PALMDALE WATER DISTRICT

A CENTURY OF SERVICE

March 19, 2025

AGENDA FOR REGULAR MEETING OF THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT TO BE HELD AT 2029 EAST AVENUE Q, PALMDALE

MONDAY, MARCH 24, 2025

6:00 p.m.

NOTES: To comply with the Americans with Disabilities Act, to participate in any Board meeting please contact Danielle Henry at 661-947-4111 x1059 at least 48 hours prior to a Board meeting to inform us of your needs and to determine if accommodation is feasible.

Additionally, an interpreter will be made available to assist the public in making **comments** under Agenda Item No. 4 and any action items where public input is offered during the meeting if requested at least 48 hours before the meeting. Please call Danielle Henry at 661-947-4111 x1059 with your request. (PWD Rules and Regulations Section 4.03.1 (c))

Adicionalmente, un intérprete estará disponible para ayudar al público a hacer **comentarios** bajo la sección No. 4 en la agenda y cualquier elemento de acción donde se ofrece comentarios al público durante la reunión, siempre y cuando se solicite con 48 horas de anticipación de la junta directiva. Por favor de llamar Danielle Henry al 661-947-4111 x1059 con su solicitud. (PWD reglas y reglamentos sección 4.03.1 (c))

Agenda item materials, as well as materials related to agenda items submitted after distribution of the agenda packets, are available for public review at the District's office located at 2029 East Avenue Q, Palmdale or on the District's website at https://www.palmdalewater.org/governance/board-activity/2025-meeting-agendas-minutes/ (Government Code Section 54957.5). Please call Danielle Henry at 661-947-4111 x1059 for public review of materials.

PUBLIC COMMENT GUIDELINES: **The prescribed time limit per speaker is three-minutes. Please refrain from public displays or outbursts such as unsolicited applause, comments, or cheering. Any disruptive activities that substantially interfere with the ability of the District to conduct its meeting will not be permitted, and offenders will be requested to leave the meeting. (PWD Rules and Regulations, Appendix DD, Sec. IV.A.)**

Each item on the agenda shall be deemed to include any appropriate motion, resolution, or ordinance to take action on any item.

1) Pledge of Allegiance/Moment of Silence.
2) Roll Call.
3) Adoption of Agenda.
4) Public Comments for Non-Agenda Items.

5) Presentations:

5.1) None at This Time.

6) Action Items - Consent Calendar (The public shall have an opportunity to comment on any action item on the Consent Calendar as the Consent Calendar is considered collectively by the Board of Directors prior to action being taken.)

6.1) Approval of Minutes of Regular Board Meeting held March 10, 2025.

6.2) Payment of Bills for March 24, 2025.

6.3) Approval of Memorandum of Understanding between Kern County Water Agency and Palmdale Water District to Evaluate Programs for Improved Water Management of the State Water Project. (No Budget Impact – Resource and Analytics Director Bolanos)

6.4) Approval to Ratify Sponsorship of the AV ALTA Soccer Team for the 2025 Season. ($2,500.00 – Budgeted – Public Affairs Director Shay)

6.5) Approval of Contract with Power Flow Products, Inc. for the Replacement of Three Rotating Assemblies at the 3M Low-Head Booster Station. ($55,358.00 – Non-Budgeted – Project No. 25-603 – Facilities Manager Wall)

7) Action Items – Action Calendar (The public shall have an opportunity to comment on any action item as each item is considered by the Board of Directors prior to action being taken.)

7.1) Consideration and Possible Action on Approval of Public Member to the Palmdale Recycled Water Authority (PRWA) Board. (No Budget Impact – General Manager LaMoreaux)

7.2) Public Hearing to Consider Modifying Palmdale Water District's Policy Regarding Capital Impact Fees for New Water Service Connections. (Assistant General Manager Rogers)

7.3) Consideration and Possible Action on Adoption of Resolution No. 25-2 being a Resolution of the Board of Directors of the Palmdale Water District Modifying the Policy Regarding Capital Impact Fees for New Water Service Connections and Adopting the Updated Water Supply Fees. (No Budget Impact – Assistant General Manager Rogers)

7.4) Consideration and Possible Action on Authorizing Staff to Execute the Third-Year Amendment (Amendment No. 2) to Professional Services Agreement with Stantec Consulting Services, Inc. for Program Management Services for Pure Water AV. ($3,514,952.00 – Not-to-Exceed – Budgeted – Project No. 22-65x – Engineering Manager Bader)

7.5) Consideration and Possible Action on Authorizing the General Manager to Execute a Professional Services Agreement with Twining, Inc. to Provide Geotechnical and Special Inspection Services for the Pure Water AV Project. ($53,388.92 – Not-To-Exceed – Budgeted – Project No. 22-653 – Engineering Manager Bader)

7.6) Consideration and Possible Action on Authorizing the General Manager to Execute a Professional Services Agreement with Kyle Groundwater, Inc. to Provide Professional Hydrogeological Services for the Pure Water AV Project. ($193,666.00 – Not-To-Exceed – Budgeted – Project No. 22-656 – Engineering Manager Bader)

7.7) Consideration and Possible Action on Authorizing Staff to Enter Into an Agreement with Petersen Ranch Mitigation Bank to Reserve and Purchase Environmental Credits to Support the Construction of the Palmdale Ditch Conversion Project. ($3,747,000.00 – Budgeted – Project No. 21-613 – Engineering Manager Bader)

7.8) Consideration and Possible Action on Authorization of the Following Conferences, Seminars, and Training Sessions for Board and Staff Attendance within Budget Amounts Previously Approved in the 2025 Budget:

a) None at This Time.

8) Information Items:

8.1) Reports of Directors:

a) Standing Committees; Organization Appointments; Agency Liaisons:

1) Antelope Valley East Kern Water Agency (AVEK) Meeting – March 11. (Director Dino, Board Liaison/President Mac Laren-Gomez, Alt.)

2) Palmdale Fin & Feather Club Meeting – March 15. (Director Wilson/Director Kellerman, Alt.)

3) Palmdale Recycled Water Authority (PRWA) – March 17. (Director Kellerman/Director Wilson/President Mac Laren-Gomez, Alt.)

b) General Meetings Reports of Directors.

8.2) Report of General Manager.

a) Department Activity Updates:

1) Human Resources Department. (Human Resources Director Garcia)

b) March 2025 Written Report of Activities through February 2025.

8.3) Report of General Counsel.

9) Board Members' Requests for Future Agenda Items.

10) Adjournment.

Dennis D. LaMoreaux

DENNIS D. LaMOREAUX,
General Manager

DDL/dh

BOARD MEMORANDUM

DATE: March 24, 2025

TO: **BOARD OF DIRECTORS**

FROM: Mrs. Claudia Bolanos, Resource and Analytics Director

VIA: Mr. Dennis D. LaMoreaux, General Manager

RE: ***APPROVAL OF MEMORANDUM OF UNDERSTANDING BETWEEN KERN COUNTY WATER AGENCY AND PALMDALE WATER DISTRICT TO EVALUATE PROGRAMS FOR IMPROVED WATER MANAGEMENT OF THE STATE WATER PROJECT. (NO BUDGET IMPACT – RESOURCE AND ANALYTICS DIRECTOR BOLANOS)***

Recommendation:

Staff recommends that the Board authorizes staff to enter a Memorandum of Understanding with Kern County Water Agency (KCWA) to further evaluate possible programs that would improve water management of the State Water Project.

Alternative Options:

The alternative option is to not sign the Memorandum of Understanding.

Impact of Taking No Action:

If we take no action, it may limit the ability for Palmdale Water District to participate in future programs that could help with water management of the State Water Project with Kern County Water Agency.

Background:

This Memorandum of Understanding (MOU) is intended to address the long-term needs of State Water Contractors and Kern County Water Agency Member Units. The purpose of this MOU is to provide a defined period, objectives, and example opportunities to explore agreements to achieve these goals. This MOU is intended to provide an opportunity for State Water Contractors to work directly with the Kern County Water Agency in evaluating larger formal programs and directly with Member Units to evaluate more niche programs.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiative No. 1 – Water Resource Reliability.

This item directly relates to the District's Mission Statement.

Budget:

This item has no budget Impact

Supporting Documents:

- Memorandum of Understanding between Kern County Water Agency, and Palmdale Water District to Evaluate Programs for Improved Water Management of the State Water Project

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding ("MOU") is entered into this ____ day of _____, 2025 (the "Effective Date") by and between Kern County Water Agency, a water agency of the State of California formed under Chapter 99 of the Water Code Appendix (the "Agency"), and Palmdale Water District ("Contractor"), with respect to the following facts:

RECITALS

A. The Agency and Contractor are parties to contracts (the "SWP Contracts") with the State of California Department of Water Resources ("DWR") to participate in the State Water Resources Development System, also known as the State Water Project.

B. Agency and Contractors desire to cooperate over approximately 18 months to identify and evaluate possible arrangements for collaboration on water management to optimize allocation of costs and benefits, through possible transfers or exchanges of some or all of their respective Table A allocations in order to optimize the allocation of costs and benefits resulting from their State Water Project allocations.

C. Agency and Contractors desire to further consider the potential arrangements specified herein in accordance with the terms and conditions set forth below.

TERMS AND CONDITIONS

Parties signatory to this MOU propose the following Terms and Conditions to implement the optimization of the allocation of costs and benefits.

A. Purpose

a. This MOU is intended to address the long-term needs of State Water Contractors (Contractors) and Kern County Water Agency Member Units (Member Units). The Delta Conveyance Project ("DCP") entails a large commitment of funds. As such, parties participating in the DCP, as well as others, have the goals of improved cost effectiveness and/or water supply reliability. The purpose of this MOU is to provide a defined period, objectives, and example opportunities to explore agreements to achieve these goals. This MOU is intended to provide an opportunity for Contractors to work directly with the Agency in evaluating larger formal programs and directly with Member Units to evaluate more niche programs to meet more specific needs.

B. Objectives

a. These objectives are to: (1) Reduce regional reliance on any one water source and diversify supplies to enable and enhance flexibility as conditions change; (2) Improve physical infrastructure, or access to physical infrastructure, to

store, move, and share water more flexibly and integrate water management through shared use of resources, science, data, and technology; (3) Optimize and diversify SWP supplies and groundwater banking; and (4) Develop funding opportunities for Member Units that maximize regional resources and provide opportunities to re-invest water supplies and infrastructure.

C. Relationship to the Delta Conveyance Project.

a. Contractors participating in the planning and construction of the DCP may be signatories to this MOU. Contractors not participating in the planning and construction of the DCP may also be signatories to this MOU.

b. Any water type can be used in the development of agreements to meet the MOU objectives set forth in Item B, above, including but not limited to water derived from the DCP.

D. Potential Agreements

a. **Development of Groundwater Banking Opportunities for Contractors Throughout California**. Groundwater banking offers several significant benefits, including enhanced water security by storing excess surface water for future use during droughts and improved aquifer health through managed recharge that can reduce the potential for land subsidence. Banking opportunities may include but are not limited to the following:

i. The development of a groundwater bank solely for any particular Contractor.
ii. The leasing of groundwater banking capacity for use during wet periods and extraction during dry periods.
iii. The use of groundwater banking in an exchange.
iv. The development of a groundwater bank dedicated to the participants of the DCP.

b. Development of a Dry/Wet Year Water Exchange Program Administered by the Agency. As the climate changes, swings between wet and dry years are expected to become even more extreme, which means greater fluctuation in the water resources for Contractor imports. A tool to mitigate these unpredictable changes in hydrology are exchanges. These exchanges, which can be structured in a variety of ways, can provide dry year water to those with limited storage and wet year water to those with greater access to storage.

c. **Long-term Wet Year/Dry Year Exchange of Table A Water or a Combination of DCP and Table A Water – Among Two Parties.** These exchanges would occur between a particular Contractor and Member Unit. Exchange of Table A water could be limited to a prescribed allocation.

d. **Coordinated Water Sales Program, in Cooperation with the State of California Department of Water Resources, Resources to Supply the Purchase Program for the Agreements to Support Healthy Rivers and Landscapes.** The Agency, in coordination with some Contractors, could develop and facilitate the short-term transfers program to coordinate same-year transfers for purposes of timing environmental flows.

e. **Short-term Operational Exchange Program for Operations and Human Health and Safety Purposes**. This program purpose would be to address vital operational needs of Contractors, as well as Human Health and Safety needs for the Department of Water Resources. The program would develop and execute same-year exchanges or transfers of water among users for purposes of operational or safety need.

f. **Coordinated Water Sales Program Administered by the Agency.** These transfers (i.e. water sales) would occur between the Agency and Contractors or a particular Contractor and Member Units. The Agency, in coordination with participating Contractors and Member Unit, would facilitate the short-term transfers program to coordinate same-year transfers.

F. Nonbinding Nature of this MOU

a. Nothing in this MOU shall be deemed to a binding agreement in regard to the planning, strategies, and topics as set forth herein. There shall be no binding agreement between the parties on any such planning, strategies and topics unless or until any binding agreement is entered into by and between any of the parties.

b. Nothing in this MOU shall amend, alter, modify, or affect the terms and conditions of any prior written agreement between the Agency, its Member Units, or the Contractors executed before the Effective Date of this MOU.

IN WITNESS WHEREOF, the parties hereto have executed this MOU as of the day and year indicated below.

AGENCY

Kern County Water Agency	Palmdale Water District
By: _____	By: _____
Its: _____	Its: _____
Date: _____	Date: _____

AGENDA ITEM NO. 6.4

BOARD MEMORANDUM

DATE: March 24, 2025

TO: **BOARD OF DIRECTORS**

FROM: Ms. Judy Shay, Public Affairs Director

VIA: Mr. Dennis D. LaMoreaux, General Manager

RE: ***APPROVAL TO RATIFY SPONSORSHIP OF THE AV ALTA SOCCER TEAM FOR THE 2025 SEASON. ($2,500 – BUDGETED – PUBLIC AFFAIRS DIRECTOR SHAY)***

Recommendation:

Staff recommends the Board ratify the $2,500 sponsorship of AV ALTA for the 2025 season.

Alternative Options:

The Board can take no action.

Impact of Taking No Action:

The sponsorship will not be ratified without Board action.

Background:

The District has been named a founding sponsor of the AV ALTA soccer league by being a bronze sponsor of its inaugural 2025 season. This is a great opportunity for the District to support the community and be visible at events for outreach purposes. Another benefit is employees will have the opportunity to enjoy events within the community.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiative No. 2 – Organizational Excellence.

This item is under Strategic Initiative No. 5 – Regional Leadership.

Budget:

This item will be funded through the general funds under GL Account 1-02-4190-700.

Supporting Documents:

- AV ALTA Sponsorship Flyer

AV ALTA FC
2025 LOCAL BUSINESS PACKAGES

- Grow Your Business
- Entertain Your Clients
- Reward Your Employees
- Support Your Community!

BRONZE - $2,500

- Four season tickets for 17 home matches*
- 20 group tickets for one home match
- On-field group photo opportunity
- Scoreboard and PA recognition at all home matches
- Exclusive in-Stadium networking event

SILVER - $3,750

- Includes all Bronze Benefits, plus
- One 2' X 2' permanent concourse sign

GOLD - $5,000

- Includes all Bronze Benefits, plus
- One 4' X 4' permanent concourse sign

Secure your package today! Contact:

tickets@avaltafc.com

* Approximately $25 per ticket per match. Upgrades available.

BOARD MEMORANDUM

DATE: March 24, 2025

TO: **BOARD OF DIRECTORS**

FROM: Mr. Wendell Wall, Facilities Manager

VIA: Mr. Scott L. Rogers, Assistant General Manager

Mr. Dennis LaMoreaux, General Manager

RE: ***APPROVAL OF CONTRACT WITH POWER FLOW PRODUCTS, INC. FOR THE REPLACEMENT OF THREE ROTATING ASSEMBLIES AT THE 3M LOW-HEAD BOOSTER STATION. ($55,358.00 – NON-BUDGETED – PROJECT NO. 25-603 – FACILITIES MANAGER WALL)***

Recommendation:

Staff recommends that the Board approve and authorize staff to enter into a contract with Power Flow Products, Inc. to purchase three rotating assemblies and associated material for the 3M low head booster pumps that pump water into the 2800 pressure zone.

Alternative Options:

The District can choose not to approve this Proposal.

Impact of Taking No Action:

The District will not be able to move forward with the rehabilitation of 6M reservoir and meet the system demands in the 2800 pressure zone when 6M is taken out of service.

Background:

When the 6M is taken out of service for rehabilitation, the 3M will act as the Clearwell for the water treatment plant. Three of the low-head booster pumps at the 3M booster station need three rotating assemblies replaced to pump water into the 2800 pressure, which is vital to delivering water to this zone. The pumps were originally installed in 1987 and need to be brought to good working condition before being placed back into service.

Staff solicited quotes from three vendors to provide costs to supply three rotating assemblies and related equipment, which are listed below:

- Power Flow Products Inc. $55,358.00
- Brax Process and Pump Equipment $125,833.00
- Tri County Pump Company No Quote

Facilities staff will perform the work to replace the assemblies once they are received.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiatives No. 3 – Systems Efficiency

This item directly relates to the District's Mission Statement.

Budget:

This item is non budgeted and will be charged to Project No. 25-603

Supporting Documents:

- Proposal Power Flow Products, Inc.
- Proposal Brax Process and Pump Equipment

POWERflo PRODUCTS INC.
5573 MARKET PLACE • CYPRESS, CA 90630
800-758-4788 Fax 714-761-7285

Quote **02272025PWD**
Date: 2/27/2025
Attention: Scott Huslebus
Company: Palmdale Water District
Phone: 661-305-9640
Fax:
Email:
Pages: 1

QT	Part #	Description	Availability	Unit Price	Total Price
		Parts To Fit Aurora 411BF 10x12x12B S/N 93-10094-1			
3		700-0092-644, Rotating Assembly, 11.875" Trim ROTELM 10 X 12 X 12B 410	5-7 Weeks	$17,430.00	$52,290.00
4		364-0803-463, Case Gasket GASKET 10X12X12 (Replaces P/N 364-0803-598)	2-4 Weeks	$218.00	$872.00
2		712-0468-755, Mechanical Seal MECH SEAL 2.500ID TYPE 1	2-4 Weeks	$1,098.00	$2,196.00
1		Inbound Freight		$0.00	$0.00
				Subtotal	$55,358.00
				FOB	Factory
				Plus Factory	Freight & Tax

Best Regards,
Keith Ruegger
Keith@powerflo.com

Brax

PROCESS AND PUMP EQUIPMENT

CLSB 487325 CAGE 6U1W7 DIR 1000441272

31248 Valley Center Rd | Valley Center CA 92082 | 760 749-2209

2115 S. Hellman Suite H | Ontario CA 91761 | 909 923- 9809

3559 Landco Dr #A | Bakersfield CA 93308 | 661 432 -2729

Quote

Quote #	59386
Date	3/6/2025
Sales Person	BW
Written By	Mina Beshara
Terms	Net 30
Freight	PREPAID & ADD

Bill To:

PALMDALE WATER DISTRICT
2029 EAST AVENUE Q
PALMDALE, CA 93550-4050

Ship To:

PALMDALE WATER DISTRICT
2029 EAST AVENUE Q
PALMDALE, CA 93550

Project

Part Number	Qty	Description	Unit	Total
		FOR AURORA PUMP 411 BF 10X12X12B / SN# 93-10094-1		
BRAX CO.	3	ROTATING ASSY. (REF. QT# BB-377) LEAD TIME: 07-09 WEEKS ARO.	34,087.00	102,261.00T
BRAX CO.	4	CASING GASKET PN# 3640803463 LEAD TIME: 01-02 WEEKS ARO	264.00	1,056.00T
BRAX CO.	2	SEAL KIT WITH TYPE 1 2.500" ID BUNA-N, CARBON, NI-RESIST, BRASS/SS MECH. SEAL. (REF. QT# BB-377-1) LEAD TIME: 01-02 WEEKS ARO.	5,409.00	10,818.00T
FREIGHT	1	FREIGHT – PREPAID AND ADD ESTIMATED AND WILL BE BILLED TO THE ACTUAL AMOUNT	0.00	0.00

INSTALLATION AND START UP SERVICE AVAILABLE. PLEASE ASK YOUR BRAX REPRESENTATIVE FOR MORE DETAILS

Sales Tax (10.25%)	$11,698.84
Total	$125,833.84

CREDIT CARD PAYMENTS WILL INCUR A 3.5% FEE

ALL SALES SUBJECT TO TERMS AND CONDITIONS AT WWW.BRAXCOMPANY.COM

BOARD MEMORANDUM

DATE: March 24, 2025

TO: **BOARD OF DIRECTORS**

FROM: Dennis D. LaMoreaux, General Manager

RE: ***CONSIDERATION AND POSSIBLE ACTION ON APPROVAL OF PUBLIC MEMBER TO THE PALMDALE RECYCLED WATER AUTHORITY (PRWA) BOARD. (NO BUDGET IMPACT – GENERAL MANAGER LaMOREAUX)***

Recommendation:

Staff concurs with the recommendation of the Palmdale Recycled Water Authority (PRWA) Board members to appoint Mr. Joe Pallon as the fifth Public Board Member for the Authority.

Impact of Taking No Action:

No action would result in delaying the appointment of the public director position as stated in the Joint Powers Agreement signed by the Palmdale Water District (District) and the City of Palmdale (City).

Background:

The Palmdale Recycled Water Authority was formed by the District and the City via the "Joint Exercise of Powers Agreement Creating the Palmdale Recycled Water Authority" in September 2012. This Agreement provides for a joint appointment by the District and City of a fifth Director (Public Board Member) in addition to two Directors from each of their respective Boards. Both agencies must agree on the PRWA Public Board Member. All Board Members are appointed to serve one-year terms that may be renewed annually.

Zakeya Anson, who served as PRWA's fifth Director since 2021, did not seek reappointment when the recruitment process for the Public Board Member position was required by City policy.

Both the Palmdale City Council and the Palmdale Water District Board of Directors must now consider the applicants, the recommendation, and take action to make an appointment.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiative No. 5 – Regional Leadership.

This item is directly related to the District's Mission Statement.

Budget:

This item has no budget impact.

Supporting Documents:

- PRWA Public Board Member Candidate Applications

Palmdale Recycled Water Authority (PRWA)
Public Member Application

Please Print or Type:

Name: Joe Pallon District 5

Address: [redacted]

City: Palmdale Zip Code: 93550 Home Phone: [redacted]

Occupation: Research Assistant Bus. Phone:

Why are you interested in this position?

I believe my educational and work background has provided a solid foundation in building my interest in water policy. As a Politics and Community Studies major at UC Santa Cruz, the one major course that I excelled at the most was the California Water Law and Policy class. This was built upon further at the University of Chicago where, as a Master of Public Policy candidate, I took a Hydropolitics class that I took alongside classmates who represented local and foreign government bodies as well as NGOs. There I utilized the California Groundwater Management Act as a basis for a policy memo assignment and where I learned more of AB1739, SB1319, and SB1168.

My work has included serving as a Restoration Team Member with the Walker Basin Conservancy in Northern Nevada where responsibilities included restoring former farm and rangelands to their original native landscapes before invasive flora could take hold. The water rights of those retired agricultural properties would then be retired and the water itself be used towards bringing the Total Dissolved Solids (TDS) levels of Walker Lake to a level that would allow the restoration of the ecosystem and bring the reintroduction of key fauna such as the Lahontan Cutthroat Trout. Our work was misconstrued constantly by local farmers as taking water away from them and of which we had to navigate the intricacies of local politics and the extension of the Water Wars of old in order to continue our mission.

On a more personal level, I am a product of the water conservation awareness efforts that Palmdale Water District would have, in particular the Water Fairs they would host in the 1990s of which the likes of Aquadog (of "Don't be a water hog, be an Aquadog!" fame) was instilled in my childhood memories, as closely as remembering when the current Palmdale Water District office was being built across Avenue Q from the preschool I attended. One of my favorite books has been the more popular "Cadillac Desert"--a book that reflected on the then-alfalfa-filled field of the Antelope Valley contrasting with the fertile soil of the Central Valley--as well as "Water Follies: Groundwater Pumping and the

Considering your previous experience and activities in business, labor, professional, social or other organizations, indicate what you feel are the most important experiences and abilities that qualify you for this position.

Volunteer, Palmdale Cares trash pickup events, 2022-present
Communications Officer, Food and Agriculture Policy Group, University of Chicago Harris School of Public Policy, 2022-2023
Participant, University of Chicago Institute of Politics Policy Challenge: Saving Transit in Chicago, Spring 2022
US Team Member, University of Chicago-US Army War College International Strategic Crisis Negotiation Exercise (ISCNE), 2023
Volunteer, Glendale College Food For Thought Pantry, 2017-2018

Have you had previous public service experience on a commission or public body? If so, indicate the public agency, title of position, and duties.

No

What do you hope to accomplish as a Palmdale Recycled Water Authority Member?

To utilize my knowledge and experience to represent Palmdale residents in bringing sustainable policies in ensuring that recycled water can be utilized in options such as recharging our groundwater stores while combating possibilities of subsidence, irrigation of public facilities, and other efficient and effective purposes to ensure that every drop does count. I hope to contribute to efforts such as the Palmdale Water District Regional Recharge and Recovery Project and Pure Water AV demonstration plant.

In your opinion, what is the goal of the Palmdale Recycled Water Authority and what benefit does it provide to the citizens of Palmdale?

The goal of PRWA is to ensure the effective, efficient, and safe use of treated wastewater; the benefit it provides is ensuring that we have sustainable and secure resource policies and programs in place in order to bring us closer to more resilient and stable water accessibility especially as we deal with events that can adversely impact our water supply such as severe droughts, of which doing so is ensuring that every drop of water does not go to waste and that

List your education, highest year completed, and degrees, if any?

Master of Public Policy, University of Chicago Harris School of Public Policy, 2023
Bachelor of Arts in Community Studies and Politics, University of California, Santa Cruz, 2019
Associate of Arts in Social Sciences, Glendale Community College, 2012

REASONABLE ACCOMMODATIONS: Based on your understanding of this PRWA position, will you require any special accommodations to apply and/or participate as a member? ___ Yes _X_ No

If yes, what reasonable accommodations would be necessary to assist you in this area?

In Case of Emergency:

Whom should we notify?

[redacted] _____

Name Relationship to Applicant

Home Phone: [redacted] _____ Work Phone: _____

Physician's Name: _____ Phone: _____

Do you have any medical history that we should be aware of in the event of an emergency? (Allergies, medications, etc.)

Agreement

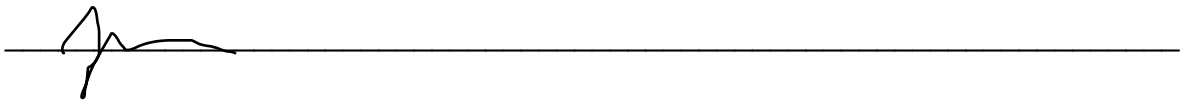
The City of Palmdale and Palmdale Water District are equal opportunity employers and do not discriminate in hiring or employment upon any basis prohibited by law, including race, color, creed, religion, age, sex (including pregnancy, childbirth and related medical conditions), cancer, national origin, genetic characteristics, genetic information, ancestry, sexual orientation, gender, gender identity, gender expression, marital status, veteran status, disability, or any other basis protected by applicable law. None of the questions or information sought in this application are intended to discriminate based upon any status protected by law. If you need reasonable accommodation in completing this application, or in any other part of the application process, please contact the Palmdale City Clerk's Office at 661/267-5151.

I certify that all statements on this application are true and complete to the best of my knowledge. I hereby authorize the City of Palmdale to investigate any information contained in this application. I understand that as part of the final selection process I will be required to pass a livescan fingerprint scan submission via the California Department of Justice. I understand that information collected during this background check will be limited to that appropriate to determining my suitability for particular types

of work and that such information collected during the check will be kept confidential. I understand that false or misleading statements shall be sufficient grounds for disqualification from this position.

I hereby agree to the Agreement set forth on this 19 day of December, 2024.

Signature:



If you wish, you may attach a copy of your resume to this application.

Please return the completed application to the Office of the City Clerk, City of Palmdale, 38300 Sierra Highway, Suite C, Palmdale, CA 93550. For additional information, you may call the City Clerk's office at (661) 267-5151.

JOE PALLON (HE/HIM)

[redacted] [redacted] [redacted]

EDUCATION

Harris School of Public Policy, University of Chicago **Chicago, IL**
Master of Public Policy July 2023
- Member of Harris Community Action, HarrisTech, Science Policy Group, International Development Policy Association, and the Urban Policy Student Association

University of California, Santa Cruz **Santa Cruz, CA**
Bachelors of Arts, Community Studies and Politics August 2019
- Concentration in Comparative Politics with a focus on East Asia and Transportation

EXPERIENCE

HEART OF LOS ANGELES **Los Angeles, CA**
Research Assistant May 2024 - Present
- Researched funding systems for existing best-practice after school sectors across the country
- Followed leads from Executive Director's national Every Hour Counts network and CA3 leadership
- Contributed to the creation of a Policy Analysis/Brief for local leaders with recommendations

CENTER FOR TECH AND CIVIC LIFE **Chicago, Illinois/Remote**
Quality Assurance Fellow July 2024 - November 2024
- Conducted quality checks on state and national candidate datasets for the Reflective Democracy Campaign
- Researched, compiled, and utilized sources of truth to support the quality assurance process
- Utilized key software such as Excel, Airtable, and Slack to compile, organize, and coordinate with team members

MICHIANA AREA COUNCIL OF GOVERNMENTS **South Bend, Indiana**
Transit Planner September 2023 - February 2024
- Led customer service feedback and inquiries regarding scheduled bus and Access vans
- Generated and edited press releases, Powerpoint presentations, and social media content
- Liaised between local, state, and federal agencies in communicating financial and operational priorities

UNIVERSITY OF CHICAGO LIBRARY **Chicago, Illinois**
Bookstacks Student Assistant November 2020 - June 2023
- Managed hundreds of returned books to designated sections and floors during shifts
- Troubleshooted heavily impacted sections to ensure better accessibility of material in library's five floors
- Supported patron inquiries and in locating specific literature within the bookstacks

CHICAGO TRANSIT AUTHORITY **Chicago, Illinois**
Labor Relations Intern April 2022 - May 2023
- Organized and uploaded data on grievance cases into databases for tracking through the process
- Utilized database software such as iManage & Registry Monitoring Insurance Services to track worker cases for arbitration
- Attended investigative meetings between Labor Relations staff and union representatives

INTERNATIONAL RESCUE COMMITTEE **Fort Hood, Texas**
Processing Specialist September 2021
- Processed and quality checked immigration documents for Special Immigrant Visa holders evacuated from Afghanistan
- Applied US State Department proprietary software to better track SIV cases once families leave the bases

WALKER BASIN CONSERVANCY **Yerington, Nevada**
Restoration Team Member March 2020 - September 2020
- Volunteered for community outreach efforts with local stakeholders
- Participated in invasive flora mitigation while supporting native species to propagate in former farmlands

SKILLS

Proficiency in Microsoft Office, Google Docs, R, Adobe Creative Suite, and Asana

CERTIFICATION

Customer Service Professional Certificate November 2023
Zendesk

EXTRACURRICULAR ACTIVITIES

Member of the American Library Association, American Political Science Association, Friends of the Lancaster CA Library, National Space Society, Pilipino American Unity for Progress, the Planetary Society, National Space Society, RailPAC, Rail Passengers Association, and World Airline Historical Society

BRYAN GUZMAN

LEGAL ASSISTANT & NOTARY PUBLIC

[redacted]
[redacted]

"Committed to Sustainable Growth, Community Engagement, and Efficient Service"

SKILLS

Bilingual: English/Spanish; speak/write
High level of commitment

EDUCATION

CA SCHOOL OF LAW — Aug 2023 - Present, Juris Doctor Candidate, 2nd year (online school)

DEVRY UNIVERSITY — School Credit

CHARTER COLLEGE — Legal Assistant Diploma
Grad Date 2014

ANTELOPE VALLEY COLLEGE — Courses Completed
2012 - 2013

LITTLE ROCK HIGH — High School Diploma
Grad Date 2012

WORK EXPERIENCE

DERRYBERRY & ASSOCIATES LLP — LEGAL ASSISTANT & NOTARY PUBLIC
JULY 2024 - PRESENT

THOMPSON|VONTUNGELN — PARALEGAL & NOTARY PUBLIC
MAY 2022 - JULY 2024

UBER — UBER EATS
JAN 2022 - MAY 2022

CAMPANO LAW GROUP — LEGAL ASSISTANT
AUG 2020 - JAN 2022

EXCEPTIONAL DENTISTRY — NEW PATIENT & TREATMENT COORDINATOR
JULY 2019 - JULY 2020

CAMPANO LAW GROUP — LEGAL ASSISTANT
DECEMBER 2018 - JUNE 2019

CRUNCH FITNESS — SALES REPRESENTATIVE
DECEMBER 2016 - DECEMBER 2018

LOS ANGELES COUNTY DOCUMENT SERVICES INC. (GLENDALE) — ASSISTANT
2014-2016

MCDONALD'S — CREW TRAINER
2012 - 2014

INTERNSHIPS

2018 — THE LAW OFFICES OF RICHARD LOA (MAYOR, **CITY OF PALMDALE**)

2018 — THE LAW OFFICES OF JONATHAN B. LAFRANCE PA

EXTERNSHIPS

2014 — BJ THOMPSON PROFESSIONAL LEGAL AID

2014 — BASTA INC.

PALMDALE RECYCLED WATER AUTHORITY

PRWA

Palmdale Recycled Water Authority (PRWA)
Public Member Application

Please Print or Type:

Name: BRYAN YOBANY GUZMAN District 1

Address: [redacted]

City: PALMDALE Zip Code: 93550 Home Phone: [redacted]

Occupation: Legal Assistant & Mobile Notary Public Bus. Phone: [redacted]

Why are you interested in this position?

I am passionate about contributing to the sustainable development and management of water resources in Palmdale. With a strong interest in environmental stewardship, I am eager to support the Palmdale Recycled Water Authority's initiatives to promote the use of recycled water for irrigation and other beneficial uses. My experience as a legal assistant has equipped me with organizational and communication skills, which I look forward to applying in this role. This opportunity aligns with my long-term goal of engaging in local governance and making a positive impact on the community.

Considering your previous experience and activities in business, labor, professional, social or other organizations, indicate what you feel are the most important experiences and abilities that qualify you for this position.

My experience as a legal assistant has given me strong organizational, communication, and problem-solving skills, which are critical for board responsibilities. I manage complex documents, stay detail-oriented, and collaborate with clients and colleagues, ensuring tasks are completed efficiently. Additionally, my interest in environmental sustainability and local initiatives aligns well with the goals of the Palmdale Recycled Water Authority. These skills and my proactive learning approach make me well-qualified for this role.

Have you had previous public service experience on a commission or public body? If so, indicate the public agency, title of position, and duties.

Although I haven't served on a commission or public body, my role as a Notary Public, appointed by the State of California, has provided me with valuable experience in carrying out official duties with integrity and impartiality, such as witnessing signatures, administering oaths, and ensuring document legality. Additionally, my work in estate planning and trust administration has deepened my understanding of public trust, as I help clients formalize their wishes through legally binding documents like wills, trusts, and powers of attorney. This experience requires a combination of technical expertise, attention to detail, and professionalism, which I believe make me well-suited for a role in public service.

What do you hope to accomplish as a Palmdale Recycled Water Authority Member?

As a Palmdale Recycled Water Authority Member, I hope to contribute to the responsible development and promotion of recycled water use in our community. I aim to support sustainable practices that enhance water conservation, drive the efficient use of resources, and ensure that the authority's activities align with the best interests of Palmdale residents. My goal is to help implement strategies that benefit both the environment and the community while fostering transparency and trust.

In your opinion, what is the goal of the Palmdale Recycled Water Authority and what benefit does it provide to the citizens of Palmdale?

The goal of the Palmdale Recycled Water Authority is to develop, promote, and manage recycled water resources for beneficial uses such as irrigation and groundwater recharge. By utilizing recycled water, the Authority helps conserve potable water, reduces environmental impact, and ensures long-term water sustainability for Palmdale. This initiative provides significant benefits to residents by supporting responsible water usage, improving water security, and fostering sustainable community development.

List your education, highest year completed, and degrees, if any?

I am currently in my second year at California School of Law, an online law school, working toward a Juris Doctor (J.D.). Additionally, I have earned credits from DeVry University online and completed a Legal Assistant diploma from Charter College. I also attended Antelope Valley College (AVC), where I completed additional credits in various courses.

REASONABLE ACCOMMODATIONS: Based on your understanding of this PRWA position, will you require any special accommodations to apply and/or participate as a member? ___ Yes ✓ No

If yes, what reasonable accommodations would be necessary to assist you in this area?

In Case of Emergency:

Whom should we notify? [redacted]

Name Relationship to Applicant

Home Phone [redacted] Work Phone: _____

Physician's Name: NA Phone: _____

Do you have any medical history that we should be aware of in the event of an emergency? (Allergies, medications, etc.)
NONE

Agreement

The City of Palmdale and Palmdale Water District are equal opportunity employers and do not discriminate in hiring or employment upon any basis prohibited by law, including race, color, creed, religion, age, sex (including pregnancy, childbirth and related medical conditions), cancer, national origin, genetic characteristics, genetic information, ancestry, sexual orientation, gender, gender identity, gender expression, marital status, veteran status, disability, or any other basis protected by applicable law. None of the questions or information sought in this application are intended to discriminate based upon any status protected by law. If you need reasonable accommodation in completing this application, or in any other part of the application process, please contact the Palmdale City Clerk's Office at 661/267-5151.

I certify that all statements on this application are true and complete to the best of my knowledge. I hereby authorize the City of Palmdale to investigate any information contained in this application. I understand that as part of the final selection process I will be required to pass a livescan fingerprint scan submission via the California Department of Justice. I understand that information collected during this background check will be limited to that appropriate to determining my suitability for particular types

of work and that such information collected during the check will be kept confidential. I understand that false or misleading statements shall be sufficient grounds for disqualification from this position.

I hereby agree to the Agreement set forth on this 13 day of December, 20 24.

Signature:

If you wish, you may attach a copy of your resume to this application.

Please return the completed application to the Office of the City Clerk, City of Palmdale, 38300 Sierra Highway, Suite C, Palmdale, CA 93550. For additional information, you may call the City Clerk's office at (661) 267-5151.

DERRYBERRY & ASSOCIATES LLP

ATTORNEYS AT LAW

[redacted]

R. STEVEN DERRYBERRY
KIMBERLY R. ROSE-MCCASLIN
ALEXANDER L. MASSARI
DENYA A. AMADOR AYALA

Selection Committee
Palmdale Recycled Water Authority
City of Palmdale, California

December 16, 2024

Dear Members of the Selection Committee,

It is my honor to recommend **Bryan Guzman** for the Public Member position on the Palmdale Recycled Water Authority (PRWA). **Bryan's** dedication to professional growth, public service, and his community is evident through his academic and professional accomplishments, which align strongly with the responsibilities of this role.

Bryan recently achieved a significant academic milestone by passing the rigorous First-Year Law Students' Examination (FYLSE), also known as the Baby Bar. This accomplishment has propelled him into his second year of legal studies, underscoring his perseverance, critical thinking, and commitment to mastering complex legal concepts. His pursuit of a Juris Doctor degree demonstrates his ambition and capability to engage with the intricate legal and regulatory matters central to PRWA's mission.

In his role as a Legal Assistant at Derryberry & Associates, **Bryan** has played a key role in facilitating estate planning and trust administration. His meticulous attention to detail and ability to handle sensitive client matters have earned him recognition, including positive feedback reflected in our firm's client reviews. **Bryan** consistently exhibits professionalism, organizational excellence, and an ability to navigate nuanced legal procedures—all qualities that will contribute to PRWA's governance and oversight responsibilities.

Additionally, as a Notary Public appointed by the State of California, **Bryan** regularly ensures the legality of documents with impartiality and precision. This role emphasizes public trust and accountability, qualities essential for managing the public resources and collaborative efforts PRWA oversees.

Bryan's diverse skill set, along with his academic achievements, legal experience, and notarial service, position him as an exceptional candidate. His dedication to excellence, ability to manage public responsibilities, and willingness to engage in regular meetings reflect the competencies needed for the PRWA Board. I am confident he will bring thoughtful insight and a strong work ethic to this role, furthering PRWA's mission to promote and manage recycled water resources for the benefit of Palmdale and its residents.

Should you require any further information or clarification, please do not hesitate to contact me at (661) 945-6115 or steven@derryberrylawyers.com.

Very truly yours,

DERRYBERRY & ASSOCIATES LLP

R. STEVEN DERRYBERRY
Attorney at Law

Google Reviews

★★★★★

Damon Ellis – Business Owner

★★★★★ 2 days ago - New

Helpful and knowledgeable. Alex Massari and **BRYAN** were efficient and professional. Thank you!

Jodale Edwards

★★★★★ a month ago

Outstanding Business & Estate Planning Assistance! **BRYAN G.** Was quick with same day necessary business filings to secure my business future. Very Thankful for The Derryberry & Associates Team

---

Alana Johnson

★★★★★ 2 months ago

My experience with Derryberry and Associates has been great. The staff is friend and always helpful. Today I had the pleasure of working with **BRYAN GUZMAN** for the first time. He made everything easy and answered all of my questions promptly and in great detail.

Francisco Martinez – Business Owner

★★★★★ 3 months ago

I was having a long standing situation with the EDD (years) with pretty much no hope in being resolved in my favor. During the process, my case was assigned to **MR. BRYAN GUZMAN** (Legal Assistant) who investigated my case in depth and latter was crucial in turning the case in my favor. **MR. GUZMAN** is a reliable man, very professional, who is dedicated to bring justice, who will give you his best in trying to help with your case. I believe that he was the determining factor in such positive and unexpected outcome.

Selection Committee
Palmdale Recycled Water Authority
City of Palmdale, California

December 12, 2024

Dear Members of the Selection Committee,

It is with great enthusiasm that I recommend Bryan Guzman for the Public Member position on the Palmdale Recycled Water Authority (PRWA). Over the course of more than a year and a half, I had the privilege of working closely with Bryan in the field of estate planning, during which he consistently demonstrated his exceptional work ethic, analytical skills, and dedication to public trust.

Bryan's recent success in passing the rigorous First-Year Law Students' Examination (FYLSE) is a testament to his discipline and intellectual curiosity. This milestone not only highlights his academic ability but also reflects the diligence and perseverance that he applies to every endeavor.

As a paralegal under my supervision, Bryan played a vital role in assisting with the preparation of estate planning documents, including trusts and wills. His keen attention to detail, organizational skills, and client-focused approach were critical in ensuring accuracy and client satisfaction. I can attest to the numerous occasions on which his conscientious work earned positive client feedback.

Additionally, Bryan's responsibilities as a Notary Public, appointed by the State of California, further illustrate his commitment to integrity and public service. His role in notarizing legal documents demanded precision, impartiality, and a deep understanding of the importance of confidentiality, all of which he handled with the utmost professionalism.

Bryan's combination of legal knowledge, organizational expertise, and a strong sense of responsibility make him an excellent candidate for this position. I am confident that his skills and dedication align perfectly with PRWA's mission and the responsibilities required of the Public Member.

If you have any questions or need further details, please do not hesitate to reach out to me at [redacted] or via email at [redacted]

Very truly yours,

RANIA RAFLA
Attorney at Law

Client and Law Firm Partner Reviews and Testimonials

Subject: Compliment from Client about Bryan Guzman

Hello,

I received a call from Mr. Thomas Gillis this afternoon. Mr. Gillis wanted to make sure that administration received information regarding Bryan Guzman. On June 10, 2024, the client came in because he could not find a copy of his Trust. He encountered Bryan and verbalized an appreciation for his eagerness to help and his pleasant and professionalism during his encounter. He felt Bryan went above and beyond and provided great service during a time when the client was stressed.

Very truly yours,

Suzanne Murray

Diana Tanner (Google Review)
★★★★★6 reviews - a month ago
Excellent seminar by Kevin Von Tungeln and got an appointment right away and it was such an easy process with Sonia Chan Lee and my contact with Bryan Guzman and Miss Maggie was a pleasure. This whole process of setting up my trust went very smoothly and I appreciate everybody's input and their professionalism. Thank you.

Wed 1/10/2024 10:01 AM

Bryan,

Thanks Mandy for digging up the history. I missed seeing that when talking to him. Can you please contact Mr. Klingenberg to get his AHCD? He commented how much he liked your professionalism. ☺

Very truly yours,

Sonia Chan Lee, Esq.*Partner

PALMDALE **RECYCLED WATER** AUTHORITY

PRWA

Palmdale Recycled Water Authority (PRWA)
Public Member Application

Please Print or Type:

Name: Oyekunle Oyeyipo District 5

Address: [redacted]

City: Palmdale Zip Code: 93550 Home Phone: [redacted]

Occupation: Engineer Bus. Phone: _____

Why are you interested in this position?

I am interested in this position because I am aware of the impact water has in general on our economy and our lives. I would like to learn how to be impactful in water education outreach

Considering your previous experience and activities in business, labor, professional, social or other organizations, indicate what you feel are the most important experiences and abilities that qualify you for this position.

I am an Engineer which creates a natural curiousity and problemsolving habits. I have volunteered as a Docent at a California State Park educating individuals about the the history of the park and I've been a board member of a Non-profit Radio station which has taught me how to effectively work within a concensus.

In Case of Emergency:

Whom should we notify?

[redacted] Sister

Name Relationship to Applicant

Home Phone: [redacted] Work Phone: _____

Physician's Name: NA Phone: _____

Do you have any medical history that we should be aware of in the event of an emergency? (Allergies, medications, etc.)
None

Agreement

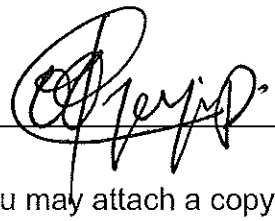
The City of Palmdale and Palmdale Water District are equal opportunity employers and do not discriminate in hiring or employment upon any basis prohibited by law, including race, color, creed, religion, age, sex (including pregnancy, childbirth and related medical conditions), cancer, national origin, genetic characteristics, genetic information, ancestry, sexual orientation, gender, gender identity, gender expression, marital status, veteran status, disability, or any other basis protected by applicable law. None of the questions or information sought in this application are intended to discriminate based upon any status protected by law. If you need reasonable accommodation in completing this application, or in any other part of the application process, please contact the Palmdale City Clerk's Office at 661/267-5151.

I certify that all statements on this application are true and complete to the best of my knowledge. I hereby authorize the City of Palmdale to investigate any information contained in this application. I understand that as part of the final selection process I will be required to pass a livescan fingerprint scan submission via the California Department of Justice. I understand that information collected during this background check will be limited to that appropriate to determining my suitability for particular types

of work and that such information collected during the check will be kept confidential. I understand that false or misleading statements shall be sufficient grounds for disqualification from this position.

I hereby agree to the Agreement set forth on this 18 day of December, 2024.

Signature:



If you wish, you may attach a copy of your resume to this application.

Please return the completed application to the Office of the City Clerk, City of Palmdale, 38300 Sierra Highway, Suite C, Palmdale, CA 93550. For additional information, you may call the City Clerk's office at (661) 267-5151.

Oyekunle O. Oyeyipo
[redacted]

EXPERIENCE SUMMARY

- Excellent skills in Value Stream Mapping (VSM), Lean Manufacturing training, Flow Analysis Simulation (ARENA and Delmia) and Microsoft applications.
- Docent California State Parks Allensworth Tulare County, CA.
- Local Station Board member, Pacifica,

EDUCATION:

CALIFORNIA STATE UNIVERSITY, Dominguez Hills, CA
MSc: Quality Assurance
Specialization: Manufacturing, Quality Management Systems, Reliability

CALIFORNIA STATE UNIVERSITY, Los Angeles, CA.
BS: Industrial Technology
Major: Manufacturing Technology
Specialization: Design Process, Document Control and Manipulation, Operation Management

PASADENA CITY COLLEGE, Pasadena, CA.
Laser Technology

CERTIFICATIONS:

SolidWorks CSWA.
Certified Quality Technician (ASQ)
IBM Python Data Analyst (IBM)
Certified Quality Auditor (ASQ)
Certified Additive Manufacturing Fundamental (SME)
Material Science (NUST)

WORK HISTORY:

02/2023 – Present — Eaton Aerospace — Los Angeles, CA
Senior Manufacturing Engineer
Material Review Board (MRB)
Developing processes and analyzing metrics using SAP system
Developing product assembly process including work instructions.
Sustaining IPT Tool depot and Inventory Management.
Certified Internal Auditor

09/2019 – 11/2022 — ENCORP FELLOWSHIP PROGRAM — Los Angeles, CA
Fellow - Career Technical Education (CTE)
STEM Curriculum development for students in
Manufacturing and product development.
Performed School district CTE needs assessment.
Setup and managed Community Advisory Board (CAB) for the CTE program.
Classroom management.

10/2020 – 11/2022	II-VI Aerospace and Defence Corp **SPDT Engineering Specialist** Material Review Board (MRB) Developing processes and analyzing metrics using SAP system DFA and DFM of Optical Diamond Turning Tooling and Processes. Developing Tooling using CAD, CAM, and Manual machines.	Tustin, CA
07/2017 – 10/2020	WAVEFRONT TECHNOLOGY INC **Diamond Turning and Quality Engineer** DFA and DFM of Optical Tooling and use of various materials: Copper, Nickel. MRB and work specification with contractors, Vendors and Team members. Programming, Set-ups and Operating Moore Nano-Tech Diamond Turning Lathe Developed quality plans for existing products and Design of Experiments (DOE) for new products.	Paramount, CA
02/2016 – 07/2017	NIPRO OPTICS INC. **Diamond Turning Technologist** Programming and Setting up Preci-Tech DT Lathes Building optical tools. Worked with Polymers, Ni, Al, Cu	Irvine, CA
01/2015 -01/2016	United Bakery Equipment **Design Engineer** Design for Manufacture (DFM & DFA) of Food processing equipment. Use of Solidworks Enterprise Product Data Management (PDM) systems. Operation simulations using Vericut. 3D Printed Polymer tooling	Rancho Dominguez, CA
2014	AIP AEROSPACE/COAST COMPOSITES **Tool Builder (ITAR Facility)** 6 S Training Rigging, Assembly & Machining of Tooling Components and Composites Product Data Management (Enovia) Metrology : Verisurf, Tracking ball/arm and PCDMIS	Santa Ana, CA
2013	BYRAN COMPANY **Quality Specialist/Machinist** 3-4 Axis Milling Setups First Article inspections Quality Audits and QMS surveillance of Manufacturing processes	Huntington Beach, CA
2011-2013	ORCHID ORTHOPEDICS **Lead 5-axis Mill Set-up/Machine operator** Work-flow and Personnel Scheduling 5 S training Statistical Process Control (UL/LL) Root Cause Analysis and Corrective Actions (RCCA) Programming with Master-CAM	Arcadia CA.

BOARD MEMORANDUM

DATE: March 24, 2025

TO: **BOARD OF DIRECTORS**

FROM: Mr. Scott Rogers, Assistant General Manager

VIA: Mr. Dennis D. Lamoreaux, General Manager

RE: ***PUBLIC HEARING TO CONSIDER MODIFYING PALMDALE WATER DISTRICT'S POLICY REGARDING CAPITAL IMPACT FEES FOR NEW WATER SERVICE CONNECTIONS; AND CONSIDERATION AND POSSIBLE ACTION ON ADOPTION OF RESOLUTION 25-2 BEING A RESOLUTION OF THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT MODIFYING THE POLICY REGARDING THE CAPITAL IMPACT FEES FOR NEW WATER SERVICE CONNECTIONS AND ADOPTING THE UPDATED WATER SUPPLY FEES. (NO BUDGET IMPACT – ASSISTANT GENERAL MANAGER ROGERS)***

Recommendation:

Staff recommend that the Board:

1. Adopt Resolution No. 25-2, being a Resolution of the Board of Directors of the Palmdale Water District Modifying the Policy Regarding the Capital Impact Fees for New Water Service Connections and Adopting the Updated Water Supply Fees; and
2. Accept and file the Water Supply Fee Analysis dated February 13, 2025 prepared by Woodard and Curran.

Alternative Options:

The Board can choose not to approve the increased fees.

Impact of Taking No Action:

The District will not have sufficient revenues to build capital infrastructure impacts and obtain additional water supply to continue issuing letters of Water Service Availability for new water service connections.

Background:

For the District to continue issuing Water Service Availability letters and allowing the connection of new services to the water system, the District must establish an equitable revenue source that will fund the development and/or acquisition of new water sources based on identified needs. The District tracks historical and future water supply and demand within our service area through various planning documents.

Earlier this year, the District retained the services of Woodard and Curran to perform a Water Supply Fee Analysis, which outlined the overall methodology and fee development process. The analysis findings are founded on PWD's 2023 Updated Strategic Water Resources Plan (SWRP). The SWRP identified future service area water demands and the potential water resource options available to the District to meet the increased water demands.

The Infrastructure Fee is based on the 2016 Water Master Plan, and subsequent updates to the Capital Impact Fees (CIF) are modified by a percentage increase based on the published Construction Cost Index (CCI) from data provided by Engineering News-Record (ENR). The amount increase shown in the following table is the last modified fee increase made on March 30, 2022. The Construction Cost Index from 2022 to 2025 has increased 18.2%.

Resolution No. 25-2 and Table 1 under Appendix H incorporate the proposed modifications to the existing Capital Impact Fees and the updated Water Supply component of said fees. Therefore, the following table summarizes the proposed fees for the period of April 1, 2025 – December 31, 2025.

CAPITAL IMPACT FEE (EFFECTIVE APRIL 1, 2025 - DECEMBER 31, 2025)
(PER SINGLE - FAMILY DWELLING UNIT)

	EXISTING			PROPOSED		
SERVICE ZONE	**INFRASTRUCTURE ($/EDU)**	**WATER SUPPLY* ($/SFDU)**	**TOTAL**	**INFRASTRUCTURE ($/EDU)**	**WATER SUPPLY** ($/SFDU)**	**TOTAL**
2800' & 2850'	$3,880	$8,907	$12,787	$4,588	$12,300	$16,888
2950' & 3000'	$10,756	$8,981	$19,737	$12,718	$12,300	$25,018
3200' & 3250'	$13,180	$8,604	$21,784	$15,584	$12,300	$27,884
3400' & 3400'+	$15,687	$8,604	$24,291	$18,549	$12,300	$30,849
	*FEE BASED ON TYPICAL SFR DEMAND (0.71 AFY)			**FEE BASED ON TYPICAL SFR DEMAND (0.44 AFY)		

CAPITAL IMPACT FEE (EFFECTIVE APRIL 1, 2025-DECEMBER 31, 2025)
(COMMERCIAL /INDUSTRIAL)

	EXISTING			PROPOSED		
SERVICE ZONE	INFRASTRUCTURE ($/EDU)	WATER SUPPLY* ($/AFY)	TOTAL	INFRASTRUCTURE ($/EDU)	WATER SUPPLY* ($/AFY)	TOTAL
2800' & 2850'	$3,880	$13,406	BASED ON EDU'S & AFY	$4,588	$28,000	BASED ON EDU'S & AFY
2950' & 3000'	$10,756	$13,406		$12,718	$28,000	
3200' & 3250'	$13,180	$13,406		$15,584	$28,000	
3400' & 3400' +	$15,687	$13,406		$18,549	$28,000	
* BASED ON FORECASTED AFY DEMAND						

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiative No. 3 – Systems Efficiency.

This item directly relates to the District's Mission Statement

Budget:

Once the modified Capital Impact Fees and Water Supply Fees are in place, the District will segregate the revenues derived from said fees and hold an account for them as specified in Government Code Sections 66001 and 66006. The revenue generated by these fees will only be used on water supply acquisitions and infrastructure projects associated related to new development.

Supporting Documents:

- Resolution No. 25-2 including Table 1 of Appendix H
- Water Supply Fee Analysis, prepared by Woodard and Curran

RESOLUTION NO. 25-2

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT MODIFYING THE POLICY REGARDING CAPITAL IMPACT FEES FOR NEW WATER SERVICE CONNECTIONS AND ADOPTING NEW WATER SUPPLY FEES

WHEREAS, following an update of its master plan in 1989, Palmdale Water District ("District") adopted a Capital Improvement Plan ("CIP") and a Capital Improvement Fee Policy ("Policy") which is set forth in Exhibit "H" to the District's Rules and Regulations; and

WHEREAS, the Policy established Capital Improvement Fees ("CIF") to be paid in connection with new service connections within the District's service area; and

WHEREAS, the new capital improvements identified in the CIP are the basis for determining the CIF under the Policy; and

WHEREAS, the purpose of the CIF is to create a fund to finance the estimated reasonable cost of capital improvements shown on the CIP to meet anticipated demand for water service arising from new connections; and

WHEREAS, as required under California Government Code Section 66002(b), the District has annually reviewed and, when necessary, updated the CIP and, based upon changes to the CIP, has modified the Policy and adjusted the CIF in accordance therewith; and

WHEREAS, since the initial planning period for the CIP would have expired in 1996, the District engaged Montgomery Watson in June, 1995, to review, study and update its master plan and to make recommendations to modify the CIP to meet projected needs and demands through the year 2005; and

WHEREAS, in January, 1996, Montgomery Watson submitted its final report entitled Water System Master Plan ("1996 Master Plan"), which report, among other things, made recommendations concerning the CIP to meet projected growth and development through year 2005; and

WHEREAS, on September 19, 1996, the District adopted the 1996 Master Plan which contained an updated CIP; and

WHEREAS, the 1996 Master Plan constituted an updating of the CIP, which update included the identification of recommended capital improvements to the District's

water system and the estimated cost of constructing the capital facilities required to accommodate projected growth and development through year 2005; and

WHEREAS, following properly noticed and conducted public hearings in 1997, 1998, 1999, and 2000, the District duly adopted resolutions which updated the Capital Improvement Policy and modified the CIF; and

WHEREAS, in 2000, the District retained Montgomery Watson to review, study, and update the 1996 Master Plan and, among other things, make recommendations concerning the CIP to meet projected needs through year 2010; and

WHEREAS, in March 2001, Montgomery Watson submitted its final report entitled Water System Master Plan ("2001 Master Plan") including recommended modifications of the CIP, and the District has approved that report and adopted it as the District's 2001 Master Plan; and

WHEREAS, following properly noticed and conducted public hearings in 2001, 2002, 2003, 2004, 2005, and 2006 the District adopted Resolutions which updated the Capital Improvement Policy and modified the CIF; and

WHEREAS, in light of the economic slowdown that impacted growth and development within the District between 2007, 2012, 2020, 2021, 2023, and 2024, the District did not make changes to the CIP over those years; and

WHEREAS, following properly noticed and conducted public hearings in 2013, the District adopted Resolutions which updated the Capital Improvement Policy and added the water supply fee to the CIF; and

WHEREAS, in June 2023, Woodard and Currant its final report entitled Update Strategic Water Resources Plan ("2023 SWRP") including recommended water supply acquisitions and projects necessary to meet future growth within the District, and the District has approved that report after certification of the Programmatic Environmental Impact Report and adopted it as the District's 2023 Update SWRP; and

WHEREAS, in 2024, the District retained Woodard and Curran to review, study, and calculate a proposed Water Supply Fee necessary to supply the next 35,000 acre feet per year of new water supply that will be necessary to meet anticipated growth and development within the District; and

WHEREAS, the purpose of the Water Supply Fee is to create a fund to finance the estimated reasonable cost of capital projects and water acquisitions necessary to meet anticipated demand for water service arising from new connections; and

WHEREAS, the District has considered the water supply costs and costs of constructing the capital facilities identified in the Update SWRP and CIP, and the impact on the existing capital improvement fees payable under the Policy and determined that the policy and the fees should be modified; and

WHEREAS, the District has given and published the required notices and conducted a public hearing with respect to the proposed modification of the Policy and CIF payable thereunder; and

WHEREAS, the Board of Directors of Palmdale Water District has found and determined that the establishment of capital improvement fees is exempt from the requirements of the California Environmental Quality Act pursuant to California Public Resources Code Section 21080(b)(8) and further has found and determined that said fees are for the purpose of obtaining funds for capital projects necessary to maintain service within existing service areas.

NOW, THEREFORE, BE IT RESOLVED that, the Board of Directors of Palmdale Water District hereby modifies and amends the Policy by deleting the existing Table 1 from Appendix "H" to the District's Rules and Regulations and inserting in place thereof proposed Table 1 attached hereto and incorporated herein.

FURTHER RESOLVED, that the General Manager of the District be and he hereby is, authorized and directed to implement this modified Policy until further order of the Board.

PASSED AND ADOPTED by the Board of Directors of the Palmdale Water District at a duly called and noticed public meeting of said Board held on March 24, 2025.

_____

Kathy Mac Laren-Gomez, President

ATTEST:

_____

Vincent Dino, Secretary

APPROVED AS TO FORM:

_____

ALESHIRE & WYNDER, General Counsel

MEMORANDUM

TO: **Scott Rogers, Palmdale Water District**

PREPARED BY: **Dawn Flores**

REVIEWED BY: **Brian Van Lienden**

DATE: **2/13/2025**

RE: **Water Supply Fee Analysis**

1. Introduction and Background

For Palmdale Water District (PWD), providing clean and reliable water is an imperative public service. The purpose of this analysis is to develop a Water Supply Fee to equitably fund the development or acquisition of future sources based on identified needs. The water supply fee serves as a cost recovery mechanism to fund the future development or procurement of additional water supplies. Furthermore, the new fee cannot be developed in a vacuum; instead, it must account for the District's existing rates and charges, and clearly identify the purpose, methodology, and uses of revenues for the fee. Primarily, the fee is designed to complement PWD's Capital Infrastructure Fee (CIF) and Water Rate Charges and provide that same costs were not recovered twice.

The findings of this analysis are founded on PWD's 2023 Strategic Water Resources Plan (SWRP) and recent planning related to recycled water and groundwater wells. The SWRP identified service area demands and the potential water resource options available to PWD to meet an increase in demand related to development. Using these studies as the foundation of the Water Supply Fee provides sound justification and creates an internal consistency throughout PWD's engineering and planning documents.

Furthermore, as PWD maintains existing water rates and capital charges, it is necessary to identify, account for, and allocate capital project, potential conservation, and recycled water offsets to achieve an equitable and cost-of-service based Water Supply Fee. Development of this fee was performed to be in conformance with existing policies and Government Code §66000.

2. Strategic Water Resources Plan

The SWRP was prepared to establish objectives and identify necessary steps to meet the projected future needs of PWD's customers. It forecasted that over the next 25 years (2025 to 2050), the population residing within PWD's service area will increase by 28%. Anticipated supply needs to meet those demands would increase by approximately 6,500 acre-feet per year (AFY).

As detailed in the SWRP, PWD has several water resource options available to meet these needs. These options include imported water, groundwater, local runoff, recycled water, conservation, and water banking. The plan evaluated various combinations of these options with respect to a variety of factors including cost,

reliability, flexibility, ease of implementation, and sustainability. It was through this evaluation process that a recommended Water Resources Strategy was developed.

Based on the projected need of an additional 6,500 AFY by 2050 plus facility replacement and improvements to ensure continued reliable supply production, the recommended Water Resources Strategy projected capital needs of $217.1 million. The majority of additional supplies would be acquired through maximizing imported water, recycled water, groundwater pumping, and local surface water.

Table 1 summarizes the SWRP recommended capital costs associated with the proposed facilities.

TABLE 1: SUMMARY OF CAPITAL COSTS

Water Resource Element	Capital Cost	Assumptions
Groundwater rights purchase	$10,000,000	$10,000 per AF for 1,000 AF
New wells	$54,500,000	Assumes 7 new wells at $7M per well, and $5.5M for new collection pipelines.
Replacement wells	$35,000,000	$7M per well for 5 wells.
Recycled water (Pure Water AV)	$117,600,000	Cost updated based on WIFIA funding application cost estimate. Includes treatment, injection wells and conveyance facilities.
Palmdale Ditch enclosure	$0	Capital cost of $22,580,000 covered by grant funds.
Total	**$217,100,000**	

As disclaimed in the SWRP, the SWRP is not meant to be a static document. As existing and future demands can vary, it is important to regularly revisit assumptions and necessary capital needs. In addition, the District is working to secure grant funding to reduce these amounts. For the purposes of this Water Supply Fee, the capital and demand needs are used "as is" and have not been escalated to account for inflation or increases in construction costs.

3. Approach

Given PWD's existing rate structure, the approach to the fee design incorporates the cost to secure and supply one acre-foot of water. Capital costs were reviewed with PWD staff, and $35,000,000 in costs that were already incorporated into other fees or rate structures were excluded.

The approach uses the costs and demand assumptions set forth in the SWRP. Under this approach, the SWRP's proposed capital project costs (over 25-years) are divided by the forecasted new supply. Simply put, it defines the cost associated to acquire 1.0 afy of water. Under this structure, the proposed fee would be $28,000 per AFY. Table 2 provides the details of this calculation.

TABLE 2: FEE CALCULATIONS

Total Capital Cost	$217,100,000
Excluded Capital Cost	$35,000,000
Total Recovered Capital	**$182,100,000**
New Supply (AFY)	6,500
Water Supply Fee (per AFY)	**$28,000**

4. Development of Water Supplies

In addition to overall capital cost, the portion of the proposed fee related to the purchase of water and that portion directly related to capital were analyzed. These costs include only the cost to purchase groundwater rights. Remaining supplies are already available to PWD and therefore do not incur additional purchase cost. Costs for recycled purchase related to the Pure Water AV project are not included in the capital costs. Table 3 presents the percentage of the fee related to the development of water resources.

TABLE 3: FEE ALLOCATION

	Percent	Cost
Water Supply Fee related to water supply	5%	$1,500/AF
Water Supply Fee related to capital costs	95%	$26,500/AF
Proposed fee ($/AF)	100%	$28,000/AF

Note that the SWRP provides a comprehensive water supply portfolio to meet the future demands of the District. The purchase of additional water supplies alone does not fully meet the District's desired water supply, reliability, and sustainability concerns. As such a capital component of the proposed water supply fee is necessary to achieve the outlined SWRP objectives.

5. Rate Design Consistency

The proposed water supply fee is designed to mirror PWD's water rate structure. Under the existing budget-based tiered rate structure, each residential customer is budgeted a specific allotment of water in one of four tiers. As a budget or allotment is exceeded, a user enters the next tier where water becomes more costly. This increase in costs is typically done to reflect the additional cost of acquiring additional water, additional energy use, or additional infrastructure needs.

As defined in the 2024 Water Rate Study, each customer receives a water budget for indoor and outdoor use that considers individual factors such as the number of people in the household, size of irrigable outdoor landscape, weather, and State efficiency standards. Under this structure, Tier 1 water is considered to be essential indoor use, and is calculated based on 50 gallons per capita per day (gpcd) for a household of four people, while Tier 2 water is considered efficient outdoor use and is calculated based on actual

irrigable area, weather, and water supply conditions. Remaining Tiers 3 and 4 reflect the cost of obtaining additional supplies.

The proposed single family residential (SFR) connection fee is defined by a typical SFR parcel. It's assumed that 100% of the Tier 1 and Tier 2 allocation is used. Based on the assumption that single family residential users will use 50 gpcd and have four persons per household, annual Tier 1 water usage is equal to 8.1 hundred cubic feet (hcf) per month or 0.22 AFY. Tier 2 single family residential use varies by irrigable area and weather, but for the purposes of this analysis, it's assumed that an average lot size has 2,500 square feet of irrigable area and 65 inches per year of evapotranspiration to equal 7.9 hcf per month or 0.22 AFY. Additional information on the formulas used to estimate Tier 1 and Tier 2 allocations are detailed in the 2024 rate study. The combined Tier 1 and Tier 2 allocations equal 16 hcf per month or 0.44 AFY.

This analysis assumes that each new connection pays immediately for a "baseline" amount of supply and will pay over time for additional needs through Tiers 3 and 4. Under this structure, the proposed fee would be $12,300 per new single family connection.

6. Summary

This is a point-in-time analysis with numerous capital and financial assumptions and water demand forecasts. The purpose of this fee is to provide supply for the cost of supplying new customers with new supplies and the infrastructure to deliver those supplies. This includes funding new groundwater acquisition, new potable recycled water production, groundwater injection and groundwater production facilities. This fee does not include the capital costs of transmission, treatment, or distribution, as these charges are recovered in PWD's CIF. Furthermore, operation and maintenance costs related to the new supplies are set to be recovered in PWD's monthly water rates and charges. Table 4 summarizes the projected water supply fee.

TABLE 4: WATER SUPPLY FEE FOR TYPICAL SFR CONNECTION

	Cost
Proposed fee for one AFY	$28,000/AF
Single-family proposed fee[1]	$12,300/AF

1. Based on a typical single family allotment of 0.44 AFY

BOARD MEMORANDUM

DATE: March 24, 2025

TO: **BOARD OF DIRECTORS**

FROM: Mr. Shadi Bader, Engineering Manager

VIA: Mr. Scott Rogers, Assistant General Manager
Mr. Dennis D. LaMoreaux, General Manager

RE: ***CONSIDERATION AND POSSIBLE ACTION ON AUTHORIZING STAFF TO EXECUTE THE THIRD-YEAR AMENDMENT (AMENDMENT NO. 2) TO PROFESSIONAL SERVICES AGREEMENT WITH STANTEC CONSULTING SERVICES, INC. FOR PROGRAM MANAGEMENT SERVICES FOR PURE WATER AV. ($3,514,952.00 – NOT-TO-EXCEED – BUDGETED – PROJECT NO. 22-65x – ENGINEERING MANAGER BADER)***

Recommendation:

Staff recommends that the Board authorize staff to execute a third-year amendment, Amendment No. 2, to the Professional Services Agreement with Stantec Consulting Services, Inc. (Stantec) for program management services for the Pure Water Antelope Valley (Pure Water AV) Program in the not-to-exceed annual amount of $3,514,952.00.

Alternative Options:

The alternative would be to not proceed with Amendment No. 2 to the Professional Services Agreement for the District's Pure Water AV Project.

Impact of Taking No Action:

The potential impact of taking no action would result in delays in the utilization of the District's 5,325 acre-feet of recycled water from Sanitation Districts of Los Angeles County, District 20 (LACSD 20).

Background:

The District entered into an agreement in 2016 to purchase 5,325 acre-feet of tertiary water from Palmdale Water Reclamation Plant owned and operated by LACSD 20. Initially, the District was pursuing a recharge and recovery project and in 2020 completed the drilling of a test well at the recharge area which resulted in recharge rates much lower than previously modeled. Based on the information collected for the project, the recharge and recovery project has been pushed to the future and the water augmentation project has been determined to be more suitable for fully utilizing tertiary water.

District staff hired Stantec Consulting Services, Inc. to evaluate the feasibility of utilizing tertiary

water from the Palmdale Regional Water Reclamation Plant of LACSD 20. The feasibility study examined the treatment train systems that make up the Advanced Water Purification Facility (AWPF). The feasibility study examined the utilization of tertiary water for either groundwater or surface water augmentation.

Since April 26, 2022, Stantec has been providing program management services under a multi-year contract to support the Project's planning, design, and regulatory compliance.

PWD initially authorized a $3 million budget for Year 1 and a $2 million budget for Year 2, which included $741,000 in out-of-scope services requested by the District. Due to the complexity of the Program, Year 1 services extended 17 months, and Year 2 services extended 15 months, effectively moving the Project into its Year 3.

Stantec has played a crucial role in project coordination, permitting, environmental compliance, and engineering support for the Pure Water AV Demonstration Facility and future full-scale facilities. To continue these efforts, Stantec requests are the following:

- A contract extension through April 25, 2027 (aligned with the original contract's optional two-year extension)
- A $3,514,952 budget for Calendar Year 2025, which includes $1.3 million for out-of-scope services such as:
    - Groundwater injection pilot testing to determine feasibility and travel times
    - Extensive redesign and construction support due to project modifications
    - Regulatory coordination and public outreach efforts, including permit revisions and event planning

This Amendment ensures continuity in program management and technical expertise as the Pure Water AV Project moves toward full-scale implementation.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiative No. 1 – Water Resource Reliability and No. 3 – Systems Efficiency.

This item directly relates to the District's Mission Statement.

Budget:

This item is budgeted and will be covered as part of Work Order No. 22-65x.

Supporting Documents:

- Stantec Consulting Services, Inc. Year 3 Scope of Services and Fee Estimate.

Stantec Consulting Services Inc.
2999 Oak Road, Suite 800
Walnut Creek, California 94597-2054

March 17, 2025

Project/File: 184031611

Shadi Bader, Engineering Manager
Palmdale Water District
2029 East Avenue Q
Palmdale, CA 93550

Dear Shadi,

Reference: Program Management Services - Amendment 2 for Palmdale Regional Water Augmentation Program (Pure Water Antelope Valley)

Stantec Consulting Services Inc. (Stantec) entered into a contract services agreement with Palmdale Water District (District) to provide Program Management Services for the Palmdale Regional Water Augmentation Program (Pure Water Antelope Valley) dated April 26, 2022. Stantec estimated the fees for Years 1 through 5 of the Program to be $7.4M and PWD authorized a budget in the amount of $3M for year 1 and $2.0M for year 2 (amendment 1) which included $741,000 of out-of-scope services requested and authorized by the District.

Stantec has continued to complete it services within budget and, in fact, the budget for “year 1” of the program extended 17 months and the budget for “year 2” (amendment 1) extended 15 months. As such, we are now essentially heading into the fourth year of the program. Attached is Stantec’s scope of services anticipated this year, our budget summary that includes Year 1, Amendment 1, and our Amendment 2 request in addition to the out-of-scope services requested by the District or not initially included in our scope of services.

Per our initial contract dated April 26, 2022 that was for three years with a possible two year extension, Stantec is requesting an extension to our contract through April 25, 2027 and a budget in the amount of $3.5M for FY 2025 for the Program. This budget includes $1.3M of out-of-scope services as outlined below and as follows:

The out-of-scope work includes:

- Continued coordination with CalOES and revising the FEMA Bric application for resubmittal - $92,294 to date
- Katz & Associates efforts to coordinate speakers and organize and plan the groundbreaking event for the demonstration facility construction - $9,552

Reference: **Program Management Services - Year 3 (Amendment 2) for Palmdale Regional Water Augmentation Program (Pure Water Antelope Valley)**

- Pilot testing for groundwater injection and groundwater modeling. This task to be provided by Stantec's subconsultant Montgomery & Associates will include tracer testing, a pumping test and groundwater injection testing to determine if the proposed location for the full-scale injection wells is a viable location and if there are adequate travel times from the point of injection to extraction. This was not part of the initial budget proposed by Stantec - $433,538

- During 2024, Stantec had to split the construction package for the AWPF Demonstration Facility and the BMA into two construction packages requiring redesign. Over the past nine months, Stantec has provided review of approximately 188 shop drawing reviews and 56 resubmittal reviews and 135 responses to RFI's/RFC's for the demonstration facility construction and is attending weekly construction coordination meetings with WM Lyles in addition to the other meetings to expedite submittal and resubmittal reviews. In addition, a substantial amount of effort has been spent to provide field observation services that was not previously budgeted. Stantec has also spent a significant amount of effort to review WM Lyles Construction Schedule updates month over month that was not part of our scope of work - $773,206

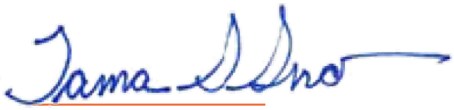
A summary of the budget status to date, percent spent versus percent complete by task, out of scope work provided, as well as budget allocation by task for year 4 is shown on the attached table.

We are requesting a budget in the amount of $3.5M. This will be the largest effort to date for the program to complete the engineering services during construction for the demonstration facility, prepare the preliminary design reports (4) for the full-scale facilities, complete the geotechnical investigation for the full-scale facilities, and complete the environmental documents for the full-scale facilities in addition to conducting the pilot testing for groundwater injection.

We are excited to have the opportunity to continue to provide these services to the District, and happy to answer any questions.

Sincerely,

Stantec Consulting Services Inc.



Tama Snow PE
Vice President, Program Manager
Phone: (925) 627-4547
Mobile: 949-533-7736
tama.snow@stantec.com

Attachment: Scope of Work, Fee Breakdown

Palmdale Water District
Pure Water Antelope Valley Program
Fee Estimate for Services Jan 1, 2025 through Dec. 31, 2025
Amendment 2

Tasks	5-Year Program Budget by Task	Year 1 17 Months 4/22/22 to 9/26/23	Amendment 1 15 Months 10/1/23 to 12/31/24					Amendment 2 12 Months 1/1/25 to 12/31/25		
Task Description	Total Authorized	Total Authorized	Total Authorized	Invoiced as of 1/31/25	Remaining	% Spent	% Complete	Requested Budget	Grand Total by Task through 12/31/25	Notes
Task 1 - Program Management	$ 1,275,465	$ 285,948	$ 268,643	$ 520,856	$ 33,735	94%	100%	$ 265,176	$ 819,767	
Task 2 - Program Priorities and Implementation Plan	$ 628,030	$ 626,664	$ -	$ 456,211	$ 170,453	73%	75%	$ -	$ 626,664	Living document and is updated as the program evolves
Task 3 - Project Delivery Methodology and Procurement Support	$ 110,322	$ 110,322	$ -	$ 19,872	$ 90,450	18%	18%	$ -	$ 110,322	
Task 4 - Funding Application Development and Preparation	$ 221,732	$ 53,000	$ 222,563	$ 333,857	$ (58,294)	121%	100%	$ 73,892	$ 349,455	
Task 5 - Tertiary Water Purchase Agreement Assistance	$ 68,438	$ 68,438	$ -	$ 58,300	$ 10,138	85%	100%	$ -	$ 68,438	
Task 6 - Public Outreach Assistance	$ 244,020	$ 60,810	$ 88,810	$ 159,172	$ (9,552)	106%	100%	$ 158,721	$ 308,341	See below explanation for out of scope work performed
Task 7 - Bureau of Reclamation Feasibility Report	$ 272,587	$ 227,061	$ 44,532	$ 126,124	$ 145,468	46%	95%	$ -	$ 271,593	
Task 8 - Environmental Studies and Regulatory Compliance	$ 340,478	$ 33,219	$ 107,000	$ 122,083	$ 18,136	87%	87%	$ 87,419	$ 227,638	
Task 9 - Groundwater Modeling	$ 484,385	$ 429,907	$ -	$ 266,136	$ 163,771	62%	62%	$ -	$ 429,907	
Task 10 - Pilot Testing for Groundwater Injection and Groundwater Monitoring	$ 30,900	$ -	$ -	$ 382	$ (382)	0%	0%	$ -	$ -	Extensive effort was not originally part of the anticipated program budget and is included in the Out of Scope Work Requested below
Task 11 - Demonstration Facility Design, Construction and Testing	$ 2,372,677	$ 834,722	$ 1,008,397	$ 2,616,326	$ (773,206)	142%	100%	$ 477,194	$ 2,320,313	See below explanation; Extensive RFI's from WM Lyles and extensive resubmittal reviews as well as construction schedule reviews
Task 12 - Design Criteria Package - AWPF, Injection Wells and Conveyance	$ 1,060,400	$ 95,023	$ 207,423	$ 97,553	$ 204,894	32%	32%	$ 1,105,758	$ 1,408,204	
Task 13 - Program Management Document Review	$ 93,552	$ 18,581	$ 23,388	$ 36,647	$ 5,322	87%	100%	$ -	$ 41,969	
Task 14 - Independent Advisory Panel	$ 86,095	$ 41,928	$ 44,166	$ 43,084	$ 43,011	50%	50%	$ -	$ 86,094	
Task 15 - Cost Estimating and Scheduling	$ 141,623	$ 93,330	$ 23,767	$ 87,102	$ 29,994	74%	60%	$ 38,202	$ 155,299	
Scope of Work Total	**$ 7,430,703**	**$ 2,978,953**	**$ 2,038,690**	**$ 4,943,706**	**$ 73,937**			**$ 2,206,362**	**$ 7,224,005**	
Out of Scope Work Requested										
Task 4 Funding Application and Grant Assistance Out of Scope Work								$ 92,294		Out of Scope Work requested by PWD to revise and resubmit application for BRIC as well as the CPRG grant application completed during FY 2024
Task 6 Public Outreach Assistance - Out of Scope Work								$ 9,552		Out of Scope Work Authorized/Requested by PWD for Katz & Assoc. to coordinate/organize speakers and attend Demo Facility Ground Breaking
Task 10 - Pilot Testing for Groundwater Injection and Groundwater Monitoring								$ 433,538		This effort was not part of the original scope of work planned for the program. This field study will gather the data to determine travel times, determine if the proposed injection well location is adequate for groundwater injection and inform the results of the initial hydrogeological model.
Task 11 Demonstration Facility Design, ESDC's, Construction Observation and Testing								$ 773,206		BMA into two construction packages requiring additional redesign efforts; Additional architectural renderings (4) for exterior and interior of the visitor's center for the Demo Facility Groundbreaking event; Weekly coordination calls with WM Lyles that was not previously budgeted; Substantial time to review WM Lyles Construction schedules, 188 shop drawing submittal reviews and 56 resubmittal reviews not initially budgeted. 10 site observation services that were not previously budgeted; Includes preparation of TM and preliminary design of the tertiary water pump station which was not previously included in the scope
Subtotal - Out of Scope Work Requested								**$ 1,308,590**		
Total Amendment 2 and Out of Scope Work Requested	**$ 7,430,703**	**$ 2,978,953**	**$ 2,038,690**					**$ 3,514,952**		

Palmdale Water District

Palmdale Regional Water Augmentation Program (Pure Water Antelope Valley)

Scope of Work

January 1, 2025 through December 31, 2025

Amendment 2

Stantec Consulting Services Inc. (Stantec) Contract Services Agreement with Palmdale Water District (District) for the Palmdale Regional Water Augmentation Program, now renamed Pure Water Antelope Valley (Pure Water AV) (Project No. 20-417) dated April 26, 2022, was for a three-year term with a possible two-year extension. The original contract was for time and materials, not-to-exceed price of $7.4M.

The purpose of this document is to request a two-year time extension to the original contract to April 25, 2027 and request budget to continue to provide Program Management Services for the Pure Water AV Program through December 31, 2025. For ease of review and tracking purposes, the scope of services updated and detailed below, includes: 1) tasks completed to date, 2) out of scope tasks performed for the overall program as was originally scoped, and 3) tasks anticipated to be performed during 2025 through December 31, 2025 which are noted in **bold text** below. As with any program of this size and complexity, there are shifts in scope of work requests and we have prepared the scope and fee estimate to reflect what is anticipated during this fiscal year.

Task 1: Program Management

Stantec will continue to provide Program Management services through December 31, 2025 to oversee and manage the Pure Water AV Program that adheres to the scope, schedule and budget; provide efficient and frequent communication with the District, subconsultants and other project stakeholders; and provide independent technical oversight and quality assurance and quality control of the tasks being completed by the design teams. The scope of services for Program Management includes the following items:

1. Preparation of Project Status Reports – Stantec will prepare monthly status reports that summarizes work completed for the previous month and anticipated work to be completed the upcoming month. The monthly reports will continue to include an updated schedule on percent complete on each task, and a summary of budget expenditures to date per task and budget remaining. In addition to the status reports, Stantec's Program team will continue to maintain strong lines of communication with District and stakeholders via email and telephone. Stantec will copy District staff on all emails to and from project stakeholders.

2. Program Coordination **–** Stantec will continue to coordinate deliverables and activities between the District's management team, the District's public outreach staff, subconsultants, District's legal team, financial advisor (NHA), rate case consultant, District's economic consultant, funding agencies, and coordination with WM Lyles, the District's Contractor for construction of the demonstration facility as necessary and as requested by the District. Project construction costs, program schedule, graphics and maps shall be provided as necessary to support the Pure Water AV Program.

3. Meetings and Workshops **–** Stantec will schedule and lead meetings with District's team, program subconsultants and stakeholders. Stantec will provide agendas of upcoming coordination meetings in advance of the meeting and prepare meeting minutes and action items within five working days following the meetings/workshops. Stantec will prepare materials for board presentations and attend board presentations as requested. The following meetings and workshops are included as part of the program management task through April 26, 2026:

    - Kickoff Meeting **–** Completed
    - Workshop 1 – Program Priorities and Implementation Plan **–** Completed
    - Workshop 2 – Regulatory Approval (including groundwater modeling) Approach and Public Outreach Strategies **–** Completed
    - Workshop 3 – Demonstration Facility Needs and Design Standards **–** Completed
    - Workshop 4 – Project Delivery Methodology **–** Completed
    - Workshop 5 – Groundwater Modeling – Preliminary Findings and Implications – Completed
    - **Workshop 6 – Design Criteria Package**
    - **Workshop 7 – Environmental Compliance Needs and Approach**
    - Review Draft TM on Purchase Agreement Task 5 – Completed
    - **Bi-weekly Progress Meetings with District**
    - **Bi-weekly coordination meetings with District and LACSD (as needed)**
    - **Weekly construction coordination meetings with WM Lyles (virtual meetings unless otherwise requested in person) (52)**
    - **Board Presentations (2) as needed**

4. Quality Assurance and Quality Control (QA/QC) Coordination – This task includes the program management time to coordinate the independent technical reviews between multiple disciplines and multiple subconsultants. Effort for independent technical reviews by the Pure Water AV team is included in Task 13.

    Deliverables:

    - **Bi-weekly project coordination calls with District**
    - **Monthly status reports**

- **Monthly coordination calls with LACSD (as needed)**
- **Meeting agendas and meeting minutes**
- **Attendance and coordination for monthly in-person meetings with District staff as needed (12)**
- **Attendance, coordination and provide materials for two (2) in-person workshops with District staff (full-day)**
- **Attendance and provide materials for in-person board meetings as needed (2)**
- **Attendance at weekly coordination calls with WM Lyles (52)**

Task 2: Program Priorities and Implementation Plan

The Program Priorities and Implementation Plan (PPIP) was completed in 2022 and identified drivers, risks, and critical milestones and defined projects and studies necessary to fully implement the Pure Water AV Program. The master schedule included in the PPIP is a living document and will be updated as milestones have been accomplished and critical path items are surpassed. In addition, the PPIP will be updated as funding for the program is obtained which may impact the delivery methods and ultimate schedule for the program.

1. Background Review – Review existing reports and data provided by the District to identify current status of work completed and identify additional studies or analyses needed to establish program priorities and develop a master program schedule. Background documents shall include, environmental reports, groundwater modeling reports, existing and future well locations and production rates, plans and process information for the LACSD 20 Palmdale Water Reclamation Plant (PWRP), financial information including grants and loans and existing funding available for the project. - Completed

2. Rapid Program Readiness Assessment – Stantec will evaluate and identify additional studies, data and/or analyses needed to supplement the existing studies, data and analyses. Identified items shall be documented, prioritized and discussed with the District and, upon reaching a consensus, items will be incorporated into the PIP and master schedule. – Completed

3. Funding Assessment – Stantec will review existing funding programs for relevance to the PRWAP and evaluate likelihood of success and develop and prioritize a loan and grant application schedule. Stantec shall coordinate and moderate strategy sessions for District staff and Board of Directors, funding agencies and elected officials. Upon securing funding, the Stantec funding team shall drive compliance, track progress, provide necessary reports and assist District staff at executing a coordinated and streamlined approach to securing maximum funding. Completed

4. Economic Impact Analysis - Stantec's Financial Services Team (FST), will identify the necessary economic inputs to include estimated construction costs, estimated full-time equivalents (FTEs), and approximate salaries for jobs created during different phases over the project's life to conduct an economic analysis. Stantec will conduct an "input-Output" analysis using a Leontif, an Implan economic input-output model (e.g., IMPLAN, the Regional Input-Output Modeling System (RIMS II), or a comparable model) to calculate the estimated economic impact of the project on local commercial and industrial activities. The input-output model will estimate the direct, indirect, and

induced effects of projects, both during construction periods and for ongoing operations through the projected life of the infrastructure or project. For purposes of this task, it has been assumed that all program components will be constructed on previously vacant land that is not being utilized for other economic purposes and, consequently, a "highest and best use" study is not being conducted nor will estimating the net effects of replacing other economic benefits be estimated. Results and findings of the economic analysis will be presented in a Technical Memorandum and submitted to the District for review and comment. Our FST will attend and conduct a presentation for the board as requested. Completed

5. Program Implementation Plan – Stantec will prepare a comprehensive PIP that identifies drivers, risks, and critical milestones and defines projects and studies necessary to fully implement the PRWAP. The PIP will be presented in a memorandum or report format and include a master schedule that ties together critical path items, funding, program budget needs and project expenditures. The master schedule shall be a living document and updated as milestones have been accomplished and critical path items are surpassed. Completed

   Deliverables:

   - Data request - Completed
   - Program priorities and implementation plan – Completed
   - Economic impact technical memorandum (draft and final) - Completed
   - **Master program schedule – Monthly updates**
   - Brine management strategy technical memorandum (draft and final) **–** Completed
   - **Program priorities and implementation plan update – Completed and will continue to be updated as needed**

Task 3: Project Delivery Methodology and Procurement Support

Stantec's in-house certified alternative project delivery expert, Mike Watson—who sat on the advisory committee for the Design-Build Institute of America (DBIA) in 2021—shall lead this task to evaluate alternative project delivery methods for the PRWAP to provide the District with the information needed to make an informed decision on selecting a project delivery method. Leveraging Stantec's in-house expertise, the following tasks shall be completed:

1. Evaluate Project Delivery Methods – Stantec will prepare a Technical Memorandum (TM) that provides a description of each project delivery method, identifies the percent of design completion required for each delivery method, and conduct a comprehensive analysis of the advantages and disadvantages of the various project delivery methods as they relate to the PRWAP. The Stantec PM team will coordinate and moderate a workshop for District staff to educate staff on different delivery methods and pros and cons. Prior to the workshop with District staff, Stantec will prepare a spreadsheet that details projects, delivery methods, alternative evaluation criteria based on the pros and cons, and weighting factors so that a Multi-Objective Decision Analysis (MODA) can be conducted during the workshop. The purpose of this value-added task is to get an unbiased assessment based on criteria that is weighted and may have varying importance to each District

staff. The MODA will assist the District and PM team with selecting the preferred project delivery method.

Following the workshop with District staff, Stantec's PM team will attend a meeting with the District board of directors to recommend the preferred delivery method for each component of the PRWAP. Delivery methods that will be evaluated include but are not limited to:

- Traditional Design-Bid-Build (100% Design Plans),
- Construction Management At-Risk (CMAR),
- Progressive-Design-Build (PDB),
- Fixed-Price Design-Build (FPDB),
- Design-Build-Operate, and
- Public-Private Partnership

As additional funding is sought and awarded to the District for the Pure Water AV Program, this may impact the delivery method(s) to be used. The Project Delivery Methods for the different design packages will be periodically evaluated and updated as needed.

2. **<u>Design Criteria Package</u> –The design team will prepare a preliminary design with sufficient detail to serve as bridging documents. This level of design is typically 10-20% to establish the design criteria and equipment performance that must be met by the DBE but does not restrict the DBE team from developing alternative equipment layouts and selecting alternative equipment vendors so that competitive bids can be obtained.**

3. **<u>Pre-Bid, Bid and DBE Award Assistance –</u> The Stantec team will assist the District in the pre-bidding, bidding and award phases to select the DBE. The following items will be completed as part of this task and will include collaborating with, and incorporating comments from, District staff, board and legal team:**

    - **Establish process for and evaluation criteria for selecting a DBE**
    - **Assist District and District's legal counsel with development of a contract for delivery by the DBE**
    - **Develop and prepare Request for Qualifications (RFQ) and Request for Proposal (RFP)**
    - **Assist in administering RFQ and evaluate submittals from prospective DBE; make recommendation on shortlist of DBE to be invited to submit proposals**
    - **Assist in administering the RFP and evaluate proposals from prospective DBE; Stantec suggests that the District consider conducting interviews with prospective DBE**
    - **Stantec Team members will attend DBE interviews and make a recommendation on selection**
    - **Assist District and legal counsel with negotiation of contract terms with recommended DBE**

    <u>Deliverables</u>:

- Project Delivery Assessment TM (Draft and Final) **–** Completed
- **10% to 20% Design for AWPF and injection wells (Progressive Design Build)**
- **10% to 20% Design for tertiary pump station and product water pipeline (Design Bid Build);**
- **10% to 20% Design for brine line and brine ponds package. This will be dependent on the results of the carbon capture demonstration facility. (Design Bid Build)**
- **Prepare Requests for Qualifications**
- **Prepare Requests for Proposals**
- Design-Build Contract

Delivery methods may be adjusted and vary for each project component depending on grant funding and further project delivery analysis.

Task 4: Funding Application Development and Preparation

The Stantec Financial Services Team (FST) prepared a detailed funding plan in FY 22 that identified the funding agency, application requirements, detailed schedule, milestones, responsible lead, and information needed from the District to support the application. In addition, the plan identified the strategies to be taken by the District and District's Board to best position the District to successfully capture funding. The Stantec Team will develop and write the technical content and prepare graphics to support each package. The following tasks shall be performed to secure funding for the PRWAP:

1. Funding Plan - The Stantec FST prepared an overall funding plan for the District that identified the funding agency, application requirements, detailed schedule that identified milestones and who will be the responsible lead and information that is needed from the District to support the application process. A draft of the Funding Plan was submitted to the District for review and comments received were incorporated in the Final Plan. This plan is the initial funding roadmap for the District and will be updated periodically as new funding opportunities are identified. This information will support the economic analysis discussed in Task 2.

2. Application Technical Project Description and Evaluation Criteria Narrative Development –Based on the Funding Plan and due dates for each application, the Stantec Team will provide the technical content and graphics for use by the FST to complete the application.
3. Application Review and Submission – Stantec will continue to coordinate and schedule regular meetings with District to gather the necessary information to expedite each application. A draft of each application (up to a maximum of two) will be submitted to District for review and revised as necessary prior to submission. Stantec's FST will submit applications on behalf of the District and track application status.

   Deliverables:

- **Funding Plan completed and will be updated periodically to reflect current funding awards and new opportunities**
- **Meeting coordination for each application**
- **FEMA BRIC Program –Notice of Interest and application was prepared. Provided ongoing coordination with Cal OES and Hagerty. Prepared letter of Appeal for District's submission to FEMA – Completed under Amendment 1 – Revisions and updates for resubmittal have also been completed this Fiscal Year**
- SRF Application and Attachments – Was not prepared. NHA indicated that SRF funding is not in the best interest of the District due to existing bond coverage requirements on existing debt.
- WRFP Application and Attachments - Will be completed following full-scale facility design reaches 10% design.
- BOR Title XVI WIIN Application and Attachments - Title XVI Study was completed in year 1 and updated in year 2 to include the demonstration facility and planning efforts and is complete; Feasibility study has been reviewed and approved by BOR. $14M in funding was awarded; Has not been contracted.
- WIFIA Letter of Interest, Application, and Attachments **–** LOI, application and attachments completed. Providing ongoing support as necessary.
- Title XVI Planning Grant Application –Submitted on February 28, 2023.
- OPR ICARP Regional Resilience Planning and Implementation Grant Program – Submitted in August 28, 2023. Completed
- Community Resilience Centers - strategic growth council; For demonstration facility; Submitted September 18, 2023. Completed
- EPA's Climate Pollution Reduction Grants Program (CPRG) – Prepared CPRG application and coordinated and attended debrief with EPA – Completed

Task 5: Assistance with Tertiary Water Purchase Agreement

Stantec will completed the following tasks to assist the District with revisions to the water purchase agreement with LACSD 20:

1. Water Quality Analysis – Stantec will review LACSD 20 source control program, process, waste discharge permit (WDR), historical water quality from the Palmdale WRP and conduct a water quality analysis to identify process improvements that may be needed at the Palmdale WRP to increase reliable operation of the AWPF. Stantec shall establish water quality parameters that will serve to support the design of the AWPF.

2. Cost Savings Analysis – Based on review of the process and water quality analysis discussed in Task 5.1, Stantec will prepare a cost analysis to determine if the recommended improvements to the Palmdale WRP to support reliable operation of the AWPF provides a cost savings to LACSD 20.

3. Prepare Technical Memorandum – Following review and analyses as discussed in tasks 5.1 and 5.2,

Stantec will prepare a draft and final TM summarizing the findings and make recommendations for improvements to the process at the Palmdale WRP as well as recommendations for amendments to the agreement with LACSD 20. The draft TM will undergo an independent technical review prior to submission to the District and comments from the technical review will be incorporated. The final draft will be submitted together with the comment and response log to the District for review. Comments received from the District will be added to the comment and response log and incorporated into the TM as appropriate and the final submitted to the District.

Deliverables:

- PWRP Tertiary Water Requirements TM (Draft and Final) - **Completed**

- **Review Water Quality Reports provided by LACSD - Ongoing**

Task 6: Public Outreach

Stantec's subconsultant Katz & Associates will continue to bring forward the latest and best practices that can be applied to stakeholder engagement and public acceptance. They will coordinate with District's Public Outreach Staff and help guide and assist with designing and implementing strategies to help raise awareness and overcome obstacles that may arise. The following tasks shall be provided as part of the public outreach task:

1. Kick-off Meeting - A kick-off team meeting/planning session will confirm project priorities, approaches, and general messages. This task will include the preparation for and participation in a two-hour outreach kick-off meeting, including preparation, materials development, and a summary. This task also includes attending and documenting project meetings; coordination with public outreach and other team members including participation in regular updates; maintaining a comprehensive stakeholder list; strategic counsel and issues management; contract compliance; and preparation of monthly progress reports. Assumes participation in up to two (2) project coordination meetings per year, for a total of 12 project coordination meetings with the project team. Assumes participation in four (4) project updates per year for a total of 24. Assumes a limited level of effort for strategic counsel and issues management. Assumes preparation and maintenance of an updated stakeholder list in coordination with District staff, and coordination of up to six (6) outreach-associated updates to stakeholders. Assumes a total of 48 monthly activity summaries.

2. Assistance with Public Outreach – Building on the District's existing outreach activities and leveraging the prior efforts for the Groundwater Recharge and Recovery efforts, the following tasks will be provided to assist the District:

    - Programmatic Communications Plan and Talking Points: This task includes supporting the District with public outreach for the PRWAP, including the preparation of a communication/public engagement plan to cover programmatic outreach for the duration of the program including outreach roles/responsibilities, tactics and timing, a rapid response plan, and a media plan. It also assumes support of public outreach through preparation of a project presentation, speaking points for team members, a PowerPoint script, and spokesperson training. It also includes a base level of strategic counsel on speakers bureau formation, scheduling, and maintenance, as well as coordination with PWD staff on

additional community event participation and partnerships specific to the augmentation project. Given the duration of this program, this task also assumes strategic support throughout the project lifecycle.

- Content for Web, Newsletter and Social Media Content: Outreach support also assumes development of a message plan, supporting facts, and public-focused information that would then become the basis for all collateral and public information (Spanish and English) including that described under RFP III.F.C flyers and handouts. We recommend preparation of an annual social media and "editorial" calendar to align with project schedule and milestones and maximize existing content and graphics to inform up to four (4) newsletter entries, six (6) website updates, and six (6) social media posts per year. All graphics for these updates are included with minimal social media post and website graphic modification included under this task.

- In-Person Tour Development and Support: For purposes of scope development, we assume that the RFP terms "flyer" and "handout" are broad terms to describe informational materials that support understanding and education for diverse audiences. Specifics will be identified in coordination with District staff, but our foundational recommendations include development of a project fact sheet, FAQ, tour brochure, project infographic, tour survey, a youth activity handout, and a post-tour survey handout. For scope estimation, we these or other identified collateral materials will be incorporated into preparation of up to eight (8), 8 ½ x 11, two-sided, full color flyers along with eight (8), 11x17, full color handouts with up to 10 project and technical specialized graphics (such as treatment train, etc.). All material will be developed in Spanish and English. For a successful and organized tour program, we recommend preparation of a tour script for general and youth audiences, a tour manual for staff, a tour presentation, and one tour guide training sessions.

- Virtual Tour: To expand the reach of information and expose a wide audience to the demonstration facility and ultimate learning center, this task assumes creation of one virtual "real-time" walkthrough video with graphic support, and creation of up to eight (8), 30-second subject matter expert videos that can meet multiple uses including website and social media posting.

- Water Ambassador Academy: As part of District activities, a range of technical and general information will be prepared and can be assembled to form the basis of an in-depth module for the District's Water Ambassador Academy. We assume existing materials covered in other tasks will be used for this module.

- Community Meetings: Finally, community meetings, whether in person or virtual or in a hybrid approach, will be important means to engage community members and encourage productive discussions. This task assumes support of four (4) community meetings and assumes that two of these will be CEQA-focused meetings to support Task III.H in the RFP, including one scoping meeting and one Draft EIR meeting in open house formats. To ensure thorough public engagement that meets CEQA requirements, this task assumes development of a draft and final public participation logistics plan; scoping and Draft EIR notification content; one (1) scoping meeting fact sheet with a Draft EIR update; scoping meeting posters (4) with Draft EIR updates (4); one (1) CEQA FAQ with a Draft EIR update; and a dry run agenda and materials to prepare subject matter experts for public

engagement and risk communications. The majority of materials and design will be prepared under previous tasks. Though we are assuming both in open house formats for all meetings, K&A has extensive experience managing logistics and options for virtual meetings and can do so in coordination with the District's communications staff. The two remaining meetings will be designed in coordination with staff and assumes updates to the program PowerPoint, preparation of a project spokesperson, and onsite support by one K&A staff member.

- All materials assume up to two revision rounds before finalization. Assumes the District will pay for costs of postage, printing, and distribution.

Deliverables:

- **Summary notes from project coordination meetings and update meetings**
- Summary report of kick-off meeting - Completed
- Comprehensive stakeholder list **-** Completed
- **Monthly activity summaries to be included with Program team monthly update**
- Communication/public engagement plan including a rapid response plan and media plan Completed
- Project presentation and script - Completed PowerPoint template and project branding
- Speaking points and speaker training for team members and board of directors - Completed
- Project message plan - Completed
- **Social media, newsletter, and website content - Ongoing support**
- Up to eight flyers - Fact Sheet **-** Completed
- **Assist District with developing content and displays for community events as needed**
- Tour script
- Tour manual
- Tour presentation
- Virtual tour video
- **Subject matter expert video clips**
- Community meeting materials – Completed posters for July 2023 Community Event
- Developed Pure Water Antelope Valley Website **–** Development completed. **Website content will continue to be updated for the duration of the program**
- Developed project logo and branding materials – Completed
- Branding (Creating project identity, style guide, name and tagline) Completed
- Tour Signage (Creating posted visuals to accompany tour materials and match branding)
- **Input on education display/design (Provide strategic counsel on educational displays, content and interactivity) – Ongoing**

- **Participation in meetings with architect and designers to assist with routing and layout for customer friendly tours – Ongoing**
- Coordination and participation in groundbreaking event for Pure Water AV Demonstration Facility – Out of Scope Effort - Completed
- **Edit Video from demonstration facility groundbreaking and develop new footage for District's use (Out of Scope Effort)**

Task 7: Bureau of Reclamation Feasibility Report

Stantec performed the following tasks to complete the Bureau of Reclamation (BOR) Title XVI Feasibility Report:

1. Background and Alternatives Analysis – Stantec shall review the existing BOR Title XVI Report that was prepared for the Groundwater Recharge Program and prepare a new BOR Title XVI feasibility report for the PRWAP.

   The alternatives to be evaluated shall include:

   - Groundwater augmentation (5 MGD)
   - Surface Water augmentation (5 MGD)
   - Combination of both groundwater and surface water augmentation (10 MGD)
   - Expansion of an Antelope Valley regional water augmentation project by utilizing tertiary water from Lancaster Reclamation Plant.
   - Direct Potable Reuse

   The Stantec Team considered the siting locations of the AWPF utilizing existing vacant parcels that were adequate to accommodate a 5 MGD plant and an expansion for 10 MGD full build out. Stantec submitted a draft report to the District for review. Comments from the District were incorporated into the Draft report and submitted to BOR for review. Comments from BOR were addressed and incorporated into the report.

Deliverables:

- BOR Feasibility Report (Draft and Final) - Completed in year 1 and updated in year 2 to include demonstration facility efforts; Completed

Task 8: Environmental Studies and Regulatory Compliance

The following studies and tasks shall be completed as part of the environmental studies and regulatory compliance task:

1. Prepare Strategy Plan – At the onset of the PRWAP, Stantec will review background documents and prepare a strategy plan to identify the best path forward to give the District the best chance at securing funding and meeting regulatory permitting requirements. Upon review and approval by the District, the strategy plan will be implemented and tied to the PRWAP schedule and application

deadlines. An environmental review of the PRWAP will be completed in accordance with the requirements of the California Environmental Quality Act (CEQA). Potential triggers for compliance with the National Environmental Policy Act (NEPA) will be identified. The Environmental Compliance Strategy Plan will identify the appropriate CEQA process for the project, including review of the benefits of a project-level or programmatic environmental document. However, for the purposes of this scope of work, it is assumed that the CEQA process for the project will be a project-level Initial Study and Mitigated Negative Declaration (IS/MND) for the treatment and groundwater injection project (to include construction of a treatment plant, repurposing of existing ponds for brine disposal, and pipeline and injection well installation).

2. Environmental Constraints Analysis - Based on proposed project facilities, locations, and the special studies conducted in item 3, below, Stantec will prepare an environmental constraints analysis for the various elements of the PRWAP. The constraints analysis will focus on environmental issues that present a fatal flaw to successful regulatory permitting or that could become major schedule constraints. A brief Technical Memorandum will be prepared to document the results of the constraints analysis.

3. Initial Study (IS) - Special studies will be required to support preparation of the environmental document for the project. The extent and complexity of these studies will depend on the locations of project facilities and the maximum areas of potential construction disturbance, including for proposed pipeline alignments. Stantec proposes to conduct initial environmental assessment for the treatment plant site, up to 40 acres of brine disposal ponds and up to 10 miles of pipeline alignments.

   Supporting assessments for the IS will include:

   a) Air Quality - Stantec will estimate construction-related air pollutant and greenhouse gas emissions based on the construction information provided by project engineers. Worst-case, peak-day emissions estimates will be prepared. Operations-related air pollutants will include consideration of energy needs for the project. Emission estimates will be compared to thresholds of significance established by the Antelope Valley Air Quality Management District and published in their CEQA and Federal Conformity Guidelines (August 2016)

   b) Biological Resources - Initial database searches, reconnaissance-level field surveys and existing document reviews for the treatment plant site, up to 40 acres of brine disposal ponds and up to 10 miles of pipeline alignments will be conducted to identify potential significant biological resources impacts.

      - Research: To assess the potential for special-status species and/or their habitat and/or regulated aquatic resources to occur on the project areas, Stantec will obtain and review existing reports and unpublished data to determine the nature and scope of additional work required to adequately characterize environmental conditions. Stantec will conduct a desktop review including review of aerial imagery/KMZ files, topographic maps, U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory online maps, USFWS database of federally listed species and critical habitat, CDFW California Natural Diversity Database (CNDDB), and California Native Plant Society (CNPS) rare plant database.

- Survey: Stantec biologists will conduct reconnaissance-level survey of the project areas to identify native and non-native plant species, existing vegetation communities, avian and wildlife use, and the potential for any special-status plants or animals to be present on the project areas. The presence of tree species covered by local ordinance will be noted.

- Reporting: The results of the surveys will include identification of necessary protocol level surveys for specific species and/or jurisdictional delineation of aquatic areas, as relevant. The results of the initial biological resources assessment will be documented in a report and incorporated into the IS. Up to one round of comments will be addressed prior to finalization of the report. Protocol or other additional surveys could be conducted under an amended or subsequent scope of work

c) Cultural Resources - Initial database searches, reconnaissance-level field surveys and existing document reviews for the treatment plant site, up to 40 acres of brine disposal ponds and up to 10 miles of pipeline alignments will be conducted to identify potential significant cultural resources impacts.
   - Research: Project archaeologists will request from the South Central Coastal Information Center (SCCIC) at California State University Fullerton a records search of these project areas to identify known cultural resources (historic and archaeological). The Native American Heritage Commission (NAHC) will be contacted and a request made for a Sacred Lands File Search and Tribal Contact. The results of the Sacred Land File search will inform the results of the literature review. Tribal contact information will be provided to the District for their AB 52 consultation obligations. If requested, Stantec is available to provide support, but no meetings or consultations with Native American entities or historical interest groups are included in this scope of work. A Stantec paleontologist meeting the standards of the Society of Vertebrate Paleontology (2010) as a Qualified Professional Paleontologist will conduct a desktop evaluation of the project areas to describe existing conditions and to assess whether the project could directly or indirectly adversely impact a unique paleontological resource or site or unique geologic feature. Completed for demonstration facility site year 1 and full-scale facilities including full-scale AWTF site, brine pond site and pipeline alignment year 2.

   - Field Survey: Stantec Team archaeologists, under the direction of a professional Secretary of the Interior qualified Principal Investigator, will conduct a non-collection pedestrian survey of the project areas. Pedestrian survey will consist f transects (parallel where possible) no greater than 20-meters apart, as feasible. It is assumed that no artifacts will be identified or require recordation on California DPR 523 forms. If sites are identified, Stantec will recommend an assessment process to the District. Completed for demonstration facility site year 1 and full-scale facilities including full-scale AWTF site, brine pond site and pipeline alignment year 2.

   - Reporting: After completion of the field survey, a cultural resource inventory report will be prepared. The report will conform to the California Office of Historic Preservation's Archaeological Resource Management Reports (ARMR) standards, and will include the following sections: introduction, purpose, project description, the natural and cultural setting, archaeological and paleontological records search results, Native American consultation results, field methodology, survey findings and documentation, management recommendations, and references cited. The report will include recommendations for

resource management, and provide a professional opinion as to whether formal evaluation and further study of any resources is required. The report will also include color digital photographs and project location maps. Up to one round of comments will be addressed prior to finalization of the report. After finalization, a copy of the report will be fled at the SCCIC. Completed for demonstration facility site in year 1 and completed for full-scale facility site, brine pond site and pipeline alignment in year 2.

d) Noise - Stantec will assess construction-related noise on adjacent receptors based on construction equipment necessary for installation of the project. On-site noise measurements and modeling are not anticipated to be necessary.

e) Water Resources - The IS will incorporate the results of groundwater modeling conducted for the project.

f) Traffic - Stantec will assess potential traffic impacts based on project construction characteristics and facility locations. Site-specific traffic counts and traffic modeling are not anticipated to be necessary.

g) Cortese List - The results of Cortese list environmental database searches will be incorporated into the IS.

4. Administer Statutory Process - Stantec will assist the District with processing of the MND, including preparation of required notices, electronic flings with the State CEQA clearinghouse and reviewing comments received on the IS. Since formal responses to comments are not required for MNDs, Stantec assumes none would be prepared.

5. Staff Support – Stantec will provide project maps and/or presentation and attend up to one Board meeting to support District staff in recommending adoption of the CEQA document by the District Board.

6. Identify Permits – Stantec will prepare a comprehensive permit matrix for the PRWAP including a brief description of the permit, permitting agency, contact information, schedule and estimated cost to obtain.

7. Evaluate Existing Chlorination Practices – The program team will evaluate LACSD's existing chlorination practice(s) and identify any potential changes to improve efficiency and impact on the AWPF equipment, while maintaining compliance with existing regulatory requirements. Completed in Year 1

8. Title 22 Engineering Report – Stantec's subconsultant Trussell Technologies will work with the program team to prepare a Title 22 Engineering Report for both the demonstration facility and full-scale project, in compliance with the requirements of the California Code of Regulations, for the PRWAP in coordination with District staff and other District consultants for supporting documentation.

9. Waste Discharge Requirements – The Stantec Team will evaluate the waste discharge requirements and prepare the permit application for brine discharge with the Lahontan Regional Water Quality Control Board.

Deliverables:

- Environmental Strategy Plan- Completed
- **CEQA Plus IS/MND (Draft and Final) – In progress**
- **Mitigated Negative Declaration Documents (notices and mailing lists) – In progress**
- Title 22 Engineering Report (Draft and Final)
- Waste Discharge Permit Application
- Mitigated Negative Declaration for Demonstration Facility – Completed
- Provided cultural and bio records searches for Avenue Q Pipeline and surrounding areas – Completed

Task 9: Groundwater Modeling

The Stantec Team conducted data analysis and groundwater modeling to support project permitting, ro locate and design injection and monitoring wells, comply with Title 22 regulations, and assist in future treatment and discharge optimization.

Groundwater modeling consisted of the following tasks.

1. Data Analysis - Available data was analyzed to identify critical data gaps that should be addressed to improve representativeness and confidence in the numerical model results and to plan the field program outlined in Task 10. A priority objective of the data analysis was to understand groundwater flow directions and gradients in the project area. Results of the data analysis will also be used to apply analytical equations to confirm the Darcy's law travel time estimate. These analytical estimates will help guide numerical model development.

2. Numerical Groundwater Flow and Transport Model Development – The Stantec Team evaluated several existing groundwater models for use on the project, including models developed but the U.S. Geological Survey and other consultants. None of the existing models are appropriate for direct use without substantial modification, but all of them contain useful information for the water augmentation project. Therefore, a project-specific groundwater flow, particle tracking, and solute transport model will be developed and calibrated to meet project objectives. The model will use pertinent information from previous models to the extent beneficial for the project.

   Our modeling approach started with an evaluation of recent MODFLOW versions (e.g., MODFLOW-USG or MODFLOW 6) to select the most appropriate model code and leverage new features that enhance achieving project objectives. This includes improved model grid design, advanced well simulation modules, and reduce computational time. Our approach will ensure that the model grid and layering are optimized for project simulations, which conceptually includes adequately reproducing local groundwater flow conditions in the project area, pumping and injection well impacts, and estimating injected water flow directions, dilution rates, and travel times to nearby pumping wells. Further, the model will be designed to study alternate injection wellfield and monitoring network designs that meet regulatory requirements. The model will include a refined evaluation of available hydrogeologic data and groundwater pumping data through at least 2020. The model will be calibrated to transient groundwater conditions over an appropriate period developed based on the Task 1 data analysis.

The initial numerical model development would begin immediately after notice to proceed and take about 6 months to complete. Initial modeling would occur concurrently with the field program outlined in Task 10 below. The model will be refined using data from the field program.

The model and draft TM will be independently reviewed by Victor Harris of H&H. The final TM will be backchecked to ensure that all comments were incorporated.

Deliverables:

- Draft and Technical Memorandum – Completed
- Participation in IAP Workshop(s) – Completed

Task 10: Pilot Testing for Groundwater Injection and Groundwater Monitoring

Stantec's subconsultant Montgomery and Associates (M&A) has prepared a technical memorandum that outlines a hydrogeologic characterization work plan for the Pure Water AV program to assess the feasibility of injecting treated water at operational rates using injection wells located on the full-scale AWPF property. In 2022, M&A analyzed available hydrogeologic data and developed a screening-level groundwater flow model to develop a conceptual injection wellfield layout (M&A, 2022 and 2023). Model results suggested that favorable underground retention times between the injection and extraction locations could be achieved by injecting treated water 5 million gallons per day into 2 injection wells located on the Property.

The site characterization includes pre-field planning, field work comprising drilling, construction, and testing in 2 new wells, and data analysis and reporting. Field work will include the following activities: test well construction, monitor well construction, pumping and injection tests, and a tracer test. In addition to meeting the primary goal, the site characterization will provide essential site-specific hydrogeologic data to enhance the groundwater model, refine the estimate of underground retention time, and develop a preliminary understanding of geochemical conditions that could affect the water quality in the District's groundwater production wells.

The site characterization includes a tracer test, which would occur between the new test well and monitor well and would be designed to acquire modeling data. The tracer test would not meet the Title 22 tracer testing requirements for the final approval to operate the facility. An additional tracer test will be required in the future for Title 22 permitting.

It is Stantec's and it's subconsultants, M&A's understanding that the District will contract directly with Kyle Groundwater, Inc. (KGI) to conduct pre-field planning, coordinate well drilling and construction, prepare technical specifications for the wells, clear property access, including utility surveys, assist District with selecting and contracting with a drilling firm and providing observation and documentation of well drilling, construction, development, and wellhead completion, Lithologic logging, geophysical logging, cuttings sampling for geochemical laboratory analyses (in coordination with the project geochemist) and assist with reporting. M&A and KGI will work closely together to ensure that characterization goals are achieved.

Stantec's subconsultant, M&A will be responsible for the following tasks based on the understanding that KGI will be responsible for the items discussed above:

- Overall coordination of the field program
- Pre-field planning and coordination for well testing activities
- Preparing technical specifications for testing operations
- Coordination with the geochemists from subconsultant, Life Cycle Geo (LG)
- Execution of the stepped pumping and constant rate pumping tests, injection test, and tracer test
- Data analysis and reporting, with support from KGI and LG

1. Pumping and Injection Testing - Pumping and injection tests are planned to assess injection feasibility on the Property. While pumping tests provide useful injection information, an injection test provides a more direct means to assess injection feasibility. The planned pumping and injection tests are described below.

    a) Pumping Test – After TW-1 is developed, stepped and constant rate pumping tests will be conducted. Rates for the stepped pumping test will be based on pumping rates observed during development. The stepped pumping test provides information on aquifer properties and enables sizing of a test pump for the constant rate test. Following the stepped pumping test, a 7-day constant rate pumping test will be conducted at a rate near the estimated sustainable pumping rate of TW-1. It was assumed that the discharge water during testing can be discharged to ground on the Property.

    Changes in groundwater level during the constant rate test will be monitored in TW-1 and MW-1. Pumping and water level data from the constant rate test will be used to estimate aquifer properties, including transmissivity, hydraulic conductivity, and specific yield. These properties provide information for estimating the sustainable injection rates for the future full-scale injection wells. Groundwater samples for laboratory analyses will be collected during the constant rate test.

    b) Injection Test - An injection test at TW-1 will be conducted if a source of potable water can be found near the Property. Preliminary test planning suggests that a fire hydrant exists south of the Property along East Avenue Q, which may be useable as a source of potable water for the test. Other potential water sources may exist; additional evaluation will be conducted during final test planning.

    If a potable water source is available and the injection test is permitted, a 7-day constant rate injection test would be conducted. A test plan will be prepared to outline test equipment, layout, and other logistics. During the test, water levels will be monitored in TW-1 and MW-1, which will be used to estimate aquifer properties. Results of the injection test will be analyzed to estimate sustainable rates for the conceptual injection wells on the Property.

2. Tracer Test - The underground retention time of treated water is controlled by the average groundwater velocity between the injection and extraction wells. Average groundwater velocity is directly proportional to aquifer hydraulic conductivity and hydraulic gradient, and inversely proportional to aquifer effective porosity. The planned pumping and injection tests provide an estimate of hydraulic conductivity, and water level data from wells provide an estimate of hydraulic gradient. A tracer test can provide an estimate of average groundwater velocity under test hydraulic

gradients, which then enables estimation of effective porosity. Effective porosity is needed for the groundwater model to estimate underground retention times.

A tracer test is planned for the field program. The test would be run between TW-1 and MW-1. A tracer would be added to TW-1 and would flow toward MW-1 under current hydraulic gradients. Based on the previous data analysis and modeling, average groundwater velocities are estimated to be between 1.5 and 2.5 feet per day. Given this velocity range, the tracer test duration could be 6 to 11 months. After initiation of the tracer test, tracer arrival at MW-1 will be monitored. Results of the test would be used to enhance the groundwater model. The tracer test results are not required to assess injection feasibility but are important for improving the groundwater model and refining underground travel time estimates.

3. Geochemical Assessment - Injection of the treated water into the groundwater system could affect water quality at PWD's groundwater production wells during PWAV operations. The site characterization includes a preliminary assessment of potential geochemical effects that might occur during operations. In general, geochemical assessment includes sediment and groundwater sampling and laboratory analyses. The geochemical assessment will be conducted by Life Cycle Geo (LG), a specialty geochemistry consultant. For planning purposes, M&A assumes that LG would be retained as a subconsultant to M&A or Stantec. M&A routinely subcontracts with LG for geochemical assessments.

4. Data Analysis and Reporting – Data acquired during the field program will be analyzed to assess injection feasibility on the full-scale AWPF property and to support future modeling. Due to the expected length of the tracer test, results of the field program through the injection test would be provided in an initial technical memorandum (TM). After the tracer test is completed, results would be analyzed and summarized in a second TM, which would include recommendations for enhancing the groundwater model to refine estimates of underground retention times.

The following assumptions were made to develop the above workplan:

- The drilling and well construction work would be competitively bid out to qualified drilling firms, with assistance from KG
- PWD would contract directly with the drilling firm
- Access to the Property will be available in the second quarter of 2025 for site characterization work to begin, including marking underground utilities (if any)
- The field program will be executed by team effort between KG and M&A
- The injection and tracer test will be approved by applicable regulatory agencies and stakeholders
- A source of potable water is available for an injection test in the test well; the source water will not require treatment before injection
- Pumping test water can be discharged to ground on or near the Property

Task 11: Demonstration Facility Design, Construction and Testing

To establish the design and operational criteria for the full-scale AWPF and support getting regulatory approvals, a 250 gpm demonstration facility is being constructed. The Stantec Design team for the demonstration facility has prepared the initial layout, design and bid package for the demonstration facility. This task also included equipment selection for evaluation and to pre-qualify and/or pre-select reverse osmosis (RO), membrane filtration (MF) and ultraviolet-advanced oxidation process (UV-AOP) equipment manufacturers. The demonstration study will evaluate and test the selected treatment system to determine the effective treatment, brine disposal, and required log removal to meet the Title 22 requirements for indirect potable reuse and direct potable reuse. The design will include the necessary modifications to the demonstration facility for it to transition from testing facility to the District's AWPF's learning facility. The following minimum tasks have been completed to date or shall be completed:

1. Pre-Purchase Equipment Bid - Completed - Develop the equipment specifications and bid documents for pre-purchase of the MF, RO and UV/AOP equipment based on the pre-qualification and/or pre-selection and design criteria task. Equipment shall be purchased such that the equipment is ready for installation by the contractor.

2. Test Protocol Development – Completed - A detailed test protocol shall be developed identifying the treatment process trains, 12-month test schedule, analytical testing and sampling schedule. The draft protocol will be provided for review by the Independent Advisory Panel (IAP). Stakeholder and regulatory comments will be incorporated into the final testing protocol. The study will include review of water quality data and previous sampling from the Palmdale WRP to identify constituents with likelihood of exceeding Safe Drinking Water Act (SDWA) primary MCLs, secondary MCLs, California Notification Levels, NPDES permit levels, or other regulated limits through an anticipated AWPF. The test protocol will include testing for target constituents that would be effective at evaluating and comparing the potable reuse treatment train that would impact public health. Special attention will be given for sampling those contaminants likely to persist through a given treatment process with the potential risk of exceeding maximum contaminant levels or notification levels. Towards the end of the 12-month test period, a treatment train will be tested that is capable of addressing DDW's concerns with reliability that will inform the District on a strategy for potable reuse. A proposed treatment train, together with the logic in how this will address DDW concerns, shall be provided.

3. Demonstration Design, Layout, and Construction – Completed **-** The demonstration facility, proposed to be located on the eastern side of the District's Main Office site, with the primary public entrance fronting East Avenue Q shall be designed so that it is suitable for public tours and interested stakeholders. A thorough geotechnical evaluation will be needed prior to any layouts or design related to this task. There are significant geotechnical concerns with strong ground shaking potential as well as secondary effects such as settlement and liquefaction that accompany a design-level earthquake and smaller seismic events.

   Our geotechnical consultant, Kleinfelder will conduct a desktop study that will review relevant and readily available reports, aerial photographs and geologic maps and reports that may contribute to the understanding of the site. The findings from the desktop study will be summarized in a technical memorandum together with recommendations for the work that will be needed to support the design of the demonstration facilities. Kleinfelder will complete a full geotechnical investigation that

will include permitting from the Los Angeles County Department of Public Health (LACDPH) which is required for borings at a depth greater than 10 feet below the ground surface. A workplan and application will also be required to accommodate the permit. Prior to site visits and field exploration, a project specific health and safety plan will be completed. For purposes of this proposal, we have assumed that at the demonstration facility site, two (2) borings at a depth of 30 to 50 feet will be performed. Soil cuttings from the borings will be drummed and disposed offsite. Temporary storage of the drums will be coordinated with the District. Laboratory testing of the soil samples will be performed focusing on identification and classification as well as evaluating the shear strength of the in-situ site soils. Laboratory testing will include moisture content and dry density determinations, sieve analyses, Atterberg Limits, direct shear, consolidation, maximum density determination, and R-value. The tests selected and the frequency of testing will be based on the subsurface conditions encountered. A site-specific response spectra will be developed per the requirements of ASCE 7-16. Site-specific ground motion criteria will be developed in terms of peak ground accelerations and response spectral accelerations for the subject site by using the current seismic source model for California and subsurface soil conditions at the site. A geotechnical report will be prepared for the demonstration facility site that summarizes the results of the field and laboratory investigation and presents conclusions and recommendations related to the geotechnical aspects of the project.

The design team has and continues to coordinate with Southern California Edison (SCE) to identify available power supply and options for getting power and remote access to obtain operational status of the facility.

Design and layout of the demonstration facility shall be developed and carefully coordinated with District staff, architect and K&A to ensure there is adequate space for tours and educational posters. The Stantec design team will work with the District to develop the layout of the facility and obtain consensus prior to proceeding with the design drawing and specifications. Upon completion of the draft construction documents, the package will be submitted for District's review and comment. Comments from the District will be discussed and incorporated as appropriate. The testing will be completed using effluent from the PWRP. The Stantec Team will coordinate procurement and oversee installation of the demonstration equipment.

The summary of changes for the demonstration facility design included:

- Change in design basis from an outdoor canopy for process area to a dual use enclosed building that includes a visitor's / community center (with capacity of 60 persons), with appealing architectural features and outdoor garden
- Increase in flow rate capacity from 30-60 gpm to 180-240 gpm to accommodate side by side high recovery RO for full scale savings and competition.
- Testing of side by side MF membranes for competition and full scale cost savings potential
- Addition of landscaping for a conservation garden for the community
- The above changes increased the construction cost from $6-8M to ≥$15M. Additional design efforts were required for the complexity and features incorporated through design development.

4. Demonstration Testing Operation - The demonstration facility will be operated by the District staff on a 24-hour per day basis and supported by the Stantec Team. The Stantec Team will train District operations staff and provide operational instructions, trouble shooting and guidance for all

demonstration equipment. District staff will assist with routine operations during the day shift and will maintain the plant in operation during other shifts as coordinated by the Stantec Team. The Stantec Team will conduct all special sampling and provide a 24-hour per day contact for the District's operations staff in the event of abnormal events or emergencies. Joint operations by Stantec and the District will be provided for a period of 12 months. The scope and fees for the additional 12 months of demonstration facility operations support will be negotiated with the District and included as an amendment to this contract, if desired by the District.

5. Brine Testing Operation – Data from the demonstration facility will provide information to establish the design criteria necessary for inland brine management. Stantec's design team shall utilize the data from the demonstration facility to evaluate RO recovery, zero liquid discharge, and the equipment to enhance evaporation to establish the most cost-effective solutions for brine management and sizing the evaporation ponds. Data from this task shall be utilized in Task 12 below to develop the construction plans and specifications of the brine facilities. Results and recommendations for brine management shall be summarized in a technical memorandum complete with cost estimates for the District's review and consensus.

6. Analytical Testing – The Stantec Team will collect samples for one monthly sampling event and will send samples for analysis. Following the initial sampling, sampling will be performed by the District or contracted out. Stantec will work with the District to establish days for sampling and include the schedule for sampling and constituents to be analyzed in the demonstration test protocol as discussed in item 2 above.

7. Study Report and Project Management – Monthly status meetings summarizing the demonstration facility operational performance will be held with the District to review facility performance and address any concerns or issues. The Stantec Team will prepare the agenda, presentation and lead the monthly meeting with the District as well as submit draft and final meeting minutes. In addition, a quarterly status report will be prepared to document plant operations and performance. Upon completion of the 12-month test period, the Stantec design team will prepare a final test report including the analytical results, analysis, conclusions of the demonstration testing and recommendations on equipment selection. The draft report shall be submitted to the District, the IAP, DDW and other stakeholders for review. Comments received will be incorporated into a final report and the Stantec Team will meet with the District to discuss equipment selection. Specific decisions to select one treatment unit over another for continued testing shall only be made after a presentation is made to District staff for their consideration.

8. Assistance during Bidding, and Construction Oversight - Stantec shall assist the District during bidding and construction and respond to requests for information and clarification (RFI/RFC) submitted by the Contractor. Stantec will provide oversight during construction of the demonstration facility. Stantec will review daily reports, work progress, requests for payment from the contractor and schedule updates.

   Stantec and its subconsultants, will continue to provide engineering services during construction. This task includes reviewing and responding to RFI's and RFC's, and review shop drawing submittals. It was agreed upon with WM Lyles and the District, that Stantec will respond to all RFI/RFC's and shop drawing reviews within 20 calendar days of receipt. WM Lyles will flag all RFI/RFC's and shop drawing reviews that are critical and urgent.

To date Stantec has provided review of 188 Shop Drawing Submittals, 56 resubmittals, 135 RFI's, 8 RFCO's and made 5 design changes.

For budgeting purposes, and based on WM Lyles most recent construction schedule, during the duration of this amendment, Stantec has assumed 50 RFI/RFC's, 20 shop drawing submittal reviews, and 35 resubmittal reviews, and five (5)

9. Construction Observation – Stantec's subject matter experts will provide construction observation services required per the construction documents. The intent of observation services is to confirm that construction is proceeding per the construction documents. The following observation services will be provided:

   a) Mechanical Observations - Stantec will provide bi-monthly inspections before and throughout the duration of the mechanical work to identify non-compliant installations. Stantec has budgeted 4 hours per visit and 1.5 hours to complete a field observation report. The report will be signed by a California Licensed Civil Engineer that will include observations, corrections to be made and photos. Stantec anticipates ten (10) site visits during the installation of the mechanical equipment.

   b) Plumbing Observations – Stantec will perform periodic observation on the installation and anchorage of piping systems and mechanical units carrying hazardous materials. Stantec will witness plumbing testing during startup and commissioning. Stantec has budgeted 4 hours per visit and 1.5 hours to complete a field observation report. The report will be signed by a California Licensed Civil Engineer that will include observations, corrections to be made and photos. Stantec anticipates six (6) site visits during the installation of the plumbing equipment during this fiscal year.

   c) HVAC Observations – Commissioning, testing, and balancing will be done by the construction Contractor and submit a testing report to Stantec for review. Stantec will provide up to two (2) site visits to review the HVAC installation, inspect installation and anchorage of the vibration isolation systems. Stantec has budgeted 4 hours per site visit and 1.5 hours to complete a field observation report. Stantec anticipates three (3) site visits during the installation and testing of the HVAC equipment. The report will be signed by a California Licensed Civil Engineer that will include observations, corrections to be made and photos.

   d) Electrical Observations – Stantec's subject matter expert will provide the following electrical observations:

      I. Main Distribution

      - Observe the main service panel for proper installation, labeling, and accessibility.
      - Observe the main service panel for proper load capacity and functioning breakers.
      - Observe subpanels in the distribution room for proper installation, labeling, and functionality.
      - Observe all wiring and connections for proper security, rating, and absence of damage or wear. Observe for proper grounding and bonding.

- Observe all circuit breakers and fuses for proper type and size for the circuits they protect.
- Observe all circuit breakers and fuses for proper operation and absence of wear or damage.
- Observe transformers in the distribution room for proper installation, ventilation, and absence of overheating or damage.
- Observe busbars and conductors for proper installation, secure connections, and absence of corrosion or overheating.
- Observe all safety signage and labels for clear visibility, including labels for panels, circuits, and potential hazards.
- Observe electrical equipment for proper clearance to allow safe operation and maintenance. Verify the room is free from obstructions and access to panels and equipment is not blocked.
- Observe ventilation and cooling systems for proper operation to prevent overheating of electrical equipment and ensure absence of dust or debris accumulation.
- Observe emergency systems, and uninterruptible power supplies (UPS), for proper installation and operation.
- Observe anchorage of emergency and standby power electrical equipment.
- Verify all installations align with the approved plans and specifications submitted for the building permit. Document and approve any deviations.

II. Building Observations

- Verify the installation, labeling, and accessibility of the main electrical panel and any subpanels. Confirm the panel is not overloaded and all breakers are functioning correctly.
- Verify the wiring for compliance with code requirements, including correct wire gauge, secure connections, and absence of damage or wear.
- Observe the grounding and bonding for proper configuration.
- Verify the installation and functionality of outlets and switches. Confirm the presence of GFCI (Ground Fault Circuit Interrupter) outlets in required areas such as kitchens, bathrooms, and outdoor spaces.
- Verify the security and wiring of lighting fixtures.

- Confirm the use of appropriate bulb and fixture types in designated areas, such as damp or wet locations.

- Verify the installation, covering, and accessibility of electrical boxes. Confirm the boxes are appropriately sized for the number of wires and devices they contain.

- Verify circuit protection, including the appropriate type and size of circuit breakers or fuses, and confirm Arc Fault Circuit Interrupters (AFCIs) are used where required.

- Observe the placement and functionality of smoke and carbon monoxide detectors.

- Verify the electrical installation matches the approved plans and specifications submitted for the building permit. Document and obtain approval for any deviations.

Stantec will provide up to six (6) site visits to review the electrical installation for the main electrical distribution and the building electrical. Stantec has budgeted 4 hours per site visit and 1.5 hours to complete a field observation report. The report will be signed by a California Licensed Civil Engineer that will include observations, corrections to be made and photos.

Note that it is Stantec's understanding that the District will provide all civil observation and specialty inspection services for compliance with the specifications including, contracting with a local geotechnical firm. Civil inspection services to be provided by the District will include, but not be limited to performing density testing for backfilling, verifying use of proper materials and procedures per the approved geotechnical report, inspecting, testing and verifying in-place soil densities and lift thickness during placement and compaction of fill, observing subgrade preparation and verify it meets project requirements, gravity manhole and pipeline testing. District shall complete a report signed by a California Licensed Engineer that includes observations, corrections made and photos and submit to Stantec for review.

Deliverables:

- Initial Layout, Transition to Learning Center, and Equipment Selection – Completed
- Equipment Request for Qualifications – Completed
- Equipment Purchase Bid – Completed
- Bid Package (Draft and Final) – Completed
- Testing and Monitoring Plan (Draft and Final) – Completed
- Geotechnical Report - Completed
- Landscaping design – out of scope effort proposal submitted November 28, 2022 and approved by District. – Completed
- Additional out of scope effort for MWA (architectural) to design the demonstration facility building and provide renderings. Initial Scope of Work was to provide a canopy design. Completed

- Increase in flow rate and project complexity to accommodate side by side high recovery RO for full scale savings and competition increased sheet count from 137 initial estimate to 192 sheets for demonstration facility design. Completed
- Completed 4 additional architectural renderings for interior of visitor's center as requested by the District – Completed
- Stantec has provided the following as it pertains to construction of the demonstration facility:
    - Review of 135 RFI/RFC's,
    - Review of 188 shop drawing submittal reviews, and
    - Review of 56 resubmittals
    - Reviewed 8 requests for change orders (RFCO)'s
    - Prepared five (5) design changes.
    - Attended weekly meetings with WM Lyles and additional meetings to resolve submittal comments and minimize resubmittals.
    - Attended approximately eight (10) site observations, took photos and prepared observation report
    - Reviewed observation reports for site observations conducted by others
    - Reviewed geotechnical test results
- **For the duration of this amendment, Stantec anticipates and has budgeted for reviewing an additional 20 submittals, review of 35 resubmittals and responding to approximately 50 additional RFI/RFC's.**
- **Construction Observations Services (25 site visits) that will include written report and photos of the site visit**
- **Attend weekly meetings with WM Lyles (52)**
- **Review monthly construction schedule updates**
- **Review five (5) additional RFCO's**
- **Review up to fifteen (15) specialty inspection reports submitted by District's Consultant**
- **Review ten (10) observation reports submitted by the District or WM Lyles**
- Demonstration Study Report (Draft and Final)
- Presentations (Two Fourth Quarter and Testing Phase Conclusion)

Key Assumptions:

- Third party construction management and specialty inspection services to be provided by the District or District's representative or District's consultant
- Stantec will provide observation services as required by the construction documents
- Stantec to review specialty inspection reports provided by District or it's consultant

Task 12: Design Criteria Package – AWPF, Injection Wells, Conveyance, and Tertiary Water Pump Station

Following selection of the location of the AWPF, geotechnical investigations, and surveying, as well as delivery method for each project component, the Stantec Team will develop full-scale design criteria packages for the AWPF, injection wells, pipeline and tertiary water pump station up to approximately 15% completion. It is assumed that all packages will be progressive design-build and will include measurable, performance-oriented criteria, schematic drawings and specifications that will define the project enough for the DBE team(s) to complete the design and construction.

15% construction drawings will be completed for all disciplines (civil, structural, mechanical, architectural, process, electrical, plumbing, I&C). A cost loaded schedule, utilizing P6 software, used by most contractors will be prepared for each package such that the District can use it to form the basis of payment. In addition, specifications will include details to prepare site-specific safety plans and requirements for start-up and testing plan to be developed by the DBE. The following minimum tasks will be completed as part of this scope of work:

1. AWPF Criteria Package – To complete the design criteria package for the AWPF and the brine evaporation, the design team will review relevant background documents for the proposed AWPF, define key process design criteria and size the AWPF unit processes, prepare preliminary mass balances, prepare a process flow diagram for the overall AWPF as well as for each individual process including MF, RO, UV/AOP, finished product water pump station, and chemical systems, equipment lists, develop P&ID's, develop preliminary process narratives, complete surveying and prepare geotechnical studies (see note below), site plan and yard piping plans, surveying, hydraulic profile and confirm the adequacy of topographical and boundary mapping, evaluate legal, City permitting and zoning constraints, and identify permits required. Construction plans and construction specifications will be completed for all disciplines such that the project is well defined for completion by the selected DBE.

2. Groundwater Injection Wells Design Criteria Package – To complete the design criteria package for the injection wells, our subconsultant, GEI and the Stantec design team will review relevant background information, review the geotechnical report(s) for the well site(s), and findings from the hydrogeological modeling to develop technical specifications and 15% construction drawings to define the project for use for bidding and selection of the DBE.

3. Pipeline Alignment Design Criteria Package – To complete the design criteria package for the recycled water pipeline, Stantec's conveyance team will review the pipeline alignment, existing utility record drawings, geotechnical report and prepare 15% drawings that will identify pipeline alignment, existing utilities and establish pipeline depth for bidding and selection of the DBE. Note that investigations completed for this proposal by our geotechnical subconsultant Kleinfelder indicated that there is an active seismic fault along portions of the conveyance alignment. Based on Kleinfelder's initial investigation, this may require a fault rupture hazard evaluation which would likely require fault trenching which will be a significant expense to the District and has not been included in our scope or fee. We have included in our scope of work, the geotechnical desktop study, investigation, lab testing, permitting, traffic control, engineering analysis that will support the pipeline design and summarized in a geotechnical report for use by the design and DBE team. We recognize the need to complete the surveying for a complete project, additional information to prepare a relevant scope of work and reasonable estimate to complete for the surveying will require

that the specific pipeline alignment, well site(s) be determined as this will determine the limits of construction and if boundary surveys will be required. Once the project is further defined, Stantec's subconsultant David Farrell will prepare a detailed scope and fee for the remaining surveying portions of the work and submit to the District for review.

Deliverables:

- **Develop scope of work and coordinate site surveying for AWPF site, pipeline alignment, and tertiary water pump station site (does not include surveying at the brine ponds).**
- **Geotechnical Report for AWPF site, pipeline alignment, and tertiary water pump station site (does not include geotechnical evaluation at the brine ponds).**
- **AWPF Design Criteria Package (Draft and Final)**
- **Groundwater Injection Wells Design Criteria Package (Draft and Final)**
- **Pipeline and Tertiary Water Pump Station Design Criteria Package (Draft and Final)**

Task 13: Program Management Document Review

The following items will be completed under this task:

1. Independent Technical Review –Stantec will implement its rigorous QA/QC program based on the ISO 9001 certification that is required on all of Stantec's projects. Per this system, every project deliverable must undergo an independent technical review from members on the PRWAP team that are not involved or providing technical oversight on the design. All deliverables including studies, permit and funding applications, models, reports, cost estimates, bridging documents and design deliverables prepared by subconsultants as well as Stantec staff will be independently reviewed by experts in their disciplines.

   Reviews will focus on missing information, adherence to regulatory requirements, and constructability. Comments on documents and redlines from the independent reviewers will be maintained in a comment log and backchecked that they have been incorporated. Stantec will provide the District with redlines, redline back-checks and the comment and response log.

   Deliverables:

   - Comment and Response Log - **Ongoing**
   - Redlines and redline back-checks (as requested) **– Ongoing**

Task 14: Independent Advisory Panel

Stantec will coordinate with the District and NWRI to identify a team of academics and industry experts with relevant water augmentation experience to form an independent advisory panel (IAP) to evaluate the technical, scientific, and regulatory aspects of the demonstration project, approve the demonstration test plan and provide input during demonstration testing and ultimately, the Project

Plan. The IAP shall meet at critical junctures of the project where decisions or conclusions are being determined for next steps. Stantec's priorities within this task include:

1. Identify Panelists –The Stantec PM team will work with NWRI and District to identify and propose a preliminary team to participate in the IAP and work with NWRI to coordinate and enlist panel members.

2. Workshop 1 – The Stantec PM and design teams will prepare and provide the pre-read documents to prepare the IAP in advance of Workshop 1 to review the results of the alternatives analysis as included in the feasibility study for the preliminary, groundwater modeling, results, and the demonstration facility design and test plan. The Stantec Team will work with the District to prepare and develop content for a full, one-day workshop to present the project alternatives, groundwater modeling results, demonstration facility and associated test plan. Meeting participants shall include the IAP, District, LACSD 20, DDW, RWQCB and the Stantec Team. Stantec shall lead the workshop and answer technical questions from meeting participants. Direction and recommendations received in writing from the IAP will be incorporated into the project as appropriate.

3. Meeting – A conference call or meeting will be held mid-way through the demonstration testing to solicit input on technical and/or regulatory hurdles. Content prior to the meeting shall be provided by the Stantec Team to the IAP. Stantec shall coordinate the meeting with NWRI, work with District to develop content and lead the call/workshop. Direction and recommendations received in writing from the IAP will be incorporated into the project as appropriate.

4. Workshop 2 – Working with the District, the Stantec Team will prepare and provide the pre-read documents to prepare the IAP in advance of Workshop 2 to review the preliminary results of the demonstration facility and final groundwater modeling results. The Stantec Team will work with the District to prepare and develop content for a full, one-day workshop to present the results. Meeting participants shall include the IAP, District, LACSD 20, DDW, RWQCB and the Stantec Team. Stantec shall lead the workshop and answer technical questions from meeting participants. Direction and recommendations received in writing from the IAP will be incorporated into the project as appropriate.

   Deliverables:

   - Identify panelists and coordinate with NWRI – Completed
   - Materials and Presentation for Workshop 1 – Completed
   - Materials and Presentation for meeting – Completed
   - Materials and Presentation for Workshop 2 to present final findings
   - Attend two one-day IAP workshops
   - Attend one additional workshop or conference call midway through demonstration and pilot well testing

Task 15: Cost Estimating and Scheduling

Stantec and its subconsultants will prepare an engineer's estimate of probable construction costs for the demonstration facility, full-scale AWPF, groundwater injection wells and conveyance system. Cost

estimates shall be based on the 15% design, quotes obtained from vendors and information available on current construction costs. Cost estimates shall be an AACE level 4 cost estimates. The master program schedule utilizing Smartsheet prepared in Task 2 shall be updated with cost loaded information as it becomes available at milestone completion.

Deliverables:

- Engineer's estimate of probable construction costs for Demonstration Facility Completed
- **Engineer's estimate of probable construction costs for AWPF Facility**
- **Engineer's estimate of probable construction costs for Injection Wells**
- **Engineer's estimate of probable construction costs for brine ponds, and brine lines**
- **Engineer's estimate of probable construction costs for tertiary water pump station and tertiary water pipeline**
- **Updated Master Program Schedule (included under Task 1) Ongoing**

BOARD MEMORANDUM

DATE: March 24, 2025

TO: **BOARD OF DIRECTORS**

FROM: Mr. Shadi Bader, Engineering Manager

VIA: Mr. Scott Rogers, Assistant General Manager
Mr. Dennis D. LaMoreaux, General Manager

RE: ***CONSIDERATION AND POSSIBLE ACTION ON AUTHORIZING THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH TWINING, INC. TO PROVIDE GEOTECHNICAL AND SPECIAL INSPECTION SERVICES FOR THE PURE WATER AV PROJECT. ($53,388.92 – NOT-TO-EXCEED – BUDGETED – PROJECT NO. 22-653 – ENGINEERING MANAGER BADER)***

Recommendation:

Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement with Twining, Inc. to provide geotechnical and special inspections services for the Pure Water Antelope Valley (Pure Water AV) Project in the not-to-exceed annual amount of $53,388.92.

Alternative Options:

The alternative would be to either not proceed with the professional services agreement or not enter into an agreement with Twining, Inc. for the District's Pure Water AV Project.

Impact of Taking No Action:

The potential impact of taking no action would result in delays in the utilization of the District's 5,325 acre-feet of recycled water from Sanitation Districts of Los Angeles County, District 20 (LACSD 20).

Background:

The Palmdale Water District (PWD) is moving forward with the Pure Water Antelope Valley Advanced Water Demonstration Facility project, which requires construction inspection and materials testing to ensure compliance with project specifications and regulatory standards. To fulfill these needs, PWD intends to award a Professional Services Agreement (PSA) to Twining, Inc. (Twining), a firm specializing in construction testing and inspection services.

Originally, Twining's scope was included within Stantec's overall contract, but staff opted to contract directly with Twining to eliminate markups and reduce project costs.

Under the agreement, Twining will provide the following services to support PWD's Pure Water AV:

- Construction inspection to verify compliance with project plans and regulatory codes
- Materials testing to assess the quality and suitability of construction materials
- Timely reporting of inspection and laboratory test results, including professional opinions on compliance
- Field tests conducted in a manner that allows project stakeholders to observe results

Twining's services will be provided on a time-and-materials basis as per an attached Schedule of Fees. Awarding this contract to Twining, Inc. ensures that the Pure Water Antelope Valley project benefits from experienced professionals in construction inspection and materials testing. Twining's expertise will help maintain high-quality standards, regulatory compliance, and efficient project execution.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiative No. 1 – Water Resource Reliability and No. 3 – Systems Efficiency.

This item directly relates to the District's Mission Statement.

Budget:

This item is budgeted and will be covered as part of Work Order No. 22-653.

Supporting Documents:

- Twining, Inc. Scope of Services and Fee Estimate

2024-2025 PROFESSIONAL SERVICES AGREEMENT

Date: December 10, 2024

Client: Stantec

Project: : Pure Water Antelope Valley Advanced Water Demonstration Facility

Twining Proposal No: 24-2454

Scope of Services: Construction Inspection and Materials Testing

---

Client desires to engage Twining, Inc. ("Twining") to perform the above-described Scope of Services for the subject Project. Twining agrees to perform the Scope of Services in accordance with the terms and conditions of this Professional Services Agreement and the attached Schedule of Fees. Acceptance of this Professional Services Agreement shall be effective upon Client returning a signed copy of this agreement to Twining, or upon Client's request for Twining to perform any portion of the Scope of Services, or upon Client's issuance of a purchase order covering any portion of the Scope of Services. In the event that Client issues a purchase order, Client agrees that any terms and conditions accompanying such purchase order, with the exception of the fees owed to Twining, shall be replaced in their entirety by the terms and conditions provided herein, irrespective of any language within the purchase order to the contrary.

SERVICES

Twining will provide only those services that fall within the professional expertise of Twining. Where required by the governing agency, Twining's services will be provided under the general direction of a California Registered Civil Engineer and in accordance with the standards promulgated by that agency.

Twining will timely submit to the Client reports of inspections and laboratory tests, including, where applicable, an opinion as to whether the inspections and laboratory tests yielded results that are in compliance with the applicable project specifications and codes governing the Project.

Field tests will be performed by Twining in such a manner that interested parties may witness the tests.

Twining will not be obligated to perform services that fall outside its professional expertise, nor will it be obligated to perform services that are contrary to its exercise of sound professional judgment.

Twining shall have no authority over any of the Project's contractors with respect to the contractors' means, methods, techniques, sequences, or procedures. Services provided by Twining shall in no way relieve the contractors of their responsibilities to perform work in accordance with applicable laws and with the Project plans and specifications.

Twining shall have no authority to alter any requirement of the Project plans and specifications, nor to approve, accept, or reject any portion of the contractors' work on behalf of the Client. Twining shall have no authority to reject or stop the progress of the contractors' work.

If client requests Twining to perform any services on the Project not included within the Scope of Services, Client agrees to place such request in writing. Twining's services will be performed using that degree of skill and care customarily exercised by other providers of similar professional services operating under similar conditions. No other representation and no warranty is expressed or implied in connection with the performance of any services by Twining.

Twining shall have the right to suspend or discontinue services on the Project without further liability in the event that any invoice tendered by Twining becomes past due by more than 30 days.

CLIENT OBLIGATIONS

Client shall provide Twining with all plans, specifications, addenda, approved shop drawings, and other Project documents necessary for Twining to perform its services.

Client shall direct the contractor to:

- Provide adequate space at the Project site for Twining to park its vehicles and perform its services
- Secure and deliver to Twining, without cost to Twining, representative samples of materials that contractor proposes to install on the Project, along with relevant data concerning the materials
- Stop the work at appropriate times to allow Twining the opportunity to sample construction materials
- Furnish, without cost to Twining, casual labor to facilitate sample procurement and storage
- Provide, without cost to Twining, adequate space at the Project for secure storage of Twining test equipment, and a proper curing facility for test samples

Client shall provide Preliminary Notice and credit information as required by Twining, prior to Twining's performance of any services.

FEES AND INVOICES

Unless otherwise indicated herein, Twining will perform its services on a time-and-materials basis in accordance with the attached Schedule of Fees. Twining's proposal may have provided Client with an estimate of total costs for completion of its Scope of Services on the Project. Client agrees that any such estimate is based on construction schedules and other information provided to Twining by others, and that such construction schedules and other information may change over the course of the Project. Client agrees to compensate Twining in accordance with the attached billing terms and schedule of fees, and not in strict accordance with any total cost estimate provided to Client by Twining.

Twining, Inc. is a signatory to a labor agreement with Local 12, Union of Operating Engineers. Under the agreement, labor rates are adjusted annually on July 1. For all services performed after June 30 of any year, Client agrees to compensate Twining at the rates then effective with Twining's current Schedule of Fees.

Twining will provide an invoice to Client on a monthly basis, describing the applicable rates and the services provided during the billing period. An administrative fee of 4% shall be added to the total amount of each invoice. Each invoice is due and payable upon presentation and shall be past due thirty (30) days after the invoice date. Past due accounts are subject to a finance charge of 1½ percent per month.

Client agrees to bring any disputes regarding the accuracy of an invoice to Twining's attention within 15 days after the invoice date. After this period, Client shall have no right to contest the accuracy of the invoice.

Client agrees to pay Twining's attorney fees and all other costs Twining incurs in connection with collection of Client's delinquent account.

RISK ALLOCATION

Client affirms that a multitude of risks affect Twining through its performance of services under this Agreement. In exchange for Twining's provision of services at an economical cost to Client, Client agrees to limit Twining's aggregate liability for professional acts and omissions by its employees, officers, agents and consultants to $50,000

or the fees paid by Client to Twining under this Agreement, whichever is greater. This limitation shall not apply to losses due to Twining's sole negligence or intentional breach of Agreement.

Client and Twining absolve one another from all liabilities connected with *force majeur*, including labor unrest, strikes, and acts of authorities, for the duration of the *force majeur* events. Client and Twining waive all claims against each other for consequential, indirect, or special damages arising out of or relating to this Professional Services Agreement.

GENERAL PROVISIONS

Twining may agree to provide certain services that are outside the professional expertise of Twining. In this event, or in the event that the Project has manpower requirements that are beyond Twining's ability to staff efficiently, Twining may subcontract a portion of the services to one or more subcontractors. Any subcontractors retained by Twining in connection with the Project shall have the same obligations to Client as Twining has to Client under this Agreement.

This Agreement, along with its attachments, constitutes the entire agreement between the parties, and supersedes and previous or prior negotiations, representations or agreements, whether written or oral.

Should any dispute arise between the parties in connection with this Agreement, the parties agree that good-faith efforts will be made to resolve the dispute among the principals of each party. If these efforts fail to resolve the dispute, then the parties agree to submit the dispute to formal mediation prior to pursuing any other remedy, unless otherwise agreed between the parties.

In any action commenced by a party to this Agreement, the prevailing party shall recover from the non-prevailing party its reasonable attorney fees and other costs in prosecuting or defending such action.

If any term or provision of this Agreement is held by a venue of competent jurisdiction to be invalid or unenforceable, that term or provision shall be stricken from the Agreement and the remainder of the Agreement shall remain in full force and effect.

Client is advised that Twining, Inc. employs professionals who are licensed by the California Board for Professional Engineers, Land Surveyors, and Geologists.

By **Twining, Inc.:**	By **Client:**
Robert Ryan	
Signature	**Signature**
Robert M. Ryan	
Name	**Name**
CEO	
Title	**Title**
12/10/2024	
Date	**Date**

Attachment
Schedule of Fees 2024-2025

Project Name: Pure Water Antelope Valley Advanced Water Demonstration Facility
Proposal No: 24-2454
Date: December 6, 2054

Twining, Inc. Ventura
Robert Ryan
(562) 426-3355

	Description of Work	Assumptions	Average Manpower	Anticipated Days				Total
Division 3: Concrete								
Special Inspector/Registered Deputy Inspector - Reinforced Concrete		ICC or as required	1	10	80	Hours	$ 139.00	$ 11,120.00
Project Manager		Portal to portal	1		6	Hours	$ 235.00	$ 1,410.00
Standard Sample Pick-Up: Concrete Cylinders 6" x 12" and 4" x 8"					60	Each	$ 36.00	$ 2,160.00
Anchor Bolt Installation			1	2	16	Hours	$ 139.00	$ 2,224.00
Drilled-In Anchor Installation			1	2	16	Hours	$ 139.00	$ 2,224.00
4" x 8" Cylinder: Compression Strength (ASTM C39)					60	Each	$ 43.00	$ 2,580.00
Clerical / Report Distribution @ 4% of total						Pct.		868.72
		SUB-TOTAL						$ 22,586.72
Field								
AWS Certified Welding Inspector	Structural	ICC/AWS as required	1	20	160	Hours	$ 139.00	$ 22,240.00
AWS Certified Welding Inspector	Miscellaneous	ICC/AWS as required	1	5	40	Hours	$ 139.00	$ 5,560.00
Project Manager		Portal to portal			4	Hours	$ 235.00	$ 940.00
Clerical / Report Distribution @ 4% of total						Pct.		$ 1,149.60
		SUB-TOTAL						$ 29,889.60
Terms and Conditions								
Mileage					1560	Miles	$ 0.585	$ 912.60
Per Diem					0	Daily	$ 125.00	$ -
Parking if not provided by client					0	Daily	$ -	$ -
		SUB-TOTAL						$ 912.60

REMARKS: This proposal is based on the plans dated July, 2024 along with the Scope of Services provided by Stantec. See attached schedule of fees for additional terms and conditions.

GRAND TOTAL	**$ 53,388.92**

Schedule Of Fees 2024-2025

NOTE: Rates will be adjusted annually each July 1st to reflect increased costs.

Personnel Rates: Per Hour Unless Otherwise Noted

Task Code	Engineering And Consulting Personnel	Rate
10026	Senior Principal Advisor/Consultant	$ 390.00
10001	Principal Engineer/Geologist	$ 280.00
10017	Metallurgical Engineer	$ 390.00
70000	Registered Geotechnical Engineer	$ 280.00
10010	Technical Advisor	$ 260.00
10011	Material Scientist, Welding/NDT Consultant	$ 275.00
70003	Registered Geologist/Certified Engineering Geologist	$ 275.00
10003	Senior Engineer/Geologist	$ 250.00
10009	Registered Civil Engineer	$ 240.00
60003	Roofing/Waterproofing Consultant	$ 265.00
10013	Project Engineer/Manager	$ 235.00
30000	Quality Control Manager	$ 235.00
10005	Senior Staff Engineer/Geologist	$ 220.00
10007	Staff Engineer/Geologist	$ 205.00
10015	Quality Control Administrator	$ 205.00
10019	Metallurgical Technician	$ 175.00
90001	CADD Operator/Draftsperson	$ 160.00
95103	Administrative Support	$ 105.00
70107	Field Supervisor	$ 195.00
91030	Safety Supervisor	$ 195.00
20000	Laboratory Manager	$ 180.00
98000	Laboratory Technician	$ 155.00
90005	Expert Witness Testimony	$ 630.00
91010	Qualified SWPPP Developer	$ 220.00
91000	Qualified SWPPP Practitioner	$ 205.00
30001	Vibration Engineer	$ 240.00

Task Code	Field Inspection Personnel	Rate
10101	Concrete/Reinforced Steel Inspector	$ 139.00
10103	Prestressed/Post Tensioned Inspector	$ 139.00
10105	Concrete ICC Inspector	$ 139.00
10109	Drilled-In-Anchor Inspector	$ 139.00
10111	Gunite/Shotcrete Inspector	$ 139.00
10113	Masonry Inspector	$ 139.00
10201	Structural Steel/Welding Inspector	$ 139.00
10203	AWS Certified Welding Inspector	$ 139.00
10207	Fireproofing Inspector	$ 139.00
10501	Lead Inspector	$ 142.00
10115	Firestop Special Inspector - IFC Premier	$ 160.00
10117	Firestop Special Inspector - IQP	$ 205.00
70109	L.A. Deputy Grading Inspector	$ 150.00
75001	Asphalt Field and Plant Inspector/Technician	$ 139.00
70103	Pile Driving Inspector	$ 139.00
70101	Soils Technician	$ 139.00
10107	Concrete Quality Control (ACI/Caltrans Technician)	$ 139.00
10122	Wood Framing Inspector	$ 139.00
60001	Roofing/Waterproofing Inspector	$ 150.00
10500	Public Works Inspector	$ 155.00
10515	Mechanical Inspector	$ 185.00
10519	Electrical Inspector	$ 185.00
10521	Plumbing Inspector	$ 185.00
10523	Building Inspector	$ 185.00
30002	Vibration Monitoring Technician	$ 160.00
50003	Field Engineering Technician	$ 139.00

Task Code	Shop Inspection Personnel	Rate
10301	Structural Steel Fabrication Inspector	$ 139.00
10309	Batch Plant Quality Control Technician/Inspector	$ 139.00
10325	Glue-Laminated Fabrication Inspector	Quotation
10328	Pre-Cast Concrete/Pipe Fabrication Inspector	$ 139.00

Task Code	Nondestructive Testing Personnel	Rate
10401	NDE Ultrasonic Testing Technician	$ 145.00
10403	NDE Magnetic Particle Testing Technician	$ 145.00
10405	NDE Dye Penetrant Testing Technician	$ 145.00
10305	Combination NDE Technician/Welding Inspector	$ 145.00
10409	Radiographic Testing (Crew Of 2)	**Quotation**
10020	NDE Engineer	$ 255.00

Task Code	Equipment Usage (Daily Unless Otherwise Noted)	Rate
95318	Skidmore	$ 51.00
95309	Torque Wrench, Small	$ 21.00
95312	Torque Wrench, Large	$ 32.00

Task Code	Equipment Usage (Daily Unless Otherwise Noted), Continued	Rate
95315	Torque Multiplier	$ 48.00
95321	Air Meter	$ 37.00
95322	Unit Weight Bucket	$ 28.00
95323	Field Concrete Scale	$ 37.00
95324	2" x 2" x 2" Mold	$ 26.00
95343	Nuclear Gauge (Per Hour)	$ 13.00
95319	Sand Cone Density Test Equipment	$ 60.00
95333	Pull Test Equipment	$ 74.00
95348	Concrete/Asphalt Coring Equipment	$ 720.00
95336	Floor Flatness (Dipstick)	$ 63.00
95330	Schmidt Hammer	$ 48.00
95341	Vapor Emission Test Kits	$ 58.00
95342	Relative Humidity Probe	$ 90.00
95339	UPV (Ultrasonic Pulse Velocity) Meter	$ 420.00
95351	Fireproofing Adhesion/Cohesion (Per Test)	$ 42.00
95300	A Scan Ultrasonic Equipment And Consumables	$ 100.00
95303	Magnetic Particle Equipment And Consumables	$ 53.00
95306	Liquid Penetrant Consumables	$ 48.00
95307	Phased Array Ultrasonic Equipment (Per Hour)	$ 105.00
95347	Ground Penetrating Radar	$ 399.00
95345	Impact Echo	$ 405.00
95362	Ultrasonic Tomography	$ 525.00
95349	Inertial Profiler (Per Hour)	Quotation
95352	Borescope	$ 315.00
95356	Infrared Camera	$ 105.00
95357	Project Dedicated Vehicle	$ 189.00
95364	Roller Compacted Concrete Vibrating Hammer/Tamping Plate	$ 84.00
95367	Half-Cell Potential Equipment Set	$ 405.00
95368	Concrete Electrical Resistivity Meter	$ 189.00
95369	Field Hardness (Steel)	$ 116.00
95370	Coating Thickness Gauge	$ 166.00
95373	Curing Box (Not Temperature Controlled, One-Time Fee/ Per Box)	$ 788.00
95371	Temperature Control Curing Box (Per Month)	$ 525.00
95372	Temperature Matching Curing Box (Per Month)	$ 599.00

Task Code	Specimen Pick-Up	Rate
20100	Soil/Aggregate Sample (Each)	$ 55.00
20102	Standard Sample: Concrete Cylinders (Each)	$ 36.00
20101	Standard Sample: Mortar/Grout Cubes And Cores, Fireproofing, Rebar, And Epoxy Prisms (Each)	$ 36.00
20103	Oversize Sample: Masonry Prisms And Shotcrete Panels (Each)	$ 94.00
20104	Oversize Sample: Flexural Beams (Each)	$ 94.00
20107	Technician For Specimen Pick-Up Not Listed Above (Per Hour, 2-Hour Minimum)	$ 160.00
20109	Technician For Specimen Pick-Up Before 5:00 a.m. Or After 5:00 p.m. Monday Thru Friday, Or All Day Saturday (Per Hour, 2-Hour Minimum Plus Mileage)	$ 220.00

Task Code	Jobsite Trailer, Mobile Or On-site Laboratory	Rate
95360	Portable Or Mobile Laboratory Unit	Quotation
95374	Jobsite Trailer, Conex, Or Equipment Storage Box	Quotation

Task Code	Concrete Tests (Field Made Specimens)	Rate
20201	6" x 12" Cylinder Compression Strength (ASTM C39)	$ 49.00
20202	4" x 8" Cylinder Compression Strength (ASTM C39)	$ 43.00
20203	Density Of Structural Lightweight Concrete Equilibrium Oven Dry Method (ASTM C567)	$ 107.00
20205	Core Compression Including Trimming (ASTM C42)	$ 97.00
20207	6" x 6" x 18" Flexural Beams Not Exceeding Referenced Size (ASTM C78, C293 or CTM 523)	$ 134.00
20209	Splitting Tensile Strength (ASTM C496)	$ 134.00
20211	Modulus Of Elasticity Test (ASTM C469)	$ 348.00
80003	Rapid Chloride Permeability Test: Cylinders Or Cores (ASTM C1202)	$ 610.00
80006	Density, Absorption, And Voids In Hardened Concrete (ASTM C642)	$ 610.00
40005	Flexural Toughness (ASTM C1609, Formerly ASTM C1018)	$ 963.00
40006	Double Punch Strength Of Fiber Reinforced Concrete	$ 642.00
40009	Coefficient Of Thermal Expansion Of Concrete (CRD 39, AASHTO T336)	$ 696.00
40012	Bulk Electrical Resistivity (One Age Of Testing, ASTM C1876)	$ 172.00
80013	Flexural Tensile Strength Of Metallic Fiber Reinforced Concrete Beam (EN 14651)	$ 1,070.00

TWINING

Task Code	Concrete Specimen Preparation	Rate
20151	Sawing Of Specimens (Each)	$ 54.00
20157	Coring Of Specimens In Lab (Each)	$ 54.00
20159	Grinding Of Concrete Below 6000 psi Strength (Each)	$ 97.00
20160	Grinding Of Concrete 6000 psi Strength And Above (Each)	$ 118.00

Task Code	Laboratory Trial Batch: Concrete, Cement And Mortar	Rate
30216	Compression Test 4" x 8" Cylinders Made And Tested In Laboratory (ASTM C192, C35)	$ 63.00
30217	Compression Test 6" x 12" Cylinders Made And Tested In Laboratory (ASTM C192, C35)	$ 73.00
30219	6" x 6" x 18" Flexural Beams Made And Tested in Laboratory (ASTM C192, C78)	$ 150.00
30223	Splitting Tensile Strength Cylinders Made And Tested In Laboratory (ASTM C192, C496)	$ 150.00
30225	Modulus of Elasticity Test Cylinders Made And Tested In Laboratory (ASTM C192, C469)	$ 364.00
30227	Density Of Structural Lightweight Concrete Made In Laboratory, Equilibrium or Oven Dry Method (ASTM C567)	$ 124.00
30237	Bulk Electrical Resistivity (ASTM C1876)	$ 188.00
30201	Laboratory Trial Batch (ASTM C192/Lab Procedure Performance)	$ 589.00
30203	Concrete Mixture Design For Preconstruction Evaluation And Backup Data Development	$ 343.00
30205	Drying Shrinkage Up To 28 Days, Three 3" x 3" Or 4" x 4" Bars, Five Readings Up To 28 Dry Days (ASTM C157)	$ 557.00
30230	Additional Reading, Per Set Of Three Bars	$ 65.00
30231	Storage Over Ninety (90) Days, Per Set Of Three Bars, Per Month	$ 54.00
30207	Setting Time Up To 7 Hours (ASTM C403)	$ 214.00
30209	Bleeding (ASTM C232)	$ 193.00
30229	Concrete Restrained Expansion (ASTM C878)	$ 749.00
30211	Mix, Make and Test Mortar or Grout Specimens for Compressive Strength: Set of 6 (ASTM C878)	$ 642.00
20263	Non-Shrink Grout: Height Change After Final Set (ASTM C1090)	$ 642.00
20265	Non-Shrink Grout: Height Change At Early Age (ASTM C827)	$ 910.00
30232	Cracking Resistance, Set Of Three Rings, Laboratory Trial Batching, Test Until Cracking Or Up To 28 Days (ASTM 1581)	$ 6,634.00
30233	Evaluation Of Pre-Packaged Masonry Mortars (ASTM C270)	$ 1,391.00
30234	Creep (ASTM C512) (One Age Of Loading, 12 Months Duration Of Testing)	$ 9,095.00
80198	Laboratory Development of Strength-Maturity Curve Without Establishing Datum Temperature (Up To 5 Testing Ages, ASTM C1074)	$ 3,424.00
80199	Laboratory Development Of Strength-Maturity Curve With Establishing Datum Temperature (Up to 5 Testing Ages, ASTM C1074)	$ 5,664.00

Task Code	Evaluation of Mixing Water for Concrete	Rate
80246	Evaluation of Mixing Water For Concrete Per The Requirements Of ASTM C1602, Table 1 (Physical Properties Of Mortar), Per Sample	$ 1,070.00
80248	Evaluation Of Mixing Water For Concrete Per The Requirements Of Caltrans, Section 90, Per Sample	$ 1,284.00

Task Code	Concrete - Chemical Analysis, Transport Properties, Service Life Modeling, Petrographic Examination	Rate
80123	Acid-Soluble Chloride Analysis (ASTM C1152) Includes Sample Prep)	$ 134.00
80126	Water-Soluble Chloride Analysis (ASTM C1218) (Includes Sample Prep)	$ 161.00
80193	Chloride Diffusion Coefficient Of Cementitious Mixtures By Bulk Diffusion (ASTM C1556)	$ 2,996.00
80159	Bulk Resistivity (ASTM C1876) And Formation Factor	$ 696.00
80204	Chloride Binding Isotherm	$ 910.00
80206	Analytical And Experimental (ASTM C1556) Modeling Of Service Life Of Concrete Per Life-365 Model, Per Mixture Design	$ 8,560.00
80208	Analytical And Experimental (NordTest) Modeling Of Service Life Of Concrete Per FIB Model Code 34, Per Mixture Design	$ 8,560.00
80210	Non-Steady State Chloride Migration Coefficient, NordTest 492	$ 669.00
80212	Petrographic Examination Of Hardened Concrete, Level I (ASTM C856) (Excludes Thin Section), Per Sample	$ 1,750.00
80129	Petrographic Examination Of Hardened Concrete, Level II (ASTM C856) Includes Thin Section, Per Sample	$ 2,250.00
80218	Petrographic Examination Of Hardened Concrete, Level III (ASTM C856/C1723) (Thin Section And SEM/EDX), Per Sample	$ 3,500.00
80222	*W/CM* Determination (NordTest Build 361)	$ 1,338.00
80224	Examination Of Volumetric Proportions Of Hardened Concrete (ASTM C457), Per Sample	$ 535.00
80228	Air Void Analysis Of Hardened Concrete (ASTM C457), Per Sample	$ 750.00
80232	Electron Microscopy (ASTM C1723)	$ 803.00
80234	Paste Carbonation Analysis, Per Sample	$ 268.00
80238	Insoluble Residue Analysis (ASTM C1324)	Quotation
80240	Alkali-Silica - Damage Rating Index (DRI), Per Sample	$ 1,338.00

Task Code	Qualification Of Cements	Rate
80100	Chemical Analysis Of Portland Cement Per Standard Requirements (ASTM C150)	$ 803.00
80103	Physical Testing Of Portland Cement Per Standard Requirements (ASTM C150)	$ 803.00
80194	Physical Testing Of Type K Cement, Mortar Expansion (ASTM C806)	$ 803.00
80195	Physical Testing And Chemical Analysis Of Portland Cement Per Standard Requirements (ASTM C150)	$ 1,498.00
80106	Partial Analysis Or Specific Physical Tests	Quotation
80110	Sulfates Resistance Of Hydraulic Cement (ASTM C1012), 6 Months	$ 3,210.00
80111	Sulfates Resistance Of Hydraulic Cement (ASTM C1012), 12 months	$ 3,531.00
80149	Type 1L Cement (ASTM C595; Excludes Special Properties)	$ 1,498.00
80151	Clinker Microscopy, Per Sample	$ 910.00

Task Code	Physical Testing Of Chemical Admixtures For Concrete	Rate
80196	Qualification Of Admixture (ASTM C494)	Quotation

Task Code	Evaluation Of Pozzolans And Slag Cement	Rate
80140	Chemical Analysis Of Fly Ash Per Standard Requirements (ASTM C618)	$ 803.00
80143	Physical Testing Of Fly Ash Per Standard Requirements (ASTM C618)	$ 803.00
80146	Partial Analysis Or Specific Physical Tests	Quotation
80147	Chemical Analysis And Physical Testing Of Fly Ash Per Standard Requirements (ASTM C1618)	$ 1,498.00
80250	Qualification Of Silica Fume Per Standard Requirements (ASTM C1240)	$ 1,498.00
80252	Qualification Of Slag Cement Per Standard Requirements (ASTM C989)	$ 1,498.00
80254	Effectiveness Of Pozzolans & Slag Cement In Mitigating Expansion Due To ASR (ASTM C441)	$ 1,498.00

Task Code	Mass Concrete - Engineering And Testing Services	Rate
80256	Thermal Control Plan (Without Cooling Pipes) Per A Unique Type Of Placement Of Similar Group Of Placements, Each Plan	$ 9,000.00
80258	Thermal Control Plan (With Cooling Pipes), Per A Unique Type Of Placement Of Similar Group Of Placements, Each Plan	$ 10,500.00
80260	Performance Based Maximum Temperature Difference Laboratory & Analytical Studies, One Concrete Mixture Design	$ 6,000.00

Task Code	Rock And Concrete Aggregates - Petrographic Examination & Special USACE & CRD Tests	Rate
80262	Rock Type Description, Per Sample (Rock Core Or Rock Chunk)	$ 1,000.00
80263	Rock Type Description + XRD Including Clay Analysis, Per Sample	$ 1,500.00
80266	Natural Aggregates - Petrographic Examination (Gravel And Natural Sand Consisting Of Single Rock Type ASTM C295) Each, One Sample	$ 2,750.00
80268	Crushed Aggregates - Petrographic Examination (Crushed Rock And Manufactured Sand Consisting Of Single Rock Type ASTM C295), Each, One Sample	$ 2,750.00
80270	Coarse Aggregate Certification For Deleterious Materials Per Specifications Of USACE, Materials Coarser Than 0.75-Inch Each, One Sample, 200 lb.	$ 6,500.00
80272	Coarse Aggregate Certification For Deleterious Materials Per Specifications Of USACE, 0.75-Inch And Finer Material, Each, One Sample, 25 lb.	$ 5,500.00
80274	Fine Aggregate Certification For Deleterious Materials Per Specifications Of USACE, Each, One Sample	$ 2,750.00
80276	Aggregate, Scratch Hardness (CRD-C 130), Each, One Sample, 25 lb.	$ 500.00

Task Code	Soils And Aggregate Tests	Rate
30503	Abrasion: LA Rattler (ASTM C131)	$ 206.00
30505	Abrasion: LA Rattler (ASTM C535)	$ 217.00
70301	Atterberg Limits/Plasticity Index (ASTM D4318, CTM 204)	$ 165.00
70303	California Bearing Ratio Excluding Maximum Density (ASTM D1883) Soil	$ 598.00
70304	California Bearing Ratio Excluding Maximum Density (ASTM D1883) Cement-Treated Soil	$ 670.00
70344	Cement-Treated Soil/Base Mix Design: Includes Three Trial Cement Contents With Three Unconfined Compressive Strength Specimens Per Cement Content	$ 3,605.00
70305	Chloride And Sulfate Content (CTM 417, CTM 422)	$ 180.00
30403	Clay Lumps And Friable Particles (ASTM C142)	$ 210.00
30321	Cleanness Value 1" x #4 (CTM 227)	$ 180.00
30322	Cleanness Value 1.5" x .75" (CTM 227)	$ 285.00

Task Code	Soils And Aggregate Tests, Continued	Rate
70393	Collapse Potential/Index (ASTM D5333)	$ 232.00
70396	Compressive Strength Of Molded Soil-Cement Cylinders (ASTM D1633)	$ 109.00
70309	Consolidation Test Full Cycle (ASTM 2435, CTM 219)	$ 205.00
70311	Consolidation Test Time Rate Per Load Increment (ASTM D2435, CTM 219)	$ 47.00
70313	Corrosivity Series Sulfate, Cl, pH, Resistivity (CTM 643, 417, and 422)	$ 253.00
70315	Crushed/Fractured Particles (ASTM D5821, CTM 205)	$ 180.00
70317	Direct Shear Test Remolded And/Or Residual (ASTM D3080)	$ 255.00
70319	Direct Shear Test Undisturbed - Slow [CD] (ASTM D3080)	$ 230.00
70321	Direct Shear Test Undisturbed - Fast [CU] (ASTM D3080)	$ 200.00
70378	Durability Index Per Method - A,B,C, or D (ASTM D3744, CTM 229)	$ 220.00
70325	Expansion Index (ASTM D4829, UBC 18-2)	$ 175.00
75004	Fine Aggregate Angularity (ASTM C1252, CTM 234, AASHTO T304)	$ 200.00
30507	Flat And Elongated Particle (ASTM D4791)	$ 250.00
30508	Flat Or Elongated Particle (ASTM D4791)	$ 220.00
70331	Maximum Density Methods A/B/C (ASTM D1557, D698, CTM 216)	$ 195.00
70333	Maximum Density Check Point (ASTM D1557, D698)	$ 70.00
70335	Maximum Density AASHTO C [Modified] (AASHTO T-180)	$ 200.00
70336	Maximum Index Density Vibratory Table (ASTM D4253)	$ 355.00
70337	Moisture Content (ASTM D2216, CTM 226)	$ 30.00
70339	Moisture and Density Ring Sample (ASTM D2937)	$ 30.00
70341	Moisture and Density Shelby Tube Sample (ASTM D2937)	$ 45.00
70340	Moisture-Density Relations Of Soil-Cement Mixtures Premixed In The Field (ASTM D558)	$ 285.00
70342	Moisture-Density Relations Of Soil-Cement Mixtures Mixed In The Lab (ASTM D558)	$ 365.00
70328	pH Of Soils (ASTM D4972)	$ 65.00
70330	Organic Content Of Soils (ASTM D2974, Method A Only)	$ 90.00
30401	Organic Impurities (ASTM C40, CTM 213)	$ 95.00
70343	Permeability (ASTM D5084)	Quotation
80001	Potential Reactivity Chemical Method (ASTM C289 - Discontinued Method)	$ 800.00
70394	Potential Reactivity Mortar Bar Expansion Method, 14-Day Exposure (ASTM C1260)	$ 990.00
70391	Potential Reactivity Mortar Bar Expansion Method, 28-Day Exposure (ASTM C1260)	$ 1,100.00
70398	Potential Reactivity Concrete Bar Expansion Method (ASTM C1293), 12 month	$ 2,995.00
70399	Potential Reactivity Concrete Bar Expansion Method (ASTM C1293), 24 month	$ 3,320.00
70397	Potential Reactivity of Aggregate Combination, Non-Standard Method; 14-Day Exposure, Mortar (After ASTM C1567)	$ 1,175.00
70392	Potential Reactivity Of Aggregate Combination, Non-Standard Method; 28-Day Exposure, Mortar (After ASTM C1567)	$ 1,230.00
70345	R-Value Soil (ASTM 2844, CTM 301)	$ 454.00
70347	R-Value Aggregate Base (ASTM D2844, CTM 301)	$ 505.00
70349	Sand Equivalent (ASTM D2419, CTM 217)	$ 129.00
70351	Sieve #200 Wash Only (ASTM D1140, CTM 202)	$ 93.00
70353	Sieve With Hydrometer 3/4" Gravel To Clay (ASTM D422, D7928, CTM 203)	$ 258.00
70355	Sieve With Hydrometer Sand To Clay (ASTM D422, D7928, CTM 203)	$ 248.00
70357	Sieve Analysis Including Wash (ASTM C136, CTM 202)	$ 155.00
70359	Sieve Analysis Without Wash (ASTM C136, CTM 202)	$ 125.00
70360	Sieve Analysis Split Sieve (ASTM C136, CTM 202)	$ 250.00
70361	Sieve Analysis Without Wash With Cobbles (ASTM C136, CTM 202)	$ 245.00
70363	Soundness Sodium Or Magnesium Sulfate, 5 Cycles (ASTM C88)	$ 464.00
70365	Specific Gravity And Absorption Coarse (ASTM C127, CTM 206)	$ 105.00
70367	Specific Gravity and Absorption Fine (ASTM C128, CTM 207)	$ 170.00
70369	Swell/Settlement Potential One Dimensional (ASTM D4546)	$ 155.00
70371	Triaxial	Quotation
70373	Unconfined Compression (ASTM D2166, CTM 221)	$ 196.00
30317	Unit Weight Per Cubic Foot (ASTM C29, CTM 212)	$ 129.00
30319	Voids In Aggregate With Known Specific Gravity (ASTM C29, CTM 212)	$ 129.00
30411	Lightweight Particles Coarse, with Two Solutions (ASTM C123)	$ 535.00
30412	Lightweight Particles Fine, with One Solution (ASTM C123)	$ 258.00
20807	Method of Test for Relative Mortar Strength of Portland Cement Concrete Sand (CT 515)	$ 1,400.00

Task Code	Asphalt Concrete Tests	Rate
75031	HMA Mixing And Preparation	$ 140.00
75032	HMA Mixing And Preparation With Aggregate Treatment	$ 196.00
75033	Bulk Specific Gravity Of Compacted Sample Or Core SSD (ASTM D2726, CTM 308C)	$ 62.00
75036	Bulk Specific Gravity Of Compacted Sample Or Core Paraffin Coated (ASTM D1188 and CTM 308A)	$ 88.00

Task Code	Asphalt Concrete Tests, Continued	Rate
75040	Emulsion Residue, Evaporation (ASTM D244)	$ 175.00
75024	Extraction % Bitumen (ASTM D6307, CTM 382)	$ 175.00
75027	Extraction % Bitumen And Gradation (ASTM D5444, D6307, CTM 202, 382)	$ 240.00
75028	Extraction % Bitumen, Correction Factor (ASTM D6307, CTM 382)	$ 385.00
75030	Chemical Extraction % Bitumen And Sieve Analysis (ASTM D2172 Method A or B, ASTM D5444)	$ 410.00
75042	Lab Tested Maximum Density Hveem, 3 Briquettes (ASTM D1561, D1188, CTM 304, 308)	$ 235.00
75057	Hveem Stabilometer Test, Premixed, 3 Briquettes (ASTM D1560, D1561, CTM 304, 366)	$ 235.00
75048	Lab Tested Maximum Density Marshall, 3 Briquettes (ASTM D6926, D2726)	$ 230.00
75049	Lab Tested Maximum Density Marshall 6" Specimen, 3 Briquettes (ASTM D5581, D2726)	$ 235.00
75050	Lab Tested Maximum Density Superpave Gyratory Compacted Briquette, SSD, 1 Briquette (ASTM D6925, D2726)	$ 90.00
75052	Lab Tested Maximum Density Superpave Gyratory Compacted Briquette, Paraffin, 1 Briquette (ASTM D1188, D6925)	$ 100.00
75051	Maximum Theoretical Specific Gravity [RICE] (ASTM D2041, CTM 309)	$ 180.00
75066	Marshall Stability And Flow, Cored Sample, Each ASTM D6927)	$ 90.00
75069	Marshall Stability And Flow, Premixed, 3 Briquettes (ASTM D6926, D6927)	$ 255.00
75106	Marshall Stability And Flow, Gyratory Compacted Specimen Pre-Mixed, 3 Briquettes (ASTM D5581, D6925)	$ 255.00
75107	Marshall Stability And Flow 6" Specimen, Premixed, 3 Briquettes (ASTM D5581)	$ 255.00
75063	Moisture Content (CTM 370)	$ 90.00
75005	Wet Track Abrasion Test (ASTM D3910)	$ 185.00
75093	Hveem Mix Design (Excluding Aggregate Quality Tests)	$ 6,000.00
75096	Hveem Mix Design, With RAP (Excluding Aggregate Quality Tests, RAP Qualification)	$ 6,500.00
75099	Hveem Mix Design, With Lime (Excluding Aggregate Quality Tests)	$ 10,000.00
75094	Hveem Mix Design Caltrans Untreated Mix (Including Aggregate Quality Tests)	$ 7,000.00
75095	Hveem Mix Design Caltrans Lime Treated Mix (Including Aggregate Quality Tests)	$ 8,000.00
75084	Marshall Mix Design (Excluding Aggregate Quality Tests)	$ 6,000.00
75087	Marshall Mix Design With RAP (Excluding Aggregate Quality Tests)	$ 6,400.00
75090	Marshall Mix Design With Lime (Excluding Aggregate Quality Tests)	$ 7,000.00
75083	Open Grade Asphalt Concrete Mix Design (ASTM D7064, CTM 368)	$ 3,500.00
75109	Superpave Mix Design (Excluding Aggregate Quality Tests)	$ 12,000.00
75113	Superpave Mix Design, With RAP (Excluding Aggregate Quality Tests)	$ 12,500.00
75114	Superpave Mix Design With Rubber (Excluding Aggregate Quality Tests)	$ 12,500.00
75115	Superpave Mix Design With Additives (Excluding Aggregate Quality Tests)	$ 12,700.00
75075	Effect Of Moisture On Asphalt Paving Mixtures, Pre-Mixed (ASTM D4867, AASHTO T283)	$ 1,200.00
75111	Hamburg Wheel Track Test, 20,000 Passes, 4 Briquettes (AASHTO T324)	$ 1,300.00
75039	Raveling Test Of Cold Mixed Emulsified Asphalt (ASTM D7196)	$ 225.00
75067	Marshall Stability, Wet Set, 3 Replicates (AASHTO T245)	$ 390.00
75068	Marshall Stability, Dry Set, 3 Replicates (AASHTO T245)	$ 330.00
75070	Cold Recycled Asphalt Mix Design 2 Gradings Each, 3 Emulsion Content (Caltrans LP-8)	$ 11,600.00

Task Code	Mortar And Stucco - Petrographic Examination	Rate
80282	Stucco, One-Coat (ASTM C856), Includes Thin Section), Per Sample	$ 2,250.00
80286	Stucco, Two-Coat (ASTM C856), Includes Thin Section), Per Sample	$ 2,500.00
80290	Stucco, Three-Coat (ASTM C856), Includes Thin Section), Per Sample	$ 3,000.00
80294	Mortar (ASTM C1324, Petrographic Examination And Chemical Analysis), Per Sample	$ 3,250.00

Task Code	Brick Masonry Tests, ASTM C67	Rate
20301	Modulus Of Rupture Flexural	$ 118.00
20303	Compression Strength	$ 81.00
20305	Absorption 5 Hour or 24 Hour	$ 86.00
20307	Absorption (Boil) 1, 2 Or 5 Hours	$ 118.00
20309	Initial Rate Of Absorption	$ 75.00
20311	Efflorescence	$ 91.00
20313	Cores Compression	$ 97.00
20315	Shear Test On Brick Cores 2 Faces	$ 118.00

Task Code	Concrete Block, ASTM C140		Rate
20321	Compression	$	102.00
20323	Absorption/Moisture Content/Oven Dry Density	$	102.00
20327	Linear Shrinkage (ASTM C426)	$	295.00
20335	Web And Face Shell Measurements	$	59.00
20329	Tension Test	$	188.00
20331	Core Compression	$	97.00
20333	Shear Test Of Masonry Cores 2 Faces	$	118.00
20339	Efflorescence Tests	$	91.00

Task Code	Masonry Prisms, ASTM C1314		Rate
20341	Compression Test, Composite Masonry Prisms Up To 8" x 16"	$	220.00
20343	Compression Test, Composite Masonry Prisms > 8" x 16"	$	295.00
20346	Prism Cord Modulus of Elasticity	$	696.00
20347	Prism Cord Modulus Of Elasticity With Transverse Strain (For Double-Wythe Specimen)	$	760.00

Task Code	Mortar And Grout		Rate
20351	Compression 2" x 4" Mortar Cylinders (ASTM C780)	$	65.00
20353	Compression 3" x 3" x 6" Grout Prisms, Includes Trimming (ASTM C1019)	$	49.00
20355	Compression 2" Cubes (ASTM C109)	$	65.00
20357	Compression Cores Includes Trimming (ASTM C42)	$	97.00

Task Code	Masonry Specimen Preparation		Rate
20155	Cutting Of Cubes Or Prisms	$	81.00

Task Code	Fireproofing Tests		Rate
20401	Oven Dry Density (ASTM E605)	$	97.00

Task Code	Gunite And Shotcrete Tests		Rate
20361	Core Compression Including Trimming (ASTM C42)	$	113.00
20365	Compression Cubes (Includes Saw Cutting)	$	81.00

Task Code	Concrete Roof Fill: Gypsum, Vermiculite, Perlite, Lightweight Insulating Concrete, Etc.		Rate
20371	Compression Test (ASTM C495 and C472)	$	81.00
20373	Air Dry Density (ASTM C472)	$	70.00
20379	Oven Dry Density (ASTM C495)	$	97.00

Task Code	Reinforcing Steel, ASTM A615, A706		Rate
20501	Tensile Test #11 Or Smaller	$	81.00
20503	Bend Test #11 Or Smaller	$	75.00
20504	Bend Test #14 Or #18	$	428.00
20505	Tensile Test #14	$	321.00
20507	Tensile Test #18	$	418.00

Task Code	Reinforcing Steel - Welded Or Coupled Specimens		Rate
20521	Tensile Test Welded/Coupled #11 And Smaller	$	91.00
20523	Tensile Test Welded/Coupled #14	$	311.00
20525	Tensile Test Welded/Coupled #18	$	439.00
20529	Weld Macroetch	$	102.00
20531	Slippage Test - Caltrans (CTM 670)	$	236.00
20532	Tensile Test Welded Hoops #11 And Smaller	$	182.00

Task Code	Metal and Steel Testing		Rate
20601	Tensile Strength Up To 100K Pounds (Each)	$	91.00
20603	Tensile Strength Up To 200K Pounds (Each)	$	102.00
20605	Tensile Strength Up To 300K Pounds (Each)	$	129.00
20607	Tensile Strength Up To 400K Pounds (Each)	$	188.00
20609	Tensile Strength 400K To 600K Pounds (Each)	$	428.00
20611	Tensile Strength Stress-Strain Percent Offset	$	268.00
20545	Weld Macroetch	$	102.00
20547	Weld Fracture	$	54.00
20615	Bend Test	$	86.00
20617	Flattening Test	$	86.00

Task Code	Metal and Steel Testing, Continued		Rate
20619	Hardness Test (ASTM E18)	$	91.00
20630	Bolt Axial Tensile Test (Up To 7/8" Diameter)	$	75.00
20631	Bolt Wedge Tensile Test (Up To 7/8" Diameter)	$	91.00
20632	Bolt Axial Tensile Test (Greater Than 7/8" Up To 1" diameter)	$	97.00
20633	Bolt Wedge Tensile Test (Greater Than 7/8" Up To 1" Diameter)	$	118.00
20634	Bolt Axial Tensile Test (Greater Than 1" Diameter)	$	140.00
20635	Bolt Wedge Tensile Test (Greater Than 1" Diameter)	$	150.00
20636	Bolt Proof Load Test (Up To 7/8")	$	102.00
20637	Bolt Proof Load Test (Greater Than 7/8" Up To 1" Diameter)	$	124.00
20638	Bolt Proof Load Test (Greater Than 1")	$	145.00
20639	Nut Proof Load Test (Up To 7/8")	$	81.00
20640	Nut Proof Load Test (Greater Than 7/8" Up To 1" Diameter)	$	102.00
20641	Nut Proof Load Test (Greater Than 1")	$	113.00

Task Code	Chemical Testing Of Metal And Steel		Rate
80170	Steel Chemical Analysis		Quotation
80173	Weight Of Galvanized Coating (ASTM A90)	$	97.00
80176	Epoxy Coating Thickness	$	107.00
80177	Coating Thickness	$	102.00

Task Code	Machining And Preparation Of Tensile And Bend Sample: Carbon Steel		Rate
20751	Machinist Initial Preparation From Mock-Up, Etc. (Per Hour)	$	156.00
20753	Sawcut To Overall Width (Per 0.5" Thickness Or Fraction Thereof)	$	70.00
20755	Machine To Test Configuration Milled Specimens	$	102.00
20757	Machine To Test Configuration Turned Specimens (Per 0.5" Thickness Or Fraction Thereof)	$	182.00
20759	Prepare Subsize Specimens (Per 0.5" Thickness Or Fraction Thereof)	$	124.00

Task Code	Charpy Impact		Rate
20621	Charpy Impact Ambient Temperature	$	113.00
20623	Charpy Impact Reduced Temperature	$	150.00

Task Code	Machining Of Charpy Samples: Carbon Steel		Rate
20780	Cutting And Milling (Per 0.5" Or Fraction Thereof)	$	102.00
20783	Final Machining To Sample Configuration	$	124.00

Task Code	Prestressing Wires And Tendons, (ASTM A416)		Rate
20701	Stress-Strain Analysis Wire Or Strands (Including Chart And Percent Offset)	$	273.00
20703	Tensile Test Only	$	204.00
20705	Tendons		Quotation

Task Code	Polymer Matrix Composite Materials (Fiberwrap)		Rate
20706	Tensile Strength – Set of 5 Specimens/Batch/Direction (ASTM D3039)	$	1,498.00
20707	Tensile Strength – Additional Specimens (ASTM D3039) (ASTM D3039)	$	289.00
20708	Heating Chamber Time – Per 24 Hr. Period	$	107.00

Task Code	Calibration Services And Universal Machine Usage		Rate
20801	Calibration/Verification Services		Quotation
20803	Universal Test Machine Usage (Per Hour)	$	509.00

Specialty Testing

- Cylic And Fatigue Testing Programs On Special Products/Parts
- Engineering And Technical Supports/Design Of Prototypes And Special Test Set-Up
- Fastener/Coupling Full Testing Program Per New Regulations: Tension, Tension/Bend, Shear, Double Shear, 8 Compressions
- Fiberglass/Composite Materials Field Testing Program (ASTM D1143 D1242, D2584, D4065, D4476, D4923, D7901, D7921, and D732)
- Field Testing Of Structures And Structural Elements
- In-Place Shear Testing
- Materials And/Or Product Evaluation Per Specifications
- Structural Dynamic Testing And Durability Analysis

General Conditions

NOTE: Field inspection work conditions are established by contract with Operating Engineers, Local 12.
NOTE: A minimum of 24 hours notice is required for testing and inspection services.
NOTE: For projects subject to a Project Labor Agreement (PLA), if the terms and conditions of the PLA are more restrictive than those listed below, PLA terms and conditions will apply.
NOTE: Rates will be adjusted annually each July 1st to reflect increased costs.

Administrative Fees

All administrative fees, except as noted below, including report distribution and Twining Construction Hive system are billed at the following percentage of the monthly invoice total: 5%

General Conditions, Continued

Note that hard copies of reports will be sent only to governing jurisdictions that mandate them. All other parties will receive reports electronically. The administrative fee above will receive reports electronically. The administrative fee above will be increased by 1% if additional hard copies of reports are requested. Submittal of project specific forms or resumes will be billed hourly at the Administrative Support Rate.

Minimum Charges (Inspection and Technician Personnel Only - Other Personnel Charged on Portal to Portal Basis)
2-Hour Minimum: Inspector arrives at jobsite, no work to perform
4-Hour Minimum: 1 to 4 hours of inspection
8-Hour Minimum: Over 4 to 8 hours of inspection

Regular Time (All Types of Inspection and also All Non-Exempt Employees)
The first 8 hours worked Monday through Friday between 5:00 a.m. and 5:00 p.m. except as noted otherwise below.

Time and One-Half (All Types of Inspection and also All Non-Exempt Employees)
All shifts will be billed based on the time and date of their start. Any increment past 8 hours through 12 hours worked Monday through Friday and the first 12 hours on Saturday. Time and one-half will also be charged for the first four hours before 5:00 a.m. and after 5:00 p.m.

Double Time (All Types of Inspection and also All Non-Exempt Employees)
All shifts will be billed based on the time and date of their start. After the first 12 hours worked Monday through Saturday, all day Sunday, and holidays. After the first four hours worked before 5:00 a.m. and after 5:00 p.m. Holidays are New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving, the day after Thanksgiving, Christmas Day, and Local 12 general meeting days (First Saturday in June, First Saturday in December). If any of the holidays should fall on Sunday, the Monday following shall be considered the holiday.

Meal Period
When personnel are required by their duties to work more than five consecutive hours without a one-half hour uninterrupted meal period, one half hour at double time rate will be charged in addition to any applicable overtime for actual hours worked.

Shift Differential (Applies to Regularly Scheduled Shifts Only)
A $1.00 per hour shift differential premium will be charged for all inspection hours that fall outside of the 5:00 a.m. to 5:00 p.m. time period. Twining will require 48-hour notice along with the General Contractors approved shift letter prior to beginning a shift that will include hours falling outside this time period. Should this notice not be provided, all work performed on that shift will be billed at the applicable overtime or double time rate.

If three shifts per day are required, the first shift will be billed at the standard rate. The second shift shall be billed in accordance with the previous paragraph. The third shift shall be billed at 8 hours for the first 6 1/2 hours worked and appropriate overtime or double time for all hours thereafter.

Travel Time and Mileage
For projects outside a 50-mile radius from the nearest Twining facility, per excess mile to and from the project will be charged for inspectors and technicians. Other than small tools, whenever project related equipment is required to be transported to and from the project site, time and mileage for inspectors and field technicians will be billed on a portal to portal basis. For all projects, current IRS mileage rate per mile and applicable travel time will be charged portal to portal for engineers, consultants, supervisors, and laboratory technicians from the laboratory to the project site and return.

For work locations located 100 miles or more from Twining, travel time will be charged at the relevant rate for inspectors and technicians in addition to a subsistence allowance as detailed below.

Weekend Sample Pick-Ups
In order to be in conformance with testing standards, it may be required that weekend pick-ups be performed (e.g. concrete specimens cast on Friday must be picked up on weekend in order to be in conformance with ASTM C31 requiring specimens to be moved to their final curing location within 48 hours of casting.) Applicable charges for weekend work will apply when this is required. Should these charges not be authorized, Twining will not be liable for any negative consequences.

Reimbursable Expenses
Parking, air fare, car rental, food, lodging and project specific software/applications (e.g. PlanGrid, Procore, etc.) will be charged at cost plus 20% per processed invoice, unless provided by client.

Project Specific Documents
Costs presented assume that client will provide project specific documents (plans, specifications, submittals, RFIs, etc.) for all inspection personnel. Should project specific documents be provided electronically through a "for fee" service, the client will be responsible for providing access and paying any fees for the service.

Project Site Facilities
Prices quoted assume that initial curing facilities for test samples that comply with relevant test standards and project requirements are provided by others. In addition, prices quoted assume that work/desk space for inspection staff are provided by others. Additional costs, provided by quotation, will apply should Twining be required to provide such facilities.

Subsistence
Subsistence on remote jobs will be charged per quotation.

Laboratory Testing Hours and Expedited Testing
Please note that laboratory testing will be billed on an hourly basis for non-standard tests. If testing is required to be performed on Saturdays, Sundays, holidays, or before 5:30 a.m. or after 4:00 p.m. on weekdays, an additional hourly charge, at the applicable regular, overtime or double time rate, with a minimum of one hour will be applied for the laboratory technician. For rush testing a 50% surcharge in addition to the regular test rate will apply.

Charges for Subcontracted Services

Material sent to outside laboratory for testing:	Cost plus 20%
Material sent to outside fabricator or machine shop:	Cost plus 20%
Glu-Lam beam inspection:	Cost plus 20%
Other subcontractors:	Cost plus 20%
Project exclusive equipment purchase:	Cost plus 20%

Limit of Liability
Client agrees to limit Twining's aggregate liability to all entities for alleged or actual errors and omissions in the performance of its professional services under this agreement to $50,000.00 or the fees actually paid to Twining, whichever amount is greater. Higher limits may be available by quotation.

Additional Insurance Coverage
Any requirements for additional insurance policies or coverage beyond our normal policies/limits (e.g. SML coverage) may be provided at an additional fee and will be quoted on a per project requirements basis.

Certified Payroll
Certified payroll will be provided, upon request, at an additional charge of $150.00/month. Fee applies to every month that certified payroll must be submitted regardless of whether or not services were provided for any given month.

General Conditions, Continued

Final Reports Required by Jurisdiction

If a final report or affidavit is required, we must first review all inspection and testing reports and clear up any unresolved issues on these reports. These issues will typically require approval by the engineer or architect of record. This process can take several weeks or just a day, depending on the number and complexity of the issues. Cost for final reports will be billed hourly.

Terms of Payment

Fees charged are for professional and technical services and are due upon presentation. If not paid within 30 days from date of invoice, they are considered past due and the maximum legal finance charge will be added to the unpaid balance.

In addition, should the client require that invoices be submitted through a web based or electronic system, the client will be responsible for all costs associated with the use of the system.

A 3% fee will be applied for payments processed by credit card.

All invoice errors or necessary corrections shall be brought to the attention of Twining within 15 days of receipt of invoice. Thereafter, customer acknowledges invoices are correct and valid. Twining reserves the right to terminate its services to a customer without notice if all invoices are not current. Upon such termination of services, the entire amount accrued for all services performed shall immediately become due and payable. Customer waives any and all claims against Twining, its subsidiaries, affiliates, servants, and agents for termination of work on account of these terms.

In the event of any litigation arising from or related to any agreement to provide services whether verbal or written, the prevailing party shall be entitled to recover from the non-prevailing party all reasonable costs incurred, including staff time, court costs, attorney's fees and all other related expenses in such litigation. Additionally, in the event of a non-adjudicative settlement of litigation between the parties or a resolution of dispute by arbitration, that same process shall determine the prevailing party.

Hold Specimens

All "hold" specimens are charged at the applicable test rate whether tested or not.

Specimen Sampling and Disposal

Twining samples materials used in construction in accordance with standard practices, methods, codes, and relevant project requirements. Representativeness of sampling and accuracy of testing are subject to the same probabilistic and precision limitations as governing standards, codes and project technical provisions.

Should samples be provided by others Twining cannot warrant or guarantee that material is representative of material that is or will be used in actual construction of the project.

Specimens will be discarded after testing unless Twining has been notified prior to testing that the customer wishes to retrieve the specimens or storage arrangements are made. Costs for storage will be by quotation.

Oversize Specimens

An extra charge will be made when test specimens require more than one person to handle because of size or weight.

Elevated Work Platforms

In the event an elevated work platform is required to safely complete our work, the client must provide safe access for Twining personnel for all required inspection, testing, sampling, etc. including a trained and certified operator or qualified inspector as applicable. Twining will not be responsible for signing waivers associated with providing such access. Should Twining be required to supply an elevated work platform, we will contract with a qualified vendor and the markups shown above will apply.

BOARD MEMORANDUM

DATE: March 24, 2025

TO: **BOARD OF DIRECTORS**

FROM: Mr. Shadi Bader, Engineering Manager

VIA: Mr. Scott Rogers, Assistant General Manager

Mr. Dennis D. LaMoreaux, General Manager

RE: ***CONSIDERATION AND POSSIBLE ACTION ON AUTHORIZING THE GENERAL MANAGER TO EXECUTE A PROFESSIONAL SERVICES AGREEMENT WITH KYLE GROUNDWATER, INC. TO PROVIDE PROFESSIONAL HYDROGEOLOGICAL SERVICES FOR THE PURE WATER AV PROJECT. ($193,666.00 – NOT-TO-EXCEED – BUDGETED – WORK ORDER NO. 22-656 – ENGINEERING MANAGER BADER)***

Recommendation:

Staff recommends that the Board authorize the General Manager to execute a Professional Services Agreement with Kyle Groundwater, Inc. to provide professional hydrogeological services for the Pure Water Antelope Valley (Pure Water AV) Project in the not-to-exceed annual amount of $193,666.00.

Alternative Options:

The alternative would be to either to not proceed with the professional services agreement or not enter into an agreement with Kyle Groundwater, Inc. for the District's Pure Water AV Project.

Impact of Taking No Action:

The potential impact of taking no action would result in delays in the utilization of the District's 5,325 acre-feet of recycled water from Sanitation Districts of Los Angeles County, District 20 (LACSD 20).

Background:

The Palmdale Water District (PWD) is advancing the Pure Water Antelope Valley (PWAV) Project, a key part of the project is aimed at assessing site characterization and injection feasibility for groundwater recharge. To support this effort, Kyle Groundwater, Inc. (KGI) has been selected to provide professional hydrogeological services, including the installation of a deep test well and monitoring well. To fulfill these needs, PWD intends to award a Professional Services Agreement to KGI.

Originally, KGI's scope was included within Stantec's overall contract, but staff opted to contract directly with KGI to eliminate markups and reduce project costs.

Under the agreement, KGI will provide the following services to support PWD's Pure Water AV:

- Project Management & Coordination
- Permitting Support
- Site Assessment & Preliminary Design
- Well Drilling Plans, Technical Specifications & Bidding
- Test Well Construction Management & Field Observation
- Monitoring Well Construction Management & Field Observation
- Data Analysis & Reporting

KGI's services will be performed on a time-and-materials basis in accordance with the attached Schedule of Fees. Awarding this contract to Kyle Groundwater, Inc. will support the successful site characterization and injection feasibility study, helping to advance Pure Water AV.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiative No. 1 – Water Resource Reliability and No. 3 – Systems Efficiency.

This item directly relates to the District's Mission Statement.

Budget:

This item is budgeted and will be covered as part of Work Order No. 22-656.

Supporting Documents:

- Kyle Groundwater, Inc. Scope of Services and Fee Estimate

March 13, 2025

Mr. Shadi Bader, PE
Engineering Manager
Palmdale Water District
2029 East Avenue Q
Palmdale, CA 93550

Subject: **Proposal for Professional Hydrogeological Support Services – Pure Water Antelope Valley Project (PWAV) Site Characterization and Injection Feasibility**

Dear Mr. Bader:

KYLE Groundwater, Inc., (KGI) is pleased to present this proposal to Palmdale Water District (PWD) for professional hydrogeological services related to installation of a deep test well and monitoring well in support of assessing site characterization and injection feasibility for the Pure Water Antelope Valley Project (PWAV). It is our understanding that KGI will support the existing program management team, including Montgomery & Associates, Inc., (M&A) and Stantec Consulting, Inc., with regard to design, bidding, and installation of the wells, and that M&A will lead the aquifer pumping, injection, and tracer testing. Our detailed scope of work and cost proposal for is as follows.

Task 1.0 – Project Management and Meetings

KGI will conduct general project administration, including QA/QC, and monitoring of the project schedule and budget. All work will be reviewed by the Project Manager, and prior to any milestone submittal. QA/QC reviews and documentation will be conducted by our QA/QC team members in accordance with in-house policies and procedures. Our team recognizes the need for comprehensive, up-to-date information on project status, budget, schedule, any identified issues, and potential solutions.

KGI will prepare for and attend a kickoff meeting to discuss the proposed scope of work. The primary objective of the project kick-off meeting will be to make sure that intent, objectives, tasks, budgets, schedules, milestones, deliverables, and data needs are properly understood and addressed. The kick-off meeting also introduces and identifies those individuals responsible for implementing each part of the work and provides a forum for discussion of critical-path tasks, and how those tasks can be efficiently executed. A baseline project schedule will be presented at the meeting and updated on a regular basis. Pertinent members of the project team will attend virtual progress meetings, as necessary, throughout the course of the project. Additional meetings, such as pre-bid, pre-construction, and design meetings are included under their respective tasks. Meeting agendas will be prepared for all project meetings and meeting minutes will be provided to PWD within five (5) working days.

Task 2.0 – Permitting Support

The drilling permit application filing and associated fees will be the responsibility of the drilling contractor. However, prior to filing the permit applications it is typically necessary to coordinate with Los Angeles County, including attendance at a site meeting to discuss the proposed location of the wells, the conceptual well design, inspections, and other requirements. KGI will also evaluate whether an NPDES permit will be required, and will assist with acquisition of a permit, as needed.

Task 3.0 – Site Assessment and Preliminary Design

KGI will review existing planning documentation for the hydrogeological characterization, including the December 20, 2024, Draft Site Characterization for Injection Feasibility work plan prepared by M&A, and will assess the feasibility of the proposed plan to accomplish project goals. Preliminary monitoring and test well designs will be prepared, including a basis of design and planning-level estimates of contractor costs. KGI will also visit the proposed well sites to identify and assess any logistical and permitting issues that may need to be addressed prior to entering the design phase. Results and recommendations from the site assessment will be presented to the project team as a brief technical memorandum at the 100% DRAFT stage for review and comment. Upon incorporation of comments, KGI will submit an electronic copy of the 100% FINAL TM.

Task 4.0 – Well Drilling Plans, Technical Specifications, and Bidding

Task 4.1 – Prepare Well Drilling Plans and Technical Specifications

KGI will prepare detailed technical plans and specifications for drilling and construction of the test and monitoring wells, assist with modification of front-end contractual documents, and prepare detailed bid schedules with specific line items showing units and unit quantities for the work. Engineer's estimates of construction cost will be prepared based on recent winning bids and materials costs for similar work within California. Critical items to be included in the technical specifications will include:

- Site requirements (i.e., noise monitoring and mitigation, dust control, air quality monitoring, waste disposal, BMPs, power, lighting, construction water source, security, sanitation facilities, staging, parking, and traffic control).
- Regulatory and permitting requirements.
- Discharge requirements.
- Well locations, depths, dimensions, and materials (conceptual well design).
- Mobilization, demobilization, site preparation, and site restoration.
- Drilling methods and fluids control requirements.
- Equipment, materials, and records to be furnished by the Contractor.
- Well drilling, zone testing, and construction procedures, including:
    - Surface casing and seal installation.
    - Borehole drilling.
    - Geophysical borehole logging.
    - Alignment, plumbness, borehole integrity, and drilling speed.
    - Installation of well casing and screen.
    - Gravel envelope design and placement method.
    - Annular cement seal installation.
- Well development procedures (initial and final).
- Well disinfection.

KGI will submit a 100% DRAFT version of the plans and specifications to PWD in electronic format for review and comment. Upon incorporation of comments, a 100% FINAL bid-ready version will be provided in native and PDF formats, including professional stamps and signatures.

Task 4.2 – Bidding Assistance

Upon entering the bid phase, KGI will prepare for and attend a pre-bid meeting with prospective drilling contractors to discuss key points within the technical plans and specifications, and to answer questions regarding site conditions, staging, well designs, schedule and other hydrogeologic or contractual matters. During the bidding process, KGI will respond to bidder's questions and prepare bid addenda as necessary (assumes up to three [3] RFIs and addenda). Once the bidding process is complete, KGI will evaluate bids and will provide recommendations regarding award.

Task 4.3 – Pre-Construction Coordination & Support

KGI will coordinate with the selected drilling contractor and will perform field-planning prior to mobilization, including attendance at a pre-construction meeting and site walk with the project team and selected drilling contractor to establish the final location of the wells and address any logistical issues with equipment setup. Discussion will also include, but not be limited to submittals, permit requirements, noise mitigation, discharge issues, air quality monitoring, construction water source location, site access, work schedules, submittal of pay requests, and communication protocol. KGI will prepare a preconstruction meeting agenda and minutes, as necessary.

Task 5.0 – Test Well Construction Management and Field Observation

Task 5.1 – Construction Coordination & Support

During the construction phase, KGI's project manager will provide construction management support, including contractor submittal review, response to RFIs and RFCs, change order review, project schedule review, contractor progress payment request review for accuracy, and regular construction updates.

Task 5.2 – Installation of Conductor Casing

KGI will provide full-time field observation during drilling of the conductor borehole and installation of the conductor casing and annular cement seal. KGI will inspect the conductor casing material, borehole and casing diameters, and casing wall thickness to verify conformance with the technical specifications and final design. The cement mix used for the annular seal will be compared to design and the time of mixing will be noted to ensure that an extended period has not taken place between mixing and delivery to the site. Cement samples will be collected during installation and submerged in drilling fluid to simulate downhole conditions, and will be monitored to verify that the cement has sufficiently set.

Task 5.3 – Borehole Drilling

KGI will provide full-time field observation during drilling of the borehole to an anticipated depth of approximately 1,000 feet below ground surface (bgs). Composite formation cuttings will be collected at 5-foot intervals or at major changes in the character of formation materials. Each sample will be classified utilizing the Unified Soil Classification System (USCS) visual method. During drilling, KGI will witness

measurement of pertinent drilling fluid parameters to optimize protection of water-bearing formations and borehole integrity. Assuming an average drilling rate of 10 feet per hour, and a 24-hour per day work schedule, it is anticipated that borehole drilling will take approximately four (4) days to complete.

Task 5.4 – Geophysical Logging

Upon completion of borehole drilling, KGI will provide full-time field observation during geophysical borehole logging for the following anticipated geophysical suite:

- Short- and long-normal resistivity
- Focused resistivity (i.e., Laterolog-3 or guard)
- Temperature
- Spontaneous potential
- Single-point resistance
- Gamma-ray
- Sonic velocity / variable density
- Nuclear Magnetic Resonance (NMR)

These geophysical logs, in combination with borehole lithology, will be used to identify the location and character of target aquifer intervals and will inform the final well design.

Task 5.5 – Mechanical Grading Analysis

Up to eight (8) formation samples will be selected for mechanical grain size (i.e., sieve) analysis based on visual observation of the actual samples, and geophysical survey logs. The results of these analyses, along with knowledge of regional aquifer characteristics, will be used as a basis for preparing a custom gravel envelope and well screen design for the test well that will offer optimal well efficiency suitable for aquifer pumping and injection testing.

Task 5.6 – Final Test Well Design

A properly designed gravel envelope will control production of formation sand while allowing for an efficient test well, critical for aquifer pumping and injection testing. Proper gravel envelope design can be accomplished through conformance with Terzaghi migration and permeability criteria, as well as appropriate uniformity coefficients and pack-to-aquifer ratios. These factors allow design of a gravel envelope which is sufficiently fine and graded to control the finest formation sand through stabilization, and coarse and uniform enough to allow efficient water flow. The gravel envelope gradation will be designed based on the results of sieve analyses. Once an appropriate gravel envelope gradation has been designed to complement the formation materials, a screen opening size will be selected.

The location of the well screen interval(s), annular cement seal, and well appurtenances (as needed) will be selected based on borehole lithology, and geophysical borehole logging. Recommendations will be provided regarding the suitability of borehole/casing depths and diameters, and materials to be used. The draft well design will be presented to the project team in letter format for review, and KGI's project manager will attend a virtual design review meeting to discuss the proposed design before submittal to the drilling contractor for implementation.

Task 5.7 – Test Well Construction

KGI will provide full-time field observation during installation of the test well casing, screen, ancillary tubing, gravel envelope, and annular seals to ensure placement in accordance with the final well design and technical specifications. Installed volumes of the gravel envelope and cement seal will be checked throughout the construction process to verify that there are no bridges and/or voids within the annular space between the well casing and borehole wall. KGI personnel will inspect all construction materials as they are delivered to the site, including the well casing, well screen, ancillary tubing, gravel envelope, and sealing materials. Casing materials will be inspected to verify that dimensions and material types are in conformance with the final well design. Each load of the gravel envelope material will be sampled upon delivery and sieved to verify that the as-delivered gradation meets design parameters. Cement mixes will be compared to design and the time of mixing will be noted to ensure that an extended period has not taken place between mixing and delivery to the site. Cement samples will be collected during installation and submerged in drilling fluid to simulate downhole conditions. These samples will be monitored to verify the cement has sufficiently set, particularly when multiple cement pours are specified.

Task 5.8 – Initial Test Well Development

Well development is a critical phase of well installation, and successful well development will provide for an efficient well from which aquifer yield and groundwater quality can be assessed. The goal is to remove as much residual drilling fluids as is considered practical and to grade the gravel envelope and near-well zone such that water can be transmitted as efficiently as possible without producing excessive sand.

The first phase of development is typically consists of swabbing while simultaneously airlifting or pumping the entire length of well screen in 10-foot increments. For each interval of screen, sand production will be measured immediately following swabbing, and as the discharge clears. Those intervals exhibiting significant sand production (i.e., greater than approximately 1 ml/L) or high turbidity will be targeted for additional development on subsequent passes through the well screen. KGI will provide part-time field observation during initial well development.

It is estimated that approximately 72 hours of airlift development will be sufficient to develop the well. This can vary based on many factors, including the drilling fluid properties, formation characteristics, well design, and the actual length of well screen. As such, KGI will review data collected during the development process and provide real-time recommendations regarding the need for additional development. Following demobilization of the drilling rig, KGI will coordinate with the drilling contractor regarding installation of a test pump to ensure that the pump is suitably sized, and that the intake is set at an appropriate depth within the well casing.

Task 5.9 – Final Test Well Development by Pumping and Surging

The second phase of well development consists of pumping and surging with a temporary test pump to be furnished by the contractor. During the final development process, pumping will begin at low rates, with no surging, slowly building to the maximum specified pumping rate. Gentle surging will then begin at lower rates, becoming increasingly aggressive as development progresses. Tests for sand production

and specific capacity will be performed throughout the process to measure the progress of development. Once specific capacity approaches a maximum, sand production approaches a minimum, and well performance criteria are met, development is considered complete and well testing can proceed. KGI will provide part-time field observation during final well development.

We estimate 40 hours of final well development will be sufficient to properly develop the well. However, this can vary based on many factors, including the drilling fluid properties, formation characteristics, and final well design. As such, KGI will review data collected during final development and provide recommendations regarding the need for additional development.

Task 5.10 – Well Disinfection

Following aquifer pumping and injection testing (to be performed by others), and assuming that the test well will remain in place and serve as a monitoring well, KGI will provide full-time field observation during final disinfection of the test well to verify that suitable chemicals, concentrations, and methods of mixing and emplacement are employed.

Task 6.0 – Monitoring Well Construction Management and Field Observation

Task 6.1 – Construction Coordination & Support

During the construction phase, KGI's project manager will provide construction management support, including contractor submittal review, response to RFIs and RFCs, change order review, project schedule review, contractor progress payment request review for accuracy, and regular construction updates.

Task 6.2 – Installation of Surface Casing

KGI will provide full-time field observation during contractor mobilization, and installation of surface casing to facilitate drilling of the monitoring well.

Task 6.3 – Borehole Drilling

KGI will provide full-time field observation during drilling of the borehole to an anticipated depth of approximately 1,000 feet bgs. Composite formation cuttings will be collected at 5-foot intervals or at major changes in the character of formation materials. Each sample will be classified utilizing the Unified Soil Classification System (USCS) visual method. During drilling, KGI will witness measurement of pertinent drilling fluid parameters to optimize protection of water-bearing formations and borehole integrity. Assuming an average drilling rate of 10 feet per hour, and a 24-hour per day work schedule, it is anticipated that borehole drilling will take approximately four (4) days to complete.

Task 6.4 – Geophysical Logging

Upon completion of borehole drilling, KGI will provide full-time field observation during geophysical borehole logging for the following anticipated geophysical suite:

- Short- and long-normal resistivity
- Focused resistivity (i.e., Laterolog-3 or guard)
- Temperature

- Spontaneous potential
- Single-point resistance
- Gamma-ray
- Sonic velocity / variable density
- Nuclear Magnetic Resonance (NMR)

Task 6.5 – Mechanical Grading Analysis

Up to eight (8) formation samples will be selected for mechanical grain size (i.e., sieve) analysis based on visual observation of the actual samples, and geophysical survey logs. The results of these analyses, along with knowledge of regional aquifer characteristics, will be used as a basis for preparing a custom gravel envelope and well screen design for the monitoring well (as needed).

Task 6.6 – Final Monitoring Well Design

The gravel envelope gradation will be designed based on the results of sieve analyses. Once an appropriate gravel envelope gradation has been designed to complement the formation materials, a screen opening size will be selected. The location of the well screen interval(s) and annular cement seal will likely mimic that of the test well design but may be modified based on borehole lithology and geophysical borehole logging. A draft monitoring well design will be presented to the project team in letter format for review, and KGI's project manager will attend a virtual design review meeting to discuss the proposed design before submittal to the drilling contractor for implementation.

Task 6.7 – Monitoring Well Construction

KGI will provide full-time field observation during installation of the monitoring well casing and screen, gravel envelope, and annular seals to ensure placement in accordance with the final well design and technical specifications. Installed volumes of the gravel envelope and cement seal will be checked throughout the construction process to verify that there are no bridges and/or voids within the annular space between the well casing and borehole wall. KGI personnel will inspect all construction materials as they are delivered to the site, including the well casing and screen, gravel envelope, and sealing materials. Casing materials will be inspected to verify that dimensions and material types are in conformance with the final well design.

Task 6.8 – Initial Monitoring Well Development

KGI will provide part-time field observation during initial monitoring well development. It is estimated that approximately 24 hours of airlift development will be sufficient to develop the well. This can vary based on many factors, including the drilling fluid properties, formation characteristics, well design, and the actual length of well screen. As such, KGI will review data collected during the development process and provide real-time recommendations regarding the need for additional development.

Task 6.9 – Final Monitoring Well Development by Pumping and Surging

The second phase of well development consists of pumping and surging with a submersible test pump to be furnished by the contractor. During the final development process, the monitoring well will be pumped to purge residual drilling fluids, and to allow an adequate hydraulic response to testing to be performed at the test well. KGI will provide part-time field observation during final well development.

We estimate 24 hours of final well development will be sufficient to properly develop the well. However, this can vary based on many factors, including the drilling fluid properties, formation characteristics, and final well design. As such, KGI will review data collected during final development and provide recommendations regarding the need for additional development.

Task 6.10 – Well Disinfection

Following aquifer pumping and injection testing (to be performed by others), and assuming that the monitoring well will remain in place, KGI will provide full-time field observation during final disinfection of the well structure to verify that suitable chemicals, concentrations, and methods of mixing and emplacement are employed.

Task 7.0 – Reporting

KGI will assemble all relevant construction records from the project and provide this information in a comprehensive written summary report. The report will include a summary of the project, construction timeline, daily field reports, an inventory of the materials installed, as-built well profiles, borehole lithology, geophysical surveys, and field data. Electronic draft and final versions of the summary report will be submitted. Bound hard copies will be provided upon request.

Thank you for considering our proposal and please do not hesitate to contact me at 626.379.7569 or russell.kyle@kylegroundwater.com should you have any questions or concerns. We welcome the opportunity to continue our working relationship with Palmdale Water District.

Sincerely,

Russell John Kyle, PG, CHG
President / Principal Hydrogeologist

cc. Scott Rogers – Palmdale Water District

PALMDALE WATER DISTIRCT
Proposal for Professional Hydrogeological Support Services
Pure Water Antelope Valley Project (PWAV) Site Characterization and Injection Feasibility

		Principal Hydrogeologist	Project Hydrogeologist	Staff Hydrogeologist	GIS Technician	Clerical	Labor	Direct Costs	Total Cost
	Hourly Rate:	$210	$155	$145	$125	$82			
1.0	**PROJECT MANAGEMENT AND MEETINGS**								
1.1	Provide project management, general administration, QA/QC, and attendance at meetings.	24	24			4	$ 9,088	$ 140	$ 9,228
2.0	**PERMITTING SUPPORT**								
2.1	Assist with acquisition and coordination of Los Angeles County drilling permits and NPDES discharge permits.	8	8		4		$ 3,420	$ 140	$ 3,560
3.0	**REVIEW WORK PLAN AND PROVIDE TECHNICAL INPUT**								
3.1	Review existing planning documents and provide input regarding test well and monitoring well design, construction/testing feasibility, preliminary test and monitopring well design, and engineers estimates; submittal of recommendations as letter TM.	12	12	16	4		$ 7,200	$ 140	$ 7,340
4.0	**WELL DRILLING PLANS, TECHNICAL SPECIFICATIONS, AND BIDDING**								
4.1	Prepare well drilling technical plans specifications for TW-1 and MW-1, including bid schedule and engineer's estimates. (100% DRAFT and FINAL submittals).	24	24	40	12	2	$ 16,224	$ -	$ 16,224
4.2	Provide assistance during bidding, including attendance at pre-bid meeting, response to RFIs and RFCs, preparation of addenda, and recommendations for award.	8	8				$ 2,920	$ 140	$ 3,060
4.3	Pre-construction Contractor coordination and feild planning, including attendance at pre-construction meeting.	8	8				$ 2,920	$ 140	$ 3,060
5.0	**TEST WELL CONSTRUCTION MANAGEMENT & FIELD OBSERVATION***								
5.1	Construction coordination and support, submittal review, response to RFIs, change order review, schedule review, contractor invoice review, and construction updates.	12	12				$ 4,380	$ -	$ 4,380
5.2	Field observation during contractor mobilization, and drilling and installation of conductor casing to 50 feet bgs (full-time).	1	6	16			$ 3,460	$ 280	$ 3,740
5.3	Field observation during borehole drilling, and logging of formation samples to 1,000 feet bgs (full-time)*.	2	24	96			$ 18,060	$ 2,720	$ 20,780
5.4	Field observation during geophysical borehole logging, including e-log surveys (full-time).	1	3	8			$ 1,835	$ 140	$ 1,975
5.5	Mechanical grading sieve analysis (assumes eight [8] formation samples)	1		3			$ 645	$ 77	$ 722
5.6	Review borehole lithology and geophysical logs, and provide final test well design including design meeting with project team (provided in letter format; assumes electronic PDF submittal in draft and final form)	8	8		4		$ 3,420	$ -	$ 3,420
5.7	Field observation during test well construction, including installation of well casing and screen, gravel envelope, and annular cement seal (assumes four [4] days, full-time).	2	24	96			$ 18,060	$ 2,720	$ 20,780
5.8	Field observation during initial well development by airlifting and swabbing (part-time; assumes 72 hours of initial development).	2	9	24			$ 5,295	$ 420	$ 5,715
5.9	Field observation during final well development by pumping and surging (part-time; assumes 40 hours of final development).	2	15	40			$ 8,545	$ 700	$ 9,245
5.10	Field observation during well disinfection (full-time).	1	3	8			$ 1,835	$ 140	$ 1,975
6.0	**MONITORING WELL CONSTRUCTION MANAGEMENT & FIELD OBSERVATION***								
6.1	Construction coordination and support, submittal review, response to RFIs, change order review, schedule review, contractor invoice review, and construction updates.	4	4				$ 1,460	$ -	$ 1,460
6.2	Field observation during contractor mobilization, drilling and installation of surface casing to 20 feet bgs (full-time).	1	3	12			$ 2,415	$ 140	$ 2,555
6.3	Field observation during borehole drilling, and logging of formation samples to 1,000 feet bgs (full-time)*.	2	24	96			$ 18,060	$ 2,720	$ 20,780
6.4	Field observation during geophysical borehole logging, including e-log surveys (full-time).	1	3	8			$ 1,835	$ 140	$ 1,975
6.5	Mechanical grading sieve analysis (assumes eight [8] formation samples)	1		3			$ 645	$ 77	$ 722

PALMDALE WATER DISTIRCT
Proposal for Professional Hydrogeological Support Services
Pure Water Antelope Valley Project (PWAV) Site Characterization and Injection Feasibility

		Principal Hydrogeologist	Project Hydrogeologist	Staff Hydrogeologist	GIS Technician	Clerical	Labor	Direct Costs	Total Cost
	Hourly Rate:	$210	$155	$145	$125	$82			
6.6	Review borehole lithology and geophysical logs, and provide final monitoring well design including design meeting with project team (provided in letter format; assumes electronic PDF[2] submittal in draft and final form)	4	8		4		$ 2,580	$ -	$ 2,580
6.7	Field observation during monitoring well construction, including installation of well casing and screen, gravel envelope, and annular cement seal (assumes three [3] days, full-time).	2	24	96			$ 18,060	$ 2,040	$ 20,100
6.8	Field observation during initial well development by airlifting and swabbing (assumes 24 hours of initial development, days only, part-time).	1	9	24			$ 5,085	$ 420	$ 5,505
6.9	Field observation during final well development by pumping and surging (assumes 24 hours of final development, days only, part-time).	1	9	24			$ 5,085	$ 420	$ 5,505
6.10	Field observation during well disinfection (full-time).	1	3	6			$ 1,545	$ 140	$ 1,685
7.0	**ANALYSIS AND REPORTING**								
7.1	Assist with data analysis and preparation of summary technical memorandum, and attend workshop to present results (draft and final submittals).	24	24	40	8		$ 15,560	$ 35	$ 15,595
	TOTAL HOURS AND COST:	***158***	***299***	***656***	***36***	***6***	***$ 179,637***	***$ 14,029***	***$ 193,666***

* Assumes average drilling rate of 10 ft per hour and borehole total depth of approximately 1,000 feet. Assumes no borehole reaming will be necessary.

BOARD MEMORANDUM

DATE: March 24, 2025

TO: **BOARD OF DIRECTORS**

FROM: Mr. Shadi Bader, Engineering Manager

VIA: Mr. Scott Rogers, Assistant General Manager
Mr. Dennis D. LaMoreaux, General Manager

RE: ***CONSIDERATION AND POSSIBLE ACTION ON AUTHORIZING STAFF TO ENTER INTO AN AGREEMENT WITH PETERSEN RANCH MITIGATION BANK TO RESERVE AND PURCHASE ENVIRONMENTAL CREDITS TO SUPPORT THE CONSTRUCTION OF THE PALMDALE DITCH CONVERSION PROJECT. ($3,747,000.00 – BUDGETED – PROJECT NO. 21-613 – ENGINEERING MANAGER BADER)***

Recommendation:

Staff recommends that the Board authorize staff to enter into an agreement with Petersen Ranch Mitigation Bank to purchase environmental credits to support the construction of the Palmdale Ditch Conversion Project in the amount of $3,747,000.00.

Alternative Options:

There is no alternative.

Impact of Taking No Action:

The District cannot move forward with the Palmdale Ditch Conversion Project, resulting in an annual loss of approximately 1,500 acre-feet of raw water from Littlerock Dam and forfeiting eligibility for the two construction grants.

Background:

The Palmdale Water District (PWD) is planning to replace the existing Palmdale Ditch, a 7.2-mile water conveyance structure that runs from Littlerock Dam to Lake Palmdale. Currently, the ditch is either earthen or concrete-lined, with approximately 70% of its length remaining unlined. The remaining 30% is either concrete-lined or enclosed in tunnels or culverts. The ditch was originally constructed in the 1880s.

This Project will enhance water conservation, reduce evaporation losses, and minimize contamination risks. However, the Project will impact existing riparian and wetland habitats, necessitating mitigation measures in accordance with state and federal environmental regulations.

Petersen Ranch Mitigation Bank is an approved conservation bank that provides habitat credits for projects affecting wetland and riparian ecosystems. The bank offers credits that meet regulatory agency requirements, including those set forth by the U.S. Army Corps of Engineers

(USACE), the California Department of Fish and Wildlife (CDFW), and the Regional Water Quality Control Board (RWQCB).

After many meetings and negotiations between District staff, Rincon (PWD's environmental consultant), Hazen and Sawyer (PWD's design engineer), RWQCB, CDFW, and Petersen Ranch Mitigation Bank (PRMB), we were able to negotiate down the requirements to mitigate the project impacts to the following:

Credit Type	Acreage
CDFW Streambed and Wetland/Riparian Credits	
1600 Credit Type	
Restoration Credits	
1600 Alluvial Floodplain Re-established	7.42
1600 Alluvial Floodplain Rehabilitated	1.05
1600 Seasonal Wetland Rehabilitated	0.17
Restoration Credits Subtotal	8.64
Enhancement Credits	
1600 Freshwater Marsh Enhanced	0.08
Enhancement Credits Subtotal	0.08
CDFW Credit Subtotal	8.72
RWQCB Porter-Cologne Wetland and Non-Wetland Waters Credits	
Freshwater Marsh Uniform Re-establishment	0.07
Seasonal Wetland Upland Buffer Preserved	5.70
RWQCB Subtotal	5.77
Grand Total	14.49

The cost to purchase these credits is $3,747,000. Securing mitigation credits from Petersen Ranch Mitigation Bank will ensure compliance with environmental regulations while facilitating the successful execution of the Palmdale Ditch Conversion Project. The specific number of credits and associated costs were determined based on final impact assessments and multiple discussions with the regulatory agencies listed above.

PRMB is requesting a $1,125,000 deposit upon execution of the reservation agreement, which will be applied toward the total purchase price. Currently, 10.89 acres of credits are available for purchase, while the remaining 3.60 acres are expected to be approved in PRMB's next phase release. As per the agreement, the District will complete the purchase and pay the remaining $2,622,000 within 30 days of USACE and CDFW approval of the Phase 5 credit release, currently anticipated on December 1, 2025.

The District must implement additional mitigation and management measures to fully address the impacts to Crotch's Bumble Bee, a candidate for endangered status. To comply with the

California Endangered Species Act, the District has prepared an application for a Section 2081(b) Incidental Take Permit for Crotch's Bumble Bee.

As part of this process, the State will require a deposit as a guarantee that the District will fulfill the required mitigation and monitoring commitments. This deposit will be refunded as construction progresses and the mitigation efforts are successfully completed. The costs for the mitigation and monitoring efforts will be presented to the Board at the start of construction.

Staff recommends that the Board of Directors proceed with the purchase of the necessary environmental credits in the amount of $3,747,000 from the Petersen Ranch Mitigation Bank to satisfy regulatory requirements for the Palmdale Ditch Conversion Project.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiatives No. 1 – Water Resources Reliability and No. 3 – Systems Efficiency.
This item directly relates to the District's Mission Statement.

Budget:

This item is budgeted under Project No. 21-613.

Supporting Documents:

- Petersen Ranch Mitigation Bank Credits Reservation and Purchase Agreement

AGREEMENT FOR RESERVATION OF CREDITS

PETERSEN RANCH MITIGATION BANK

This Agreement for Reservation of Credits ("Agreement") is entered into this ____ day of _____, 2025 (the "Effective Date"), by and between Land Veritas Corp. ("Bank Sponsor") and Palmdale Water District ("Project Proponent"), jointly referred to as the "Parties" and each as a "Party", as follows:

RECITALS

A. Bank Sponsor has developed the Petersen Ranch Mitigation Bank ("Bank") located in Los Angeles County, California; and

B. The Bank has been developed pursuant to a Bank Enabling Instrument (BEI) entered into by and among Bank Sponsor, LV-BP Investors Ranch, LLC, LV Lake Elizabeth LLC (jointly "Property Owner"), the U.S. Army Corps of Engineers (USACE), the U.S. Environmental Protection Agency (EPA), the Lahontan Regional Water Quality Control Board (Lahontan RWQCB), and the California Department of Fish and Wildlife (CDFW); on May 11, 2016; and

C. Project Proponent is seeking to implement the project described on Exhibit "A" attached hereto ("Project"), which would unavoidably and permanently impact Waters of the U.S. and Waters of the State, and seeks to compensate for the loss of the same by purchasing credits from the Bank Sponsor; and

D. Project Proponent is applying for authorization by USACE File No. SPL-2024-00544, CDFW File No. EPIMS-LAN-56772-R5, and Lahontan RWQCB File No. CAROGE1216 to purchase the credit package shown in Exhibit "A" ("Credits") upon confirmation by the Bank Sponsor of credit availability/adequate balance of credits remaining for sale; and

E. Upon agency approval, Project Proponent desires to purchase from Bank Sponsor and Bank Sponsor desires to sell to Project Proponent the Credits in order to satisfy the mitigation obligations for the project described on Exhibit "A" using the form of agreement attached as Exhibit "B"; and

F. Bank Sponsor is willing to grant to Project Proponent (and Project Proponent is willing to accept from Bank Sponsor) a reservation to acquire the Credits from Bank Sponsor and reserve the Credits until 30 days following USACE and CDFW approval of the Release 5 Credit Release ("Closing Date"). Closing must occur on or before the Closing Date.

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. Grant of Reservation; Value of Credits.

   a. Grant of Reservation. Subject to the terms and conditions set forth in this Agreement, Bank Sponsor hereby grants and reserves unto Project Proponent, and Project Proponent accepts from Bank Sponsor, the right to acquire the Credits (the "Reservation") through and including the Closing Date.

b. Deposits. Upon execution of this contract, Project Proponent shall provide a deposit of one million one hundred twenty-five thousand dollars ($1,125,000) (the "Deposit"), one hundred ninety-five thousand dollars ($195,000) of which is non-refundable. Once the Release 5 Credit Release is approved by the USACE and CDFW, the entirety of the Deposit will be considered non-refundable. The Deposit will be applied to and credited to the Purchase Price (as defined below).

c. Value of Credits. The Parties acknowledge and agree that the value of the Credits (as reserved pursuant to the Reservation) is three million seven hundred forty-seven thousand dollars ($3,747,000) ("Purchase Price").

d. Termination and Application of Deposit.

a) If the Release 5 Credit Release is not approved by the USACE and CDFW by December 1, 2025, this Agreement shall terminate, the Bank Sponsor will refund the refundable portion of the Deposit to the Project Proponent, the Project Proponent will forfeit the non-refundable portion of the Deposit, and the Bank Sponsor can sell the Credits to another buyer upon release.

b) If the Credits have not been purchased by the Closing Date, the entire Deposit will be forfeit, this Agreement shall terminate, and the Bank Sponsor can sell the Credits to another buyer.

2. Notices. All notices, demands, consents, requests or other communications required to or permitted to be given pursuant to this Agreement shall be in writing, shall be given only in accordance with the provisions of this Section, shall be addressed to the Parties in the manner set forth below, and shall be conclusively deemed to have been properly delivered: (i) upon receipt when hand delivered during normal business hours (provided that notices which are hand delivered shall not be effective unless the sending Party obtains a signature of a person at such address that the notice has been received); (ii) upon receipt when sent by facsimile prior to 5:00 p.m. of a given business day (otherwise such receipt is deemed as of the following business day) to the number set forth below (provided, however, that notices given by facsimile shall not be effective unless the sending Party's machine provides written confirmation of successful delivery thereof); (iii) upon the day of delivery if the notice has been deposited in an authorized receptacle of the United States Postal Service as first-class, registered or certified mail, postage prepaid, with a return receipt requested (provided that the sender has in its possession the return receipt to prove actual delivery); or (iv) one (1) business day after the notice has been deposited with either FedEx or United Parcel Service to be delivered by overnight delivery (provided that the sending Party receives a confirmation of actual delivery from the courier). The addresses of the Parties to receive notices are as follows:

To Bank Sponsor: Land Veritas Corp.
1001 Bridgeway #246
Sausalito CA 94965
Attention: H. Tracey Brownfield, President
Email: tracey@landveritas.com

To Project Proponent: Palmdale Water District
2029 East Avenue Q
Palmdale, California 93550
Attention: Scott Rogers
Email: srogers@palmdalewater.org

3. Governing Law and Venue. This Agreement, and the documents attached as exhibits to this Agreement, shall be governed by, and construed in accordance with, the laws of the State of California. In the event of any legal action to enforce or interpret this Agreement or the attached exhibits, the sole and exclusive venue shall be a court of competent jurisdiction located in Los Angeles County; and the Parties hereto agree to and do hereby submit to the jurisdiction of such court.

4. Entire Agreement. This Agreement (including all attached exhibits) is the final expression of, and contains the entire agreement between, the Parties with respect to the subject matter hereof and supersedes all prior understandings with respect thereto. This Agreement may not be modified, changed, supplemented, superseded, canceled or terminated, nor may any obligations hereunder be waived, except by written instrument signed by the Party to be charged or by its agent duly authorized in writing or as otherwise expressly permitted herein. The Parties do not intend to confer any benefit hereunder on any person, firm or corporation other than the Parties hereto and lawful assignees.

5. Time of Essence. The Parties hereby acknowledge and agree that time is strictly of the essence with respect to each and every term, condition, obligation and provision under this Agreement and that failure to timely perform any of the terms, conditions, obligations or provisions hereof by any Party shall constitute a material breach of and a non-curable (but waivable) default under this Agreement by the Party so failing to perform.

6. Counterparts. This Agreement may be executed in multiple counterparts, each of which shall be deemed an original, but all of which, together, shall constitute one and the same instrument.

7. Signatures. The signatures pages to this Agreement may be delivered via facsimile, electronic mail (including PDF or any other electronic signature complying with the U.S. federal ESIGN Act of 2000; e.g., DocuSign) or other transmission method, and any signature so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

[***THIS SPACE INTENTIONALLY LEFT BLANK; SIGNATURES TO FOLLOW***]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the Effective Date first above written.

BANK SPONSOR

Bank Sponsor

By: _____ Date: _____

Nathan Bello, on behalf of H. Tracey Brownfield, President

Its: _____

PROJECT PROPONENT

Palmdale Water District

By: _____ Date: _____

Name: _____

Its: _____

EXHIBIT "A"

DESCRIPTION OF PROJECT TO BE MITIGATED

Name of Project:

Palmdale Ditch Conversion Project

Project Location:

The Project site consists of an approximately 7.2-mile-long corridor of the Palmdale Ditch (Ditch) that overlaps 88 parcels in the city of Palmdale and unincorporated Los Angeles County. The approximate center of the Project is located at 34.527221°N, --118.055227°W.

Permitting Agency(ies) File/Tracking Number:

USACE File No. SPL-2024-00544

CDFW File No. EPIMS-LAN-56772-R5

Lahontan RWQCB File No. CAROGE1216

Project Description:

The Project is a critical drought resiliency initiative that would involve the conversion of approximately 7.2 miles of the Ditch to a buried 48- inch diameter pipeline made from reinforced concrete or high-density polyethylene. Of the 7.2-mile length, approximately 6.4 miles is currently open-channel with a mixture of concrete-lined and earthen-bottomed segments, which would be converted to pipeline. Approximately 0.5 mile of the Ditch is currently within pipelines or tunnels, specifically at its overcrossing of the California Aqueduct and below Los Angeles Department of Water and Power electrical lines. These pipelines and tunnels would be inspected and potentially rehabilitated. Approximately 0.1 mile of the Ditch consists of road culvert crossings under various City of Palmdale and County of Los Angeles roads. The Project involves inspection, rehabilitation, and replacement of these crossings, as needed. Along open-channel segments of the Ditch where the proposed pipeline is placed directly in the existing Ditch alignment, the Ditch would be backfilled following pipeline installation. Along open-channel segments of the Ditch where the proposed pipeline is placed outside the existing alignment, the Ditch would be left in its current condition. In addition, any buried pipelines or tunnels expected to remain in service as part of the improved Ditch would be inspected and rehabilitated, as necessary, to ensure a fully functioning system upon completion of the improvements.

Credits To Be Purchased:

CDFW Streambed and Wetland/Riparian Credits

1600 Credit Type	Acreage
Restoration Credits	
1600 Alluvial Floodplain Re-established	7.42
1600 Alluvial Floodplain Rehabilitated	1.05
1600 Seasonal Wetland Rehabilitated	0.17
Restoration Credits Subtotal	***8.64***
Enhancement Credits	
1600 Freshwater Marsh Enhanced	0.08
Enhancement Credits Subtotal	***0.08***
Total	**8.72**

RWQCB Porter-Cologne Wetland and Non-Wetland Waters Credits

PC Credit Type	Acreage
Freshwater Marsh Uniform Re-establishment	0.07
Seasonal Wetland Upland Buffer Preserved	5.70
Total	**5.770**

EXHIBIT "B"

AGREEMENT FOR SALE OF CREDITS

AGREEMENT FOR SALE OF CREDITS

USACE FILE NO. SPL-2024-00544

CDFW FILE NO. EPIMS-LAN-56772-R5

LAHONTAN RWQCB FILE NO. CAROGE1216

This Agreement is entered into this ____ day of _____, 2025, by and between the Land Veritas Corp (Bank Sponsor) and Palmdale Water District (Project Proponent), jointly referred to as the "Parties," as follows:

RECITALS

A. The Bank Sponsor has developed the Petersen Ranch Mitigation Bank (Bank) located in Los Angeles County, California; and

B. The Bank has been developed pursuant to a Bank Enabling Instrument (BEI) entered into by and between Bank Sponsor, LV-BP Investors Ranch, LLC, LV Lake Elizabeth, LLC (jointly "Property Owner"), the U.S. Army Corps of Engineers (USACE), the Environmental Protection Agency (EPA), the Lahontan Regional Water Quality Control Board (Lahontan RWQCB), and the California Department of Fish and Wildlife (CDFW) on May 11, 2016, and is currently in good standing with these agencies; and

C. Project Proponent is seeking to implement the project described on Exhibit "A" attached hereto (Project), which would unavoidably and adversely impact Waters of the U.S. and Waters of the State, and seeks to compensate for the loss of the same by purchasing credits from Bank Sponsor; and

D. Project Proponent has been authorized by the USACE File No. SPL-2024-00544, CDFW File No. EPIMS-LAN-56772-R5, and Lahontan RWQCB File No. CAROGE1216 to purchase from the Bank the credit package shown in Exhibit "A" ("Credits") upon confirmation by the Bank Sponsor of credit availability/adequate balance of credits remaining for sale; and

E. Project Proponent desires to purchase from Bank Sponsor and Bank Sponsor desires to sell to Project Proponent the Credits;

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. Bank Sponsor hereby sells to Project Proponent and Project Proponent hereby purchases from Bank Sponsor Credits for the purchase price of three million seven hundred forty-seven thousand dollars ($3,747,000). The Bank Sponsor will then deliver to Project Proponent an executed Bill of Sale in the manner and form as attached hereto and marked Exhibit "B". The purchase price for said credits shall be paid by cashier's check or, at the option of Bank Sponsor, wire transfer of funds according to written instructions by Bank Sponsor to Project Proponent.

2. The sale and transfer herein is not intended as a sale or transfer to Project Proponent of a security, license, lease, easement, or possessory or non-possessory interest in real property, nor the granting of any interest of the foregoing.

3. Project Proponent shall have no obligation whatsoever by reason of the purchase of the Credits, to support, pay for, monitor, report on, sustain, continue in perpetuity, or otherwise be obligated or liable for the success or continued expense or maintenance in perpetuity of the Credits sold, or the Bank. Pursuant to the BEI and any amendments thereto, Bank Sponsor shall monitor and make reports to the appropriate agency or agencies on the status of any Credits sold to Project Proponent. Bank Sponsor shall be fully and completely responsible for satisfying any and all conditions placed on the Bank or the Credits by all state or federal jurisdictional agencies.

4. The Credits sold and transferred to Project Proponent shall be non-transferable and non-assignable and shall not be used as compensatory mitigation for any other project or purpose, except as set forth herein.

5. Project Proponent must exercise his/her/its right to purchase the Credits within 30 days of the date of this Agreement. After the 30-day period this Agreement will be considered null and void.

6. Upon purchase of the Credits specified in paragraph 1 above, the Bank Sponsor shall submit to the parties listed in the Notices section of the BEI, copies of the: a) Agreement for Sale of Credits; b) Bill of Sale; c) Payment Receipt; and d) an updated ledger. The updated ledger must detail: i) Project Proponent; ii) Project Name; iii) Status (sale complete/sale not complete); iv) Credit Sale Date; v) Permitting Agency File/Tracking Number; vi) Total Number of Credits Authorized to Sell; vii) Total Number of Credits Sold to Date (inclusive); and viii) Balance of all Credits Available. The ledger should include all sales data from Bank Establishment Date to the present.

7. The signatures pages to this Agreement may be delivered via facsimile, electronic mail (including PDF or any other electronic signature complying with the U.S. federal ESIGN Act of 2000; e.g., DocuSign) or other transmission method, and any signature so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

[*THIS SPACE INTENTIONALLY LEFT BLANK; SIGNATURES TO FOLLOW*]

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

BANK SPONSOR

LAND VERITAS CORP

By: _____ Date:

Nathan Bello, on behalf of H. Tracey Brownfield, President

PROJECT PROPONENT

PALMDALE WATER DISTRICT

By: _____ Date:

Name: _____ Title: _____

EXHIBIT "A"

DESCRIPTION OF PROJECT TO BE MITIGATED

Name of Project:

Palmdale Ditch Conversion Project

Project Location:

The Project site consists of an approximately 7.2-mile-long corridor of the Palmdale Ditch (Ditch) that overlaps 88 parcels in the city of Palmdale and unincorporated Los Angeles County. The approximate center of the Project is located at 34.527221°N, --118.055227°W.

Permitting Agency(ies) File Number:

USACE File No. SPL-2024-00544

CDFW File No. EPIMS-LAN-56772-R5

Lahontan RWQCB File No. CAROGE1216

Project Description:

The Project is a critical drought resiliency initiative that would involve the conversion of approximately 7.2 miles of the Ditch to a buried 48- inch diameter pipeline made from reinforced concrete or high-density polyethylene. Of the 7.2-mile length, approximately 6.4 miles is currently open-channel with a mixture of concrete-lined and earthen-bottomed segments, which would be converted to pipeline. Approximately 0.5 mile of the Ditch is currently within pipelines or tunnels, specifically at its overcrossing of the California Aqueduct and below Los Angeles Department of Water and Power electrical lines. These pipelines and tunnels would be inspected and potentially rehabilitated. Approximately 0.1 mile of the Ditch consists of road culvert crossings under various City of Palmdale and County of Los Angeles roads. The Project involves inspection, rehabilitation, and replacement of these crossings, as needed. Along open-channel segments of the Ditch where the proposed pipeline is placed directly in the existing Ditch alignment, the Ditch would be backfilled following pipeline installation. Along open-channel segments of the Ditch where the proposed pipeline is placed outside the existing alignment, the Ditch would be left in its current condition. In addition, any buried pipelines or tunnels expected to remain in service as part of the improved Ditch would be inspected and rehabilitated, as necessary, to ensure a fully functioning system upon completion of the improvements.

Credits To Be Purchased:

CDFW Streambed and Wetland/Riparian Credits

1600 Credit Type	**Acreage**
Restoration Credits	
1600 Alluvial Floodplain Re-established	7.42
1600 Alluvial Floodplain Rehabilitated	1.05
1600 Seasonal Wetland Rehabilitated	0.17
Restoration Credits Subtotal	***8.64***
Enhancement Credits	
1600 Freshwater Marsh Enhanced	0.08
Enhancement Credits Subtotal	***0.08***
Total	**8.72**

RWQCB Porter-Cologne Wetland and Non-Wetland Waters Credits

PC Credit Type	**Acreage**
Freshwater Marsh Uniform Re-establishment	0.07
Seasonal Wetland Upland Buffer Preserved	5.70
Total	**5.77**

EXHIBIT "B"

BILL OF SALE

USACE File No. SPL-2024-00544

CDFW File No. EPIMS-LAN-56772-R5

Lahontan RWQCB File No. CAROGE1216

In consideration of $3,747,000, receipt of which is hereby acknowledged, Land Veritas Corp. (Bank Sponsor), does hereby bargain, sell and transfer to Palmdale Water District (Project Proponent) the credit package defined in Exhibit "C" (Credits) in the Petersen Ranch Mitigation Bank in Los Angeles County, California, developed, and approved by the USACE, EPA, RWQCB, and/or CDFW and associated with the Project described in Exhibit A.

Bank Sponsor represents and warrants that it has good title to the Credits, has good right to sell the same, and that they are free and clear of all claims, liens, or encumbrances.

Bank Sponsor covenants and agrees with the Project Proponent to warrant and defend the sale of the Credits hereinbefore described against all and every person and persons whomsoever lawfully claiming or to claim the same.

DATED: _____

Petersen Ranch Mitigation Bank

Land Veritas Corp., Bank Sponsor

By: _____

Nathan Bello, on behalf of H. Tracey Brownfield, President

EXHIBIT "C"

PETERSEN RANCH MITIGATION BANK

PAYMENT RECEIPT

PROJECT PROPONENT INFORMATION

Name:

Palmdale Water District

Address of Project Proponent:

2029 East Avenue Q

Palmdale, California 93550

Telephone:

(206) 303-9303

Contact:

Scott Rogers

PROJECT INFORMATION

Project Description:

The Project is a critical drought resiliency initiative that would involve the conversion of approximately 7.2 miles of the Ditch to a buried 48- inch diameter pipeline made from reinforced concrete or high-density polyethylene. Of the 7.2-mile length, approximately 6.4 miles is currently open-channel with a mixture of concrete-lined and earthen-bottomed segments, which would be converted to pipeline. Approximately 0.5 mile of the Ditch is currently within pipelines or tunnels, specifically at its overcrossing of the California Aqueduct and below Los Angeles Department of Water and Power electrical lines. These pipelines and tunnels would be inspected and potentially rehabilitated. Approximately 0.1 mile of the Ditch consists of road culvert crossings under various City of Palmdale and County of Los Angeles roads. The Project involves inspection, rehabilitation, and replacement of these crossings, as needed. Along open-channel segments of the Ditch where the proposed pipeline is placed directly in the existing Ditch alignment, the Ditch would be backfilled following pipeline installation. Along open-channel segments of the Ditch where the proposed pipeline is placed outside the existing alignment, the Ditch would be left in its current condition. In addition, any buried pipelines or tunnels expected to remain in service as part of the improved Ditch would be inspected and rehabilitated, as necessary, to ensure a fully functioning system upon completion of the improvements.

Project Location:

The Project site consists of an approximately 7.2-mile-long corridor of the Palmdale Ditch (Ditch) that overlaps 88 parcels in the city of Palmdale and unincorporated Los Angeles County. The approximate center of the Project is located at 34.527221°N, --118.055227°W.

Permitting Agency File Number:

USACE File No. SPL-2024-00544

CDFW File No. EPIMS-LAN-56772-R5

Lahontan RWQCB File No. CAROGE1216

Species/Habitat Affected:

8.64 acres CDFW-jurisdictional streambed and riparian habitat

2.92 acres Lahontan RWQCB-jurisdictional wetland and non-wetland waters

Credits to be Purchased:

CDFW Streambed and Wetland/Riparian Credits

1600 Credit Type	**Acreage**
Restoration Credits	
1600 Alluvial Floodplain Re-established	7.42
1600 Alluvial Floodplain Rehabilitated	1.05
1600 Seasonal Wetland Rehabilitated	0.17
Restoration Credits Subtotal	***8.64***
Enhancement Credits	
1600 Freshwater Marsh Enhanced	0.08
Enhancement Credits Subtotal	***0.08***
Total	**8.72**

RWQCB Porter-Cologne Wetland and Non-Wetland Waters Credits

PC Credit Type	**Acreage**
Freshwater Marsh Uniform Re-establishment	0.07
Seasonal Wetland Upland Buffer Preserved	5.70
Total	**5.77**

PAYMENT INFORMATION

Payee:

Land Veritas Corp

Payer:

Palmdale Water District

Amount:

$3,747,000

Method of payment: _____

Received by: _____

Nathan Bello, on behalf of H. Tracey Brownfield, President

Date: _____

BOARD MEMORANDUM

DATE: March 24, 2025

TO: **BOARD OF DIRECTORS**

FROM: Dennis D. LaMoreaux, General Manager

RE: ***REPORT OF GENERAL MANAGER.***

The following is the March 2025 report to the Board of activities through February 2025. It is organized to follow the District's 2022 Strategic Plan approved in October 2022 and composed of six strategic initiatives. The initiatives follow for reference. It is intended to provide a general framework to update the month's activities.

PWD 2022 STRATEGIC PLAN SUMMARY

***Water Resource Reliability*:** *Resilience, Development, Partnership*

Support and participate with local agencies in the development of projects and policies that improve water reliability

Maximize state and federal funding opportunities for Pure Water AV

Support projects and initiatives that increase the resilience of the State Water Project

Develop water storage options for State Water Project supplies and improve groundwater capture capabilities

Strengthen stakeholder relationships and implement Littlerock Dam and Reservoir Sediment Removal Project

***Organizational Excellence*:** *Train, Perform, Reward*

Offer competitive compensation and benefits package for employee recruitment and retention

Focus Succession Planning Program on ensuring an overlap of training for key positions

Continue providing transparency to our ratepayers through training for the ongoing achievement of the Districts of Distinction certification

Encourage cohesiveness, transparency, and integrity within the staff through Codes of Conduct and increased accountability

Ensure employees are trained on the Strategic Plan and the District's Values of Diversity, Integrity, Teamwork, and Passion

Improve safety for Directors, employees, and customers

Develop career paths at the District for interns and pursue state and federal funding for intern programs

Cultivate a positive culture and increase employee engagement

***Systems Efficiency*:** *Independence, Technology, Research*

Explore energy independence and evaluate the feasibility of energy options, including wind and solar

Incorporate more energy efficient technologies into the District's infrastructure

Research state-of-the-art treatment techniques to enhance systems efficiency

Re-evaluate Lake Palmdale by-pass pipeline and pursue funding options

Improve Palmdale Ditch to reduce water loss

***Financial Health and Stability*:** *Strength, Consistency, Balance*

Pursue grant funding for District projects and operations

Maintain the five-year financial plan adopted as part of the 2019 Water Rate Study, including the five-year Capital Improvement Plan

Conduct and adopt a 2024 five-year Water Rate Plan

Build adequate reserve levels and achieve high-level bond rating

Seek potential revenue sources from vacant District properties

Monitor finances, operations, and projects affected by emergencies

Digitize and document departmental workflows

***Regional Leadership*:** *Engage, Lead, Progress*

Continue to provide opportunities and information for local businesses and agencies to contract with the District

Continue to collaborate with neighboring water agencies and move to include more agencies throughout and outside of the Antelope Valley through Greater Antelope Valley Mutual Response Agreements and emergency response exercises

Develop working relationships and mutually beneficial projects with other water agencies in the District's region

Develop strategies, alliances, and funding to make Littlerock Dam and Reservoir recreational again

Continue Memorandum of Understanding with United Water Conservation District to combine political forces to obtain grant funding and research other joint cooperative regional efforts

Continue representation on larger regional organizations such as the California Special Districts Association (CSDA) and the Association of California Water Agencies (ACWA) and assist with the growth and influence of the Special Districts Association of North Los Angeles County, a CSDA local chapter

***Customer Care, Advocacy and Outreach*:** *Promote, Educate, Support*

Enhance customers' experience through communication and feedback

Expand and market additional payment options

Continue to increase public awareness of current programs and services through traditional and new media platforms

Engage elected officials and the public on the importance of local and state water reliability issues

Complete conversion to an Advanced Metering Infrastructure (AMI) to increase customers' knowledge of water use and promote customer self-help portal

Continue to increase public awareness of the on-going drought and the importance of conservation efforts

Publicize, engage, and educate the community about Pure Water AV

Overview

This report also includes charts that show the effects of the District's efforts in several areas. They are organized within each strategic initiative and include status of the State Water Resources Control Board's (SWRCB) former long-term conservation orders (20 x 2020), the District's total per capita water use trends, 2024 actual water production and customer use graph, mainline leaks, and the water loss trends for both 12- and 24-month running averages.

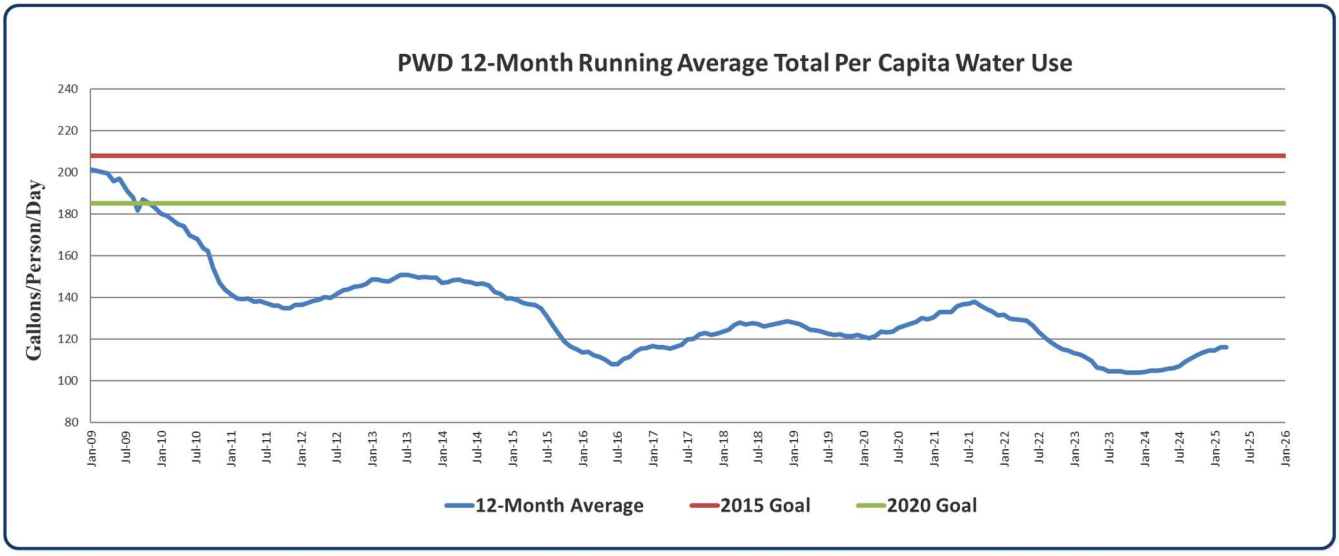
Water Resource Reliability *Resilience, Development, Partnership*

This initiative includes conservation efforts, water supply projects, and water planning. Recent highlights are as follows:

Overall Water Use Goals and Compliance

The 2020 Urban Water Management Plan was adopted by the District in June 2021. This report still uses the 20 x 2020 requirements. It does not relate the District's water use to the upcoming agency water budget requirement. The new "Making Conservation a Way of Life" regulations were approved on July 3, 2024. The District's use of a water budget-based rate structure is helpful in complying with the new regulations. Current staff estimates show the District is within 4% of complying with the new regulations when they become fully implemented in 2027.

The District's compliance with the former 20 x 2020 law is evident from the chart titled "PWD 12-Month Running Average Total Per Capita Water Use:"



The District's customers have cut their water use by **49.8%** from the baseline number of 231 re-established in the 2020 Urban Water Management Plan and met the 2020 Goal in early 2010. The current Metered-GPCD, gallons per capita per day, is now 116 showing our customers continued reduced usage.

Water Supply Information

- The AV Adjudication is now in its ninth year. The District's 2025 groundwater production right is expected to be more than needed to meet our customers' demands.

- The water production plan for 2025 is still being developed. A major goal is taking advantage of the available surface water and producing a minimum of 4,300 AF of groundwater using the native and unused Federal production rights.

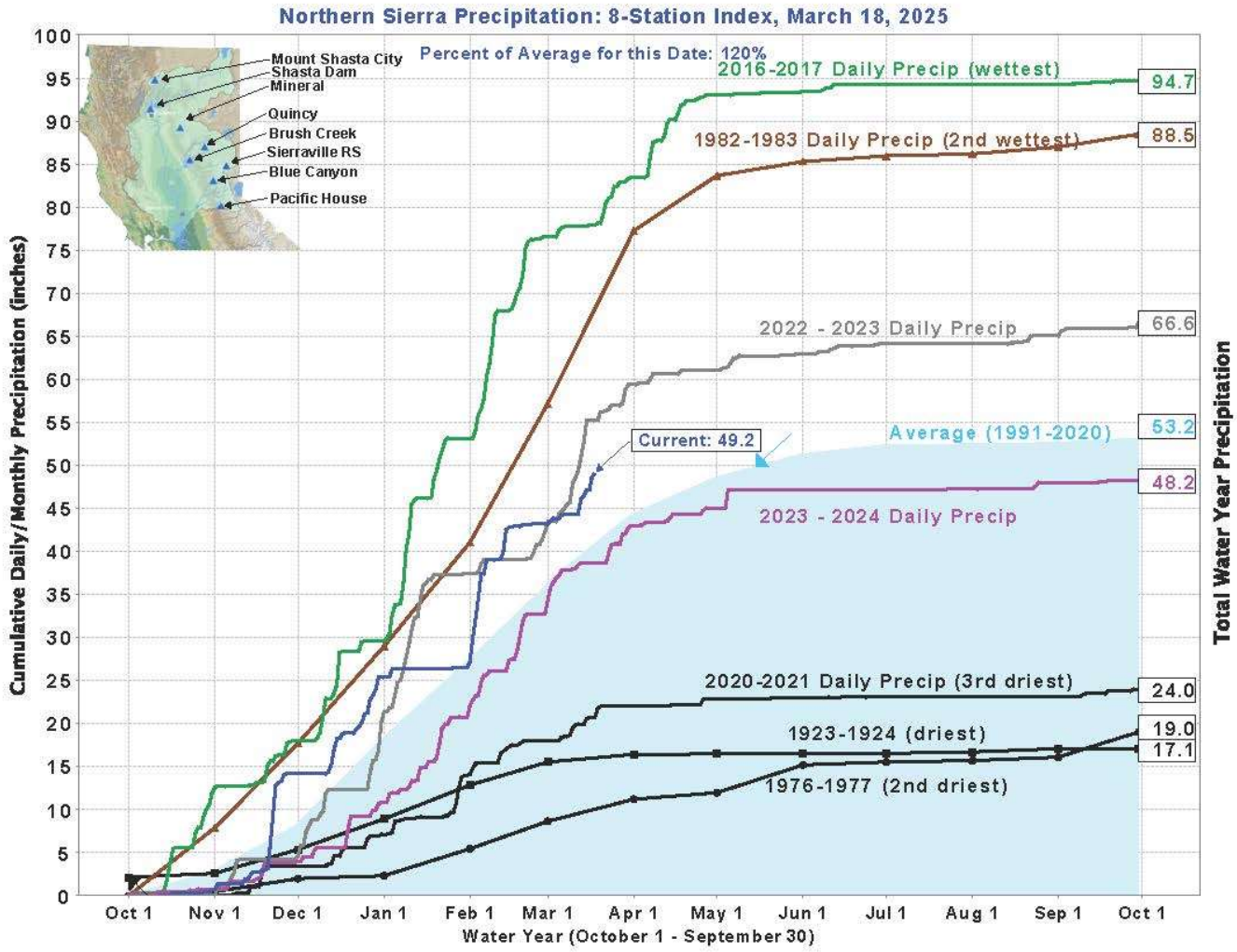
2025 began with a full Littlerock Dam and Reservoir and an initial SWP allocation of 10%. The SWP has now increased to 35%. These surface water resources, including approved transfers, total 14,460 AF. This is more surface water than is needed to meet the anticipated 2025 production and will allow some SWP water to be carried over for 2026.

State Supply Status

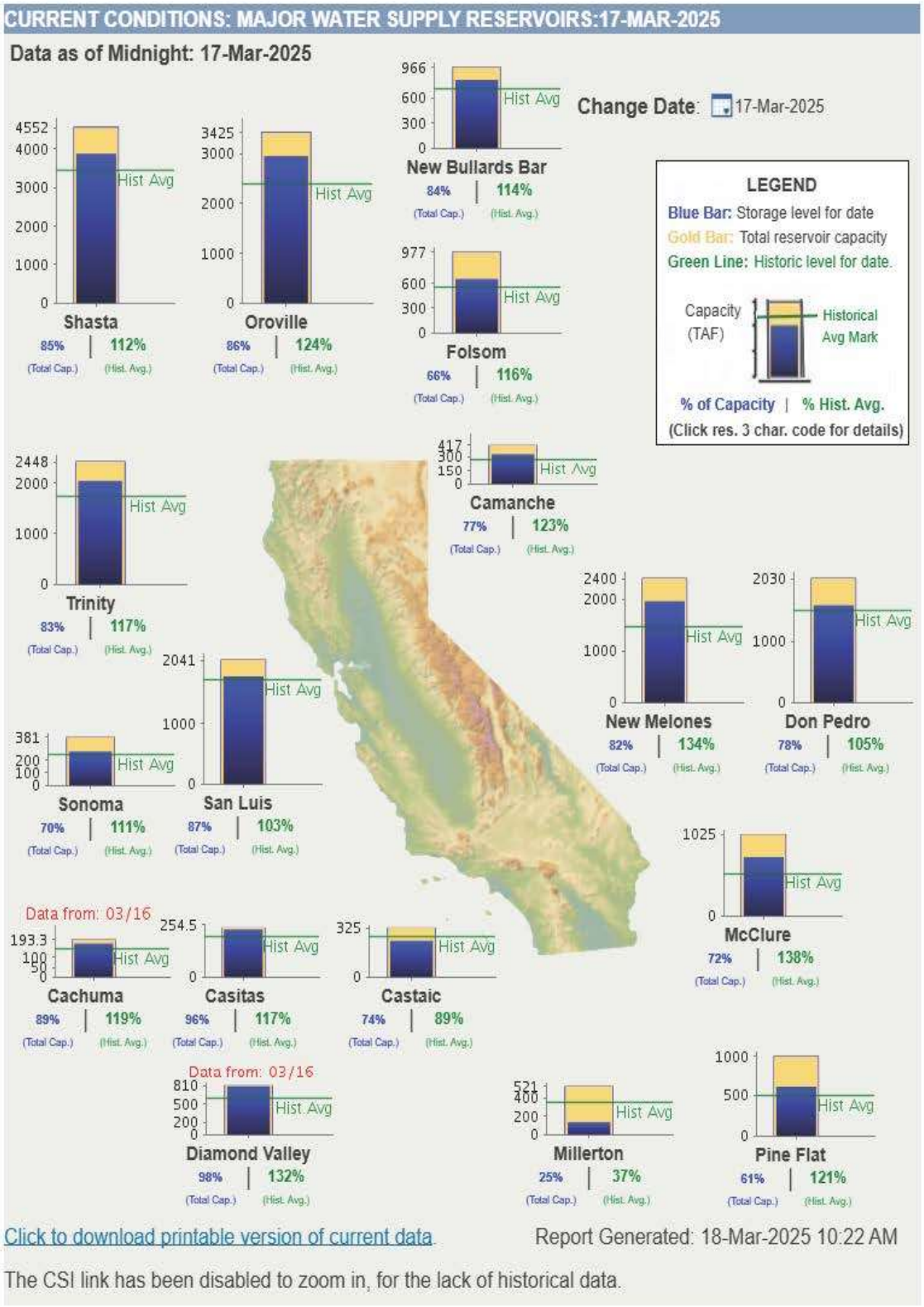
Precipitation in the area that contributes to the State Water Project for the 2024-2025 Water Year (October through September) is currently at 120% of the average for this date and already exceeds the entire 2023-2024 water year.

The next few charts show the status of precipitation, water storage, the snowpack status, and drought status.

The March 18, 2025 Northern Sierra precipitation is as follows:



The March 18, 2025 reservoir summary is as follows:



California's snowpack status as of March 17, 2025 is as follows:

CURRENT REGIONAL SNOWPACK FROM AUTOMATED SNOW SENSORS

% of April 1 Average / % of Normal for This Date

NORTH	
Data as of March 17, 2025	
Number of Stations Reporting	27
Average snow water equivalent (inches)	28.0
Percent of April 1 Average (%)	108
Percent of normal for this date (%)	110

CENTRAL	
Data as of March 17, 2025	
Number of Stations Reporting	53
Average snow water equivalent (inches)	23.3
Percent of April 1 Average (%)	84
Percent of normal for this date (%)	87

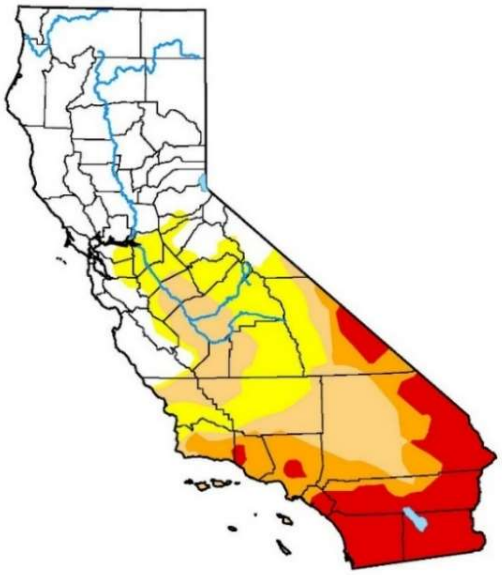
SOUTH	
Data as of March 17, 2025	
Number of Stations Reporting	27
Average snow water equivalent (inches)	19.4
Percent of April 1 Average (%)	86
Percent of normal for this date (%)	89

STATE	
Data as of March 17, 2025	
Number of Stations Reporting	107
Average snow water equivalent (inches)	23.5
Percent of April 1 Average (%)	90
Percent of normal for this date (%)	93

Statewide Average: 90% / 93%

Data as of March 17, 2025

The lack of rain early in the water year has led drought in some areas of California, including Los Angeles County. Though recent storms have helped, precipitation is below average. The status is shown on the following U.S. Drought Monitor illustrations dated February 18, 2025 and March 11, 2025:



February 18, 2025
(Released Thursday, Feb. 20, 2025)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

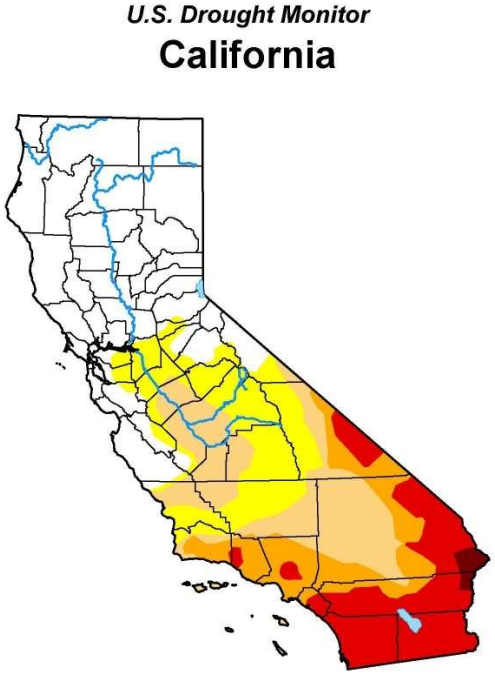
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	41.82	58.18	41.58	24.83	14.75	0.00
Last Week 02-11-2025	33.22	66.78	54.31	34.66	21.21	0.00
3 Months Ago 11-19-2024	28.61	71.39	16.88	5.50	0.95	0.00
Start of Calendar Year 01-07-2025	39.11	60.89	35.93	10.43	1.06	0.00
Start of Water Year 10-01-2024	28.40	71.60	10.67	0.08	0.00	0.00
One Year Ago 02-20-2024	92.97	7.03	0.00	0.00	0.00	0.00

Intensity:
None
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:
Brian Fuchs
National Drought Mitigation Center

droughtmonitor.unl.edu



March 11, 2025
(Released Thursday, Mar. 13, 2025)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	41.78	58.22	41.58	24.83	14.75	0.73
Last Week 03-04-2025	41.82	58.18	41.58	24.83	14.75	0.73
3 Months Ago 12-10-2024	43.46	56.54	16.72	5.70	1.03	0.00
Start of Calendar Year 01-07-2025	39.11	60.89	35.93	10.43	1.06	0.00
Start of Water Year 10-01-2024	28.40	71.60	10.67	0.08	0.00	0.00
One Year Ago 03-12-2024	95.46	4.54	0.00	0.00	0.00	0.00

Intensity:
None
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought

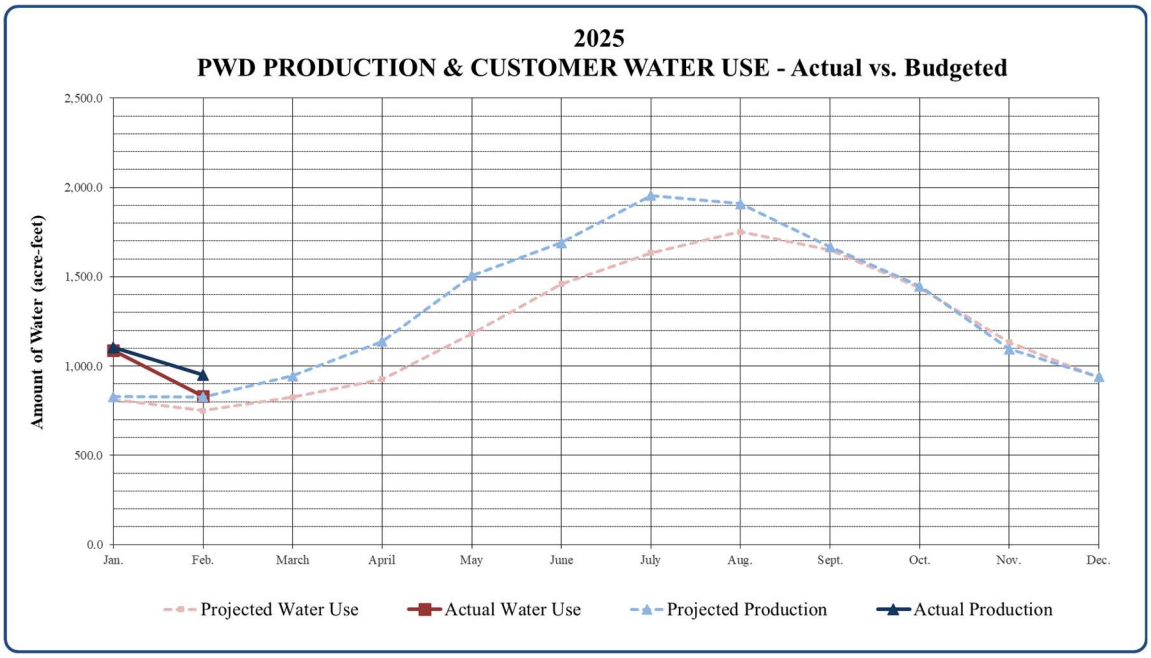
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

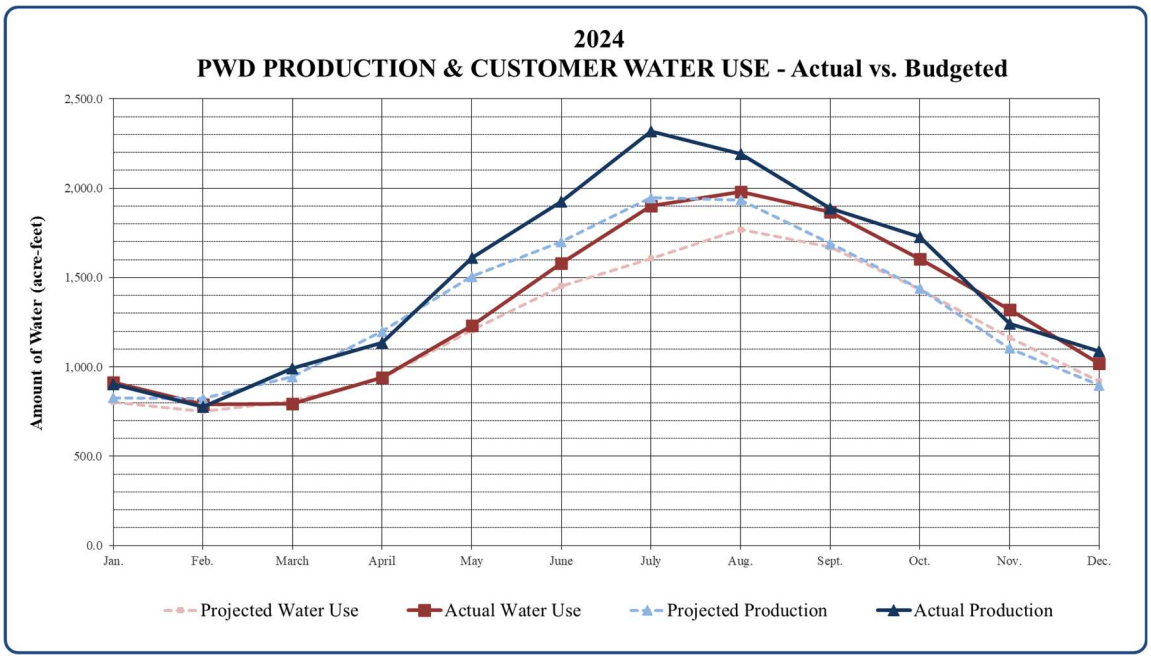
Author:
Richard Tinker
CPC/NOAA/NWS/NCEP

droughtmonitor.unl.edu

2025 and Historical Water Use Information

- The following graph is the actual and projected monthly water consumption and production for 2025. The shape of the projected amounts are based on an average of the prior five years of actual monthly information. The projected total consumption is based on the 2025 Budget amount of 14,500 AF. The actual 2024 use was 15,939 AF. The 2024 graph shows the projected and actual water use for that year.





Other Items

- **Littlerock Sediment Removal Project**

  The Project consists of three phases. The Grade Control Structure is Phase 1 and was completed in January 2020. Phase II is the removal of 1.2 million cubic yards (CY) of sediment from the reservoir. Approximately 58,000 cubic yards of sediment were removed in 2022 using a single year California Fish and Wildlife permit. Staff continues to work with Aspen Environmental to secure all the necessary permits for multi-year sediment removal. No sediment was removed since then due to having a full reservoir through the end of the years. Sediment may be removed this year because it appears all the water will be used.

  Other planned maintenance includes removing debris on the upstream side of the Dam and clearing vegetation from the outlet pond downstream of the Dam.

- **Pure Water AV Project**

  The District's goal of using recycled water for a reliable potable water supply is advanced water treatment and groundwater augmentation. The project is called Pure Water AV. The program management firm assisting the District with the Project is Stantec. Current activities include management of the construction contract with W. M. Lyles for the Demonstration Facility, refining the funding strategy for the full-sized Project, and working on potential grants.

  Staff is working with the Sanitation Districts of Los Angeles County, District 20 (LASD), and, potentially, the City of Palmdale as collaborators or partners in the Project. Pure Water AV will put the already highly treated tertiary recycled water to a higher beneficial use and satisfies LACSD's goals for use of the water. The City may be interested in the Project for the potential benefits to the area's parks and landscaping during droughts without having to expand the current purple pipe distribution system.

  Related activities include the design, funding, and construction of a recycled water pipeline in Avenue Q from 30th Street East to the Pure Water AV Demonstration Facility. This pipeline also provides additional access to recycled water for construction and Palmdale SOAR High School for irrigation.

  This project is funded by a state grant, PRWA, and PWD. The construction contract was awarded to American Pipeline Services on May 13, 2024. The pipeline is now nearly complete. All tests on the pipeline were successful. Punchlist items and final discussions with Soar High School are now being worked on.

- **Upper Amargosa Creek Recharge Project**
  The Project's construction is complete. The Project partners, City of Palmdale, LA County Waterworks, and AVEK, are working toward finalizing the operation and maintenance agreement. The recharge yield in 2023 was very disappointing and will also be discussed to improve it in the future. Additionally, the City of Palmdale also notified the Project partners about the mitigation requirements and costs in 2021. Preliminary costs were stated at that time. However, there has not been any further action on the mitigation activities or finalizing the operation and maintenance agreement.

- **Littlerock Creek Recharge Project**
  AVEK, LCID, and the District had an agreement with DWR and the AV Watermaster Engineer for a pilot project to use Littlerock Wash to recharge available Article 21, beyond the District's Table "A", SWP water in 2023. Due to the availability of Article 21 water until July 2023, a total of 8,055 AF was recharged through this program. 2,000 AF was banked this way in 2024. Draft environmental work is complete to allow this as an ongoing recharge project and a storage agreement with the AV Watermaster is being drafted.

- **2022 Strategic Water Resources Plan Update**
  It looks at the water demands and supplies through 2050, identifies packages of projects to provide additional water supplies, looks at how they will be financed, and will ultimately be used to determine "Water Supply" fees within the Capital Improvement Fees paid by new water service connections. The Final E.I.R. and Strategic Water Resources Plan was adopted at a special meeting on December 16, 2024. Staff has completed the work of updating the Water Supply portion of the Capital Improvement Fees. The update will be considered by the Board at the March 24, 2025 regular meeting.

- **Delta Conveyance Project**
  The Delta Conveyance Project (DCP) Final EIR for the Project was completed in December 2023. DWR then certified the document and issued a Notice of Determination naming the Bethany Alternative as the project moving forward. Work has begun to obtain the necessary permits for the project.

  The Board of Directors was briefed by DWR and the DCA on the status of the Project and the updated cost estimate and benefit/cost analysis on June 24, 2024. The current cost estimate is $20.12 billion with a benefit/cost ratio of 2.20. Continued participation in funding the District's share on planning and engineering in 2026 and 2027 was approved by the Board at the November 12, 2024 Board meeting.

Organizational Excellence *Train, Perform, Reward*

This initiative includes efforts to restructure staff duties and activities to more efficiently provide service to our customers. The recent highlights are as follows:

- Nearly 80 percent of the District's staff is required to have certifications or licenses issued by the State of California. Many of these have continuing educational requirements which must be met by technical training. The District provides an education reimbursement that can be used by staff for these requirements.

- The District has continued to find ways for internships and training opportunities for college and high school students who are interested in the water industry.

- An Employee Engagement survey was conducted in November 2023. Information from the survey was compiled, presented to the Personnel Committee and staff, and meetings by staff were held to develop action plans addressing areas identified for improvement in the survey are now completed. The staff Engagement Committee also met to determine an action plan to address the District's overall results. That action plan and all the department plans have been distributed to staff for implementation.

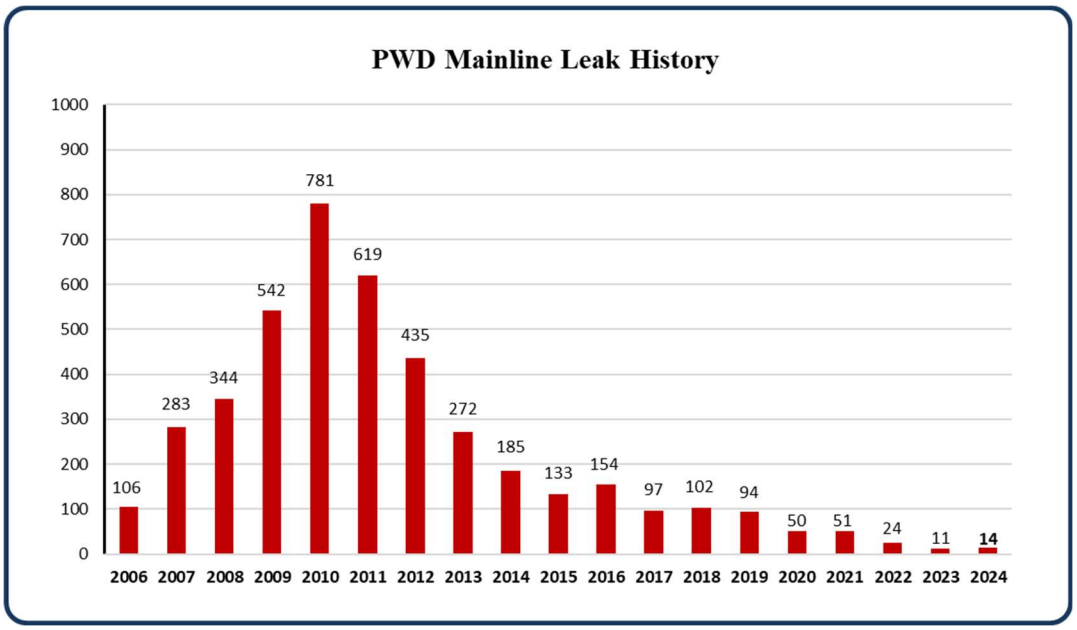
- Work is beginning to review and make any necessary updates to all the job descriptions. Once complete, they will be the basis of a salary survey to compare the compensation for positions in similar agencies.

- The District's Risk and Resiliency Plan developed and approved in 2020 is required to be updated under Federal law. The update is nearly complete and will be self-certified on March 31, 2025. Similarly, an update of the District's Emergency Response Plan is required. The PWAG Emergency Coordinator will assist the District with the update. It is due in September 2025.

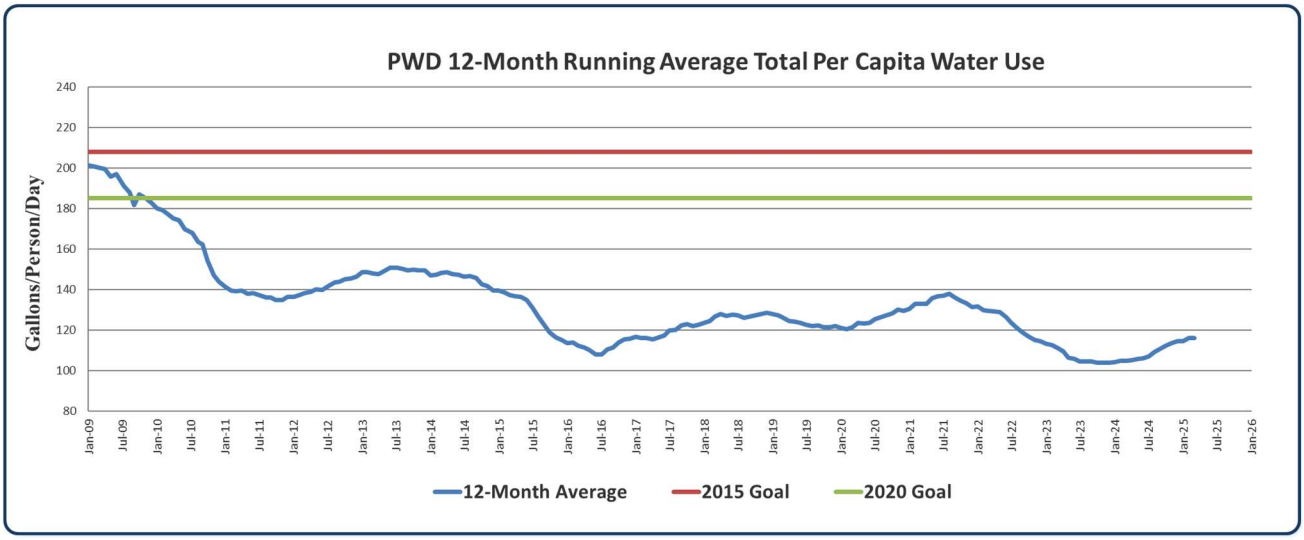
Systems Efficiency *Independence, Technology, Research*

This initiative largely focuses on the state of the District's infrastructure. The recent highlights are as follows:

- The effects of the District's past efforts in replacing failing water mains can be seen in the reduced number of mainline leaks. This is illustrated in the following chart titled "PWD Mainline Leak History." 2024 ended with 14 mainline leaks. 2025 has also started well with no mainline leaks and two service line leaks through the end of February 2025.



- The positive effect of both water main and water meter replacement programs is also shown on the chart titled "PWD Water Loss History." The running average for water loss is approximately 10%.



- Battery arrays for backup power are operational at four booster facilities. This program was funded and managed by the California Public Utilities Commission. These batteries are located at Well 5, the 3M booster site, the 45th Street Booster Station, and the Underground Booster Station. Staff is working with Terra Verde to make sure these systems are managed correctly.

- The District approved two solar PV projects to provide energy for wells, the Clearwell booster, and the Leslie O. Carter Water Treatment Plant in December 2022. One will be located north of the maintenance yard and will provide power for a set of wells. The other will be located between Avenue S and Avenue R-8 on the west side of the railroad tracks. It will provide power for the Clearwell booster and Leslie O. Carter Water Treatment Plant. Both of these facilities are currently under construction.

  Additionally, PV solar companies are expressing an interest in vacant District-owned parcels. Staff and the attorney's office worked through State requirements regarding the sale or long-term lease of vacant land to allow the parcels to be used in this way.

- The Resources and Facilities Committee and Board approved contracts earlier this year to address improvements needed for the 6 Million Gallon (6M) tank used as the Clearwell for treated water from the Leslie O. Carter Water Treatment Plant. Tank Industry Consultants (TIC) was hired by the District a few years ago to inspect the District's tanks, including the 6M. The executive summary of their 2022 report was distributed to the Board on April 12, 2023 and is the basis of the awarded work.

  Staff has completed some of TIC's recommendations. Other recommendations will be addressed when possible until the 6M can be taken out of service. This will be possible after the new 2950' booster station at the 3M tank is completed and the 3M can be used as the Clearwell. Meanwhile, staff is ensuring the 6M is operating safely. This includes removing the baffle curtain in 2023 due to finding pieces of it in transmission mains.

Financial Health and Stability *Strength, Consistency, Balance*

- Staff has implemented the approved 2024 Water Rate Study.

- The District successfully closed the EPA WIFIA Loan for the Pure Water AV Demonstration Facility in June. This, and the 2024 Series Revenue Bonds, ensure funding for the Demonstration Facility construction.

- The District is seeking assistance from the State's SAFER Program to provide water service to the Alpine Springs Mobile Home Park on Sierra Highway. It has stopped using its well due to poor water quality, has several health violations, and now relies on hauled water. This will be considered a consolidation as the Alpine Springs MHP is currently a separate public water system.

  Maria Kennedy, Kennedy Communications, is experienced with these programs and is contracted with the District to help accomplish this. A grant agreement is now in place to fund water hauling until the connection to the District is approved by the State, constructed, and operational. An extension of this agreement through the end of 2026 has been approved by the State. A grant application to fund the construction of the water system improvements needed to serve the mobile home park is being finalized by the State's contracted engineering firm.

Regional Leadership *Engage, Lead, Progress*

This initiative includes efforts to involve the community, be involved in regional activities, and be a resource for other agencies in the area. The recent highlights are as follows:

- Activities of the Palmdale Recycled Water Authority (PRWA), AV Integrated Regional Water Management Plan (IRWMP), and Antelope Valley State Water Contractors Association (AVSWCA) have continued. The District has leadership positions in these organizations. District staff is active in the local chambers, AV EDGE, regional human resources, and public information organizations. This includes the recent AV EDGE efforts to help coordinate agencies to allow several large developments to move forward.

- The PRWA Board consists of two Palmdale City Councilmembers, two PWD Board Members, and a public director, Zakeya Anson. The public director position was advertised for 2025, and applicants were presented to the PRWA Board in March. Construction of new purple pipes with PRWA is on hold as the District works on the Pure Water AV Project. However, PRWA did approve partial funding of the Avenue Q purple pipe project for construction water access and urban irrigation.

- The "PWD Water Ambassador Academy" (WAA) is scheduled for April 2025.

- The District and other members of the Public Water Agencies Group (PWAG) share the services of an Emergency Preparedness Coordinator. This approach also helped the District successfully comply with the America's Water Infrastructure Act (AWIA) of 2018 and respond to the COVID-19 event. It has also been critical in developing mutual aid agreements and more universal equipping of mobile generators.

- Staff has taken a lead role in developing and implementing a valley-wide mutual aid agreement for agencies and mutual water companies.

- **United Water Conservation District Memorandum of Understanding**

  The District and United Water Conservation District (United) approved a memorandum of understanding (MOU) to work cooperatively on projects where our interests overlap. These include internships and cooperation with community colleges, combined recreational funding for Piru and Littlerock Reservoir recreational improvements, and assistance and funding of advanced treatment of recycled or brackish water for potable use projects.

  There have been several meetings between District staff and United Human Resources staff to discuss apprenticeship programs, intern programs, and work with three community college districts to support water-related curriculum. The first action item from these meetings was the funding of PWD interns for 2022. Participation in interview panels and the development of a mutual aid agreement are also being done.

  Recreation staff from United met with District staff and visited the Littlerock Recreation Area in March. They provided good advice and input on a rough plan for helping the Area open at some point. Staff worked with the Angeles National Forest (ANF) as the first step in clearing the prior recreational concessionaire's property in the recreational area. All the property now belongs to the ANF. A hazardous material survey is being funded by the District's existing deposit to begin the process of clearing the site.

  Several other meetings have been held regarding the use of available State Water Project (SWP) supplies. District and United staff are working with other East Branch SWP contractors on ways to recategorize water and avoid having water go unused. This is expected to make additional water available for United and the District. Staff also collaborated with United on legislative issues and completed a 2,000 AF SWP exchange agreement in 2023.

Additional coordination will also be focused on both agencies' advanced water treatment projects. The United project will treat brackish groundwater for potable use by the military. The PWD project, Pure Water AV, will treat tertiary water for potable use by our customers. Once Pure Water AV is more established, joint meetings with state and federal representatives will be held to obtain funding assistance.

The District also recently supported United's concerns and comments on potential changes to the designation of Piru Creek by the Angeles National Forest. These changes could affect the delivery of State Water Project Water to United, including exchanges with the District. A United facility tour was held on July 29, 2024 to assist newer directors for both agencies in understanding each district's operations.

Customer Care, Advocacy, and Outreach *Promote, Educate, Support*

This initiative includes efforts to better serve our customers. The recent highlights are as follows:

- Applications for 2025 were accepted beginning in November 2024. The Rate Assistance Program typically reaches its capacity in February. Staff continually monitors the Program for openings. The Board approved changes to the program in 2023 and it provided assistance to 700 customer accounts in 2024.

- Staff successfully conducted virtual coffee meetings with Directors and their constituents, online "Let's Talk H2O" meetings, issued regular internal and public newsletters, coordinated drive-through giveaways for customers, an in-person customer appreciation day, monitored and maintained the District's social media, and assisted with information for the current drought. In-person workshops have also been held.