assistant Engineer II	$184
	Project Engineer I	$203
	Project Engineer II	$218
	Senior Engineer I	$238
	Senior Engineer II	$251
	Senior Engineer III	$267
	Principal Engineer	$289
Project Management	Project Manager	$256
	Senior Project Manager	$267
	Project Director	$312
	Senior Project Director	$329
Construction Management Services	Scheduler	$179
	*** Construction Inspector	$200
	Assistant Resident Engineer	$200
	Resident Engineer	$212
	Construction Manager	$231
	Principal Construction Manager	$272

The foregoing Billing Rate Schedule is effective through December 31, 2025 and will be adjusted each year after at a rate of 2 to 5%.

DIRECT PROJECT EXPENSES

Outside Reproduction	Cost + 10%
Subcontracted or Subconsultant Services	Cost + 10%
Travel & Subsistence (other than mileage)	Cost
Auto Mileage	Current IRS Rate

*** 40 hrs per week assumed; part-time rates can be provided upon request
Rates also subject to prevailing wage mandatory increases during a calendar year

ORANGE COUNTY WATER DISTRICT
ANAHEIM VALVE VAULT

	Senior Project Director	Principal Engineer	Senior Engineer I	Project Engineer I	Senior Designer	Administrative Assistant	Total Hours (MKN)	Labor (MKN)	Structural-Beyaz and Patel	Electrical- GGI	Non-Labor Costs	Total Fee
Hourly Rates	329	289	238	203	185	113						
Task Description												
Task 4.1 Project Management (15 mo.)		12	20			15	47	$ 9,923	$ -	$ -	$ -	$ 9,923
Task 4.2 Conformed Drawings			5		10	6	21	$ 3,718	$ 3,080	$ -	$ 3,080	$ 6,798
Task 4.3 Pre-Construction Meeting		2	4				6	$ 1,530	$ 330	$ 484	$ 814	$ 2,344
Task 4.4 Construction Meetings (30)	10		30				40	$ 10,430	$ 2,750	$ 1,210	$ 3,960	$ 14,390
Task 4.5 Change Order/ Plan Revision (3)	10		12	16	28	8	74	$ 15,478	$ 5,500	$ 5,500	$ 11,000	$ 26,478
Task 4.6 Request for Information (20)	15		20	20	3	4	62	$ 14,762	$ 5,500	$ 1,210	$ 6,710	$ 21,472
Task 4.7 Shop Drawing Review (30)	20		30	40		6	96	$ 22,518	$ 11,000	$ 1,210	$ 12,210	$ 34,728
Task 4.8 Technical Visits (3)	6		15				21	$ 5,544	$ 2,200	$ 1,210	$ 3,410	$ 8,954
Task 4.9 Record Drawings (32)			10		16		26	$ 5,340	$ 2,860	$ 1,452	$ 4,312	$ 9,652
Task 4.10 Additional Design Services		4	45	24	20		93	$ 20,438	$ -	$ -	$ -	$ 20,438
Subtotal	61	18	191	100	77	39	486	$ 109,681	$ 33,220	$ 12,276	$ 45,496	$ 155,177
TOTAL BUDGET	61	18	191	100	77	39	486	$ 109,681	$ 33,220	$ 12,276	$ 45,496	$ 155,177

AGENDA ITEM SUBMITTAL

Meeting Date: September 10, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: M. Plumlee

Budgeted: Yes
Budgeted Amount: $80,000
Cost Estimate: $130,000
Funding Source: R&R
Program/ Line Item No. R24005
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: ANNEX BUILDING FLOORING REFURBISHMENT – PUBLICATION OF NOTICE INVITING BIDS

SUMMARY

The Annex building at the District's Fountain Valley headquarters is occupied by the Research & Development (R&D) Department and the National Water Research Institute (NWRI). Replacement of the flooring (approximately 4,100 square feet, aged 20+ to 35+ years) throughout these spaces is necessary to maintain functionality, address wear-and-tear, and replace aged carpeting positioned immediately outside the R&D laboratories with more appropriate flooring compatible with adjacent laboratory work.

RECOMMENDATION

Agendize for September 17 Board meeting: Authorize publication of Notice Inviting Bids for Annex Building Flooring Refurbishment Project.

BACKGROUND/ANALYSIS

The Annex building was constructed in the early 1980s and is located on the District's Fountain Valley campus. Both the OCWD Research and Development (R&D) Department and the National Water Research Institute (NWRI) occupy the Annex building. The flooring in the parts of the building used by R&D and NWRI has reached the end of its useful life. The first floor (approximately 900 square feet) consists of an entry area with stairway and elevator to second floor, three offices and hallway utilized by NWRI staff (all featuring carpeted flooring), in addition to a restroom and kitchen break room utilized by NWRI, R&D, and Water Production staff (tile flooring). The second floor (approximately 3,200 square feet) consists of a landing, five offices, a conference room and hallways (all carpeted) as well as six laboratory rooms (various flooring styles, typically linoleum) located along the carpeted hallways. There is also a microscope laboratory room (carpeted since it was previously an office), a restroom (tile flooring), and a back emergency stairwell (linoleum).

The flooring has incurred significant wear-and-tear due to normal use and has reached the end of its usable life. Figures 1 to 3 show various examples of the flooring in these spaces. Its age ranges 20+ to 35+ years depending on the room, with the newest flooring being the blue carpeting throughout the first and second floors that was replaced in the early 2000s. Typically, carpet is not selected as a flooring material for offices and hallways adjacent to

a laboratory environment since staff go back-and-forth between these spaces; however, the Annex building was originally occupied by non-laboratory departments. The six laboratories feature four different flooring styles in terms of material or color.

Flooring replacement is recommended for the first and second floors (totaling approximately 4,100 square feet) to maintain safety, functionality, cleanliness, and to address decades of wear-and-tear. The type of flooring would be selected as appropriate for the space, e.g., tile for restrooms and kitchen, non-carpet flooring (e.g., LVT) for entry, offices, hallways, stairs, and finally, laboratory flooring for the laboratories (e.g., epoxy). Suitable flooring in a laboratory environment must meet certain performance standards such as chemical resistance and durability from foot traffic and movement of equipment, as well as ease of cleaning.

Purchasing staff worked with R&D staff to publish a Request for Information (RFI) to aid with development of the project scope of work and to identify suitable flooring material specification and types. The scope of work will include removal and return of office furniture, flooring demolition, and installing new flooring in the various rooms and two stairways using appropriate flooring types. Based on the information received from the RFI, the project cost estimate has been increased from $80,000 originally budgeted in R&R for FY25-26 to $130,000. This is largely due to increasing the scope of work to add the two restrooms, back stairwell, and shared kitchen breakroom flooring to the originally planned first and second floor offices and laboratories flooring. Staff will return to the Board later this Fall to authorize an agreement and establish the project budget after quotes are received and reviewed. The work is expected to be completed this winter, in a two to three-week period, which should minimize impacts to staff.

Figure 1: Various R&D laboratories' flooring features scuffing and general wear-and-tear.

Figure 2: R&D laboratory flooring (left) and same linoleum flooring in back stairwell (middle and right).

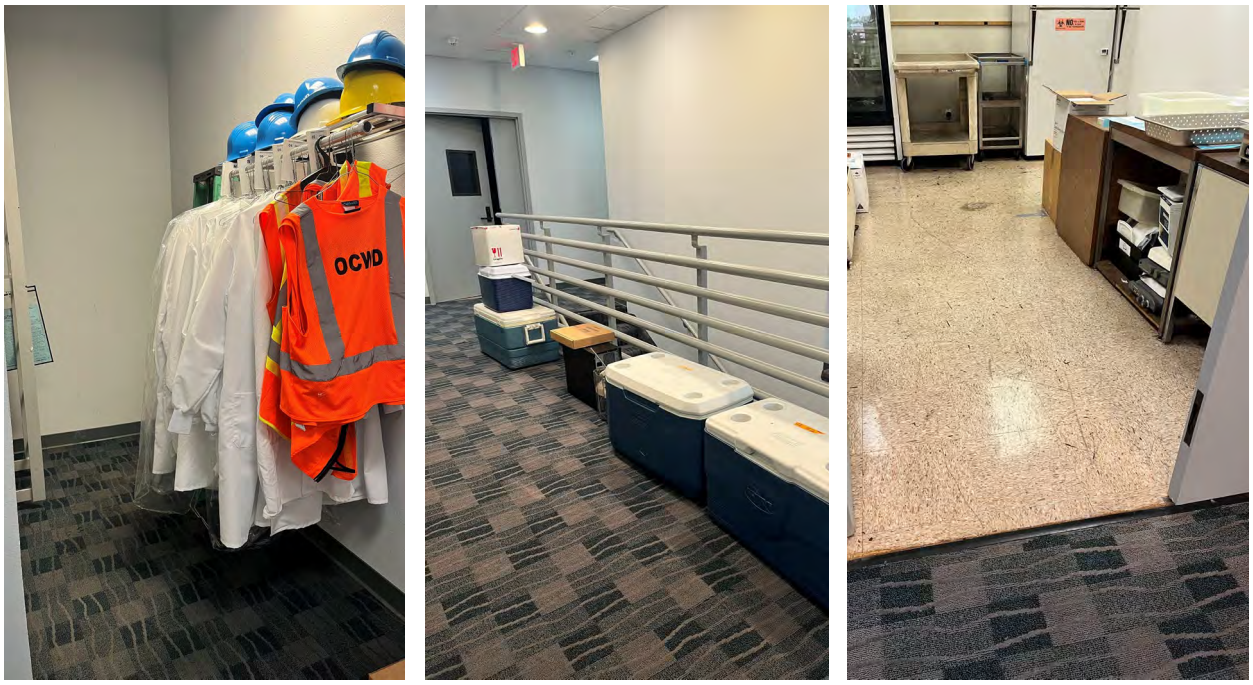


Figure 3: Carpeting in general purpose areas outside of R&D laboratories.

PRIOR RELEVANT BOARD ACTION(S)

None

AGENDA ITEM SUBMITTAL

Meeting Date: September 10, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: R. Bouley/A. Waite

Budgeted: Yes
Budgeted Amount: $1,100,000
Cost Estimate: $0
Funding Source: General Fund
Program/ Line Item No. 1070.57016.2039
General Counsel Approval: Yes
Engineers/Feasibility Report: No
CEQA Compliance: EIR

Subject: REJECT BIDS FOR CONTRACT NO. PB-2025-1 PRADO BASIN SHORT TERM SEDIMENT REMOVAL COMPLIANCE PROJECT

SUMMARY

Construction bids were received on July 24, 2025, for the Prado Basin Short Term Sediment Compliance Project – Phase I, Contract No. PB-2025-1 (the "Project"). Due to permitting delays beyond control of OCWD, the project will not be able to move forward within this calendar year. Staff recommends rejecting all bids received for PB-2025-1.

Attachment: Affidavit of Publication for Notice Inviting Bids for Contract PB-2025-1

RECOMMENDATION

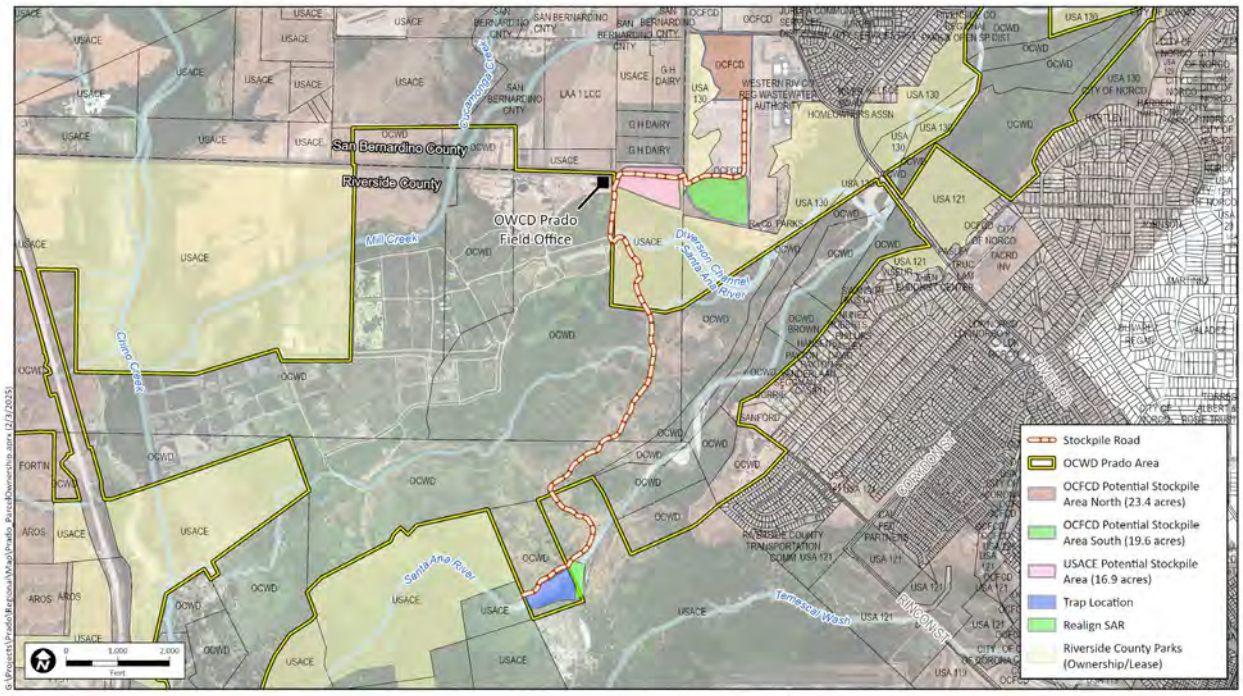
Agendize for September 17 Board meeting:

1. Receive and file Affidavit of Publication of Notice Inviting Bids for PB-2025-1 Prado Basin Short Term Sediment Removal Compliance Project – Phase I;
2. Ratify issuance of Addendum No. 1;
3. Reject all bids for Contract PB-2025-1 Prado Basin Short Term Sediment Removal Compliance Project – Phase I.

BACKGROUND/ANALYSIS

The Short-Term Sediment Removal Compliance Project – Phase I represents the first phase in meeting the OCWD's obligation to the United States Fish and Wildlife Service to remove 250,000 cubic yards of sediment from within Prado Basin. The Project includes preparation of a stockpile site on property owned by the County of Orange, improvements to an existing haul road that partially traverses US Army Corps of Engineers (Corps) property in the Basin, excavation of 100,000 cubic yards of sediment from the existing sand trap constructed in 2020 and stockpiling the material in an accessible area. The goal of the project is to remove the sediment from the SAR alignment and stockpile the material so that it is available to beneficial users, such as Orange County Transit Authority, year-round. A figure of the short-term sediment removal project approach indicating the sediment trap location, access road, and stockpile locations are shown in Figure 1.

Figure 1: Prado Basin Short-Term Sediment Removal Compliance Project: Sediment Trap, Access Road, and Stockpile Locations



The originally approved budget for this Project for FY25/26 provided for completing design and beginning preparation of the stockpile site. Excavation of the sediment, hauling, and stockpiling was estimated to begin in FY26/27 and thus was not included in this fiscal year's budget. However, increased interest in the sediment from beneficial users, such as OCTA and the City of San Clemente, accelerated the Project timeline, and Staff worked at an accelerated pace with several regulatory agencies in an attempt to obtain permits that would allow the work to start in Fall, 2025. These agencies, including County of Orange, the Corps, and State Water Board, all indicated a high likelihood that they would be able to meet OCWD's timelines for a Fall start during preliminary and ongoing discussions.

The Project was advertised for bid on July 2, 2025, and Addendum No. 1 was issued to provide revised project specifications and to provide responses to potential bidders' questions. Nine construction bids were received on July 24, 2025. In addition, a Request for Proposals for Construction Management Services for the Project was posted on the District's website on July 8, 2025. One proposal for Construction Management Services was received by OCWD.

In mid-August, the Corps notified Staff that due to staffing issues, they are unable to meet the originally anticipated permitting schedule of Fall 2025. Additionally, the County of Orange also determined that they are unable to provide the property access to the stockpile storage site in the expedited manner originally envisioned during early discussions. These two factors prevent the project from moving forward during Fall 2025. However, the project will be able to move forward at a later date, once permits are finalized. The expected project schedule is shown below in Table 1.

Table 1: PB-2025-1 Prado Basin Short Term Sediment Removal Compliance Project – Phase I
Schedule Summary

Description	Date
Design	May 2025 – June 2025
Permitting: United States Army Corps of Engineers, United States Fish and Wildlife Service, County of Riverside, and County of Orange	June 2025 – Sep 2026
Construction Contract PB-2025-1	Sep 2026 – Dec 2026

Due to the significant delay in permitting being completed, Staff recommends rejecting all bids received for Contract PB-2025-1 Prado Basin Short Term Sediment Removal Compliance Project – Phase I. Staff will return to the Board to request authorization to bid the project once permits are finalized and the project can move forward.

PRIOR RELEVANT BOARD ACTIONS

6/18/25, R25-6-105: Authorize publication of Notice Inviting Bids for Contract No. PB-2025-1, Prado Basin Short-Term Compliance Sediment Removal Project – Phase I; authorize issuance of a Request for Proposals for Construction Management Services for the Prado Basin Short-Term Compliance Sediment Removal Project – Phase I; and approve Amendment to Agreement with Scheevel Engineering to implement a sediment removal monitoring program.

2/19/25, R25-2-23: Approve Amendment to Agreement with Scheevel Engineering to Assist in the Sediment Management Plan Development and Long-Term Planning Needs for Sediment Removal within the Prado Basin

7/3/24, R24-7-77: Approve Agreement with Scheevel Engineering to assist in the sediment management plan development and long-term planning needs for sediment removal within the Prado Basin.

3/15/23, R23-32: Approve Master Sediment Removal Agreement that can be executed by the General Manager with individual contractors for sediment removal at no cost to the District, subject to review as to form and content by the District's General Counsel.

3/17/21, R21-3-41: Accepting Completion of Contract No. PB-2020-1, Prado Basin SMDP excavation and dredging (CJW Construction, Inc) and authorizing Issuance of Agreement to Endemic Environmental Services, Inc.

THE ORANGE COUNTY
REGISTER
1920 Main Street, Suite 209
Irvine, California 92614
(714) 796-7000
legals@inlandnewspapers.com

Orange County Water District
18700 Ward Street
Fountain Valley, California 92708

Account Number:	5179533
Ad Order Number:	0011743738
Customer's Reference/PO Number:	
Publication:	The Orange County Register
Publication Dates:	06/30/2025
Total Amount:	$1032.75
Payment Amount:	$0.00
Amount Due:	$1032.75
Notice ID:	ypXeGNrjvxe7dY8szZt9
Invoice Text:	

THE ORANGE COUNTY
REGISTER
The Orange County Register
1920 Main Street, Suite 209
Irvine, California 92614
(714) 796-7000

0011743738

Orange County Water District
18700 Ward Street
Fountain Valley, California 92708

PROOF OF PUBLICATION
(2015.5 C.C.P.)

STATE OF CALIFORNIA
County of Orange

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not party to or interested in the above-entitled matter. I am the principal clerk of the printer of The Orange County Register, a newspaper of general circulation, printed and published in the City of Irvine*, County of Orange, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of County of Orange, State of California, under the date of November 19, 1905, Case No.A-21046. The notice, of which the annexed is a printed copy (set in type not smaller than nonpareil), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

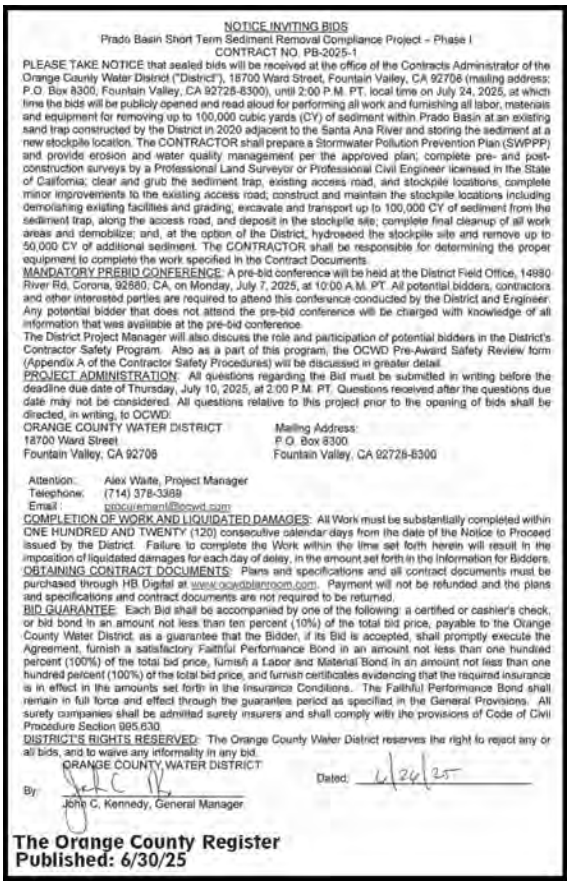
06/30/2025

I certify (or declare) under the penalty of perjury that the foregoing is true and correct.

Dated at Irvine, California

On this 30th day of June, 2025.

Sandra Campos
Signature



NOTICE INVITING BIDS
Prado Basin Short Term Sediment Removal Compliance Project – Phase I
CONTRACT NO. PB-2025-1

PLEASE TAKE NOTICE that sealed bids will be received at the office of the Contracts Administrator of the Orange County Water District ("District"), 18700 Ward Street, Fountain Valley, CA 92708 (mailing address: P.O. Box 8300, Fountain Valley, CA 92728-8300), until 2:00 P.M. PT, local time on July 24, 2025, at which time the bids will be publicly opened and read aloud for performing all work and furnishing all labor, materials and equipment for removing up to 100,000 cubic yards (CY) of sediment within Prado Basin at an existing sand trap constructed by the District in 2020 adjacent to the Santa Ana River and storing the sediment at a new stockpile location. The CONTRACTOR shall prepare a Stormwater Pollution Prevention Plan (SWPPP) and provide erosion and water quality management per the approved plan; complete pre- and post-construction surveys by a Professional Land Surveyor or Professional Civil Engineer licensed in the State of California; clear and grub the sediment trap, existing access road, and stockpile locations, complete minor improvements to the existing access road; construct and maintain the stockpile locations including demolishing existing facilities and grading; excavate and transport up to 100,000 CY of sediment from the sediment trap, along the access road, and deposit in the stockpile site; complete final cleanup of all work areas and demobilize; and, at the option of the District, hydroseed the stockpile site and remove up to 50,000 CY of additional sediment. The CONTRACTOR shall be responsible for determining the proper equipment to complete the work specified in the Contract Documents.

MANDATORY PREBID CONFERENCE: A pre-bid conference will be held at the District Field Office, 14980 River Rd, Corona, 92880, CA, on Monday, July 7, 2025, at 10:00 A.M. PT. All potential bidders, contractors and other interested parties are required to attend this conference conducted by the District and Engineer. Any potential bidder that does not attend the pre-bid conference will be charged with knowledge of all information that was available at the pre-bid conference.

The District Project Manager will also discuss the role and participation of potential bidders in the District's Contractor Safety Program. Also as a part of this program, the OCWD Pre-Award Safety Review form (Appendix A of the Contractor Safety Procedures) will be discussed in greater detail.

PROJECT ADMINISTRATION: All questions regarding the Bid must be submitted in writing before the deadline due date of Thursday, July 10, 2025, at 2:00 P.M. PT. Questions received after the questions due date may not be considered. All questions relative to this project prior to the opening of bids shall be directed, in writing, to OCWD:

ORANGE COUNTY WATER DISTRICT
18700 Ward Street
Fountain Valley, CA 92708

Mailing Address:
P.O. Box 8300
Fountain Valley, CA 92728-8300

Attention: Alex Waite, Project Manager
Telephone: (714) 378-3388
Email: procurement@ocwd.com

COMPLETION OF WORK AND LIQUIDATED DAMAGES: All Work must be substantially completed within ONE HUNDRED AND TWENTY (120) consecutive calendar days from the date of the Notice to Proceed issued by the District. Failure to complete the Work within the time set forth herein will result in the imposition of liquidated damages for each day of delay, in the amount set forth in the Information for Bidders.

OBTAINING CONTRACT DOCUMENTS: Plans and specifications and all contract documents must be purchased through HB Digital at www.ocwdplanroom.com. Payment will not be refunded and the plans and specifications and contract documents are not required to be returned.

BID GUARANTEE: Each Bid shall be accompanied by one of the following: a certified or cashier's check, or bid bond in an amount not less than ten percent (10%) of the total bid price, payable to the Orange County Water District, as a guarantee that the Bidder, if its Bid is accepted, shall promptly execute the Agreement, furnish a satisfactory Faithful Performance Bond in an amount not less than one hundred percent (100%) of the total bid price, furnish a Labor and Material Bond in an amount not less than one hundred percent (100%) of the total bid price, and furnish certificates evidencing that the required insurance is in effect in the amounts set forth in the Insurance Conditions. The Faithful Performance Bond shall remain in full force and effect through the guarantee period as specified in the General Provisions. All surety companies shall be admitted surety insurers and shall comply with the provisions of Code of Civil Procedure Section 995.630.

DISTRICT'S RIGHTS RESERVED: The Orange County Water District reserves the right to reject any or all bids, and to waive any informality in any bid.

ORANGE COUNTY WATER DISTRICT

By: _____ Dated: 6/24/25
John C. Kennedy, General Manager

The Orange County Register
Published: 6/30/25

AGENDA ITEM SUBMITTAL

Meeting Date: September 10, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: R. Bouley/A. Waite

Budgeted: Yes
Budgeted Amount: $12,000,000
Cost Estimate: $12,442,399
Funding Source: CIP
Program/Line Item No.: C24011
General Counsel Approval: Yes
Engineers Report: Completed
CEQA Compliance: Cat. Ex.

Subject: AWARD CONTRACT NO. FUL-2025-1 FULLERTON MAIN PLANT (WELLS 5, 6 & 8) PFAS WATER TREATMENT PLANT PROJECT TO PACIFIC HYDROTECH

SUMMARY

A total of five construction bids were received on September 3, 2025, for the City of Fullerton Main Plant (Wells 5, 6 & 8) PFAS Water Treatment Plant Project, Contract No. FUL-2025-1 (the "Project"). Based on a review of the bids received, staff recommends awarding a contract to Pacific Hydrotech Corporation as the responsible bidder submitting the lowest responsive bid, in the amount of $8,765,900, and increasing the project budget to $12,442,399.

Attachment: Affidavit of Publication for Notice Inviting Bids for Contract FUL-2025-1

RECOMMENDATION

Agendize for September 17 Board meeting:

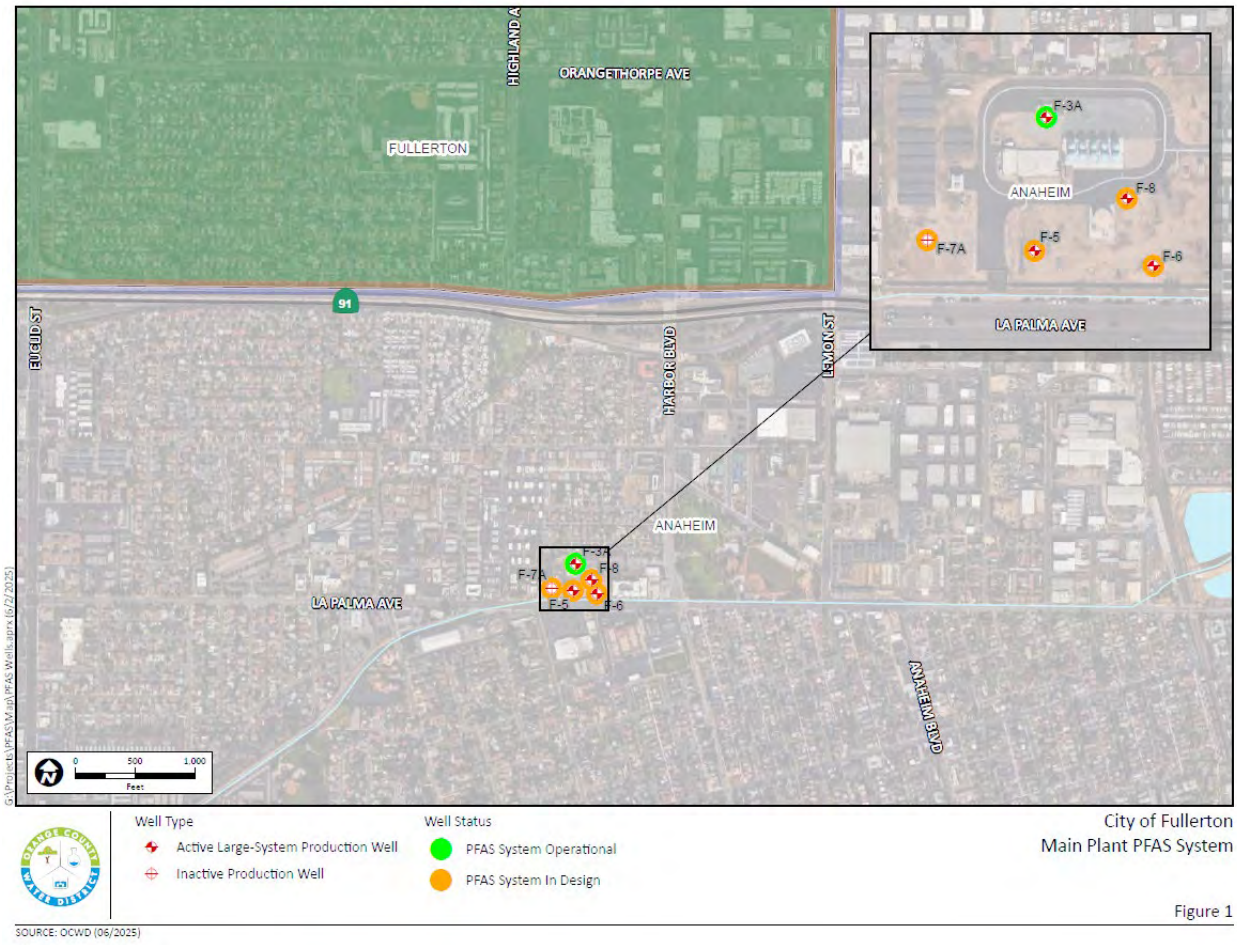
1. Receive and file Affidavit of Publication of Notice Inviting Bids for Contract FUL-2025-1, Fullerton Main Plant (Wells 5, 6 & 8) PFAS Water Treatment Plant Project;
2. Ratify issuance of Addenda 1 & 2;
3. Accept bid and award contract FUL-2025-1 to the lowest responsive bid and responsible bidder, Pacific Hydrotech Corporation, in the amount of $8,765,900;
4. Ratify Work Order No. 1B to Agreement No. 1581 to Tetra Tech, Inc. for a not-to-exceed amount of $102,804; and,
5. Increase the Fullerton Main Plant (Wells 5, 6, & 8) PFAS Water Treatment Plant Project budget to $12,442,399.

BACKGROUND/ANALYSIS

To restore the use of groundwater supplies impacted by PFAS contaminants with minimal delay, design of the Fullerton Main Plant PFAS treatment plant expansion began in September 2024. These projects expand the existing Main Plant PFAS treatment system constructed in July 2024, which is currently treating only Well 3A, to treat existing Wells 5, 6, 7A and 8. Granular Activated Carbon (GAC) was selected as the treatment process at the Main Plant to match the existing treatment system and remove trace concentrations of co-contaminant volatile organic compounds found in

these wells. Design was completed in June 2025. The City is progressing expansion of the existing Main Plant for treating Well 7A under a separate construction contract held by the City. The Main Plant Well 7A PFAS treatment expansion is anticipated to cost approximately $750,000, and the District is reimbursing the City for the costs associated with the Well 7A PFAS treatment expansion construction. The remaining wells – 5, 6, and 8 – will be treated through a new GAC treatment system, and this Project will be managed by the District. Figure 1 shows the location of the City of Fullerton's Main Plant:

Figure 1: City of Fullerton Main Plant PFAS Well Treatment Site



The Project was advertised for bid on July 15, 2025. Addenda No. 1 & 2 were issued to revise the Bid Opening date, provide revised project plans and specifications, and to provide responses to potential bidder's questions. Five construction bids were received on September 3, 2025, and a summary of these bids is shown below in Table 1. The original engineer's estimate was $10,000,000.

Table 1: FUL-2025-1 Fullerton Main Plant (Wells 5, 6 & 8)
PFAS Water Treatment Plant
Bid Summary

Contractor	Bid Price
Pacific Hydrotech Corporation	$8,765,900
Kingmen Construction, Inc.	$9,074,700
American Integrated Services	$9,587,100
MMC, Inc.	$9,630,000
Myers & Sons Construction, LLC	$9,660,000

Staff reviewed the bid of Pacific Hydrotech Corporation and found it to be responsive. Staff also checked Pacific Hydrotech Corporation's references, and confirmed that their contractor's license is current, active, and in good standing with the State of California. Staff recommends awarding the construction contract to Pacific Hydrotech Corporation as the lowest responsible bidder that submitted a responsive bid in the amount of $8,765,900.

The City of Fullerton's ability to pump groundwater is currently limited to only three of their nine production wells due to PFAS, and imported water supply connections are insufficient to provide adequate capacity during summer months. The City and OCWD collaborated on opportunities to restore pumping from the Main Plant as soon as possible. To accelerate design, permitting, and construction efforts for the Main Plant Expansion including temporary treatment options for Well 8 and completion of the Well 7A tie-in to the existing Main Plant through the City's construction contract, additional design services were requested from Tetra Tech, Inc. Staff recommends ratifying Work Order No. 1B to Agreement No. 1581 to Tetra Tech Inc., for a not-to-exceed amount of $102,804. Staff is also increasing the budget to include the $750,000 reimbursement to the City of Fullerton for their work to expand the existing PFAS treatment plant to treat the new Well 7A.

The project budget for the Fullerton Main Plant (Wells 5, 6 & 8) PFAS Water Treatment Plant Project, Contract No. FUL-2025-1, including reimbursement to the City for Well 7A PFAS treatment expansion, is summarized in Table 2.

Table 2: FUL-2025-1 Fullerton Main Plant (Wells 5, 6, & 8)
PFAS Water Treatment Plant and Well 7A PFAS Treatment Expansion Project
Budget Summary

Description	Budget
Design and Construction Management	
Design-Work Order No. 1, 1A, & 1B Main Plant (Tetra Tech)	$686,874
Work Order 1 (CM Services - Tetra Tech)	$531,330
Design and CM Subtotal	**$1,218,204**
Construction	
Contract FUL-2025-1	$8,765,900
GAC Media	$1,160,000
Permits and Advertisement Costs	$50,000
Staff Expenses	$60,000
Construction Subtotal	**$10,035,900**
Project Contingency (5% of Contract Amount)	$438,295
Well 7A Main Plant Expansion Construction Reimbursement (City Contract)	$750,000
Total Project Budget	**$12,442,399**

The expected project schedule is shown below in Table 3

Table 1: Fullerton Main Plant Wells 5, 6 & 8 and Well 7A PFAS Treatment Projects
Schedule Summary

Description	Date
Fullerton Main Plant (Wells 5, 6 & 8) and 7A PFAS Treatment Projects	
Design	Sep 2024 – June 2025
DDW Permitting	June 2025 – April 2026
Construction Contract FUL-2025-1	Nov 2025 – June 2027
Well 7A Main Plant Expansion Construction (City Contract)	June 2025 – Mar 2026

PRIOR RELEVANT BOARD ACTION(S)

6/18/25, R25-6-95: Authorize filing of categorical exemption for Fullerton Main Plant (Wells 5, 6 & 8) and Well 7a PFAS Water Treatment Plant, approve the engineer's report, authorize publication of Notice Inviting Bids, and authorize reimbursement to the City of Fullerton

THE ORANGE COUNTY
REGISTER
1920 Main Street, Suite 209
Irvine, California 92614
(714) 796-7000
legals@inlandnewspapers.com

Orange County Water District
18700 Ward Street
Fountain Valley, California 92708

Account Number:	5179533
Ad Order Number:	0011746049
Customer's Reference/PO Number:	
Publication:	The Orange County Register
Publication Dates:	07/15/2025
Total Amount:	$1084.91
Payment Amount:	$0.00
Amount Due:	$1084.91
Notice ID:	4R7O9iPxWxst74mjQ7Fx
Invoice Text:	

THE ORANGE COUNTY
REGISTER
The Orange County Register
1920 Main Street, Suite 209
Irvine, California 92614
(714) 796-7000

0011746049

Orange County Water District
18700 Ward Street
Fountain Valley, California 92708

PROOF OF PUBLICATION
(2015.5 C.C.P.)

STATE OF CALIFORNIA
County of Orange

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not party to or interested in the above-entitled matter. I am the principal clerk of the printer of The Orange County Register, a newspaper of general circulation, printed and published in the City of Irvine*, County of Orange, and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of County of Orange, State of California, under the date of November 19, 1905, Case No.A-21046. The notice, of which the annexed is a printed copy (set in type not smaller than nonpareil), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to wit:

07/15/2025

I certify (or declare) under the penalty of perjury that the foregoing is true and correct.

Dated at Irvine, California

On this 15th day of July, 2025.

Sandra Campos
Signature

NOTICE INVITING BIDS
CITY OF FULLERTON MAIN PLANT (WELLS 5, 6 & 8) PFAS WATER TREATMENT PLANT PROJECT, CONTRACT NO. FUL-2025-1

PLEASE TAKE NOTICE that sealed bids will be received at the office of the Contracts Administrator of the Orange County Water District ("District"), 18700 Ward Street, Fountain Valley, CA 92708 (mailing address: P.O. Box 8300, Fountain Valley, CA 92728-8300), until 2 PM PT, local time on September 2, 2025 at which time the bids will be publicly opened and read aloud for performing all work and furnishing all labor, materials and equipment for: Construction of the City of Fullerton's Main Plant (Wells 5, 6 & 8) PFAS Water Treatment Plant Project including procurement and installation of GAC Pressure Vessel systems; connection to Wells 5, 6, and 8; connections to the distribution system; replacement of Well 8 Pump & Motor replacement and installation of new VFD; installation of valves, piping, meters, electrical, instrumentation, and other ancillary and support facilities; constructing site improvements, excavation, and pavement replacement; providing warranty and guarantees; and completing all associated commissioning, training, and acceptance testing for a fully functional water treatment plant.

MANDATORY PREBID CONFERENCE: A mandatory pre-bid conference will be held at the City of Fullerton's Main Plant, 627 La Palma Ave, Anaheim, CA 92801, on Tuesday, July 22, 2025, at 10 AM PT. In addition, a mandatory remote pre-bid conference will be offered, via Zoom service, on Tuesday, July 22, 2025 at 8 AM PT. **Link to meeting:** https://ocwd.zoom.us/j/87453662041 **Meeting ID Number:** 874 5366 2041. All potential bidders, contractors and other interested parties are required to attend this conference conducted by the District and Engineer. Any potential bidder that does not attend the pre-bid conference will be charged with knowledge of all information that was available at the pre-bid conference. The District Project Manager will also discuss the role and participation of potential bidders in the District's Contractor Safety Program. Also as a part of this program, the OCWD Pre-Award Safety Review form (Appendix A of the Contractor Safety Procedures) will be discussed in greater detail.

PROJECT ADMINISTRATION: All questions regarding the Bid must be submitted in writing before the deadline due date of August 7, 2025, at 2 PM PT. Questions received after the questions due date may not be considered. All questions relative to this project prior to the opening of bids shall be directed, in writing, to OCWD:

ORANGE COUNTY WATER DISTRICT
18700 Ward Street
Fountain Valley, CA 92708

Mailing Address:
P.O. Box 8300
Fountain Valley, CA 92728-8300

Attention: Alex Waite, Project Manager
Telephone: (714) 378-3369
Email : procurement@ocwd.com

COMPLETION OF WORK AND LIQUIDATED DAMAGES: All Work must be substantially completed within FIVE HUNDRED AND FORTY (540) consecutive calendar days from the date of the Notice to Proceed issued by the District. Failure to complete the Work within the time set forth herein will result in the imposition of liquidated damages for each day of delay, in the amount set forth in the Information for Bidders.

OBTAINING CONTRACT DOCUMENTS: Plans and specifications and all contract documents must be purchased through HB Digital at www.ocwdplanroom.com. Payment will not be refunded and the plans and specifications and contract documents are not required to be returned.

BID GUARANTEE: Each Bid shall be accompanied by one of the following: a certified or cashier's check, or bid bond in an amount not less than ten percent (10%) of the total bid price, payable to the Orange County Water District, as a guarantee that the Bidder, if its Bid is accepted, shall promptly execute the Agreement, furnish a satisfactory

Faithful Performance Bond in an amount not less than one hundred percent (100%) of the total bid price, furnish a Labor and Material Bond in an amount not less than one hundred percent (100%) of the total bid price, and furnish certificates evidencing that the required insurance is in effect in the amounts set forth in the Insurance Conditions. The Faithful Performance Bond shall remain in full force and effect through the guarantee period as specified in the General Provisions. All surety companies shall be admitted surety insurers and shall comply with the provisions of Code of Civil Procedure Section 995.630.

WAGE RATE: As required by Section 1773 of the California Labor Code, the Director of the Department of Industrial Relations of the State of California has determined the general prevailing rates of wages in the locality in which the Work is to be performed. The prevailing wage determinations are available at the following web site: http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm The Contractor and any subcontractor under it shall not pay less than the specified prevailing rates of wages to all workers employed in the execution of the Contract.

DISTRICT'S RIGHTS RESERVED: The Orange County Water District reserves the right to reject any or all bids, and to waive any informality in any bid.

ORANGE COUNTY WATER DISTRICT

By: _____ Dated: July 15, 2025
John C. Kennedy, General Manager

The Orange County Register
Published: 7/15/25

AGENDA ITEM SUBMITTAL

Meeting Date: September 10, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: P. Parmar/L. Esguerra

Budgeted: Yes
Budgeted Amount: $1,175,000
Final Cost: $1,125,404
Funding Source: R&R
Program/ Line Item No. R21002
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: CONTRACT NO. LAB-2024-1 AUTHORIZE NOTICE OF COMPLETION AND RATIFY CHANGE ORDERS

SUMMARY

Construction of the Laboratory Washroom Refurbishment Project, Contract No. LAB-2024-1 is complete. Staff recommends ratifying Change Order No. 2 and authorizing filing of a Notice of Completion.

RECOMMENDATION

Agendize for September 17 Board Meeting:

1. Ratify issuance of Change Order No. 2 to RBA for a total amount of $12,996; and

2. Accept completion of work and authorize filing a Notice of Completion for Contract No. LAB-2024-1: Laboratory Washroom Refurbishment.

BACKGROUND/ANALYSIS

The Laboratory Washroom Refurbishment project replaced the washroom fixtures and cabinets with chemically resistant materials, installed a permanent safety eyewash/shower, installed three chemical fume hoods, and replaced the epoxy flooring. The project is complete and staff has occupied the space as of July 2025.

Change Order No. 2 in the amount of $12,996 was issued for added costs associated with replacement of existing components located in the trap primer panel, procurement and installation of the rubber wall base, and additional materials for lab carts. The total amount of Change Orders on the project is $53,523. Change Order No. 1 was previously ratified by the Board and Change Order No. 2 is 1.2% of the current construction contract amount. A detailed budget summary is presented in Table 1.

Table 1: Laboratory Washroom Refurbishment

Budget Summary

Description	Current Budget	Final Costs
Design, Construction Management. Permitting		
Design (IDS)	$ 60,300	$ 60,300.00
Construction Support (IDS)	$ 35,046	$ 35,046.00
Permitting, Reimbursements, Advertising	$ 29,000	$ 16,604.08
Design, Construction Support & Permitting Sub-Total	$ 124,346	$ 111,950.08
Construction		
Contract (RBA)	$ 959,927	$ 959,927.00
Change Order No. 1	$ 40,530	$ 40,530.47
Change Order No. 2		*$ 12,996.00*
Construction Sub-Total	$ 1,000,457	$ $1,013,453.47
Project Contingency	$ 50,197	$ *0.00*
Total Project Budget:	**$ 1,175,000**	**$ 1,125,403.55**

Staff recommends ratifying issuance of Change Order No. 2 in the amount of $12,996 and authorizing filing of the Notice of Completion for Contract No. LAB-2024-1, Laboratory Washroom Refurbishment.

PRIOR RELEVANT BOARD ACTIONS

6/18/2025, R25-6-91 – Approving change order and budget increase for Contract No. LAB-2024-1.

12/18/2024, R24-12-154 – Awarding Contract LAB-2024-1 Laboratory Washroom Refurbishment to RBA Builders LLC and authorizing increase of existing purchase order to IDS Group INC and budget Increase.

6/15/2022, R22-6-77 – Approving Purchase Order to IDS Group, Inc. for the Evaluation and Design of the Laboratory Washroom in the amount of $60,300.

6/19/2024, M24-55 – Authorizing Publication of Notice of Inviting Bids for Laboratory Washroom Refurbishment Project.

AGENDA ITEM SUBMITTAL

Meeting Date: September 10, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: M. Patel/A. Waite

Budgeted: Yes
Budgeted Amount: $200,000
Cost Estimate: $199,415
Funding Source: General Fund
Program/Line Item No. 1050.53001
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: AUTHORIZE AGREEMENT WITH BROWN AND CALDWELL FOR FLOW REVERSAL REVERSE OSMOSIS RETROFIT CONSTRUCTABILITY STUDY

SUMMARY

Staff recommends entering into an Agreement with Brown and Caldwell to conduct a Flow Reversal Reverse Osmosis (FRRO) Retrofit Constructability Study to investigate the constructability of retrofitting the existing GWRS RO units to FRRO. This effort is part of OCWD's Resilience Plan Priority Project No. 6c: "Demonstration Scale Test of Flow Reversal RO to Enhance GWRS Recovery via Retrofit of One RO Unit."

Attachment: Brown and Caldwell Scope and Price Proposal for RFP-24-022, dated September 9, 2025

RECOMMENDATION

Agendize for September 17 Board meeting: Authorize issuance of Agreement to Brown and Caldwell for an amount not to exceed $199,415 to provide professional consulting services for the development of a Flow Reversal Reverse Osmosis Retrofit Constructability Study.

BACKGROUND/ANALYSIS

The reverse osmosis (RO) process is a major component of the GWRS multi-barrier treatment system, removing salts, viruses, and bacteria to produce distilled permeate water. Each of the 27 existing RO units produce 5 million gallons per day (mgd) of permeate water for a total production of 130 mgd of purified water. Purified water production from the GWRS is predominantly limited by the RO system's current maximum recovery of 85%, leaving 15% of the RO concentrate discharged via OC San's ocean outfall. Increasing RO recovery represents a significant opportunity to increase GWRS production and OCWD's water supply resilience.

Based on numerous investigations including pilot testing conducted by staff of high-recovery RO technologies, flow reversal reverse osmosis (FRRO) was shown to be one of the most promising commercially available technologies to increase production and be economically viable. A full-scale retrofit of one RO unit was identified as the next

phase of the investigation and included as part of OCWD's Resilience Plan Priority Project No. 6c: "Demonstration Scale Test of Flow Reversal RO to Enhance GWRS Recovery via Retrofit of One RO Unit." However, before proceeding with full-scale retrofit, a constructability assessment is necessary to fully analyze the constraints and cost benefits with implementing this technology.

The Board authorized issuance of Request for Proposals (RFP) for a professional engineering firm to complete a constructability assessment considering the complexities and costs for retrofitting an existing GWRS RO unit to FRRO. The scope of services includes analyzing the constraints and costs associated with retrofitting one RO unit as well as all 27 existing RO units including conceptual level designs, completing a life-cycle cost-benefit analysis, developing a phased implementation program, and providing a recommended project. The RFP was issued July 10, 2025, on the District website. Staff received two proposals on August 11, 2025, one from Black & Veatch and another from Brown and Caldwell. The proposals were independently reviewed and scored by engineering, operations, and R&D staff, and the scoring of the proposals included evaluating each firm's experience and qualifications of the project team, approach and schedule, experience on similar projects, commitment of key staff and organization support services, and fee. See Table 1 for the proposed score and proposed fee.

Table 1: Proposal Score and Proposed Fee

Firm	Score (out of 100)	Proposed Fee
Brown and Caldwell	78.3	$189,215
Black & Veatch	70.3	$200,000

Staff's evaluation of the proposals and consideration of cost proposals resulted in a recommendation of Brown and Caldwell for professional engineering services for the development of a Flow Reversal Reverse Osmosis Retrofit Constructability Study for the following reasons:

- Brown and Caldwell is the only professional engineering firm to have designed and constructed the first and only operational municipal installation of FRRO in the United States;

- Brown and Caldwell's proposed project management and design team have significant experience in planning, design, and construction projects relevant to this study, including engineers involved in the original GWRS and initial and final expansions; and,

- Brown and Caldwell's recent acquisition of Separation Processes, Inc. (SPI), who has provided both design and operational support for the GWRS since the original project, provides them with unparalleled membrane expertise for the RO facility.

Staff met with Brown and Caldwell to discuss scope of services and their assumed level effort included in their original fee of $189,215. In addition to the base scope of services, staff recommend including the proposed optional service of laser scanning an existing RO unit planned for future retrofit for an additional $10,200. Depending on which RO unit is ultimately recommended for full-scale retrofit, a 3D laser scan would significantly benefit full-scale design efforts and accelerate the design process. Staff recommends authorizing an agreement with Brown and Caldwell for a not-to-exceed amount of $199,415 for professional engineering services for the development of a Flow Reversal Reverse Osmosis Retrofit Constructability Study. The study is anticipated to be completed by June 2026.

PRIOR RELEVANT BOARD ACTIONS

6/25/25, R25-6-99 – Authorize Issuance of Request for Proposals for the Flow Reversal Reverse Osmosis Retrofit Constructability Study

2/19/25, R25-2-19 – Receive and File OCWD Resilience Plan and Authorize Filing of a Notice of Exemption

18500 Von Karman Ave. #800
Irvine, CA 92612

T: 714.730.7600

September 4, 2025

Ms. Ashlie Valencia
Contracts Administrator
Orange County Water District
18700 Ward St.
Fountain Valley, CA 92708

Subject: Scope and Price Proposal for RFP-24-022
Flow Reversal Reverse Osmosis Retrofit Constructability Study

PRIMARY CONTACT
Kirstin Byrne Kale, P.E.
Project Manager
P | 213.271.2236
E | kkale@brwncald.com

Dear Ms. Valencia:

Brown and Caldwell (BC) appreciates the opportunity to submit our Scope of Work and price proposal for engineering services for the Flow Reversal Reverse Osmosis (FRRO) Retrofit Constructability Study. BC will provide the following services:

Task 1 – Project Management

BC will provide project management services throughout the project including meetings, QA/QC of deliverables, progress reports, project schedule development and updates, and invoicing to meet schedule and budget requirements.

BC's project manager will work directly with OCWD's project manager on project management tasks and to address any assignments requiring an accelerated turnaround and will adjust the team's priorities to accommodate, as necessary. Weekly to bi-weekly meetings will be held between the project managers to discuss progress and meet schedule. This will promote an understanding of what will be included in the monthly progress reports with schedule updates and invoicing, as well as ongoing and upcoming work.

BC will facilitate the kick-off meeting reviewing the work plan prepared by BC laying out schedule, milestones, and deliverables to meet project goals. BC will also facilitate monthly progress meetings to provide overviews and status updates of **Task 3: Preparation of Constructability Study** subtasks. Information from the monthly progress meetings will be used to develop the presentations for OCWD to present at committee and Board of Directors meetings.

Task 2 – Data Collection and Review

BC will identify and prepare an information request to OCWD for record drawings, planning documents, past studies, operating costs, and other pertinent data not accessible related to the constructability study for review. One site visit will be performed to obtain necessary field information following data collection and review. Interviews with District staff will be coordinated with the site visit.

Task 3 – Preparation of Constructability Study

This task includes preparation of the draft and final constructability study. The draft study will be provided in Microsoft Word and appendices in PDF format. A Draft Study Review Workshop will be held following delivery of the draft constructability study and

OCWD's review, facilitated by BC. The final study will incorporate OCWD's comments on the draft study. Two print hard copies will be provided for the Final Constructability Study with color copies provided for graphics. The following subtasks will be completed as part of the study.

Task 3.1 Constructability Assessment to Retrofit One Existing RO Unit

BC will assess constructability to retrofit one existing 5-mgd permeate capacity RO unit to high-capacity FRRO. A RO unit from each facility design (original, initial expansion, and final expansion) will be investigated to determine the mechanical, electrical, structural, instrumentation and controls, and civil constraints associated with each design. The assessment will determine the most feasible RO unit to retrofit.

Task 3.2 Constructability Assessment to Retrofit All Existing RO Units

BC will assess constructability to retrofit all of the existing 27 RO units to high-capacity FRRO. A description of the mechanical, electrical, structural, instrumentation and controls, and civil constraints and work required for complete retrofit of each facility design (original, initial expansion, and final expansion) will be performed. Impacts to other existing facilities will be identified (i.e. chemical systems, electrical equipment, brine disposal to OC San).

BC will analyze phased construction approaches considering how many RO units to retrofit at a time and which units to retrofit first based on funding, declining flows to OCWD, RO concentrate volumes, or other items.

Task 3.3 Integration Capability of FRRO with Energy Recovery Systems Analysis

BC will coordinate with energy recovery device (ERD) vendors on integration with FRRO technology to determine feasibility and required modifications to the RO units and/or ERDs to accommodate an FRRO retrofit. If incompatibilities arise, the BC team will coordinate with OCWD to evaluate whether the initial expansion RO units should still be included in the retrofit scope.

Task 3.4 Contracting Method Analysis

BC will evaluate contracting methods to perform the FRRO retrofit on one or all RO units. The multi-discipline work identified in Tasks 3.1 thru 3.3 will impact the recommendation to use the original equipment manufacturer or a general/specialty contractor to lead the construction of a single RO unit or full GWRS retrofit.

Task 3.5 Capital, O&M, and Life-Cycle Cost Estimate for One RO Unit Retrofit and Retrofitting All Units

BC will review the feasibility cost analysis previously prepared for retrofit of one RO unit, make updates based on company expertise for capital, operation and maintenance costs, and life-cycle costs. BC will prepare capital, O&M, and life-cycle costs for one RO unit retrofit (selected unit from Task 3.1) and retrofitting all RO units (Task 3.2) incorporating modifications from Task 3.3 and contracting method recommendations from Task 3.4.

Task 3.6 Cost-Benefit Analysis to Retrofit One RO Unit and All Units

BC will prepare a cost-benefit analysis evaluating the cost of producing additional purified water with FRRO (one RO unit and all RO units) versus purchasing imported water from Metropolitan Water District of Southern California.

Task 3.7 Recommended Full-Scale Retrofit Program

BC will recommend a full-scale retrofit program based on analyses performed in Tasks 3.1 to 3.6 including the recommended project (one RO unit retrofit or more), phased construction approach, description of proposed modifications, identification of preliminary design criteria, planning period and cost basis assumptions, life-cycle cost benefit analysis, reliability of facilities, and development of an implementation plan including permits, and draft schedule.

Task 4.3 – Laser Scan of selected RO Unit for Retrofit

BC will collect a 3D laser scan of the selected RO unit for the 30 percent design. This technology creates detailed 3D representations of facilities that have a design level degree of dimensional accuracy, removing the need to return to the site to collect additional physical dimensions once the scan is taken. The collected files may require development of 3D design models using conventional CAD programs like Revit and AutoCAD Plant 3D. The BC team already has access to two scans collected at the facility, a full train scan of Train I-03, and a partial scan showing mainly the train concentrate infrastructure for Train A-03. If either of these trains are selected, less field effort would be required.

Our price proposal is presented in the format required in the Request for Proposal (RFP) covering all services in the scope of work (Tasks 1-3) and Task 4.3. The table includes the tasks and subtasks with descriptions, labor hour breakdowns by personnel, and fully loaded hourly billing rates. A summary of our constructability study price proposal is shown below:

Summary of Price Proposal		
Constructability Study		**Estimated Fee**
Task 1 - Project Management	$	76,375
Task 2 - Data Collection and Review	$	19,320
Task 3 - Preparation of Constructability Study	$	93,520
Task 4.3 – Laser Scan of selected RO Unit for Retrofit	$	10,200
Total for Constructability Report	**$**	**199,415**

Our level of effort for the constructability study is based on development of the constructability study, internal quality assurance and control, and project controls to closely monitor the project to conform to the quality management plan, incorporation of input by OCWD at monthly meetings, and track project progress to meet the accelerated schedule proposed and maintain the project budget.

The following assumptions were made in developing the Tasks 1-3 and Task 4.3 price proposal for this project:

1. Fully loaded billing rates including all direct, capital, and reimbursable expenses have been built into the hourly rates. These hourly billing rates will remain in effect for the duration of the Agreement.
2. Our proposed fee is based on the reduced schedule presented in OCWD's RFP. The proposed budget is per the Scope of Work presented in OCWD's RFP.
3. Monthly Progress Meetings (7) are assumed to be 2 hours per meeting, attended in-person.
4. Committee and Board presentations will be prepared from existing meeting content and will not exceed five hours of preparation time for each meeting.
5. Class 5 Construction Cost Estimate will be provided, with life cycle costs encompassing projected expenditures for power, chemicals, and maintenance.

We are confident that our team's past FRRO experience and current experience with the RO facility at GWRS will be leveraged to produce efficient and effective submittals to help OCWD fully evaluate the considerations of implementing FRRO.

We thank you for the opportunity to submit our proposal and look forward to continuing our collaborative partnership with OCWD. If you have any questions, please reach out to project manager Kirstin Byrne Kale.

Sincerely,

Brown and Caldwell

Sandy Scott-Roberts, P.E.
Principal-in-Charge

Kirstin Byrne Kale, P.E.
Project Manager

RFP-24-022

FRRO Retrofit Constructability Study

-- Price Proposal 09042025 --

Orange County Water District Flow Reversal Reverse Osmosis Retrofit Constructability Study

		BROWN & CALDWELL																	
	Position	Principal-In-Charge	QC Officer / QC Mechanical	Technical Advisor / Regulatory	QC Structural	QC Electrical / I&C	Project Manager	Mechanical / Operations Support	Mechanical / Operations Support	Electrical	Structural	I&C	Mechanical / Operations Support	Estimating Support	Funding Support	All Discipline Revit	Project Analyst	Word Processing	
	Personnel	Sandy Scott-Roberts	Adam Zacheis	Jim Vickers	Richard Austin	Chris Kindle	Kirstin Kale	Alex Wesner	Jan Guenther	Keene Matsuda	Michaela Shaffer	Billy Tieman	Helia Ng	Dan Goodburn	Seema Chavan	Miguel Sanchez	Rose Ford	Dawn Schock	BROWN & CALDWELL Total Hours
Task	Description	$350.00	$350.00	$350.00	$290.00	$350.00	$280.00	$350.00	$180.00	$350.00	$210.00	$260.00	$210.00	$290.00	$350.00	$210.00	$130.00	$160.00	
Budget																			
1	**Project Management**	7	17	-	2	12	109	29.5	14	21	-	12	-	-	-	-	72	-	**295.5**
	Project Management and Coordination						27												27
	Project kick-off meeting	2					8	5		5									20
	Project Schedule	1	1				8												10
	QA/QC		16		2	12													30
	Monthly Progress Meetings						42	24.5	14	16		12							108.5
	Prepare Presentations	4					6												10
	Monthly Progress Reports, Schedule updates & Invoicing						18										72		90
2	**Data Collection and Review**	4	-	-	-	-	10	8	12	12	8	10	8	-	-	-	-	-	**72**
	Review Background Information and Information Request						4	4	6	6	4	6	4						34
	Site Visit	4					6	4	6	6	4	4	4						38
3	**Preparation of Constructability Study**	18	-	19	-	-	45	33	53	63	7	28	4	40	4	-	-	14	**328**
	Task 3.1 Constructability Assessment to Retrofit One Existing RO Unit																		-
	Preparation of Submittal	2		2			4	6	8	12	2	4	2		-		-	2	*44*
	Task 3.2 Constructability Assessment to Retrofit All Existing RO Units																		-
	Preparation of Submittal	2		4			6	6	8	24	2	12	2					2	*68*
	Task 3.3 Integration Capability of FRRO with Energy Recovery Systems Analysis																		-
	Preparation of Submittal	1		2			2	6	5	6		2						2	*26*
	Task 3.4 Contracting Method Analysis																		-
	Preparation of Submittal	1					16											2	*19*
	Task 3.5 Capital, O&M, and Life-Cycle Cost Estimate for One RO Unit Retrofit and Retrofitting All Units																		-
	Preparation of Submittal	4		2			2	2	12	5	2	2		40				2	*73*
	Task 3.6 Cost-Benefit Analysis to Retrofit One RO Unit and All Units																		-
	Preparation of Submittal	3		3			3	2	12									2	*25*
	Task 3.7 Recommended Full-Scale Retrofit Program																		-
	Preparation of Submittal	2		2			4	5	8	12	1	4			4			2	*44*
	Draft Study Review Workshop	3		4			8	6		4		4							*29*
4	**Additional Services**	-	-	-	-	-	-	-	10	-	-	-	-	-	-	40	-	-	**50**
	Task 4.3 Laser Scan of selected RO Unit for Retrofit						-												-
	Preparation of Submittal								10							40			**50**
	Total Hours	**29**	**17**	**19**	**2**	**12**	**164**	**71**	**89**	**96**	**15**	**50**	**12**	**40**	**4**	**40**	**72**	**14**	**745.5**
	Total Budget (Tasks 1-4)	**$ 10,150.00**	**$ 5,950.00**	**$ 6,650.00**	**$ 580.00**	**$ 4,200.00**	**$ 45,920.00**	**$ 24,675.00**	**$ 16,020.00**	**$ 33,600.00**	**$ 3,150.00**	**$ 13,000.00**	**$ 2,520.00**	**$ 11,600.00**	**$ 1,400.00**	**$ 8,400.00**	**$ 9,360.00**	**$ 2,240.00**	**-**

	Project Total
Budget	
1	**$ 76,375**
Project Management and Coordination	$ 7,560
Project kick-off meeting	$ 6,440
Project Schedule	$ 2,940
QA/QC	$ 10,380
Monthly Progress Meetings	$ 31,575
Prepare Presentations	$ 3,080
Monthly Progress Reports, Schedule updates & Invoicing	$ 14,400
2	**$ 19,320**
Review Background Information and Information Request	$ 8,940
Site Visit	$ 10,380
	$ -
3	**$ 93,520**
Task 3.1 Constructability Assessment to Retrofit One Existing RO Unit	$ -
Preparation of Submittal	*$ 12,460*
Task 3.2 Constructability Assessment to Retrofit All Existing RO Units	$ -
Preparation of Submittal	*$ 20,000*
Task 3.3 Integration Capability of FRRO with Energy Recovery Systems Analysis	$ -
Preparation of Submittal	*$ 7,550*
Task 3.4 Contracting Method Analysis	$ -
Preparation of Submittal	*$ 5,150*
Task 3.5 Capital, O&M, and Life-Cycle Cost Estimate for One RO Unit Retrofit and Retrofitting All Units	$ -
Preparation of Submittal	*$ 20,130*
Task 3.6 Cost-Benefit Analysis to Retrofit One RO Unit and All Units	$ -
Preparation of Submittal	*$ 6,120*
Task 3.7 Recommended Full-Scale Retrofit Program	$ -
Preparation of Submittal	*$ 12,880*
Draft Study Review Workshop	*$ 9,230*
4	**$ 10,200**
Task 4.3 Laser Scan of selected RO Unit for Retrofit	$ -
Preparation of Submittal	**$ 10,200**
Total Hours	-
Total Budget (Tasks 1-4)	**$ 199,415**

AGENDA ITEM SUBMITTAL

Meeting Date: September 10, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: R. Bouley/F. Almario

Budgeted: Yes
Proposed Budget: $14,654,959
Cost Estimate: $498,899
Funding Source: WIFIA
Program/Line Item No.: C19016
General Counsel Approval: Yes
Engineers Report: Completed
CEQA Compliance: Cat. Ex.

Subject: CONTRACT NO. ORA-2022-1 CITY OF ORANGE WELLS 20, 21 & 22: CHANGE ORDER RATIFICATION AND BUDGET INCREASE

SUMMARY

Construction of the PFAS water treatment plants at the City of Orange wells 20, 21, and 22 is underway and nearing completion. There have been seven change orders issued to date which have nearly depleted the project contingency amount. Staff recommends ratifying change orders 1-7 and increasing the project budget by $498,899.

RECOMMENDATION

Agendize for September 17 Board meeting:

1. Ratify issuance of Change Order Nos. 1-7; and
2. Increase project budget by $498,899 for a total Project budget in the amount of $14,654,959.

BACKGROUND/ANALYSIS

Construction of the PFAS water treatment plants at the City of Orange wells 20, 21, and 22 is underway and expected to be completed within the next few months. The project generally includes Ion Exchange (IX) vessel systems, upgraded well pumps and motors, upgraded electrical and power components, piping, and site reconfiguration at each of the three well sites. There have been 7 change orders issued to date which have nearly depleted the project contingency amount.

Below is a summary of the change orders to date:

1. Pipeline modifications at Well 20 due to elevation discrepancies, additional rebar in PFAS slabs at all sites to comply with seismic calculations, demolition associated with SCE requirements ($46,500);
2. Well 20 electrical equipment pad not shown on plans, additional survey to verify property boundary at Well 20, additional excavation and disposal of poor soils, electrical conduit modifications at all sites, and transformer slab box as required by SCE and SCE meter and transformer service at Well 22 ($126,140);
3. Final Davis-Bacon wage rate determinations for Orange County ($0);

4. The Davis-Bacon language for drinking water projects funded by the Drinking Water State Revolving Fund and the Final Davis-Bacon Wage Rate Determinations for Orange County, California, General Decision Number CA20230024 Modification Number 6 Published 3-17-2023 ($0);
5. Well 20 perimeter fence material change as required by OCPW, Well 22 well pump misalignment modifications, additional demolition at Well 20, Well 22 pipeline modifications ($118,183);
6. Installation of personnel gate at Well 20, installation of new transformer slab box as required by SCE, VFD modifications at Wells 20, 21, and 22 ($63,370);
7. Paving at Well 20 site was not included in the design. Additional demolition was required which required restoration of site pavement ($52,316)

The budget for the City of Orange PFAS Project is summarized in Table 1.

Table 1: ORA-2022-1 Budget Summary

Description	Budget	Proposed Budget
Design, Construction Management, Permitting		
Design and CM (Kennedy Jenks)	$ 1,550,500	$ 1,363,994
Amendments 1-3		$ *437,236*
Permitting, Reimbursements, Advertising	$ 50,000	$ 20,000
Construction		
Contract TUS-2022-1	$ 9,566,800	$ 9,566,800
change orders 1-7 (4.2% of contract)		$ *406,509*
Subtotal Contract ORA-2022-1	$ 9,566,800	$ 9,973,309
Treatment Vessels (AV)	$ 1,342,520	$ 1,342,520
IX Resin (Evoqua)	$ 1,167,900	$ 1,167,900
Project Contingency	$ 988,585	$ 350,000
Total Project Budget:	**$ 14,156,060**	**$14,654,959**
Estimated Grant Funding	***($5,000,000)***	***($5,000,000)***

PRIOR RELEVANT BOARD ACTIONS

5/3/23, R23-5-59: Award Contract No. ORA-2022-1 City of Orange Wells 20, 21 & 22 PFAS Treatment Systems to Caliagua Inc.

4/20/22, R22-4-46: Approving Engineer's Report for Contract No. ORA-2022-1, City of Orange Wells 20, 21 & 22 PFAS Treatment Systems and authorizing filing of Categorical Exemption.

5/19/21, R21-5-79: Issuance of Amendment No. 3 to Agreement No. 1423 with Aqueous Vets for PFAS Vessel System Design Modifications and Steel Price Increases, for an amount not to exceed $208,313; and Amendment No. 4 to Agreement No. 1434 with

Evoqua for PFAS Vessel System Pressure Rating Increase and Steel Price Increases, for an additional amount not to exceed $131,854 are authorized.

10/21/20, R20-10-135: Issuance of Amendment No. 1 to Agreement No. 1422 with Aqueous Vets, for an amount not to exceed $306,338 and Issuance of Amendment No. 2 to Agreement No. 1423 with Evoqua, for an amount not to exceed $533,593 is authorized to modify 55 treatment vessel systems (110 vessels) to meet State Water Resources Control Board, Division of Drinking Water (DDW) requirements.

5/6/20, R20-5-56: The following agreements are authorized for the purchase of PFAS treatment pressure vessel systems: Agreement to Aqueous Vets for the purchase of 25 systems for a price not to exceed $8,159,052 and Agreement to Evoqua and for the purchase of 30 systems for a price not to exceed $11,020,220; and, upon approval as to form by District General Counsel, execution of such agreements by the District officers is authorized.

1/22/20, R20-1-13: Issuance of a Request for Quotes to pre-purchase up to 150 PFAS treatment vessels; Issuance of a Request for Proposals for on-call consultants to prepare PFAS Treatment System designs; Execution of PFAS treatment system professional services agreements for design services with the highest ranked consultants; and Establishment of a project design budget of $10,000,000.

AGENDA ITEM SUBMITTAL

Meeting Date: September 10, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: R. Herndon/D. Field

Budgeted: Yes
Budgeted Amount: $193,000
Cost Estimate: $96,800
Funding Source: R&R
Program/ Line Item No.: R24034
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: AGREEMENT TO YELLOW JACKET DRILLING SERVICES FOR MONITORING WELL SC-4 REDEVELOPMENT, AND INCREASE PURCHASE ORDER AMOUNT TO WESTBAY FOR EXTENDED SPECIALIZED TOOL RENTAL

SUMMARY

Cost proposals for redevelopment of multiport monitoring well SC-4 were received on August 20, 2025. Based on the received proposals, staff recommends issuing an Agreement to Yellow Jacket Drilling Services LLC. Removal of obsolete packers and other components at SC-4 required an additional week of rental of specialized equipment which necessitates an increase in the purchase order to Westbay Instruments.

RECOMMENDATION

Agendize for September 17 Board meeting:

1. Authorize issuance of a Services Agreement to Yellow Jacket Drilling Services, LLC for an amount not to exceed $96,800; and
2. Increase purchase order to Westbay Instruments by $3,982 for specialized Westbay tool rental.

BACKGROUND/ANALYSIS

Monitoring well SC-4 was constructed in 1990 and is 1,148 feet deep with nine screened intervals at various depths. The well is located in the City of Orange adjacent to Santiago Creek, on County of Orange Flood Control Property (Figure 1). The well is among the 56 Westbay-type wells installed by OCWD between 1988 and 2002. These multi-level wells are the backbone of the District's basin-wide monitoring well network, comprising more than 550 depth-specific monitoring points. They have provided the data integral to the development and operation of the OCWD basin model and continued water level and water quality monitoring including the annual basin accumulated overdraft calculation.

SC-4 is constructed of 4-inch diameter steel casing with 9 depth-discrete screened intervals that are hydraulically separated by annular seals outside the well casing and

permanently inflated packers inside the casing. The packers in this well were believed to have a 6- to10-year life expectancy when installed in 1991; however, the actual useful life of the components was approximately 33 years. Review of data indicated that the packers have lost pressure and are no longer isolating the zones in the upper part of the well.

With Board approval, staff removed most of the packers and other Westbay components from SC-4 in preparation for redevelopment. A video survey shows that well redevelopment is required prior to installing replacement Westbay components and continued use of this important well. Westbay component removal requires rental of specialized Westbay equipment. The Board approved one week of Westbay rental. However, two weeks of rental was required, incurring an additional $3,982 in rental fees. During packer removal, 40 feet of components fell to the bottom of the well. Attempts to remove these components have been unsuccessful. Staff believes that there is sediment (fill) on top of the components making removal of these components difficult. The District does not have the staffing and equipment capability to remove the fill on top of the components due to the depth (1,110 feet), which requires that this work be outsourced. The hired contractor will remove the fill during the redevelopment process. Following redevelopment, an attempt will be made to remove the remaining 40 feet of components.

In July 2025, staff prepared and issued an Invitation for Quotes (IFQ) to redevelop monitoring well SC-4. The scope of work entails acid chemical treatment and airlifting for chemical removal. The purpose of the acid treatment is to remove accumulated mineral and bacterial deposits within the casing and screen intervals. In August 2025, the following quotations were received:

1. Yellow Jacket Drilling Services, LLC $ 96,800
2. BC2 Environmental, LLC $174,350
3. Layne Christensen Company $283,875
4. Arsenal Well Drilling, Inc $327,646
5. Well Tec Services $ 59,979 (non-responsive)

Well Tec Services made an error in their cost quotation and requested a retraction of their quote. Therefore, the quote from Well Tec has been deemed non-responsive. The lowest responsive quote from Yellow Jacket Drilling Services in the amount of $96,800 is less than the Geologist’s estimate of $193,000 by $96,200. The Geologist’s estimate was based on a recent redevelopment project conducted in 2023.

Staff recommends that the District enter into a Service Agreement with Yellow Jacket Drilling Services, LLC for redevelopment of monitoring well SC-4 for an amount not to exceed $96,800. Additionally, staff requests increasing the purchase order with Westbay by $3,892 for one extra week of tool rental.

Table 1 below provides a summary of the proposed budget based on estimated costs for Westbay components, Westbay tool rental, and well redevelopment.

Table 1. Well SC-4 Redevelopment and Retrofit Budget, and Actual and Anticipated Expenditures

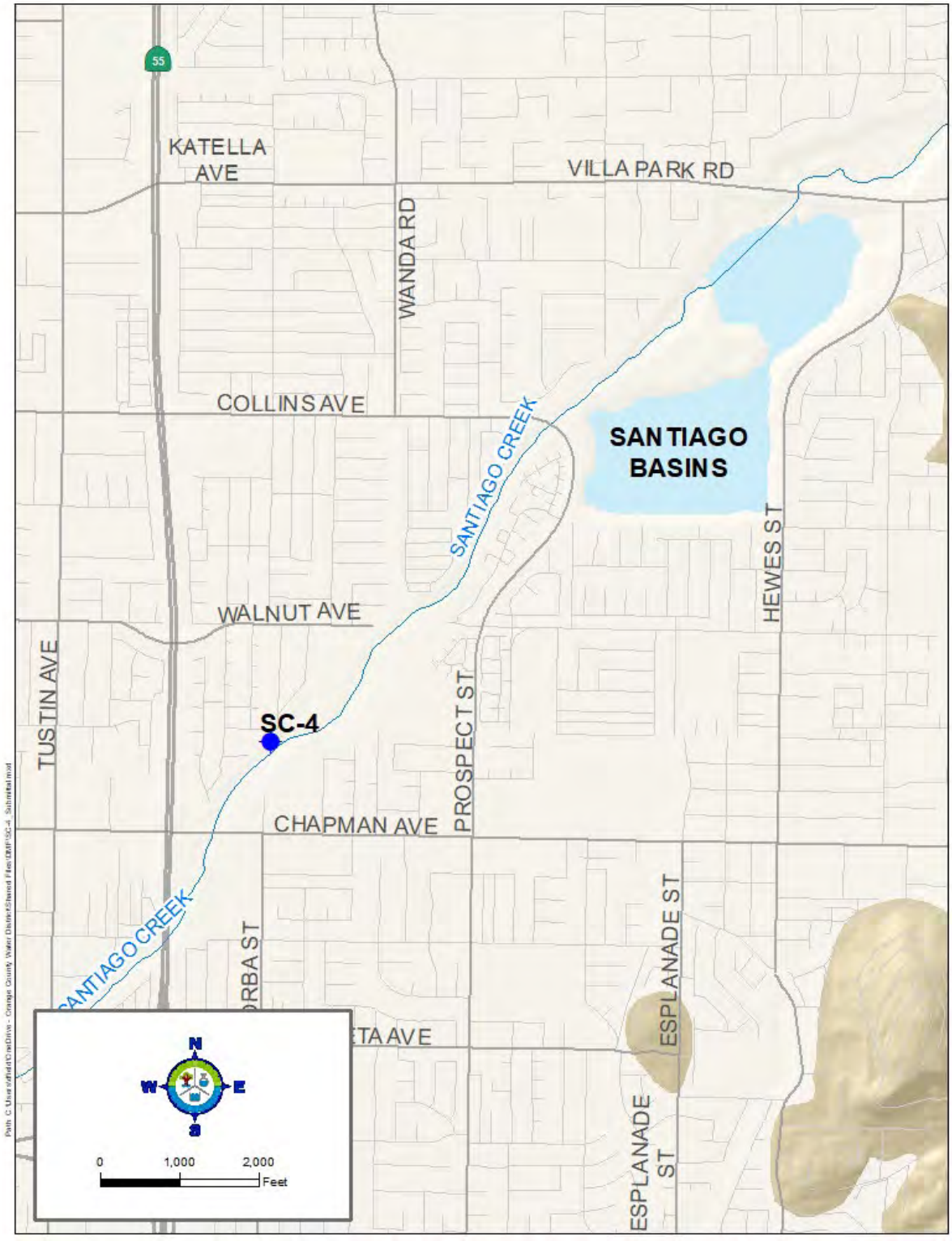
Task	Approved Budget	Actual and Anticipated Expenditures
Well Redevelopment (contractor)	$ 193,000	$ 96,800
Replacement Westbay Components	92,000	92,000
Westbay Tool Rental	5,000	8,982
TOTAL:	**$ 290,000**	**$ 197,782**

PRIOR RELEVANT BOARD ACTIONS

11/20/24, R24-11-142, Approve Request for Quotes for monitoring well SC-4 redevelopment and purchase order to Westbay Instruments.

4/20/1988, R88-4-81, Determine Westbay Instruments to be sole-source provider of multi-level monitoring equipment.

Figure 1 Westbay Well SC-4 Location Map



AGENDA ITEM SUBMITTAL

Meeting Date: September 10, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: R. Bouley

Budgeted: No
Budgeted Amount: $0
Final Cost: $28,985
Funding Source: General Fund
Program/ Line Item No. 1070.53010
General Counsel Approval: NA
Engineers/Feasibility Report: NA
CEQA Compliance: NA

Subject: EXPENSE CHARGES TO C16001 BURRIS BASIN BOOSTER PUMP STATION

SUMMARY

Several years ago, Tetra Tech prepared Preliminary Design Options for a Burris Basin Booster Pump Station and Outlet to help send GWRS water to Forebay or Santiago Basin. Staff has abandoned the booster pump station concept to pursue more cost-efficient options. The expenditures charged to capital project C16001 for the Burris Basin Booster Pump Station and Outlet for $28,985 need to be expensed and not capitalized.

RECOMMENDATION

Agendize for September 17 Board meeting: Authorize staff to expense $28,985 charged to capital project C16001 for the Burris Basin Booster Pumps Station and Outlet due to the District terminating that project.

BACKGROUND/ANALYSIS

Capital Project C16100 was created to construct a booster pump station and outlet at Buris Basin that would expand the areas for GWRS water recharge. The project would have included an outlet to Burris Basin that would allow recharge in Burris and Santiago Basins. The booster pump station would also increase the amount of water that could be pumped to the Forebay recharge basins. Tetra Tech prepared several preliminary exhibits showing alternatives for a booster pump station and outlet in Burris Basin. The project was placed on hold shortly after these exhibits were received, and since that time, other alternatives for increasing GWRS recharge area in the Forebay have been proposed. These other alternatives would have similar impacts on recharge with significantly lower capital and operating costs. Therefore, Staff has decided to terminate the Burris Basin Booster Pump Station and Outlet project.

Since the project was never constructed, and OCWD never received any assets to capitalize, the project expenditures need to be expensed. Staff recommends expensing $28,985 charged to Capital Project C16001 for the Burris Basin Booster Pumps Station and Outlet due to the District terminating that project.

PRIOR RELEVANT BOARD ACTION(S)

N/A

AGENDA ITEM SUBMITTAL

Meeting Date: September 10, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: R. Bouley

Budgeted: Yes
Budgeted Amount: $7,176,000
Final Cost: $7,175,896
Funding Source: CIP
Program/Line Item No.: C19014
General Counsel Approval: Yes
Engineers Report: Completed
CEQA Compliance: Cat. Ex.

Subject: CONTRACT NO. IRWD-2021-1 AUTHORIZE NOTICE OF COMPLETION, RATIFY CHANGE ORDERS, AND AUTHORIZE TRANSFER

SUMMARY

Innovative Construction Solutions (ICS) has completed construction of the Irvine Ranch Water District (IRWD) Well Orange Park Acres (OPA-1) PFAS Water Treatment Plant. Staff recommend ratifying Change Order No. 9, authorizing Change Order No 10, authorizing filing a Notice of Completion, and authorizing transfer of improvements for Contract IRWD-2021-1.

RECOMMENDATION

Agendize for September 17 Board meeting:

1. Ratify issuance of Change Order No. 9 and Authorize issuance of Change Order No. 10 to Innovative Construction Solutions for a total amount of $216,642;
2. Accept completion of work and authorize filing a Notice of Completion for Contract No. IRWD-2021-1: IRWD Well OPA-1PFAS Water Treatment Plant;
3. Authorize the General Manager to transfer the IRWD Well OPA-1 PFAS Water Treatment Plant to the Irvine Ranch Water District effective the date of filing the Notice of Completion and quitclaim any property rights obtained for the project.

BACKGROUND/ANALYSIS

Construction of the Irvine Ranch Water District (IRWD) Well OPA-1 PFAS Water Treatment Plant is complete and has started producing water. There were several changes to the plans due to unknown utilities and buried rock, as well as design changes and operational modifications that were not accounted for with the original design. Change Order Nos. 1-8 were previously ratified by the Board; Change Order No. 9 was executed under the General Manager's signing authority; and Staff requests authorization for Change Order 10.

Change Order No. 9 added the Final Davis Bacon Wage Rate Determinations for Orange County Modification 5 to the Contract but did not add any cost to the Contract. There were additional changes due to items that were not originally shown on the plans and items that were added by IRWD. These included additional overhead for the Contractor due to startup and programming delays, additional programming effort by the Contractor, relocation of the disinfection chemical injection quills, addition of a second chlorine analyzer panel to the IX effluent piping, addition of a new IX effluent sampling

station, vessel piping upgrades, demolition of an unidentified buried structure that conflicted with pipe installation, and additional paving beyond the areas shown on the plans. This extra work requires Change Order No. 10 in the amount of $216,642. These costs will be partially reimbursed by IRWD.

Staff requests ratifying Change Order No. 9 and authorizing Change Order No. 10. The final project cost is shown in Table 1, below:

Table 1: IRWD Well OPA-1 PFAS Treatment Cost Summary

Description	Budget	Final Cost
Design and Construction Management		
AECOM Work Order 1-1A (Design)	$631,195	$631,195
AECOM Work Order 1B (Construction Support)	*$150,748*	*$80,262*
CDM Smith Work Order 3-3A (CM/Inspection)	$544,770	$544,770
CDM Smith Work Order 3B (CM/Inspection)	*$27,500*	*$26,003*
Subtotal	**$1,354,213**	**$1,354,213**
Construction		
Contract IRWD-2021-1	$3,485,000	$3,485,000
CCO Nos 1-3	*$560,577*	*$528,134*
CCO 4-7	$154,943	$154,943
CCO 8	$39,507	$39,507
CCO 9-10	*$0*	*$216,642*
OPA-1 PFAS Treatment Vessels	$834,000	$834,000
OPA-1 IX Resin	*$550,000*	*$538,722*
Construction Sub-Total	**$5,624,027**	**$5,624,027**
Bid Advertisement Costs	*$5,800*	*$5,760*
OCWD Staff Expense	*$92,000*	*$90,958*
Project Contingency	*$99,960*	*$0*
Total Budget	**$7,176,000**	**$7,175,896**
IRWD Reimbursement for Contract IRWD-2021-1		($225,443)
Project Cost to OCWD		**$6,950,453**

The PFAS Treatment Facilities and Program Agreement executed between the District and IRWD requires OCWD to transfer the Treatment Systems to IRWD upon filing of the construction contract Notice of Completion. It is recommended that the General Manager be authorized to transfer the Treatment System to the Irvine Ranch Water District.

PRIOR RELEVANT BOARD ACTIONS

03/20/23, M24-30: Ratifying Change Orders to Contract No. IRWD-2021-1, and Authorizing Budget Increase.

03/15/23, M23-24: Ratifying Change Orders to Contract No. IRWD-2021-1, and Authorizing Budget Increase.

03/16/22, R22-3-26: Award Contract No. IRWD-2021-1, Irvine Ranch Water District Well OPA-1 PFAS Treatment System, to Innovative Construction Solutions.

12/15/21, R21-12-178: Approve actions in connection with the IRWD Well OPA-1 PFAS Water Treatment Plant Project: Approve Engineers Report, Find Addendum No. 1 to the ISMND for OPA Well Replacement adequately evaluates the environmental impacts of the project, authorize publication of RFP for IX Media, authorize publication of Notice Inviting Bids, and authorize filing a Notice of Determination for Addendum No. 1 to the ISMND for the OPA Well Replacement Project.

AGENDA ITEM SUBMITTAL

Meeting Date: September 10, 2025

To: Water Issues Committee
Board of Directors

From: John C. Kennedy

Staff Contact: R. Bouley / A. Perry

Budgeted: Yes
Budget Amount: $6,906,571
Cost Estimate: $7,336,771
Funding Source: CIP
Program/Line Item No.: C19022
General Counsel Approval: Yes
Engineers Report: Completed
CEQA Compliance: Cat. Ex.

Subject: RATIFY CHANGE ORDERS AND AUTHORIZE BUDGET INCREASE TO CONTRACT NO. SA-2022-1 CITY OF SANTA ANA PFAS WATER TREATMENT PLANT WELL NO. 38

SUMMARY

Pacific Hydrotech Corporation is nearing completion of construction of the City of Santa Ana PFAS Water Treatment Plant Well No. 38 Project, Contract SA-2022-1, and is preparing to commission the site in preparation for startup in early Fall 2025. There are currently three change orders that require ratification. Staff recommends ratifying change orders 1-3 and increasing the project budget by $430,200.

RECOMMENDATION

Agendize for September 17 Board meeting:

1. Ratify issuance of Change Order Nos. 1-3; and

2. Increase project budget by $430,200 for a total project budget of $7,336,771.

BACKGROUND/ANALYSIS

Construction of the City of Santa Ana PFAS Water Treatment Plant Well No. 38 is nearing completion and is expected to be online within the next few months. The project consists of pretreatment, two trains of Ion Exchange (IX) vessel systems, piping, upgraded mechanical and electrical components, and upgraded chemical dosing equipment. The project has experienced delays due to equipment procurement lead times and Southern California Edison site upgrade designs. Staff has issued three change orders to date, as summarized below.

CCO 1. City requested additional 20-inch butterfly valve, security cabinet replacement, piping connection orientation, additional disconnect switches for valves, and rotation of effluent backwash tee on Evoqua procured piping ($34,986.02; 5 calendar days);

CCO 2. Removal of concrete obstruction, cancellation fee due to City request; reroute of chlorine analyzer drain, altered chemical injection location; cartridge filter connection modifications, chlorine analyzer panel redesign per City's request ($74,242.89; 9 calendar days);

CCO 3. Core drilling of existing electrical building slab, additional 10-inch butterfly valves, additional excavation, asphalt removal and electrical conduit work for new SCE service; remobilization for paving per City's request ($82,266.06; 7 calendar days);

Change orders 1-3 account for 4.47% of the construction contract. In addition to these change orders, there is an additional pending change order that will include costs associated with the City requested changes in the switchgear procurement strategy, site electrical wiring changes and additional site paving. Other additional costs include the following: Stantec has incurred additional costs for design and construction management due to the SCE changes and electrical material delays, City requested scope, and contractor RFI and submittal reviews ($56,400); IX media costs increased with Xylem's (Evoqua's) new IX Media Purchase Agreement for 2025/26 ($57,500); and staff management expenses that were not quantified in the original project budget ($50,000). Staff is maintaining a $150,000 contingency to cover the upcoming Change Order and any other unforeseen costs. The proposed project budget is shown in Table 1 below:

Table 1: SA-38 PFAS Treatment Budget Summary

Description	Budget	Proposed Budget
Design, Construction Management, Permitting		
Design and CM (Stantec)	$571,700	$571,700
Amendment No. 1	$157,200	$157,200
Amendment No. 2	$299,200	$299,200
Amendment No. 3		*$168,800*
Amendment No. 4		*$56,415*
Permitting, Reimbursements, Advertising	$50,000	$20,000
Construction		
Contract SA-2022-1	$4,279,400	$4,279,400
Change Orders No. 1-3 (4.47% of contract)		*$191,495*
Pressure Vessel Pre-Purchase and Storage	$787,021	$787,021
IX Resin Media	*$548,080*	*$605,540*
Staff Expenses		*$50,000*
Project Contingency	*$213,970*	*$150,000*
Total Project Budget:	$6,906,571	$7,336,771

PRIOR RELEVANT BOARD ACTION(S)

7/5/23, R23-7-86: Award Contract No. SA-2022-1, City of Santa Ana PFAS Water Treatment Plant Well No. 38 to Pacific Hydrotech Corporation

12/21/22, R22-12-171: Authorizing Publication of Notice Inviting Bids for Contract No. SA-2022-1, City of Santa Ana Well No. SA-38 PFAS Water Treatment Plant And Authorizing Filing of Categorical Exemption For Such Well

AGENDA ITEM SUBMITTAL

Meeting Date: September 10, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: C. Olsen

Budgeted: N/A
Budgeted Amount: N/A
Cost Estimate: N/A
Funding Source: N/A
Program/Line Item No.: N/A
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: CALIFORNIA WATER FOR ALL COALITION

SUMMARY

The California Water for All Coalition (www.cawaterforall.com) is a statewide effort seeking to educate policymakers on the urgent need for a legislative solution to address California's ongoing water supply challenges. The organization is focused on bringing together the water community, policymakers, and stakeholders to collaborate on ensuring Californians have a sustainable and reliable water supply for all beneficial uses now and for future generations. Numerous water agencies throughout the state belong to and support the coalition. General Manager Craig Miller from the Western Municipal Water District will present on the coalition and the District's possible participation and funding contribution of $20k.

Attachment: CA Water for All informational document

RECOMMENDATION

Agendize for September 17 Board meeting; Take action as appropriate

DISCUSSION

California continues to face long-term water supply challenges across the State that will threaten communities, businesses, the economy, jobs, and the California way of life. For California's future, it's critically important that policymakers address the inadequacies in the water system that are evident in times of drought and heavy rain.

CA Water for All, which was formed by a group of water agency general managers from across the state. The group has nearly 200 supporters made up of water agencies, agricultural interests and statewide associations. The group is urging California lawmakers to act now on a legislative solution to address the water shortage threat that continues to loom over the Golden State.

CA Water for All developed a legislative bill, SB72, to initiate action to solve the state's water challenges. The California Municipal Utilities Association (CMUA) is sponsoring Senate Bill 72 (formerly SB 366) authored by Senator Anna Caballero (D-Merced). This piece of legislation would modify DWR's California Water Plan to include water supply development aspirational targets. The goal is to change water supply management from a scarcity mindset to a position

of water abundance. The State will work toward water supply targets to ensure we have enough water for all beneficial uses. SB 72 would:

- Establish necessary water supply targets to capture and produce enough water for all uses
- Modernize the California Water Plan for a 21st century climate
- Ensure accountability for state agencies to meet water supply development targets
- Work within the Department of Water Resources State Water Plan
- Compliment and amplify Governor Newsom's Water Supply Strategy, ensuring there are water supply targets that extend beyond any single Administration
- Establishes an Advisory Group to work with DWR to develop a plan to meet targets

The District is formally supporting SB72.

The targets are meant to create accountability and generate a commitment from the State, the water community, and all stakeholders to follow through on comprehensive solutions that can make meaningful and necessary change. Targets and goals have long been successful in California on some of our highest priority issues including housing, climate, education, energy, workforce development, transportation, and public safety.

As a result of changing and worsening climate conditions, an aging water infrastructure, a growing population, a global economy, and antiquated state policies, California is facing a long-term water supply shortage. While there have been some investments by the State and federal governments to start on a path toward sustainability, a major effort is needed to create a fully functioning water supply system that is reliable for future generations.

PRIOR RELEVANT BOARD ACTION(S)

N/A

What Others Are Saying

Improved Infrastructure Needed

"We need to be able to capture and store water when it's available, and then we have to reuse that water, and we have to be more efficient across the board. I don't think of it as an either-or; we have to do all of it."

Karla Nemeth, director, California Department of Water Resources, Mar 2023

"California has experienced two of the worst droughts in our state's history in the last decade alone. While we've invested billions across the state to become more drought resilient in light of this new reality, there's more we need to do to prepare for the next drought, whenever it comes."

Wade Crowfoot, secretary of the California Natural Resources Agency, Jan 2024

"California does indeed have a water supply problem, mostly because its political leaders for decades have failed to expand the state's water infrastructure that had been built during the mid-20th century… the issue that must be resolved by reallocating existing supplies, building new storage and/or creating new supplies, such as desalination of seawater."

Dan Walters, opinion columnist at CalMatters, Jan 2024

"The specter of drier dries, and preparing for wetter wets, should be guiding our decision-making process at this time. How do we capture more rainwater? How do we capture more snow melt? How do we convey more water across different areas of the state? How do we store more of it into the ground? Although it's being alleviated right now, scientists agree that the drought condition that we're in probably isn't going anywhere. A 21st-century infrastructure solution has to begin at the governance and investment prioritization standpoint… We need to rethink what a 21st-century water infrastructure framework looks like, one that meets the needs of different parts of the state and different communities."

Matt Horton, senior adviser at the Milken Institute's Center for Regional Economics and California Center, May 2023

"Projects that capture available precipitation, stormwater, or floodwaters to recharge depleted groundwater basins need to be ready to capture high flows when they are available during each wet season."

Karla Nemeth, director, California Department of Water Resources, May 2023

"Building resilience against extreme weather will take time but that just means we need to work fast. And yes, it will be costly, but spending now to prepare for very wet and very dry seasons will cost far less than having to pay for future disasters. In May, Gov. Newsom proposed nearly half a billion dollars for one-time flood relief, but consistent, long-term funding is needed."

Peter Gleick, senior fellow at the Pacific Institute, Jan 2024

Climate Change and Worsening Conditions

"We do know that climate change is altering California's weather pattern and is likely, though not certain, to mean less snow and more rain, as well as wider swings in overall precipitation. That should persuade officialdom to create more water storage capacity to both capture runoff for later use and protect communities from disastrous floods."

Dan Walters, opinion columnist at CalMatters, Jan 2024

"Climate change is throwing California's already variable climate for a loop, supercharging the extremes of drought and flood and leaving us with fewer "in-between" moments. But while we've done a great job preparing for increasingly frequent and severe droughts in California, our infrastructure and institutions remain woefully underprepared for the extreme floods that are coming our way. It's time to take this threat seriously, and accelerate planning for the wet years we know are bound to happen. The need is urgent… California's water supply and flood infrastructure is not up to the task of adapting to increasing climate volatility…"

Letitia Grenier, director of the PPIC Water Policy Center, and Ellen Hanak, senior fellow with the PPIC Water Policy Center, Jan 2024

"There are areas like California or South Africa or the western coast of Australia that simply do not have enough water to go around and climate change is going to make that all the worse. It's going to heat things up, which means that we will have more water evaporate, but we will also need more water at the same time…"

Barton H. "Buzz" Thompson, professor at Stanford, Jan 2024

"You can't extrapolate from one region to another, but you can clearly map the fact that we are depleting [water] faster than we are accreting… you've got to intervene."

Felicia Marcus, fellow at Stanford University's Water in the West Program, Jan 2024

“Atmospheric rivers and bone-dry droughts are like earthquakes and wildfires — challenges Californians have to face. We know they’re coming; we just don’t know exactly when or where. An earthquake-resilient house or a more flood-resilient community won’t stop the ground from shaking or the rain from falling, but it can mean the difference between weathering the storm or cleaning up after a disaster.”

Peter Gleick, senior fellow at the Pacific Institute, Jan 2024

“Today we have an infrastructure from last century that wasn’t built to withstand the intensity of today’s storms, nor the increase in runoff from both paved over landscapes and denuded hillsides and mountains due to more frequent forest and development.”

Kurt Schwabe, professor of water economics and policy at the University of California, Riverside, Feb 2024

Weather Whiplash Worsens Water Supply Challenges

“Current media reports have been telling us to expect a wet El Niño weather pattern this winter, but whether or not that occurs, everyone who lives in the state knows that dry years will return. No matter the forecast, we must prepare for future droughts by capturing water during wet years, like 2023, and saving it for inevitable dry ones on the horizon. We need facilities to store water, especially in wet years, and we must do so in ways that deliver water to people in cities and towns, farmers who grow our food and the environment.”

Mike Wade, executive director of the California Farm Water Coalition, Dec 2023

“Dams become really unsafe with time, especially if maintenance has been deferred. We need to be especially careful in California because of how old our dams are (the median dam age is 74 years) and how geologically active the landscape is. There are some examples in the news recently of failed dams, and we definitely want to avoid that.”

Andrew Rypel, director of the Center for Watershed Sciences at UC Davis, June 2023

“We should welcome the wet weather because California depends for most of its annual water supply on winter storms that roll in across the Pacific or sweep down from Alaska. Nevertheless… the state is not adequately prepared to deal with extreme weather events, especially the turbocharged storms that human-caused climate change can deliver.”

Peter Gleick, senior fellow at the Pacific Institute, Jan 2024

New Water Supply Needed

“The fact that groundwater depletion has been accelerating in such a large number of food-producing regions underscores the critical links between food and water security, and that both are at far greater risk around the world than most people realize… There’s a whole kitchen sink of things we need to be trying. It’s important for future generations. It’s important to sustain our groundwater supply so that we can be growing food for generations and generations, not just one.”

Jay Famiglietti, hydrologist and professor at Arizona State University’s School of Sustainability, Jan 2024

“Some of the rates of groundwater level decline occurring in California really are some of the highest in the world. It’s a sobering finding. We’ve got a lot of work to do here in California.”

Scott Jasechko, associate professor of hydrology at UC Santa Barbara, Jan 2024

CA Water for All is a statewide education effort seeking to educate policymakers on the urgent need for a legislative solution to immediately address California’s ongoing water supply threat. The path forward requires bringing together the water community, policymakers, and stakeholders to collaborate on ensuring that we have enough water for all beneficial uses and to support all Californians and future generations.

To learn more, visit: cawaterforall.com

AGENDA ITEM SUBMITTAL

Meeting Date: September 10, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: S. Parsons/L. Haney

Budgeted: Yes
Budgeted Amount: $126,000
Cost Estimate: $935,000
Funding Source: General Fund
Program/ Line Item No. 1080.53001
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: SANTA ANA SUCKER TRANSLOCATION

SUMMARY

As a requirement of our 2006 agreement with the California Department of Fish and Wildlife (CDFW) to dismiss the CDFW's protest to OCWD's Santa Ana River water right application with the State Water Resources Control Board (SWRCB), OCWD is required to perform a translocation of the Santa Ana sucker, a threatened native fish, within the Santa Ana River watershed. OCWD was granted rights to SAR water which currently averages approximately 140,000 acre-feet per year with an annual value of over $140 million. Staff recommends entering into an Agreement with the San Bernardino Valley Municipal Water District, the lead program agency of the Upper Santa Ana River Habitat Conservation Plan (HCP), to complete a translocation of the Santa Ana sucker for $935,000 over seven years.

Attachment: Presentation

RECOMMENDATION

Agendize for September 17 Board Meeting: Enter into an Agreement with San Bernardino Valley Municipal Water District (SBVMWD) to complete a translocation of the Santa Ana sucker for $935,000 over 7 years.

BACKGROUND/ANALYSIS

In the 1990s, OCWD submitted a water right application to the State Water Resources Control Board (SWRCB), proposing appropriation of 505,000 acre-feet of water from the Santa Ana River. CDFW protested the application, citing effects to the Santa Ana sucker, a threatened native fish found within the Santa Ana River. In 2006, OCWD and CDFW entered into an agreement to dismiss the protest. This agreement required OCWD to complete six actions related to the Santa Ana sucker to be completed by March 31, 2008. In 2020, OCWD submitted a letter to CDFW indicating completion of all six actions. The following year, however, CDFW responded, rejecting OCWD's claims of completing two of these actions:

1) Submitting a re-introduction and monitoring plan and
2) Implementing sucker re-introduction and monitoring at CDFW approved site(s) within the Santa Ana River watershed.

As of 2025, these requirements are seventeen years overdue. A deciding factor in the SWRCB approving OCWD's recent water right application was the understanding that OCWD would complete these remaining requirements, specifically through use of the HCP (discussed below).

Currently, OCWD does not possess the ability to meet CDFW requirements for performing a translocation on our own.

- OCWD staff does not meet the qualifications for receiving a 10(a)(1)(A) permit, required by the United States Fish and Wildlife Service (USFWS), to conduct a translocation.
- OCWD does not have an approved translocation plan, which is estimated to cost approximately $400,000 to complete.
- OCWD does not have a CDFW-approved tributary in which to conduct the translocation, and the remaining tributaries with high-quality habitat have already been assigned to the HCP.

Instead of completing the translocation ourselves, OCWD staff recommend completing the translocation under the umbrella of the HCP. The HCP is a large umbrella permit that provides endangered species permit coverage for 21 covered species, including the Santa Ana sucker. The HCP already has approved 10(a)(1)(A) permits, an approved translocation plan, and approved tributaries in which to conduct Santa Ana sucker translocations. As a member of the HCP, OCWD can join the HCP's translocation effort and use their plan and permits to reach compliance of our remaining CDFW obligations.

The estimated total cost of implementation is $935,000, though this cost can be spread out over 7 years. These costs include $125,888 in upfront implementation costs, $138,005 in operating expenses, and the funding of a $671,107 non-wasting endowment to cover the cost of maintaining the translocation site in perpetuity. Funds have been included in the current FY2025-26 budget to cover the first year of implementation.

Spread out over seven years, the annual costs of the project would be:

Year	Annual Cost
Year 1	$152,206
Year 2	$152,206
Year 3	$179,806
Year 4	$179,806
Year 5	$179,806
Year 6	$45,585
Year 7	$45,585
Total	**$935,000**

Staff recommends entering into an Agreement with SBVMWD to complete a translocation of the Santa Ana sucker for $935,000 over 7 years.

PRIOR RELEVANT BOARD ACTION(S)

N/A

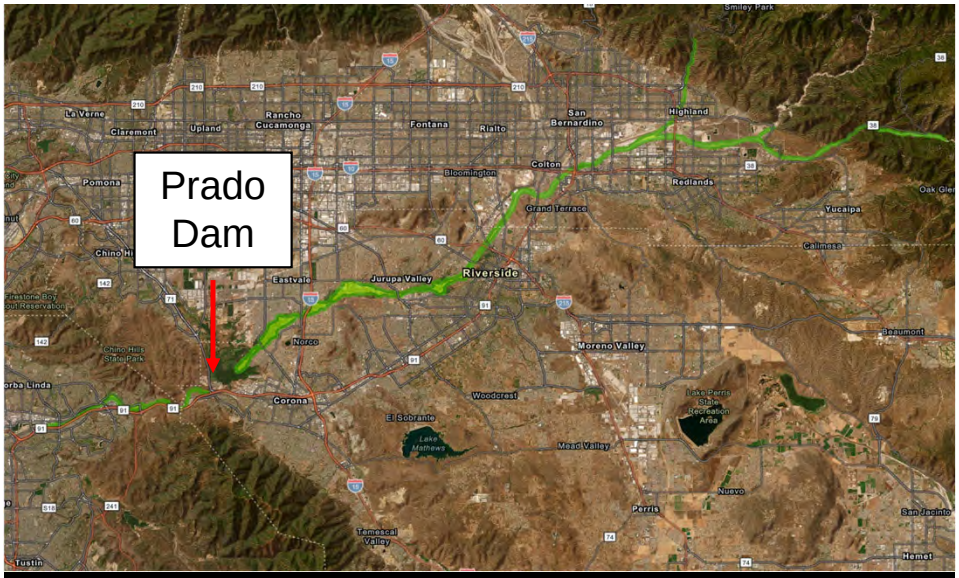
Santa Ana Sucker Translocation

Sheryl Parsons
Director of Natural Resources

September 10th, 2025
Water Issues Committee

Santa Ana Sucker

- Federally threatened fish
- Found only in parts of the San Gabriel, Los Angeles, and Santa Ana rivers
- Suitable habitat has been lost in most of the river
  - Due to sedimentation and decreasing baseflow
- Mostly found in upper tributaries



CDFW Agreement Regarding Water Right

- In the 1990s, OCWD submitted a Water Rights Application to the State Water Resources Control Board proposing appropriation of 505,000 acre-feet of water from the Santa Ana River
  - Current SAR flows average 140,000 AFY
  - Value of water is approximately $140 million/year
- CDFW protested the WRA citing effects to the Santa Ana sucker and subsequently entered into an agreement with OCWD to dismiss the protest.
- The 2006 agreement required OCWD to complete 6 actions related to the Santa Ana sucker.

2021 Response from CDFW

CDFW Agreement Regarding Water Right

1. ✓ Assess sites for sucker re-introduction by October 31, 2006.
2. ✗ Submit re-introduction and monitoring plan by June 30, 2007.
3. ✗ Implement sucker re-introduction and monitoring at Department approved site(s) within the SAR watershed by March 31, 2008.
4. ✓ Assess sites for experimental sucker habitat restoration above River Road Bridge by December 31, 2006.
5. ✓ Submit experimental sucker habitat restoration and monitoring plan by June 30, 2007.
6. ✓ Implement experimental sucker habitat restoration and monitoring by October 31, 2007.

2021 Response from CDFW

CDFW Agreement Regarding Water Right

1. Assess sites for sucker re-introduction by October 31, 2006.
2. Submit re-introduction and monitoring plan by **June 30, 2007.**
3. Implement sucker re-introduction and monitoring at Department approved site(s) within the SAR watershed by **March 31, 2008.**
4. Assess sites for experimental sucker habitat restoration above River Road Bridge by December 31, 2006.
5. Submit experimental sucker habitat restoration and monitoring plan by June 30, 2007.
6. Implement experimental sucker habitat restoration and monitoring by October 31, 2007.

Past Translocation Efforts
OCWD 2020 Letter to CDFW

- 2010 Habitat Restoration in Sunnyslope Creek
  - Prior to 2005, Sunnyslope was a known Santa Ana sucker spawning site
  - In 2005, the creek was closed off from the river following a storm
  - No sucker in Sunnyslope from 2005-2010
  - OCWD restored habitat in the creek and reconnected creek to river
  - Sucker returned to Sunnyslope in 2011

- SAWPA Sucker Conservation Team
  - Hosted 2 workshops to identify issues related to sucker reintroduction
  - Concerns by USFWS delayed reintroduction efforts

- OCWD funded RCRCD sucker rearing program through SAWA
  - Sucker from RCRCD were reintroduced in coordination with USFWS/CDFW

CDFW did not approve any of these actions and determined they did not count as meeting the translocation requirement.

What Do You Need For A Translocation?

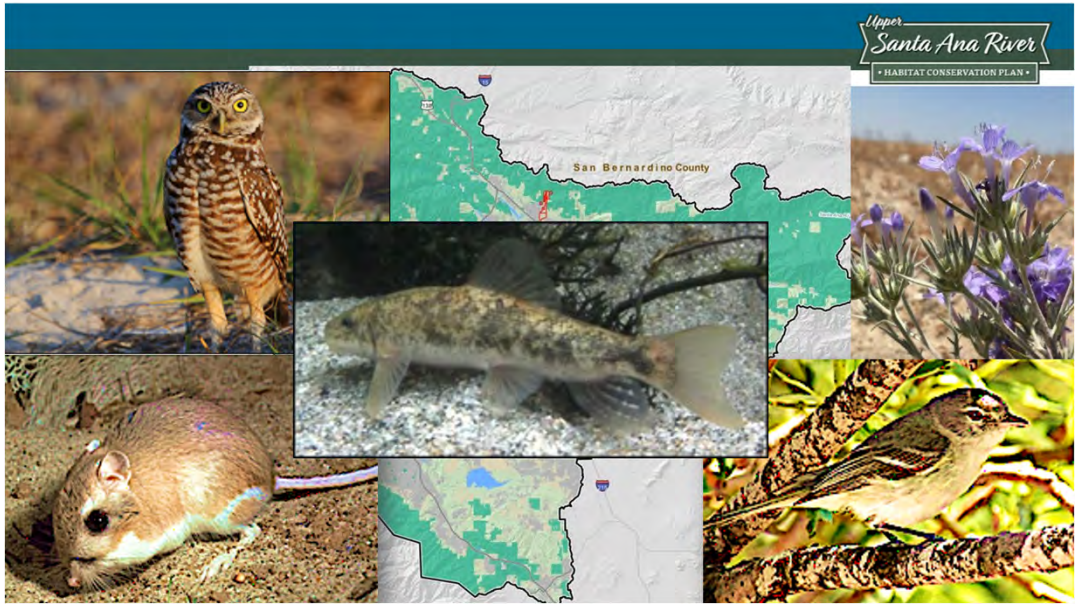
- **10(a)(1)(A) permit** that allows for take of listed species for scientific purposes or to enhance the survival of the species
- Development of and CDFW/USFWS approval of a **translocation plan**
- **Approved tributary** by CDFW
- **Endowment** for in perpetuity maintenance
- **Operational budget** for fish rearing and translocation

Problem Summary

- CDFW sucker-related obligations are 18 years overdue
- OCWD staff does not have qualifications for 10(a)(1)(A) permits
- OCWD does not have an approved translocation plan or approved tributaries
- SWRCB approved recent water right application in good faith when OCWD identified potential path forward → HCP

Solution:
Upper Santa Ana River Habitat Conservation Plan

- Large umbrella permit that provides endangered species permits for 21 covered species
- 50-year permit
- Permittees – 11 water agencies (including OCWD)
  - OCWD Covered Activities – Operation of the Prado Wetlands, Sunnyslope Creek maintenance, and sediment management
- Identifies restoration/conservation projects to mitigate for all agencies activities
  - **Including Santa Ana sucker translocation**
- Have an already approved **10(a)(1)(A) permit** and **approved translocation plan** with **identified tributaries**



As members of the HCP, we can join the HCP's translocation effort and use their plan and permits to get into compliance for our CDFW obligations.

HCP vs. OCWD Comparison

	HCP	OCWD
	Cost	
Upfront Implementation Costs	$125,900	$400,000
Operating Expenses	$138,000	$138,000
Endowment	$671,100	$671,100
Total Cost	**$935,000**	**$1,209,100**
	Time	
Translocation Plan	0 Years	≥ 3 Years
Permits	0 Years	≥ 3 Years
Endowment Funding & Growth	7 Years	7 Years
Translocation & Monitoring *(can overlap endowment funding & growth)*	5 Years	5 Years
Total Time To Compliance	**7 Years**	**≥ 10 Years**

← Based off cost of HCP Plan

Assumes OCWD can find approved tributary

Using the HCP will save OCWD ~$274,000 and get us into compliance at least 3 years sooner

HCP Translocation Cost Overview

- One-time project with associated hand-off cost to HCP
- Can pay as a lump sum, or over time

Upfront implementation costs + endowment

Endowment fully funded; two year growth period

Year	Cost
Year 1	$152,206
Year 2	$152,206
Year 3	$179,806
Year 4	$179,806
Year 5	$179,806
Year 6	$45,585
Year 7	$45,585
Total	**$935,000**

Funds have been included in the FY2025-26 budget for the first year of implementation

← Start of translocation; operation expenses start

Includes funding an endowment to cover Years 8-50 of the project.
Endowment must be fully funded by Year 5, with a two year growth period.

Recommendation

Enter into an agreement with San Bernardino Valley Municipal Water District to complete a translocation of the Santa Ana sucker for $935,000 over 7 years.

Thank You!

Sheryl Parsons
Director of Natural Resources
Orange County Water District
sparsons@ocwd.com

Stay informed

HCP Translocation Cost Breakdown

	Year 1	Year 2	Year 3 (Presumed Start Date of Translocation)	Year 4	Year 5	Year 6	Year 7
Upfront Implementation Costs	$17,984	$17,984	$17,984	$17,984	$17,984	$17,984	$17,984
Operating Expenses	*Do not need to pay until translocation begins*		$27,601	$27,601	$27,601	$27,601	$27,601
Endowment	$134,221	$134,221	$134,221	$134,221	$134,221	*Fully funded by Year 5; two year growth period*	
Annual Cost	**$152,206**	**$152,206**	**$179,806**	**$179,806**	**$179,806**	**$45,585**	**$45,585**
Running Total Cost	$152,206	$304,411	$484,218	$664,024	$843,830	$889,415	**$935,000**

HCP Translocation Cost Calculations

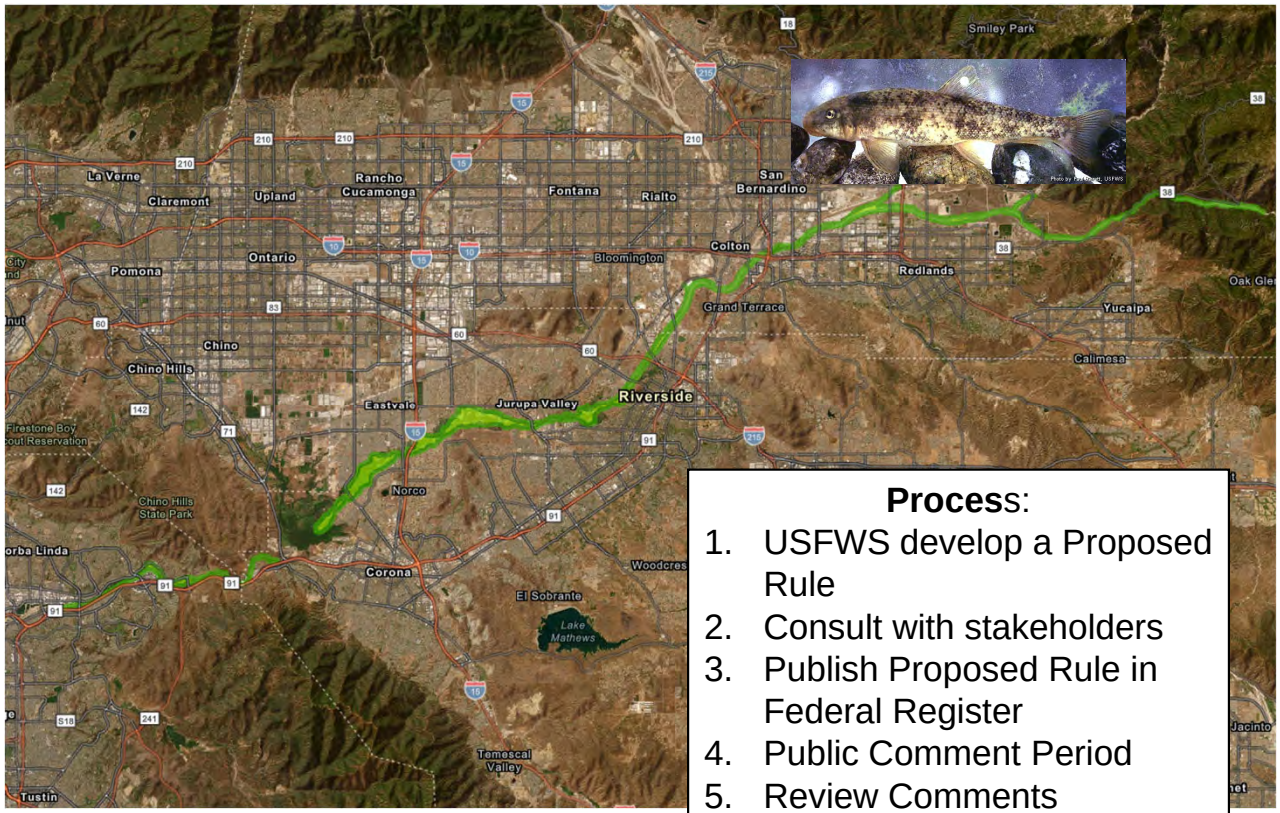
Upfront Implementation	HCP Total Cost	Shared by Six Agencies (divide by 6)	Annual Cost (divide by 7 years)
Translocation Plan	$398,051	$66,342	$9,477
Sucker Raising Facility	$357,285	$59,548	$8,507
		Annual Total Cost	**$17,984**

Operating Expenses (1 Year)	HCP Total Cost	Shared by Six Agencies (divide by 6)	Annual Cost
1 Translocation	$24,150	-	$24,150
Equipment/Vehicles	$12,074	$2,013	$2,013
Reporting	$8,625	$1,438	$1,438
		Annual Total Operations Cost, Years 3-7	**$27,601**

Endowment	HCP Total Cost	Shared by Six Agencies (divide by 6)	Annual Cost
1 Translocation	$13,800	-	$13,800
Equipment/Vehicles	$55,488	$9,248	$9,248
Reporting	$2,645	$441	$441
		Annual Total Cost, Years 7+	**$23,489**
	Capitalization Rate	**3.5%**	**-**
	Total Principal Needed (Annual Cost ÷ Capitalization Rate)	**$671,107**	**-**
		Fully Funded by Year 5 (divide by 5)	**$134,221**

What is Needed for a Translocation: 10(j) Designation

- **10(j)** is a section of the Endangered Species Act
- Allows the USFWS to designate reintroduced populations of listed species as **"experimental" populations.**
- Reduces protections for these populations
  - Example: If you reintroduce sucker upstream, and then they are washed downstream into someone else's property, is that landowner accountable for harm done to the sucker?
  - If the population is designated an "experimental population" under 10(j), full ESA protection does not apply to that population.



Process:

1. USFWS develop a Proposed Rule
2. Consult with stakeholders
3. Publish Proposed Rule in Federal Register
4. Public Comment Period
5. Review Comments
6. Publish Final Rule

What is Needed for a Translocation:

1. **10(a)(1)(A) permits** allow for take of listed species for scientific purposes or to enhance the survival of the species.
   - Required for reintroduction efforts
   - OCWD staff not currently qualified for 10(a)(1)(A) approval
   - Can take up to 3 years to approve

2. **Approved translocation plan** by both CDFW and USFWS
   - Plan must identify tributaries for translocation
     - CDFW & OCWD have not been able to identify an available feasible tributary for the translocation
   - Can take over 3 years to approve
   - Estimated cost: $400,000

HCP has both of these already!

Conclusion

- CDFW sucker-related obligations are 18 years overdue
- SWRCB approved recent water right application in good faith, expecting OCWD to use the HCP met compliance

- OCWD staff does not have qualifications for 10(a)(1)(A) permits
- OCWD does not have an approved translocation plan or approved tributaries

- The Upper SAR HCP has the plans and permits in place
  - **Translocation plan** already approved by agency – *no need to wait for approval*
  - **10(a)(1)(A) permit** already obtained - *no need to wait 3+ years for a permit*
  - HCP is the only outside entity for translocation moving forward

- Total cost for the translocation is $935,000
  - Years 1-2: $152,206/year
  - Years 3-5: $179,806/year
  - Years 6-7: $45,585/year

Using the HCP will save OCWD ~$274,000 and get us into compliance at least 3 years sooner

Solution: Upper Santa Ana River Habitat Conservation Plan (HCP)

- Regional umbrella permit – 50 yrs
- Permittees – 11 water agencies (including OCWD)
- Performs **Santa Ana sucker translocation**
- Has an approved **10(a)(1)(A) permit** and **approved translocation plan** with **identified tributaries**

As members of the HCP, we can join the HCP's translocation effort and use their plan and permits to get into compliance for our CDFW obligations.

AGENDA ITEM SUBMITTAL

Meeting Date: September 10, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: C. Olsen

Budgeted: N/A
Budgeted Amount: N/A
Cost Estimate: N/A
Funding Source: N/A
Program/Line Item No.: N/A
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: EMERGENCY WATER SUPPLIES TO SOUTH ORANGE COUNTY UPDATE

SUMMARY

On July 30, 2025, staff from OCWD and Moulton Niguel Water District (MNWD) gave a presentation to the Groundwater Producers and South Orange County agencies regarding a new interconnection between City of Santa Ana (City) and MNWD to be used during emergencies. The meeting summary is attached and described below.

Attachment: July 30, 2025 Meeting summary

RECOMMENDATION

Informational

DISCUSSION

In 2022, the Board approved an Agreement with the City and MNWD which provided for preliminary engineering analysis and design of the Santa Ana – East Station option to determine the exact facilities needed, initiating CEQA analysis, and investigating the institutional arrangements needed to connect into the EOCF#2 and to deliver water into the pipeline. More specifically, the program calls for the following;

- MNWD funds all work specified in the agreement.
- Water from the City's water system would only be pumped into the EOCF#2 when MWD was unable to deliver water to MNWD.
- New facilities are designed to City and OCWD standards.
- At no time would the delivery of water to MNWD cause or exacerbate a shortage of water to the City's customers.
- MNWD reimburses the City for all expenses incurred by the City as a result of this program.
- The agreement does not allow MNWD to store water in the OCWD groundwater basin.
- The City utilizes the new water system improvements during normal operations.
- The program complies with the OCWD Act.
- MNWD prepares the two requests for proposals necessary to hire an engineering and CEQA consultant and administer the contracts.
- The three parties collaboratively carry out the scope of work for this agreement.

This agreement was set to terminate on May 24, 2025 and the Board approved extending the agreement three years through June 30, 2028 at the April 16, 2025 Board Meeting. During this three year period, MNWD will solicit for and develop CEQA documents and final design of the proposed infrastructure based on the preliminary design analysis. MNWD will also coordinate with the parties having EOCF#2 ownership and will pursue the necessary authorizations for the project. The proposed amendment also calls for MNWD to reimburse the City and OCWD for their expenses associated with the performance of the scope of work of this agreement and the proposed amendment.

On May 28, 2025, staff from OCWD, Municipal Water District of Orange County (MWDOC), City and MNWD met to further discuss City system capacity, infrastructure improvements and EOCF#2 interconnection. MNWD then developed a draft framework of an operating plan for the proposed interconnection for all involved parties (including the Metropolitan Water District) to review.

A meeting with EOCF#2 owners and interested stakeholders occurred on July 30, 2025 to present the draft framework plan and discuss how to proceed with obtaining approval for an emergency interconnection. After presentations were made discussing the existing emergency supply Agreement with Irvine Ranch Water District and South OC agencies, the OCWD, City and MNWD Agreement, and proposed project elements, the meeting was opened up to question and answer. Several comments were made regarding addressing the institutional matters with focus on identifying benefits to the basin and Producers and establishing a mechanism for use of the EOCF#2 pipeline. This topic will be on the October WACO agenda to share and discuss the project.

PRIOR RELEVANT BOARD ACTIONS

7/9/25, May 28, 2025 meeting summary, which involved further discussion of City system capacity, infrastructure improvements and the EOCF#2 interconnection related to providing emergency water supplies to south orange county, between OCWD, Municipal Water District of Orange County, City of Santa Ana and Moulton Niguel Water District provided as informational item.

4/16/25, R25-4-62: Authorize execution of Amendment to Agreement with the city of Santa Ana and the Moulton Niguel Water District.

3/16/22, R22-3-30: Authorize execution of agreement with the city of Santa Ana and the Moulton Niguel Water District.

7/21/21, R21-7-109: Approved the policy principles to provide emergency water supplies to SOC.

2/10/21, Informational Item: Provided Tetra Tech report to the Water Issues Committee.

3/20/19, R19-3-31: Hired Tetra Tech to perform two technical studies for the District.

3/20-19, R19-3-32: Hired Westwater to perform two technical studies for the District.

1/16/19, R1-1-10: Authorize execution of Agreement with the Moulton Niguel Water District and issuance of two requests for proposals for review of existing water storage programs and evaluation of groundwater conveyance options.

10/3/18: OCWD MNWD ad-hoc committee created.

8/15/18, M18-104: Directed staff to update the 2007 *Report on Orange County Groundwater Basin Storage and Operational Strategy* to reflect the recommended basin operating changes and to limit any potential future storage agreements to within the 36,000 acre-foot Santa Ana River Conservation and Conjunctive Use Program until the Metropolitan Water District Conjunctive Use Storage Program expires in 2028.

8/2/17, R17-8-107: Broadened the District's Water Resources Policy to allow the consideration of water storage and exchange programs with SOC water agencies.

MEETING SUMMARY

Subject:	Emergency Water Supplies to South Orange County – Stakeholders Meeting
Date & Time:	July 30, 2025 | 10:00 AM
Location:	OCWD-MWDOC Boardroom (18700 Ward St., Fountain Valley, CA 92708)
Attendees:	See attached sign-in sheets and list of Zoom attendees.

1. Staff from the Orange County Water District (OCWD), City of Santa Ana (COSA), and Moulton Niguel Water District (MNWD) gave a presentation (attached) regarding a new interconnection between COSA and MNWD to be used during emergencies per the terms of the OCWD Emergency Services Program and MET Admin Code 4519.
   1.1. Chris Olsen (OCWD) reviewed the history of the OCWD Emergency Services Program, July 2021 policy principles, and agreements between OCWD, COSA, and MNWD related to a new emergency interconnection.
   1.2. Matt Collings (MNWD) elaborated on past efforts, including reliability plans and studies prepared by the Municipal Water District of Orange County (MWDOC), and provided an outline of the project objectives.
   1.3. Todd Dmytryshyn (MNWD) reviewed the proposed improvements, noting that water quality and hydraulics were evaluated in coordination with OCWD, COSA, MWDOC, and MET and determined to be feasible.
   1.4. Cesar Barrera (COSA) highlighted the importance of the project to the City of Santa Ana, noting it represents a significant investment in infrastructure that would be used by the City during normal operating conditions.
   1.5. Todd Dmytryshyn reviewed the timeline, highlighting the importance of continuing to advance these efforts considering the anticipated expiration of the agreement for the existing IRWD emergency interconnection.
   1.6. Todd Dmytryshyn provided a summary of the Draft Operating Plan Framework (attached), explaining the intent is to comply with the terms of the OCWD Emergency Services Program and MET Admin Code 4519.
2. Following the presentation, attendees were encouraged to provide questions and remarks. Remarks were generally supportive, while emphasizing the need to address institutional matters, including:
   2.1. Establish a mechanism for use of the East Orange County Feeder No. 2 (EOCF#2). Charles Busslinger (MWDOC) noted that MET staff has indicated that they are supportive of the project and will look to the EOCF#2 participants.
   2.2. Identify opportunities for benefits to the basin agencies.
   2.3. Clarify in framework that intent is to operate similar to IRWD interconnection (except during emergencies only), whereby MNWD would purchase MET water for COSA to offset what is pumped from the basin.
   2.4. Develop a communication plan to help basin agencies articulate project benefits to their governing bodies.
3. Next Steps:
   3.1. Schedule a similar presentation for a future OCWD and/or MWDOC Board Meeting. It was suggested that OCWD/COSA/MNWD pursue presenting the project at a regional meeting, such as WACO.
   3.2. OCWD to determine process and timing for reviewing the Emergency Services Program.
   3.3. MNWD, COSA, and MWDOC to discuss approach to work through institutional matters regarding EOCF#2.

Attachments:

- Agenda with Draft Operating Plan Framework from Stakeholders Meeting on July 30, 2025
- Sign-in sheets and list of Zoom attendees from Stakeholders Meeting on July 30, 2025
- Presentation slides from Stakeholders Meeting on July 30, 2025

Link to Recording: http://bit.ly/45x54Uu | Passcode: aD8V2Bb. (include period at end of passcode)

MEETING AGENDA

Project:	Emergency Water Supplies to South Orange County – Stakeholders Meeting
Date:	July 30, 2025
Time:	10:00 AM
Location:	Orange County Water District (18700 Ward St., Fountain Valley, CA 92708) and on Zoom at https://ocwd.zoom.us/j/81530662605

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1. Introductions

2. Proposed Emergency Interconnection at Santa Ana East Station
   - 2.1. Background and Purpose
   - 2.2. Project Components
   - 2.3. Status and Next Steps

3. East Orange County Feeder No. 2 Stakeholder Coordination
   - 3.1. Operating Plan Framework
   - 3.2. Ongoing Updates

4. Questions / Open Discussion

Attachment: Draft Operating Plan Framework for Emergency Deliveries of Water to South Orange County from City of Santa Ana East Station Via East Orange County Feeder No. 2

DRAFT

OPERATING PLAN FRAMEWORK
FOR EMERGENCY DELIVERIES OF WATER TO SOUTH ORANGE COUNTY FROM
CITY OF SANTA ANA EAST STATION VIA EAST ORANGE COUNTY FEEDER NO. 2

SECTION 1 Purpose

The City of Santa Ana (COSA), Moulton Niguel Water District, and Orange County Water District (OCWD), collectively the "Establishing Parties", are cooperating on an emergency interconnection that will supply water to Moulton Niguel Water District ("Requesting Agency") during an emergency involving the inability of the Metropolitan Water District of Southern California (MET) to supply imported water due to an infrastructure failure or outage resulting from a natural disaster or other catastrophic event (excluding drought-related shortages) for a period expected to be greater than seven days. The emergency interconnection will use the East Orange County Feeder No. 2 (EOCF#2) to deliver water from the Orange County Groundwater Basin, originating from the COSA's East Station, to the Requesting Agency. This plan is intended to guide operation of the emergency interconnection consistent with MET's Administrative Code § 4519 and OCWD's South Orange County Emergency Services Program.

SECTION 2 Conditions During Which the Emergency Interconnection May Be Used (All of the Following Conditions Must Be Met)

- Loss of Supply: Emergency involving MET's inability to supply imported water due to an infrastructure failure or outage resulting from a natural disaster or other catastrophic event (excluding drought-related shortages) for a period expected to be greater than seven days. MET's General Manager shall solely determine when the emergency begins and ends.
- No Alternatives for MET: There are no alternative means for MET to make deliveries to the Requesting Agency through another service connection on the MET system.
- No Alternatives for Requesting Agency: The Requesting Agency has determined that no other feasible alternative methods (e.g. other interconnections, local/regional emergency storage, etc.) are available and adequate to provide water service to their service area for the expected duration of the emergency.

SECTION 3 Approvals Required Prior to Initiation of the Emergency Interconnection

- Metropolitan Water District of Southern California
- City of Santa Ana

SECTION 4 Initiation of the Emergency Interconnection

- Notifications: Requesting Agency, in conjunction with MWDOC, will notify MET, COSA, OCWD, and all downstream member agencies at least 24 hours in advance of initiating the emergency interconnection.
- Santa Ana East Station: COSA will assess and determine availability, and if available, will make the necessary operational adjustments at the Santa Ana East Station to redirect flows into EOCF#2.

- ECOF#2: This plan assumes that, within 24 hours following notifications, flows to turnouts on EOCF#2 between SA-7 and the Coastal Junction will be discontinued and will remain that way throughout operation of the emergency interconnection and until the MET system is returned to its normal operating configuration.
- Joint Transmission Main (JTM): Requesting Agency will coordinate with the Designated Operator of the JTM to maintain positive pressure throughout the system to the Bradt Reservoir.

SECTION 5 Throughout Operation of the Emergency Interconnection

- Communication Protocol: The Parties will continuously coordinate throughout operation of the emergency interconnection.
- COSA reserves the right to change, pause, or discontinue emergency deliveries if other emergencies or water availability issues arise where continuing emergency deliveries as requested would impact water deliveries to COSA customers.
- Water Quality: The Requesting Agency, in conjunction with MWDOC, will provide water quality data to MET upon request. The Requesting Agency will immediately notify MET, MWDOC, and downstream member agencies of any changes in water quality delivered to EOCF#2 during operation of the emergency interconnection.

SECTION 6 Conclusion of the Emergency

- Emergency use of the Facilities shall be concluded when MET determines that the emergency has ended or otherwise directs the Requesting Agency to discontinue operation of the emergency interconnection
- Flushing: The Requesting Agency will cooperate with MET, in conjunction with MWDOC, to flush the system with MET water and return the system to its normal operating configuration as soon as reasonably possible.

SECTION 7 Post-Emergency Actions

- Reporting: MET and downstream member agencies report any damages claimed to have resulted from operation of the emergency interconnection. The Requesting Agency will pay all costs to repair or otherwise remedy damages resulting from operation of the emergency interconnection.
- Compensation: The Requesting Agency will pay all direct costs and fees incurred by COSA, MET, MWDOC, and OCWD associated with operation of the emergency interconnection. This includes payment for water flushed through MET's system at the conclusion of the operation of the emergency interconnection.

APPENDIX

A. Primary Contact Information for the Parties
B. Map of Orange County Water Retailers and Transmission Mains

APPENDIX A – Primary Contact Information for the Parties

Agency	Contact Name	Phone	Email
Establishing Parties			
City of Santa Ana			
Moulton Niguel Water District			
Orange County Water District			
East Orange County Feeder No. 2 Parties			
City of Anaheim			
East Orange County Water District			
City of Huntington Beach			
Irvine Ranch Water District			
Laguna Beach County Water District			
Mesa Water District			
Metropolitan Water District of Southern California			
Municipal Water District of Orange County			
City of Newport Beach			
City of Orange			
City of San Clemente			
City of San Juan Capistrano			
Sata Margarita Water District			
South Coast Water District			

APPENDIX B – Map of Orange County Water Retailers and Transmission Mains

Sign-In Sheet

Subject: Emergency Water Supplies to South Orange County – Stakeholders Meetings
Date/Time: July 30, 2025 | 10:00 a.m.
Location: Orange County Water District (18700 Ward St., Fountain Valley, CA 92708)

Name	Affiliation	Phone	Email
Noelani Leal	Westminster		nleal@westminster-ca.gov
Kristen Schroeder	HB		kristen.schroeder@surfcity-hb.org
John Poehler	HB		
SEAN LOW (LOW)	SEAL BEACH	562-370-3928	slow@sealbeachca.gov
Laura Rocha	MNWD		LRocha@MNWD.com
Matt Collings	MNWD		
Rod Woods	"		
TODD DYMYTRYSHYN	"		
Joone Lopez	"		
Cleve Lee	"		
Andrew Weisner	Mesa Water		AndrewW@MesaWater.org
Stacy Taylor	"	7149710848	StacyT@MesaWater.org
Charles Busslinger	MWDOC	~~714 593~~-5003	CBusslinger@mwdoc.com
MARK TOY	YLWD	714-737-7041	mtoy@ylwd.com
Heidi Chou	Santa Ana		
ARMANDO FERNANDEZ	"	714-~~757~~ 647-3386	
Kevin Hostert	MWDOC		Khostert@mwdoc.com
KEN VECCHIARELLI	GSWC	(310) 256-0424	K.VEC@gswater.com
MIKE MARKUS	PWCE	(714) 3491677	MMARKUS@PWCE.COM
[illegible]	Seal Beach		
MARK SPRAGUE	FV		
Michael Perea	TCWD		mperea@tcwd.ca.gov

Sign-In Sheet

Subject: Emergency Water Supplies to South Orange County – Stakeholders Meetings
Date/Time: July 30, 2025 | 10:00 a.m.
Location: Orange County Water District (18700 Ward St., Fountain Valley, CA 92708)

Name	Affiliation	Phone	Email
Mark Vukojevic	City Newport Beach	949-718-3401	mvukojevic@newportbeachca.gov
Patrick Terry	SCWD JRWSS	949-239-2256	jterry@scwd.org
DENNIS CAFFERTY	ETWD	9495992555	dcafferty@etwd.com
Paul Weghorst	IRWD	949-453-5832	weghorst@irwd.com
Rod Woods	MNWD	949 285 0104	rwoods@mnwd.com
Jared Dawson	MWDOC	925 819 9191	jdawson@mwdoc.com
CESAR BARRERA	Santa Ana	714-673-3408	cbarrera@santa-ana.gov
Melissa Baum-Haley	MWDOC	714 5935016	mbaum@mwdoc.com
Chris Olsen	OCWD	7143783232	colsen@ocwd.com
MARC SERNA	SCWD	949 613 0042	mserna@scwd.org
Jerry Vilander	Serrano		

Emergency Interconnect Zoom Meeting Participants 7/30/25

Chris Olsen
Darla Cirillo
Adrian T
Chau Vu
David Youngblood
Denise’s iPhone
Doug Davert
Dustin Burnside
Fallon Franklin (Santa Ana)
Freddie Ojeda
Heather Rhee (Laguna Beach Water)
Katrina Wraight (BB&K)
Keith Van Der Maaten
Klussier
Marina Lindsay
Mike McGee
Philip Bogdanoff (Anaheim)
RGoodall
Rick’s iPhone
Sonny Tran
Steffen Catron
Mike Grisso

Emergency Water Supplies to South Orange County

Stakeholders Meeting

July 30, 2025

History of Emergency Service Program

- Agreements were approved in 2006 and 2008 to provide emergency water supplies to South Orange County (SOC) agencies.
- Provide water supplies to SOC agencies via IRWD water system during emergency events.
- Up to 50 cfs for 30 days (3,000 af) – relatively small program
  - MNWD – CSA is for 14 cfs
- Decision to extend or terminate – December 2029

Recent History

- August 2017 – OCWD broadened the District's Water Resources Policy to allow consideration of programs with SOC.
- January 2019 – OCWD entered into an agreement with Moulton Niguel Water District (MNWD) to consider a water program.
- This emergency interconnect water supply was discussed with Producers several times and as a result, in July 2021 – OCWD Board approved policy principles for providing emergency water supplies to SOC water agencies.

July 2021 Policy Principles

- OCWD will explore and look to develop a new program to assist SOC agencies during periods when needed imported water is unavailable.
- OCWD will periodically meet with SOC agencies to determine what their possible emergency water supply needs could be.
- Any proposed new actions to assist SOC will be coordinated with the possible extension of the existing SOC Phase I Emergency Services Agreement.
- The Metropolitan Water District indirectly benefits from OCWD actions to assist SOC during shortages of the imported water system. MWD will be requested to participate in any capital expenses that relieves pressure on its system.

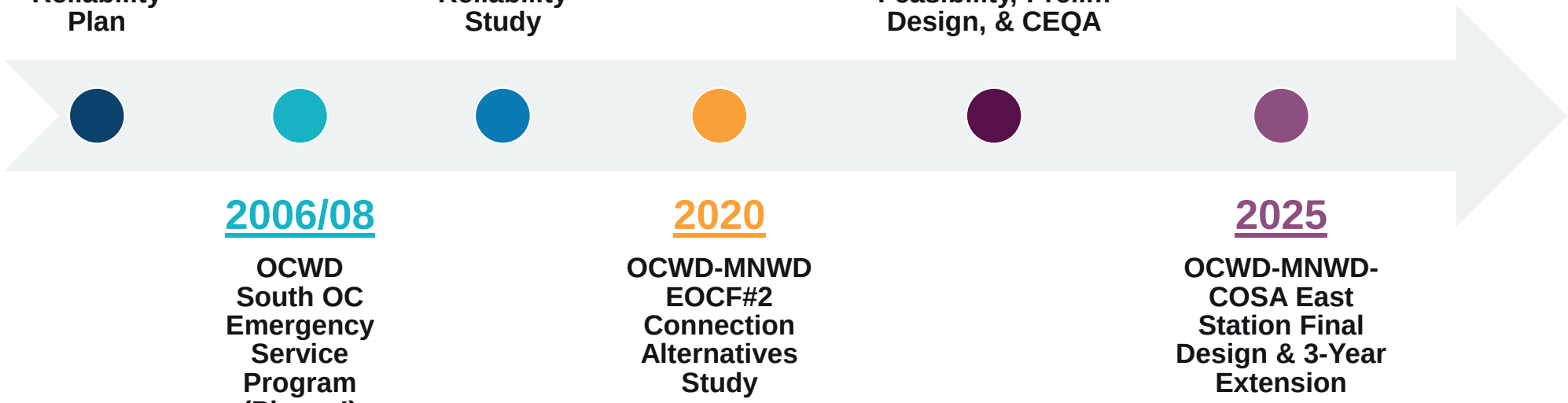
Policy Principles (continued)

- Any program will not adversely impact OCWD's operations.
- OCWD will financially benefit from the program.
- Any program will comply with the OCWD Act.
- OCWD staff will work collectively with MWDOC, the Groundwater Producers and interested SOC agencies to develop any new programs that could be recommended to the OCWD Board.

Agreement with City of Santa Ana & MNWD

- March 2022 – to begin feasibility study
- MNWD funds all work specified in the agreement.
- Water from the City's water system would only be pumped into the EOCF#2 when MWD was unable to deliver water to MNWD.
- New facilities are designed to City and OCWD standards.
- At no time would the delivery of water to MNWD cause or exacerbate a shortage of water to the City's customers.
- MNWD reimburses the City and OCWD for all expenses incurred as a result of this program.
- The agreement does not allow MNWD to store water in the OCWD groundwater basin.
- The City utilizes the new water system improvements during normal operations.
- The program complies with the OCWD Act.
- MNWD prepares the two RFPs necessary to hire an engineering and CEQA consultant and administer the contracts.
- The three parties collaboratively carry out the scope of work for this agreement.
- 3-year extension of this Agreement approved by OCWD Board in April 2025.

Continuation of Previous Efforts



Project Objectives

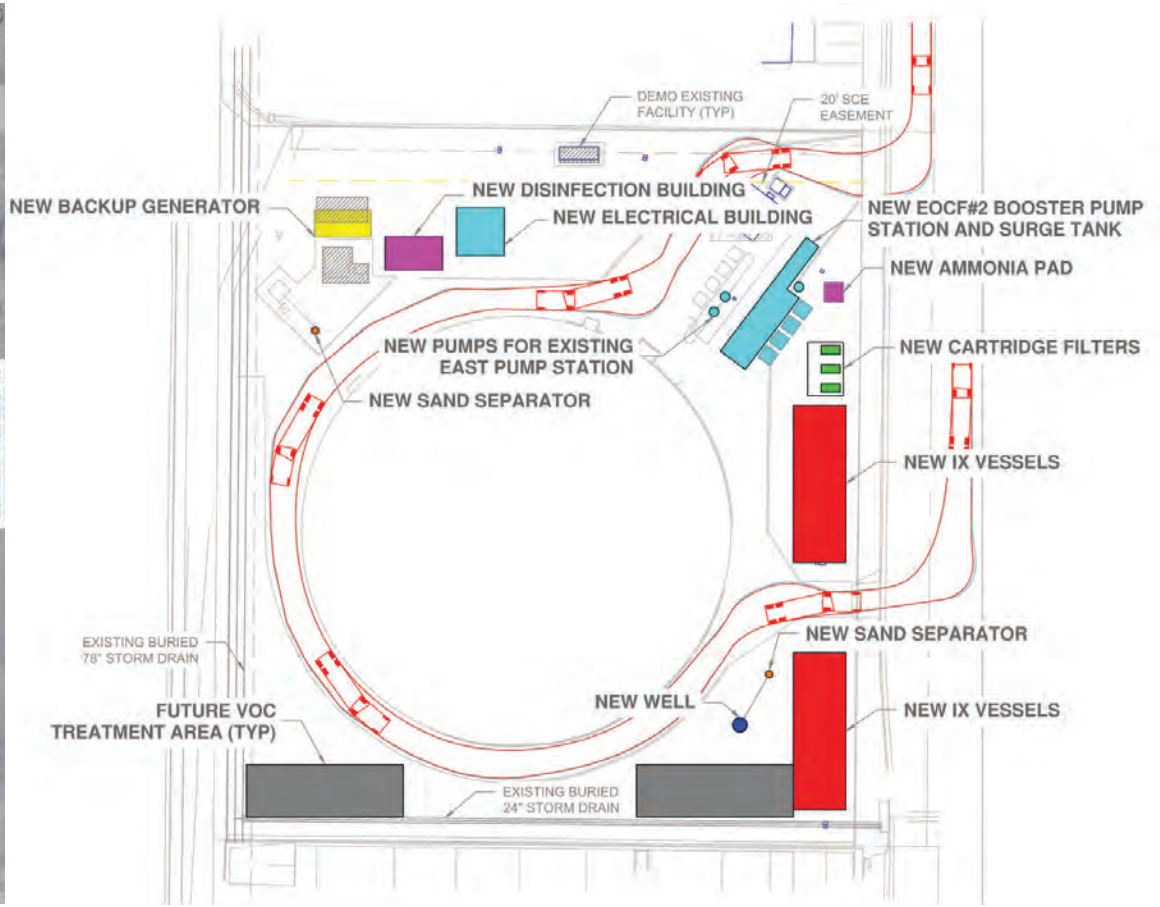
What it would do…

- Construct new facilities to pump and treat groundwater to supply the City of Santa Ana during normal operations.
- Construct new facilities to transfer groundwater during emergencies to South Orange County via East Orange County Feeder No. 2, consistent with MET Admin Code 4519.
- Meet water quality standards and requirements for compatibility with MET-supplied imported water.

What it wouldn't do…

- Address drought-related water shortages.
- Impede other member agencies' ability to supply water during an emergency.

Existing Site

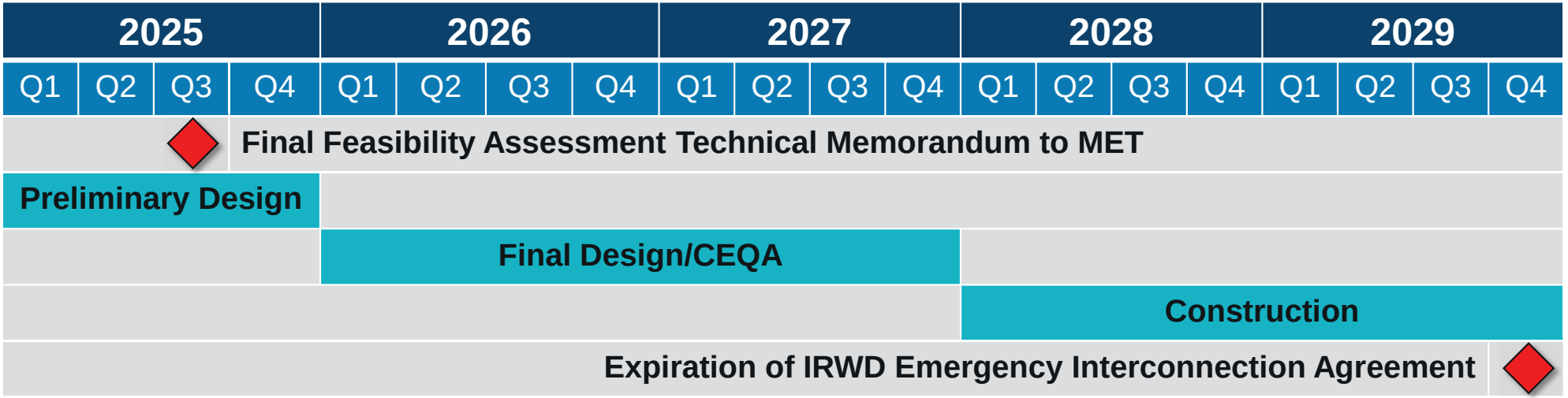


Proposed Improvements

Santa Ana East Station

Proposed Pipeline to EOCF#2

Timeline of Key Activities



Future Activities:

- Ongoing Coordination with EOCF#2 Stakeholders
- Continue Grant Pursuits
- Interagency Construction and Operating Agreement

Operating Plan Framework

Purpose and Basis

- Establish a mutual understanding amongst EOCF#2 stakeholders
- For an emergency outage due to a MET infrastructure failure lasting longer than 7 days (not for drought and not for storage)
- Consistent with MET Administrative Code 4519 and OCWD South Orange County Emergency Services Program

Key Elements

- Refer to Draft Operating Plan Framework

AGENDA ITEM SUBMITTAL

Meeting Date: September 10, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: Herndon/Sovich/Neel

Budgeted: N/A
Budgeted Amount: N/A
Cost Estimate: N/A
Funding Source: N/A
Program/Line Item No.: N/A
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: BASIN STORAGE UPDATE FOR WATER YEAR 2024-25

SUMMARY

Staff evaluated water level conditions throughout the basin and constructed groundwater elevation contour maps representing the end of the water year. Using the "full basin" benchmark for all three aquifer layers in the basin, an accumulated overdraft of 183,000 acre-feet (AF) was calculated as of June 30, 2025. Thus, the basin experienced an annual storage decrease of 50,000 AF for water year (WY) 2024-25. A brief description of the water level change and accumulated overdraft calculation will be presented.

Attachment: Presentation

RECOMMENDATION

Informational

BACKGROUND/ANALYSIS

Following the methodology outlined in the March 2007 staff report entitled, "Evaluation of Orange County Groundwater Basin Storage and Operational Strategy," staff calculated the storage change and accumulated overdraft in the basin based on water levels in the three primary aquifer layers: Shallow, Principal, and Deep. Accumulated overdraft is essentially the volume of "empty basin storage" that is available to fill with groundwater.

Staff constructed groundwater elevation contour maps for each of the three aquifer layers in the basin. These hand-drawn contour maps representing end of June 2025 groundwater elevations were scanned and digitized into the District's GIS database and then used to calculate the accumulated overdraft from the full-basin condition and the annual change in storage for WY 2024-25 using the three-layer storage change methodology.

Findings

The calculated storage decreased approximately 50,000 AF and resulted primarily from a substantial decrease in groundwater levels throughout most of the basin from June 2024 to June 2025. In the Shallow aquifer, groundwater levels declined by approximately 10-20 feet in the Anaheim Forebay area near the OCWD recharge facilities, 3-5 feet in the

greater Anaheim/Fullerton Forebay area, 30-50 feet near the Santiago Basins, 1-5 feet in the Irvine area, and 0-2 feet throughout the coastal area. Shallow aquifer groundwater levels increased 1-4 feet throughout the central portion of the basin and remained stable near the Talbert Barrier at or above protective elevations for seawater intrusion control.

In the Principal aquifer, groundwater levels decreased approximately 10-20 feet in the Anaheim Forebay area near the OCWD recharge facilities, 5-15 feet in the greater Anaheim/Fullerton Forebay area, and 30-60 feet near the Santiago Basins. In the Pressure area of the Basin, Principal aquifer levels decreased up to 15 feet throughout the central portion of the basin, including the IRWD Dyer Road Well Field, and decreased 15-20 feet throughout the coastal area and in the Irvine Sub-basin.

In the Deep aquifer, groundwater levels decreased approximately 20-50 feet near the Santiago Basins, 5-15 feet throughout the Irvine Sub-basin, and 10-20 feet throughout the rest of the basin.

Since the Shallow aquifer in the Forebay area (generally north of the 5 Freeway) behaves as an unconfined water table aquifer, most of the storage change in the basin typically occurs due to the rise and fall of this uppermost Shallow aquifer water table. Sediments in this area are largely comprised of coarse sands and gravels. Although over 90% of basin pumping typically comes from the Principal aquifer, most of the pumped groundwater originates from the Shallow aquifer, which in turn is replenished by the District's recharge activities at the Forebay spreading grounds.

During WY 2024-25, the Shallow aquifer exhibited an estimated storage decrease of 39,000 AF, primarily due to the lack of rainfall and no imported replenishment water purchases which led to slightly reduced Forebay recharge at the OCWD spreading grounds and reduced natural (incidental) recharge. Due to the confined or pressurized conditions in the Principal and Deep aquifers, their groundwater level decreases led to much smaller decreases in groundwater storage – only 11,000 AF combined, as shown in the following table:

Aquifer	WY 2024-25 Storage Change (AF)
Shallow	-39,000
Principal	-7,000
Deep	-4,000
Total:	**-50,000**

The total storage decrease of 50,000 AF during WY 2024-25 represents the first year of decrease following two consecutive years of significant increase and was less than originally budgeted due to below-average rainfall.

During WY 2024-25, 6.7 inches of rain fell at the District's field headquarters in Anaheim, 50% below the 38-year average of 13.3 inches. The estimated incidental recharge of 7,400 AF (Table 1) was significantly below expectations based on the historical best-fit trend line of incidental recharge and field headquarters rainfall. Incidental recharge is an

estimated term in the basin water budget and incorporates all unmeasured inflows and outflows to and from the basin (e.g., outflow to Los Angeles County and inflow from/outflow to the ocean). While rainfall is a key factor affecting incidental recharge, other factors include the relative basin conditions between Orange and Los Angeles counties as well as barrier operations and coastal groundwater elevations relative to sea level. For these reasons, the correlation between rainfall and incidental recharge is weak.

Based on analyses from recent years, the lower incidental recharge appears primarily attributable to SAR storm flow recharge being higher than its best-fit trend line with San Bernardino rainfall. This suggests that OCWD recharge operations have been capturing more local inflows and potentially reducing losses to the ocean relative to historical conditions, with the higher conservation pool behind Prado Dam likely contributing to increased SAR storm flow capture. For example, during WY 2024-25, measured SAR storm flow recharge was approximately 18,000 AF higher than predicted by the historical best-ft trend line with 10.3 inches of San Bernardino rainfall.

Groundwater pumping was 302,200 AF, which was about 15% higher than the previous water year and 3.4% above budgeted due to the increased water demand associated with a dry year, and to a lesser extent, PFAS treatment systems continuing to come on-line. No basin replenishment water was purchased from MWD during WY 2024-25.

Table 1 shows a comparison of budgeted versus actual inflows and outflows to and from the basin for WY 2024-25. The budgeted values were developed prior to commencement of the water year based on an assumption of average rainfall conditions.

Table 1. Groundwater Budget for Water Year 2024-25: Budgeted vs. Actual

Inflows & Outflows (acre-feet)	Original Budget (Avg. Rain ~13 in.)	Actual (Rain 6.7 in.)
SAR Base and Storm Flow Recharge	133,000	129,500(1)
Incidental Recharge	49,000	7,400
GWRS (Forebay, Barrier, and Mid-Basin)	128,000	113,100
MWD Replenishment Water Purchases	0	0
Other (Alamitos Barrier, Talbert OC-44)	3,000	2,200
Total Water into Basin	313,000	252,200
Total Basin Pumping @ 85% BPP	-292,000	-302,200
Storage Change	+21,000	-50,000
Accumulated Overdraft	112,000	183,000

(1) Includes 8,343 AF of percolation from prior year's carryover storage in recharge basins and 4,230 AF of Santiago Creek and other local inflows.

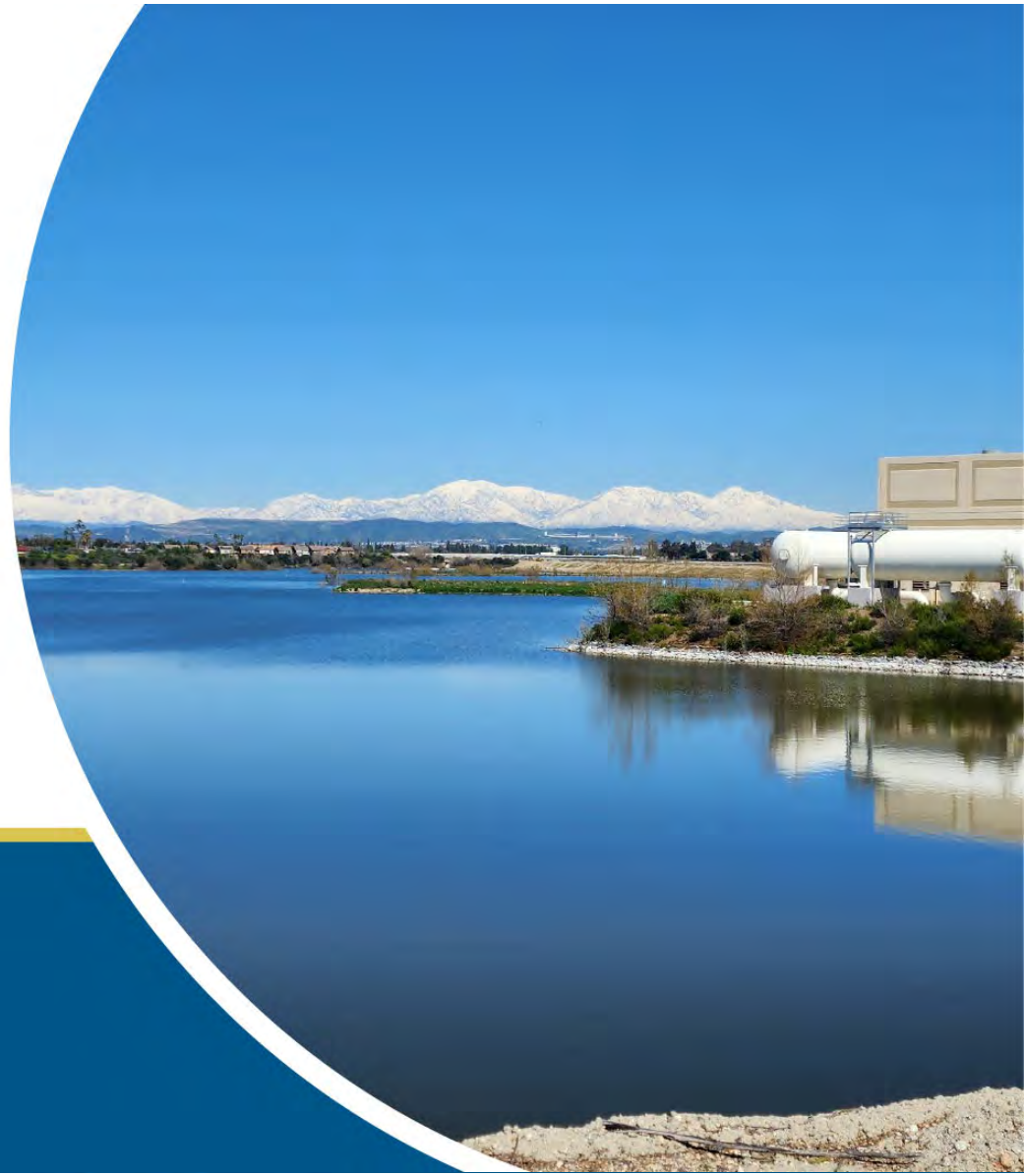
Notable variations in the original versus actual water budget include:

- 27,700 AF less incidental recharge than budgeted;
- 14,900 AF less GWRS recharge than budgeted due primarily to extended periods of reduced GWRS influent flows due to OC San maintenance and repairs from July to November 2024; and
- 10,200 AF more basin pumping than budgeted due to increased water demands during a dry year.

PRIOR RELEVANT BOARD ACTION

3/21/07 M07-44 Receive and file staff report, titled “Evaluation of Orange County Groundwater Basin Storage and Operational Strategy,” and adopt new three-layer storage change methodology with the associated new full basin condition.

Basin Storage Update
Water Year 2024-25

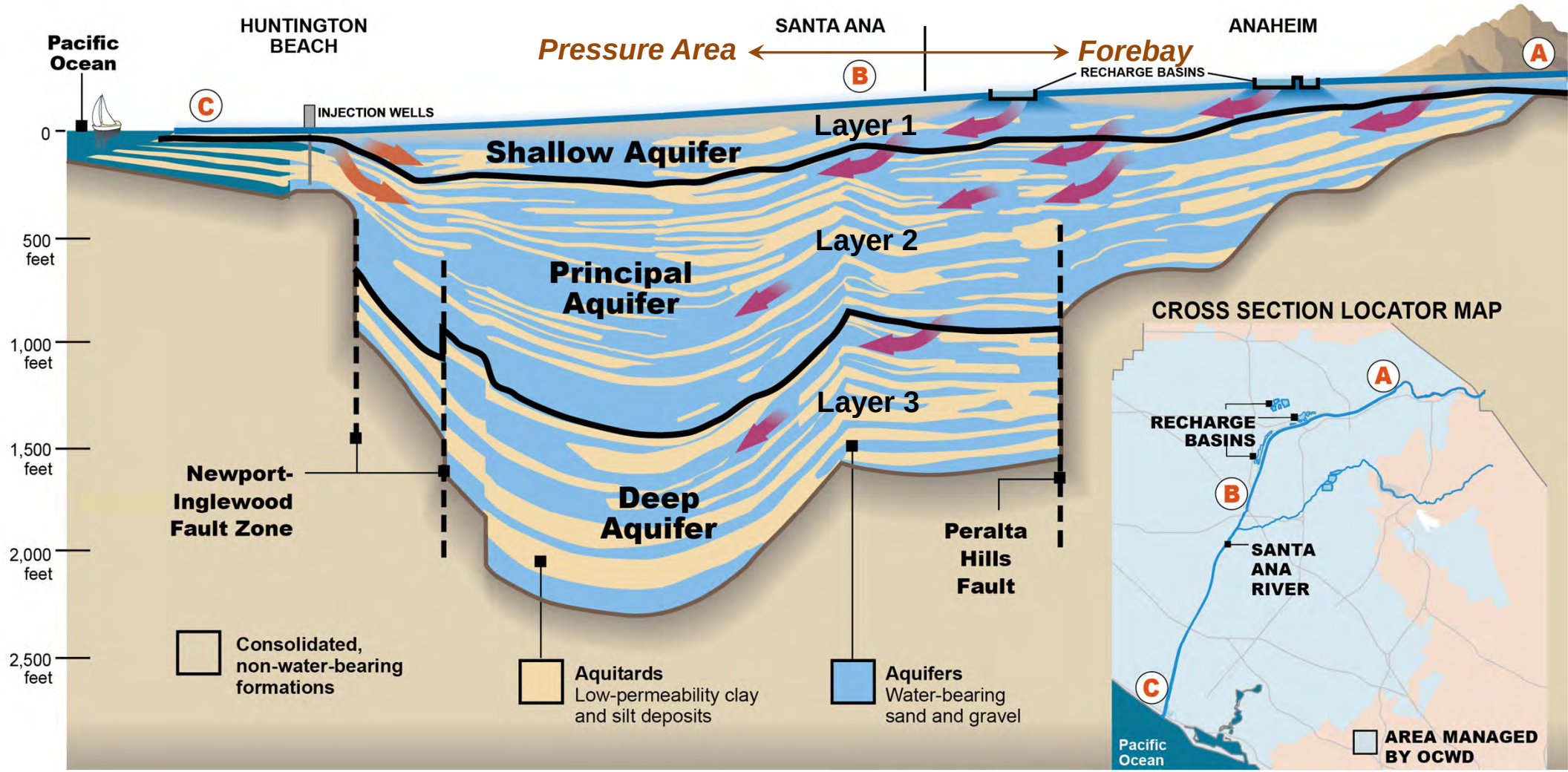


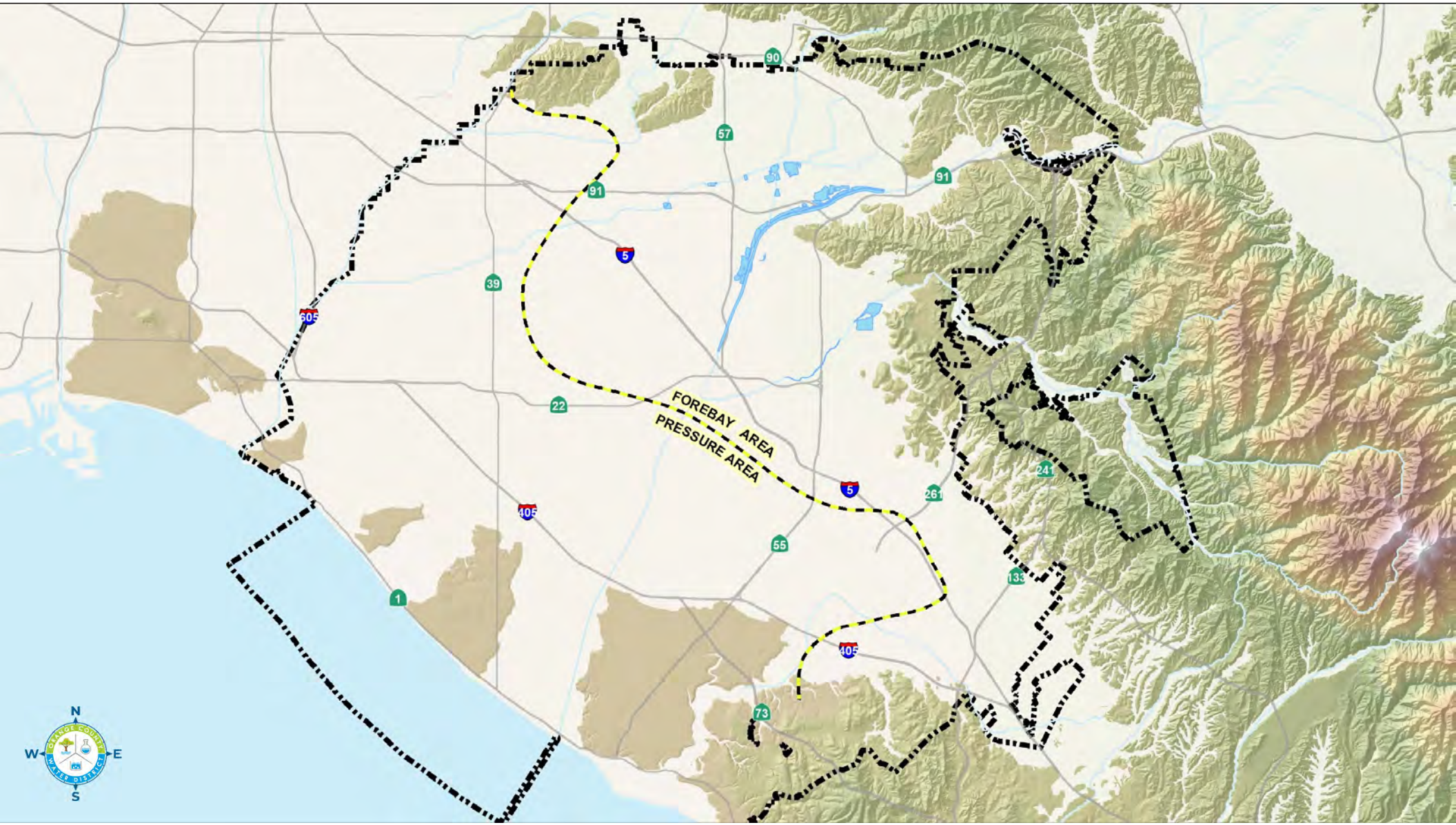
Water Issues Committee
September 10, 2025

WY 2024-25 Highlights

- Recharge 3,500 AF less than budgeted from SAR
  - 6.7 inches of rainfall at FHQ (~0.5x the 38-year average)
- Incidental recharge 41,600 AF less than budgeted
  - Lower IR and higher storm flow recharge since 2018
- GWRS recharge 14,900 AF less than budgeted
  - Reduced GWRS influent from OC San maintenance/repairs and reduced injection rates

Storage change was calculated for the three aquifer layers in the basin.




90
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FOREBAY AREA
PRESSURE AREA
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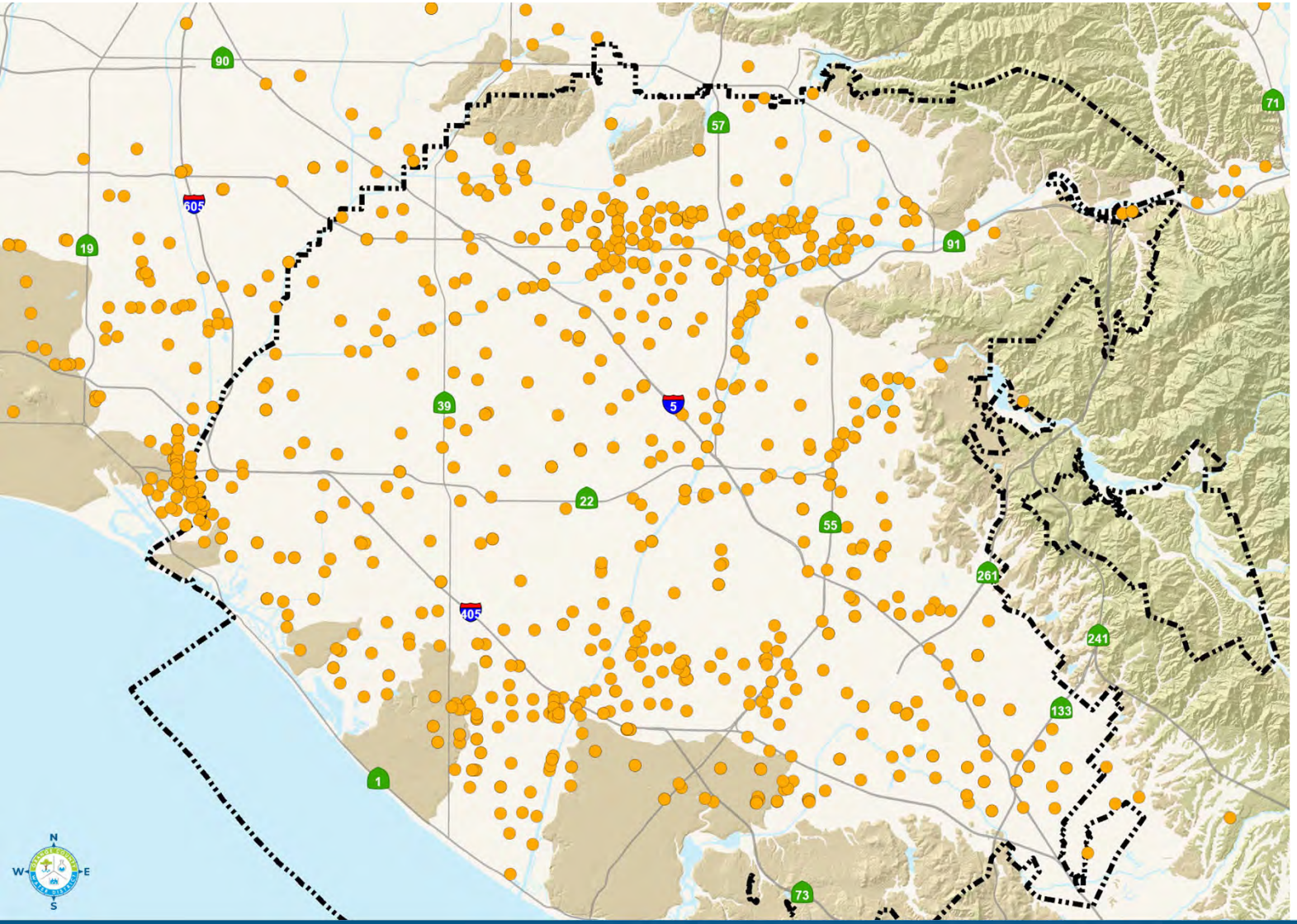
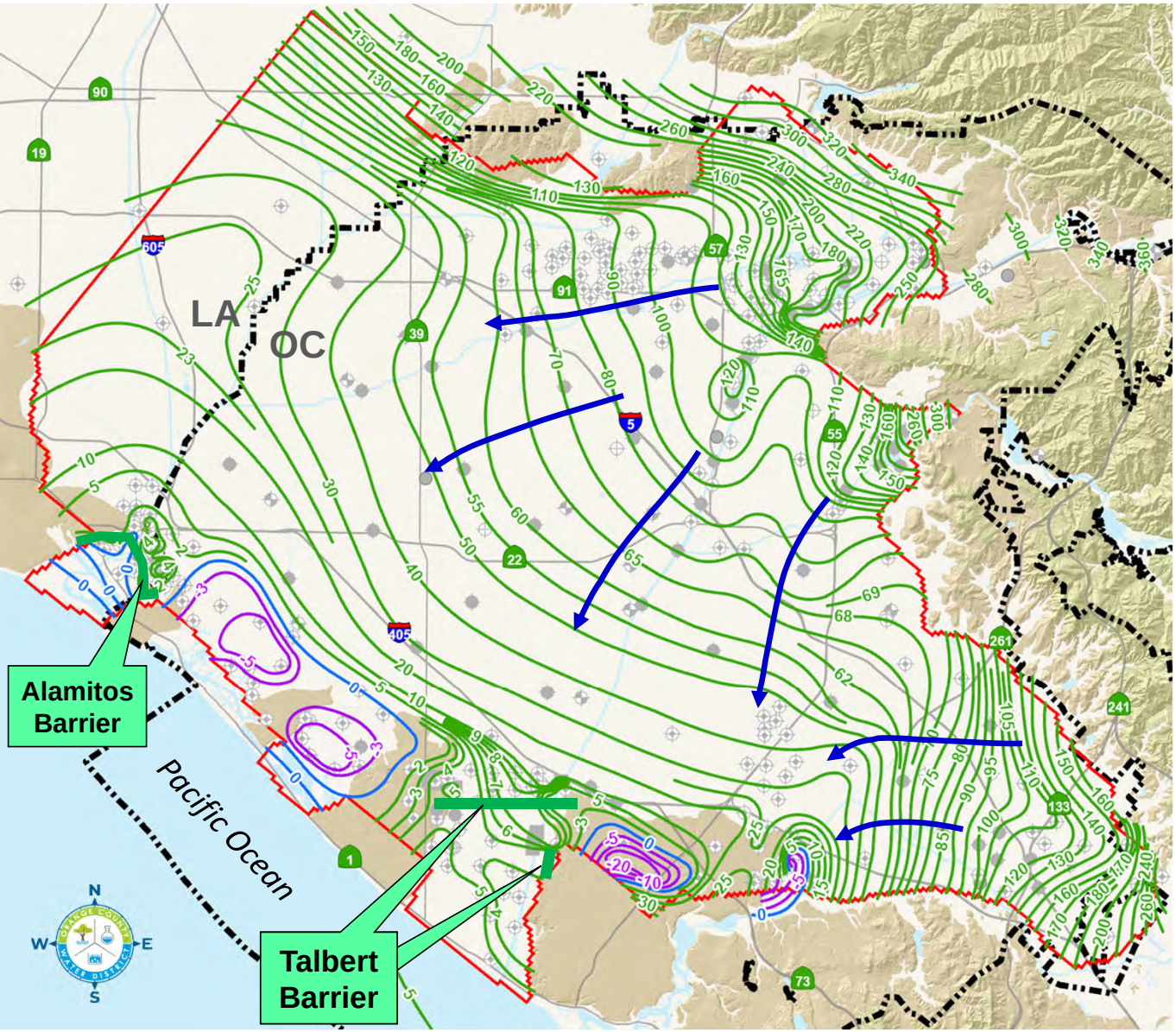


Several hundred water levels used for constructing groundwater contour maps…

Collaboratively measured near June 30:

- OCWD staff
- OC Producers
- LA Producers
- WRD

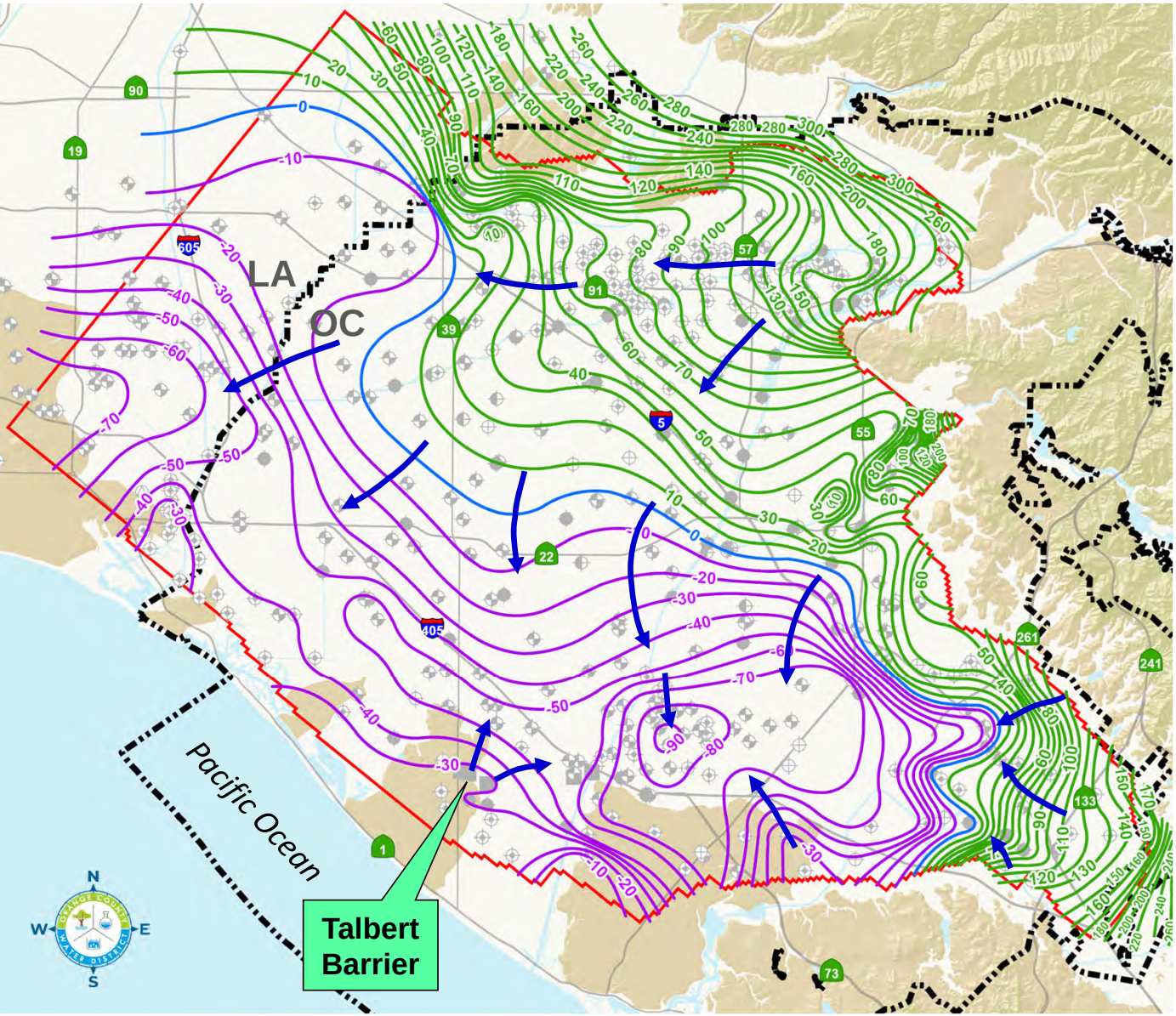


Shallow Aquifer Groundwater Elevations June 2025

Relatively smooth parallel contours since not much shallow pumping.

Groundwater flows to the SW from Forebay towards the coast.

Groundwater levels at or above protective elevations seaward of Talbert Barrier.

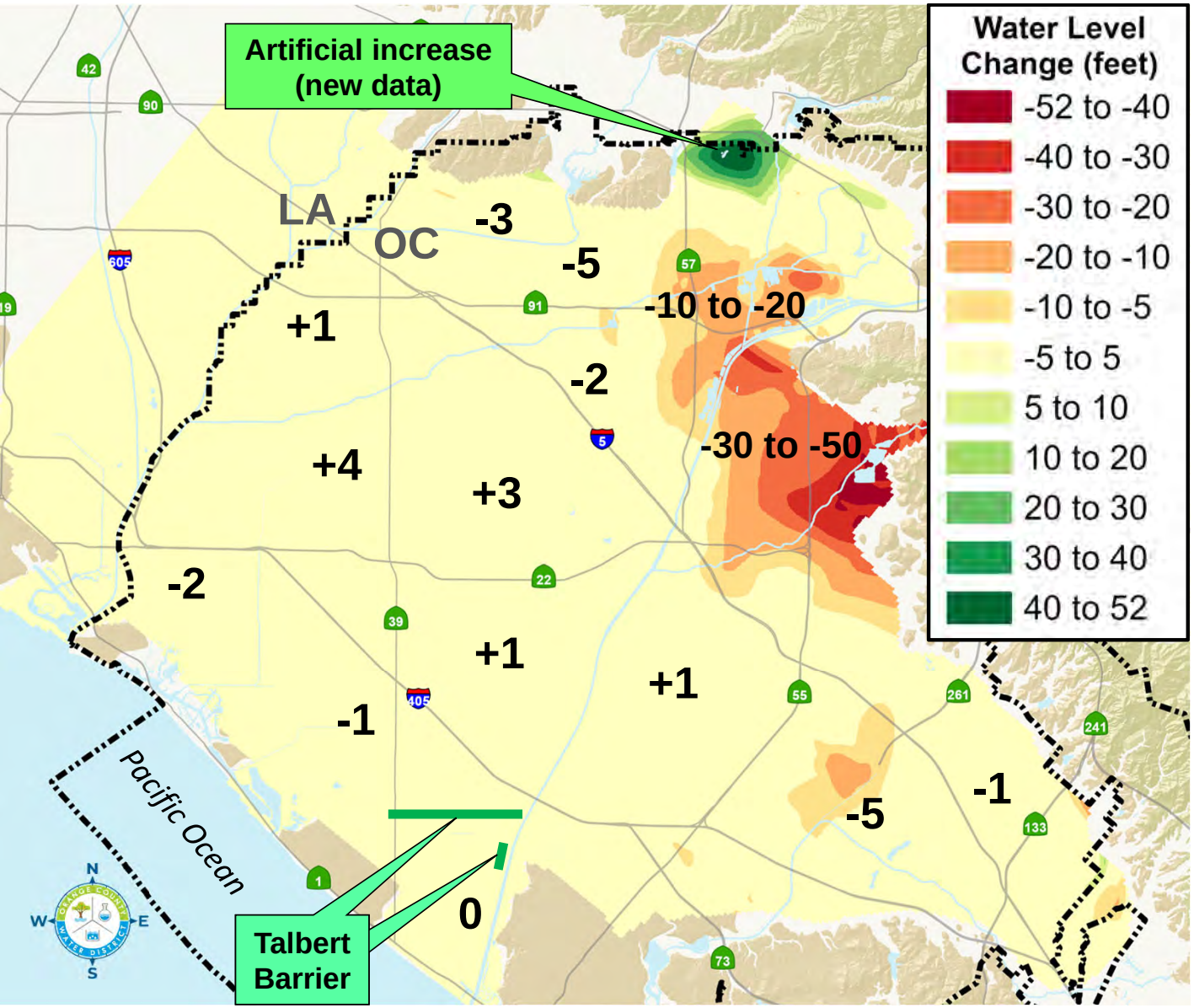


Principal Aquifer Groundwater Elevations June 2025

Groundwater flows from Forebay towards the coast and LA County

Steep hydraulic gradients and depressions below sea level due to pumping

Typical low point around IRWD DRWF and Mesa Water wells (-90 ft msl)



Shallow Aquifer Water Level Change

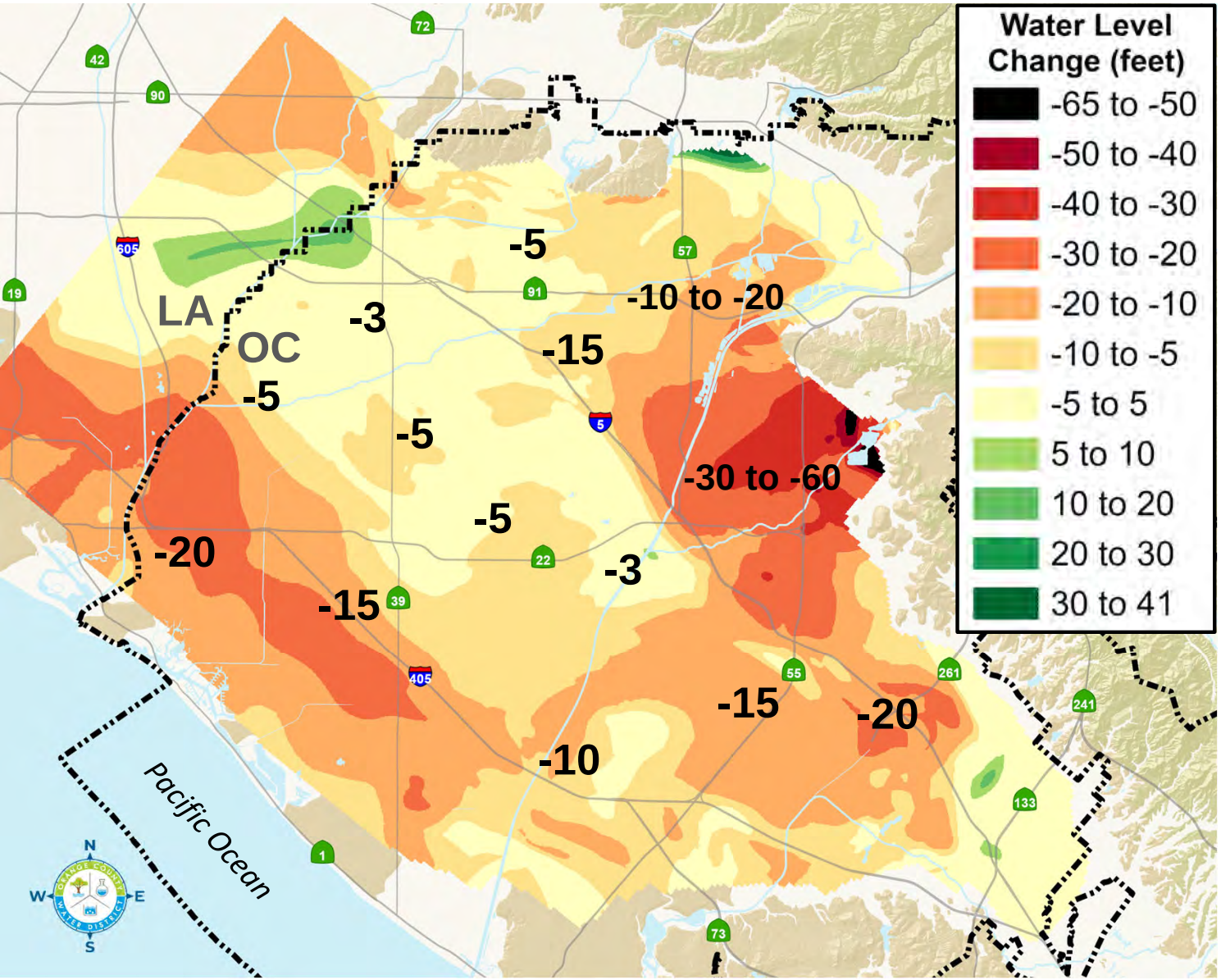
June 2024 to June 2025

Anaheim and Orange Recharge Basins:
significant decrease

Greater Forebay, Coastal and Irvine Areas:
mild decrease

Pressure Area:
mild increase

Talbert Barrier:
stable



Principal Aquifer Water Level Change

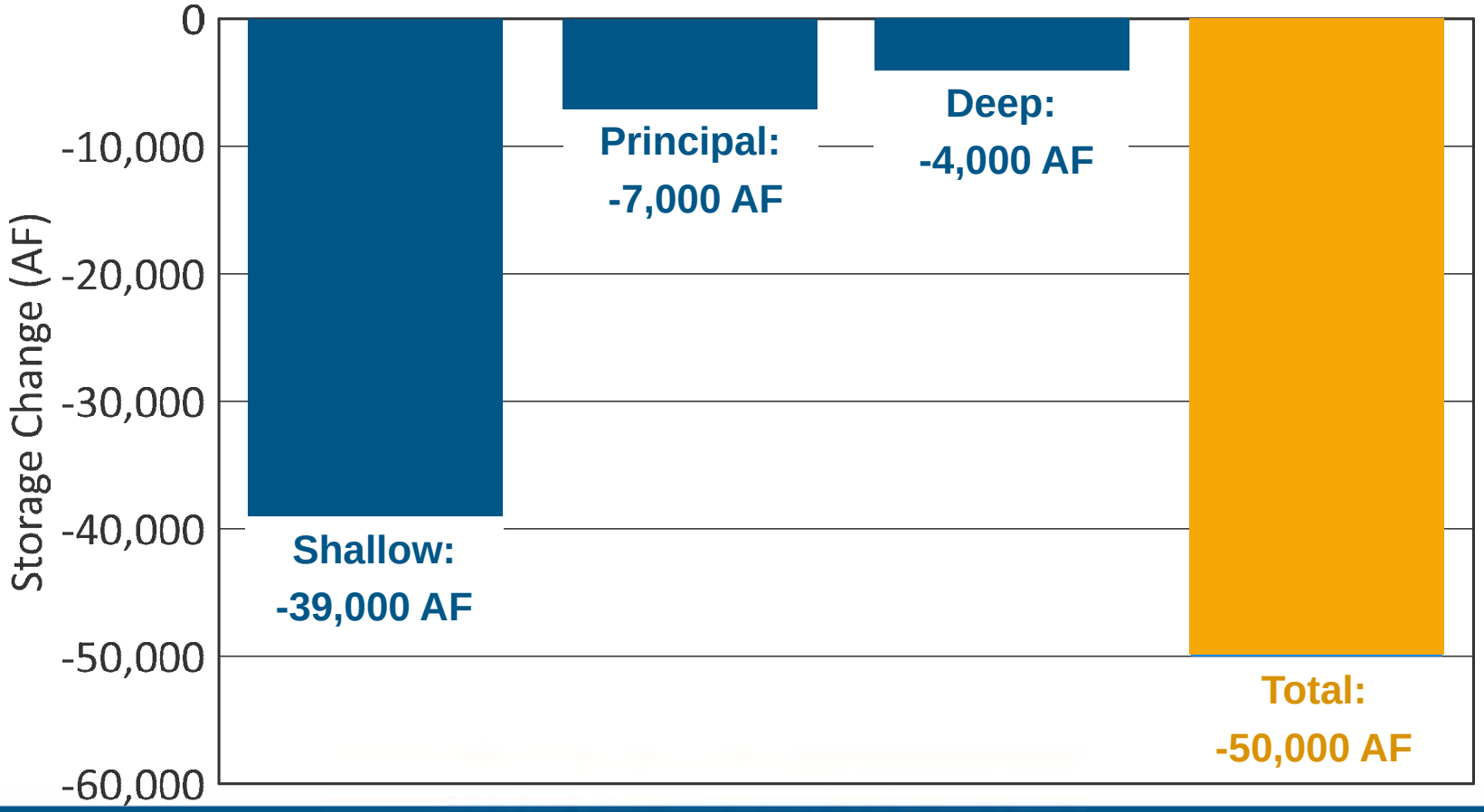
June 2024 to June 2025

Anaheim and Orange Recharge Basins:
significant decrease

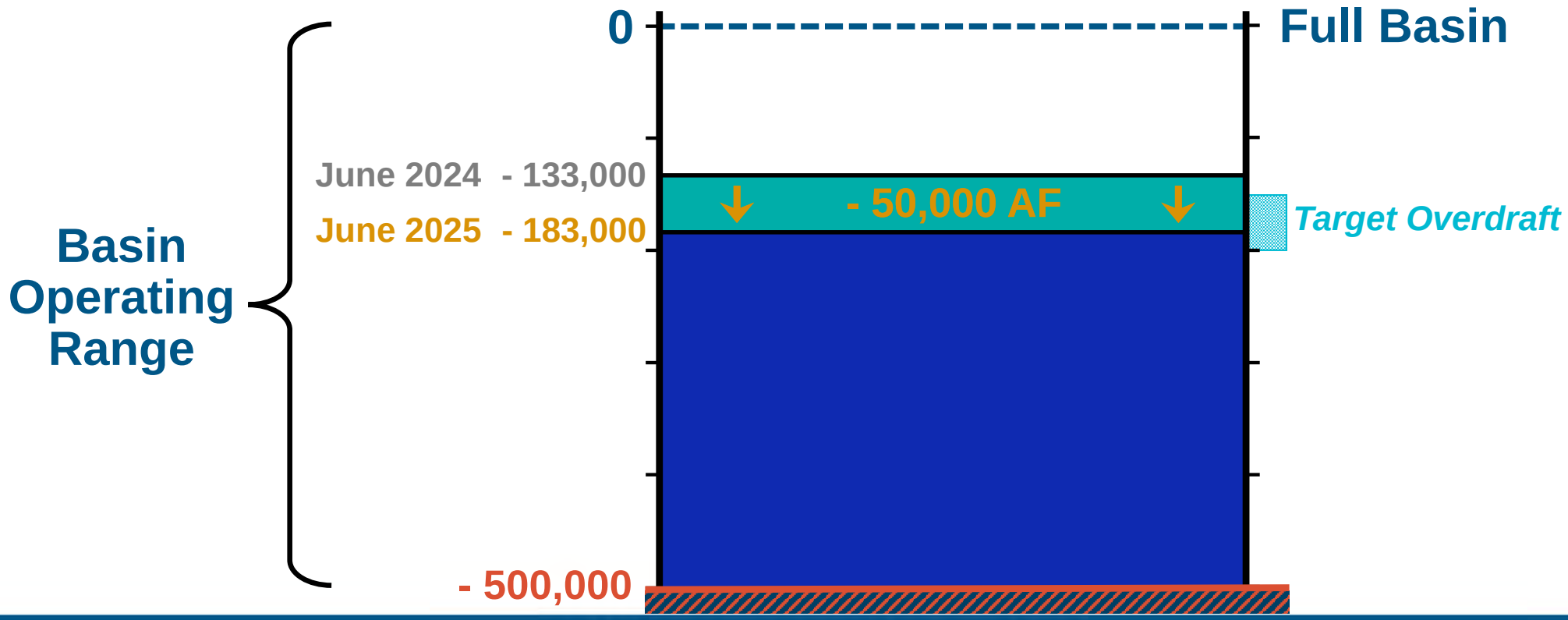
Greater Forebay and Pressure Areas:
mild to moderate decrease

Coastal and Irvine Areas:
moderate to significant decrease

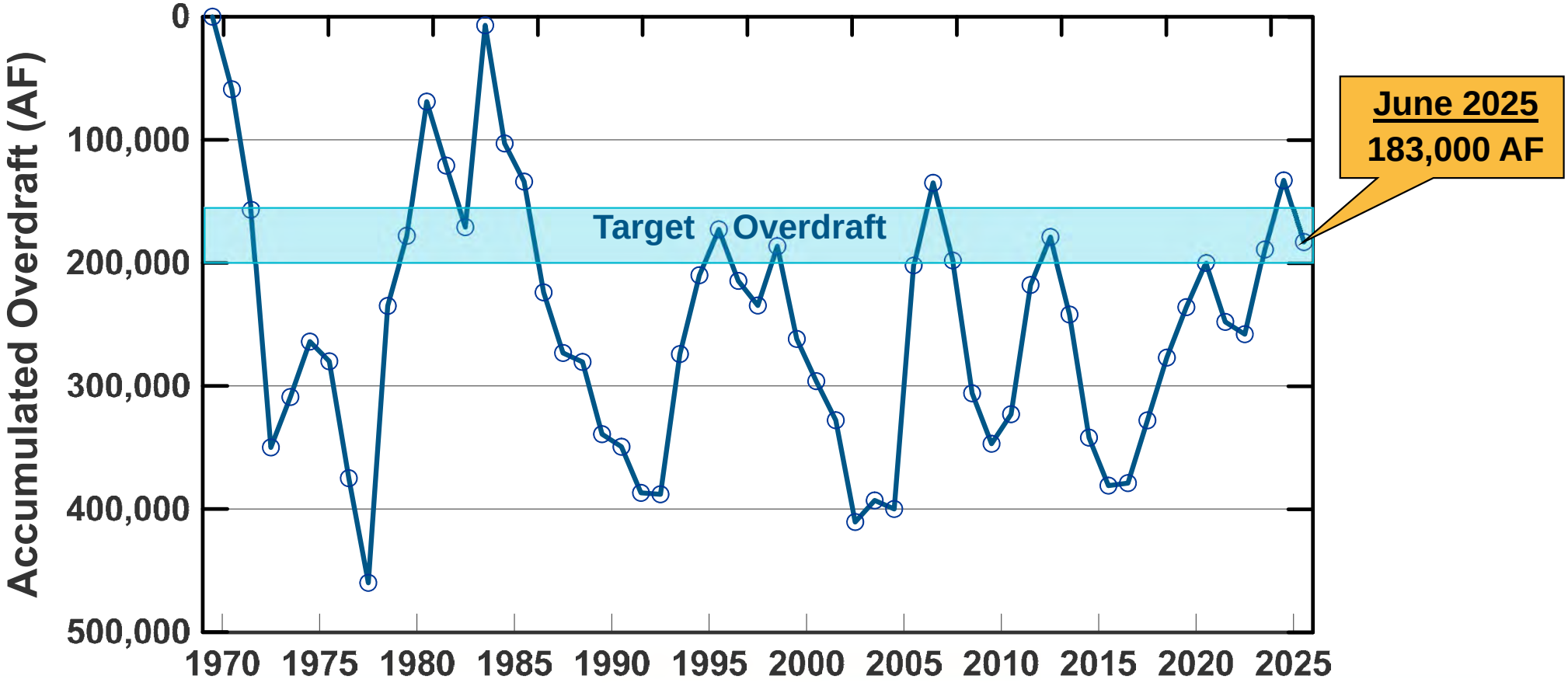
WY 2024-25 annual storage change was calculated for all three aquifer layers



Accumulated Overdraft for June 30, 2025: 183,000 AF below Full



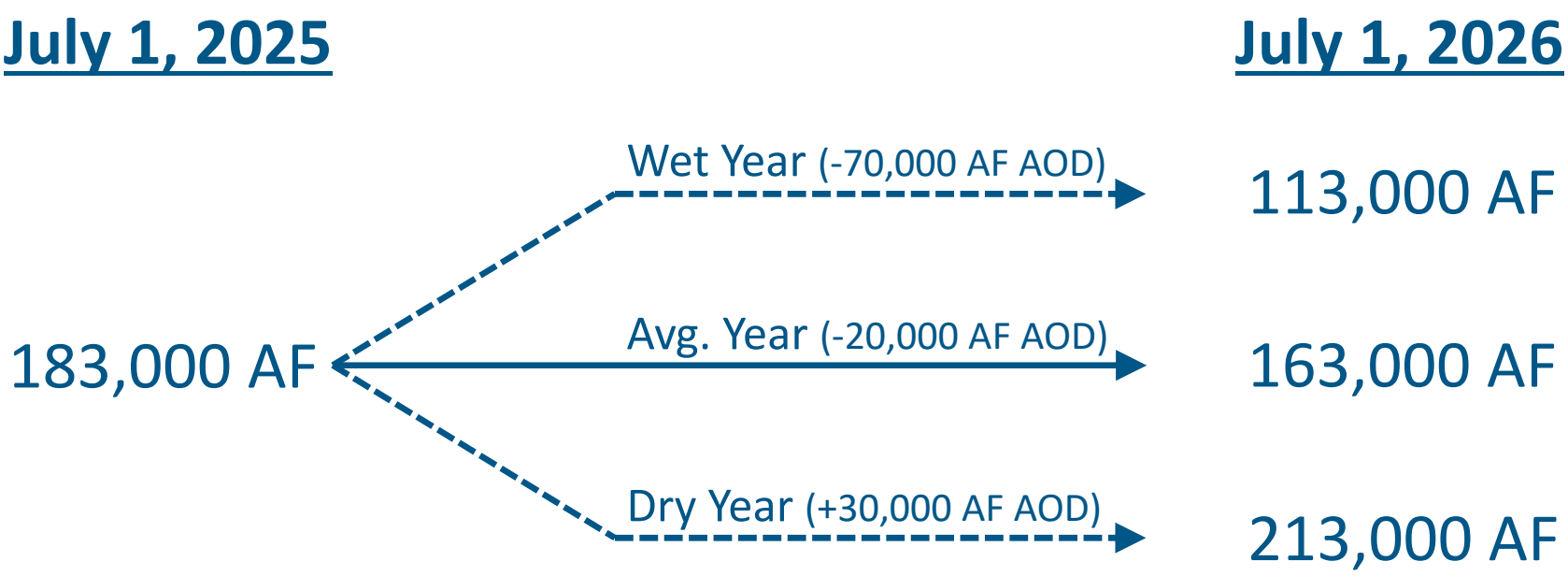
Accumulated Overdraft Since 1969



WY 2024-25 Groundwater Balance

Inflows & Outflows (acre-feet)	Budget (Rain~13 in.)	Actual (Rain 6.7 in.)	Difference
SAR Base and Storm Flow Recharge	133,000	129,500	-3,500
Incidental Recharge	49,000	7,400	-41,600
GWR System (Forebay, Barrier, and MBI)	128,000	113,100	-14,900
MWD Supplies	0	0	0
Other (Alamitos Barrier, Talbert OC-44)	3,000	2,200	-800
Total Water Into Basin	313,000	252,200	60,800
Total Basin Pumping @ 85% BPP	-292,000	-302,200	-10,200
Storage Change	+21,000	-50,000	
Accumulated Overdraft	112,000	183,000	

WY 2025-26 Accumulated Overdraft Projection



Thank You

Brendan Neel
Hydrogeologist
Orange County Water District
bneel@ocwd.com