AGENDA

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

WATER ISSUES COMMITTEE MEETING
WITH BOARD OF DIRECTORS *
ORANGE COUNTY WATER DISTRICT
Wednesday, November 12, 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 **November 19** 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
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 OCTOBER 8, 2025

   RECOMMENDATION: Approve minutes as presented

2. SIXTH AMENDED AGREEMENT WITH UNITED STATES ARMY CORPS OF ENGINEERS TO IMPLEMENT FIRO AT PRADO DAM

   RECOMMENDATION: Agendize for November 19 Board meeting: Authorize execution of the Sixth Amended Cooperative Research and Development Agreement (Appendix H) with the U.S. Army Corps of Engineers to support implementation of FIRO at Prado Dam, including Water Control Manual update coordination, continued participation in the FIRO Steering Committee, and related activities, subject to approval as to form and content by District's General Counsel, for an additional $125,000 for a total amount not to exceed $495,000

3. AUTHORIZE RFP FOR GWRS DECARBONATION PROCESS ENHANCEMENTS

   RECOMMENDATION: Agendize for November 19 Board meeting: Authorize issuance of a Request for Proposals for design of GWRS Decarbonation Process Enhancements

4. AMENDMENT 3 TO AGREEMENT 1547 WITH FALCON SERVICES FOR FIELD HEADQUARTERS ABOVEGROUND GASOLINE STORAGE TANK

   RECOMMENDATION: Agendize for November 19 Board meeting: Authorize issuance of Amendment No. 3 to Agreement 1547 with Falcon Services & Construction, Inc. for an amount not to exceed $3,309 and to extend the termination date to November 30, 2025

5. PURCHASE ORDER TO MULTIPLE VENDORS FOR AN AUTOMATED FLOW INJECTION ANALYZER FOR THE PHILIP L. ANTHONY LABORATORY

   RECOMMENDATION: Agendize for November 19 Board meeting: Authorize issuance of Purchase Orders to FIAlab Instruments, Inc., Environmental Express, and EZkem in the amounts of $68,558, $13,173, and $6,872 respectively for the purchase of instrumentation to support the lab's Nitrate, Nitrite, Ammonia, and Total Cyanide analyses

6. PURCHASE ORDER TO PROMOCHROM TECHNOLOGIES LTD FOR THREE SPE-03 UNITS FOR THE PHILIP L. ANTHONY WATER QUALITY LABORATORY

   RECOMMENDATION: Agendize for November 19 Board meeting: Authorize issuance of Purchase Order to PromoChrom Technologies, Ltd. in the total amount of $76,942 for the trade-in purchase of three replacement SPE-03 Solid Phase Extractors

7. CONTRACT NO. FV-2024-1 AUTHORIZE NOTICE OF COMPLETION

RECOMMENDATION: Agendize for November 19 Board meeting: Accept completion of work and authorize filing a Notice of Completion for Contract No. FV-2024-1: Annex Building Roof Replacement Project

8. AUTHORIZE REQUEST FOR PROPOSALS FOR FIELD HEADQUARTERS DIESEL FUEL TANK REPLACEMENT AND VEHICLE CHARGING INFRASTRUCTURE DESIGN

RECOMMENDATION: Agendize for November 19 Board meeting: Authorize issuance of RFP for FHQ Diesel Fuel Tank Replacement and Vehicle Charging Infrastructure Design

9. AGREEMENT EXTENSION WITH ORANGE COUNTY SANITATION DISTRICT AND IRVINE RANCH WATER DISTRICT

RECOMMENDATION: Agendize for November 19 Board meeting: Authorize execution of the GAP/GWRS Flows Agreement with the Orange County Sanitation District and the Irvine Ranch Water District subject to minor edits by legal counsel and/or the General Manager

10. BOND BASIN SLOPE REPAIR AUTHORIZE AMENDMENT NO. 1 TO BUTIER ENGINEERING INC

RECOMMENDATION: Agendize for November 19 Board meeting: Authorize Amendment No. 1 to Agreement 1732 with Butier Engineering, Inc. for a not-to-exceed amount of $85,478.00

11. MULTI-BUILDING ROOF REPLACEMENT PROJECT - PUBLICATION OF NOTICE INVITING BIDS

RECOMMENDATION: Agendize for November 19 Board meeting: Authorize publication of Notice Inviting Bids for Contract No. FV-2025-1: Multi-Building Roof Replacement Project

12. CONTRACT NO. TUS-2022-1: AMENDMENT NO. 3 TO BUTIER ENGINEERING

RECOMMENDATION: Agendize for November 19 Board meeting: Authorize issuance of Amendment No. 3 to Agreement No. 1558 with Butier Engineering Inc. for construction management and inspection services in the amount of $63,132

13. REQUEST FOR PROPOSALS FOR DESTRUCTION OF WESTBAY MONITORING WELL SAR-3

RECOMMENDATION: Agendize for November 19 Board meeting:

1) Authorize filing of a Categorical Exemption for the destruction of monitoring well SAR-3 in compliance with CEQA guidelines; and

2) Authorize issuance of Request for Proposals for services for the destruction of Westbay monitoring well SAR-3

END OF CONSENT CALENDAR

MATTER FOR CONSIDERATION

14. SANTA ANA RIVER ECOFLOW STUDY

RECOMMENDATION: Agendize for November 19 Board meeting: Approve entering into agreement with Southern California Coastal Water Research Project (SCCWRP) to conduct the Santa Ana River Ecoflow Study for an amount not to exceed $120,000

INFORMATIONAL ITEM

15. FUTURE OF SANTA ANA RIVER BASEFLOWS

CHAIR DIRECTION AS TO ITEMS IF ANY TO BE AGENDIZED AS MATTERS FOR CONSIDERATION AT THE NOVEMBER 19 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
October 8, 2025 @ 12:00 p.m.

Director Green called the Water Issues Committee meeting to order at 12:00 p.m. in Conference Room L-1. 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 of Engineering/Water Resources
Roger Yoh		
Van Tran		Mehul Patel – Executive Director of Operations
Dina Nguyen	arrived @ 12:15 p.m.	Jason Dadakis – Executive Director of Water Quality & Technical Resources
Alternates		Lisa Haney – Executive Director of Planning & Natural Resources
Valerie Amezcua	arrived @ 12:15 p.m.	
Fred Jung	arrived @ 12:05 p.m.	Jeremy Jungreis – General Counsel
Natalie Meeks	arrived @ 12:05 p.m.	Christina Fuller –District Secretary
Steve Sheldon	absent	
Denis Bilodeau		

CONSENT CALENDAR

The Consent Calendar was approved upon motion by Director Tran, seconded by Director Weigand and carried [5-0], as follows:
Ayes: ***Green, Weigand, Yoh, Tran, Bilodeau****
**** As required by government code section 1091.5(a)(9), Director Bilodeau disclosed that he does not have a financial interest in item No. 10 but identified that he is an employee of the County of Orange, which is involved in the item.***

1. Minutes of Water Issues Committee Meeting

The Minutes of the Water Issues Committee meeting held September 10, 2025, were approved as presented.

2. Monitoring Well FVM-1 Vault Replacement

Recommended for approval at October 15 Board meeting: Authorize issuance of a Request for Quotes for monitoring well FVM-1 vault replacement.

3. Authorize Agreement to Butier Engineering Inc for Construction Management and Inspection Services for SA-2025-1 City Of Santa Ana PFAS Treatment at John Garthe Reservoir

Recommended for approval at October 15 Board meeting: Authorize agreement with Butier Engineering, Inc. for a not-to-exceed amount of $2,107,242.50 for construction management and inspection services for Contract No.SA-2025-1, City of Santa Ana PFAS Treatment at John Garthe Reservoir Project.

4. Authorize Agreement 1749 Amendment No 1 to Scheevel Engineering for Water Rights Diversion Measurement Certifications

Recommended for approval at October 15 Board meeting: Authorize issuance of Amendment No. 1 to Agreement 1749 with Scheevel Engineering for an amount not to exceed $45,000 for the water rights diversion measurement certifications; and authorize additional funds in the amount of $65,000 to the Recharge Operations general fund budget line item 1060.53001.

5. Authorize Agreement to KDC Systems for FHQ SCADA Ignition Upgrade

Recommended for approval at October 15 Board meeting: Authorize issuance of Agreement to KDC Systems for an amount not to exceed $268,858 for the FHQ SCADA Ignition Upgrade; and authorize additional funds in the amount of $208,858 for R&R account R24030.

6. Replacement of Green Acres Project Influent Pump A03 Variable Frequency Drive

Recommended for approval at October 15 Board meeting: Authorize issuance of Purchase Order to One Source for a PowerFlex 755TS model Variable Frequency Drive for GAP influent pump A03 for $93,689.

7. Authorize Agreement to Calgon Carbon Corporation for Granular Activated Carbon Procurement, Delivery and Installation at the Fullerton Main Plant

Recommended for approval at October 15 Board meeting: Authorize Agreement to Calgon Carbon Corporation for an amount not to exceed $866,256 to procure, deliver, and install Granular Activated Carbon at the Fullerton Main Plant.

8. Purchase Order to AB Sciex LLC for One Pal Liquid Injection System for an Existing Liquid Chromatography / Tandem

Recommended for approval at October 15 Board meeting: Authorize issuance of Purchase Order to AB Sciex LLC in the total amount of $63,677 for the purchase of one PAL RSI 537 Liquid Injection System.

9. Agreement with Bonnie Johnson for Prado Vireo Monitoring

Recommended for approval at October 15 Board meeting: Approve Agreement with Bonnie Johnson to perform biological monitoring services in the Prado Basin not-to-exceed $130,000 over a two-year period.

10. OCWD Continued Participation in Adopt A Channel Program

Recommended for approval at October 15 Board meeting: 1) Authorize continued participation in the OC Public Works Adopt A Channel program in the portion of the Santa Ana River where OCWD conducts recharge operations; and 2) Authorize issuance of Agreement to the Orange County Conservation Corps to conduct graffiti and trash removal for three years for an annual cost of $42,160, for a not to exceed total of $126,480 for three years with an option to renew for up to an additional two years with General Manager approval under the same terms and conditions.

INFORMATIONAL ITEM

11. PFAS Update

Director of Engineering Ryan Bouley provided a construction update and an overview of current PFAS grant funding efforts.

CHAIR DIRECTION AS TO ITEMS IF ANY TO BE AGENDIZED AS MATTERS FOR CONSIDERATION AT THE OCTOBER 15 BOARD MEETING

It was agreed to place all items on the Consent Calendar for the October 15 Board meeting.

ADJOURNMENT

There being no further business, the meeting was adjourned at 12:23 p.m.

_____

Cathy Green, Chair

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AGENDA ITEM SUBMITTAL

Meeting Date: November 12, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: L. Haney/A. Hutchinson

Budgeted: Yes
Budgeted Amount: $125,000
Cost Estimate: $125,000
Funding Source: General Fund
Program/Line Item No. 1044.53001
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: SIXTH AMENDED AGREEMENT WITH UNITED STATES ARMY CORPS OF ENGINEERS TO IMPLEMENT FIRO AT PRADO DAM

SUMMARY

OCWD is collaborating with the U.S. Army Corps of Engineers (USACE) to implement Forecast-Informed Reservoir Operations (FIRO) at Prado Dam. This agreement enables OCWD to reimburse USACE staff for their participation in this multi-year effort, which involves ongoing coordination and engagement in the Water Control Manual update process, participation in the Prado Dam FIRO Steering Committee, and other required tasks.

Attachment: Sixth Amended Cooperative Research and Development Agreement with United States Army Corps of Engineers (Appendix H)

RECOMMENDATION

Agendize for November 19 Board meeting: Authorize execution of the Sixth Amended Cooperative Research and Development Agreement (Appendix H) with the U.S. Army Corps of Engineers to support implementation of FIRO at Prado Dam, including Water Control Manual update coordination, continued participation in the FIRO Steering Committee, and related activities, subject to approval as to form and content by District's General Counsel, for an additional $125,000 for a total amount not to exceed $495,000.

BACKGROUND/ANALYSIS

OCWD has been studying the viability of using FIRO to further increase the amount of water that can be temporarily impounded in the water conservation pool at Prado Dam without negatively impacting the primary flood risk management (FRM) purpose of the dam. FIRO is an innovative research and operations partnership that uses modern weather forecasting, runoff modeling, and watershed monitoring to help water managers selectively retain or release water from reservoirs in a manner that reflects current and forecasted conditions.

The Prado Dam FIRO Viability Assessment Study was led by a Steering Committee that included representatives from OCWD, Scripps Institution of Oceanography, U.C. San

Diego Center for Weather and Water Extremes (CW3E), USACE, Orange County Public Works (OCPW), National Oceanic and Atmospheric Administration (NOAA), Sonoma Water, California Department of Water Resources (DWR), and the U.S. Fish and Wildlife Service (USFWS).

In November 2023, the Steering Committee completed the Final Viability Assessment (FVA) that demonstrated that FIRO can be applied at Prado Dam without compromising its primary FRM purpose.

USACE Agreement and Scope of Work

In 2018, the Board approved an agreement with the USACE to reimburse the USACE for staff time and expenses to participate in the FIRO Study. The Cooperative Research and Development Agreement (CRADA) is with the United States Army Engineer Research and Development Center (ERDC) in Vicksburg, Mississippi.

Based on the results of the FIRO studies, the Steering Committee requested the USACE to review and process a 5-year minor deviation from the Prado Dam Water Control Plan to test opportunities to increase stormwater capture using FIRO. The requested deviation is to increase the water conservation pool to an elevation of 508 feet, which would provide an additional 5,905 acre-feet of storage for a total storage volume of 25,400 acre-feet.

The CRADA was amended several times to fund work required to process the minor deviation, which was approved by the USACE on March 2, 2025.

With the completion of the minor deviation, funding is required to support implementation of FIRO at Prado Dam, including Water Control Manual update coordination, continued participation in the FIRO Steering Committee, and related activities. Amendment Six to the CRADA supports this work and includes the following activities:

Task 1 – Water Control Manual Update Coordination

This task consists of general ongoing coordination between the OCWD team, including their private consultants, the USACE FIRO team, and internal USACE entities, including weekly meetings, unplanned meetings, responses to emails/phone calls, and project financial reporting.

Task 2 – Annual Cultural Resources Modeling ($5,000)

This task will only be conducted if the water level within the Prado Basin reaches an elevation between 505 and 508 feet during the water year. This task includes an annual cultural resources survey conducted by SPL staff. This task includes visiting historic properties identified between the 505 and 508 elevations within the Prado Basin to evaluate whether there has been any erosion between those elevations. It also includes coordination with SPL Reservoir Regulation staff to determine how many times each of the sites had water impounded on them during the previous water year.

Task 3 – Steering Committee Participation ($40,000)

The viability assessment of FIRO at Prado Dam was guided by a multi-agency Steering Committee co-led by OCWD and the Center for Western Weather and Water Extremes (CW3E). With the completion of the viability assessment, FIRO moves into the implementation stage with a reconstituted Steering Committee that is co-led by OCWD and Los Angeles USACE staff. This task includes funding for USACE staff time to participate in the steering committee and provide feedback on how FIRO will be implemented and measured during the deviation period.

Task 4 – Seepage Monitoring at Prado Dam ($25,000)

This task is focused on monitoring potential seepage at Prado Dam by the USACE. When the water conservation pool exceeds 505 feet, USACE personnel will be deployed to observe the dam for signs of seepage. Seepage measurements will be made as appropriate. Measurement data and observations will be documented in a report. Data will be evaluated periodically.

Table 1 presents the costs associated with Amendment Six and the prior costs and activities that have been completed.

Table 1: Cost Estimate for USACE Activities

Task	Activity	Cost
1	Water Control Manual Update Coordination	$55,000
2	Annual Cultural Resources Modeling	$5,000
3	Steering Committee Participation	$40,000
4	Seepage Monitoring at Prado Dam	$25,000
	Subtotal for Amendment Six	*$125,000*
Completed Tasks		
	Water Control Deviation Coordination	$111,000
	Water Control Deviation Document Review & Package Development	$41,000
	Inundation Frequency Analysis for El 508	$7,000
	Prepare Mapping	$13,000
	ERB Support / Coordinate w/ USFWS & BO	$76,000
	Section 106 consultation (Cultural Resources)	$100,000
	Dam Safety Support	$22,000
	Subtotal of Completed Tasks	*$370,000*
	Grand Total with Amendment Six	**$495,000**

PRIOR RELEVANT BOARD ACTIONS

9/18/2025, R25-9-109. Authorize approval of the Fifth Amended Cooperative Research and Development Agreement (Appendix G) with the United States Army Corps of Engineers for the Review and Processing of Water Control Plan Deviation for Forecast

Informed Reservoir Operations (FIRO) for Prado Dam, California subject to approval as to form and content by District's General Counsel, for an additional $125,000 for a total amount not to exceed $370,000.

6/19/2024, R24-6-65. Authorize approval of the Fourth Amended Cooperative Research and Development Agreement (Appendix F) with the United States Army Corps of Engineers for the Review and Processing of Water Control Plan Deviation for Forecast Informed Reservoir Operations (FIRO) for Prado Dam, California subject to approval as to form and content by District's General Counsel, for an additional $30,000 for a total amount not to exceed $245,000.

3/15/23, R23-3-29 - Authorize approval of Third Amended Cooperative Research and Development Agreement with the United States Army Corps of Engineers for Forecast Informed Reservoir Operations Study that provides a no-cost schedule extension to March 31, 2027.

3/16/22, R22-3-24 – Authorize approval of the Second Amended Cooperative Research and Development Agreement with the United States Army Corps of Engineers for the Forecast Informed Reservoir Operations Study subject to approval as to form and content by District's General Counsel, for an additional $120,000 for a total amount not to exceed $215,000 to fund Army Corps staff time in reviewing and processing the deviation and Authorize approval of agreement with Q3 Consulting to perform hydrologic modeling to support the Corps evaluation of the deviation at Prado Dam for an amount not to exceed $35,280.

9/15/21, R21-9-131 – Authorize General Manager to request that the United States Army Corps of Engineers review and process a proposed deviation to the Prado Dam Water Control Plan and authorize amended Cooperative Research and Development Agreement with the United States Army Corps of Engineers for the Forecast Informed Reservoir Operations Study for an amount not to exceed $95,000.

1/17/18, R18-1-5 – Authorize execution of an agreement with the United States Army Corps of Engineers for the Forecast Informed Reservoir Operations study for an amount not to exceed $45,000.

APPENDIX H
COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT
BETWEEN
UNITED STATES ARMY ENGINEER RESEARCH AND DEVELOPMENT CENTER
COASTAL AND HYDRAULICS LABORATORY
AND
ORANGE COUNTY WATER DISTRICT

Pursuant to Article 8.7, Amendments and Modifications, the Parties agree to amend this Cooperative Research and Development Agreement, originally signed May 18, 2018, extended for an additional four years on March 17, 2023 and current expiration date of March 31, 2027 is hereby amended.

1. In accordance with Article 2.2 of this CRADA, this Work Statement defines a particular research activity (consistent with the scope and obligations set forth in Appendix A) to be conducted. This Work Statement will be incorporated into this CRADA as Appendix H.

2. Except as amended herein all terms and conditions of the original AGREEMENT, remain in full force and effect unless completed.

IN WITNESS WHEREOF, the PARTIES have caused this CRADA amendment to be executed by their duly authorized representatives as follows:

For THE ORANGE COUNTY WATER DISTRICT:

_____ Date: _____
DENIS BILODEAU
PRESIDENT

_____ Date: _____
JOHN KENNEDY,
GENERAL MANAGER

For THE U.S. ARMY ERDC-CHL:

_____ Date: _____
TY V. WAMSLEY, PhD, PE, SES
DIRECTOR

APPENDIX H
STATEMENT OF WORK
FOR

1.0. **TITLE**: Review and Processing of Water Control Plan Deviation for Forecast Informed Reservoir Operations (FIRO) for Prado Dam, California

2.0. **BACKGROUND**. The Forecast Informed Reservoir Operations (FIRO) program within the US Army Corps of Engineers (USACE) is investigating the incorporation of improved weather forecast capability into the operation of USACE reservoirs to find a better balance between the competing objectives of flood risk management, water supply and ecological benefits. A recently completed viability assessment has shown that FIRO is viable at Prado Dam and a Water Control Manual (WCM) update is underway to incorporate FIRO into the Water Control Plan (WCP). While this update is underway, a deviation to the existing WCP is desired to allow the benefits of FIRO to be realized while the permanent WCM update is executed.

3.0. **PROJECT OBJECTIVE.** This CRADA will facilitate the involvement of the US Army Engineer Research and Development Center Coastal and Hydraulics Laboratory (ERDC-CHL) and the Los Angeles District (SPL), South Pacific Division (SPD), USACE in assessing a requested deviation to the Prado Dam WCP for FIRO.

4.0. **TECHNICAL MANAGERS**

OCWD

Lisa Haney
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ERDC

Cary A. Talbot
CEERD-HTZ
3909 Halls Ferry Road
Vicksburg, MS 39180
(601) 634-2625
Cary.A.Talbot@usace.army.mil

5.0. **ERDC TASKS, SCHEDULE, and COST ESTIMATE.** This Appendix details the tasks required for coordination during the Water Control Manual update process, annual cultural resources monitoring, Prado Dam FIRO Steering Committee participation, and seepage monitoring. The estimated costs to complete these tasks is $125,000. The tasks to be conducted by USACE include the following:

Task 1 – Water Control Manual Update Coordination ($55,000)
This task consists of general on-going coordination between the Orange County Water District (OCWD) team, including their private consultants, the USACE FIRO team and internal USACE entities, to include weekly meetings, unplanned meetings, responses to emails/phone calls and project financial reporting.

Task 2 – Annual Cultural Resources Modeling ($5,000)
This task will only be conducted if the water level within the Prado Basin reaches an elevation between 505 and 508 feet during the water year. This task includes an annual cultural resources survey conducted by SPL staff. This task includes visiting historic properties identified between the 505 and 508 elevations within the Prado Basin to evaluate if there has been any erosion between those elevations. It also includes coordination with SPL Reservoir Regulation staff to determine how many times each of the sites had water impounded on them during the previous water year.

Task 3 – Steering Committee Participation ($40,000)
The viability assessment of FIRO at Prado Dam was guided by a multi-agency Steering Committee co-led by OCWD and the Center for Western Weather and Water Extremes (CW3E). With the completion of the viability assessment, FIRO moves into the implementation stage with a reconstituted Steering Committee that is co-led by OCWD and SPL. This task includes funding for USACE staff time to participate in the steering committee and provide feedback on how FIRO will be implemented and measured during the deviation period.

Task 4 – Seepage Monitoring at Prado Dam ($25,000)
This task is focused on monitoring for potential seepage at Prado Dam. When the water conservation pool exceeds 505 feet, personnel will be deployed to observe the dam for signs of seepage. Seepage measurements will be made as appropriate. Measurement data and observations will be documented in a report. Data will be evaluated periodically.

6.0. **OCWD TASKS.** OCWD will provide funds to ERDC-CHL for support of reviewing and processing the requested deviation. OCWD will also provide technical assistance to ERDC-CHL for the requested deviation, including data collection and environmental analysis. OCWD will provide support with outreach to stakeholders in the Santa Ana River Watershed and the State of California. OCWD will also collaborate with ERDC-CHL regarding coordination with other stakeholders in the USACE and other federal agencies.

7.0. **ESTIMATED CONTRIBUTIONS.** In accordance with DOD policy, DOD is requesting that both the federal and non-federal CRADA partners report an estimate of their contributions to the CRADA, both financial and non-financial. Non-financial contributions are defined as: All non-monetary resources devoted to the execution of the subject agreement

(e.g. labor, test facility usage, etc.). Information will not be reported by individual organizations, but included in totals for the laboratory-wide annual upward reports.

7.1. ERDC-CHL:	Financial - $0	Non-financial in-kind - $15,000
7.2. OCWD:	Financial: $125,000	Non-financial: $10,000

AGENDA ITEM SUBMITTAL

Meeting Date: November 12, 2025	**Budgeted:** No
	Budgeted Amount: $0
To: Water Issues Committee	**Cost Estimate:** $150,000
Board of Directors	**Funding Source:** 1050
	Program/ Line Item No. TBD
From: John Kennedy	**General Counsel Approval:** N/A
	Engineers/Feasibility Report: N/A
Staff Contact: C. Olsen/M. Patel	**CEQA Compliance:** N/A

Subject: AUTHORIZE RFP FOR GWRS DECARBONATION PROCESS ENHANCEMENTS

SUMMARY

Optimizing the Groundwater Replenishment System decarbonation treatment step will enhance the removal of volatile organic compounds (VOCs) like dichloromethane while still providing appropriate stabilization of the purified recycled water before its distribution for recharge and injection into the groundwater basin. Staff request authorization to issue a Request for Proposals (RFP) to develop a preliminary design and cost estimate for GWRS Decarbonation Process Enhancements.

RECOMMENDATION

Agendize for November 19 Board meeting: Authorize issuance of a Request for Proposals for design of GWRS Decarbonation Process Enhancements.

BACKGROUND/ANALYSIS

In June 2025, the Board awarded a Professional Service Agreement to Trussell Technologies, Inc. to perform an optimization and feasibility study for the GWRS decarbonation system. This was based on the fact that since the beginning of the calendar year 2025, the District's operational and required permit compliance monitoring for the GWRS has detected the presence of dichloromethane (DCM), also known as methylene chloride. DCM is a VOC and a common ingredient in paint thinners, degreasers, adhesives, and sealants. In April 2024, the United States Environmental Production Agency (EPA) finalized a DCM ban in consumer uses/products effective May 2025 and in commercial uses by May 2026; the bans were driven by human health risks, including cancer and neurotoxicity effects from skin and inhalation exposures, primarily associated with workers using DCM.

OC San's final effluent complies with all discharge limits as specified in its National Pollutant Discharge Elimination System permit, which includes an average monthly Performance Goal of 4.26 parts per billion (ppb) for DCM. On average, OC San removes over 80% of DCM within its primary and secondary wastewater treatment processes.

Trussell Technologies, Inc. recently completed its evaluation and provided a technical memorandum regarding the optimization and feasibility study for the GWRS decarbonation system. Optimizing the decarbonation system operations has the potential to enhance the removal of VOCs while still providing appropriate stabilization of the purified recycled water before its distribution for recharge and injection into the groundwater basin. Several options were evaluated, and the most feasible and economical is enhancing the existing decarbonation process.

The decarbonation process currently removes excess carbon dioxide (CO_2) from about 25% of the plant flow via air stripping aeration towers located after the UV-AOP step, with the remaining 75% of the plant flow bypassed around the towers and therefore not decarbonated. This partial decarbonation strategy provides sufficient dissolved CO_2 after the decarbonated and non-decarbonated streams recombine, such that the subsequent hydrated lime (calcium hydroxide) addition results in the desired stabilized final product water chemistry (e.g., pH, alkalinity, specific mineral content). This stabilization is required due to the near-complete demineralization of GWRS water by the RO process and prevents the final product water from being corrosive and damaging the distribution pipelines, injection wells, and recharge structures, plus it helps inhibit the high-purity product water from mobilizing native aquifer contaminants (such as metals).

Testing of the GWRS decarbonation system effluent has indicated consistent excellent removal of DCM (>95%), confirming that the air stripping technique is effective at removing VOCs. The GWRS decarbonation system is comprised of seven 12 million gallons per day (MGD) aeration towers. The proportion of plant flow receiving decarbonation can be safely increased from the current 25% to the maximum of ~65% of the plant's maximum production (84 MGD of 130 MGD) to be decarbonated/air stripped. To maximize the use of the existing decarbonation towers, a new CO_2 addition process would be needed for the finished product water stabilization, since the balance is being altered from the current configuration, as maximum decarbonator usage to remove additional DCM also removes additional CO_2.

Staff is preparing an RFP for Decarbonation Process Enhancements, and the scope will be to perform a preliminary 30% design and cost estimate. The budget is currently unknown until we receive proposals and staff has estimated an approximate amount of $150,000. Staff will reach out to the three consultants (Black & Veatch, Brown & Caldwell, and CDM-Smith) who already have intimate knowledge from past work on the original GWRS, its Initial expansion, and its Final expansion.

PRIOR RELEVANT BOARD ACTIONS

6/4/25, R25-6-88: Authorize issuance of a Professional Services Agreement to Trussell Technologies, Inc. for an amount not to exceed $88,735 to provide consulting services to conduct a GWRS Decarbonation System Optimization & Feasibility Study.

9/21/16, R16-09-125: Authorize execution of Consulting Services Subcontract with Trussell Technologies in support of the project, "Evaluating Post Treatment Challenges for Potable Reuse Applications (WRRF-16-01)" through which OCWD will receive $35,000 compensation

AGENDA ITEM SUBMITTAL

Meeting Date: November 12, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: M. Patel/B. Smith

Budgeted: Yes
Budgeted Amount: $155,000
Cost Estimate: $152,454
Funding Source: R&R
Program/Line Item No.: R23017
General Counsel Approval: N/A
Engineers Report: N/A
CEQA Compliance: Cat. Ex.

Subject: AMENDMENT 3 TO AGREEMENT 1547 WITH FALCON SERVICES FOR FIELD HEADQUARTERS ABOVEGROUND GASOLINE STORAGE TANK

SUMMARY

The underground gasoline storage tank located at Field Headquarters was removed in 2022. Permitting and construction of the aboveground tank replacement started in 2023 and is now complete. The contractor's out-of-scope effort to comply with regulatory requirements requires additional compensation.

RECOMMENDATION

Agendize for November 19 Board Meeting: Authorize issuance of Amendment No. 3 to Agreement 1547 with Falcon Services & Construction, Inc. for an amount not to exceed $3,309 and to extend the termination date to November 30, 2025.

BACKGROUND/ANALYSIS

The 2,500 gallon gasoline underground storage tank (UST) located at Field Headquarters (FHQ) did not pass pressure tests in 2021. The Anaheim Fire & Rescue Hazardous Materials Section issued Correction Notices to the District requiring removal of the gasoline and tank. The District awarded a contract for removal of the UST which was executed in the summer of 2022. No contamination was observed during the removal of the UST, nor detected in the soil samples analyzed by a third-party laboratory.

The gasoline tank and dispenser have been used at FHQ since the 1980's to supply gasoline for District vehicles and equipment under typical operations and as an emergency supply for potential disaster response. The on-site tank is a cost saving measure because the District can bulk purchase gasoline at a discounted rate.

An agreement to construct a new 1,000 gallon gasoline aboveground storage tank (AST) was issued in September 2023 to Falcon Services & Construction, Inc. The regulatory requirements for an AST are less stringent than a UST, and potential leaks can be immediately observed in the AST arrangement versus having to be indirectly tested for with a UST arrangement.

The project has been completed, and the tank has been in operation since May 2025. The contractor that constructed the tank, Falcon Services, has asked for an amendment

to cover additional efforts related to regulatory permitting. Staff agrees that additional out-of-scope effort was required to produce additional plans and engineered calculations. Staff recommends issuance of Amendment No. 3 to cover the additional $3,309 effort of regulatory permitting requirements and to extend the agreement termination date to November 30, 2025. The project budget is shown in Table 1.

Table 1: AST Project Budget Summary

Description	Budget 4/16/2025	Final Expenses
AST Scope of Work (Falcon Services)	$ 115,492	$ 118,801
Start-Up Testing (Tait)	$ 6,000	$ 2,744
SPCC Update (Weyman)	$ 4,000	$ 3,360
Card Reader Upgrade (Fuel Serv)	$ 27,550	$ 27,550
Contingency	$ 1,958	-
Total Project Budget	$ 155,000	$ 152,454

PRIOR RELEVANT BOARD ACTIONS

R25-4-61, 4/16/2025: Authorized an increase to the field headquarters aboveground gasoline storage tank project budget by $35,000, for a total project budget of $155,000.

R24-4-37, 4/17/2024: Issuance of Amendment No. 1 to Agreement 1547 with Falcon Services & Construction, Inc. for an amount not to exceed $17,923 and to extend the termination date to December 31, 2024.

R23-8-105, 8/16/2023: Issuance of an Agreement is authorized to Falcon Services & Construction, Inc. for Installation of Aboveground Gasoline Storage Tank; In accordance with the California Environmental Quality Act (CEQA) guidelines filing of a Categorical Exemption for the installation of an aboveground Gasoline Storage Tank is authorized; A project budget for the Aboveground Gasoline Storage Tank is hereby established in the amount of $120,000.

R22-5-58, 5/18/2022: Issuance of an Agreement is authorized to Cardno for Removal of Gasoline Underground Storage Tank for $71,281; In accordance with the California Environmental Quality Act (CEQA) guidelines filing of a Categorical Exemption for the Removal of Gasoline Underground Storage Tank is Authorized; A project budget for the budget for the Removal of Gasoline Underground Storage Tank is hereby established in the amount of $75,000.

AGENDA ITEM SUBMITTAL

Meeting Date: November 12, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: P. Parmar/J. Davis

Budgeted: Yes
Budgeted Amount: $125,000
Cost Estimate: $88,603
Funding Source: R&R
Program/Item No.: R25004
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: PURCHASE ORDER TO MULTIPLE VENDORS FOR AN AUTOMATED FLOW INJECTION ANALYZER FOR THE PHILIP L. ANTHONY LABORATORY

SUMMARY

Laboratory staff recommends the purchase of FIAlab Instruments, Inc. FIAlyzer-FLEX Flow Injection Analyzer (FIA) for Nitrate and Nitrite analyses, as well as for back-up support for Ammonia and Total Cyanide analyses. The lab's current segmented flow analysis (SFA) automated system is 10 years old and due for replacement, in part because the manufacturer has discontinued the analyzer line and is phasing out technical and maintenance support. These methods are required for the Producers' Title 22 drinking water compliance monitoring, GWRS permit monitoring, and the District's basin wide groundwater monitoring programs.

Attachments:

- Quotation 13884-2 from FIAlab Instruments, Inc. for one FIAlyzer-FLEX Flow Injection Analyzer, dated 10/24/2025;
- Quotation 10684260-D from Environmental Express for two C8000 SimpleDist Micro 26-position Distillation Blocks, dated 10/15/2025; and
- Quotation 5479 from EZkem for one TKN/NH3 Gas Diffusion Cartridge, dated 10/27/2025.

RECOMMENDATION

Agendize for November 19 Board meeting: Authorize issuance of Purchase Orders to FIAlab Instruments, Inc., Environmental Express, and EZkem in the amounts of $68,558, $13,173, and $6,872 respectively for the purchase of instrumentation to support the lab's Nitrate, Nitrite, Ammonia, and Total Cyanide analyses.

BACKGROUND/ANALYSIS

The District's Philip L. Anthony Advanced Water Quality Assurance Laboratory ('lab') performs analyses of nitrate, nitrite, ammonia, and total cyanide across two different instruments in support of many monitoring programs, including Groundwater Producer compliance, GWRS permit compliance, Santa Ana River monitoring, and basin-wide groundwater monitoring. The lab has utilized a SEAL Segmented Flow Analyzer (SFA) system for ammonia and total cyanide analyses since purchasing it 10 years ago to meet the detection limits for reporting (DLRs) set by the State of California Division of Drinking Water (DDW).

The lab completed the purchase of a Xylem/OI FS3700 Continuous Flow Analyzer (CFA) in the 2022-2023 Fiscal Year (FY) to support nitrate and nitrite analyses. This CFA instrumentation is designed to conduct both Flow Injection Analyzer (FIA) and SFA types of analyses, but most closely resembles SFA technology and has been less efficient for lab staff to perform FIA-type applications.

Following extensive evaluation of multiple analytical method and instrumentation options, District lab staff believe the most efficient and cost effective approach to replace the outdated SEAL SFA is to purchase a dedicated FIA system for nitrate and nitrite analyses, while subsequently purchasing a cartridge upgrade for the existing Xylem/OI FS3700 to convert it to a full-time SFA instrument for ammonia and total cyanide analyses. In doing so, the lab maintains capability across the two instruments to analyze all four methods, while increasing productivity with a dedicated FIA rather than continuing to utilize the slower CFA to complete nitrate and nitrite analyses. Additionally, completing the upgrades in this fashion will allow both instruments to operate as backups for each other as needed.

To support the lab's total cyanide analyses, new distillation blocks and consumables are needed to more efficiently complete sample preparation prior to analysis on the upgraded Xylem/OI. The lab's current distillation blocks have become corroded over time and less efficient in their heating process, requiring frequent maintenance by lab staff. The new blocks will ensure consistent sample preparation and improved data quality.

In summary, lab staff recommend the purchase of a new FIA system from FIAlab Instruments, Inc., new cartridge to upgrade the existing Xylem/OI FS3700, and Environmental Express distillation blocks to meet District's current and future analytical needs.

PRIOR RELEVANT BOARD ACTION(S)

08/10/22, R22-8-106: Authorize issuance of a Purchase Order to YSI Incorporated for an Automated Chemistry Analyzer for the Philip L. Anthony Laboratory

FIAlab Instruments, Inc.
4259 23rd Ave W
Seattle, WA, 98199, USA
+1 (206) 258-2290
accounting@flowinjection.com

QUOTE

QUOTE #	13884-2
DATE	10/24/2025
VALID UNTIL	12/15/2025

CUSTOMER CONTACT INFORMATION

Orange County Water District
Attn: Prem Parmar
18700 Ward Street
Fountain Valley, CA 92708

TERMS	SHIPPING TERMS	REP
Net 30	DAP	JF

ITEM	DESCRIPTION	QTY	UNIT PRICE	TOTAL
793631	FIAlyzer-FLEX(1) - 120 V - One-channel flow injection analyzer -Includes one license for FIAsoft control software package -Includes two days training and installation by a FIAlab scientist.	1	31,954.28	31,954.28T
41045	Standalone high-precision peristaltic pump, 6 channels, in grey aluminum enclosure. For use with FIAlyzer-FLEX.	1	3,825.31	3,825.31T
61000	ASX-280 Cetac autosampler - 2-rack (120 position)	1	10,564.74	10,564.74T
796026	FLEX Module: nitrate + nitrite; SM 4500 NO3-F	1	3,185.52	3,185.52T
796065	FLEX Module: post-distillation total cyanide; EPA 335.4	1	2,017.39	2,017.39T
796015	FLEX Module: ammonia / TKN w/ gas diffusion; EPA 350.1	1	2,623.13	2,623.13T
810140	Service Plan - Silver - 2yr new FIA instrument -first channel at location. Service plan provides - extension of warranty on non-consumable parts from 1 year to 2 years from original instrument invoice date - one service visit - phone, e-mail and remote desktop support - free software upgrades		9,844.47	9,844.47T
	Subtotal			64,014.84
83101	GSA Government Price Match		-3.00%	-1,920.45
83004	Packing and Handling		232.18	232.18T
83003	Shipping and Insurance		715.00	715.00T
	Sales Tax		8.75%	5,516.14

TOTAL $68,557.71

environmental express
an antylia scientific company

2345-A Charleston Regional Parkway
Charleston, SC 29492

Telephone: 843-881-6560
Fax: 843-881-3964

Sales Quote

Sales Quote No.	10684260-D
Customer No.	OCCA2

Bill To

ORANGE COUNTY WATER DISTRICT
PO BOX 20845
FOUNTAIN VALLEY, CA 92728

Telephone: 714 378 3200

Ship To

ORANGE COUNTY WATER DISTRICT
RECEIVING WAREHOUSE
18700 WARD ST
FOUNTAIN VLY, CA 92708

Telephone: 714 378 3200

Quote Date	Ship Via	Freight Terms	Customer PO Number	Payment Method
10/15/25	BEST - UPS GRD	FOB DESTINATION		NET 30

Entered By		Ordered By	Resale Number
Randall Malatak		JEREMY DAVIS	

Order Quantity	Shipped Quantity	Tax	Item Number / Description	Unit Price	Extended Price
2.00	2.00	Y	C8000 SimpleDist Micro - 26 Position Distillation Block DIMENIONS: 33 LONG 7 WIDE & 7 5/8 TALL (ALL IN INCHES	5,899.00 <10.00 %>	10,618.20
1.00	1.00	Y	C8001 SimpleDist Micro Press, EACH shipping weight for 1 unit = 6lbs	230.00 <10.00 %>	207.00

Print Date	10/29/25
Print Time	04:52:12 PM
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Printed By: Randall Malatak

Continued on Next Page

CURRENCY: USD

environmental express
an antylia scientific company

Sales Quote

2345-A Charleston Regional Parkway
Charleston, SC 29492

Telephone: 843-881-6560
Fax: 843-881-3964

Sales Quote No.	10684260-D
Customer No.	OCCA2

Bill To

ORANGE COUNTY WATER DISTRICT
PO BOX 20845
FOUNTAIN VALLEY, CA 92728

Telephone: 714 378 3200

Ship To

ORANGE COUNTY WATER DISTRICT
RECEIVING WAREHOUSE
18700 WARD ST
FOUNTAIN VLY, CA 92708

Telephone: 714 378 3200

Quote Date	Ship Via	Freight Terms	Customer PO Number	Payment Method
10/15/25	BEST - UPS GRD	FOB DESTINATION		NET 30

Entered By		Ordered By	Resale Number
Randall Malatak		JEREMY DAVIS	

Order Quantity	Shipped Quantity	Tax	Item Number / Description	Unit Price	Extended Price
			PLEASE REFER TO THE QUOTE NUMBER AT THE TOP OF TH PAGE WHEN ORDERING. ********** ********** FREIGHT ARRANGED BY ENVIRONMENTAL EXPRESS FREIGHT ESTIMATE: $1400 FREIGHT WILL BE F.O.B. DESTINATION: PREPAY & ADD. FREIGHT ESTIMATES ARE FOR THE PURPOSE OF APPROXIMATING COST AND ARE SUBJECT TO CHANGE. **THESE PRODUCT PRICES ARE VAILD FOR 60 DAYS. **Approved By:** _____ ☐ **Approve All Items & Quantities**		

Print Date	10/29/25
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Printed By: Randall Malatak

Subtotal	10,825.20
Freight	1,400.00
8.750 % **Sales Tax**	947.21
Order Total	13,172.41

CURRENCY: USD

1045 Cannon Drive
Hood River, OR 97031

QUOTE

Quote #	Date
5479	10/27/2025

Bill To

Orange County Water District
Accounts Payable
PO Box 20845
Fountain Valley, CA 92728-0845

Ship To

Orange County Water District
Attn: Anh Tran
18700 Ward Street
Fountain Valley, CA 92708

P.O. No.		Terms	Net 30

Item	Description	Qty	U/M	Cost	Total
330094	Cartridge, TKN/NH3 Gas Diffusion, FS3700 Complete with heater, filter, all tubing and fittings.	1	ea	3,495.00	3,495.00
E030110	Container, 1000 ml Reagent w/ 2-Port Cap Assy	1	ea	34.95	34.95
E030102	Container, 1000ml, Reagent with 1-port Cap Assy (GD)	2	ea	29.95	59.90
A161102	Container, 500 ml, Reagent w/ Cap Assy Glass Amber	1	ea	39.95	39.95
A003110	Container, 2000 ml, Wash w/ Cap Assy	1	ea	85.00	85.00
A000115	Container, 2000 ml, Waste w/ Cap Assy	1	ea	69.00	69.00
A21-0110-33	Brij-35, 125 ml	1	ea	29.00	29.00
A001520	Membrane, 25 mm, PP for Gas Diffusion, 10 pack	1	ea	39.00	39.00
	Subtotal				3,851.80
Shipping	FedEx Ground			25.00	25.00
EZkem Service V...	EZkem Service Visit - 2-3 days onsite Installation, training and validation. Includes modification of nitrate channel for dual cartridge set up.	1		2,995.00	2,995.00

Quote valid until 12/31/2025.

Subtotal	$6,871.80
Sales Tax (0.0%)	$0.00
Total	**$6,871.80**

AGENDA ITEM SUBMITTAL

Meeting Date: November 12, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: P. Parmar/L. Sanchez

Budgeted: Yes
Budgeted Amount: $90,000
Cost Estimate: $76,942
Funding Source: New Equipment
Program/Item No.: E25.17110.1038
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: PURCHASE ORDER TO PROMOCHROM TECHNOLOGIES LTD FOR THREE SPE-03 UNITS FOR THE PHILIP L. ANTHONY WATER QUALITY LABORATORY

SUMMARY

Laboratory staff recommend the trade-in purchase of three solid-phase extraction (SPE) systems from PromoChrom Technologies Ltd. The new instruments are essential to continue support of sample preparation for per-and polyfluoroalkyl substance (PFAS) analyses. The need for PFAS testing continues to increase as additional Groundwater Producer PFAS Treatment Systems come online.

Attachment: Quotation #Q20250106 from PromoChrom Technologies Ltd, dated 10/06/2025

RECOMMENDATION

Agendize for November 19 Board meeting: Authorize issuance of Purchase Order to PromoChrom Technologies, Ltd. in the total amount of $76,942 for the trade-in purchase of three replacement SPE-03 Solid Phase Extractors.

BACKGROUND/ANALYSIS

The District's Philip L. Anthony Water Quality Laboratory performs PFAS analyses in support of many monitoring programs, including for the Groundwater Producers, pilot- and full-scale treatment systems, GWRS permit compliance, Santa Ana River monitoring, federally mandated Unregulated Contaminant Monitoring Rule 5 (UCMR 5), and basin-wide groundwater monitoring. The laboratory has utilized PromoChrom SPE-03 extractors for PFAS sample preparation since 2019.

The lab currently operates six PromoChrom SPE-03 extractors to support the analysis of PFAS using both EPA Methods 533 and 537.1. With the continuing implementation of new Producer PFAS treatment facilities throughout the OCWD service area, upgrades to the lab's outdated sample prep systems are necessary to manage the projected increase in PFAS sample workload.

Laboratory staff have been notified by Promochrom that the lab's older Generation 2 systems are approaching end of vendor support for major parts and electronics and will soon become increasingly difficult to maintain. To facilitate an upgrade of these three outdated systems, Promochrom has offered OCWD a 45% trade-in discount to acquire the latest versions. The

upgrade will ensure continued effective operation of this crucial set component of PFAS analysis. Continued use of Promochrom's equipment offers several advantages:

- The District lab currently utilizes six SPE-03 to prepare the samples. Lab staff's familiarity with PromoChrom instrumentation will allow the lab to quickly bring the new instruments online.

- PromoChrom has provided excellent service and support since the installation of the first SPE-03 in 2019. Their prompt responses to the lab's requests for support and replacement parts are commendable.

- The lab maintains a surplus of translatable parts and consumables dedicated for PromoChrom SPE-03 units. By opting to purchase the upgraded PromoChrom instrument configuration, the lab can continue to utilize these consumables on the new instruments.

To most efficiently implement the upgrades, District staff will receive and validate one new SPE-03 system at a time before shipping back existing units. This will ensure the District always has six validated systems to keep up with the sample workload.

District lab staff have concluded that upgrades of the existing systems best meet the laboratory's goals for current and future analytical needs within the FY25-26 New Equipment budget. As such, the lab recommends the trade-in purchase of three upgraded PromoChrom SPE-03 systems.

PRIOR RELEVANT BOARD ACTION(S)

August 21, 2024, R24-8-101: Authorize Purchase Order to Promochrom Technologies LTD For Two SPE-03 Units for the Philip L. Anthony Water Quality Laboratory

PromoChrom Technologies Ltd.

QUOTATION

Sample Preparation Without Limits

13351 Commerce Parkway, Unit 1103
Richmond, BC V6V 2X7
Canada
Phone 1-833-772-4766
www.promochrom.com, info@promochrom.com

DATE: 2025-10-06
QUOTATION #: Q20250106
Your Reference:
Payment Method: See below
Valid Till: **2025-12-31**

For: Lily Vuong Sanchez
Orange County Water District

Item	P/N Description	Unit Price (USD)	Discount (USD)	Qty	Total (USD)
1	Part No.: SPE-03 Includes MOD-004 automated sample bottle rinsing, MOD-005 minimal-Teflon option, 8 channel SPE-03, 24V power supply, touch screen stylus pen, solvent bottle adapters, sample bottle adapter tubing and user manual. (includes shipping)	46,631.00		3	139,893.00
2	Part No.: Trade in Discount (SN 201909002) 45% discount for trading in 2019 system with new GEN4 system		-20,983.95	1	-20,983.95
3	Part No.: Trade in Discount (SN 201909001) 45% discount for trading in 2019 system with new GEN4 system		-20,983.95	1	-20,983.95
4	Part No.: Trade in Discount (SN 201901001) 45% discount for trading in 2019 system with new GEN4 system		-20,983.95	1	-20,983.95
				SUBTOTAL	76,941.15
				SHIPPING & HANDLING	0.00
				TOTAL	76,941.15

Delivery: Within 75 days after receiving PO and one week after receiving full payment.
Terms: Includes shipping and one year warranty on parts and labor.
Full terms as per document "Terms and Conditions of Sale – Goods and Services"

Payment: **Check, bank transfer or credit card**

Check: Mail check to 13351 Commerce Pkwy Unit 1103, Richmond, BC V6V 2X7
Payee name "PromoChrom Technologies Ltd."

Bank Transfer: Please instruct your bank that all fees from the transfer should be charged to you.
A $20 bank transfer charge will be applied to purchases under $400

Bank: Canada Trust (TD)
Branch #: 9725
Bank Address: Richlea Square Shopping Centre, 10151 No 3 Road, Richmond, BC V7A 4R6, Canada. Tel: 1-866-222-3456
Swift Address: TDOMCATTTOR
Account Name: PromoChrom Technologies Ltd.
Account # (US$): 004-97250-7301454

Credit Card: 3.5% credit card fee will be applied.
Please call 1-833-772-4766 ext.1 to provide credit card information

THANK YOU FOR YOUR BUSINESS!

Terms and Conditions of Sale – Goods and Services

1. **DEFINITIONS:**

   In these Terms and Conditions of Sale, "Seller" means PromoChrom Technologies Ltd.; "Buyer" means the person, firm, company or corporation by whom the order is given. “Product” means any products listed in the Seller's Quotation, including any accompanying accessories, components, or related materials specified therein. Any modifications or amendments to the Seller's Quotation shall be subject to mutual written agreement by both parties.

2. **THE CONTRACT:**

   2.1 All orders must be in writing and are accepted subject to these Terms and Conditions of Sale.

   2.2 The Contract shall become effective only upon the date of acceptance of Buyer's Purchase Order by Seller.

   2.3 No alteration or variation to the Contract shall apply unless agreed in writing by both parties. However, Seller reserves the right to effect minor modifications and/or improvements to the Goods before delivery provided that the performance of the Goods is not adversely affected and that neither the Contract Price nor the delivery date is affected.

3. **VALIDITY OF QUOTATION AND PRICES:**

   3.1 Unless previously withdrawn, Seller's quotation is open for acceptance within the period stated therein or, when no period is so stated, within sixty (60) days after its date.

   3.2 Prices are firm for delivery within the period stated in Seller's quotation and are exclusive of (a) Value Added Tax and (b) any similar and other taxes, duties, levies or other like charges arising outside Canada in connection with the performance of the Contract.

   3.3 Prices are for Goods delivered EXW (Ex works) Seller’s shipping point, inclusive of freight, insurance and handling unless otherwise stated in the Seller's order confirmation.

4. **PAYMENT:**

   4.1 Payment shall be made: (a) in full without set-off, counterclaim or withholding of any kind (save where and to the extent that this cannot by law be excluded); and (b) in the currency specified by Seller's order confirmation, by bank transfer, within thirty (30) days from the date of invoice (“Net 30”), irrespective of the date of receiving Goods,

unless otherwise specified in Seller's quotation or invoice. The invoice shall be issued by Seller to Buyer upon the shipment of Goods.

4.2 Buyer will provide Seller with a tax exemption certificate acceptable to the applicable taxing authorities.

4.3 If full payment is not made to Buyer per Clause 4.1, Buyer is responsible for paying a USD1000 late payment penalty per month or part there-of to Seller.

5. **DELIVERY PERIOD:**

5.1 Unless otherwise stated in Seller's quotation, Seller will ship out the Goods within 45 days after receiving Buyer's Purchase Order. The method of shipment will be within the discretion of the Seller. The Goods will be deemed received by Buyer when delivered to the address specified in Buyer's Purchase Order.

5.2 If Seller is delayed in or prevented from performing any of its obligations under the Contract due to the acts or omissions of Buyer or its agents (including but not limited to failure to provide specifications and/or such other information as Seller reasonably requires to proceed expeditiously with its obligations under the Contract), the delivery/completion period and the Contract Price shall both be adjusted by Seller accordingly. Any costs incurred as a result will be charged to Buyer.

6. **FORCE MAJEURE:**

6.1 Force Majeure of any kind, unforeseeable production, traffic or shipping disturbances, war, acts of terrorism, fire, floods, unforeseeable shortages of labor, utilities or raw materials and supplies, strikes, lockouts, acts of government, and any other hindrances beyond the control of the party obliged to perform which diminish, delay or prevent production, shipment, acceptance or use of the goods, or make it an unreasonable proposition, shall relieve the party from its obligation to supply or take delivery, as the case may be, as long as and to the extent that the hindrance prevails. If, as a result of the hindrance, supply and/or acceptance is delayed by more than four weeks, either party shall have the right to cancel the contract.

7. **DELIVERY, RISK & TITLE:**

7.1 Unless otherwise expressly stated in the Buyer's Purchase Order, the Goods will be delivered F.O.B Destination to the destination named in the Purchase Order. Risk of loss of or damage to the Goods shall pass to Buyer upon delivery as aforesaid and Buyer shall be responsible for insurance of the Goods after risk has so passed.

7.2 Title to the Goods shall pass to Buyer upon delivery in accordance with Clause 7.1.

8. POST-SALE SUPPORT:

8.1 “Warranty Period” begins 10 days after Product is delivered. The one-year warranty and any additional service contracts shall cover any defects of Repair Parts listed in the Post-Sale Order Guide which, under proper use, care and maintenance, which are reported to Seller within the Warranty Period, and which arise solely from faulty materials or workmanship. Consumable Parts listed in the Post-Sale Order Guide are covered for the first 90 days into the Warranty Period.

8.2 Defective items are to be shipped to Seller for repair at the cost of Seller. The method of shipment will be within the discretion of the Seller.

8.3 Repaired items will be delivered to Buyer at the cost of Seller. The method of shipment will be within the discretion of the Seller.

8.4 Goods replaced in accordance with Clause 8.1 shall be subject to the foregoing warranty for the unexpired portion of the Warranty Period or for 90 days from the date of their return to Buyer (or completion of correction in the case of Services), whichever expires the later.

8.5 Notwithstanding Clause 8.1, Seller shall not be liable for any defects caused by: non-compliance with Seller's storage, installation, operation or environmental requirements; lack of proper maintenance; any modification or repair not previously authorized by Seller in writing. Seller's costs incurred in investigating and rectifying such defects shall be paid by Buyer upon demand. Buyer shall at all times remain solely responsible for the adequacy and accuracy of all information supplied by it.

8.6 The warranty for defects is limited to the purchase price of the product.

9. INSTALLATION & TRAINING

9.1 Seller shall provide Buyer with video detailing the steps for installing and using Product.

9.2 Seller shall remotely support Buyer with installation and training make available assistance through phone, email or Skype.

10. SERVICE CONTRACTS

10.1 Buyer must purchase service contracts from Seller before the expiry of Buyer’s current warranty period. Payment and warranty coverage are in accordance with Clause 4 and Clause 8.

10.2 Purchased extended warranty will begin on the day after the expiry of Buyer's current warranty period and effective through the number of days specified in Buyer's Purchase Order.

11. RETURNS

No Product returns shall be accepted by Seller. Buyer will be given the opportunity during installation and training to validate Product and work out any necessary adjustments with Seller. Any system defects after installation will be covered under the one-year warranty in accordance to Clause 8.

12. SALES TAX

Buyer acknowledges and agrees that they are responsible for complying with all applicable state, local, and federal sales tax laws and regulations. The purchase price of Product does not include any sales tax. The Buyer shall be solely responsible for declaring, collecting, and remitting any required sales tax to the appropriate tax authorities. Seller shall not be liable or responsible for any sales tax obligations arising from the Buyer's purchase or use of Product.

PROMOCHROM TECHNOLOGIES

Service Contract and Post-Sale Order Guide

All prices in the Post-Sale Order Guide are valid up to 365 days after the effective period of warranty or service contract.

SERVICE CONTRACT

PART NUMBER	DESCRIPTION	PRICE (US$)	TERMS AND COVERAGE
SC1-SPE03	**GOLD PLAN** Extended warranty on parts and labor for one year.	4004	Gold service contract covers all repair parts, shipping and labor. It also includes shipping of the system back for factory repair if part replacement is not possible, during which a demo unit will be provided based on availability.
SC2-SPE03	**SILVER PLAN** Extended warranty on parts for one year.	2964	Silver service contract covers all repair parts only. Shipping and labor are not included. It does not cover shipping the system back for factory repair or provision of demo unit.

Service contracts do not cover any consumable parts. Service contracts can only be purchased when an existing warranty or service contract is still valid and can be purchased for consecutive years. The terms are the same as described in Clause 8 of our Terms and Conditions of Sale.

Support will be available through email, phone or virtual call between 9am to 4pm pacific time, Monday to Friday, excluding British Columbia statutory holidays. Urgent support issues are typically handled within 1 hour when inquiry is directly sent to the assigned Support Chemist. The general support hotline is 1-833-772-4766 extension 2. On-site support is not included in the service contracts and will be quoted and scheduled as required.

REPAIR PARTS

PART NUMBER	DESCRIPTION	PRICE* (US$)	TYP. CHANGE INTERVAL (mo.)	CAUSES OF DAMAGE
S03-V1	Valve 1 without stator (includes rotor)	1645.80	36+	Wear of motor or malfunctioning of electrical components.
S03-V2	Valve 2 without stator (includes rotor)	1645.80	36+	Wear of motor or malfunctioning of electrical components.
S03-V3	Valve 3 without stator (includes rotor)	1645.80	36+	Wear of motor or malfunctioning of electrical components.

S03-VR1	PEEK rotor for valve 1	493.74	12-24	Wear or clog by particles from sample
S03-VR2	PEEK rotor for valve 2	548.60	12-24	Wear or clog by particles from sample
S03-VR3	PEEK rotor for valve 3	548.60	12-24	Wear or clog by particles from sample
S03-VS1	Stainless Steel stator for valve 1	658.32	36+	Using high concentration of salts in reagents and not properly cleaning with water
S03-VS2	Stainless Steel stator for valve 2	658.32	36+	Using high concentration of salts in samples and not properly cleaning with water, or running samples with high particulates without filtering
S03-VS3	Stainless Steel stator for valve 3	658.32	36+	Using high concentration of salts in samples and not properly cleaning with water, or running samples with high particulates without filtering
S03-VS1-C	Ceramic stator for valve 1	1438.32	36+	Wear over time
S03-VS2-C	Ceramic stator for valve 2	1438.32	36+	Wear over time
S03-VS3-C	Ceramic stator for valve 3	1438.32	36+	Wear over time
S03-VS1-T-PTFE	Stainless Steel stator for valve 1 with all PTFE tubing attached	822.90	36+	Wear over time
S03-VS1-T-PE	Stainless Steel stator for valve 1 with all PE tubing attached	822.90	36+	Wear over time
S03-VS2-T-PTFE	Stainless Steel stator for valve 2 with all PTFE tubing attached	987.48	36+	Wear over time
S03-VS2-T-PE	Stainless Steel stator for valve 2 with all PE tubing attached	987.48	36+	Wear over time

S03-VS3-T-PTFE	Stainless Steel stator for valve 3 with all PTFE tubing attached	987.48	36+	Wear over time
S03-VS3-T-PE	Stainless Steel stator for valve 3 with all PE tubing attached	987.48	36+	Wear over time
S03-VS1-T-C-PTFE	Ceramic stator for valve 1 with all PTFE tubing attached	1602.90	36+	Wear over time
S03-VS1-T-C-PE	Ceramic stator for valve 1 with all PE tubing attached	1602.90	36+	Wear over time
S03-VS2-T-C-PTFE	Ceramic stator for valve 2 with all PTFE tubing attached	1767.48	36+	Wear over time
S03-VS2-T-C-PE	Ceramic stator for valve 2 with all PE tubing attached	1767.48	36+	Wear over time
S03-VS3-T-C-PTFE	Ceramic stator for valve 3 with all PTFE tubing attached	1767.48	36+	Wear over time
S03-VS3-T-C-PE	Ceramic stator for valve 3 with all PE tubing attached	1767.48	36+	Wear over time
S03-PU	Pump set without syringe	877.76	18-36	Wear of motor, malfunctioning of electrical components
S03-PU-M48	48mm pump motor	384.02	18-36	Wear of motor
S03-PU-M40	40mm pump motor	329.16	18-36	Wear of motor
S03-TR	Tray motor with sensor	384.02	18-36	Wear of motor, malfunctioning of electrical components
S03-T5	Touch screen computer including casing	526.66	36+	Malfunctioning of electrical components or software
S03-BM	Main board	636.38	36+	Malfunctioning of electrical components

S03-BS	Stepper motor drive board	526.66	24-48	Malfunctioning of electrical components
S03-CS-P40	Stepper motor chip for 40mm pump (Gen 3 without MOD-00P)	32.64	12-48	Malfunctioning of electrical components
S03-CS-P48	Stepper motor chip for 48mm pump	32.64	12-48	Malfunctioning of electrical components
S03-CS-V	Stepper motor chip for valves	27.44	12-48	Malfunctioning of electrical components
S03-CS-T	Stepper motor chip for tray	27.44	12-48	Malfunctioning of electrical components
S03-S-P	Sensor for pump	82.30	24-48	Malfunctioning of electrical components
S03-S-T	Sensor for tray	82.30	24-48	Malfunctioning of electrical components
S03-S-V	Sensor for valve	82.30	36+	Malfunctioning of electrical components
MOD004-RES	Resonators for MOD-004	164.58	12-24	Brush wear in motor

CONSUMABLE PARTS

PART NUMBER	DESCRIPTION	PRICE** (US$)	TYP. CHANGE INTERVAL (mo.)	CAUSES OF DAMAGE
S03-PS5	5-mL pump syringe, 4 pcs/pack	526.66	18-36	Dirt accumulation from direct extraction of samples with high sediment or plunger wear during operation
S03-PU-PS5	Full pump assembly with 5mL syringes	1536.08	18-36	Wear of motor or syringes
S03-CD-1/3/6	Adapters for 1/3/6mL cartridges, 8 pcs/set	87.78	18-36	Wear and tear from use
S03-CD-6/12/20	Adapters for 6/12/20mL cartridges, 8 pcs/set	87.78	18-36	Wear and tear from use

S03-TB-PTFE	Sample extension tubing, PTFE, 8 pcs/set	202.99	24-36	Contamination by sample matrix or clog by particles from sample.
S03-TB-PE	Sample extension tubing, PE, 8 pcs/set	202.99	24-36	Contamination by sample matrix or clog by particles from sample.
MOD004-SA	Single-Line cap with spray nozzle and tubing for MOD-004, 8 pcs/set	746.10	24-36	Thread damaged from repeated use or sample line wear
MOD004-SA-C	Single-Line cap with spray nozzle (no tubing) for MOD-004, 8 pcs/set	570.54	24-36	Thread damaged from repeated use
MOD004-SA-L	Single-Line tubing with luer tips for MOD-004, 8 pc/set	175.55	24-36	Damage or clogging
MOD004-SA-D	Dual-line cap adapter with spray nozzle and tubing for MOD-004, 8 pcs/set	965.54	24-36	Thread damaged from repeated use or sample line wear
MOD004-SA-C-D	Dual-line cap adapter with spray nozzle (no tubing) for MOD-004, 8 pcs/set	724.15	24-36	Thread damaged from repeated use
MOD004-SA-L-D	Dual-line tubing with luer tips for MOD-004, 8 pc/set	241.38	24-36	Damage or clogging
MOD00P-SA-PTFE	Integrated sample and rinse lines for MOD-00P (PTFE)	1049.93	24-36	Damage from handling or improper use
MOD00P-SA-PE	Integrated sample and rinse lines for MOD-00P (PE)	1049.93	24-36	Damage from handling or improper use
S03-PS-L	Pump syringe lubricant kit, 2mL vial and Q-tip applicator	13.17	24-36	For relubricating pump syringes during maintenance

*Prices do not include shipping unless covered under warranty or service contract. Shipping cost will be quoted during time of order or can be charged to your shipping account. Free shipping on orders $1000 or more.
**Prices do not include shipping. Shipping cost will be quoted during time of order or can be charged to your shipping account. Free shipping on orders $1000 or more.

AGENDA ITEM SUBMITTAL

Meeting Date: November 12, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: R. Bouley/M. Patel/
F. Almario

Budgeted: Yes
Budgeted Amount: $203,448
Final Cost: $193,357
Funding Source: R&R
Program/Line Item No.: R24011
General Counsel Approval: N/A
Engineers Report: N/A
CEQA Compliance: N/A

Subject: CONTRACT NO. FV-2024-1 AUTHORIZE NOTICE OF COMPLETION

SUMMARY

Construction of the Annex Building Roof Replacement Project, Contract No. FV-2024-1 is complete. Staff recommends authorizing the filing of a Notice of Completion.

RECOMMENDATION

Agendize for November 19 Board Meeting: Accept completion of work and authorize filing a Notice of Completion for Contract No. FV-2024-1: Annex Building Roof Replacement Project

BACKGROUND/ANALYSIS

The Annex building was constructed in the early 1980s and is located on the Fountain Valley campus. Both the OCWD Research and Development department and the National Water Research Institute (NWRI) occupy the Annex building. The existing roof system on the Annex building is typical of its era and consists of one layer of ½" plywood decking for structure with one layer of bitumen (tar) and reinforcing fabric to provide weather/water proofing.

Construction included the installation of a reinforcement coating system directly over the existing roof, making the entire roof seamless from the top of the parapet to the bottom of the drains. This system was sprayed on and applied to a minimum thickness of 250 mil dry film thickness (¼-inch). This system will require no maintenance for the life of the 40-year warranty. The Project is complete, and staff have occupied the space.

The detailed project budget summary is presented in Table 1.

Table 1: Annex Building Roof Replacement Budget Summary

Description	Current Budget	Final Costs
Design and Construction Management		
In-house CM	$ 0	$ 0
Advertisement	$ 1,000	$ 884
Construction		
Contract FV-2024-1	*$ 192,848*	*$ 192,473*
Project Contingency	*$ 9,600*	*$ 0*
Total Project Budget:	*$ 203,448*	*$ 193,357*

Staff recommends authorizing the filing of the Notice of Completion for Contract No. FV-2024-1, Annex Building Roof Replacement Project.

PRIOR RELEVANT BOARD ACTIONS

7/2/2025, R25-7-107: Award Contract No. FV-2024-1 Annex Building Roof Replacement Project to BEST Contracting Services.

12/18/2024, M24-118: Authorize publication of Notice Inviting Bids for Annex Building Roof Replacement Project.

AGENDA ITEM SUBMITTAL

Meeting Date: November 12, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: R. Bouley/L. Esguerra

Budgeted: Yes
Budgeted Amount: $500,000/$400,000
Cost Estimate: N/A
Funding Source: R&R/CIP
Program/Line Item No.: R25027/C25001
General Counsel Approval: N/A
Engineers Report: N/A
CEQA Compliance: Cat. Ex.

Subject: AUTHORIZE REQUEST FOR PROPOSALS FOR FIELD HEADQUARTERS DIESEL FUEL TANK REPLACEMENT AND VEHICLE CHARGING INFRASTRUCTURE DESIGN

SUMMARY

The aging underground diesel storage tank located at Field Headquarters is becoming too expensive to insure, requiring an above-ground replacement. Also, electric vehicle charging infrastructure at Field Headquarters is required to support the District's transition to zero-emission vehicles required by the Advance Clean Fleet regulation adopted by the California Air Resources Control Board. Staff recommends issuing a Request for Proposals (RFP) for engineering and design services to prepare construction documents for these two projects.

Attachment: Draft RFP for FHQ Diesel Fuel Tank Replacement and Vehicle Charging Infrastructure

RECOMMENDATION

Agendize for November 19 Board Meeting: Authorize issuance of RFP for FHQ Diesel Fuel Tank Replacement and Vehicle Charging Infrastructure Design.

BACKGROUND/ANALYSIS

The 20,000-gallon diesel underground storage tank (UST) located at Field Headquarters (FHQ) was constructed in 1987. No leaks have been observed; however, due to the tank's age, it is at risk of being dropped by JPIA insurance coverage and would become more expensive to insure. The diesel tank and dispenser have been used at FHQ since the 1980s to supply diesel for District off-road equipment under typical operations and as an emergency supply for potential disaster response. The on-site tank is a cost-saving measure because the District can purchase diesel in bulk at a discounted rate, while also taking advantage of lower-cost red-dyed diesel for off-road use. A gasoline aboveground storage tank (AST) was recently constructed and has been in operation since May 2025 at FHQ. Construction of a 20,000-gallon AST for diesel fuel will have regulatory requirements less stringent than a UST, and potential leaks can be immediately observed in the AST arrangement, versus having to be indirectly tested for with a UST arrangement.

The California Air Resources Control Board adopted the Advance Clean Fleets (ACF) regulation requiring state and local governments to transition to zero-emissions vehicles (ZEV) for medium and heavy-duty fleet vehicles starting January 1, 2024. The District has elected to follow the purchase pathway for new vehicle purchases to comply with ACF. Beginning on January 1, 2024, 50% of the District fleet purchases in these weight classes shall be ZEV, and on January 1, 2030, 100% of fleet vehicles purchased shall be ZEV. OCWD maintains a fleet of 39 medium and heavy-duty fleet vehicles across three locations: Fountain Valley, Anaheim Field Headquarters, and Prado. Additional electric vehicle charging infrastructure at all locations is required to support the District's transition to zero-emission vehicles; however, the most immediate need is at FHQ.

Both projects require overlapping civil and electrical improvements at FHQ; therefore, their designs must be coordinated to minimize potential conflicts. Utilizing the engineering and design services of a single consultant for both projects would provide consistency in design, expedite deliverables, and reduce overall design costs. Staff recommends issuing a Request for Proposal (RFP) for engineering and design services to prepare construction documents for both the FHQ Diesel Fuel Tank Replacement and Vehicle Charging Infrastructure. A proposed project schedule is shown in Table 1.

Table 1: Project Schedule

Description	Timeline
Diesel Fuel Tank Design	March 2026 – July 2026
Diesel Fuel Tank Construction	September 2026 – May 2027
EV Charging Design	March 2026 – December 2026
EV Charging Construction	March 2027 – March 2028

PRIOR RELEVANT BOARD ACTION(S)

None

ORANGE COUNTY WATER DISTRICT

REQUEST FOR PROPOSALS
RFP-YY-XXX

FOR
FHQ DIESEL FUEL TANK REPLACMENT AND VEHICLE CHARGING INFRASTRUCTURE

ISSUED: December 8, 2025

PROPOSALS DUE:

January 22, 2026 at 2:00 PM PT

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Attachment No.1: RFP Submittal Checklist

The Orange County Water District ("OCWD" or District) is seeking proposals from qualified and experienced firms to provide engineering and design services for the replacement of an existing underground diesel storage tank and vehicle charging infrastructure at the District's Field Headquarters (FHQ). OCWD intends to evaluate the proposals received and enter into a Three-Year Professional Services Agreement ("Agreement") with the qualified firm. The work is expected to commence on March 2, 2026. This Agreement will be for a minimum term of two (2) years for the period from March 2, 2026 to March 2, 2028. The Agreement will be monitored closely for acceptable services rendered throughout the Agreement term. OCWD will have the option to terminate the contract in whole or in part during the Agreement term, for any reason or no reason, without penalty, upon notice. The proposer will not be entitled to lost profits or any other compensation not earned prior to the time of termination.

This Request for Proposal ("RFP") describes the required scope of services, the information that must be included in the proposal, and the proposal selection process. Proposers are encouraged to carefully review this RFP in its entirety prior to submitting their proposals. Failure to submit information in accordance with these requirements and procedures may be cause for disqualification.

1. INTRODUCTION

The OCWD is an internationally recognized leader in the water industry that was formed in 1933 by the California State Legislature which entrusted OCWD to guard and protect the region's groundwater basin and limited water supply. OCWD's mission is to provide a reliable supply of high-quality water that is sourced in an environmentally responsible manner to the more than 2.5 million residents and businesses within the 270 square mile service area of Orange County, California that OCWD serves. OCWD manages three of Southern California's greatest water supplies, this includes protecting rights to the Santa Ana River, managing and replenishing the Orange County Groundwater Basin, and operating and maintaining the Groundwater Replenishment System (GWRS), the world's largest advanced water purification system for potable water reuse. More information regarding the OCWD can be found at www.ocwd.com.

2. SOLICITATION SCHEDULE

The solicitation schedule is summarized in the table below. OCWD reserves the right to modify the schedule below at its discretion. Proper notification changes will be made to interested proposers.

RFP Issued	December 8, 2025
Pre-Proposal Meeting	January 6, 2026 at 9:00 AM PT
Questions Due Date	January 12, 2026 at 5:00 PM PT
Proposals Due	January 22, 2026 at 2:00 PM PT
Agreement Award Date:	February 18, 2026

2.1. PRE-PROPOSAL MEETING

The **non-mandatory** pre-proposal meeting will be held on January 6, 2026 at 9:00 AM PT, **at Orange County Water District's Field Headquarters office at 4060 E. La Palma Avenue, Anaheim, CA 92807**.

2.2. QUESTIONS CONCERNING REQUEST FOR PROPOSALS

All questions regarding the RFP must be submitted in writing before the deadline due date of **January 12, 2026 at 5:00 PM PT**. All questions must be titled "**Question – RFP-YY-XXX FHQ DIESEL TANK AND VEHICLE CHARGING"**. Responses to questions received from prospective proposers will be formally documented in a Question and Answer (Q&A) table that will be posted on the OCWD website: https://www.ocwd.com/working-with-us/rfp-contracts/. The Q&A table will be updated regularly as questions are received from prospective proposers. Questions received after the questions due date will not be considered.

Attention: Ashlie Valencia, Contracts Administrator
Email: procurement@ocwd.com

2.3. DEADLINE FOR PROPOSALS

Three (3) hard copies and one (1) electronic flash drive copy of the proposal must be received in a sealed envelope by OCWD no later than **January 22, 2026 at 2:00 PM PT** or such later time that OCWD may announce by an addendum at any time prior to the proposal deadline. The envelope shall be plainly marked on the exterior "Proposal for **RFP-YY-XXX FHQ DIESEL FUEL TANK REPLACMENT AND VEHICLE CHARGING INFRASTRUCTURE**" and with the name, company name, and address of the proposer.

Proposals must be mailed or delivered in person or via courier services at the District office listed below. To deliver submittal packages in person or via courier, please notify the guard at the main gate for proposal drop off. Sealed envelopes will be timestamped upon receipt at the receptionist desk.

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

It is the Proposer's responsibility to ensure that proposals are received prior to the submittal deadline. Proposal packages should also include all signed Acknowledgment of Addendum forms that may be issued by OCWD as part of this RFP process, as further described below. Proposals received after the deadline will not be considered under any circumstances. FAXED OR E-MAILED SUBMISSIONS WILL NOT BE ACCEPTED. The OCWD will not be responsible for the proper identification and handling of any proposals submitted incorrectly. Only responses properly submitted to OCWD will be considered.

OCWD reserves the right to reject any and/or all responses received. There will be no formal opening of the proposals.

2.4. PRE-SUBMITTAL ACTIVITIES

The District reserves the right to revise the RFP prior to the date the Proposals are due. Addendums to the RFP shall be posted on the OCWD website: https://www.ocwd.com/working-with-us/rfp-contracts/ for all interested Proposers. The District reserves the right to extend the date by which the Proposals are due.

3. PROJECT BACKGROUND AND DESCRIPTION

The California Air Resources Control Board adopted The Advance Clean Fleets (ACF) regulation requiring state and local governments to transition to zero-emissions vehicles (ZEV) for medium and heavy-duty fleet vehicles starting January 1, 2024. Orange County Water District has elected to follow the purchase pathway for new vehicle purchases to comply with ACF. Beginning on January 1, 2024 50% of the total number of District fleet purchase shall be ZEV and on January 1, 2030, 100% of fleet vehicles shall be ZEV. OCWD maintains a fleet of 39 medium and heavy-duty fleet vehicles across three locations: Fountain Valley, Anaheim Field Headquarters, and Prado Dam. The selected Firm will analyze the District's fleet for electrification and develop recommendations for electrical vehicle charging infrastructure improvements at each District location.

District operates and maintains an existing 20,000 gallon diesel underground storage tank at the Anaheim Field Headquarters. Due to age the District desires to replace the existing underground storage take with an above ground storage tank and filling station meeting minimum requirements for AQMD, building, and fire code. The selected Firm will develop Contract Documents for the replacement diesel fuel storage tank and coordinate the design with electrical vehicle charging infrastructure improvements recommended by the Firm. The Firm shall prepare separate Contract Documents for electrical vehicle charging infrastructure at Anaheim Field Headquarters.

4. SCOPE OF SERVICES

See **Exhibit A, attached to the end of this RFP.**

5. GENERAL INFORMATION

The District expects the selected firm to provide quality service in accordance with industry standards. The firm must demonstrate experience with the type of anticipated work and must have the ability to perform all services in a timely manner upon the request(s) from the District or the District's authorized representative. All work shall comply with the requirements of federal, state, and local laws, and District requirements. The Consulting Firm shall be reputable and capable of assessing the District' fleet for electric vehicle replacement potential, charging infrastructure requirements, and

development plans and specifications for the diesel storage and electric vehicle charging infrastructure improvements at Anaheim Field Headquarters as defined in this RFP.

Acceptable performance standards include, but are not limited to, dependability, contractor safety, demonstrated experience with anticipated work with the ability to perform all anticipated services in a timely manner upon receipt of request, expertise in assisting public agencies transition electric vehicles, electrical, mechanical, and structural design..

5.1. MINIMUM QUALIFICATIONS

The selected firm is required to have at minimum the following qualifications:

- Completed a minimum of two similar projects in size and complexity within the last Five years. Provide name of owner, name of contact, telephone number, email address, type of work performed, and value (design and constructed value).
- Plans shall be designed under the responsible charge of a Professional Civil/Structural Engineer and Electrical Engineer currently registered in the State of California.

6. ELEMENTS OF PROPOSAL

The hard copy proposal shall be submitted in one large sealed envelope, which shall include a two (2) part sealed proposal where each part shall be submitted in a separate sealed envelope. The electronic file shall include two separate PDF files, plainly marked with Part One and Part Two as listed below:

1. Part One: the first envelope, and PDF file, shall be plainly marked as Part One – Statement of Qualifications. The name and address of the Proposer shall be marked on the physical envelope.

2. Part Two: the second envelope, and separate PDF file, shall be plainly marked as Part Two – Price Proposal. The name and address of the Proposer shall be marked on the physical envelope.

To provide a degree of consistency in the review of the written proposals, firms are required to include the following content in their proposals. The information required below will be used to evaluate each proposal based on the evaluation criteria outlined in this RFP. Proposals may be deemed nonresponsive if they do not respond to all areas specified below.

Proposals shall be prepared simply and economically, providing a straightforward and concise description of how the proposal has satisfied all the requirements of this RFP. Emphasis shall be on completeness and clarity of content with sufficient detail to allow for accurate evaluation and comparative analysis. Excessive or irrelevant materials will not be favorably received.

Please include the following in your proposal:

6.1 Part 1 - Statement of Qualifications

The following subsections describe the contents required in Part One of the proposal. Part One of the proposal shall be of such scope and depth to sufficiently describe and demonstrate the Proposer's understanding of and approach to the project(s).

6.1.1 Title Page

The proposer should identify the RFP title, name and title of the firm's contact person, address, telephone number, fax number, email address, and date of proposal submission.

6.1.2 Cover letter

A principal of the firm authorized to commit the firm to the requirements of the RFP must sign the cover letter. The letter should identify a contact person (name, e-mail address, and phone number) for future communication during the selection process. And shall also discuss the Proposer's commitment to providing high quality services, describe the firm's understanding and approach to the services, and its ability to perform the requirements of this RFP. Include a brief background of the firm including history, types of services provided, number of employees, number of offices and locations with staff size and disciplines, and any other relevant information that may be useful in determining the firm's qualifications to provide the services described in this RFP.

6.1.3 Table of Contents

The table of contents should include a clear and complete identification by section and page number of the submitted materials.

6.1.4 Experience and record of past performance.

Provide a minimum of three (3) references from other municipal, city, or county governmental agencies for which the company has recently or is currently providing engineering and design services for the replacement of an existing underground diesel storage tank and vehicle charging infrastructure that is equivalent or greater in scope as being required in this RFP. Indicate the scope of work, date, contract amount, and the name, email address, and telephone number of the client contact. Also provide a complete list of other public agencies in California utilizing your services over the past five (5) years. Ongoing projects currently being performed by the proposer also may be submitted for consideration. The District at its discretion may contact the references for additional information. Failure to provide accurate contact information may be cause for rejection of the proposal as being nonresponsive.

6.1.5 Project Team and Qualifications

Provide an organizational chart that describes the structure of the project team, including subconsultants. The project team description shall identify the following:

(i) The Project Manager,
(ii) The names of readily-available key personnel that will be deployed for each task and their contact information, and the primary office locations of each project team member,
(iii) The role each team member will play in providing services under the Agreement, and
(iv) A written assurance that the key individuals listed and identified will be performing the work and will not be substituted with other personnel or reassigned to another project without the District's prior approval. The proposal shall clearly identify who will lead the execution of assigned tasks and the respective personnel that will be assigned to them.

Provide a description of the experience, qualifications including required licenses and certifications, area of expertise or specialization, and availability (including current workload) of the project team members, including subconsultants/subcontractors, if any. Describe other project commitments by project team members and the anticipated level of involvement of each team member based on the abilities and expertise required for the type of work desired.

Provide the resumes of all members of the project team, including subconsultants/ subcontractors, as an appendix. Each resume shall not exceed three (3) pages and shall include name and title, education, years with the company, licenses and certifications (issue and expiration dates), home office location, relevant experience within at least the last five (5) years, and other required qualifications discussed in this RFP.

The identified Project Manager will be OWCD's main point of contact for all assigned projects for the duration of the Agreement. The proposal shall include the Project Manager's contact information, including phone and e-mail address.

Once an Agreement has been executed, the Consultant must request approval from the District in advance of any new personnel being assigned to the project. The District reserves the right to reject or remove personnel performing services at any time for the duration of the Agreement.

6.1.6 Project Overview and Approach

Present a narrative overview of the Proposer's understanding of the RFP requirements and the overall approach and technical plan for accomplishing the work assignments. Also discuss at a minimum the following:

- Ability to successfully complete work assignments within the District's required time frame and, as necessary, on short notice,
- Approach to assignment of work within the firm and how team members will conduct tasks and prepare anticipated deliverables,
- Describe the Proposer's project management approach and communications protocol,

- Describe the Proposer's approach to quality assurance and control, as well as any performance guarantees,
- Technical approach to assigned tasks, such as deployment strategies (how the project will be implemented from mobilization to demobilization), and
- Identify current and reasonably foreseeable actual and possible constraints, problems, and/or issues that could hinder the execution of services under the contract, and suggest approaches to resolving or managing these constraints, problems, and/or issues.

6.1.7 Additional Services

Include any comments, suggestions, or additions the Proposer may have regarding the scope of work or any other aspects of the work that the Proposer feels would be helpful to OCWD in selecting a firm for the services described in the RFP. Identify the potential impact(s) or benefit(s) that these recommendations would have if accepted by OCWD. Tasks above the minimum to complete the work described herein shall be clearly identified as "optional" in the proposal.

6.1.8 Statement of Insurance Compliance

Proposer shall provide a statement that it will meet the insurance requirements that are listed in the Services Agreement, attached hereto as **Exhibit C**. OCWD will request the insurance forms and associated documentation when OCWD provides notice that the Services Agreement is awarded.

6.1.9 OCWD Standard Agreement

Proposers shall provide a statement that the Proposer accepts OCWD's form of Services Agreement attached hereto as **Exhibit C**. Proposers responding to this RFP must be prepared to proceed with the Services Agreement in substantially the form provided, with minor non-substantive changes in OCWD's sole discretion. OCWD retains full discretion to rescind the proposed Services Agreement award to a Proposer who fails to comply with this requirement, and to exclude the Proposer from future procurement where applicable. The Services Agreement shall be executed by the Proposer within ten (10) calendar days of receipt of OCWD's Notice of Award to Proposer.

6.1.10 Billing

Proposers shall provide a statement that it will meet the minimum requirements specified here. At a minimum, the invoice for services shall include the Purchase Order Number, Agreement Number, and the itemized summary of each authorized project task along with the names of persons, their job titles, the hours worked, and hourly billing rates. OCWD will provide reporting requirements to the selected firm, and the selected firm shall prepare invoices that comply with the requirements. Failure to satisfy the reporting requirements may result in rejection, payment delay, or short pay of the invoices submitted to OCWD for payment.

6.1.11 Conflict of Interest

Provide a statement that the proposer, individuals employed by the proposer, or firms employed by or associated with the proposer, do not have a conflict of interest with the Project. The proposer shall exercise reasonable efforts to prevent any actions or conditions that could result in a conflict of interest and shall include, but is not limited to, establishing precautions to prevent its employees or agents from making, receiving, providing in, or offering gifts, entertainment, payments, loans, or other considerations which could be deemed to appear to influence individuals to act contrary to the best interest of the District. If a potential conflict of interest is identified in any form, the Proposer shall inform the District immediately. Proposers are subject to disqualification on the basis of a conflict of interest as determined by OCWD. By submitting a proposal you are stating you do not have a conflict of interest with the Project.

6.1.12 Equal Employment Opportunity And Affirmative Action Requirements

The proposers shall provide a Statement of Equal Employment Opportunity/Affirmative Action. The selected consultant/contractor and each subconsultant/subcontractor 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 except as permitted by Section 12940 of the California Government Code. The selected contractor is expected to maintain policies similar to those of the District regarding equal employment opportunities and affirmative action as set forth in the District's Administrative Policies.

6.2 Part 2 - Price Proposal (Separate Sealed Envelope)

Part two of the proposal shall include a table showing the following information:

- Labor hour breakdowns by the project tasks and subtasks identified in Section 4.0 (including other subtasks as the Proposer sees fit) and associated personnel, including any subconsultants, as well as total hours. Names and titles/categories of individuals proposed to work on the project tasks/subtasks, including names of subconsultants/ subcontractors shall be indicated.

- Fully loaded hourly billing rates – All direct, capital, and reimbursable expenses, including but not limited to travel and transportation costs, meals, lodging, office equipment and supplies, administrative and communications fees, etc., must be built into the hourly rates. Therefore, the District shall not pay Consultant nor its subconsultants/ subcontractors for any direct or reimbursable expenses incurred for implementation of the scope of services described herein.

- The labor hours and fees for proposed optional tasks, if any, shall be presented in a separate table to differentiate from the baseline Scope of Work.

It is expected that the indicated hourly rates will remain in effect for the duration of the Agreement unless otherwise specified and approved by OCWD. The rate sheet shall include any other rates or fees, such as markups for subconsultants/subcontractors not identified as part of the project team, equipment markups, or other direct costs that may be incurred.

The proposal shall also include a description of the anticipated method of billing for services performed, with provisions for monthly billing that will include itemized accounting of hours of personnel, hourly rates, and percent completion for each task identified. A project schedule shall be included with the invoice to track project costs on a resource loaded schedule.

7. PROPOSAL SUBMISSION REQUIREMENTS

7.1. Proposal Format

The proposal shall be limited to no more than 20 single-pages in 8.5” width x 11” length size recycled or recyclable white bond paper, paginated, and bound. This does not include the title page, table of contents, cover letter, appendices, dividers, or résumés. Any oversized documents, such as charts or tables, must be folded to size and secured in the envelope.

All files shall be bookmarked and in a text searchable PDF format (i.e., not scanned images) compatible with Adobe Acrobat Version 8.0 (at a minimum). The main directory of the flash drive shall contain the entire proposal as two separate PDF files for Part One and Part Two. All sections of the PDF file shall be bookmarked.

7.2. Proposal Preparation Costs

This solicitation does not commit the District to award any work nor to pay any costs incurred from the preparation of proposals. Firms responding to this RFP will be solely responsible for all costs and expenses incurred during the selection process.

8. SELECTION PROCESS

Selection of the Consultant will be based on the proposal contents, prior experience of the firm, performance on similar or related projects, and overall costs that best serve the District. Other factors that may be considered during the evaluations include the firm’s reputation in the industry and any other aspects which could affect the proposer’s performance under the awarded Agreement.

All responsive proposals will be evaluated by a selection committee formed by the District. The proposal shall be of such scope and depth to sufficiently describe and demonstrate the proposer’s understanding, approach, and qualifications to successfully complete the

scope of services described herein. Submittal of incomplete or vague responses to any section or subsection of this RFP may result in rejection of the proposal. Proposals will be evaluated, scored, and ranked based on the criteria specified in the table below. The evaluation criteria listed in the OCWD Proposal Evaluation Form (**Exhibit B**) will be used to evaluate each proposer.

Item No.	Criteria for Proposal Evaluations	Maximum Points
1	Project Approach and Schedule	<20>
2	Experience and Qualifications of the Project Manager	<20>
3	Experience of Firm and Other Project Team Members	<20>
4	Time Commitment of Key Staff	<20>
5	Record of Success on Recent Similar Project	<15>
6	Man-Hour Estimate	<15>
	TOTAL POINTS:	**100**

The District reserves the right to award the contract to the firm who presents the proposal, which in the judgment of the District, best accomplishes the desired results based upon this information, OCWD staff will recommend a firm to OCWD's Board of Directors for award of the contract. The selected firm must be able to begin work immediately upon award of contract and must be able to maintain the required level of effort to meet the proposed schedule.

9. SPECIAL CONDITIONS

9.1. RESERVATIONS

This RFP does not commit the District to award a contract, to defray any costs incurred in the preparation of a Proposal pursuant to this RFP or to procure or contract for work.

9.2. PUBLIC RECORDS

All Proposals submitted in response to this RFP become the property of the District and are public records and as such may be subject to public review.

9.3. RIGHT TO CANCEL

The District reserves the right to cancel, for any or no reason, in part or in its entirety, this RFP including but not limited to: selection schedule, submittal date, and submittal requirements. If the District cancels or revises the RFP, the District will notify all the proposers in writing via email.

9.4. ADDITIONAL INFORMATION

The District reserves the right to request additional information and/or clarifications from any or all Proposers.

9.5. PUBLIC INFORMATION

Release of Public Information selection announcements, contract awards, and all data provided by the District shall be protected from public disclosure. Proposers desiring to release information to the public must receive prior written approval from the District.

EXHIBITS

EXHIBIT A

SCOPE OF SERVICES

SCOPE OF WORK

FHQ DIESEL FUEL TANK REPLACEMENT AND VEHICLE CHARGING INFRASTRUCTURE

1. PROJECT MANAGEMENT AND ADMINISTRATION

   The Consultant shall conduct project management activities to ensure adherence to schedule and budget, as well as documentation of communication between the Design Consultant and OCWD, as required. Consultant shall prepare and submit monthly invoices and include a summary of activities completed in the prior month. The Consultant shall prepare and maintain a project schedule and submit revised schedule at the request of the District. The Consultant shall coordinate and administer the following meetings with OCWD staff:

   - Project Kick-off Meeting
   - Site Visits with District Staff (assume 2)
   - Preliminary Design Review Meeting
   - Additional as needed Design Review Meetings (minimum 2)

   Deliverable: The Consultant is responsible for preparing meeting agendas and meeting minutes, including action item logs, for each of these meetings.

2. RECORDS REVIEW

   The Consultant shall obtain and review all available record drawings necessary to prepare the required base drawings used for the project. Records review shall include is not limited to: assessor maps, records of survey, tract maps, parcel maps, easements, utilities, etc.

   Review existing information provided by the District including but not limited to:

   - Record Drawings of Field Headquarters
   - ZEV Master Plan provided by Anaheim Public Utilities dated May 7, 2024

3. SURVEY

   The Consultant shall determine if a site survey of Field Headquarters (FHQ) is necessary to supplement the record drawings. Survey prepared for the project shall be of sufficient detail for the project.

4. PRELIMINARY DESIGN REPORT

   Existing Fleet Assessment: Conduct an assessment of the District's existing fleet of vehicles to identify potential electric vehicle alternatives. The District has chosen the "purchase pathway" to comply with ACF and the consultant shall prioritize medium and heavy-duty vehicles with a gross vehicle weight of 8,500 pounds and above. The assessment shall include but is not limited to:

   - Analyze existing fleet by vehicle class, type, and operational data and usage. Consultant shall provide recommendations of optimized vehicle types and fleet size based on the analysis.
   - Identify fleet vehicle viability for conversion to electric, including information about inadequate alternative, untested technology, excessive cost, unknown commercial availability, or other reasons.

- Provide recommendations of electrical charging types for recommended electric vehicle fleet and incorporate future charging needs of off-road heavy equipment and employee charging of personal light duty vehicles.

Electric Vehicle Infrastructure Evaluation: Evaluate the existing electrical infrastructure at FHQ, Fountain Valley (FV), and Prado and determine the electrical demand for the proposed type and quantity of electric vehicle charging stations at each site. The evaluation shall include but not limited to:

- Identify number, location, and type of electrical vehicle charging stations per site. Evaluation shall include potential electrical infrastructure upgrades and integration with existing or additional electrical meters.
- Estimate of electric vehicle charging costs.
- Summary of coordination and permitting requirements with the electrical service provider: Southern California Edison or Anaheim Public Utilities.
- Evaluation of reliability and resilience during long term power outage from SCE or APU, emergency generators, battery storage, and solar facilities.
- Evaluate solar facilities to provide secondary electric vehicle electrical supply and/or supplement at FHQ.

Cost Estimates and Phased Implementation: Develop cost estimates for electrical vehicle charge infrastructure improvements at FHQ, FV, and Prado including the project cost of replacement of recommended electrical vehicle replacements. Assume District will phase implementation electrical infrastructure improvements at FHQ and FV.

Electric Fleet Grant, Loans, and Incentives: Assess and evaluate available financing options for electric vehicle fleets such as State and Federal grants and loans and Utility rebates or incentives. District is not interested in providing charging for other fleets or the public.

Field Headquarters Diesel Fuel Tank Replacement: The Consultant shall evaluate the existing 20,000-gallon underground diesel storage tank and associated refueling facility and develop a conceptual design for installation of an above ground diesel storage tank and refueling system. Conceptual design shall include but not limited to:

- Review the current refueling area for compliance with current building, fire safety, and air quality standards. Provide recommendations for modifications or improvements to bring the facility into compliance.
- Summarize permitting requirements completed during design phase and to be completed by Contractor.
- Conceptual Site Layout -The Consultant shall coordinate and administer a conceptual design review meeting to discuss with FHQ operators the diesel fueling and electrical vehicle charging requirements of District vehicles. Conceptual site layouts shall consider diesel fuel delivery routing, location of dedicated electrical vehicle charging stations, employee and guest parking.

- Construction cost estimate of preferred materials and methods.
- Calculations required for the final design of all project facilities and equipment.
- Project schedule with estimated impacts to existing operations.
- List of necessary technical specification sections.
- 30% complete design drawings.
- Construction schedule.

Deliverable: Consultant shall provide two hardcopies and one digital copy of the draft PDR to receive comments from OCWD. After reviewing and incorporating these comments, the consultant shall provide a hardcopy and a digital copy of the final PDR to OCWD.

5. FINAL DESIGN

Consultant shall prepare two separate sets of construction drawings and specifications for the FHQ Diesel Fuel Tank Replacement and Vehicle Charging Infrastructure Projects. This task will include preparation of drawings and specifications for each design milestone (75%, 100%, and Final):

75% Design Submittal - Prepare drawings for the proposed improvements. Develop revised project schedule and estimated construction costs. Provide PDF copy of plans and specifications and three sets of half-size (11x17) drawings for OCWD review.

100% Design Submittal - Incorporate all revisions from 75% design review and prepare draft 100% plans and specifications. This submittal should include the same deliverables as the 75% design submittal.

Final Design Submittal – Address all comments from 100% review. Prepare final construction plans, bid item schedule, specifications and technical provisions for the project. Modify the OCWD General and Special Provisions as necessary, which will be incorporated into the OCWD standard contract documents to complete construction-bidding documents. Provide an engineer's estimate of probable construction costs. Provide a detailed bid item schedule to be completed by the bidding contractors. Provide a complete set of signed construction plans on full size (Arch D) and specifications reproducible bond drawing sheets and on a digital copy (in pdf format, 2010 version of AutoCAD dwg format with pen settings file, an AutoCAD Civil 3D format if used, and all external references). A copy of the title page with OCWD signature block shall be provided on a full-size Bond sheet. OCWD will provide duplication of contract documents for construction bid advertisement. The Consultant shall provide a copy of all required permits along with construction requirements.

6. PERMITTING

Consultant shall coordinate permitting requirements with regulatory agencies identified in the PDR for the construction of the FHQ Diesel Fuel Tank Replacement and Vehicle Charging Infrastructure Projects. The Consultant shall prepare permits applications on behalf the of the District and/or specify permits the Contractor is responsible to complete. It is anticipated the following will be required:

- FHQ Diesel Fuel Tank Replacement: Anaheim Fire, and South Coast Air Quality Management District.
- FHQ Vehicle Charging Infrastructure Projects: Anaheim Public Utilities.

7. BID PHASE

   The Consultant shall provide bid phase services including project management, bid support, addenda preparation, and conforming sets of contract documents. These services are detailed below. The Consultant shall assume the FHQ Diesel Fuel Tank Replacement and Vehicle Charging Infrastructure Projects will be bid as separate construction contracts.

   Project Management – The Consultant shall provide an agenda for and attend the pre-bid meeting.

   Bid Support – The Consultant shall provide bidding support as it pertains to the contract documents and drawings of the structures and piping system. Assume review and response to 5 RFIs for this task.

   Addenda – Any addenda will be prepared, issued, and documented by the Consultant. Consultant shall assume three addenda for purposes of preparing this proposal.

   Conformed Set – The Consultant shall provide a conformed set of specifications and signed construction plans that incorporate any revisions made by addenda. Two bound full size copies (22x34), two bound half-size copies (11x17), one set of PDF files, and any revised AutoCAD files for the conforming plan set and specifications shall be provided to OCWD within five business days following the construction bid opening date.

8. CONSTRUCTION PHASE

   The Consultant shall provide construction phase services including project management, submittal/shop drawing review, response to requests for information, and record drawing preparation. The Consultant shall assume the FHQ Diesel Fuel Tank Replacement and Vehicle Charging Infrastructure Projects will be bid as separate construction contracts These services are detailed below.

   Project Management/Inspection Services – Attend construction meetings as needed to support OCWD (assume 5 meetings at OCWD). Consultant shall also provide field inspection services to assist OCWD at critical phases as determined by the OCWD Project Manager. Assume 40 hours of on-call field inspection services.

   Submittal/Shop Drawing Review – Review Contractor submittals for completeness and conformity with the contract documents. Review any deviations and/or substitutions submitted by the contractor and make recommendations to OCWD. Assume 10 submittals and resubmittals.

   Requests for Information (RFIs) – Review contractor's request for information and prepare responses to the contractor. Prepare any revisions to contract documents necessary to resolve conflicts. Assume 10 RFIs.

Record Drawing Preparation – As appropriate, incorporate OCWD comments and/or revisions along with Contractor deviations from conformed set to draft documents and finalize all record documents with record drawing stamp. Provide two copies each of the final documents in digital and hardcopy. All drawings shall be completed and provided on Mylar sheets at the end of the project. Digital copies shall be provided at the end of the project containing the drawings in the 2010 version of AutoCAD (dwg format) with pen settings, Adobe Acrobat (pdf format), and AutoCAD Civil 3D (dwg format) if used.

SCHEDULE

The tentative proposed project schedule is as follows:

Award Project Design	February 18, 2026
Notice to Proceed	March 2, 2026
Design Kick-off Meeting	March 16, 2026
PDR Submittal	April 13, 2026
75% Design Submittal – AST Plans	May 25, 2026
100% Design Submittal – AST Plans	June 22, 2026
Final Design Submittal – AST Plans	July 6, 2026
Advertise Construction Contract – AST Plans	*July 2026*
Open bids for Construction Contract – AST Plans	*August 2026*
Award Construction Contract – AST Plans	*September 2026*
Construction – AST Plans	*September 2026 to May 2027*
75% Design Submittal – EV Charging	*August 2026*
100% Design Submittal – EV Charging	*October 2026*
Final Design Submittal – EV Charging	*December 2026*

AGENDA ITEM SUBMITTAL

Meeting Date: November 12, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: M.Patel/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: Yes
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: AGREEMENT EXTENSION WITH ORANGE COUNTY SANITATION DISTRICT AND IRVINE RANCH WATER DISTRICT

SUMMARY

Since 1997, an agreement has been in place allowing Irvine Ranch Water District (IRWD) to send recycled water to the District and/or Orange County Sanitation District (OC San) to avoid discharging excess recycled water to the Newport Back Bay. The original agreement was extended in 2012 for an additional 15 years to 2027. The District benefits as the IRWD water is used to provide recycled water in the Green Acres Project (GAP) system and/or provide source water to the Groundwater Replenishment System (GWRS), which is then treated to drinking water standards. The District receives the water at no cost.

Attachments:

- Draft GAP/GWRS Flows Agreement with OC San, IRWD and OCWD
- Draft Amended and Restated Flow Exchange and Pre-Annexation Agreement with OC San and IRWD

RECOMMENDATION

Agendize for November 19 Board meeting: Authorize execution of the GAP/GWRS Flows Agreement with the Orange County Sanitation District and the Irvine Ranch Water District subject to minor edits by legal counsel and/or the General Manager.

BACKGROUND/ANALYSIS

Since 1997, primarily during the winter months (typically December through March), the GAP distribution system has often been supplied with excess recycled water from IRWD through an Intertie between the IRWD recycled water system and the GAP system located on University Avenue in Newport Beach. The water is first supplied to OCWD's GAP customers to satisfy their demands. If IRWD has additional excess water beyond what is needed for satisfying GAP demands, that excess water is either used by the Groundwater Replenishment System and/or discharged to the OC San ocean outfall system located at Plant No. 2.

OCWD receives the IRWD recycled water at no cost. While the Intertie is operating, OCWD shuts down the GAP treatment plant, clearwell and pump station along with the GAP Santa Ana Reservoir to perform routine maintenance. Under this arrangement,

OCSD, OCWD, IRWD, and the City of Newport Beach are parties to a 15-year agreement that expires on January 15, 2027.

IRWD, OC San and District staff desire to extend the agreement further. Without the extension, IRWD could be faced with the possibility of having to petition to discharge recycled water to state waters (i.e., San Diego Creek and upper Newport Bay) or discharging raw sewage into the OC San system and incurring OC San fees.

Key agreement points include:

- IRWD will provide up to 8 mgd of recycled water to OCWD when it has excess supplies. This situation typically occurs in the winter months.

- OCWD will use the IRWD recycled water in the GAP system when it is made available. During these periods, OCWD staff perform routine maintenance of the GAP treatment plant and reservoir.

- OCWD does not have to use the IRWD recycled water in the GWRS.

- OCWD receives the recycled water at no cost.

- Up to 5 mgd of recycled water received by OCWD but not utilized will be discharged to the OC San ocean outfall.

- Agreement term is for 20 years.

A second agreement is being executed between IRWD and OC San to consolidate, restate, and streamline over 12 prior agreements between the two agencies into this one new agreement for ease of determining which provisions of the prior agreements are still viable, to simplify and streamline their operations and finances, and to provide for cleaner jurisdictional lines and more logical service plans for purposes of ownership, management, operation, and growth of wastewater treatment and recycling services. This second agreement includes the transfer of the Irvine Business Park area to the OC San, which means the wastewater generated in that area (approximately 4.7 mgd) will forever come to OC San and be available for the Groundwater Replenishment System.

PRIOR RELEVANT BOARD ACTIONS

12/15/2012 – Approved agreement extension for an additional 15 years.

9/15/2010, R10-09-151: Determine the Green Acres Project/GWRS Intertie Project feasible, necessary, and of general benefit to the lands of the District, and declare project duly instituted; Approve Engineer's Report and authorize filing notice of Exemption for California Environmental Quality Act (CEQA) documentation in support of the Green Acres Project/GWRS Intertie Project; and Establish a project budget of $350,000.

7/17/1996, R96-7-118: Approve and authorize execution of Agreement with IRWD and City of Newport Beach for Green Acres Phase 2 Intertie.

GAP/GWRS FLOWS AGREEMENT

This GAP/GWRS Flows Agreement ("**Agreement**") is effective December___, 2025 ("**Effective Date**"), and is among:

- Orange County Water District ("**OCWD**"),
- Irvine Ranch Water District ("**IRWD**"), and
- Orange County Sanitation District ("**OC San**").

OCWD, IRWD, and OC San are sometimes individually referred to as a "**Party**" and collectively as the "**Parties**."

A. Purpose. The purpose of this Agreement is to establish the rights and duties of the Parties with respect to IRWD's supply of recycled water to OCWD's Green Acres Project ("**GAP**") or OCWD's Groundwater Replenishment System ("**GWRS**"), and IRWD's capacity to discharge recycled water into the OC San ocean outfall system ("**Outfall**").

B. The GAP System. GAP provides recycled water to approximately 100 different end users in Costa Mesa, Fountain Valley, Huntington Beach, Newport Beach, and Santa Ana. OCWD's Green Acres Phase II pipeline ("**GAP II**"), which is a takeoff from the GAP system, provides recycled water to Newport Beach end users, and is a part of the GAP system.

C. Recycled Water Supplies to GAP. The GAP system has two sources of supply: (i) tertiary treated wastewater from OCWD, treated from secondary treated wastewater received from OCSD's Plants No. 1 and 2 and supplied primarily during the summer months; and (ii) tertiary treated recycled water from IRWD's Michelson Water Recycling Plant ("**MWRP**") received intermittently, usually during the winter months, through IRWD's intertie facility (the "**Intertie**") that connects to GAP, which includes the GAP II pipeline.

D. 2011 IRWD GAP II/GWRS Agreement. On December 21, 2011, the Parties and the City entered into the *Agreement for Irvine Ranch Water District Interties to Orange County Water District Green Acres Project and Groundwater Replenishment System and Orange County Sanitation District Outfall* ("**2011 GAP II/GWRS Agreement**") relating to the Parties' operation of the Intertie, GAP II, and the Outfall.

E. 2013 Annexation Agreement. On October 2, 2013, the Parties entered into an *Annexation Agreement*, under which IRWD agreed to convey 4 million gallons per day ("**mgd**") of sewage, recycled water and runoff flows generated from within IRWD to OC San until 2033.

F. Cross-Services. By a separate agreement, OC San and IRWD are working to consolidate, restate, and streamline several agreements to simplify their operations and finances with regards to the treatment of wastewater. Terms of the separate agreement will provide for the continued sewage flow from IRWD's Irvine Business Complex into OC San's retail territory, for the benefit of OCWD and the efficient operation of GWRS.

G. The Parties intend by this Agreement to amend and restate, and in doing so, supersede, the 2011 GAP II/GWRS Agreement to update and extend the 2011 agreement past January 12, 2027.

The Parties therefore agree as follows:

1. **Ownership & Maintenance of Facilities.** Each Party owns the facilities identified on Exhibit A, which are necessary for the delivery of recycled water to OCWD as per Sections 2 and 3 herein, and each Party shall operate and maintain the facilities they own and appurtenant equipment and telemetry.

2. **IRWD Discharge of Recycled Water to GAP.**

2.1 IRWD-Initiated Discharges. IRWD may discharge to the Intertie at its sole discretion up to 8 mgd of recycled water treated in accordance with the standards set forth in California Code of Regulations Title 22 ("**Recycled Water**"). If IRWD initiates discharges of Recycled Water to the Intertie, then IRWD will not be entitled to any compensation for that discharged Recycled Water.

A. Notice. IRWD shall provide notice to OCWD at least 14 calendar days prior to each scheduled date for commencement or cessation of the discharge of Recycled Water to the Intertie.

B. Min-Max Daily Discharges. If IRWD elects to discharge Recycled Water to the Intertie, then during the period its discharge, IRWD shall discharge a minimum of 4 mgd and a maximum of 8 mgd of Recycled Water.

C. In Lieu of OCWD GAP Operations. OCWD will not operate the GAP treatment plant, clearwell, pump stations or Santa Ana GAP Reservoir whenever IRWD is delivering Recycled Water to the Intertie.

D. Continuous Discharges. IRWD shall make a good faith effort to meet GAP customer demands when discharging Recycled Water to the Intertie. IRWD shall not operate the Intertie on an intermittent basis, but rather will attempt in good faith to operate the Intertie on a continuous basis for each Intertie delivery season that IRWD elects to commence discharges of Recycled Water to the Intertie.

2.2 OCWD-Requested Supply. OCWD may request in writing that IRWD discharge Recycled Water to meet GAP or GWRS supply needs at a time when IRWD has not itself elected to discharge Recycled Water to the Intertie ("**OCWD-Requested Supply**"). If IRWD Recycled Water is readily available, and supplied to OCWD at the Intertie at OCWD's request, then OCWD shall pay IRWD for any OCWD-Requested Supply at a rate equivalent to the Metropolitan Water District of Southern California's full-service untreated water rate to cover IRWD's additional costs.

2.3 No Required Flow**.** Nothing in this Agreement requires IRWD to deliver any Recycled Water to the GAP system.

3. **Total Flow From IRWD to OC San and OCWD.** Sections 3.13 and 3.14 of the 2013 Annexation Agreement require IRWD to deliver to the OCWD Green Acres Project a total of 4 mgd of combined flows from (i) sewage flows generated by IRWD to OC San, (ii) Recycled Water flows in section 2, and (iii) supply sources qualifying for the OC San Urban Runoff Diversion Program. Upon execution of this agreement, and the execution of the separate agreement between OC San and IRWD referenced in Recital F, sewage flows from the Irvine Business Complex that are delivered to OCWD will continue to count towards IRWD's obligation to comply with Section 3.13 of the Annexation Agreement.

4. **Acceptance of Recycled Water Flows**.

4.1 Acceptance in GWRS Facilities. OCWD shall accept any Recycled Water discharged by IRWD to the Intertie for use to supply GAP users or for treatment by the GWRS. Recycled Water that is discharged by IRWD to the Intertie will be deemed to have been delivered through the GWRS Connection to the Outfall (as described in Section 4.2) if it is discharged by IRWD to the Intertie when GWRS is not receiving any influent water and the control valve at the GWRS Connection is in the open position. The volumes of Recycled Water delivered to GAP or GWRS and deemed to have been delivered to the Outfall will be determined from meter readings as provided in Section 8.2. OCWD will not be entitled to any compensation from IRWD for treating or disposing of Recycled Water.

4.2 Acceptance of up to 8 mgd in OC San Outfall**.** OC San shall accept up to 5 mgd of Recycled Water not accepted by OCWD and deemed to have been discharged by IRWD through the GWRS Connection to the Outfall. OC San shall accept up to an additional 3 mgd of Recycled Water discharged by IRWD directly to the Outfall Connection.

4.3 LRP Payments. IRWD waives any claim to receive Local Resources Program subsidy payments from The Metropolitan Water District of Southern California for Recycled Water delivered to the Intertie.

4.4 No Required Acceptance for GWRS. OCWD is not required to accept any Recycled Water from IRWD for use in, treatment by, or discharge through GWRS.

4.5 Mutual Waiver of Fees. OC San shall accept IRWD's flows under this Agreement at no cost in exchange for IRWD's waiver of the Harvard Avenue Trunk Sewer maintenance fees.

5. **Access to IRWD's Outfall Connection Telemetry.** IRWD owns certain Outfall Connection telemetry and a Cla Valve at OC San's Plant No. 2. OC San hereby confirms, ratifies and continues in effect the non-exclusive license conveyed to IRWD pursuant to the 1998 Outfall Connection Agreement for access to the Outfall Connection Cla Valve and telemetry and for such access purposes over the portions of OC San's Plant 2 property depicted on Exhibit B; but OC San may modify the license area or designated access route from time to time following written notice to IRWD.

5.1 Regular Maintenance. OC San shall permit IRWD to access OC San's property for routine and scheduled maintenance or repairs of the Outfall Connection telemetry and Cla Valve, upon written or electronic notice at least one week prior to the date of the

maintenance. IRWD shall comply with any and all security provisions adopted or instituted by OC San for access into and across OC San's property.

5.2 Emergency Access. In the event of an emergency, IRWD shall notify OC San by telephone prior to access, and OC San shall not unreasonably condition or delay IRWD's access to the OC San property required for emergency response.

5.3 Indemnity. IRWD will indemnify, defend and hold harmless OC San for any property damage, bodily injury, or wrongful death caused by the gross negligence or willful misconduct of IRWD's employees, contractors, or agents while accessing OC San's property.

6. **Shutdown of IRWD's Flows to OC San's Outfall.**

6.1 The Outfall Connection is intended to be used for the disposal of Recycled Water delivered by IRWD through the Intertie and GAP II at any time elected by IRWD as specified in Section 4, which is in excess of the amount accepted into GAP and the GWRS under Sections 5.1 and 5.2. The overflow weir at the GWRS Screening Facility allows IRWD flows at the Plant No. 1 GWRS Connection to enter the OC San outfall and is also intended to be used for the disposal of Recycled Water delivered by IRWD through the Intertie and GAP II, at any time elected by IRWD, which is in excess of the amount accepted into GAP and the GWRS.

6.2 Outfall Shutdowns. If OC San temporarily shuts down Recycled Water deliveries into the Outfall for scheduled or emergency maintenance or repairs or during conditions of high flows through the Outfall, then IRWD shall limit its discharge of Recycled Water through the Intertie to the amount that OCWD reasonably determines can be used by GAP and GWRS during that shutdown.

A. Scheduled Shutdowns. OC San shall provide IRWD with written notice one week prior to the date of any scheduled maintenance or repair.

B. Emergency Shutdowns. If emergency high flow conditions or maintenance require a shutdown of the Recycled Water deliveries into the Outfall, then OC San shall give reasonable notice to IRWD by telephone prior to the shutdown. OC San shall use reasonable efforts to schedule maintenance and repairs during the non-rainy season.

7. **Source Control**.

7.1 In accordance with both: (a) the 2010 OCWD-OC San GWRS Agreement and (b) the GWRS permit, OC San shall maintain a comprehensive industrial wastewater pretreatment and pollutant source control program for controlling the discharge of wastes from point sources, including in those areas serviced by IRWD. OC San's current source control program addressing these requirements includes: (a) monitoring and testing of federally regulated categorical and locally regulated non-categorical industrial discharges, (b) a non-point source program for discharges with the potential to adversely affect GWRS performance and water quality, (c) the planning and development of non-industrial source controls for contaminants, and (d) the regulatory authority to prohibit the discharge of pollutants to the sewer causing OC San effluent to be unsuitable for reclamation, as contained within OC San Ordinance No. OC San-53. For the Recycled Water discharged by IRWD that may supply GWRS that

includes any specific contaminant specified by state or federal regulators, both now and in the future, as harmful or potentially harmful to human health and drinking water supplies, and/or affects GWRS performance and water quality, OC San shall develop and implement a pollution source control strategy for that constituent.

7.2 If any contaminants, either known as of the date of this Agreement or discovered after that date, are found in IRWD Recycled Water which require removal in order for the GWRS to meet current or future GWRS permit requirements, and/or any other state or federal regulatory agency standards, then IRWD, OCWD, and OC San will meet and confer in good faith regarding: (a) the appropriate type of source control and/or water treatment needed to address the contaminants; (b) the appropriate sharing of cost for the construction and operation of any necessary treatment facilities; and/or (c) the development and implementation of additional source control strategies. IRWD shall supply trunkline sampling and /or analytical support for all sewer investigations aimed at determining the source or sources of any such contaminant discovered in IRWD's Recycled Water.

7.3 OC San's liability for IRWD's Recycled Water shall extend only to the development and implementation of the additional source control strategies; and shall not include the costs of any construction and/or operation of needed treatment facilities.

7.4 If IRWD Recycled Water is found to contain contaminants in a concentration that affects OCWD's ability to reclaim the GWRS Specification Influent and/or OC San's ability to meet its NPDES discharge limits, and OC San's source control strategies prove unable to mitigate the concentration of said constituent, then OC San and OCWD reserve the right to reject and refuse to accept the IRWD Recycled Water to GWRS. To assist in the identification of contaminant sources or other factors that may affect GWRS performance, IRWD shall provide information concerning all chemicals (e.g., polymers and coagulants) used in the IRWD wastewater and/or solids treatment processes (e.g., manufacturer, type, chemical composition, etc.) if requested by OCWD or OC San.

7.5 IRWD shall indemnify, defend and hold harmless OCWD and OC San from any and all liability for any damage to GWRS for noncompliance of these source control terms, conditions and requirements.

8. **Reporting**. IRWD shall provide OCWD and OC San with a monthly report for each calendar month during an operation period for the Intertie, by the last day of the following month. Monthly reports must include the following information:

8.1 Water Quality Data. The reports must include final effluent water quality data from MWRP, including, at minimum, the daily results for coliform, electrical conductivity (maximum, minimum and average for each day) and chlorine residual (maximum, minimum and average for each day), and monthly sampling results for total dissolved solids, pH, carbonate, bicarbonate, calcium, magnesium, boron, chloride, sodium, calculated sodium adsorption ratio (SAR) and adjusted SAR. Results for other constituents that are routinely measured in the final effluent shall also be included. The report shall include the dates of sample collection and units used for reporting. Upon written notification by OCWD or OC San, IRWD shall test for additional constituents based on operational and regulatory needs of OCWD or OC San.

8.2 Meter Readings.

Commented [CC1]: OC San and OCWD- Please provide clarifications here or in Exhibit A

A. IRWD shall provide daily readings, in both acre feet and million gallons, of the quantity of water delivered through the Intertie meter on University Drive and the quantity of excess flow delivered through the Outfall Connection meter.

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C. OC San shall provide daily readings of the quantity of influent flow to Plant No. 1 and total effluent flow to the Outfall.

D. The Parties' designated staff representatives may revise the designated meters to be read and meter reading responsibilities as they determine that operating circumstances necessitate; and those revision(s) may be made by the mutual written agreement of the Parties' representatives without formally amending this Agreement.

9. **Staff Representatives**. Each Party shall appoint one staff representative and one alternate to facilitate communication between the Parties and aid in the administration of this Agreement. The Parties shall give full consideration to all joint recommendations of the staff representatives. The staff representatives shall meet periodically, but at least once a year, to perform any tasks assigned to them by the Parties, including, but not limited to, the following: provide and receive input on scheduling Recycled Water discharges to the Intertie, GAP, GWRS and the Outfall; address operational concerns in the use and maintenance of the Intertie and GAP II; and address any other operational matters.

10. **Notices.** Any notice or other document and all billings and payments required or permitted to be given by any Party to another Party will be deemed received upon delivery in person to the recipient or upon deposit in the United States mail in the State of California, with postage prepaid, and addressed as follows:

To OC San: Orange County Sanitation District
18480 Bandilier Circle
Fountain Valley, CA 92708
Attention: General Manager
Telephone: (714) 593-7110
E-mail: rthompson@ocsan.gov

To OCWD: Orange County Water District
18700 Ward Street
P.O. Box 8300
Fountain Valley, CA 92728-8300
Attention: General Manager

Telephone: (714)378-3200

E-mail: jkennedy@ocwd.com

To IRWD: Irvine Ranch Water District
15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, CA 92619-7000
Attention: General Manager
Telephone: (949) 453-5590
E-mail: cook@irwd.com

11. **Counterparts**. This Agreement may be executed in counterparts, each of which will constitute an original.

12. **Entire Agreement**. This Agreement contains the entire Agreement of the Parties with respect to the subject matter hereof, and supersedes all prior negotiations, understandings or agreements, either written or oral, express or implied.

13. **Further Acts**. The Parties shall execute such additional documents and to take such further actions as are reasonably necessary to accomplish the objectives and intent of this Agreement.

14. **Indemnification**. Each Party agrees to defend, indemnify, and hold the other parties, and their officials, officers, employees and agents free and harmless from any claim, loss, damage, or injury to property or persons, including wrongful death, in any manner arising out of or incident to any negligent or otherwise wrongful act, omission or willful misconduct of the agreeing Party, their respective officers, employees or agents, arising out of or in connection with the execution or performance of this Agreement, including without limitation the payment of attorneys' fees.

15. **Waiver**. The failure of any Party to insist upon strict compliance with any provision of this Agreement or to exercise any right or privilege provided herein, or any Party's waiver of any breach hereunder unless in writing, shall not relieve any other Party of any of its obligations hereunder, whether of the same or similar type. The foregoing shall be true whether the waiving Party's actions are intentional or unintentional.

16. **Authorization to Execute**. The signatories to this Agreement warrant that they have been lawfully authorized execute this Agreement on behalf of the Party for which they are signing.

17. **Severability**. If any provision or clause of this Agreement or any application of it to any person, firm, organization, partnership or corporation is held invalid, that invalidity shall not affect other provisions of this Agreement which can be given effect without the invalid provision or application. To this end, the provisions of this Agreement are declared to be severable.

18. **No Assignment**. No Party may assign this Agreement or any interest in it without the prior written consent of the other.

19. **Effectiveness of Agreement; Term**. The term of this Agreement is 20 years and will automatically renew annually unless one of the Parties gives written notice to the other Parties no later than 6 months prior to the renewal or expiration date.

Commented [CC2]: OC San indicated that it would like to delete this clause and revisit after 15 years. IRWD suggests that it would be more efficient if we provided for automatic renewal, but allowed any party to exit upon 6-months notice. Would it be helpful if we just had a year-to-year automatic renewal?

Commented [JJ3R2]: OCWD prefers 20 year initial term with automatic renewals thereafter absent the six month written notice required by paragraph 19.

ORANGE COUNTY SANITATION DISTRICT

By: _____
Robert Thompson, General Manager

ATTEST:

By:_____
Kelly Lore, MMC, Clerk of the Board
Orange County Sanitation District

APPROVED AS TO LEGAL FORM:

By: _____
Scott C. Smith, General Counsel
Orange County Sanitation District

IRVINE RANCH WATER DISTRICT

By: _____
Paul A. Cook, General Manager

ATTEST:

By:_____
Kristine Swan, District Secretary
Irvine Ranch Water District

APPROVED AS TO LEGAL FORM:

By: _____
Claire H. Collins, General Counsel
Irvine Ranch Water District

ORANGE COUNTY WATER DISTRICT

By: _____
John Kennedy, General Manager

ATTEST:

By:_____
Clerk of the Board

APPROVED AS TO LEGAL FORM:

By: _____
Jeremy Jungreis, General Counsel
Orange County Water District

Exhibit A

Acknowledgment of Facilities Ownership

1. IRWD Facilities. IRWD owns:

1.1 the Intertie, Intertie meter and vault, associated telemetry equipment and all associated appurtenances upstream of the downstream side of the Intertie meter vault on University Drive, as depicted in Exhibit A-1, and

1.2 the Outfall Connection telemetry and Cla Valve at OC San's Plant No. 2.

2. OCWD Facilities. OCWD owns:

2.1 GAP II and associated telemetry equipment and all associated appurtenances downstream of the point of connection between the OCWD GAP II pipeline and the Connector Line in Jamboree Road,

2.2 the Bonita Creek Park dedicated service line downstream of the point of connection thereof with the Connector Line, and

2.3 all other Green Acres Project ("**GAP**") and GAP II facilities not included in Paragraph 1.1 or 1.2.

2.4 the microfiltration feed ("**MFF**"), trickling filter ("**TF**"), activated sludge ("**AS**"), and IRWD feed ("**IT**") meters and GWRS Screening Facility & Overflow Weir, and

2.5 the connection ("**GWRS Connection**") between OC San Plant No. 1 Secondary Effluent Junction Box XX ("**SEJB XX**") and the 24" GAP pipeline located in Garfield Avenue immediately south of OC San's Plant No. 1 facility, as depicted in Exhibit C, such that the IRWD flows described in Section 4 can be supplied as influent to OCWD's GWRS project.

3. OC San Facilities. OC San owns the Outfall Connection exclusive of all associated telemetry and Cla Valve but inclusive of the meter, as depicted in Exhibit B.

Commented [4]: Do we need another exhibit here? Or can we identify the Intertie meter vault on one of the current exhibits?

Commented [JJ5R4]: OCWD is not clear what is required here. More detail would be helpful for what IRWD is trying to accomplish. Did the annexation agreement specify which facilities were to be used to deliver treated wastewater to OCWD?

Commented [6]: OCWD – would you like to rewrite?

Commented [JJ7R6]: We should discuss.

Exhibit A-1

Exhibit B

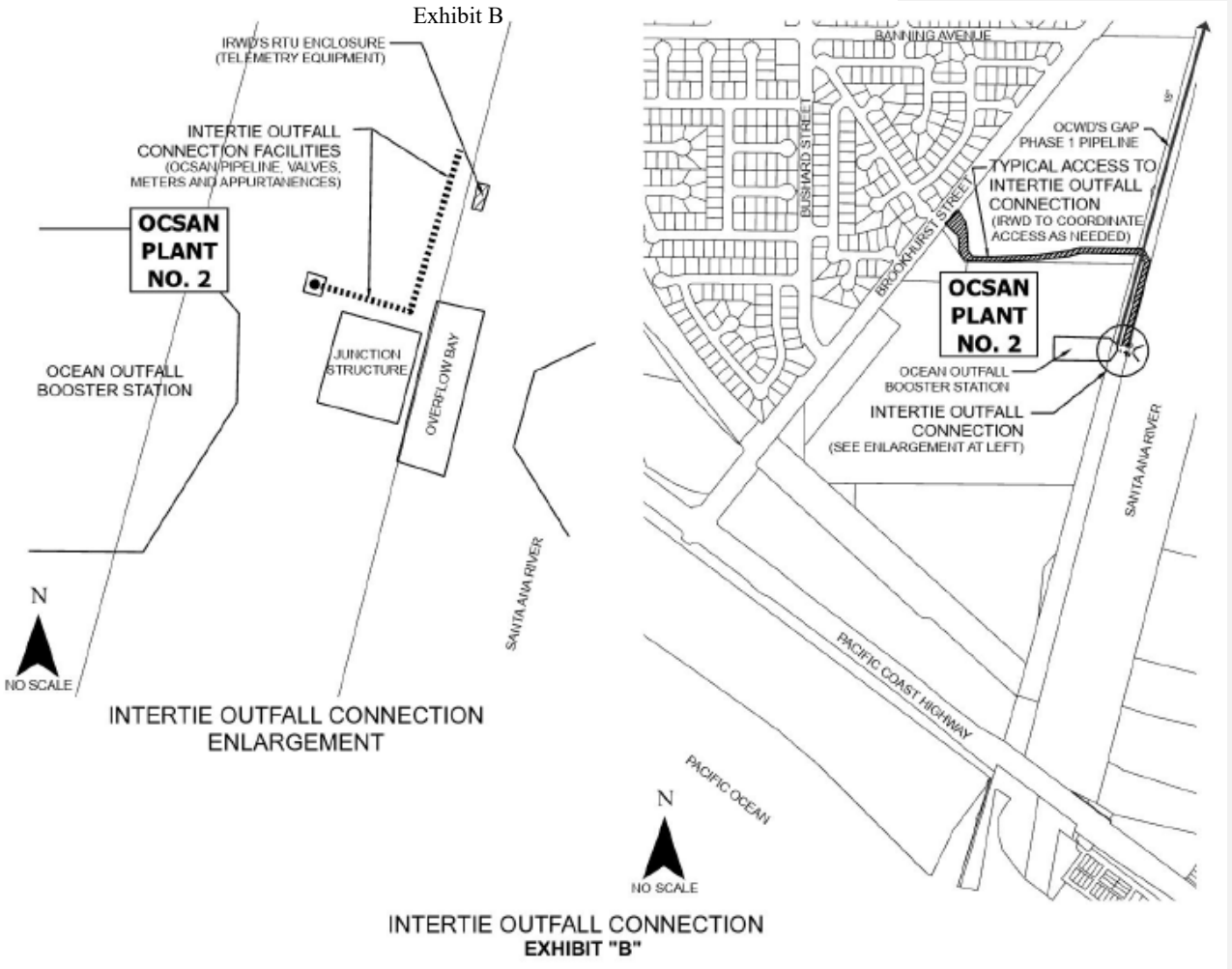
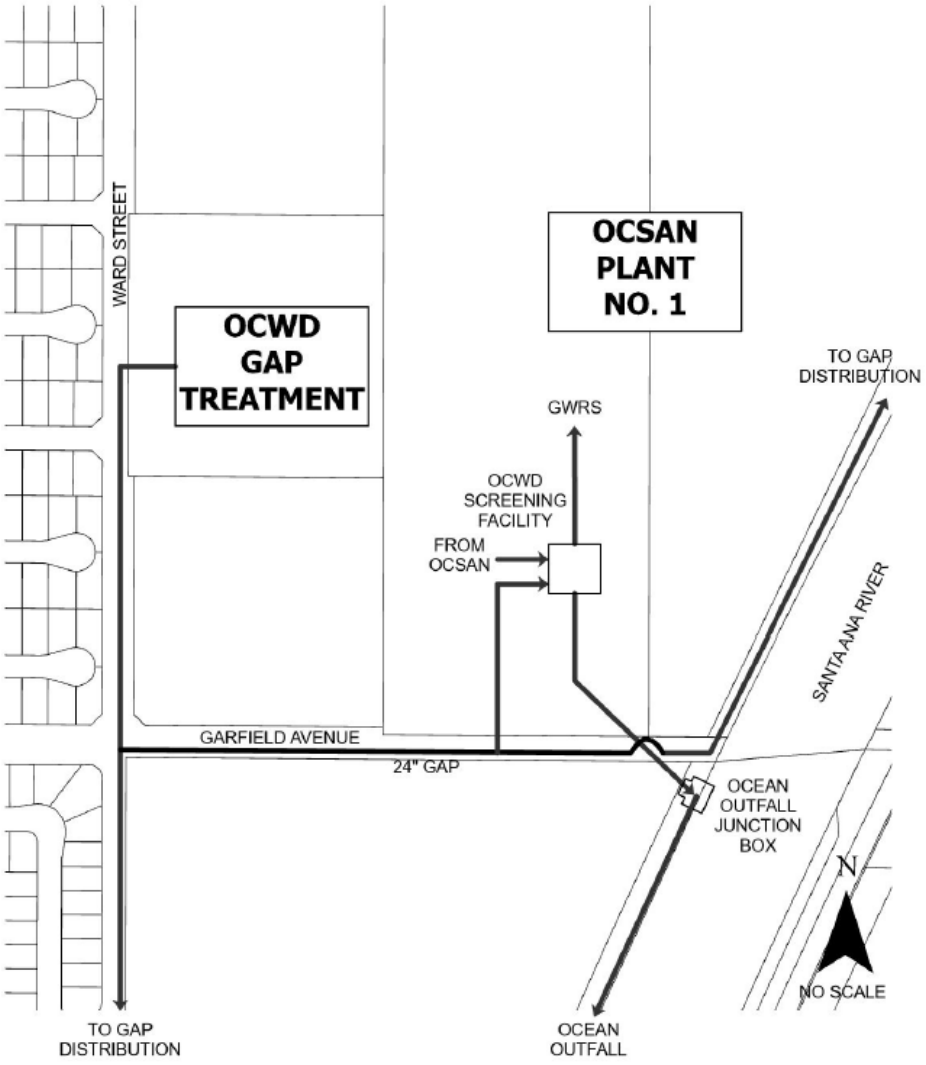

IRWD'S RTU ENCLOSURE
(TELEMETRY EQUIPMENT)
INTERTIE OUTFALL
CONNECTION FACILITIES
(OCSAN PIPELINE, VALVES,
METERS AND APPURTANENCES)
OCSAN
PLANT
NO. 2
OCEAN OUTFALL
BOOSTER STATION
JUNCTION
STRUCTURE
OVERFLOW BAY
SANTA ANA RIVER
N
NO SCALE
INTERTIE OUTFALL CONNECTION
ENLARGEMENT
BANNING AVENUE
DUSHARD STREET
BROOKHURST STREET
OCWD'S GAP
PHASE 1 PIPELINE
TYPICAL ACCESS TO
INTERTIE OUTFALL
CONNECTION
(IRWD TO COORDINATE
ACCESS AS NEEDED)
OCSAN
PLANT
NO. 2
OCEAN OUTFALL
BOOSTER STATION
INTERTIE OUTFALL
CONNECTION
(SEE ENLARGEMENT AT LEFT)
SANTA ANA RIVER
PACIFIC COAST HIGHWAY
PACIFIC OCEAN
N
NO SCALE
INTERTIE OUTFALL CONNECTION
EXHIBIT "B"

Exhibit C



PLANNED CONNECTION FOR
IRWD INTERITE DELIVERIES TO GWRS
AT OCSAN PLANT NO. 1
EXHIBIT "C"

GAP/GWRS FLOWS AGREEMENT

This GAP/GWRS Flows Agreement ("**Agreement**") is effective December___, 2025 ("**Effective Date**"), and is among:

- Orange County Water District ("**OCWD**"),
- Irvine Ranch Water District ("**IRWD**"), and
- Orange County Sanitation District ("**OC San**").

OCWD, IRWD, and OC San are sometimes individually referred to as a "**Party**" and collectively as the "**Parties**."

A. Purpose. The purpose of this Agreement is to establish the rights and duties of the Parties with respect to IRWD's supply of recycled water to OCWD's Green Acres Project ("**GAP**") or OCWD's Groundwater Replenishment System ("**GWRS**"), and IRWD's capacity to discharge recycled water into the OC San ocean outfall system ("**Outfall**").

B. The GAP System. GAP provides recycled water to approximately 100 different end users in Costa Mesa, Fountain Valley, Huntington Beach, Newport Beach, and Santa Ana. OCWD's Green Acres Phase II pipeline ("**GAP II**"), which is a takeoff from the GAP system, provides recycled water to Newport Beach end users, and is a part of the GAP system.

C. Recycled Water Supplies to GAP. The GAP system has two sources of supply: (i) tertiary treated wastewater from OCWD, treated from secondary treated wastewater received from OCSD's Plants No. 1 and 2 and supplied primarily during the summer months; and (ii) tertiary treated recycled water from IRWD's Michelson Water Recycling Plant ("**MWRP**") received intermittently, usually during the winter months, through IRWD's intertie facility (the "**Intertie**") that connects to GAP, which includes the GAP II pipeline.

D. 2011 IRWD GAP II/GWRS Agreement. On December 21, 2011, the Parties and the City entered into the *Agreement for Irvine Ranch Water District Interties to Orange County Water District Green Acres Project and Groundwater Replenishment System and Orange County Sanitation District Outfall* ("**2011 GAP II/GWRS Agreement**") relating to the Parties' operation of the Intertie, GAP II, and the Outfall.

E. 2013 Annexation Agreement. On October 2, 2013, the Parties entered into an *Annexation Agreement*, under which IRWD agreed to convey 4 million gallons per day ("**mgd**") of sewage, recycled water and runoff flows generated from within IRWD to OC San until 2033.

F. Cross-Services. By a separate agreement, OC San and IRWD are working to consolidate, restate, and streamline several agreements to simplify their operations and finances with regards to the treatment of wastewater. Terms of the separate agreement will provide for the continued sewage flow from IRWD's Irvine Business Complex into OC San's retail territory, for the benefit of OCWD and the efficient operation of GWRS.

G. The Parties intend by this Agreement to amend and restate, and in doing so, supersede, the 2011 GAP II/GWRS Agreement to update and extend the 2011 agreement past January 12, 2027.

The Parties therefore agree as follows:

1. **Ownership & Maintenance of Facilities.** Each Party owns the facilities identified on Exhibit A, which are necessary for the delivery of recycled water to OCWD as per Sections 2 and 3 herein, and each Party shall operate and maintain the facilities they own and appurtenant equipment and telemetry.

2. **IRWD Discharge of Recycled Water to GAP.**

2.1 IRWD-Initiated Discharges. IRWD may discharge to the Intertie at its sole discretion up to 8 mgd of recycled water treated in accordance with the standards set forth in California Code of Regulations Title 22 ("**Recycled Water**"). If IRWD initiates discharges of Recycled Water to the Intertie, then IRWD will not be entitled to any compensation for that discharged Recycled Water.

A. Notice. IRWD shall provide notice to OCWD at least 14 calendar days prior to each scheduled date for commencement or cessation of the discharge of Recycled Water to the Intertie.

B. Min-Max Daily Discharges. If IRWD elects to discharge Recycled Water to the Intertie, then during the period its discharge, IRWD shall discharge a minimum of 4 mgd and a maximum of 8 mgd of Recycled Water.

C. In Lieu of OCWD GAP Operations. OCWD will not operate the GAP treatment plant, clearwell, pump stations or Santa Ana GAP Reservoir whenever IRWD is delivering Recycled Water to the Intertie.

D. Continuous Discharges. IRWD shall make a good faith effort to meet GAP customer demands when discharging Recycled Water to the Intertie. IRWD shall not operate the Intertie on an intermittent basis, but rather will attempt in good faith to operate the Intertie on a continuous basis for each Intertie delivery season that IRWD elects to commence discharges of Recycled Water to the Intertie.

2.2 OCWD-Requested Supply. OCWD may request in writing that IRWD discharge Recycled Water to meet GAP or GWRS supply needs at a time when IRWD has not itself elected to discharge Recycled Water to the Intertie ("**OCWD-Requested Supply**"). If IRWD Recycled Water is readily available, and supplied to OCWD at the Intertie at OCWD's request, then OCWD shall pay IRWD for any OCWD-Requested Supply at a rate equivalent to the Metropolitan Water District of Southern California's full-service untreated water rate to cover IRWD's additional costs.

2.3 No Required Flow**.** Nothing in this Agreement requires IRWD to deliver any Recycled Water to the GAP system.

3. **Total Flow From IRWD to OC San and OCWD.** Sections 3.13 and 3.14 of the 2013 Annexation Agreement require IRWD to deliver to the OCWD Green Acres Project a total of 4 mgd of combined flows from (i) sewage flows generated by IRWD to OC San, (ii) Recycled Water flows in section 2, and (iii) supply sources qualifying for the OC San Urban Runoff Diversion Program. Upon execution of this agreement, and the execution of the separate agreement between OC San and IRWD referenced in Recital F, sewage flows from the Irvine Business Complex that are delivered to OCWD will continue to count towards IRWD's obligation to comply with Section 3.13 of the Annexation Agreement.

4. **Acceptance of Recycled Water Flows**.

4.1 Acceptance in GWRS Facilities. OCWD shall accept any Recycled Water discharged by IRWD to the Intertie for use to supply GAP users or for treatment by the GWRS. Recycled Water that is discharged by IRWD to the Intertie will be deemed to have been delivered through the GWRS Connection to the Outfall (as described in Section 4.2) if it is discharged by IRWD to the Intertie when GWRS is not receiving any influent water and the control valve at the GWRS Connection is in the open position. The volumes of Recycled Water delivered to GAP or GWRS and deemed to have been delivered to the Outfall will be determined from meter readings as provided in Section 8.2. OCWD will not be entitled to any compensation from IRWD for treating or disposing of Recycled Water.

4.2 Acceptance of up to 8 mgd in OC San Outfall**.** OC San shall accept up to 5 mgd of Recycled Water not accepted by OCWD and deemed to have been discharged by IRWD through the GWRS Connection to the Outfall. OC San shall accept up to an additional 3 mgd of Recycled Water discharged by IRWD directly to the Outfall Connection.

4.3 LRP Payments. IRWD waives any claim to receive Local Resources Program subsidy payments from The Metropolitan Water District of Southern California for Recycled Water delivered to the Intertie.

4.4 No Required Acceptance for GWRS. OCWD is not required to accept any Recycled Water from IRWD for use in, treatment by, or discharge through GWRS.

4.5 Mutual Waiver of Fees. OC San shall accept IRWD's flows under this Agreement at no cost in exchange for IRWD's waiver of the Harvard Avenue Trunk Sewer maintenance fees.

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maintenance. IRWD shall comply with any and all security provisions adopted or instituted by OC San for access into and across OC San's property.

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7.4 If IRWD Recycled Water is found to contain contaminants in a concentration that affects OCWD's ability to reclaim the GWRS Specification Influent and/or OC San's ability to meet its NPDES discharge limits, and OC San's source control strategies prove unable to mitigate the concentration of said constituent, then OC San and OCWD reserve the right to reject and refuse to accept the IRWD Recycled Water to GWRS. To assist in the identification of contaminant sources or other factors that may affect GWRS performance, IRWD shall provide information concerning all chemicals (e.g., polymers and coagulants) used in the IRWD wastewater and/or solids treatment processes (e.g., manufacturer, type, chemical composition, etc.) if requested by OCWD or OC San.

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C. OC San shall provide daily readings of the quantity of influent flow to Plant No. 1 and total effluent flow to the Outfall.

D. The Parties' designated staff representatives may revise the designated meters to be read and meter reading responsibilities as they determine that operating circumstances necessitate; and those revision(s) may be made by the mutual written agreement of the Parties' representatives without formally amending this Agreement.

9. **Staff Representatives**. Each Party shall appoint one staff representative and one alternate to facilitate communication between the Parties and aid in the administration of this Agreement. The Parties shall give full consideration to all joint recommendations of the staff representatives. The staff representatives shall meet periodically, but at least once a year, to perform any tasks assigned to them by the Parties, including, but not limited to, the following: provide and receive input on scheduling Recycled Water discharges to the Intertie, GAP, GWRS and the Outfall; address operational concerns in the use and maintenance of the Intertie and GAP II; and address any other operational matters.

10. **Notices.** Any notice or other document and all billings and payments required or permitted to be given by any Party to another Party will be deemed received upon delivery in person to the recipient or upon deposit in the United States mail in the State of California, with postage prepaid, and addressed as follows:

To OC San: Orange County Sanitation District
18480 Bandilier Circle
Fountain Valley, CA 92708
Attention: General Manager
Telephone: (714) 593-7110
E-mail: rthompson@ocsan.gov

To OCWD: Orange County Water District
18700 Ward Street
P.O. Box 8300
Fountain Valley, CA 92728-8300
Attention: General Manager

Telephone: (714)378-3200

E-mail: jkennedy@ocwd.com

To IRWD: Irvine Ranch Water District
15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, CA 92619-7000
Attention: General Manager
Telephone: (949) 453-5590
E-mail: cook@irwd.com

11. **Counterparts**. This Agreement may be executed in counterparts, each of which will constitute an original.

12. **Entire Agreement**. This Agreement contains the entire Agreement of the Parties with respect to the subject matter hereof, and supersedes all prior negotiations, understandings or agreements, either written or oral, express or implied.

13. **Further Acts**. The Parties shall execute such additional documents and to take such further actions as are reasonably necessary to accomplish the objectives and intent of this Agreement.

14. **Indemnification**. Each Party agrees to defend, indemnify, and hold the other parties, and their officials, officers, employees and agents free and harmless from any claim, loss, damage, or injury to property or persons, including wrongful death, in any manner arising out of or incident to any negligent or otherwise wrongful act, omission or willful misconduct of the agreeing Party, their respective officers, employees or agents, arising out of or in connection with the execution or performance of this Agreement, including without limitation the payment of attorneys' fees.

15. **Waiver**. The failure of any Party to insist upon strict compliance with any provision of this Agreement or to exercise any right or privilege provided herein, or any Party's waiver of any breach hereunder unless in writing, shall not relieve any other Party of any of its obligations hereunder, whether of the same or similar type. The foregoing shall be true whether the waiving Party's actions are intentional or unintentional.

16. **Authorization to Execute**. The signatories to this Agreement warrant that they have been lawfully authorized execute this Agreement on behalf of the Party for which they are signing.

17. **Severability**. If any provision or clause of this Agreement or any application of it to any person, firm, organization, partnership or corporation is held invalid, that invalidity shall not affect other provisions of this Agreement which can be given effect without the invalid provision or application. To this end, the provisions of this Agreement are declared to be severable.

18. **No Assignment**. No Party may assign this Agreement or any interest in it without the prior written consent of the other.

19. **Effectiveness of Agreement; Term**. The term of this Agreement is 20 years and will automatically renew annually unless one of the Parties gives written notice to the other Parties no later than 6 months prior to the renewal or expiration date.

ORANGE COUNTY SANITATION DISTRICT

By: _____
Robert Thompson, General Manager

ATTEST:

By:_____
Kelly Lore, MMC, Clerk of the Board
Orange County Sanitation District

APPROVED AS TO LEGAL FORM:

By: _____
Scott C. Smith, General Counsel
Orange County Sanitation District

IRVINE RANCH WATER DISTRICT

By: _____
Paul A. Cook, General Manager

ATTEST:

By:_____
Kristine Swan, District Secretary
Irvine Ranch Water District

APPROVED AS TO LEGAL FORM:

By: _____
Claire H. Collins, General Counsel
Irvine Ranch Water District

ORANGE COUNTY WATER DISTRICT

By: _____
John Kennedy, General Manager

ATTEST:

By:_____
Clerk of the Board

APPROVED AS TO LEGAL FORM:

By: _____
Jeremy Jungreis, General Counsel
Orange County Water District

Exhibit A

Acknowledgment of Facilities Ownership

1. IRWD Facilities. IRWD owns:

1.1 the Intertie, Intertie meter and vault, associated telemetry equipment and all associated appurtenances upstream of the Intertie meter vault and downstream of the meter vault to the points of connection to the OCWD distribution lines on University Drive and La Vida; and

1.2 the Outfall Connection telemetry and Cla Valve at OC San's Plant No. 2.

2. OCWD Facilities. OCWD owns:

2.1 GAP II and associated telemetry equipment and all associated appurtenances downstream of the point of connection between the OCWD GAP II pipeline and the Connector Line in Jamboree Road,

2.2 the Bonita Creek Park dedicated service line downstream of the point of connection thereof with the Connector Line, and

2.3 all other Green Acres Project ("**GAP**") and GAP II facilities not included in Paragraph 1.1 or 1.2.

2.4 the microfiltration feed ("**MFF**"), trickling filter ("**TF**"), activated sludge ("**AS**"), and IRWD feed ("**IT**") meters and GWRS Screening Facility & Overflow Weir, and

2.5 the connection ("**GWRS Connection**") between OC San Plant No. 1 Secondary Effluent Junction Box 4 ("**SEJB 4**") and the 24" GAP pipeline located in Garfield Avenue immediately south of OC San's Plant No. 1 facility, as depicted in Exhibit C, such that the IRWD flows described in Section 4 can be supplied as influent to OCWD's GWRS project.

3. OC San Facilities. OC San owns the Outfall Connection exclusive of all associated telemetry and Cla Valve but inclusive of the meter, as depicted in Exhibit B.

Exhibit B

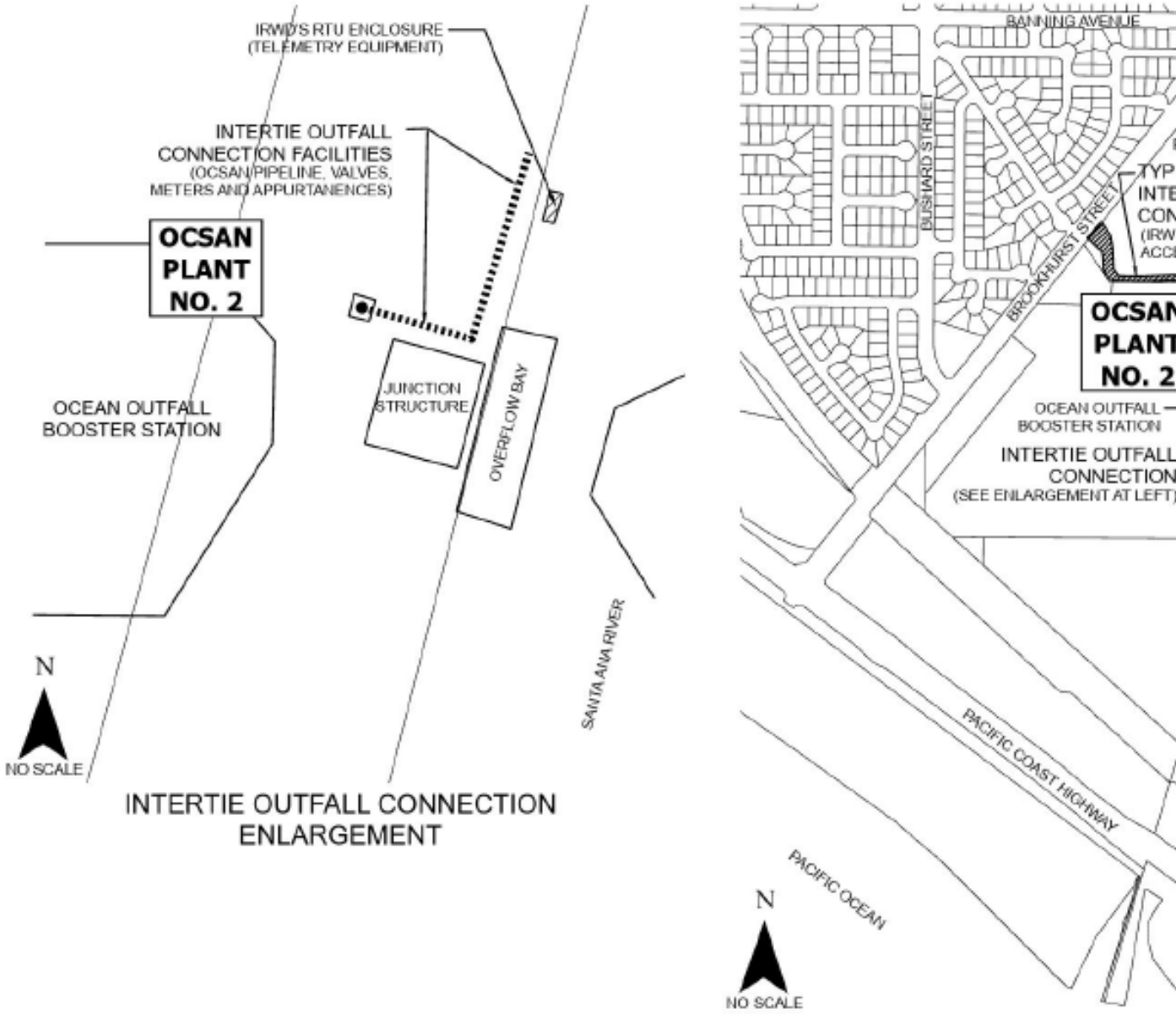
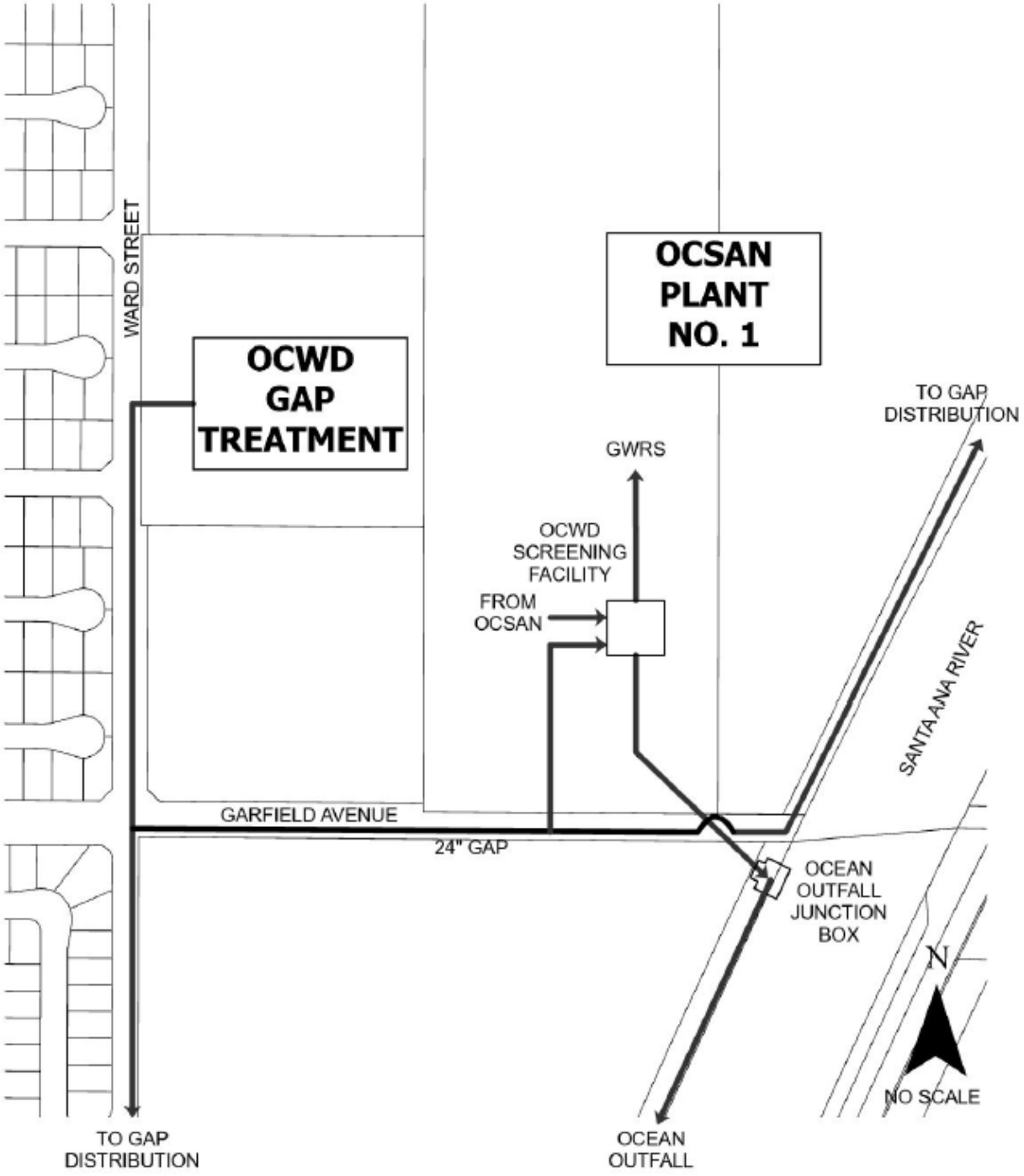

IRWD'S RTU ENCLOSURE
(TELEMETRY EQUIPMENT)
INTERTIE OUTFALL
CONNECTION FACILITIES
(OCSAN/PIPELINE, VALVES,
METERS AND APPURTANENCES)
OCSAN
PLANT
NO. 2
OCEAN OUTFALL
BOOSTER STATION
JUNCTION
STRUCTURE
OVERFLOW BAY
SANTA ANA RIVER
N
NO SCALE
INTERTIE OUTFALL CONNECTION
ENLARGEMENT
BANNING AVENUE
BUSHARD STREET
BROOKHURST STREET
OCSAN
PLANT
NO. 2
OCEAN OUTFALL
BOOSTER STATION
INTERTIE OUTFALL
CONNECTION
(SEE ENLARGEMENT AT LEFT)
PACIFIC COAST HIGHWAY
PACIFIC OCEAN
N
NO SCALE
INTERTIE OUTFALL CONNECTION
EXHIBIT "B"

Exhibit C



PLANNED CONNECTION FOR
IRWD INTERITE DELIVERIES TO GWRS
AT OCSAN PLANT NO. 1
EXHIBIT "C"

AGENDA ITEM SUBMITTAL

Meeting Date: November 12, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: R. Bouley/L. Esguerra

Budgeted: Yes
Budgeted Amount: $3,849,414
Cost Estimate: $85,478
Funding Source: R&R Fund
Program/Line Item No.: R22028
General Counsel Approval: N/A
Engineers/Feasibility Report: NA
CEQA Compliance: Cat. Ex.

Subject: BOND BASIN SLOPE REPAIR AUTHORIZE AMENDMENT NO. 1 TO BUTIER ENGINEERING INC

SUMMARY

Construction of the Bond Basin Slope Repair Project, Contract SB-2025-1 is progressing. During initial phases of construction, the Contractor and the Construction Management team, Butier Engineering, performed additional work to locate suitable soils for construction of the keyway for the proposed slope repair and to perform additional slope repair outside the original project limits. Staff recommend authorizing Amendment No. 1 with Butier for construction management and inspection services in the amount of $85,478.

Attachment: Butier Engineering Inc. proposal for additional construction management and inspection services

RECOMMENDATION

Agendize for November 19 Board meeting: Authorize Amendment No. 1 to Agreement 1732 with Butier Engineering, Inc. for a not-to-exceed amount of $85,478.00

DISCUSSION

Bond Basin (Basin) is part of the Santiago Basins recharge system and the slope repair project is located in the southeasterly corner of the Basin. An existing City of Orange storm drain failed causing significant erosion to the area, and due to the complicated history of ownership and maintenance of the storm drain, the City and District have agreed to share the cost to repair the slope and storm drain. An emergency contract that included constructing a soil nail wall with rip rap was completed in January 2023 (See Figure 1), and construction of the permanent slope repair and storm drain pipeline relocation began in July 2025. The Contractor, ICS, has completed construction of the of the slope repair as shown on Figure 2 and is continuing to construct the relocated storm drain and concrete swale inlet into the basin.

During initial phases of construction, the native soil material located at the base of the slope was determined by geologist to be unsuitable. This required the Contractor to expand the limits of their excavation for the keyway that supports the imported fill for the

slope repair. Expanding the keyway also required expanding the slope repair and increased the overall quantity of soil required for the repair. The Contractor and Construction Management team performed additional work to locate suitable soil to construct the keyway and slope repair onsite, within the Basin. After suitable material was found and accepted by the geologist, the keyway and slope repair work commenced.

With the project limits expanded, another eroded area in a difficult to access location along the east slope of the Basin became easily accessible. This erosion is visible in the bottom-right corner of Figure 1 and to the right of the repaired slope in Figure 2. Since the material and equipment were available to repair this erosion, Staff authorized repair of the east slope. This resulted in addition construction management and inspection services to oversee the work but reduced the cost of repairs significantly compared to performing this work as a separate project.

Figure 1 – Soil Nail Wall at corner of Bond Basin

Figure 2 – Corner of Bond Basin October 2025

The Board authorized an agreement with Butier Engineering Inc. for Construction Management and Inspection Services on May 21, 2025. Butier has provided additional

construction management and inspection services due to the additional effort required to locate suitable soil material for construction of the keyway for the proposed slope repair and additional slope repair outside the original project limits along the east face of the Basin. Staff recommends authorizing Amendment No. 1 to Agreement 1732 with Butier in an amount not-to-exceed $85,478 using funds available in the project contingency, as summarized by Table 1.

Table 1: SB-2025-1 Bond Basin Slope Repair Project Budget Summary

Description	Current Budget	Proposed Budget
Design and Construction Management		
Design Agreement 1555 – (ENGEO)	$46,800	$46,800
Amendment 1	$42,500	$42,500
Amendment 2	$59,800	$59,800
Construction Management and Inspection – (Butier)	$321,124	$321,124
Amendment 1		*$85,478*
Design and CM&I Subtotal	**$470,224**	***$555,702***
Construction		
Contract SB-2025-1 (ICS)	$3,199,190	$3,199,190
Permits and Advertisement Costs	$20,000	$20,000
Construction Subtotal	**$3,219,190**	**$3,219,190**
Project Contingency (5% of Contract Amount)	*$160,000*	*$74,522*
Total Project Budget	**$3,849,414**	**$3,849,414**
City of Orange Contribution	$1,924,707	$1,924,707
Total Cost to OCWD	**$1,924,707**	**$1,924,707**

PREVIOUS BOARD ACTIONS

5/21/25, R25-5-68: Approving Agreement with Butier Engineering INC for Construction Management and Inspection Services for SB-2025-1 Bond Basin Slope Repair and Budget Increase.

4/16/25, R25-4-58: Reject bid protest and award contract to Innovative Construction Solutions, authorize Amendment No. 2 to Engeo and establish project budget.

3/19/25, R25-3-36: Authorize issuance of RFP for Construction Management and Inspection Services for Contract SB-2025-1, Bond Basin Slope Repair Project.

2/19/25, R25-2-15: Authorize filing of a Categorical Exemption in compliance of CEQA and authorize publication of Notice Inviting Bids for Contract SB-2025-1, Bond Basin Slope Repair Project.

3/20/24, R24-3-17: Authorize issuance of an Amendment to Agreement No. 1555 with ENGEO for final design services of Bond Basin slope repair and storm drain realignment for an amount not to exceed $42,500.

10/18/23, R23-10-140: Authorize issuance of a Professional Services Agreement to ENGEO for design services for the permanent Bond Basin slope repair and storm drain extension for an amount not to exceed $46,800.

11/16/22, R22-11-153: Ratify the emergency slope repair contract for Bond Basin in an amount of $992,000 to Access Limited Construction and ratify an amendment issued to ENGEO Incorporated for testing, construction inspection and reporting for $76,400.

10/5/22, R22-10-141: Authorized the General Manager to negotiate and execute a 50/50 cost share agreement with the city of Orange.

Amendment No. 1 Bond Basin Slope Repair Project

November 5, 2025

Laurence Esguerra, PE
Project Manager/Senior Engineer
Orange County Water District
18700 Ward Street
Fountain Valley, CA 92708

Subject: Amendment No. 1 for Construction Management and Inspection Services for Bond Basin Slope Repair Contract No. SB-2025-1

Dear Mr. Esguerra

Attached you will find our Amendment No.1 for the above referenced project. OCWD staff is familiar with specific construction impacts and changes to the project schedule revising Butier's original budget The primary driver for the amendment is the time impact associated with the relocation of the keyway for the east slope repair. This change also requires additional geotechnical field services from Ninyo & Moore (see attached)

If you have any questions regarding our proposal, please contact Senior Construction Manager, Mr. Joe Blum, or the undersigned for clarification.

Respectfully Yours,
Butier Engineering, Inc.

Mark M. Butier Jr.
President/CFO

BUTIER
Construction Managers, Consulting Engineers

17822 E. 17th Street, Suite 404
Tustin, California 92780
Tel: (714) 832-7222 Fax: (714) 832-7211

BUTIER
Construction Managers, Consulting Engineers

Amendment No. 1
OCWD Bond Basin Slope Repair Contract- CM and Inspection Level of Effort

						Total Hrs	Rate/ Hour		Total $
1. Construction Phase		Oct	Nov	Dec	Jan				
Resident Engineer	Joe Blum	60	60	40	40	200	$ 230.00		$46,000
Field Engineer	Ryan Weir	6	40	40	40	126	$ 185.00		$23,310
Lead QA/QC	Eddie Fonbon	168	168	168	80	584	$ 185.00		$108,040
Document Controls	Bryan Wilson	8	8	8	8	32	$ 175.00		$5,600
						942		**$**	**182,950.00**
Geotechnical Services Budget								**$**	**25,380.00**
Mark-Up 5 %								**$**	**1,269.00**
Cost to Complete								**$**	**209,599.00**
Original Contract Contract								**$**	**321,123.50**
CMS Service Billed though September 30, 2025								**$**	**155,485.00**
Geotechnical Services through September 30, 2025								**$**	**41,517.50**
Total Invoiced through September 30, 2025								**$**	**197,002.50**
Contract Balance as of September 30,2025								**$**	**124,121.00**
Cost to Complete (October through January 2026)								**$**	**(209,599.00)**
Amendment Request No. 1								**$**	**(85,478.00)**

Ninyo & Moore
A SOCOTEC COMPANY

October 16, 2025
Project No. 213185001

Mr. Joe Blum
Butier Engineering, Inc.
17822 E. 17th Street
Tustin, California 92780

Subject: Budget Status for Geotechnical, Materials Testing and Specialty Inspection Services
Bond Basin Slope Repair Project
Orange, California

Dear Mr. Blum:

Per your request and authorization, we are providing geotechnical, materials testing and specialty inspection services for the above referenced project. To date, we have been providing our services on an as-requested basis, as scheduled by Butier's authorized representative. We understand that our current approved budget is $69,385. We anticipate exceeding our budget.

The number of requested site visits has exceeded our original estimate. Additional site visits were required by our Field Technician and Geologist in order to relocate the keyway, and for the new east slope repair area. The new keyway had to be moved 50 feet further down the slope in order to achieve a competent bottom. Therefore, the backfill area was much larger. This additional work resulted in more Field Technician time in the field. More Geologist time in the field as well as in the office to review and calculate the final slope design and keyway depth and location. The additional work for the keyway was roughly $18,300, please see the attached August invoice for breakdown. We anticipate that our remaining scope of work will include soil testing, concrete sampling, laboratory testing, project coordination and management, and report preparation. We understand that Butier will perform the structural inspections for concrete. Based on the information described above and our understanding of the remaining scope of work, our revised estimated fee for the project is $94,765. The following describes our budget status:

Revised Total Estimated Fee	$ 94,765
Current Approved Budget	$ 69,385
Requested Budget Increase (difference)	$ 25,380

Therefore, we request that our total budget be increased by $25,380 to $94,765. In order to have written authorization for the additional expenditure, please sign and return one copy of this letter to our office at your earliest convenience. To avoid delays to the project, we will continue to provide our services as requested with the understanding that we will be reimbursed on a time and materials basis for the additional services.

We appreciate the opportunity to be of service on this project. If you have any questions regarding this letter, please contact the undersigned at your convenience.

Respectfully submitted,
NINYO & MOORE

Andy Rodriguez
Senior Project Manager

Alfredo "Tino" Rodriguez
Principal, Construction Services

AER/AR/co

Attachments: Table 1 – Breakdown of Estimated Fee
Ninyo & Moore August Invoice

Authorized by:
Butier Engineering, Inc.

Signature _____ Date _____

Print Name and Title _____

Table 1 - Breakdown of Estimated Fee						
Field Services						
Field Technician - East Slope Repair/Backfill	40 hours	@	$ 130.00	/hour	$	5,200.00
Field Technician - Storm Drain Trench Backfill	60 hours	@	$ 130.00	/hour	$	7,800.00
ACI Concrete Technician	20 hours	@	$ 130.00	/hour	$	2,600.00
Sample Pickup	8 hours	@	$ 120.00	/hour	$	960.00
			Subtotal		**$**	**16,560.00**
Laboratory Testing						
Concrete Compression, Cylinders, C 39	20 tests	@	$ 35.00	/test	$	700.00
			Subtotal		**$**	**700.00**
Reimbursables						
Field Vehicle Usage	128 hour	@	$ 15.00	/test	$	1,920.00
Equipment Usage	128 hour	@	$ 15.00	/test	$	1,920.00
			Subtotal		**$**	**3,840.00**
Project Coordination						
Senior Project Manager	8 hours	@	$ 220.00	/hour	$	1,760.00
Geotechnical Assistant/Dispatcher	4 hours	@	$ 120.00	/hour	$	480.00
			Subtotal		**$**	**2,240.00**
Report Preparation						
Principal Engineer/Geologist/Environmental Scientist	1 hour	@	$ 250.00	/hour	$	250.00
Senior Project Manager	6 hours	@	$ 220.00	/hour	$	1,320.00
Technical Illustrator/CAD Operator	2 hours	@	$ 140.00	/hour	$	280.00
Data Processor	2 hours	@	$ 95.00	/hour	$	190.00
			Subtotal		**$**	**2,040.00**
TOTAL ESTIMATED FEE					$	25,380.00

Ninyo & Moore
A SOCOTEC COMPANY

INVOICE

Mr. Mark Butier, Jr.
BUTIER ENGINEERING
17822 E. 17th Street, Suite 404
Tustin, CA 92780

September 19, 2025
Project No: 213185001
Invoice No: 308717

Geotechnical, Materials Testing and Specialty Inspection Services
Bond Basin Slope Repair
East Bond Avenue and Hewes Street
Orange, California

Invoice for geotechnical, materials testing and specialty inspection services pertaining to the Bond Basin Slope Repair project in Orange, California. Our services for this period included project coordination and management, data compilation & analysis, and test data distribution. Our field services included observation and in-place density testing during grading operations. Our laboratory services included Proctor density and direct shear testing.

Tax ID No. 33-0269828

Professional Services through August 29, 2025

Task 01 Field Services

		Hours	Rate	Amount	
Principal Engineer/Geologist/Scientist					
Putt, Michael	7/30/2025	3.00	250.00	750.00	Additional work for keyway
Putt, Michael	7/31/2025	3.00	250.00	750.00	
Putt, Michael	8/19/2025	2.00	250.00	500.00	
Staff Engineer/Geologist/Scientist					
Billmeier, Alec	7/31/2025	8.00	180.00	1,440.00	
Billmeier, Alec	8/1/2025	5.00	180.00	900.00	
Billmeier, Alec	8/4/2025	6.00	180.00	1,080.00	
Senior Technician					
Eck, Steven	8/5/2025	8.00	135.00	1,080.00	Additional work for keyway
Eck, Steven	8/6/2025	8.00	135.00	1,080.00	
Eck, Steven	8/7/2025	8.00	135.00	1,080.00	
Eck, Steven	8/8/2025	8.00	135.00	1,080.00	
Eck, Steven	8/11/2025	8.00	135.00	1,080.00	
Eck, Steven	8/12/2025	8.00	135.00	1,080.00	
Eck, Steven	8/13/2025	8.00	135.00	1,080.00	
Eck, Steven	8/14/2025	8.00	135.00	1,080.00	
Eck, Steven	8/15/2025	8.00	135.00	1,080.00	
Eck, Steven	8/18/2025	8.00	135.00	1,080.00	
Eck, Steven	8/19/2025	8.00	135.00	1,080.00	
Eck, Steven	8/19/2025 Ovt	2.00	202.50	405.00	
Eck, Steven	8/20/2025	8.00	135.00	1,080.00	

Field vehicle and equipment, 56.0 hours x $30.00 = $1,680.00 Additional work for keyway

Eck, Steven	8/21/2025	8.00	135.00	1,080.00	
Eck, Steven	8/22/2025	8.00	135.00	1,080.00	
Eck, Steven	8/25/2025	8.00	135.00	1,080.00	
Eck, Steven	8/26/2025	8.00	135.00	1,080.00	
Eck, Steven	8/27/2025	8.00	135.00	1,080.00	
Eck, Steven	8/28/2025	8.00	135.00	1,080.00	
Eck, Steven	8/29/2025	4.00	135.00	540.00	
Hansen, Zachary	7/29/2025	4.00	135.00	540.00	
Totals		181.00		26,345.00	
Total Labor					**26,345.00**

Task 02 Data Compilation & Analysis

		Hours	Rate	Amount	
Principal Engineer/Geologist/Scientist					
Guha, Soumitra	8/5/2025	1.00	250.00	250.00	Additional work for keyway
Putt, Michael	7/30/2025	2.00	250.00	500.00	
Putt, Michael	8/1/2025	.50	250.00	125.00	
Putt, Michael	8/5/2025	2.50	250.00	625.00	
Staff Engineer/Geologist/Scientist					
Billmeier, Alec	8/1/2025	2.00	180.00	360.00	
Billmeier, Alec	8/4/2025	1.00	180.00	180.00	
Billmeier, Alec	8/5/2025	3.50	180.00	630.00	
Totals		12.50		2,670.00	
Total Labor					**2,670.00**

Task 11 Project Coordination

		Hours	Rate	Amount	
Principal Engineer/Geologist/Scientist					
Putt, Michael	7/29/2025	1.00	250.00	250.00	Additional work for keyway
Saiki, Garreth	7/29/2025	.25	250.00	62.50	
Saiki, Garreth	8/8/2025	.50	250.00	125.00	
Saiki, Garreth	8/12/2025	.50	250.00	125.00	
Saiki, Garreth	8/21/2025	.50	250.00	125.00	
Saiki, Garreth	8/28/2025	.50	250.00	125.00	
Sr. Project Engineer/Geologist/Scientist					
Rodriguez, Andy	7/25/2025	.75	220.00	165.00	
Rodriguez, Andy	7/28/2025	.50	220.00	110.00	
Rodriguez, Andy	7/29/2025	1.00	220.00	220.00	Additional work for keyway
Rodriguez, Andy	7/30/2025	.50	220.00	110.00	
Rodriguez, Andy	7/31/2025	.75	220.00	165.00	
Rodriguez, Andy	8/1/2025	.50	220.00	110.00	
Rodriguez, Andy	8/5/2025	.75	220.00	165.00	
Rodriguez, Andy	8/6/2025	1.00	220.00	220.00	
Rodriguez, Andy	8/7/2025	.50	220.00	110.00	
Rodriguez, Andy	8/8/2025	.75	220.00	165.00	

NINYO & MOORE, A SOCOTEC COMPANY
5710 Ruffin Road | San Diego, California 92123 | p.858.576.1000 | www.ninyoandmoore.com

Rodriguez, Andy	8/11/2025	.75	220.00	165.00	
Rodriguez, Andy	8/12/2025	.75	220.00	165.00	
Rodriguez, Andy	8/13/2025	.75	220.00	165.00	
Rodriguez, Andy	8/14/2025	1.00	220.00	220.00	
Rodriguez, Andy	8/15/2025	.75	220.00	165.00	
Rodriguez, Andy	8/18/2025	1.00	220.00	220.00	
Rodriguez, Andy	8/19/2025	1.00	220.00	220.00	
Rodriguez, Andy	8/20/2025	.75	220.00	165.00	
Rodriguez, Andy	8/21/2025	.75	220.00	165.00	
Rodriguez, Andy	8/22/2025	.50	220.00	110.00	
Rodriguez, Andy	8/25/2025	.75	220.00	165.00	
Rodriguez, Andy	8/26/2025	.75	220.00	165.00	
Rodriguez, Andy	8/27/2025	.75	220.00	165.00	
Rodriguez, Andy	8/28/2025	.75	220.00	165.00	
Rodriguez, Andy	8/29/2025	.50	220.00	110.00	
Geo/Environmental Assistant					
Cartter, Kelly	7/28/2025	.25	120.00	30.00	
Cartter, Kelly	8/4/2025	.25	120.00	30.00	
Cartter, Kelly	8/7/2025	.25	120.00	30.00	
Cartter, Kelly	8/8/2025	.25	120.00	30.00	
Cartter, Kelly	8/12/2025	.25	120.00	30.00	
Cartter, Kelly	8/13/2025	.25	120.00	30.00	
Cartter, Kelly	8/18/2025	.25	120.00	30.00	
Orejel, Griselda	8/6/2025	.25	120.00	30.00	
Totals		23.75		5,122.50	
Total Labor					**5,122.50**

Task 17 Laboratory Testing

Proctor Density (rock corrected)	2.0 Tests @ 340.00	680.00	
Direct Shear - Remolded	3.0 Tests @ 350.00	1,050.00	
Proctor Density	1.0 Test @ 220.00	220.00	
Total Units		**1,950.00**	**1,950.00**

Task 21 Reimbursables

Equipment Charge	181.0 Hours @ 15.00	2,715.00	
Field Vehicle Usage	181.0 Hours @ 15.00	2,715.00	
Total Units		**5,430.00**	**5,430.00**

TOTAL THIS INVOICE $41,517.50

Contract Summary

Previously Invoiced	$0.00
Amount This Invoice	$41,517.50
Total Invoiced	$41,517.50
Contract Amount	$69,385.00

NINYO & MOORE, A SOCOTEC COMPANY
5710 Ruffin Road | San Diego, California 92123 | p.858.576.1000 | www.ninyoandmoore.com

Funds Remaining	$27,867.50
Percent Billed	60%

NINYO & MOORE, A SOCOTEC COMPANY
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Table 1 - Breakdown of Estimated Fee						
Field Services						
Geologist - Evaluate Bottom Keyway and Benching	12 hours	@	$ 220.00	/hour	$	2,640.00
Field Technician - Slope Repair/Backfill	120 hours	@	$ 130.00	/hour	$	15,600.00
Field Technician - Storm Drain Trench Backfill	60 hours	@	$ 130.00	/hour	$	7,800.00
Reinf. Concrete Inspector - Foundations, Headwall, Swale	80 hours	@	$ 135.00	/hour	$	10,800.00
Reinf. Concrete Inspector - Tieback Anchor	32 hours	@	$ 135.00	/hour	$	4,320.00
ACI Concrete Technician	32 hours	@	$ 130.00	/hour	$	4,160.00
Sample Pickup	12 hours	@	$ 120.00	/hour	$	1,440.00
			Subtotal		**$**	**44,120.00**
Laboratory Testing						
Concrete Compression, Cylinders, C 39	35 tests	@	$ 35.00	/test	$	1,225.00
2-Sack Slurry Compression, Cylinders, C 39	5 tests	@	$ 35.00	/test	$	175.00
Tieback Grout, 2x2 Cubes, C 1019	12 tests	@	$ 55.00	/test	$	660.00
Proctor Density D 1557, D 698, CT 216, & AASHTO T-180	4 tests	@	$ 220.00	/test	$	880.00
Plastic Index/Atterberg Limits D 4318, CT 202	1 test	@	$ 170.00	/test	$	170.00
Sieve Analysis, D 422, CT 202	2 tests	@	$ 145.00	/test	$	290.00
Sand Equivalent, D 2419, CT 217	1 test	@	$ 125.00	/test	$	125.00
Expansion Index, D 4829, IBC 18-3	2 tests	@	$ 190.00	/test	$	380.00
Chloride and Sulfate Content, CT 417 & CT 422	2 tests	@	$ 175.00	/test	$	350.00
pH and Resistivity, CT 643	2 tests	@	$ 175.00	/test	$	350.00
			Subtotal		**$**	**4,605.00**
Reimbursables						
Field Vehicle Usage	348 hour	@	$ 15.00	/test	$	5,220.00
Equipment Usage	348 hour	@	$ 15.00	/test	$	5,220.00
			Subtotal		**$**	**10,440.00**
Project Coordination						
Senior Project Manager	24 hours	@	$ 220.00	/hour	$	5,280.00
Geotechnical Assistant/Dispatcher	12 hours	@	$ 120.00	/hour	$	1,440.00
			Subtotal		**$**	**6,720.00**
Report Preparation						
Principal Engineer/Geologist/Environmental Scientist	1 hour	@	$ 250.00	/hour	$	250.00
Senior Project Manager	12 hours	@	$ 220.00	/hour	$	2,640.00
Technical Illustrator/CAD Operator	3 hours	@	$ 140.00	/hour	$	420.00
Data Processor	2 hours	@	$ 95.00	/hour	$	190.00
			Subtotal		**$**	**3,500.00**
TOTAL ESTIMATED FEE					$	69,385.00

AGENDA ITEM SUBMITTAL

Meeting Date: November 12, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: R. Bouley/M. Patel/
F. Almario

Budgeted: Yes
Budgeted Amount: $600,000
Cost Estimate: $600,000
Funding Source: R&R
Program/Line Item No.: R25054
General Counsel Approval: N/A
Engineers Report: N/A
CEQA Compliance: N/A

Subject: MULTI-BUILDING ROOF REPLACEMENT PROJECT - PUBLICATION OF NOTICE INVITING BIDS

SUMMARY

Plans and technical specifications for the Multi-Building Roof Replacement Project (Project) are currently being prepared. The scope of the Project includes protecting the existing roof structures in place and applying a roof reinforcement coating to the entire roof, ducting, and penetrations. The buildings included in this Project include the Switchgear Building, RO Electrical Building, MF East Electrical Building, and MF West Electrical Building.

RECOMMENDATION

Agendize for November 19 Board meeting: Authorize publication of Notice Inviting Bids for Contract No. FV-2025-1: Multi-Building Roof Replacement Project.

BACKGROUND/ANALYSIS

Weather Weld manufactures a fiberglass-reinforced ceramic asphalt that is sprayed over the existing roofing materials to provide a new seamless roof membrane surface that is water-tight, meets California energy requirements, and does not require the removal and disposal of the existing roof material. Staff recently completed a contract to install a new roof layer onto OCWD's Annex Building using Weather Weld's product and found their product to be a preferable alternative to other roof replacement technologies.

The Switchgear Building, RO Electrical Building, MF East Electrical Building, and MF West Electrical Building (Project Buildings) were constructed in 2006 and are located on the Fountain Valley campus. The existing roof systems of all Project Buildings consist of a metal roof deck, lightweight concrete, and a built-up roof system. These types of roof systems are constructed with multiple layers of felt ply sheets and hot asphalt. The weather resisting layer of typical built-up roofs of this design have a life cycle of 10 to 15 years.

The Project roofs were inspected in October 2025 by Staff and a representative from Weather Weld to explore possible repair or replacement options. In general, the existing roofs were rated from fair to poor, with observations of ponding water. The inspection

report noted that the roofs have been temporarily repaired multiple times using mastic and acrylic. Several cracks in areas of separation, buckling, and loss of granules were also detailed in the report. The inspector also performed a core test at multiple locations to determine the integrity of the existing roof.

The inspection report concluded that the existing roof materials could stay in place and would not require complete removal. Weather Weld's recommendation includes installation of a reinforcement coating system directly over the existing roof, making the entire roof seamless from the top of the parapet to the bottom of the drains. This system would be sprayed on and applied to a minimum thickness of 250 mil dry film thickness (¼-inch). This system will require no maintenance for the life of the 40-year warranty.

The plans and specifications for the Project Buildings are currently being finalized. Despite manufacturing the materials, Weather Weld does not install the roofing system itself. Staff recommends authorizing publication of the Notice Inviting Bids for the Multi-Building Roof Replacement Project. This will allow Contractors that are certified to install the Weather Weld system to bid on the project and give OCWD the most competitive price for the installation. Weather Weld will inspect the installation and ensure that the product is installed within its requirements. Table 1 shows the proposed schedule for the project:

Table 1: Project Schedule

Description	Date
Complete Design	November 2025
Advertise for Construction	November 2025
Award Construction Contract	December 2025
Construction Complete	April 2026

PRIOR RELEVANT BOARD ACTION(S)

N/A

12

AGENDA ITEM SUBMITTAL

Meeting Date: November 12, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: R. Bouley/F. Almario

Budgeted: Yes
Budgeted Amount: $32,716,975
Cost Estimate: $63,132
Funding Source: WIFIA, Paygo
Program/Line Item No.: C19011
General Counsel Approval: Yes
Engineers Report: Completed
CEQA Compliance: Cat. Ex.

Subject: CONTRACT NO. TUS-2022-1: AMENDMENT NO. 3 TO BUTIER ENGINEERING

SUMMARY

Construction of the PFAS water treatment plant at the City of Tustin Main Street Plant is complete and producing water, however, some minor work remains to be completed. Due to the specific construction impacts and changes to the project schedule, staff recommends authorizing the issuance of Amendment No. 3 to Agreement No. 1558 with Butier Engineering Inc. for additional construction management and inspection services in the amount of $63,132.

RECOMMENDATIONS

Agendize for November 19 Board Meeting: Authorize issuance of Amendment No. 3 to Agreement No. 1558 with Butier Engineering Inc. for construction management and inspection services in the amount of $63,132.

BACKGROUND/ANALYSIS

Construction of the PFAS water treatment plant at the city of Tustin Main Street Plant is complete and producing water, however, some minor work remains to be completed. The project generally includes four Ion Exchange (IX) vessel systems for four wells (Vandenberg, Columbus, Pasadena and Beneta) at a centralized treatment plant, construction of new pipelines to convey water from the well sites to the new PFAS treatment system located at the Main Plant, a new section of distribution piping from the Main Plant, replacement of an existing nitrate treatment system and upgraded booster pumps to handle the additional flows.

OCWD's agreement with Butier for Construction Management and Inspection Services projected construction completion in June 2025. Due to the unforeseen construction issues in both the PFAS and Nitrate treatment systems, construction is now projected to be fully completed in November 2025. The PFAS treatment plant was placed online in manual mode in June 2025, and the city is able to produce water, but additional work was needed to fully automate the system. This required redesign and modification of the motor-operated valves and associated influent piping. Staff recommends issuance of Amendment No. 3 to Agreement No. 1558 with Butier Engineering Inc. for additional

construction management and inspection services in the amount of $63,132. The level of effort in the recommended Amendment is sufficient to complete the project. Staff recommends maintaining the current project budget by deducting the amount of this amendment from the Project Contingency, as shown in the budget for the City of Tustin PFAS Project that is summarized in Table 1.

Table 1: City of Tustin Treatment Budget Summary

Description	Budget 5/2025	Proposed Budget 11/2025
Design, Construction Management, Permitting		
Design and CM (Jacobs Engineering)	$2,272,041	$2,272,041
CM (Butier)	$652,488	$652,488
Amendment No. 1	$460,830	$460,830
Amendment No. 2	$197,010	$197,010
Amendment No. 3		*$63,132*
Permitting, Reimbursements, Advertising	$15,000	$15,000
Construction		
Contract TUS-2022-1	$19,771,700	$19,771,700
Change orders 1-4 (3.3% of contract)	$658,822	$658,822
Change order 5 (0.4% of contract)	$172,580	$172,580
Revised pipeline construction – change order 6	$5,500,000	$5,500,000
Subtotal Contract TUS-2022-1	$26,103,102	$26,103,102
Treatment Vessels (Evoqua)	$1,608,000	$1,608,000
IX Resin (Evoqua)	$1,077,800	$1,077,800
Project Contingency	$330,739	*$267,607*
Total Project Cost:	**$32,716,975**	**$32,716,975**
Estimated Grant Funding	***($18,000,000)***	***($18,000,000)***

PRIOR RELEVANT BOARD ACTIONS

5/21/25, R25-5-68: Contract No. TUS-2022-1 Amendment No. 2 to Butier Engineering

11/20/24, R24-11-139: Contract No. TUS-2022-1 Amendment to Butier Engineering

5/15/24, M24-49: Contract No. TUS-2022-1 Change Order Ratification and Budget Increase.

11/1/23, R23-11-147: Authoring Issuance of Agreement to Butier Inc. For Construction Management and Inspection Services and Increasing Budget.

12/21/22, R21-12-174: Awarding Contract No. Tus-2022-1 City of Tustin Pfas Treatment System And Influent Conveyance Project To Caliagua Inc.

6/15/22, R22-6-79: Contract No. TUS-2022-1 City of Tustin Pfas Treatment System and Influent Conveyance Project: Engineers Report, Categorical Exemption, and Notice Inviting Bids.

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.

Amendment No. 3
City of Tustin PFAS Treatment Facility

October 15, 2025

Mr. Fernando Almario, P.E.
Project Manager/Senior Engineer
Orange County Water District
18700 Ward Street
Fountain Valley, CA 92708

Subject: Amendment No. 3: Construction Management and Inspection Services for the City of Tustin PFAS Treatment System and Influent Conveyance Project

Dear Mr. Almario:

Attached is our Amendment No. 3 for the above-referenced project. OCWD staff is familiar with specific construction impacts and changes to the project schedule, modifying Butier's revised budget.

If you have any questions regarding our proposal, please contact Senior Construction Manager, Mr. Joe Blum, or the undersigned for clarification.

Respectfully Yours,
Butier Engineering, Inc.

Mark M. Butier Jr.
President/CFO

BUTIER
Construction Managers, Consulting Engineers

17822 E. 17th Street, Suite 404
Tustin, California 92780
Tel: (714) 832-7222 Fax: (714) 832-7211

BUTIER
Construction Managers, Consulting Engineers

Amendment No. 3

City of Tustin PFAS Treatment System and Influent Conveyance - CM&I Level of Effort

1. Construction Phase		Aug	Sept	Oct	Total Hrs	Rate/ Hour	Total $
Construction Manager	Blum	36.00	17.00	40.00	93.00	$ 220.00	$ 20,460.00
R.E./QA Manager (Plant)	Ling	75.50	38.50	40.00	154.00	$ 195.00	$ 30,030.00
Electrical	Phillips	6.00	8.00	10.00	24.00	$ 195.00	$ 4,680.00
Field Engineer	TBD	15.50	10.00	20.00	45.50	$ 175.00	$ 7,962.50
	TOTALS	**133.00**	**73.50**	**110.00**	**316.50**		**$ 63,132.50**
Geotechnical Services Budget							$ -
Subcontractor: Includes 5% mark-up							$ -

Grand Total **$ 63,132.50**

AGENDA ITEM SUBMITTAL

Meeting Date: November 12, 2025	**Budgeted:** No **Budgeted Amount:** $0
To: Water Issues Committee Board of Directors	**Cost Estimate:** $50,000 **Funding Source:** R&R **Program/ Line Item No.:** TBD
From: John Kennedy	**General Counsel Approval:** N/A **Engineers/Feasibility Report:** N/A
Staff Contact: R. Herndon/D. Field	**CEQA Compliance:** Categorical Exemption to be filed upon project approval

Subject: REQUEST FOR PROPOSALS FOR DESTRUCTION OF WESTBAY MONITORING WELL SAR-3

SUMMARY

The area adjacent to Westbay multi-level monitoring well SAR-3 will be redeveloped as a park playground by the City of Anaheim. Once the property is redeveloped, there will be no practical access for large trucks/equipment to rehabilitate or to properly grout and destroy the well. SAR-3 was constructed in 1988, making it one of the oldest Westbay-type multi-level monitoring wells. It is nearing the end of its useful life and with the pending playground development, staff recommends destroying this well. Staff plans to come back to the Board requesting approval to construct a replacement well after a suitable location has been identified.

RECOMMENDATION

Agendize for November 19 Board Meeting:

1. Authorize filing of a Categorical Exemption for the destruction of monitoring well SAR-3 in compliance with CEQA guidelines; and

2. Authorize issuance of Request for Proposals for services for the destruction of Westbay monitoring well SAR-3.

BACKGROUND/ANALYSIS

Westbay multi-level monitoring well SAR-3 was constructed in 1988 and is 1,420 feet deep with 11 screen intervals at various depths. The well is located in the City of Anaheim adjacent to the Santa Ana River and Angel Stadium (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.

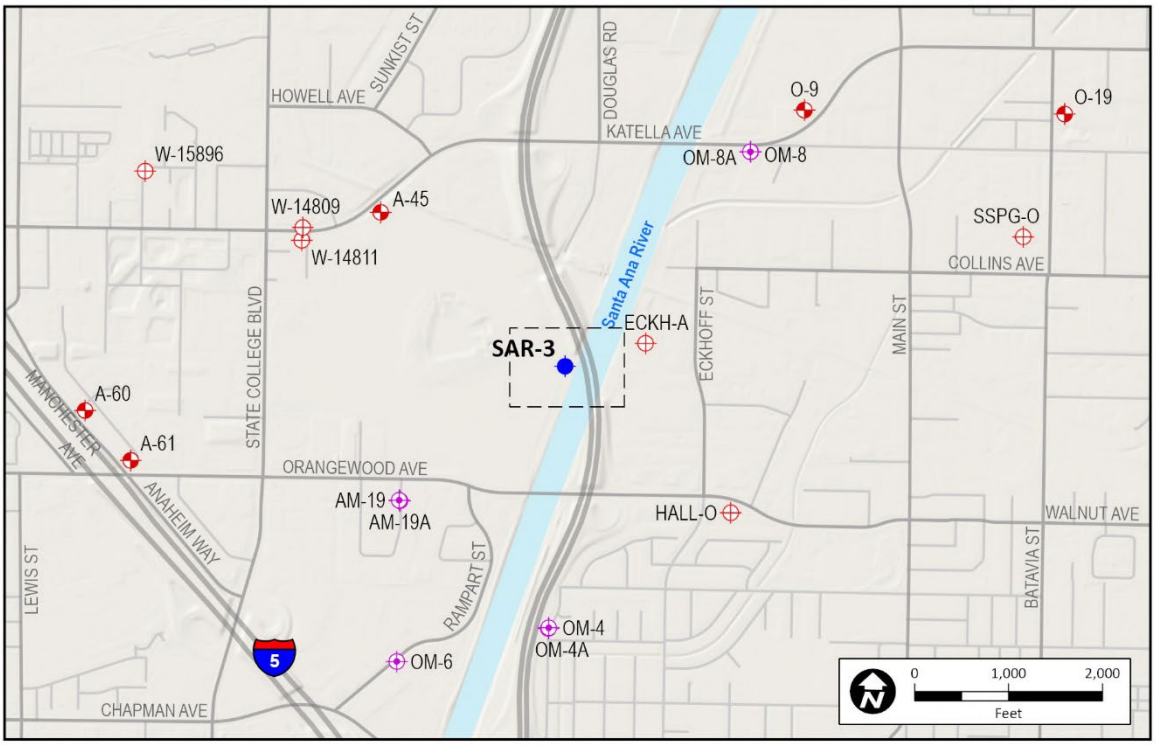
OCWD constructed well SAR-3 on then-County owned property under an encroachment permit. The property has been acquired by the City of Anaheim from the County of Orange. The City is in the final design stages to construct “River Park” including a playground and play structures adjacent to the well site. Although the City has offered to protect the well, the new site layout will prevent access to large trucks and equipment that are necessary to conduct well rehabilitation and eventual sealing/destruction of the well. Additionally, having the well in a playground would restrict safe access to the well for routine monitoring and maintenance, making its use infeasible. Construction of River Park is tentatively scheduled to start in April 2026. Figures 2 and 3 show renderings of proposed River Park and the location of SAR-3.

Due to its age, staff believes that SAR-3 is near the end of its useful life and should be properly destroyed and sealed before access is restricted to the well. Staff will identify a suitable replacement well location, budget for construction of the replacement in FY26-27, and subsequently request Board approval to construct the replacement. Based on this information, staff requests authorization to issue a Request for Quotes to properly destroying monitoring well SAR-3.

PRIOR RELEVANT BOARD ACTION(S)

None

Figure 1: SAR-3 Location



g:\staff\DavidF\SAR-3 Well Map.aprx (10/30/2025)

SOURCE: OCWD (09/2025); Nearmap (5/2025)

Figure 2: Rendering of Proposed River Park (1 of 2)

Figure 3: Rendering of Proposed River Park (2 of 2)

AGENDA ITEM SUBMITTAL

Meeting Date: November 12, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: S. Parsons/L. Haney

Budgeted: Yes
Budgeted Amount: $120,000
Cost Estimate: $120,000
Funding Source: General Fund
Program/Line Item No. 1044.53001.9978
General Counsel Approval: N/A
Engineers/Feasibility Report: N/A
CEQA Compliance: N/A

Subject: SANTA ANA RIVER ECOFLOW STUDY

SUMMARY

OCWD is required under its regulatory agreements with the U.S. Fish and Wildlife Service (USFWS) to ensure riparian habitat within Prado Basin is not adversely affected by inundation caused by water storage behind Prado Dam. While the District's Digital Twin project is analyzing how inundation, groundwater levels, and sediment deposition can influence habitat, the role of Santa Ana River baseflows in sustaining the riparian forest has not been quantified and is a critical data gap that needs to be resolved.

An ecoflow study of the Santa Ana River and its tributaries will determine the minimum flow needed to support the habitat behind Prado Dam. Staff recommend entering into a sole source agreement with the Southern California Coastal Water Research Project (SCCWRP) to conduct this study for a cost not to exceed $120,000.

Attachments:
- Santa Ana River Ecoflow Study Presentation
- Santa Ana River Ecoflow Study Scope of Work and Budget

RECOMMENDATION

Agendize for November 19 Board meeting: Approve entering into agreement with Southern California Coastal Water Research Project (SCCWRP) to conduct the Santa Ana River Ecoflow Study for an amount not to exceed $120,000.

DISCUSSION/ANALYSIS

OCWD's 2025 Biological Opinion with USFWS requires the District to monitor and report on habitat loss in Prado Basin. If more than 30% of the riparian forest is lost for two consecutive years while performing water conservation operations at an elevation of 508 feet, OCWD must implement additional mitigation to recover the lost habitat due to operational activities.

However, Prado Basin is a highly dynamic system influenced by multiple interacting factors, including inundation frequency, drought conditions, groundwater levels, sedimentation, and baseflows from the Santa Ana River and its tributaries. While the Digital Twin project is currently analyzing the first four of these factors, the influence of baseflow has not yet been examined. Understanding this relationship is critical to ensure that OCWD is not held responsible for habitat loss driven by factors beyond its operations, such as regional baseflow reductions over time. With mitigation costs of roughly $72,000 per acre, identifying the specific factors that cause habitat loss is essential to avoid unnecessary financial liability.

U.S. Fish and Wildlife Service has requested that OCWD continue developing the Digital Twin as a monitoring mechanism to support water storage operations within Prado Basin. OCWD has also been coordinating with the Upper Santa Ana River Habitat Conservation Plan (HCP) team to align this effort with HCP compliance requirements established by U.S. Fish and Wildlife. The intent is for the Digital Twin to serve as a shared monitoring and analytical tool that supports OCWD's operational compliance while incorporating the broader regional implications of reduced baseflows under the HCP. This initiative provides OCWD with a valuable means to monitor regulatory obligations and understand how regional changes may influence them. The effort has been well received by both agencies, who have encouraged OCWD to continue building out the necessary data layers to enhance informed decision-making and better distinguish the causes of observed habitat changes.

This study will provide the scientific foundation to define the minimum flow necessary to sustain riparian habitat under anticipated future baseflow conditions. Should baseflows fall below the identified thresholds, the HCP and US Fish and Wildlife can use the results of this study to collaboratively engage with upper watershed agencies to determine actions needed to protect Prado riparian habitat.

Staff recommends a sole source agreement with the Southern California Coastal Water Research Project (SCCWRP) based on their unique qualifications and proprietary methodology. SCCWRP is the developer of the California Environmental Flows Framework (CEFF)—a scientifically rigorous, state-recognized methodology used by agencies such as Orange County Public Works and the California Department of Fish and Wildlife to evaluate ecological flow needs and balance water-supply and habitat objectives.

CEFF is currently the only pre-approved regulatory framework for ecological flow studies in California, and SCCWRP is the sole organization authorized and equipped to perform these analyses. Furthermore, the U.S. Fish and Wildlife Service's confidence in both SCCWRP and the CEFF framework is essential to ensure that the results of OCWD's study are accepted for future regulatory coordination and potential negotiations. Selecting SCCWRP as a sole source provider ensures that the study's outcomes will be scientifically defensible, consistent with state and federal expectations, and directly applicable to regulatory decision-making.

The scope of work for this study includes:

- Applying CEFF to determine the natural flows of the Santa Ana River and its tributaries
- Developing models to identify ecological flow needs for the Prado Basin riparian forest
- Summarizing findings in a technical report

Staff recommend entering into an agreement with SCCWRP to conduct the Santa Ana River Ecoflow Study for an amount not to exceed $120,000.

PRIOR RELEVANT BOARD ACTION(S)

None

Santa Ana River Ecoflow Study

Sheryl Parsons
Natural Resources Director

Water Issues Committee
November 12, 2025

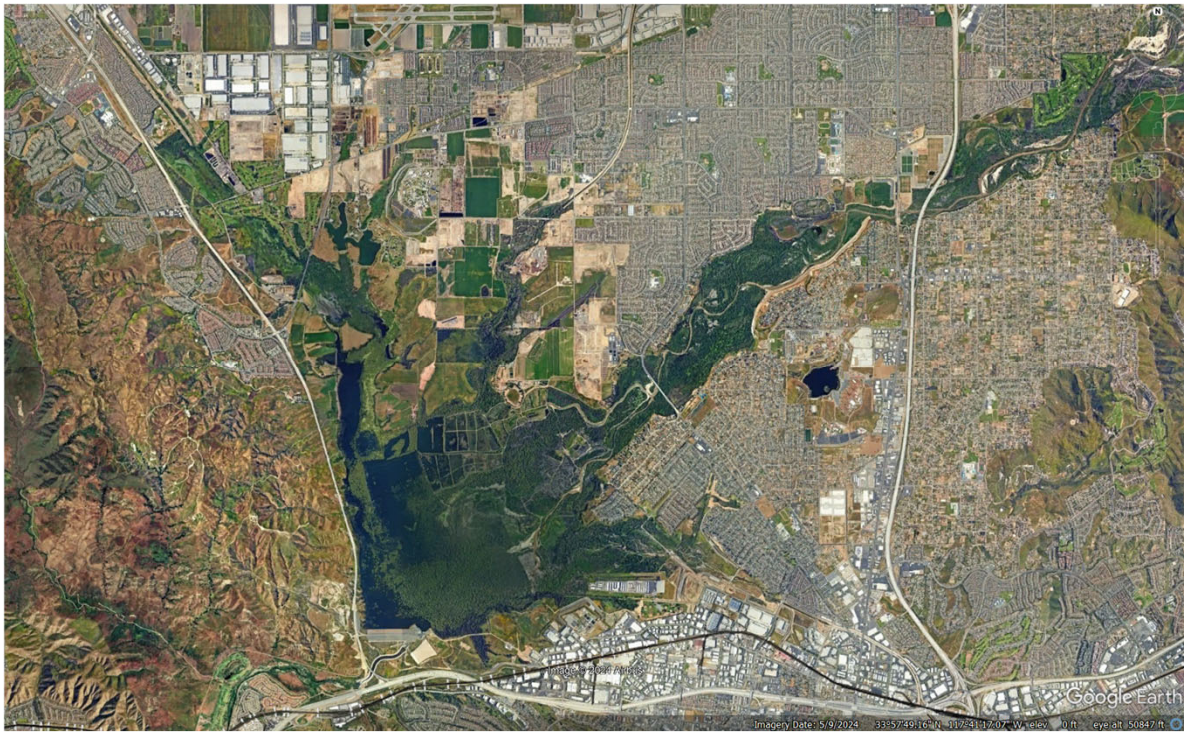
What do changing SAR baseflows means for Prado?

- OCWD has a requirement with USFWS to **ensure that riparian habitat within Prado Basin does not decrease due to operations** behind Prado Dam

- If habitat behind Prado Dam decreases, **how do we know what caused it**?
  - Inundation?
  - Drought?
  - Sedimentation?
  - Decreasing groundwater?
  - Decreasing baseflows?

Digital Twin

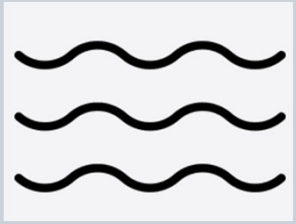
Ecoflow Study



What are Ecoflows?

- Also called “Environmental Flows”
- The flows needed to sustain healthy rivers and related habitats

Quantity



How much flow is needed within the river?

Timing

What time of year is flow needed within the river?

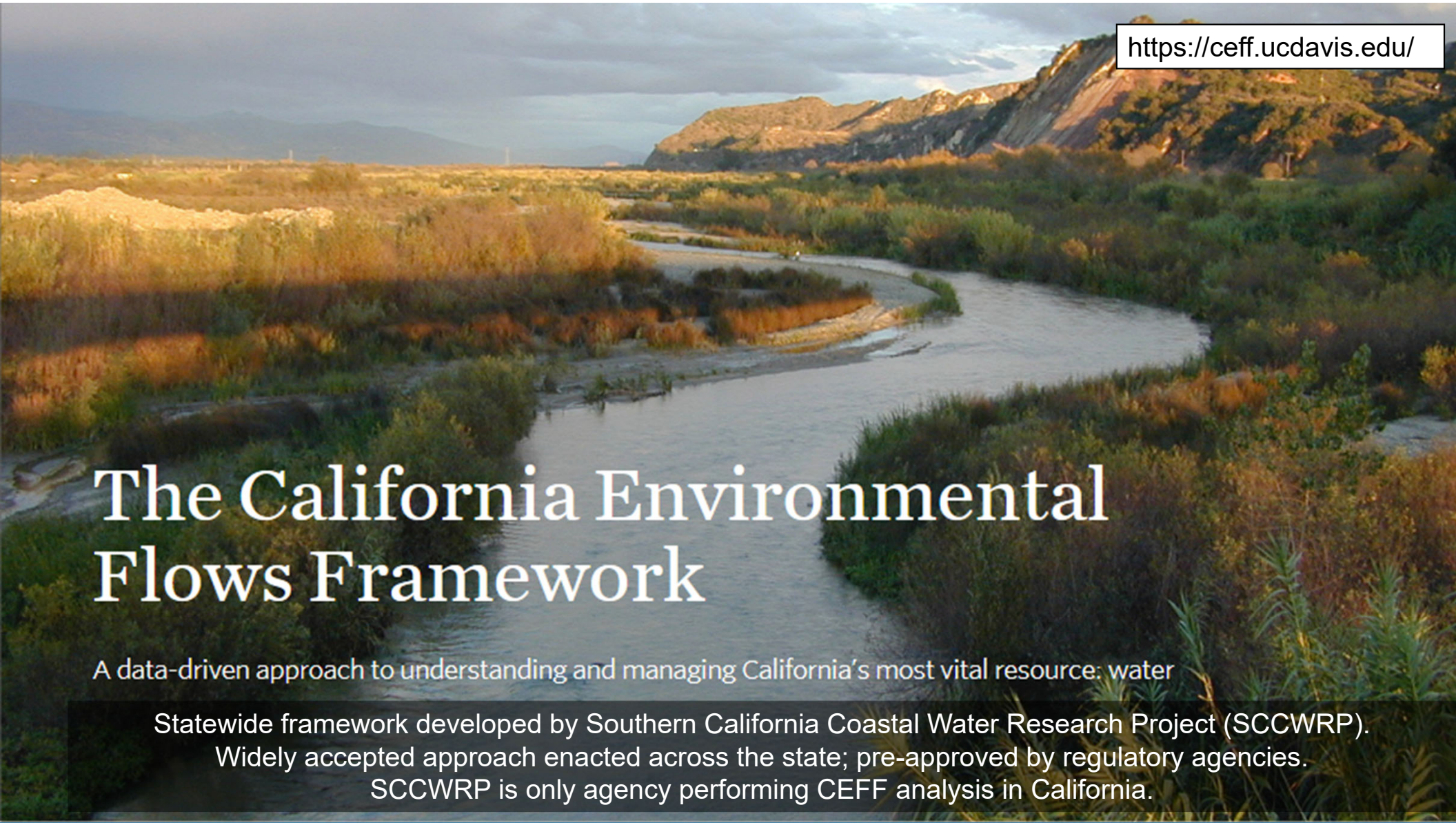
- Not necessarily restoring the natural flow patterns before human development, but balancing a set of priorities for the river

Ecoflow Study Goals

- **Identify flows** needed in the Santa Ana River and its tributaries to:
  - Sustain riparian habitats in Prado Basin
  - Support Santa Ana sucker populations upstream of Prado Basin

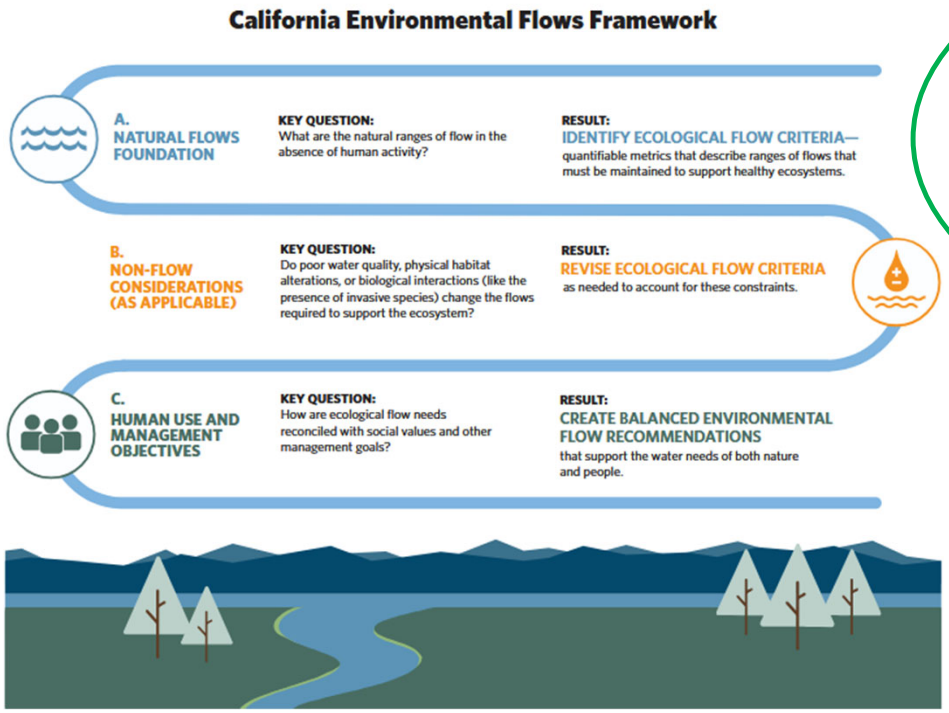
This will help pinpoint causes of habitat impacts.

If baseflows drop below these identified flows, then habitat impacts may be linked to declining baseflow – not OCWD operations – ***supporting continued water storage behind Prado Dam***



Statewide framework developed by Southern California Coastal Water Research Project (SCCWRP).
Widely accepted approach enacted across the state; pre-approved by regulatory agencies.
SCCWRP is only agency performing CEFF analysis in California.

California Environmental Flows Framework



1. **Natural Flows** Foundation
   - *Identifies natural flows (dry and wet) in absence of human activity*
2. **Non-Flows** Considerations
   - *Adds in water quality, invasive species, physical habitat alteration (sediment), etc.*
3. **Human Use** and Management Objectives
   - *Adds in human use (downstream users needs)*

RESULT: Balanced environmental flow recommendations

Project Scope, Cost, and Timeline

Task	Cost	Timeline
Identifying Inputs and Data Requirements	$45,331	Jan – Mar 2026
California Environmental Flows Framework (CEFF) Analysis	$59,925	Apr – Dec 2026
Flow Recommendation Report	$14,714	Jan – Mar 2027
Total	**$119,970**	**15 Months**
FY 25-26	*$66,238*	*6 Months*
FY 26-27	*$53,732*	*9 Months*

Recommendation

Staff recommends entering into a sole source agreement with Southern California Coastal Water Research Project (SCCWRP) to conduct the Santa Ana River Ecoflow Study for an amount not to exceed $120,000.

Thank You!

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

Santa Ana River Ecoflow Study

Scope of Work

Introduction and Objectives

Creative water resource management is critical in regions such as southern California where average rainfall is low and periodic droughts are increasingly common. Often, decisions regarding water supply must be balanced with the need to protect species and habitat that also depend on the same water resources.

This project aims to develop tools to explore this issue and flow recommendations for the Santa Ana River and its tributaries into Prado Basin (Chino Creek, Mill Creek, and Temescal Creek), where water reuse plans will likely result in decreased flows to the Prado riparian forest. Additionally, the Santa Ana River is home to the threatened Santa Ana sucker, though suitable habitat for the sucker has decreased throughout the river due to increased sedimentation and decreased base flows.

The objective of this project is to evaluate and identify the flows needed in the Santa Ana River and its tributaries to:

- Sustain riparian habitats;
- Support Santa Ana sucker habitat by maintaining sediment and flow dynamics (including seasonality).

This study will leverage recent findings from CW3E on inundation effects, integrating their insights within the California Environmental Flows Framework (CEFF) to support development of a Prado Basin digital twin. CEFF provides a consistent, yet flexible approach to addressing a broad range of environmental flow needs in ways that consider local stream conditions and management priorities. The functional flows approach that underlies CEFF ensures that all elements of the annual hydrograph are considered when developing environmental flow targets.

General Approach

We propose to couple a statistical modeling approach with outputs from hydrologic and hydraulic models to estimate the effects of different flow patterns on the riparian habitat along the Santa Ana River flowing into Prado Basin. By combining deterministic hydrologic/hydraulic modeling with machine learning ecological models, we can evaluate the potential effects of water reuse scenarios on ecological resources. This hybrid approach is advantageous because 1) it is a more efficient approach for evaluating ecological effects in a relatively small area over relatively short periods of time; 2) it can be more directly related to available species observation data; 3) it produces a probability estimate that provides flexibility in setting management thresholds (i.e. managers can select a probability of effect that triggers a management decision); and 4) it is computationally less expensive than development of a mechanistic approach. Our analysis will be based on the following assumptions:

- ✓ The focal area of analysis will be the Santa Ana River downstream of Seven Oaks to Prado Basin and the major tributaries entering Prado Basin (Chino Creek, Mill Creek, and Temescal Creek)
- ✓ Hydrologic and hydraulic model output is available at a sufficient spatial and temporal scale to analyze habitat changes (*determined following Task 1.2*)
- ✓ Vegetation mapping, and sucker survey data is available over time at a compatible scale with the output of the hydraulic modeling (*determined following Task 1.2*)
- ✓ Information on sediment flux is available that includes accretion rates *(determined following Task 1.2*)

Tasks

1. Task 1: Identifying Inputs and Data Requirements

1.1 *Stakeholder Engagement and Meeting Coordination:* Establish and convene an advisory committee to review the technical approach, assumptions, analyses, and conclusions. This committee will include technical experts capable of providing input on the modeling approach and representatives of potentially affected entities who may need to make or advise decisions based on the products of this work. The advisory committee will meet approximately 1-2 times per year.

Products: Roster of advisory committee members, meeting presentations and notes

1.2 *Develop Conceptual Model*: Develop the conceptual approach for relating physical and hydrologic change to ecological response. Identify inputs and data required for model. The conceptual model will represent the presumed relationships controlling ecological changes and the variables that can be used to represent those relationships. The model will be reviewed through the technical advisory group. OCWD staff will compile existing data and identify critical data gaps for model development.

Products: Draft and final conceptual model and document summarizing input data requirements

2. Task 2: CEFF Analysis

2.1 *Evaluate Natural Flow Patterns*: Apply CEFF Sections A and B to determine the natural flows and associate ecological flow criteria for the Santa Ana River and tributaries (Chino Creek, Mill Creek, and Temescal Creek), consistent with the CEFF framework. This will form the basis for the alteration assessment necessary for subsequent scenario analysis.

Products: Natural flow ranges for all functional flow components

2.2 *Assess Habitat Flow Needs*: Develop ecological response models that relate changes in flow and depth to the probability of supporting willow riparian habitat and Santa Ana sucker habitat, incorporating effects of seasonality of streamflow conditions on habitat. Develop predictive statistical (or machine learning) models that relate hydrologic and hydraulic

change to likely ecological response. Development and refinement of the ecological response relationships will be coordinated with the advisory committee. Provide ranges of flow recommendations that can inform guidelines tailored to meet riparian and Santa Ana Sucker needs.

Products: Flow-ecology relationships and flow recommendation table for Santa Ana sucker and riparian habitat

3. Task 3: Flow Recommendation Report

3.1 Documentation: Summarize findings in a technical memo or report that outlines the approach, methods, assumptions, findings, and conclusions. Integrate CW3E's findings with CEFF-driven recommendations, emphasizing sediment and flow variability management. Provide draft report to OCWD and the project advisory committee for review and comment. Produce final version of report based on input received on the draft report.

Products: Draft and final technical memo or report

Key Deliverables:

1. **Flow Recommendations:** Flow recommendations within the Santa Ana River and its tributaries (Chino Creek, Mill Creek, and Temescal Creek) to

    b) support riparian habitat in Prado Basin;

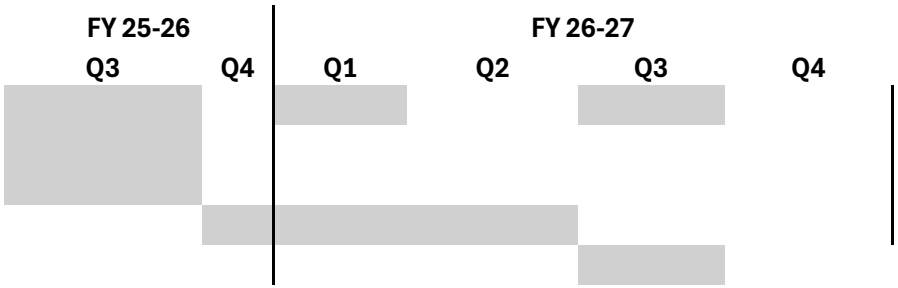
    c) optimize Santa Ana sucker habitat;

    d) riparian habitat and Santa Ana sucker habitat together;

    e) and mimic natural flow regimes

2. **Final Report and Presentation:** Comprehensive findings delivered to OCWD and partners.

Task	Description	FY 25-26 Q3	Q4	FY 26-27 Q1	Q2	Q3	Q4
1.1	Stakeholder Engagement and Meeting Coordination						
1.2	Develop a conceptual model						
2.1	Evaluate natural flow patterns						
2.2	Assess habitat flow needs						
3.1	Documentation						



Task	Description	Budget
1.1	Stakeholder Engagement and Meeting Coordination	$ 20,326
1.2	Develop Conceptual Model	$ 25,005
2.1	Evaluate Natural Flow Patterns	$ 14,847
2.2	Assess Habitat Flow Needs	$ 45,078
3.1	Documentation	$ 14,714
	TOTAL	$ 119,970

AGENDA ITEM SUBMITTAL

Meeting Date: November 12, 2025

To: Water Issues Committee
Board of Directors

From: John Kennedy

Staff Contact: Haney/O'Toole

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: FUTURE OF SANTA ANA RIVER BASEFLOWS

SUMMARY

Staff closely monitors baseflows in the Santa Ana River and the factors that affect them. Baseflows are defined as all flows not attributed to storm events and predominately consist of wastewater effluent, rising groundwater and dry weather urban runoff. Staff are developing tools to better understand key drivers that will impact the quantity of baseflows arriving at Prado Dam and available to OCWD for groundwater recharge. A brief overview of the factors impacting future baseflow in the Santa Ana River and the visualization tools will be provided.

Attachment: Presentation

RECOMMENDATION

Informational

BACKGROUND

The Santa Ana River represents a critical component of Orange County Water District's (OCWD) water supply portfolio, providing approximately 133,000 acre-feet annually—40% of the District's total supply. Baseflows, which consist of non-stormwater contributions including treated wastewater effluent from upstream facilities, dry weather urban runoff, and groundwater interactions, account for more than half of all Santa Ana River flows recharged into the Orange County Groundwater Basin. Due to their consistent nature, OCWD can capture and recharge 100% of baseflows arriving at Prado Dam.

Historical Context
Baseflows are estimated annually by the Santa Ana River Watermaster using a "scalping process" methodology designed to differentiate baseflows from total Santa Ana River flows at Prado Dam.

Baseflow volumes have fluctuated significantly over the past five decades:

- **1970s – early 2000s:** Substantial increases coinciding with upper watershed urbanization, reaching peak levels in the early 2000s

- **Early 2000s – 2015:** Declining trend attributed to expanded wastewater reuse programs, lower groundwater basin operating levels (resulting in increased natural river percolation), and reduced rising groundwater contributions
  Last Decade: Have been relatively stable as indoor water use efficiency (which reduces flows to wastewater treatment plants) has offset continued urbanization of the upper watershed

Factors affecting Baseflows

The four primary factors affecting baseflow are the quantity of wastewater effluent discharged to the Santa Ana River and tributaries above Prado Dam, evapotranspiration, dry weather urban runoff and contributions and losses to groundwater. Mathematically, baseflows can be visualized as follows:

Baseflows = WW Effluent + Dry Weather Urban Runoff - ET +/- Groundwater Contributions
WW = Wastewater
ET = Evapotranspiration

Wastewater effluent and baseflows are well measured and well correlated. Figure 1 shows the total wastewater effluent and the baseflows at Prado Dam from 2011 through 2024.

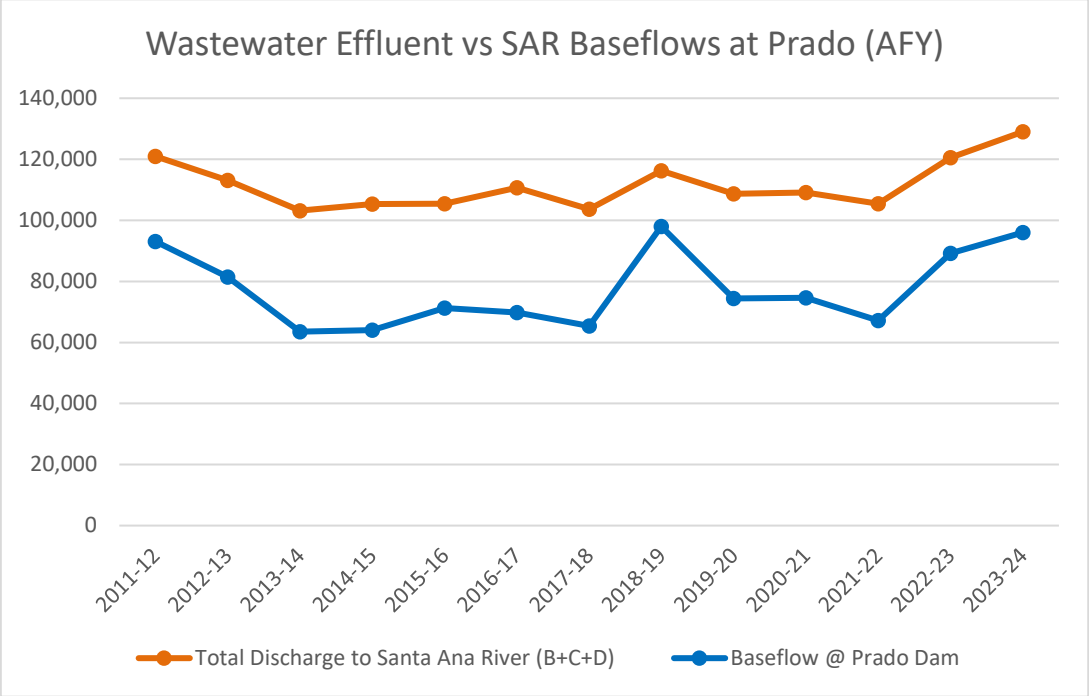


Figure 1: Wastewater Effluent vs Santa Ana River Baseflows at Prado from 2011-2024

The three residual factors, evapotranspiration, dry weather urban runoff and groundwater contributions, are unmeasured. Combined, they account for the 20 - 40 thousand acres feet per year difference between wastewater effluent and Santa Ana River Baseflows at Prado Dam.

Each baseflow factor has projects and programs that are being considered by upper watershed agencies that could impact its relative contribution to future baseflows. Staff are closely monitoring and developing new tools to better understand and predict changes to each of these baseflow factors.

Presentation Overview

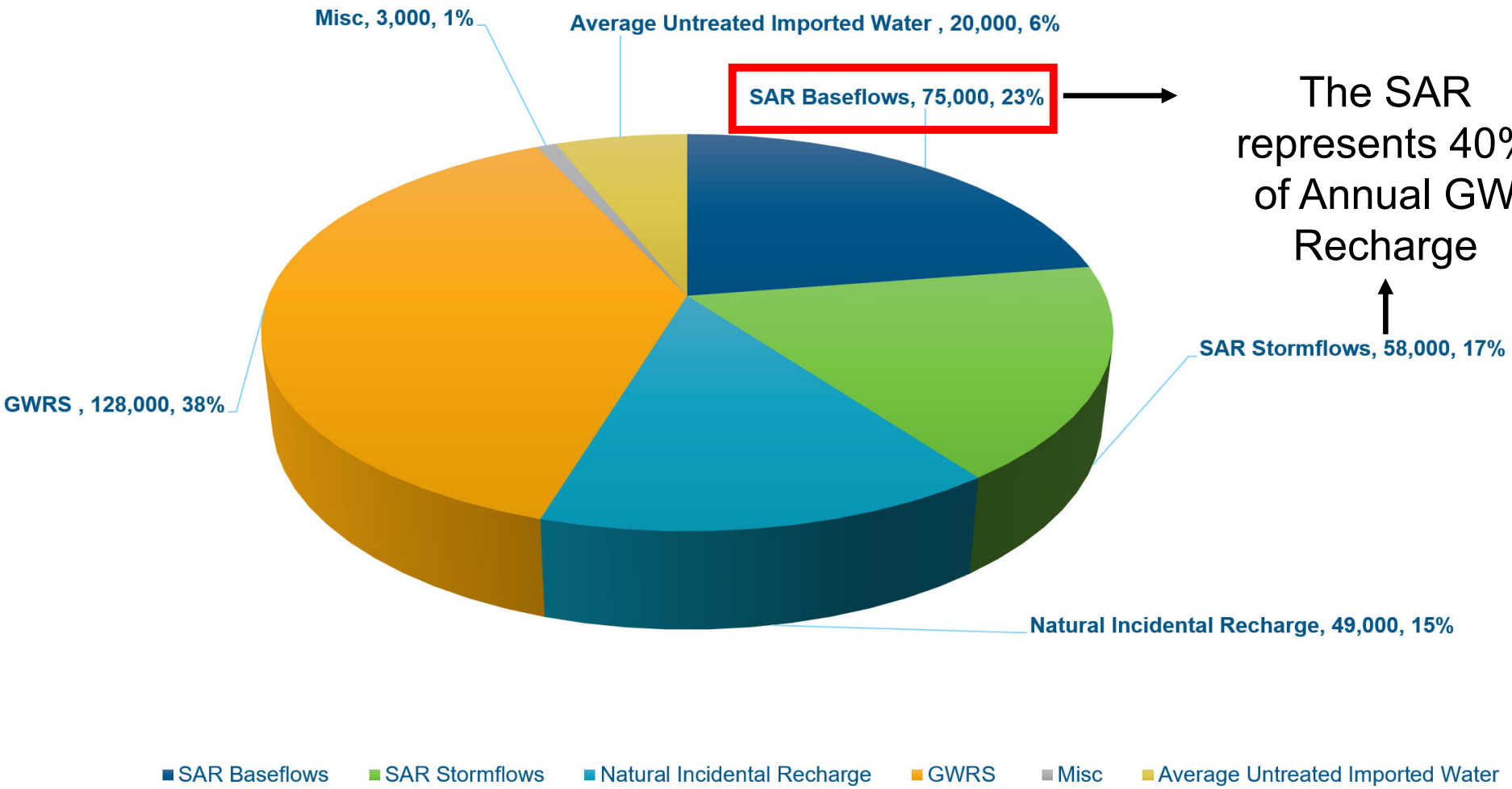
Staff will be providing a presentation on the history and future drivers of Santa Ana River Baseflows and highlighting new efforts and tools that are being developed to better understand and anticipate future baseflows in the Santa Ana River available to OCWD for groundwater recharge.

PRIOR RELEVANT BOARD ACTION(S)

None

Future of Santa Ana River Baseflows

Water Issues Committee
November 12, 2025

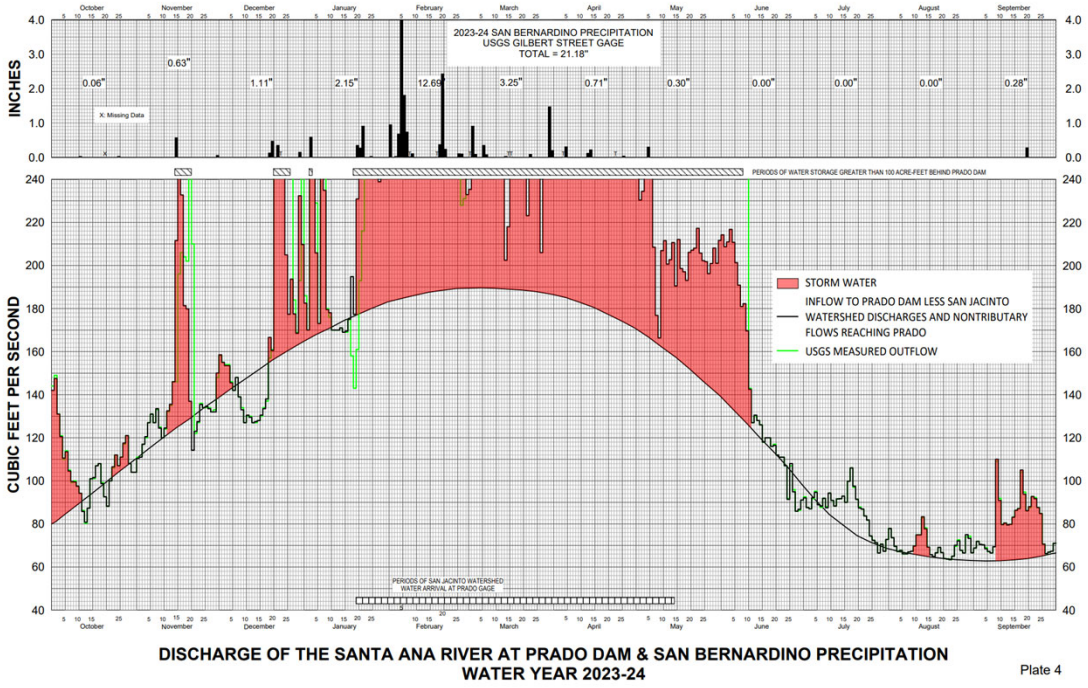


Total average = 333,000 afy

Recharging the Groundwater Basin (Overall Average)

What are Baseflows?

- Baseflow is all non-stormwater
- Determined by SAR Watermaster annual scalping process
- Baseflows in WY23-24 were 96,064 AF
- Legal minimum 34,000 AFY
- OCWD captures 100% of baseflows

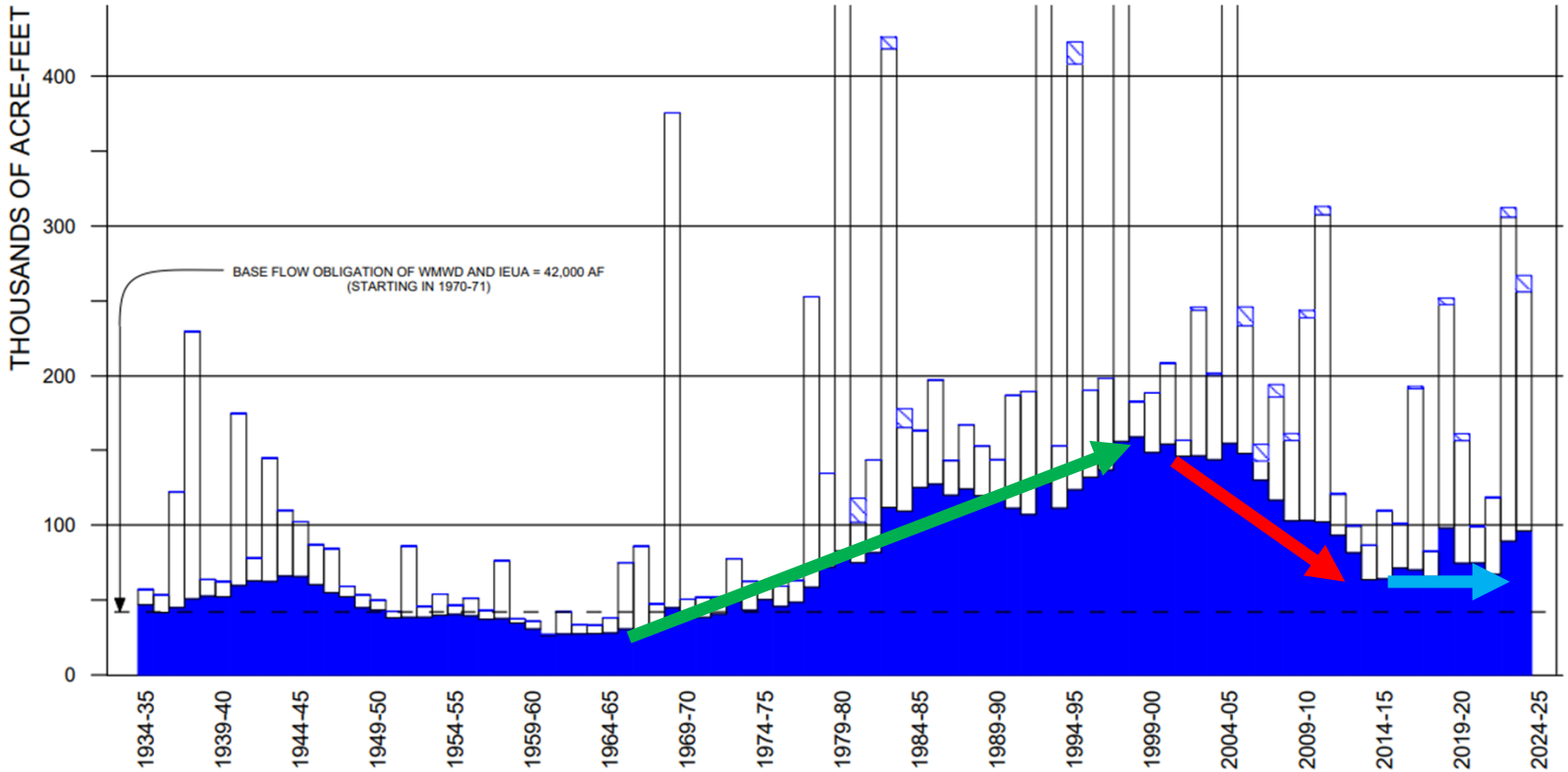


SAR Baseflows = All non-stormwater

- Predominantly consists Wastewater (WW) Effluent from Upper Watershed facilities
- Gains include dry weather urban runoff and rising groundwater
- Losses include ET and streambed recharge

Baseflow = WW Effluent + Dry Weather Urban Runoff - ET +/- Groundwater

History of Baseflows

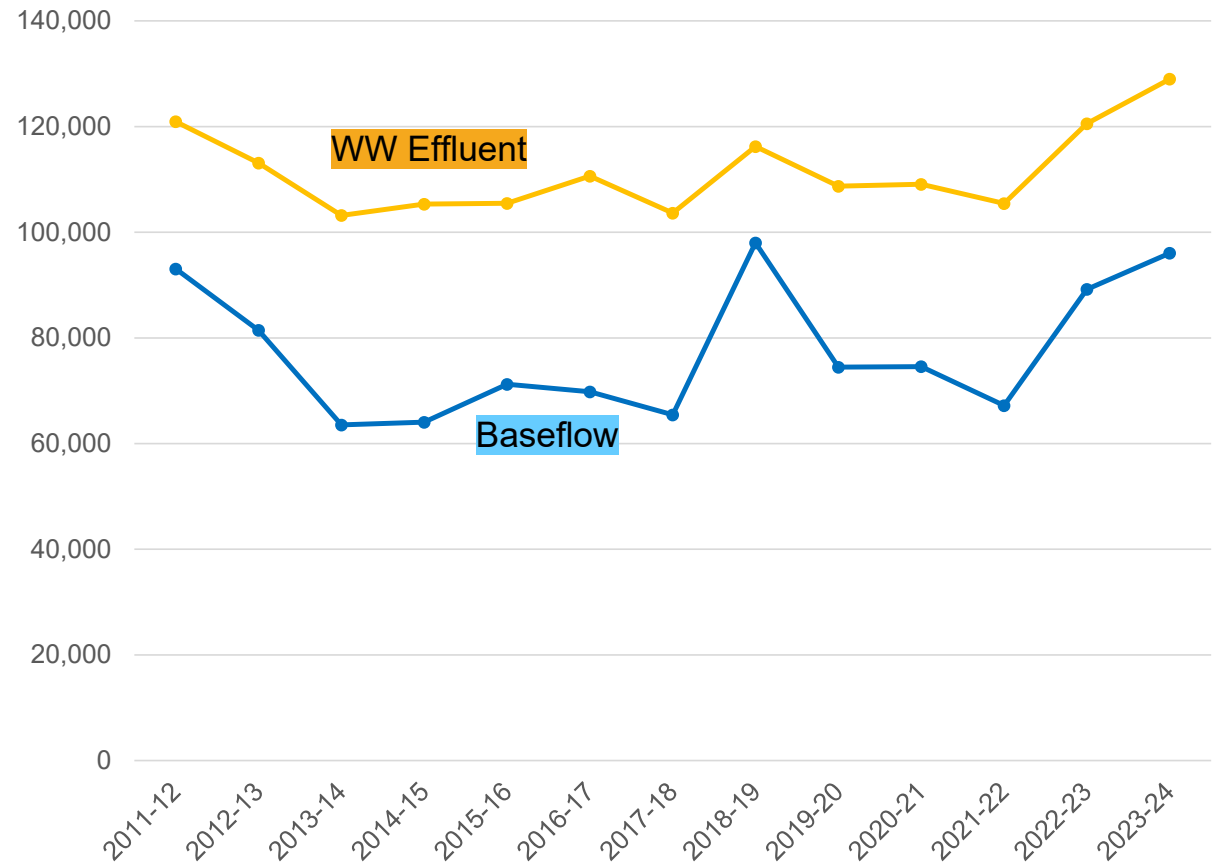


Baseflow = WW Effluent + Dry Weather Urban Runoff - ET +/- Groundwater

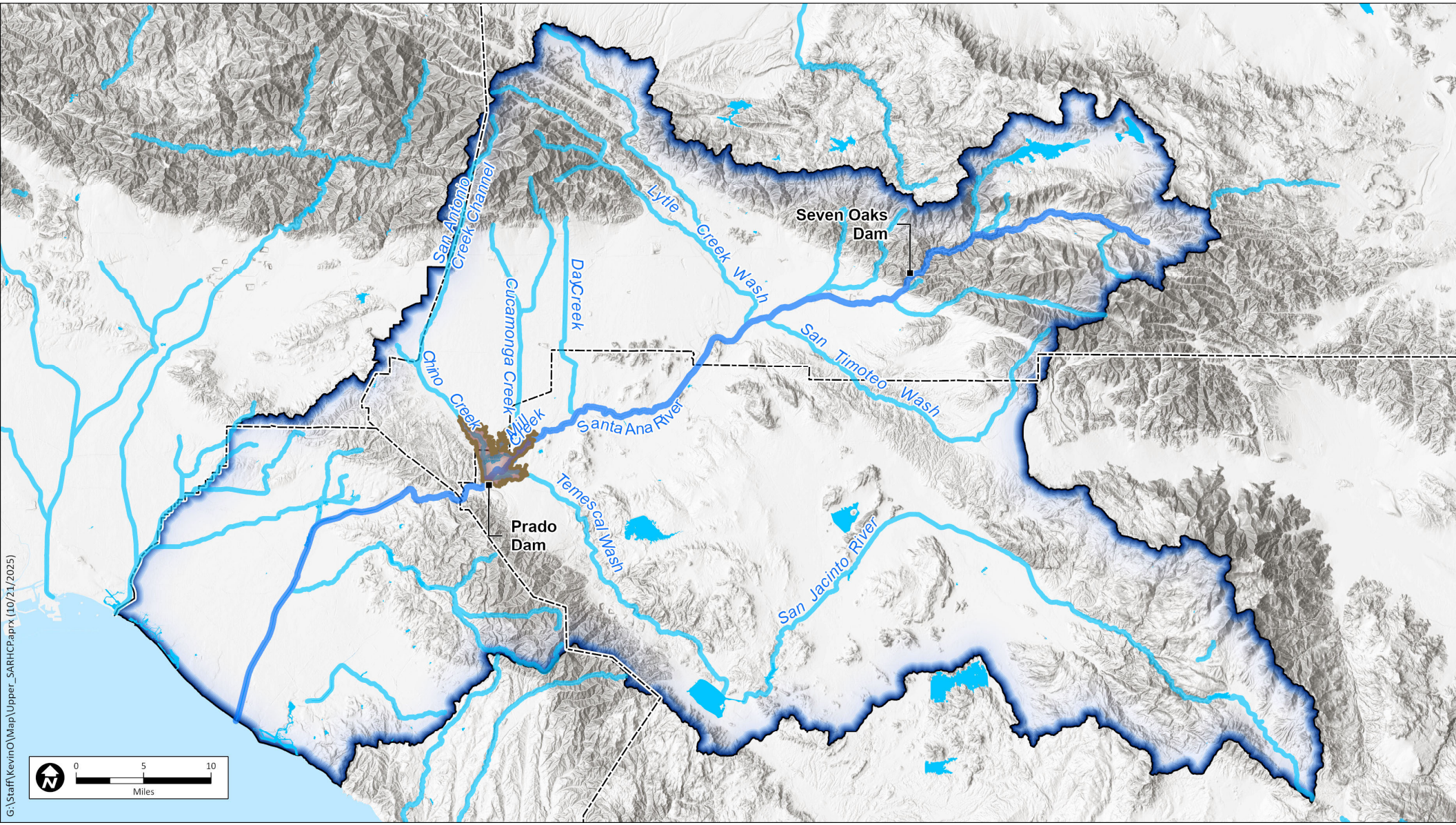
Baseflow vs Wastewater Effluent

On average baseflows are 30% less compared to wastewater effluent [in the 20k - 40k AFY range]

Decrease attributed to ET and net groundwater recharge



Baseflow = WW Effluent + Dry Weather Urban Runoff - ET +/- Groundwater


San Antonio Creek Channel
Cucamonga Creek
Day Creek
Lytle Creek Wash
Seven Oaks Dam
San Timoteo Wash
Chino Creek
Mill Creek
Santa Ana River
Prado Dam
Temescal Wash
San Jacinto River
0
5
10
Miles
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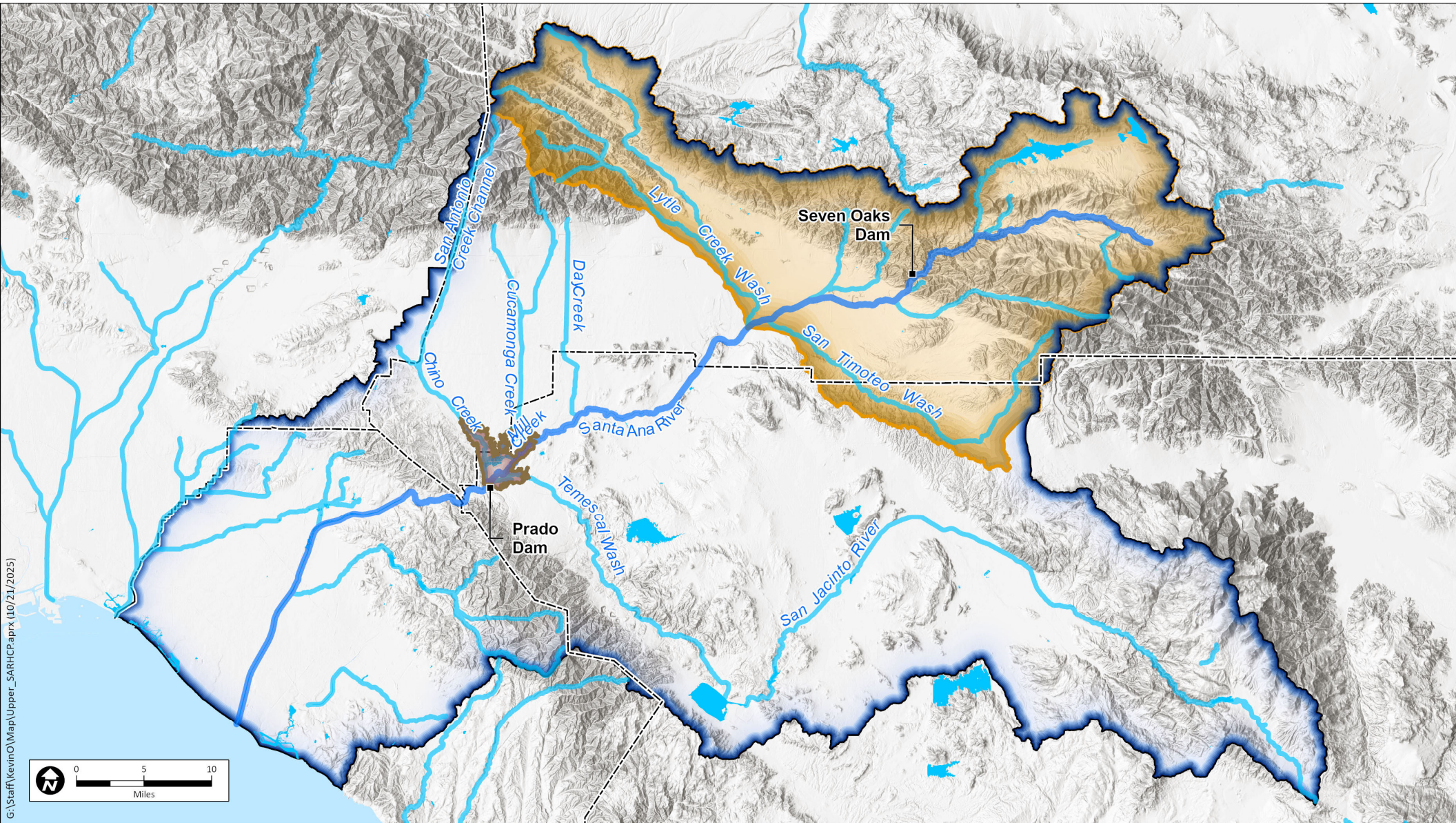
Seven Oaks Dam
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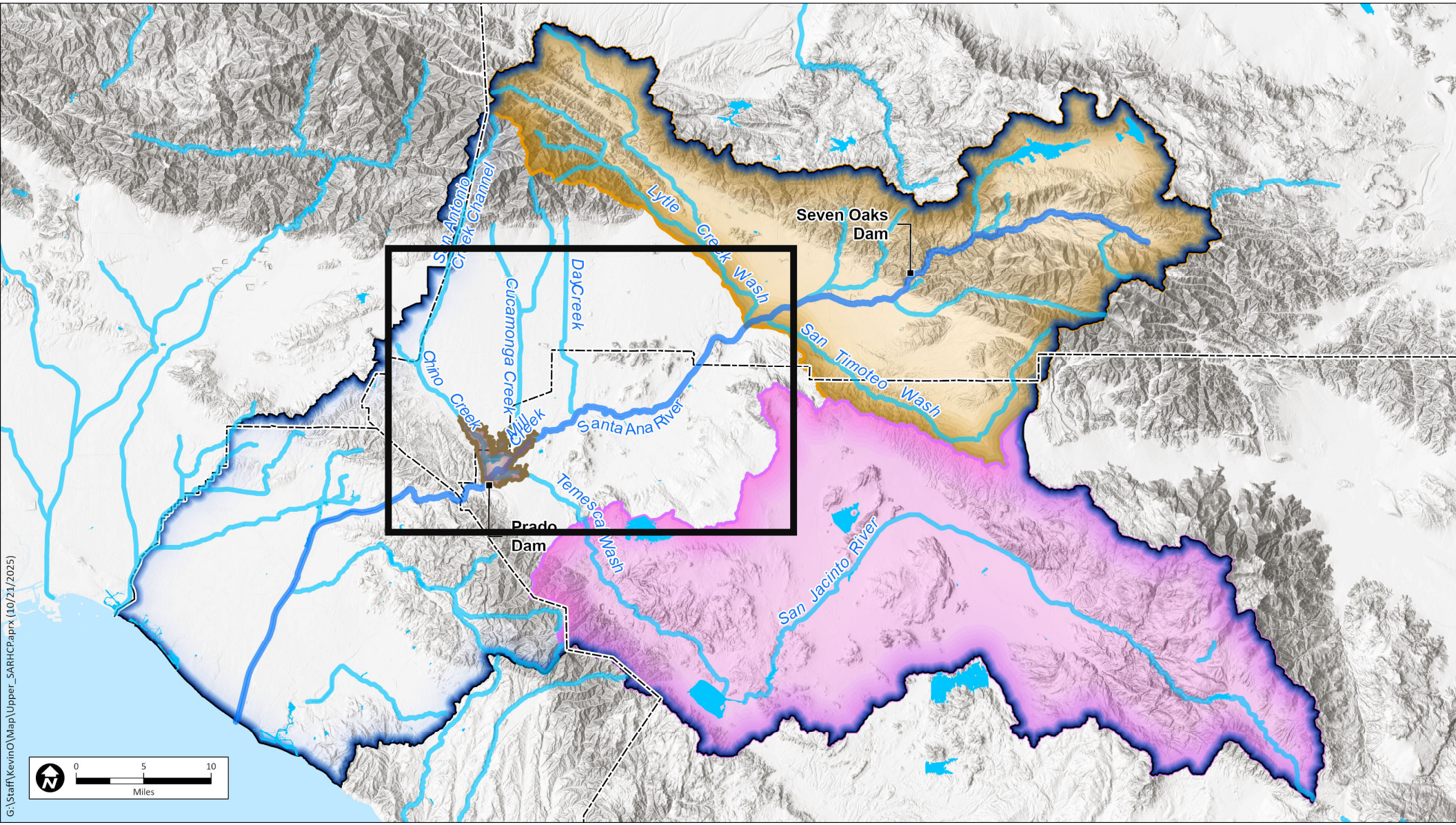
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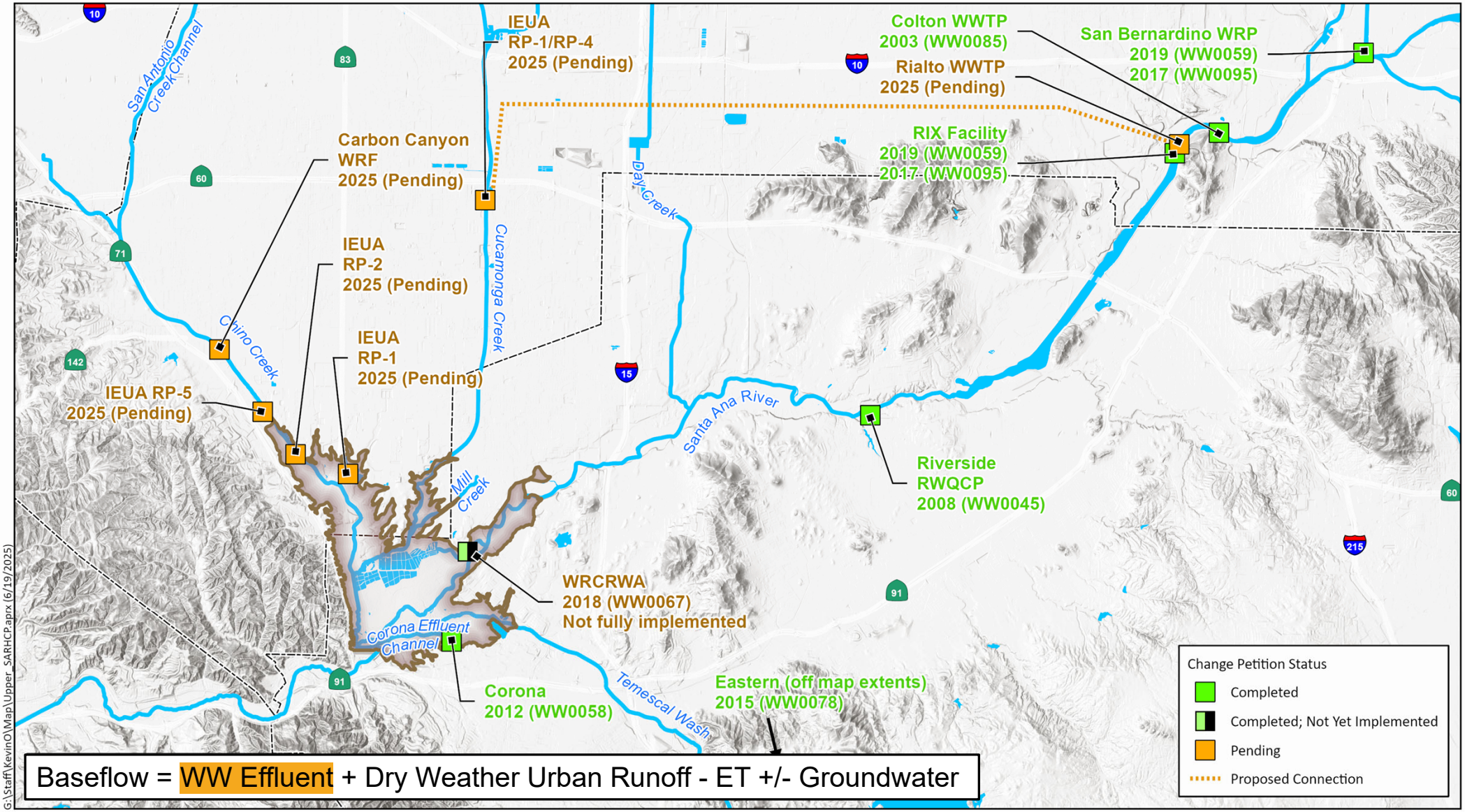
IEUA
RP-1/RP-4
2025 (Pending)
Colton WWTP
2003 (WW0085)
Rialto WWTP
2025 (Pending)
San Bernardino WRP
2019 (WW0059)
2017 (WW0095)
RIX Facility
2019 (WW0059)
2017 (WW0095)
Carbon Canyon
WRF
2025 (Pending)
IEUA
RP-2
2025 (Pending)
IEUA
RP-1
2025 (Pending)
IEUA RP-5
2025 (Pending)
Riverside
RWQCP
2008 (WW0045)
WRCRWA
2018 (WW0067)
Not fully implemented
Corona
2012 (WW0058)
Eastern (off map extents)
2015 (WW0078)
San Antonio Creek Channel
Day Creek
Cucamonga Creek
Chino Creek
Santa Ana River
Mill Creek
Corona Effluent Channel
Temescal Wash
Change Petition Status
Completed
Completed; Not Yet Implemented
Pending
Proposed Connection
Baseflow = WW Effluent + Dry Weather Urban Runoff - ET +/- Groundwater
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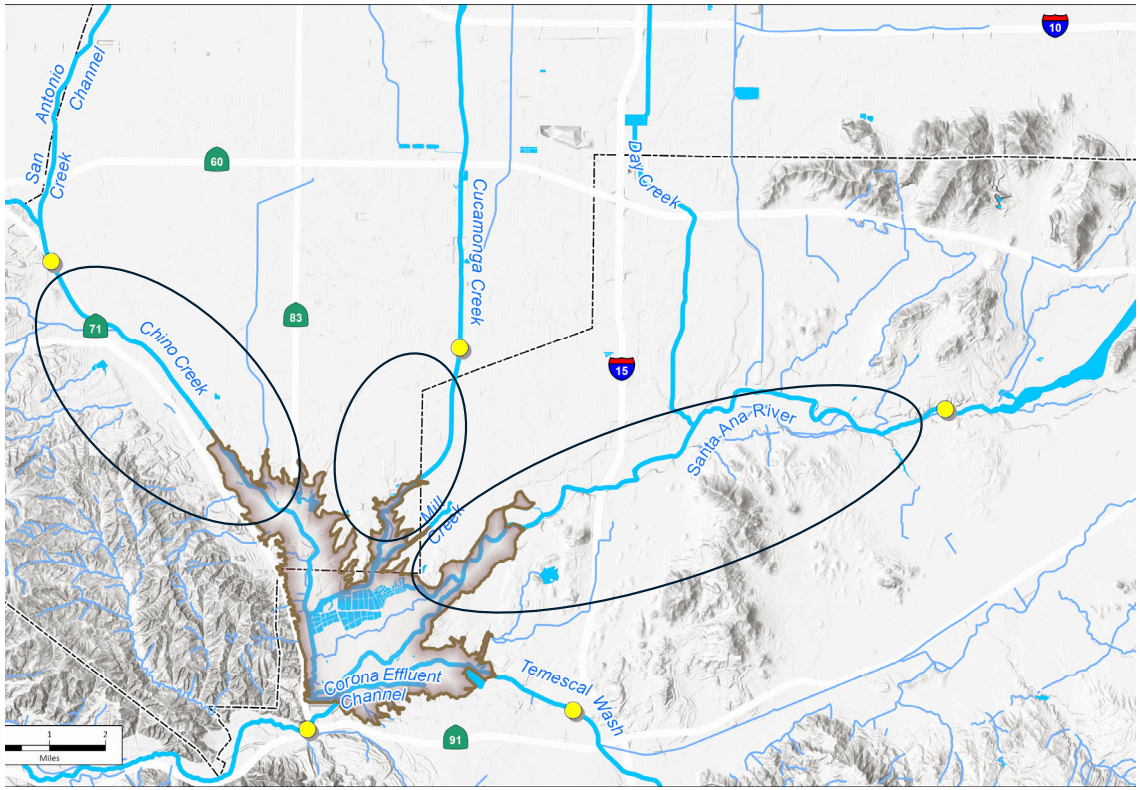
Dry Weather Urban Runoff

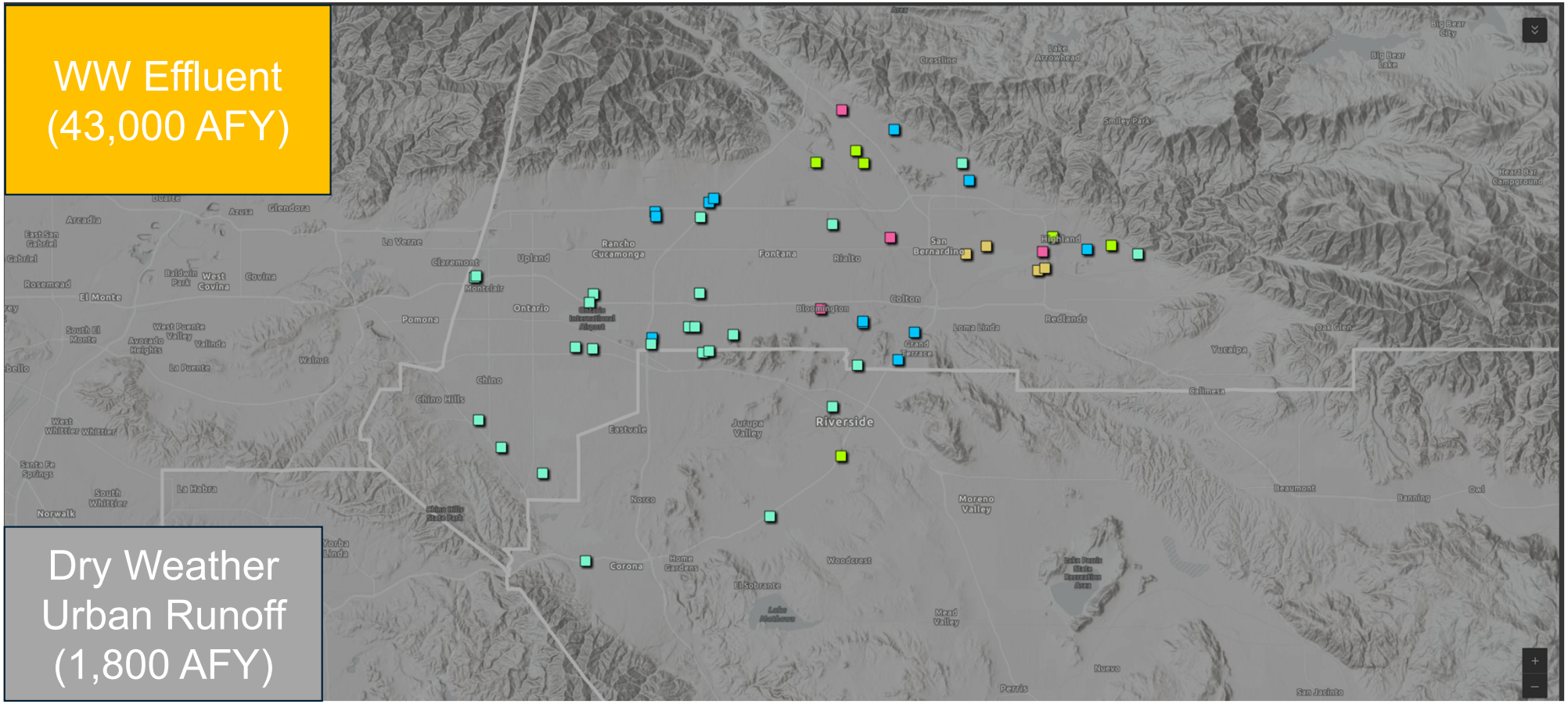
- Limited stream gage data
- Magnitude of contribution uncertain
- Regional MS4 permit is nearing completion
- Purpose protect surface water quality
  - MS4 permit effectively prohibits urban dry weather runoff



Baseflow = WW Effluent + Dry Weather Urban Runoff - ET +/- Groundwater

Upper Watershed Projects Tracking Tool

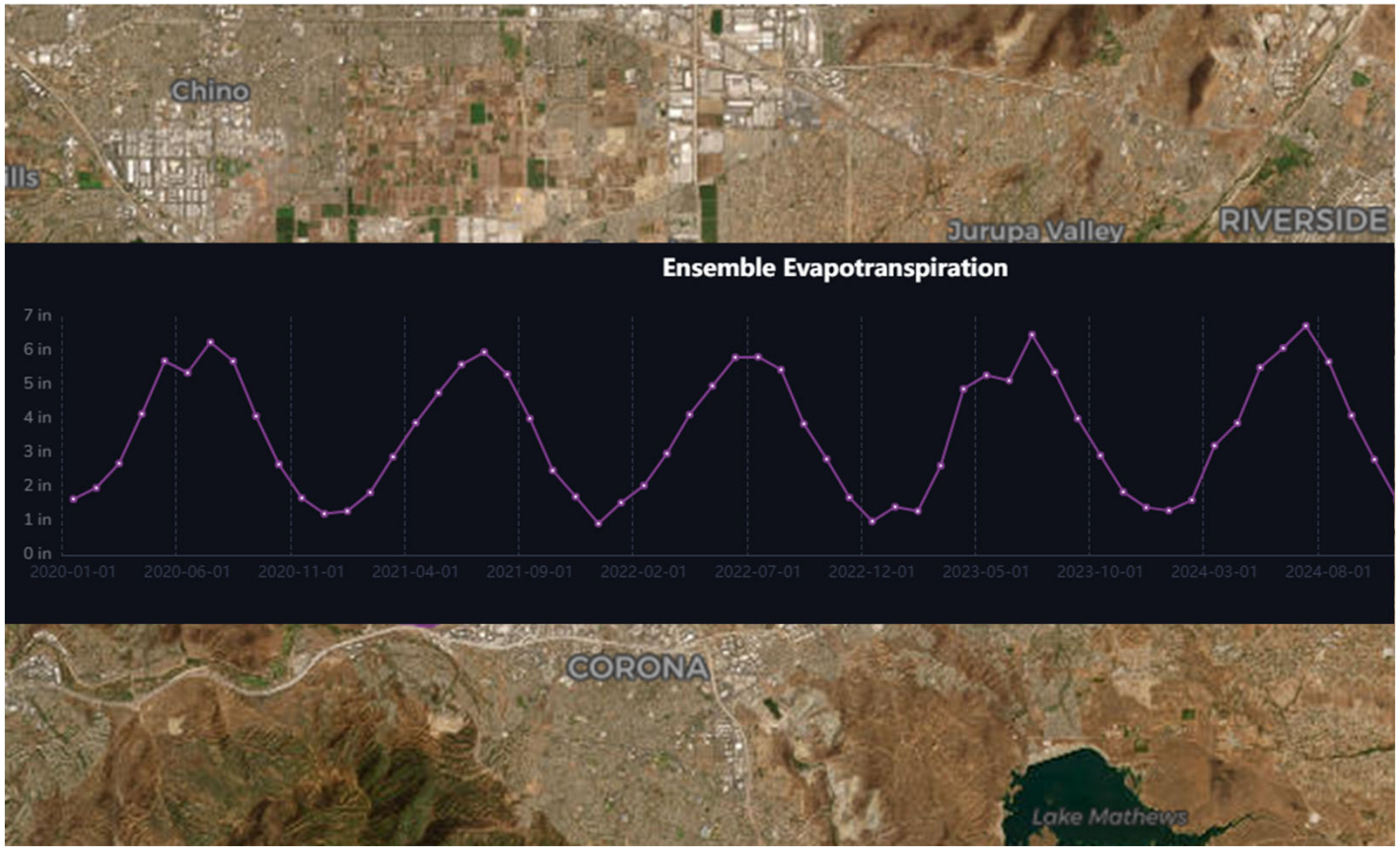
WW Effluent
(43,000 AFY)



Dry Weather
Urban Runoff
(1,800 AFY)

Baseflow = WW Effluent + Dry Weather Urban Runoff - ET +/- Groundwater

Evapotranspiration or ET



Definition: Water returning to the atmosphere through evaporation and plant transpiration

- Dependent on temperature, wind, plant type (like Arundo)
- ET can be estimated using satellite imaging
- OCWD exploring and evaluating applications

* Source: OpenET FARMS

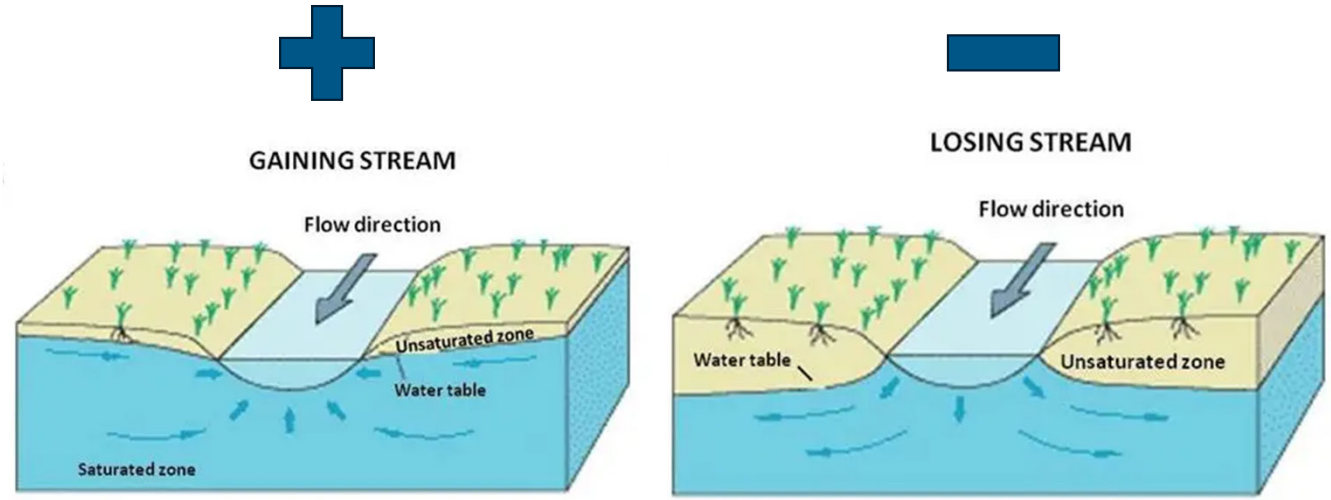
Baseflow = WW Effluent + Dry Weather Urban Runoff - ET +/- Groundwater

Upper SAR Groundwater Management

Management of groundwater basins in the upper watershed impact baseflows

This is dynamic and difficult to predict and quantify

Concern for Riparian/Aquatic Habitat



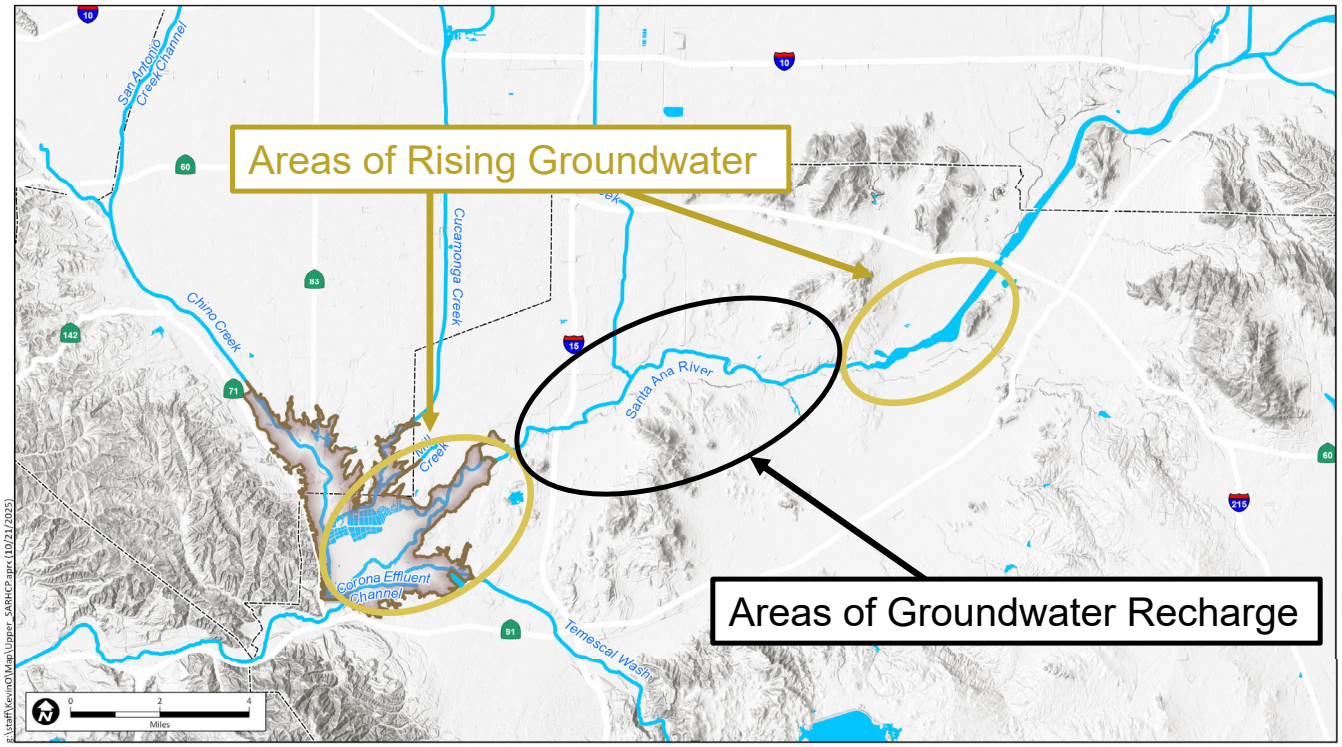
Baseflow = WW Effluent + DWUR - ET +/- Groundwater

Upper SAR Groundwater Management

Management of groundwater basins in the upper watershed impact baseflows

This is dynamic and difficult to predict and quantify

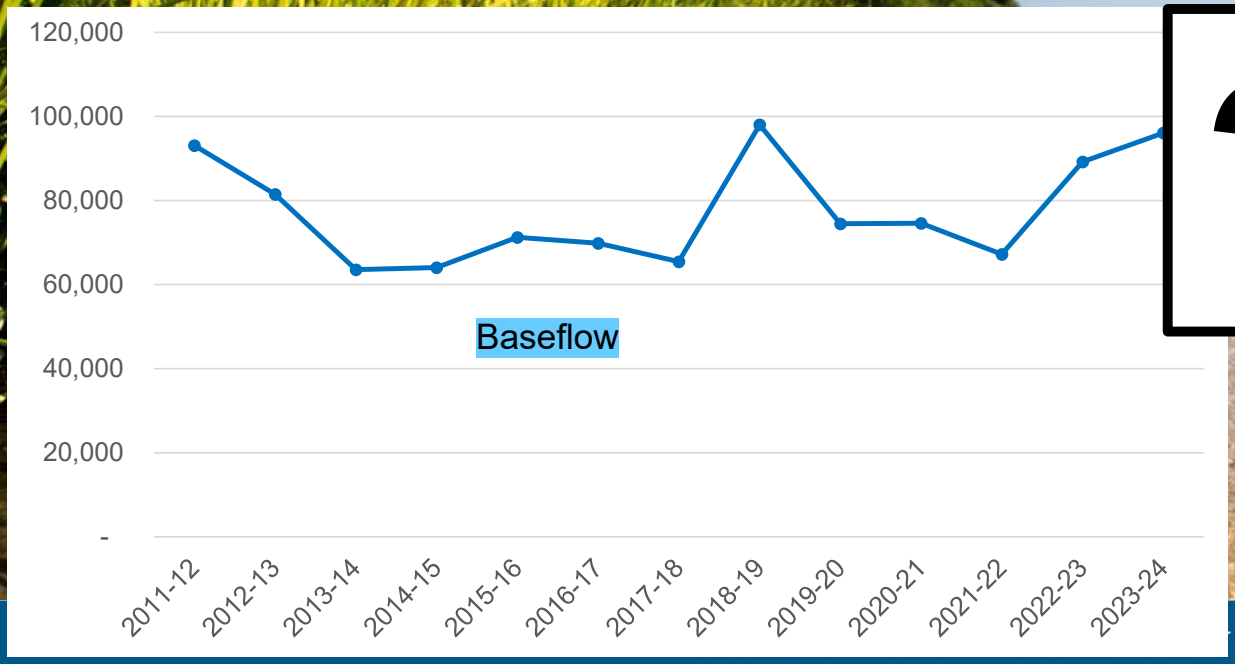
Concern for Riparian/Aquatic Habitat



Baseflow = WW Effluent + DWUR - ET +/- Groundwater

Long Term Baseflow Expectations

Baseflow = WW Effluent + DWUR - ET +/- Groundwater



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Additional Considerations

- Urbanization of the upper watershed should increase influent to WW facilities
- Arundo Removal
- Developing new tools to quantify and anticipate changes
- Magnitude and timing of projects/changes being closely monitored

Thank You!

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