PALMDALE WATER DISTRICT
A CENTURY OF SERVICE

December 10, 2025

BOARD OF DIRECTORS

W. SCOTT KELLERMAN
Division 1

DON WILSON
Division 2

CYNTHIA SANCHEZ
Division 3

KATHY MAC LAREN-GOMEZ
Division 4

DEBBIE DINO
Division 5

DENNIS D. LaMOREAUX
General Manager

ALESHIRE & WYNDER LLP
Attorneys

ACWA PROUD MEMBER

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

MONDAY, DECEMBER 15, 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) State Legislative Summary. (Mr. Robert Reeb, Reeb Government Relations)

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 November 24, 2025.

6.2) Ratification of Payment of Bills for December 8, 2025.

6.3) Approval of Certification Updates to Recommended Job Descriptions. (No Budget Impact – Human Resources Director Garcia/Personnel Committee)

6.4) Approval of Updates to Job Description Duties for Recommended Positions. (No Budget Impact – Human Resources Director Garcia/Personnel Committee)

6.5) Approval of Updated Structure for Education and Years of Experience Requirements for Recommended Positions. (No Budget Impact – Human Resources Director Garcia/Personnel Committee)

6.6) Approval to Ratify the General Manager's Execution of the First Amendment to Professional Contract Services Agreement with California Consulting for As-Needed Grant Funding Services. ($28,000.00 – Budgeted – Assistant General Manager Rogers)

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) Public Hearing Regarding Draft Initial Study Mitigated Negative Declaration and Mitigated Monitoring and Reporting Program for the Pure Water Antelope Valley Project. (No Budget Impact – Project No. 22-656 – Engineering Manager Bader)

7.2) Consideration and Possible Action on Approval of Resolution No. 25-11 being a Resolution of the Board of Directors of the Palmdale Water District Adopting the Initial Study and Mitigated Negative Declaration for the Pure Water Antelope Valley Project and Authorizing Staff to File the Notice of Determination with the California State Clearinghouse. (No Budget Impact – Project No. 22-656 – Engineering Manager Bader)

7.3) Consideration and Possible Action to Issue a Letter of Support for the Canyons to Desert Resource Conservation District's Monarch Butterfly, Pollinator Rescue, and Habitat Restoration Program Proposition 4 Grant Application. (No Budget Impact – General Manager LaMoreaux)

7.4) Consideration and Possible Action to Direct Staff to Investigate Hosting a Native Pollinator Garden for the Canyons to Desert Resource Conservation District's Monarch Butterfly, Pollinator Rescue, and Habitat Restoration Program. (No Budget Impact – General Manager LaMoreaux)

7.5) Consideration and Possible Action to Approve and Authorize the General Manager or His Designee to Execute Amendment No. 7 (SWP #25-818) to the Agreement for the Supply and Conveyance of Water Under the Dry Year Water Purchase Program between the Department of Water Resources and Palmdale Water District. (No Budget Impact – Resource and Analytics Director Bolanos)

7.6) Consideration and Possible Action on Approval of Resolution No. 25-12 being a Resolution of the Board of Directors of the Palmdale Water District to Approve Reimbursement of Funds Financed through the State Water Resources Control Board for the Design and Construction of the Pure Water Antelope Valley Project in an Amount up to $207 Million. (No Budget Impact – Assistant General Manager Rogers)

7.7) Consideration and Possible Action on Approval of Resolution No. 25-13 being a Resolution of the Board of Directors of the Palmdale Water District Authorizing the General Manager or His Designee to Sign and File, For and on Behalf of the District, a Financial Assistance Application for a Financing Agreement with the State Water Resources Control Board for the Design and Construction of the Pure Water Antelope Valley Project. (No Budget Impact – Assistant General Manager Rogers)

7.8) Consideration and Possible Action on Adopting the Categorical Exemption for the Alpine Springs Mobile Home Park Project. (No Budget Impact – Assistant General Manager Rogers)

7.9) Consideration and Possible Action to Approve the 2025 Salary Survey Analysis Recommendations. ($115,000.00 – Not-to-Exceed – Annual Budget Impact – Human Resources Director Garcia/Personnel Committee)

7.10) Consideration and Possible Action to Approve the 2026 Operating Budget. (Finance Manager Iguaran/Finance Committee)

7.11) 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 – November 25 & December 9. (Director Dino, Board Liaison/President Mac Laren-Gomez, Alt.)

2) Finance Committee Meeting – November 25 & December 9. (Director Wilson, Chair/Director Kellerman/Director Sanchez, Alt.)

3) Personnel Committee Meeting – December 8. (Director Kellerman, Chair/President Mac Laren-Gomez/Director Dino, Alt.

4) Antelope Valley State Water Contractors Association (AVSWCA) Meeting – December 11. (President Mac Laren-Gomez/Director Wilson/Director Kellerman, Alt.)

b) General Meeting Reports.

8.2) Report of General Manager.

a) Department Activity Updates:

1) Resource and Analytics Department. (Resource and Analytics Director Bolanos)

2) Review of 2024 Water Loss Audit. (Resource and Analytics Director Bolanos)

8.3) Report of General Counsel.

9) Board Members' Requests for Future Agenda Items.

10) Adjournment.



DENNIS D. LaMOREAUX,
General Manager

DDL/dh

MINUTES OF REGULAR MEETING OF THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT, NOVEMBER 24, 2025:

A regular meeting of the Board of Directors of the Palmdale Water District was held Monday, November 24, 2025, at 2029 East Avenue Q, Palmdale, California, in the Board Room of the District Office. President, Kathy Mac Laren-Gomez, called the meeting to order at 6:00 p.m.

1) Pledge of Allegiance/Moment of Silence.

At the request of President Mac Laren-Gomez, Director Dino led the Pledge of Allegiance followed by a moment of silence.

2) Roll Call.

Attendance:	**Others Present:**
Kathy Mac Laren-Gomez, President	Dennis LaMoreaux, General Manager
Scott Kellerman, Vice President	Scott Rogers, Assistant General Manager
Don Wilson, Treasurer	Lisa Torossian, General Counsel
Cynthia Sanchez, Assistant Secretary	Viri Iguaran, Finance Manager
Debbie Dino, Director	Wendell Wall, Facilities Manager
	Judy Shay, Public Affairs Director
	Danielle Henry, Executive Assistant
	4 members of the public

3) Adoption of Agenda.

It was moved by Director Kellerman, seconded by Director Wilson, and unanimously carried by all members of the Board of Directors present at the meeting to adopt the agenda, as written.

4) Public Comments for Non-Agenda Items.

There were no public comments for non-agenda items.

5) Presentations:

5.1) None at This Time.

There were no presentations.

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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 Special Board Meeting held November 10, 2025.

6.2) Payment of Bills for November 24, 2025.

6.3) Approval of Job Description Update for Management Analyst-Finance Position. (No Budget Impact – Human Resources Director Garcia)

President Mac Laren-Gomez announced the items included in the Consent Calendar after which it was moved by Director Sanchez, seconded by Director Kellerman, and unanimously carried by all members of the Board of Directors present at the meeting to approve those items included in the Consent Calendar.

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 Request for Proposals for 2026 Strategic Plan Update. (No Budget Impact – General Manager LaMoreaux)

General Manager LaMoreaux provided an overview of the proposed Request for Proposals for the 2026 Strategic Plan Update, reflecting input from the September 29 Strategic Plan Workshop with Jennifer Liebermann Consulting, after which it was moved by Director Sanchez, seconded by Director Wilson, and unanimously carried by all members of the Board of Directors present at the meeting to approve the Request for Proposals for the 2026 Strategic Plan Update.

7.2) Consideration and Possible Action on Approval of Contract with Five Star Bank and Resolution No. 25-10 Assigning Authorized Signers for Bank Transactions with Five Star Bank. (No Budget Impact – Finance Manager Iguaran)

Finance Manager Viri provided an overview of the recommended contract and resolution with Five State Bank to establish a letter of credit to for permit compliance with the California Department of Fish and Wildlife related to the Palmdale Ditch Conversion Project, and after a brief discussion of earned interest and the line of credit term, it was moved by Director Kellerman, seconded by Director Dino, and unanimously carried by all members of the Board of Directors present at the meeting to

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approve the Contract with Five Star Bank and Resolution No. 25-10 Assigning Authorized Signers for Bank Transactions with Five Star Bank.

Resolution No. 25-10 is hereby made a portion of the minutes of this meeting.

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

a) ACWA Legislative Symposium '26 to be held February 11, 2026 in Sacramento.

b) AWWA Water Conference of the West to be held April 6-9, 2026 in San Diego.

General Manager LaMoreaux provided a brief overview of the recommended conferences for early registration after which it was moved by Director Kellerman, seconded by Director Wilson, and unanimously carried by all members of the Board of Directors present at the meeting to approve the following conferences, seminars, and training sessions for Board and staff attendance within amounts approved in the Budget: ACWA Legislative Symposium '26 to be held February 11, 2026 in Sacramento and AWWA Water Conference of the West to be held April 6-9, 2026 in San Diego.

8) Information Items:

8.1) Reports of Directors:

a) Standing Committees; Organization Appointments; Agency Liaisons:

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

Director Dino reported that on November 11, she attended the AVEK Board Meeting and shared a summary of a presentation that was provided by Jonathan Young on the Department of Water Resources Variable Charges for Transportation of the State Water Project.

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

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Director Kellerman reported that the Palmdale Fin & Feather Club Meeting scheduled for November 15 was not held.

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

Directors Kellerman and Wilson reported that on November 17, they attended the PRWA Meeting where they discussed the budget and allocation of assets should PRWA be dissolved.

b) General Meetings Reports of Directors.

Director Kellerman reported that on November 17, he attended the PRWA Meeting; that on November 20, he attended a Board Briefing; and that on November 24, he is attending the Palmdale Water District (PWD) Regular Board Meeting.

Director Wilson reported that on November 17, he attended the PRWA Meeting and that on November 20, he attended a Board Briefing.

Director Sanchez reported that on November 20, she attended a Board Briefing.

Director Mac Laren-Gomez reported that on November 13, she attended an Agenda Review Briefing; that on November 17, she attended the PRWA Briefing; that on November 20, she attended a Board Briefing.

Director Dino reported that on November 11, she attended an AVEK Board Meeting; that on November 14, she completed a CSDA Webinar regarding Who Does What? Best Practices for Board and Staff; that on November 15, she completed a CSDA Webinar regarding Mastering Good Governance for a Better District ; that on November 16-19, she attended the CSDA Special District Leadership Conference and completed her Governance training; that on November 20, she attended a Board Briefing; that on November 24, she is attending the PWD Regular Board Meeting; and that on November 25, she will be attending the AVEK Board Meeting,

8.2) Report of General Manager.

a) Department Activity Updates:

1) Facilities Department. (Facilities Manager Wall)

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Facilities Manager Wall provided a detailed update of the Facilities Department's current and projected activities including infrastructure maintenance, installations, repairs, replacements, flushing, meter and vault replacements, well rehabilitations and engine replacements, fleet updates, staff accomplishments, new staff members, and highlighted the revenue received from the new Electric Vehicle Charging Stations (EVCS) followed by a brief discussed of well engine types and the District's valve turning equipment.

b) November 2025 Written Report of Activities through October 2025.

General Manager LaMoreaux stated that a written report was provided with the agenda packet and highlighted the precipitation contributions in the Oroville and San Luis Reservoirs, the water increase in Littlerock Reservoir, and the minimal number of leaks for the year followed by a brief discussion on the status of the Upper Amargosa Creek Recharge Project and the Delta Conveyance Project.

8.3) Report of General Counsel.

General Counsel Torossian reported that she had no updates and extended Thanksgiving greetings from Aleshire & Wynder.

9) Board Members' Requests for Future Agenda Items.

There were no requests for future agenda items.

10) Adjournment.

There being no further business to come before the Board, the meeting was adjourned at 6:33 p.m.

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Secretary

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BOARD MEMORANDUM

DATE: December 15, 2025

TO: **BOARD OF DIRECTORS**

FROM: Mrs. Angelica Garcia, Human Resources Director

VIA: Mr. Dennis D. LaMoreaux, General Manager

RE: ***APPROVAL OF CERTIFICATION UPDATES TO RECOMMENED JOB DESCRIPTIONS. (NO BUDGET IMPACT – HUMAN RESOURCES DIRECTOR GARCIA/PERSONNEL COMMITTEE)***

Recommendation:

Staff and the Personnel Committee recommends that the Board approve the proposed changes to certification requirements for the recommended job descriptions.

Alternative Options:

The Board may choose to leave the requirements as is.

Impact of Taking No Action:

If the current requirements are higher than the proposed changes, this could limit the number of qualified candidates.

Background:

During this year's job description review, the management team was tasked with evaluating the certification requirements for each position to determine what is essential and legally necessary for performing job duties. The objective was to reduce unnecessary or redundant certifications, thereby potentially expanding the pool of qualified candidates.

Additionally, the review process identified inconsistencies in the timeframes allowed for obtaining required certifications, as well as variations in grace periods across different roles. To address these issues and ensure fairness and consistency, staff recommends the following changes:

- **Standardized Timeframe:** All positions requiring certifications should have a uniform timeframe of six months to obtain them, aligning with the typical initial training period.
- **Extended Allowance for Certain Roles:** In cases where six months is not practical, a one-year allowance may be granted for entry-level and stand-alone positions. These roles often involve unique challenges or require additional time for training, making a longer grace period reasonable.

- **Revised Grace Period Policy:** Currently, some non-entry-level and non-standalone positions are given flexibility to obtain certifications after being designated to the position, while others are not. To maintain consistency, the grace period will now apply only to entry-level and standalone positions. All other roles must meet certification requirements before being considered qualified for the position.

Strategic Plan Initiative/Mission Statement:

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

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

Budget:

This item has no budget impact.

Supporting Documents:

- Certification recommendation file

Job Title	Specific License or Certification	JD currently lists as required or preferred	Recommendation : Keep, Remove, Edit/change
Assistant Engineer	D2	Required	Edit/Change to prefer
Customer Care Representative 3	AWWA Customer Service Certificate Program	Required	Edit/Change to prefer
Electrician 1	D2	Required	4-5 yrs Electrical Exp. CGEL, certified electrician general license required
Electrician 2	T2	Preferred	5-6 years, D2, T2 Required, CGEL
Electrician 2	D3	Required	Edit/Change to D2
Electrician 3	D3	Required	7+ yrs of exp. T2 requirement
Electrician 3	C-10 contractor license	Required	Edit/Change to CGEL
Engineering Technician 1	D1	Required	edit/change to preferred
Executive Assistant	Board Secretary Certificate from CSDA	Required	Edit/Change, to 1 yr
Field Customer Care Representative 1	D1	Preferred	change to required
Field Customer Care Representative 3	T1	Required	edit/change to preferred
Fleet Equipment Mechanic 1	T1	Preferred	Remove
GIS Coordinator	Microsoft Cert	Required	Edit/remove
GIS Coordinator	ComptTIA A+	Preferred	Edit/remove
GIS Coordinator	Network+ cert	Preferred	Edit/remove
GIS Coordinator	Security+ cert	Preferred	Edit/remove
GIS Coordinator	Developer entry cert & associate certification	Required	Edit/change to 6 months
Lab Analyst 1	CA-NV AWWA , Water Quality Lab Analyst Grade 1	Required	Change to preferred
Lab Analyst 1	D2	Preferred	change to required with same timeframe as T2
Lab Analyst 2	D2	Preferred	change to required
Lab Analyst 2	CA-NV AWWA , Water Quality Lab Analyst Grade 2	Required	Remove; add wording to JD: "Ability to meet and maintain laboratory personnel requirements according to 22 CCR § 64812.00"
Management Analyst-Admin	CA Public Notary	Required	edit/change, timeframe
Network Administrator	Vmware cert	Required	edit/change to preferred
Network Administrator	Desktop Certified Associate Cert	Required	edit/change to preferred
Network Administrator	Desktop Certified Professional Cert.	Required	edit/change to preferred
Network Administrator	Enterprise Associate Cert	Required	edit/change to preferred
Network Administrator	Enterprise Professional Cert	Required	edit/change to preferred
Network Administrator	Developer Entry cert	Required	edit/change to preferred
Network Administrator	Developer Associate Cert	Required	edit/change to preferred
Operations Technician 2	D3	Required	Edit/Change to D2
Operator in Training	D2	Preferred	change to required
Purchasing Technician	D2	Required	edit/change to preferred
Risk & Emg. Mgmt. Admin	D2	Required	edit/change to preferred
Service Worker 2	Rigging & signalman certification	Required	Remove

Service Worker 3	T2	Preferred	change to required
Service Worker 3	Rigging & signalman certification	Required	Remove
Water Quality/Regulatory Affairs Supervisor	T2	Required	Keep, & Add D2 as required.
Water Quality/Regulatory Affairs Supervisor	AWWA Water quality Lab Analyst 1 cert.	Required	Remove
Water Quality/Regulatory Affairs Supervisor	AWWA Water quality Lab Analyst 2 cert.	Preferred	Remove & change to AWWA Water quality Lab Analyst 3, preferred

BOARD MEMORANDUM

DATE: December 15, 2025

TO: **BOARD OF DIRECTORS**

FROM: Mrs. Angelica Garcia, Human Resources Director

VIA: Mr. Dennis D. LaMoreaux, General Manager

RE: ***APPROVAL OF UPDATES TO JOB DESCRIPTION DUTIES FOR RECOMMENED POSITIONS. (NO BUDGET IMPACT – HUMAN RESOURCES DIRECTOR GARCIA/PERSONNEL COMMITTEE)***

Recommendation:

Staff and the Personnel Committee recommends that the Board approve the job descriptions update for the recommended positions.

Alternative Options:

There is no alternative.

Impact of Taking No Action:

The current job description would not accurately reflect current duties, knowledge, and abilities.

Background:

The proposed updates to the attached job descriptions aim to revise the sections on duties, required knowledge, and abilities only. These adjustments are intended to more accurately reflect the responsibilities and competencies (KSAs) associated with each position.

Strategic Plan Initiative/Mission Statement:

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

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

Budget:

This item has no budget impact.

Supporting Documents:

- Management Analyst-Administration job description redline version
- OIT and Plant Operator Series job description redline version
- Water Quality and Regulatory Affairs Supervisor job description redline version

PALMDALE WATER DISTRICT

MANAGEMENT ANALYST - ADMINISTRATION

FLSA Status: Non-Exempt

JOB SUMMARY

Under general supervision, the Management Analyst assists the Executive Assistant and serves as support to Department Heads and the Board of Directors as assigned, relieving them of a variety of routine administrative details and performs difficult and complex office support work.

Supervision Received and Exercised

Receives immediate supervision from the Executive Assistant.

Examples of Essential Duties

Duties may include but are not limited to, the following:

- Gather and organize a variety of information and materials for assigned District management positions.
- Establish and maintain a variety of office and Department files.
- Attend Board and Board Committee meetings as needed. Take and transcribe minutes from meetings following as necessary with proper distribution of information directed through Board action.
- Prepare correspondence and memoranda, Board agenda packets and other items as assigned.
- Monitor, update, and ensure accuracy of official District documents such as the Rules and Regulations.
- Make appointments and maintain appointment calendars for department heads, Board of Directors, and other staff, as assigned.
- Receive, sort, and distribute incoming correspondence for the Admin. Department and Board of Directors.
- Administrates billing/records and prepares financial reports as needed for JPA's.
- Coordinate activities related to Conflict-of-Interest statements from staff and Board members of JPA's, as assigned.
- Answer telephone and receive office visitors, providing a variety of information about District and Department policies, programs, and functions.
- Review letters, reports, records, and other items for accuracy, completeness, and compliance with established standards; perform variety of special studies and reports.
- Assist in maintaining central filing system.
- Make travel arrangements for District staff and Board of Directors for seminar/conference attendance.
- Serve as back-up administrative support in the absence of the Executive Assistant.
- Maintain inventory for essential materials and supplies.
- Provide notary services as-needed for District-related matters.
- Establish and maintain cooperative working relationships with co-workers, outside agencies, and the public.
- Perform related duties as assigned.

MINIMUM QUALIFICATIONS

Knowledge of:

- Modern office technology and related computer equipment and programs including word processing. spreadsheet, and database applications.
- Principle and practice of record keeping and file records management practices.

- Computer systems and software applications related to District management support and administrative functions, including word processing and spreadsheet software, as appropriate.
- English usage, spelling, punctuation, and grammar, including proofreading and principles of business letter writing and report preparation.
- Standard business arithmetic and related record-keeping.

Ability to:
- Operate a variety of office equipment and computers in the performance of work assignments.
- Perform a variety of complex and responsible administrative support work. Pay specific attention to detail.
- Work under specific deadlines to meet agenda preparation requirements. Perform a variety of office management and support functions.
- Type at a rate of 50 words per minute from clear, legible copy.
- Take and transcribe minutes and notes at an acceptable rate for assigned responsibilities.
- Perform research and prepare a variety of correspondence.
- Maintain confidentiality when working with sensitive information.
- Effectively represent1heDistrict, including its programs and policies, with the public and other agencies.
- Work irregular or extended hours; occasionally required to change working hours or work overtime.

PHYSICAL REQUIREMENTS

On a continuous basis sit at a desk for long periods of time; intermittently stand, walk, bend, twist, squat, and kneel while performing work; twist to reach office equipment surrounding desk; perform simple and power grasping, pushing, pulling and fine manipulation; use telephone and write or use a keyboard to communicate through written means; and lift or carry weight up to 25 pounds.

Approved: ~~January 27, 2025~~ December 15,2025

I have reviewed this job description with my supervisor and agree with its contents.

_____ _____
Employee Signature Date

_____ _____
Supervisor Signature Date

The specific statements shown in each section of this job description are not intended to be all-inclusive. They represent typical elements and criteria necessary to successfully perform the job.

PALMDALE WATER DISTRICT

Operator In Training (OIT)
Plant Operator I & II

FLSA Status: Non-Exempt

JOB SUMMARY

To perform a variety of duties related to the continuous operation and maintenance of the Leslie O. Carter water treatment plant and the distribution system.

Distinguishing Characteristics

Operator In Training (OIT) - This is the entry level in the Plant Operator series. **Typically**, candidates in this level have obtained Water Treatment Operator T-2 and Water Distribution Operator D-2 Certifications; but do not have sufficient Plant Operator experience. The goal for these candidates is to be instructed and overseen by a Plant Operator 1 or higher and obtain the necessary **knowledge** and experience to qualify for T3 and D3 Certifications. (T3 and D3 Certifications are obtained by passing the exams, submitting documentation **proving** they met the requirements **and receiving approval and certification by the State**). The OIT level is distinguished from other Plant Operator levels by their duties. The OIT duties are less than the duties of a Plant Operator 1 and 2. Incumbents work under immediate supervision while learning **maintenance and functional** job tasks and progress to general supervision as procedures and processes in the assigned areas of responsibility are learned and competencies are demonstrated. Positions at this level are flexibly staffed to meet PWD's functional needs.

*Plant Operator **I*** - This is the intermediate level in the Plant Operator series. Positions in this level work under immediate supervision while learning operational job tasks. Plant Operator **I** is distinguished from **Plant Operator II** by performing less than the full range of duties assigned to **Plant Operator II**. Incumbents work under immediate supervision while learning job tasks, progressing to general supervision as procedures and processes in the assigned area of responsibility are learned, competencies are demonstrated and flexibly staffed **to meet the operational needs of PWD.**

*Plant Operator **II*** - This is the journey level in the Plant Operator series. Employees at this level are expected to have good working knowledge of the operation, maintenance, **problem identification and solving** in the WTP and Distribution System. Plant Operator **II** is distinguished from **Plant Operator** I by the assignment of the full range of duties. Employees at this level receive occasional instruction or assistance as new, unusual or unique situations arise. Positions in this level are flexibly staffed and are normally filled by advancement from the Plant Operator I level. Employees at this level provide guidance to the Plant Operator **I** and OIT level positions.

~~Under the direction of the Operation Manager plans, organizes and directs work on the control and operations of the WTP and Distribution system within the Operations Department. Performs a variety of technical tasks relative to assigned area of responsibility. Functions as Chief Plant Operator and fills in for the Operations Manager when assigned.~~

Supervision Received and Exercised

Plant Operator in Training (OIT): Receives immediate supervision from **the Operations Supervisor** or the Operations Manager; may receive technical and functional supervision from a Plant Operator **I or II** ~~**III**~~.

Plant Operator 1: Receives immediate supervision from the **Operations Supervisor** or the Operations Manager; may receive technical and functional supervision from a Plant Operator **II. May exercise technical and functional supervision over OIT.**

Plant Operator 2: Receives general supervision from the **Operations Supervisor** or the Operations Manager; may exercise technical and functional supervision over Plant Operator I **and OIT.**

Examples Of Essential Duties

(Excluding the OIT), Duties may include, but are not limited to, the following:

- Operate Supervisory Control and Data Acquisition (SCADA) computer equipment to control and monitor flow of water treatment and processing of chemicals through the treatment plant and the water distribution system; operate control systems manually, as needed; monitor gauges and meters and record meter readings; maintain shift log.
- Observe variations in operating conditions; interpret computer, meter and gauge readings; check, standardize and calibrate instruments, analyzers and chemical feed pumps; start and stop electric driven pumps and motors to control and adjust flow and treatment processes.
- Collect samples and perform routine laboratory tests and analysis; determine chemical and physical characteristics of raw, settled, filtered, and finished water.
- Oversee sludge pond operation including monitoring of removal and transfer of sludge.
- Receive delivery of chemicals, materials, parts, and supplies; store in accordance with accepted safety standards and requirements.
- Inspect mechanical equipment for proper working order and prepare/submit work orders for mechanical and/or electrical maintenance attention; perform routine maintenance work as necessary.
- Participate in preparation of reports to various external regulatory agencies and District divisions and departments.
- Maintain records and documentation.
- Build and maintain positive working relationships with co-workers, other District employees, and the public using principles of good customer service.
- Perform related duties as assigned.

MINIMUM QUALIFICATIONS

Operator In Training (OIT)

Knowledge of:

- Principles, practices, and regulations related to operating a water treatment plant and related facilities in accordance with the scope of duties allowed by a Certified Water Treatment Operator Grade 2.
- Principles, practices, and regulations related to operating a water distribution system and related facilities in accordance with the scope of duties allowed by a Certified Distribution Operator Grade 2.
- Operating characteristics of a water treatment plant facility including SCADA automated control system, and use of pumps, gauges, and chemical feeds.
- Principles, practices and regulations related to operating a water treatment plant and related facilities.
- Pertinent local, State, and Federal laws, rules and regulations.
- Safety practices and procedures related to the area of assignment.
- Computer use in record keeping and reporting methods.
- Arithmetic and computations including calculation of percentages, decimals, and fractions.

Ability to:

- Perform a variety of skilled duties related to the continuous operation of a water treatment plant.
- Perform preventative maintenance of equipment and analyzers, general housekeeping, and groundskeeping.
- On a continuous basis, know and understand operations, and observe safety rules; intermittently analyze problem processes and equipment; identify and locate equipment; interpret work orders; remember equipment location.
- Perform routine laboratory tests and analysis; determine chemical and physical characteristics of raw, settled, filtered, and finished water.
- Use a computer to maintain required records and documentation; respond to customer questions and complaints.
- Use various hand and power tools to perform basic mechanical maintenance.
- Work assigned shift schedules; be available for overtime.
- Work outdoors in a variety of weather conditions.
- Communicate clearly and concisely, both orally and in writing.
- Establish and maintain effective working relationships with those contacted in the course of work.

Plant Operator 1

In addition to the qualifications for OIT:

Knowledge of:

- Principles, practices, and regulations related to operating a water treatment plant and related facilities in accordance with the scope of duties allowed by a Water Treatment Operator Grade 3.
- Principles, practices, and regulations related to operating a water distributions system and related facilities in accordance with the scope of duties allowed by a Water Distribution Operator Grade 3.

Ability to:

- Perform water treatment plant operations/activities as provided within the scope of a Water Treatment Plant Operator Grade 3 under general supervision as a Shift Operator.
- Work various shift schedules including days, nights, weekends, holidays, etc.

Plant Operator 2

In addition to the qualifications for OIT and Plant Operator 1:

Knowledge of:

- Principles, practices, and regulations related to operating a water treatment plant and related facilities in accordance with the scope of duties allowed by a Water Treatment Plant Operator Grade 4.
- Principles, practices, and regulations related to operating a water distributions system and related facilities in accordance with the scope of duties allowed by a Water Distribution Operator Grade 3.

Ability to:

- Perform water treatment plant operations/activities as provided within the scope of a Water Treatment Plant Operator Grade ~~3~~ **4** as a Shift Operator under limited supervision at a journey level.

Approved: ~~April 8, 2024~~December 15, 2025

PALMDALE WATER DISTRICT

WATER QUALITY & REGULATORY AFFAIRS SUPERVISOR

FLSA Status: Exempt

JOB SUMMARY

To plan, organize, direct, and supervise water quality laboratory operations and related regulatory compliance activities within the Operations Department; and to perform a variety of technical tasks relative to assigned area of responsibility.

Supervision Received and Exercised

- Receives general direction from the Operations Manager.
- Exercises direct supervision over assigned professional and technical staff.

Examples of Essential Duties

Duties may include, but are not limited to, the following:

- Recommend and assist in the implementation of goals and objectives; establish schedules and methods for water quality laboratory operations; implement policies and procedures.
- Plan, prioritize, assign, supervise, and review the work of assigned staff ~~involved in water quality laboratory operations and regulatory compliance activities~~; conduct performance appraisals.
- Evaluate operations and activities of assigned responsibilities; recommend improvements and modifications; prepare various reports on operations and activities.
- Participate in budget preparation and administration; prepare cost estimates for budget recommendations; submit justifications for staff, supplies, equipment, and services; monitor and control expenditure.
- Participate in the selection of staff; provide or coordinate staff training; ~~work with employees to correct deficiencies~~recommend personnel actions; implement discipline procedures as needed.
- Develop, implement, and maintain laboratory quality assurance ~~and~~, quality control, and data integrity programs; maintain required laboratory certification.
- Supervise day-to-day laboratory operations and data reporting.
- Prepare and/or oversee preparation of required internal and external reports regarding water quality; ensure reports are accurate and submitted in a timely ~~fashion~~manner.
- Plan and implement sampling, data gathering, and special testing programs to evaluate and solve water quality problems; assign and/or participate in special water quality monitoring investigations.
- Evaluate and interpret water quality data related to water treatment and distribution systems and watershed water quality studies.

- Participate in development of improved water treatment processes and review monitoring programs related to water supply, distribution and storage; recommend changes in monitoring programs, treatment methods or process control.
- Meets with regulatory agencies while representing the District to assess proposed regulations; provides technical and policy input into the development of new regulations; tracks regulations.
- Maintains a liaison and cooperates with other water utility and trade organizations on issues relating to the interest of the District and water industry and ; advises management on how proposed statutes and regulations may impact the District's mission.
- Conducts special applied research projects relating to the District's processes and systems, designing and overseeing experiments, modifying equipment, and maintaining records. Prepares, maintain,s and validates statistical and analytical reports for regional, state and federal agencies.
- Work with commercial laboratories and requisition specialized testing, as appropriate.
- Answer questions and provide information to the public; investigate complaints and recommend corrective action as necessary to resolve complaints.
- Build and maintain positive working relationships with co-workers, other District employees and the public using principles of good customer service.
- Perform related duties as assigned.

MINIMUM QUALIFICATIONS

Knowledge of:

- Principles and practices of analytical chemistry and microbiology; and chemical, physical, and bacteriological characteristics of treated and untreated water.chemical and microbiological laboratory analysis as applied to water quality samplingmonitoring.
- Principles and practices of water treatment processes and distribution systems; including water quality and regulatory reporting requirements.
- Methods and techniques for recordkeeping and report preparation and writing.
- Equipment, tools, and materials used in chemical and microbiological sampling and environmental laboratory analysis.
- Modern laboratory procedures and equipment, including computer uses and applications used in laboratory testing and analysis such as Laboratory Information Management Systems (LIMS).
- Sample collection/monitoring procedures and sample preservation methods related to water treatment processes.
- Computer applications used in laboratory testing and analysis and water treatment processing problems.
- Modern office procedures, methods, and computer equipment including word processing, database and spreadsheet applications. ELAP requirements and the 2016 TNI Standard.

- Principles and practices of supervision, training, and performance evaluations.
- Principles and practices of budget monitoring.
- Principles and practices of safety management.
- Pertinent local, State and Federal laws, ordinances, and rules and regulations.

Ability to:

- ~~Organize, implement, d~~Direct and supervise the water quality laboratory activities ~~operations~~ and personnel.
- Interpret and follow ~~related~~ regulatory compliance activities required by ELAP requirements and the 2016 TNI Standard.
- Establish and adhere to the 2016 TNI Standard quality control program and standards.
- Read, interpret, and record laboratory data and ensure it is accurately recorded and reported.
- Perform the requirements required as a Technical and Quality Manager (as listed in 22 CCR 64812.00) ~~qualitative and quantitative analysis.~~
- ~~On a continuous basis, know and understand all aspects of the job;~~
- Intermittently analyze work papers, reports and special projects.
- Identify and interpret technical and numerical information.
- Observe and problem solve operational and technical policy and procedures.
- Explain District regulations and policies and requirements of regulatory agencies related to water quality.
- ~~On a continuous basis, sit at desk for long periods of time; intermittently walk, bend, or twist while performing field sampling work; intermittently twist to reach equipment surrounding desk; perform simple grasping and fine manipulation; use telephone, write or use a keyboard to communicate through written means; and lift or carry weight up to 20 pounds.~~
- Interpret and explain pertinent District and department policies and procedures.
- Assist in the development and monitoring of an assigned program budget.
- Develop and recommend policies and procedures related to assigned operations.
- Supervise, train and evaluate assigned staff.
- Communicate clearly and concisely, both orally and in writing.
- Establish and maintain effective working relationships. ~~with those contacted in the course of work.~~

PHYSICAL ~~Requirements~~REQUIREMENTS

On a continuous basis, sit at desk for long periods of time; intermittently bend, squat, climb, kneel or twist while performing field sampling work; intermittently twist to reach equipment surrounding desk; perform simple grasping and fine manipulation; use telephone, and write or use a keyboard to communicate through written means; and push, pull, lift or carry weight up to 25 pounds.

Communicate clearly and concisely, both orally and in writing. Must be able to operate a district vehicle.

APPROVED: December ~~January 01, 2016~~ 15, 2025

BOARD MEMORANDUM

DATE: December 15, 2025

TO: **BOARD OF DIRECTORS**

FROM: Mrs. Angelica Garcia, Human Resources Director

VIA: Mr. Dennis D. LaMoreaux, General Manager

RE: ***APPROVAL OF UPDATED STRUCTURE FOR EDUCATION AND YEARS OF EXPERIENCE REQUIREMENTS FOR RECOMMENDED POSITIONS. (NO BUDGET IMPACT – HUMAN RESOURCES DIRECTOR GARCIA/PERSONNEL COMMITTEE)***

Recommendation:

Staff and the Personnel Committee recommends that the Board approve the proposed job level structure, which standardizes education and experience requirements for all positions.

Alternative Options:

The Board may choose to maintain current requirements, and the District will continue to manually adjust the education and years of experience for positions.

Impact of Taking No Action:

If no changes are made, job descriptions will remain as they are, with minor variations among positions at the same level. This may lead to inconsistencies and limit clarity in role expectations.

Background:

Currently, each job description outlines specific education and experience requirements. Under the proposed approach, every position will be assigned a job level with standardized criteria for education and experience. This framework aligns closely with existing role expectations and requires only minor adjustments. In some cases, the job level structure will reduce the current requirements which will assist in addressing knowledge gaps and adapting to changing workforce demographics. Whenever possible, job levels will define education and experience standards, except where legal or certification mandates require different qualifications. Implementing defined job levels will promote consistency and provide clear guidance for both current and future roles.

Strategic Plan Initiative/Mission Statement:

This work is part of Strategic Plan Initiative No. 2 – Organizational Excellence.

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

Budget:

No budget impact.

Supporting Documents:

- Job Level Structure

Job Level Structure

Level	Characteristics	Yrs of Experience	Education
Entry-Level/Trainee	Learning the basics, performs tasks under close supervision, may be currently enrolled in a school program, university, or recent graduate with no direct experience	0	High school or equivalent: technical certificate or associate degree in related field. Includes interns, enrolled in school or recent graduate.
Level I- Technical Roles	Performs routine or semi-skilled work under close monitoring. Little discretion in task execution.	0-2	High school or equivalent: technical certificate or associate degree in related field.
Level II-Technical Roles	Performs independently within defined parameters	3-4	High school or equivalent: technical certificate or associate degree in related field
Level III- Advance Technician	High independence, performs tasks with limited oversight; may lead or train lower level staff	5+ years with specialization and increasingly responsible experience	High school or equivalent: technical certificate or associate degree in related field or equivalent, increased certification as applicable
Level I -Analyst/Coordinator/Specialist	Entry-level subject matter experts and specialized work.	0-2	High School or equivalent or professional certifications, BA preferred
Level II-Analyst/Coordinator/Specialist	Mid level subject matter experts, specialized work.	3-4	Associate degree and/or professional certifications, BA preferred
Level III-Analyst/Coordinator/Specialist	Mid-Advance Level, supports decision-making, specialized work	5+ years of increasingly responsible experience	Associate degree or equivalent, advanced certifications as applicable, advanced degree preferred
Supervisor	Directly manages staff and oversees day-to-day operations. Acts independently in overseeing team and resources within their designated group	6+ years of increasingly responsible experience; 3 years supervisory/lead capacity	Associate degree or equivalent, supervisory training, advanced certifications as applicable, Bachelor's degree preferred
Manager	Oversees departments/functional areas. Responsible for leading a department by setting goals that align with district-wide strategy, and recommending department budget.	8+ yrs progression in the field; 4 years supervisory/leadership	bachelor's degree or equivalent, leadership training, advanced certifications as applicable, advanced degree preferred
Executive Leadership	Sets direction for the entire district.	10+ yrs progression in the field; 5 years supervisory/leadership	bachelor's degree or equivalent, leadership training, advanced certifications as applicable, advanced degree preferred

BOARD MEMORANDUM

DATE: December 15, 2025

TO: **BOARD OF DIRECTORS**

FROM: Scott Rogers, Assistant General Manager

VIA: Dennis LaMoreaux, General Manager

RE: ***APPROVAL TO RATIFY THE GENERAL MANAGER'S EXECUTION OF THE FIRST AMENDMENT TO PROFESSIONAL CONTRACT SERVICES AGREEMENT WITH CALIFORNIA CONSULTING FOR AS-NEEDED GRANT FUNDING SERVICES. ($28,000.00 – BUDGETED – ASSISTANT GENERAL MANAGER ROGERS)***

Recommendation:

Staff recommends that the Board ratify the first amendment to the Professional Contract Services Agreement with California Consulting in the amount of $28,000.00 or a total contact amount of $46,000.00.

Alternative Options:

The alternative is to self-fund the costs to renovate Littlerock Reservoir Recreation Area.

Impact of Taking No Action:

If no action is taken, the District will miss potential funding for the Littlerock Reservoir Recreation Area renovation.

Background:

Staff have been working to secure funding for the renovation of the existing recreational facilities at Littlerock Reservoir. Many of the funding opportunities had deadlines at the end of October and November 2025. Staff reached out to California Consulting to assist with funding applications. Specifically, the District wanted to pursue funding from the Los Angeles County Recreational Parks and Open Space District (RPOSD) $58 million 2025 Competitive Grant Program. Initially, it was determined that a single application for $18,000 could be submitted for the three funding opportunities – Planning, Category 3, and Category 4. However, it was determined that three applications would need to be submitted based on the compensation established in the agreement. The applications were due at the end of October 2025. California Consulting provided a 25-percent discount on the fee which resulted in additional $18,000.

Another funding opportunity was discovered through the California Department of Fish and Wildlife Boating Access Grant Program. An additional task order of $10,000 was executed to prepare an application that was due by November 2, 2025.

In summary, the agreement amendment was executed by the Assistant General Manager in the amount of $18,000 and another task order was executed for $10,000 for a total first amendment amount of $28,000.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiatives No. 3 System Efficiency, Financial Health & Stability and No. 4 – Regional Leadership

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

Budget:

This work is budgeted under 1-02-5070-007.

Supporting Documents:

- Contract Services Amendment for As-Needed Grant Funding Services

CONTRACT SERVICES AMENDMENT

AS-NEEDED GRANT FUNDING SERVICES

I. Amendment

This First Amendment to that certain Contract Services Agreement dated Monday, August 25, 2025 is made and entered into on the Effective Date by and between the Palmdale Water District, a California public agency organized and existing under the provisions of the California Water Code ("District") and California Consulting a California Corporation (herein "Consultant"). District and Consultant are sometimes hereinafter individually referred to as "Party" and hereinafter collectively referred to as the "Parties."

NOW, THEREFORE, the parties hereto agree as follows:

RECITALS

WHEREAS, District and Consultant previously entered into that certain Contract Services Agreement for As-Needed Grant Funding Services dated Monday, August 25, 2025 (the "Agreement"), whereby Consultantagreed to provide services to the District as described in the Scope of Services attached as Exhibit "A" of the Agreement; and

WHEREAS, District and Consultant now desire to amend the Agreement in order to provide for a modified contract sum, scope of services; and

NOW, THEREFORE, for good and adequate consideration the sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

II. Scope of Services

First Amendment Scope of Services. Article 1 of the Agreement, Services of Consultant, and Exhibit A thereto, are hereby amended to include, in their entirely, the additional services described and attached hereto as Exhibit “A” of the First Amendment which include:

Original Agreement assumed single application grant writing services for the LA Regional Parks and Open Space District. However, each funding opportunity required three applications. A. Grant writing services for Category 3 –Regional Recreation, Multi-use Trails & Accessibility Grant submitted on 10/30/2025 for $3,280,000. (Orginal Agreement) B. Grant writing Services for Category 4 - –Regional Recreation, Multi-use Trails & Accessibility Grant submitted on 10/30/2025 for $3,280,000 (Added Services) C. Grant Writing Services - LA Regional Parks and Open Space District: Planning and Design Grant submitted on 10/30/2025 for $350,000. (Added Services)

Additional services for writing an application for the following grant: D. Grant Writing Services - California Department of Fish and Wildlife (CDFW) – Watershed Restoration Grants Branch, Boating Access Subprogram (U.S. Fish and Wildlife Service WSFR Partnership): Boating Access Grant Program FY 2026/27 submitted on 11/5/2025 for $1,500,000 Federal Share. $500,000 Non-Federal Match (Measure A + PWD In-Kind). Total Project Cost: $2,000,000. (Task Order 1)

III. Contract Sum

First Amendment Contract Sum. For the services rendered pursuant to the First Amendment, Consultant shall be compensated in accordance with the "Schedule of Compensation, Exhibit "C" of the "Agreement for As-Needed Grant Funding Services dated Monday, August 25, 2025, and incorporated herein by this reference, an additional Twenty-Eight Thousand Dollars ($28,000) ("First Amendment Sum") with a total contract sum not-to-exceed a maximum of Forty-Six Thousand Dollars ($46,000).

First Amendment Sum:

Grant Writing Services - 2) LA Regional Parks and Open Space District: Category 4 –Regional Recreation, Multi-use Trails & Accessibility Grant submitted on 10/30/2025 for $3,280,000.	$ 13,500
Grant Writing Services - 3) LA Regional Parks and Open Space District: Planning and Design Grant submitted on 10/30/2025 for $350,000.	$ 4,500
Task Order 1 - Boat Access Grant Program	$ 10,000

IV. Continuing Effect of Agreement

Except as expressly amended by this First Amendment, all other terms, conditions, and obligations of the Agreement shall remain in full force and effect. From and after the date of this First Amendment, whenever the term "Agreement" appears in the Agreement, it shall mean the Agreement, as amended by this First Amendment.

V. Authority

The persons executing this Agreement on behalf of the parties hereto warrant that (i) such party is duly organized and existing, (ii) they are duly authorized to execute and deliver this Agreement on behalf of said party, (iii) by so executing this Agreement, such party is formally bound to the provision of this Agreement, and (iv) the entering into this Agreement does not violate any provision of any other Agreement to which said party is bound.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date and year entered by the District ("Effective Date").

I am aware of the provisions of Labor Code §3700 requiring every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the Work of this contract.

CONSULTANT: California Consulting, Inc., a California Corporation	DISTRICT: Palmdale Water District, a California public agency
SIGNATURE	SIGNATURE
Steve Samuelian	Scott L. Rogers
FULL NAME	FULL NAME
DATE SIGNED	DATE SIGNED
CEO/President	Assistant General Manager
TITLE	TITLE

Two corporate officer signatures required when Contractor is a corporation, with one signature required from each of the following groups: 1) Chairman of the Board, President or any Vice President; and 2) Secretary, any Assistant Secretary, Chief Financial Officer or any Assistant Treasurer.

BOARD MEMORANDUM

DATE: December 15, 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: ***PUBLIC HEARING REGARDING DRAFT INITIAL STUDY MITIGATED NEGATIVE DECLARATION AND MITIGATION MONITORING AND REPORTING PROGRAM FOR THE PURE WATER ANTELOPE VALLEY PROJECT. (NO BUDGET IMPACT – PROJECT NO. 22-656 – ENGINEERING MANAGER BADER)***

Recommendation:

Staff recommends the Board open the public hearing on the Draft Initial Study – Mitigated Negative Declaration (IS/MND) and affirm the adoption of the Mitigation Monitoring and Reporting Program (MMRP) for the Pure Water Antelope Valley Project (Project).

Alternative Options:

The Board can choose not to open the hearing on the Project.

Impact of Taking No Action:

The District will not be able to approve the California Environmental Quality Act (CEQA) document and approve the Project.

Background:

The District is advancing the Project to create a new drought resilient water supply through indirect potable reuse by groundwater augmentation. The District is serving as the Lead Agency for environmental review. Stantec prepared the Initial Study and Mitigated Negative Declaration for the Project. The document was completed and released for public review through the California State Clearinghouse on October 21, 2025 under State Clearinghouse No. 2025100946. The thirty-day review period closed on December 9, 2025. A Notice of Intent to Adopt a Mitigated Negative Declaration and Notice of an Initial Study was also posted on the District's website on October 28, 2025 and recorded with the Los Angeles County Registrar Recorder's Office. The notice was posted by the County Clerk from October 20, 2025 through November 19, 2025.

District staff posted the Clearinghouse link on the District's website on October 21, 2025. A notice of availability was also provided to Los Angeles County for posting. Staff additionally published legal notices in the Antelope Valley Press on October 17 and November 14, 2025, with the second publication advising the public of the updated Board meeting date. These notices informed the community about the Project and encouraged public involvement. This public meeting provides

another opportunity for residents and interested parties to offer comments on the IS/MND before the District considers adoption of the final environmental document.

Four comment letters were received in response to the IS/MND, including letters from the Federal Aviation Administration, the Los Angeles County Sanitation Districts, the California Department of Fish and Wildlife, and Caltrans. The agencies generally agreed with the analysis presented in the document and focused their comments on regulatory considerations and permitting requirements. Stantec and District staff prepared responses to all four letters and addressed each comment.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiatives No. 1 – Water Resources Reliability, No. 3 – Systems Efficiency and No. 6 – Customer Care, Advocacy and Outreach.

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

Budget:

There is no budget impact.

Supporting Documents:

- Mitigation Monitoring and Reporting Program for Pure Water Antelope Valley Project
- Comment Response Letters from the Federal Aviation Administration, the Los Angeles County Sanitation Districts, the California Department of Fish and Wildlife, and Caltrans

The Pure Water Antelope Valley Final CEQA Initial Study is available for review at the District Office and at: https://www.palmdalewater.org/wp-content/uploads/2025/10/Pure-Water-AV_Initial-Study_101625.pdf and the Pure Water AV website: https://purewaterav.org/wp-content/uploads/2025/10/Pure-Water-AV_Initial-Study_101625.pdf.

Pure Water Antelope Valley

Final CEQA Initial Study

December 2025

Lead Agency:

Palmdale Water District
2029 East Avenue Q
Palmdale, California 93550

Technical Assistance Provided by:

Stantec Consulting Services Inc.
300 North Lake Avenue, Suite 1080
Pasadena, California 91101

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Section 1
Project and Agency Information

1.1 PROJECT TITLE AND LEAD AGENCY

Project Title:	Pure Water Antelope Valley
Lead Agency Name:	Palmdale Water District
Lead Agency Address:	2029 East Avenue Q Palmdale, California 93550
Contact Person:	Scott L. Rogers, PE, Assistant General Manager
Contact Phone Numbers/email:	d: 661-456-1020 c: 206-303-9303 srogers@palmdalewater.org
Project Sponsor:	Palmdale Water District

1.2 PROJECT BACKGROUND AND OBJECTIVES

1.2.1 Background

Originally operated as the Palmdale Irrigation District, the Palmdale Water District (PWD) has been providing water service to the Antelope Valley of Los Angeles County since 1918. Serving approximately 27,000 connections, PWD provides potable water to municipal, industrial, and agricultural customers within a 187 square mile service area. Approximately 48 percent of the water supply is from the Antelope Valley groundwater basin, an adjudicated basin that has been in overdraft condition due to extensive agricultural use since the 1930s. Other sources of water supply are the Littlerock Reservoir, conveyed through the Palmdale Ditch, and the State Water Project, conveyed through the California Aqueduct, and stored in Lake Palmdale.

In June 2023 PWD finalized a Strategic Water Resources Plan (SWRP) Update (update to the 2010 SWRP) to outline a plan for developing and diversifying PWD's water supply through 2050. To sustainably meet future water demands and address existing groundwater overdraft, the SWRP examines maximizing PWD imported water supplies for internal water storage, purified recycled water injection, well rehabilitation and/or replacement of existing wells, new wells, and local supplies enhancements through the sediment removal at Littlerock Reservoir and Palmdale Ditch Conversion project, and conservation. In 2024 a Program Environmental Impact Report (PEIR) was prepared in compliance with the California Environmental Quality Act (CEQA) (Woodard & Curran 2024). The proposed Project, Pure Water Antelope Valley (Pure Water AV), is the purified recycled water injection component of the SWRP and the subject of this CEQA Initial Study (IS). Information from the PEIR is referenced throughout this IS, as relevant.

Pure Water AV is a regional water augmentation program using indirect potable reuse (IPR) by groundwater augmentation via direct injection. Using advanced treatment processes including microfiltration (MF), reverse osmosis (RO), and ultraviolet/advanced oxidation processes

(UV/AOP), Pure Water AV would further purify tertiary treated (Title 22) wastewater to produce water that would meet all applicable state and federal drinking water standards and regulations for IPR. Project water from the proposed Advanced Water Purification Facility (AWPF) would be injected into the Antelope Valley groundwater basin, thereby supplementing PWD's existing water supplies.

As the entity that has proposed and would approve construction and operation of the proposed Project, PWD is the CEQA Lead Agency. PWD has prepared this IS to address the potential impacts of construction and operation of Pure Water AV. The IS has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., and the State CEQA Guidelines, Title 14 California Code of Regulations (CCR) Section 15000 et seq. The IS identifies the site-specific impacts, evaluates their potential significance, and determines the appropriate document needed to comply with CEQA. Based on the information reviewed and contained herein, the proposed Project would not have a significant environmental impact with mitigation measures incorporated into the Project. Based on this IS, a Mitigated Negative Declaration (MND) is the appropriate CEQA document for evaluating the potential environmental impacts of the Pure Water AV Project. This Final IS (December 2025) incorporates minor changes based on comments received during the public review period for the Initial Study. The list of permits (Table 7) anticipated for the project has been clarified based on input from Los Angeles County Sanitation District (LACSD). The wording of select biological resources mitigation measures has been clarified based on input from California Department of Fish and Wildlife (CDFW).

1.2.2 Demonstration Facility

As a separate data collection project and as part of the CCR Title 22 permitting process, PWD is currently constructing a 240-gallon per minute (gpm) (feedwater flow) advanced water treatment (AWT) demonstration facility and visitor center to be located adjacent to PWD's headquarters. Tertiary effluent would be provided from the LACSD Palmdale Water Reclamation Plant (PWRP). Treatment processes for the demonstration facility are low-pressure MF, RO and UV/AOP. The goals for the demonstration facility are:

- Determine the optimum process design parameters for the full-scale AWPF
- Evaluate the operational and water quality performance of unit processes
- Support public outreach and education
- Collect necessary data to obtain regulatory approval of the full-scale AWPF

In 2022 PWD determined that the demonstration facility was categorically exempt from CEQA under sections 15306 (information collection) and 15303 (new construction of small structures). Construction is anticipated to be completed in the summer of 2026 with commissioning, operations and testing starting shortly thereafter. Once the necessary data are collected, PWD plans to continue operating the facility as a training center for operations staff and for public education.

1.2.3 Project Objective

The overall objective of Pure Water AV is to develop an IPR by groundwater augmentation via direct injection project to recharge the Antelope Valley groundwater basin to enhance local water supply for PWD customers.

The Pure Water AV Project is proposed to support the primary objectives of the SWRP:

- Meet the current and future water supply needs for PWD's service area
- Increase water supply reliability by identifying feasible and reliable sources of water to meet current and future needs
- Maximize cost savings by optimizing existing water rights and facilities, while strategically prioritizing new projects that align with PWD's Mission and Vision
- Identify and plan for the facilities that will be needed to meet current and future needs
- Maximize potential funding by selecting water supply sources that are in line with existing funding programs
- Plan for system redundancy and sustainability so that the system and PWD can accommodate unforeseen changes

Specific objectives of the SWRP for recycled water and groundwater are:

- Maximize the use of recycled water within PWD's service area to reduce the current demand for imported water and limit the need for more imported water in the future
- Obtain funding and partnerships to offset the cost of Pure Water AV
- Be able to pump stored water to meet demands during imported water shortages
- Establish and operate recharge facilities to offset proposed pumping increases
- Leverage excess stored water to generate capital for PWD projects
- Increase PWD's groundwater production right

To meet these objectives the goal of Pure Water AV is to augment 4.75 million gallons per day (mgd) of highly treated recycled water to the Antelope Valley groundwater basin in the near-term and 10 mgd with ultimate buildout of the proposed AWPF.

1.3 PROJECT LOCATION AND ENVIRONMENTAL SETTING

The proposed AWPF and two groundwater injection wells would be constructed on part of a 20-acre parcel bounded by 25th Street East and 27th Street East approximately 950 feet north of Avenue Q in Palmdale, Los Angeles County, California, approximately 60 miles north of the City of Los Angeles (Figures 1, 2). The approximate center of the parcel is located at 34.59 latitude -118.08 longitude, United States Geological Survey (USGS) Palmdale NW, California 7.5-minute quadrangle map. Owned by PWD, the land proposed for the AWPF is approximately 5 acres of

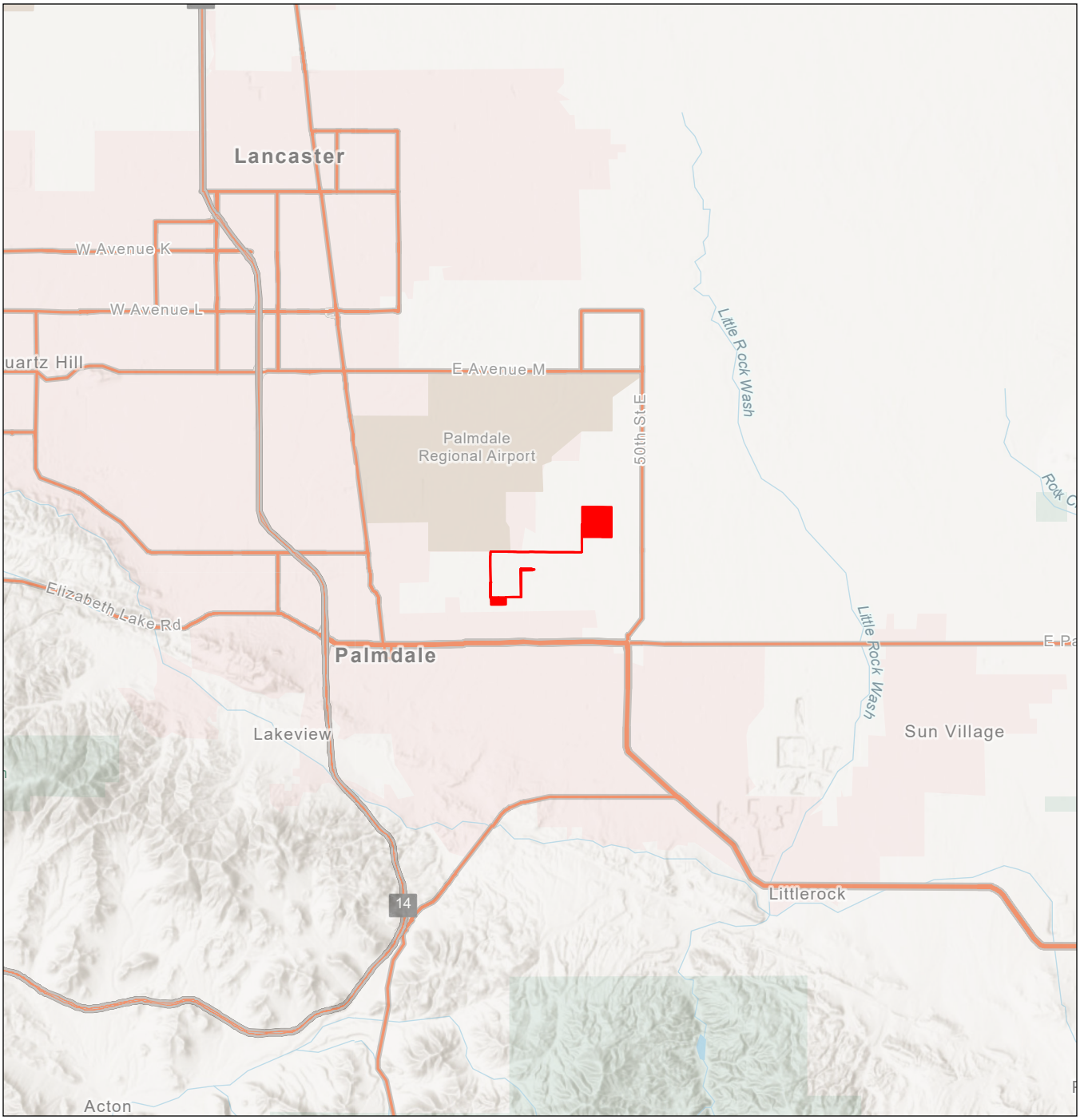
the northwest quadrant of the 20-acre parcel (Figure 3). The equipment expansion for Phase 2 will be within the Phase 1 footprint. Pipelines and injection wells would be installed within the 20-acre parcel. Access to the proposed AWPF site is via 25th Street East. Adjacent land uses include a landscaping company, maintenance company, and one single-family home to the south, warehouse to the southeast, storage facility to the east and open space north and west of the proposed Project site. City of Palmdale zoning of the proposed AWPF parcel is Office Flex; adjacent parcels are Office Flex (west), Prezone Aerospace Industrial (north), Light Industrial (east) and Mixed Use 3 (south) (Palmdale 2023).

Proposed Project pipelines would be located within the rights-of-way of existing roadways and on property owned by Los Angeles World Airport (LAWA) north of the proposed AWPF. Brine disposal for the Project is proposed for existing oxidation ponds owned by LACSD east of 40th Street East, north of East Avenue P; surrounding land uses are agriculture and open space. Tertiary effluent feed water would be conveyed to the AWPF from the PWRP located north of East Avenue P-8 and east of 30th Street East. Project-related construction at this existing facility would be limited to a pump station and pipeline. The Project also includes construction of a replacement groundwater production well (Well 37) to be located west of the PWRP just north of East Avenue P-8 on undeveloped LAWA property.

The Project is located in the Antelope Valley at the western terminus of the Mojave Desert Geomorphic Province. The Antelope Valley is adjacent to the Great Basin geomorphic province to the Northeast and shares some of its geomorphic features. Structurally, the Antelope Valley is a wedge-shaped fault block, bounded to the southwest by the San Andreas Fault, to the Northwest by the Garlock fault, and by an indefinite eastern boundary that extends into the Mojave Desert (Norris and Webb 1990).

The climate of the Mojave Desert is sub-arid, a transitional zone between the Great Basin's relatively colder climate and the Sonoran Desert's subtropical climate (Axelrod 1979; McCorkle-Apple and Lilburn 1992). Seasonal temperatures vary, as do rain, general humidity, and wind levels. As a result, temperature extremes are common, ranging from well below freezing to over 100 degrees Fahrenheit (°F). The Project occurs at an elevation of approximately 2,537-2,576 feet above mean sea level (msl), with average annual temperatures ranging from a low of 49 °F to a high of 78 °F. Annual precipitation averages approximately 7.4 inches (U.S. Climate Data 2025).

The Project site lies in the Mojave Desert scrub vegetation community. This biome is dominated by drought-resistant bushes such as creosote (*Larrea tridentate*), all-scale (*Atriplex polycarpa*), brittlebush (*Encelia farinose*), desert holly (*Atriplex hymenelytra*), Joshua tree (*Yucca brevifolia*), and white burro brush (*Hymenoclea salsola*). In addition, black brush (*Coleogyne ramosissima*) and various cactus species are common throughout the region. Fauna include a variety of rodents, reptiles, small carnivores, and birds.





Project Location

0 1.25 2.5 Miles

(At original document size of 8.5x11)
1:162,342

N

Stantec

Notes
1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2025.
3. Background:Stantec World Topographic Map: World Ocean Base: Esri, GEBCO, Garmin World Hillshade: Esri, CGIAR, USGS

Project Location
City of Palmdale,
Los Angeles County, California

Prepared by DL on 2025-09-08
TR by SET on 2025-09-08
IR by SG on 2025-09-08

Client/Project 184031611

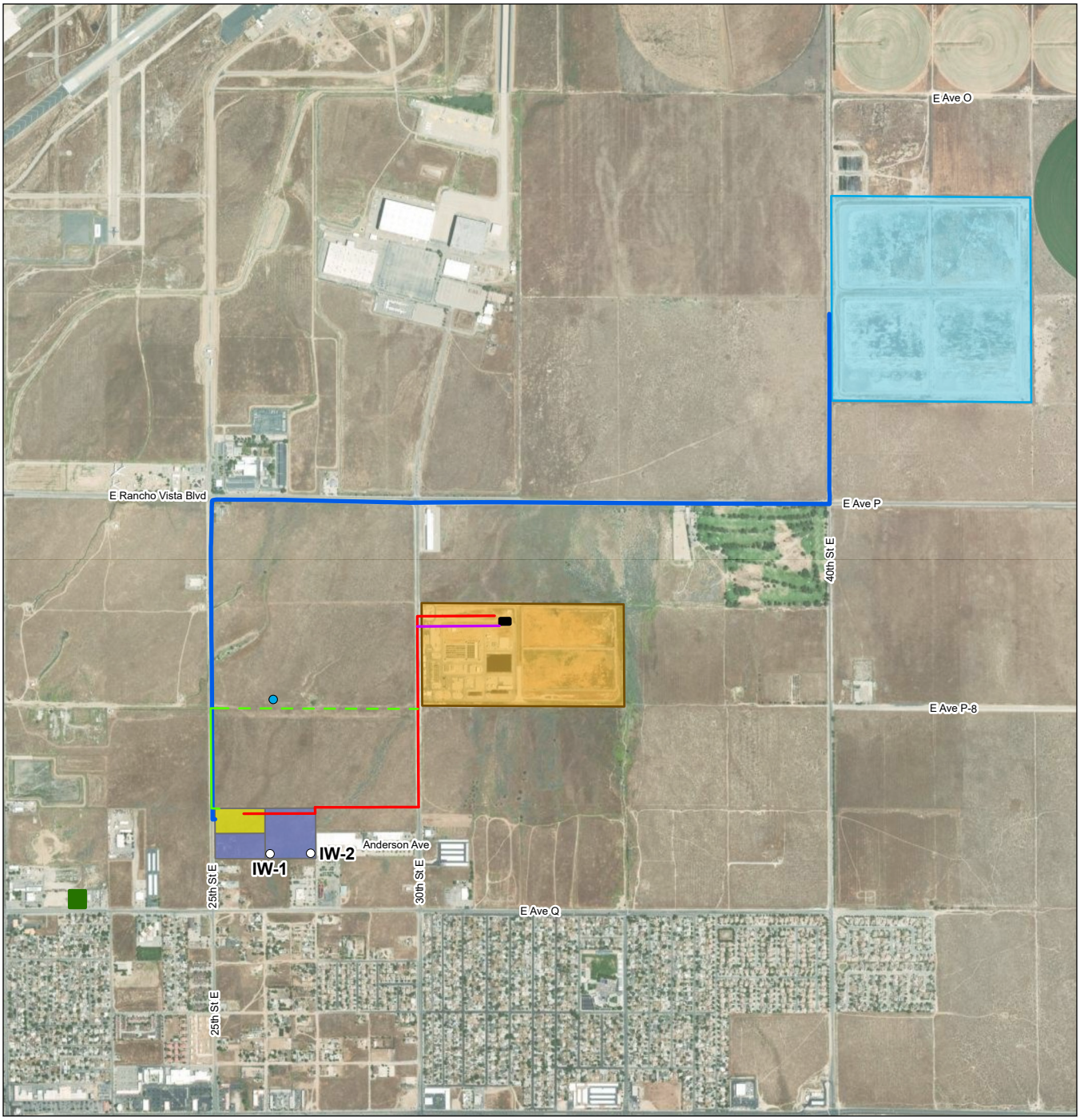
Palmdale Water District
Pure Water Antelope Valley Project

Figure No.
1

Title
Project Location

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- Proposed Injection Well (Approximate Location)
- Proposed Well 37
- Existing Sewer Pipeline
- Proposed Brine Pipeline
- Proposed Sewer Pipeline
- Proposed Tertiary Effluent Pipeline
- Proposed Recycled Water Pipeline
- Existing Demonstration Facility
- Existing Palmdale Water Reclamation Plant (PWRP)
- Proposed Advanced Water Purification Facility (AWPF)
- Proposed Advanced Water Purification Facility (AWPF) Staging Areas
- Proposed Brine Ponds (Existing Oxidation Ponds)
- Proposed Pump Station

0 1,000 2,000 Feet

(At original document size of 8.5x11)
1:24,000

N

Notes

1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2025.
3. Background:World Imagery: Earthstar Geographics
World Ocean Base: Esri, GEBCO, Garmin, NaturalVue

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Project Location
City of Palmdale,
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Client/Project
184031611

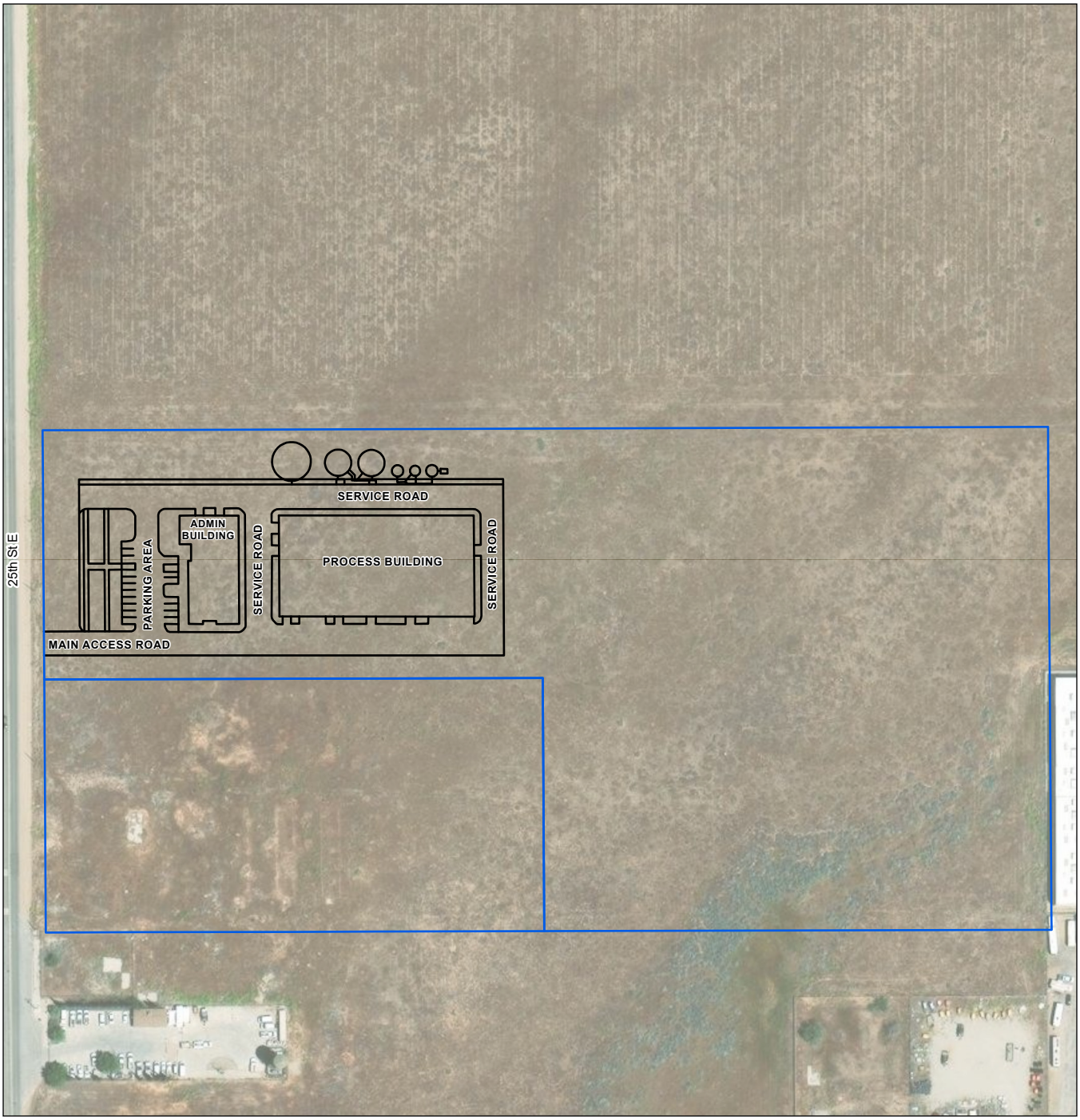
Palmdale Water District
Pure Water Antelope Valley Project

Figure No.
2

Title
Project Components Map

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— Approximate Advanced Water Purification Facility (AWPF) Site Layout

Parcel Boundaries

0 100 200 Feet

(At original document size of 8.5x11)
1:2,400

N

Stantec

Project Location
City of Palmdale,
Los Angeles County, California

Prepared by DL on 2025-09-08
TR by SET on 2025-09-08
IR by SG on 2025-09-08

Client/Project
184031611

Palmdale Water District
Pure Water Antelope Valley Project

Figure No.
3

Title
Advanced Water Purification Facility Site Layout

Notes
1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2025.
3. Background:World Imagery: Maxar
World Ocean Base: Esri, GEBCO, Garmin, NaturalVue

U:\184031611_Palmdale_FieldMap\Pro_Maps\Pro_Maps2.aprx Revised: 2025-10-03 By: dalaw

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1.4 PROJECT DESCRIPTION

As shown in the process schematic below (Figure 4), the proposed Project includes development of an AWPF, injection wells for the storage of the recycled water in the groundwater basin, and conveyance facilities for AWPF feed water and waste streams. Modification of existing inoperative oxidation ponds for use for brine disposal is also proposed. Extraction and chlorination of groundwater for delivery to potable water customers in PWD's service area would continue as under PWD's existing operations. One replacement production well (Well 37) is proposed as part of the Project.

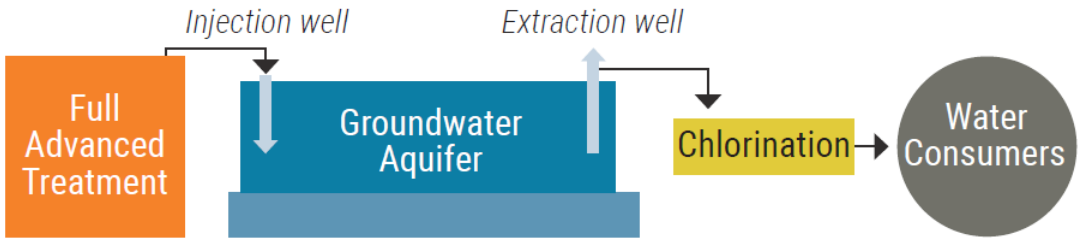


Figure 4. Process Schematic of Groundwater Recharge via Direct Injection

1.4.1 Indirect Potable Reuse

IPR includes the addition of recycled and/or purified water to an environmental buffer (e.g., groundwater aquifer) and subsequently extracting and retreating it for potable distribution. Two broad forms of IPR which have been formally regulated by the State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) since 2014 and 2018 include groundwater recharge (GWR) and surface water augmentation (SWA). GWR can be further classified as surface application (i.e., surface spreading via percolation basins) or subsurface application (i.e., direct injection). Title 22 classifies a project as a groundwater replenishment reuse project (GRRP) when a project involves planned use of recycled municipal wastewater that is operated for the purpose of replenishing a groundwater basin. PWD's pursuit of IPR by GWR via subsurface application qualifies as a GRRP.

1.4.1.1 Water Recycling Criteria

The GWR regulations require that the wastewater used for direct injection adhere to the definition of Title 22 disinfected tertiary recycled purified water, which requires that wastewater is oxidized (i.e., biological treatment), filtered, and disinfected in accordance with the specified criteria. Recycled municipal wastewater (i.e., tertiary effluent) from the PWRP meets this definition and would be used by Pure Water AV as the feed water for its AWPF.

1.4.1.2 Treatment Requirements

According to Title 22, full advanced treatment (FAT), which includes RO and AOP, is required for GRRP's pursuing GWR via direct injection. Additionally, MF is a required pretreatment to the

RO process. Following FAT and the injection of purified recycled water in a groundwater aquifer, a minimum subsurface retention time of two months is required. The replenished groundwater can then be extracted, chlorinated, and conveyed to customers.

FAT must meet advanced treatment criteria regarding sodium chloride rejection, operational recovery percentage, pH, total organic carbon (TOC), continuous performance monitoring, 1,4-dioxane, source control to prevent pollutants that may interfere with the advanced treatment process, and pathogen control for enteric viruses, *Giardia* cysts, and *Cryptosporidium* oocysts.

As mandated in the GWR regulations, the applied purified recycled water for recharge must meet all federal and state primary and secondary Maximum Contaminant Levels (MCLs) for drinking water, as well as lead and copper action levels, as defined in Title 22 of the CCR. For certain chemicals with no MCLs, DDW has established health-based advisory levels known as notification levels (NLs). The total nitrogen (TN) of the purified water must be below 10 milligrams per liter (mg/L) as N, and the TOC must be less than 0.5 mg/L. Full advanced treated water can reliably meet all requirements set forth by Title 22 for TN, TOC, constituents with primary and secondary MCLs, lead and copper action levels, and constituents with NLs.

1.4.2 Advanced Water Purification Facility

1.4.2.1 Buildings

Two buildings would be constructed as part of the proposed Project, an approximate 10,200 square ft Administration Building and an approximate 26,700 square ft Process Building (Figure 3). These structures are planned for the northwest quadrant of PWD's 20-acre site. The area below the proposed AWPF and the eastern portion of the site would be used for injection well siting, product water pipeline routing, construction laydown area or potentially future developments.

The single-story Process Building would consist of a pre-engineered metal building frame with an exterior insulated metal panel skin and insulated standing seam roof panel, sitting on a slab-on-grade concrete foundation. The design blends a minimalist, industrial character matching the Administrative Building with a complementary asymmetrical roof line over a rectangular volume. The building would accommodate a future expansion from the initial phase facility to up to the ultimate buildout facility. Storage tanks for various water types (e.g., influent, RO waste, product water) would be located outside the Process Building. The single-story Administration Building would consist of a pre-engineered metal frame clad in insulated metal wall panels and insulated standing seam metal roof panels, sitting on a slab-on-grade foundation. Spaces within the Administration Building are designated for entry lobby, offices, mechanical equipment room, restroom/lockers, breakroom, conference room, supervisory control and data acquisition (SCADA) system/information technology, mechanical and electrical, and laboratory. The Administration Building would have a maximum occupancy of 49 people.

1.4.2.2 Roadways and Parking

Service roads would be constructed throughout the site, surrounding and connecting the buildings to facilitate operational and maintenance access. A primary access road along the southern side would support site entry for maintenance vehicles and chemical deliveries, leading directly to the

chemical area located on the south side of the Process Building. Process water storage tanks would be situated near the site's northern boundary, maintaining open sightlines across the property and enabling centralized monitoring capabilities.

A pedestrian loading sidewalk and parking would be provided on the west side of the site with access from the main road. A fence line separating the right of way from the parcel would be established. The parking lot located adjacent to the loading sidewalk would be separated by a 10-ft landscaped area. The parking lot would include 18 spaces, with 7 spaces for staff including one Americans with Disabilities Act (ADA) accessible stall and 11 spaces for visitors with one ADA accessible stall. Accessible parking and CALGreen requirements apply to the proposed Project. At least two electric vehicle (EV) parking stalls would be provided.

1.4.2.3 Security Features

A perimeter fence would be installed around the AWPF site; specifics regarding materials and size would be developed during detailed design. In areas where chemical storage is required, primary access for vehicle entry would be fenced and would include motorized (traction drive) gates. A chain-link fence enclosure with lockable gates would provide secondary access immediately into chemical storage areas. Video cameras would be located within the building and outside of the building to monitor entries and secure areas.

1.4.2.4 Water Treatment Process

With a design capacity of 12 mgd, the existing PWRP provides primary, secondary, and tertiary treatment meeting CCR Title 22 Water Recycling Criteria. Primary treatment consists of bar screens, aerated grit chambers, and primary clarifiers. Secondary treatment includes activated sludge with anoxic and aerated zones for nitrification and partial denitrification, followed by secondary clarifiers. Tertiary treatment is achieved with cloth-media filtration and disinfection using chloramines. Effluent from the PWRP would serve as the feed water to the AWPF. The AWPF is designed around an initial feed flow of 4.75 mgd (Initial Phase) and ultimate potential buildout feed flow of 10.0 mgd (Ultimate Buildout), if additional tertiary effluent flows are identified and accepted to the facility. A process flow diagram for the AWPF is provided as Figure 5. The main AWPF processes units would be:

- **MF Feed Tank and Pumps**: The tanks and pumps would provide equalization of tertiary effluent feed flow to the AWPF and the requisite flow and head ahead of the MF feed strainers and MF trains. It is assumed that the optimal configuration for the MF feed tank and pumps would include an above-grade cylindrical tank with above-grade mounted vertical turbine pumps. Sodium hypochlorite and ammonium sulfate would be added downstream of the MF feed pumps and upstream of the strainers, as needed, to boost the chloramine residual in PWRP tertiary effluent for biofouling control through the MF system.
- **MF System**: The MF system would remove particulate matter from the feed water to enhance downstream RO membrane performance. The MF system serves as the first pathogen removal barrier in the AWPF for *Giardia* and *Cryptosporidium* while providing necessary pretreatment for the RO process. The MF system includes the MF

feed strainers, MF trains, and MF clean-in-place (CIP) system. Upstream automatic strainers would provide particulate removal to protect the membranes from physical damage. As solids accumulate on the feed side of the screens, the pressure differential between the feed and filtrate would increase. Once the pressure differential reaches a preset value, the strainers would automatically backwash.

The Compressed air system would allow daily pressure decay tests on each MF train to demonstrate membrane integrity and to operate pneumatic valve actuators on the MF skids.

The purpose of the MF CIP system is to accomplish maintenance cleans (MCs) and recovery cleans (RCs) on individual MF trains to mitigate the long-term impacts of inorganic and organic foulants (e.g., precipitants, colloidal organics, biogrowth) that are not removed by the backwash process.

- **RO System**: The RO system serves as a chemical barrier and pathogen barrier for virus, *Giardia*, and *Cryptosporidium*. The RO configuration would include a primary 2-stage RO system followed by a secondary closed-circuit reverse osmosis (CCRO) system for an overall recovery of 92 percent. The RO system array is designed with 26 stage 1 vessels and 13 stage 2 vessels. Major components include the RO cartridge filters, RO trains, RO flush system, and RO CIP system.
- **UV/AOP System**: The main components of the UV/AOP system include UV reactors, lamps, power distribution enclosures, and an oxidant injection system. The UV/AOP system provides disinfection, chemical control, and pathogen control of all target pathogens. The UV/AOP effluent would be stabilized through the injection of calcium chloride, sodium hydroxide, and carbon dioxide.
- **Product Water Stabilization**: Product water stabilization serves to re-mineralize and increase the pH of the product water to prevent corrosion of the downstream product water conveyance, as well as prevent mobilization of metals in the aquifer. The main components include calcium chloride, sodium hydroxide, and carbon dioxide chemical storage and feed systems.
- **Product Water Pump Station**: To provide equalization, purified water from the AWPF would collect in a product water clearwell before being pumped to the injection wells.
- **Waste Equalization Tank and Pump**: The tank would provide equalization of waste streams from all major unit processes (primarily MF and RO) and pump waste to the sewer.

1.4.3 Product Water Conveyance Line

Purified water from the AWPF would be conveyed to the product water clearwell before being pumped to the injection wells. The final size and alignment of product water pipelines would be determined once the injection well number, capacity and location are determined. The pipelines would be installed within the boundary of the PWD-owned parcel.

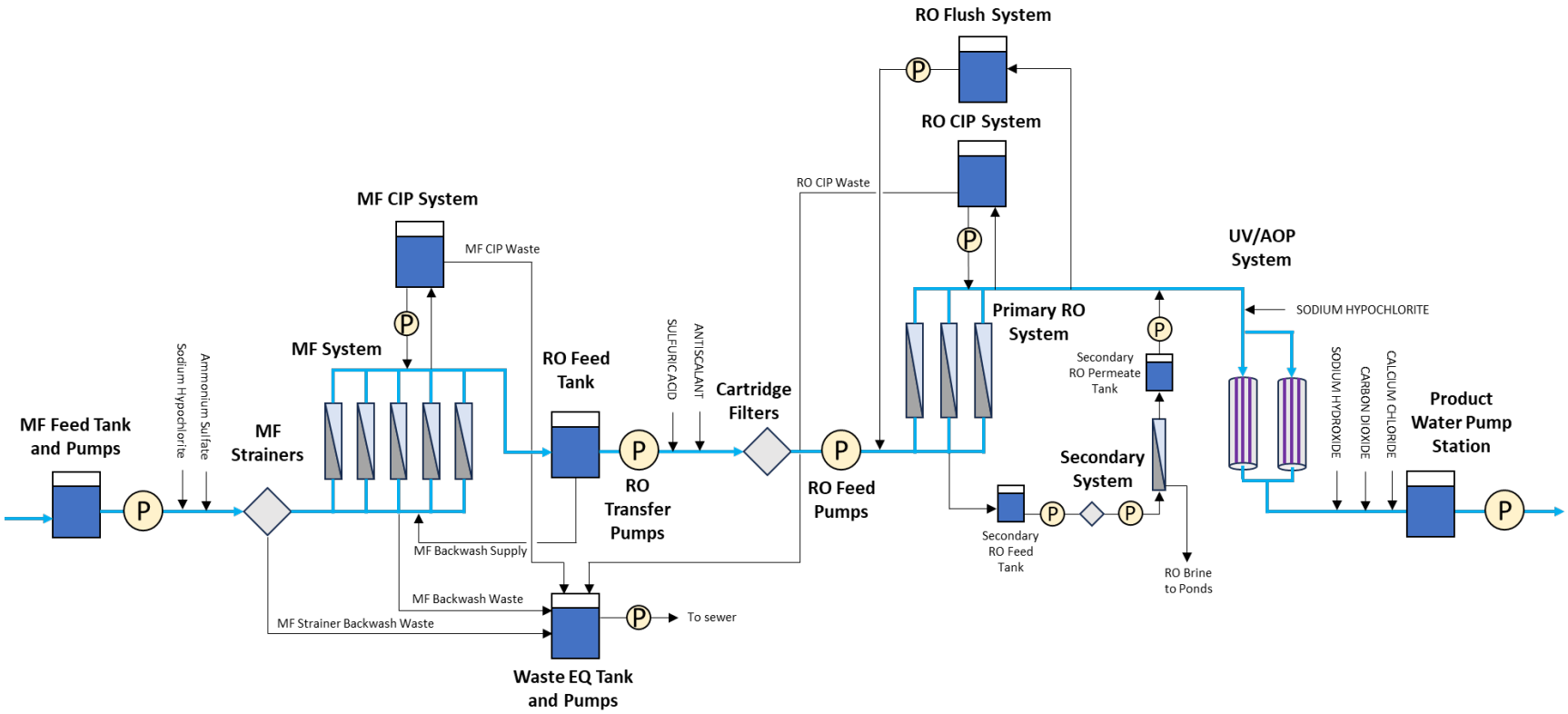


Figure 5. Process Flow Diagram for the Pure Water AV AWPF

1.4.4 Injection Wells

Based on conceptual design, two injection wells capable of injecting approximately 1,650 gpm would be constructed on the 20-acre parcel. Based on further geotechnical investigation and detailed design, the specific number and location of injection wells would be determined. Preliminary injection well design includes a 24-inch diameter well drilled to a depth of approximately 850 feet with well screening at 600 to 840 feet below ground surface (bgs). Final location and total number of injection wells would depend on the total treatment rate, aquifer conditions, and injection well design.

1.4.5 Wells

Pure Water AV operation would require monitoring of purified water flow in the saturated zone between the injection wells and pumping wells. Title 22 regulations require at least two monitor wells to be located downgradient of the injection wells and upgradient of the pumping wells. At least one monitor well shall be located as follows:

- No less than two weeks, but no more than six months, of purified water travel time in the aquifer system
- At least one month of purified water travel time upgradient of the nearest drinking water well.

The wells would be small diameter and installed to 500 ft or more. One monitor well would be located on the PWD property, and one monitor well could be located in the vicinity of 25th Street East and East Avenue Q.

A replacement production well (Well 37) is proposed west of abandoned PWD Well 24 and would be constructed within an easement from LAWA. The new well would be designed to deliver approximately 200 gpm of water from the Antelope Valley Groundwater Basin. Since existing PWD Wells 4A and 24 are inactive and Well 24A is abandoned, operation of Well 37 would not increase PWD's overall groundwater production capacity.

1.4.6 Tertiary Effluent Pump Station and Pipeline

A tertiary effluent pump station would be installed at the PWRP and would contain two centrifugal end suction with variable frequency drive (VFD) pumps plus one standby for the AWPF and three pumps plus one standby for PWD's existing recycled water system. Based on preliminary design, the pump station building housing the pumps would be 77 feet by 27 feet and located on a previously disturbed area in the northeast portion of the PWRP. Two surge tanks (each approximately 5 feet wide by 10 feet long) would be outside west of the pump building and a concrete pad with emergency standby generator would be outside and east of the pump station building. Approximately 6,500 feet of 18-inch diameter pipeline would be installed on 30th Street East to convey tertiary effluent to the MF feed tank at the AWPF.

The recycled water system consists of an existing 24-inch pipe along 30th Street, approximately 4,900 feet of 12-inch pipe along Avenue Q, and approximately 1,020 feet of new 12-inch diameter pipe to replace the existing 8-inch pipe that would need to be installed to convey tertiary water from the new AWPF pump station to the point of connection to the existing 24-inch pipe in 30th

Street. McAdam Park on East Avenue R and the Academic Rise (SOAR) Palmdale High School at 2270 E Ave Q are existing recycled water users (for landscape irrigation).

1.4.7 Waste Streams

The full-scale AWPF would produce waste streams that must be disposed of in accordance with applicable environmental regulations and LACSD. Table 1 lists the flows generated from each process unit together with discharge locations and waste frequency. Waste streams are defined as continuous or intermittent, if generated during normal operation on an hourly or daily basis; or scheduled, if generated less frequently (e.g., weekly or monthly), and generally initiated by plant operators.

Table 1. AWPF Waste Stream Summary

What Process	Waste Flow	Waste Frequency	Discharge Location
Various	Process drains, online analyzers	Continuous	Waste equalization tank, pumped to sewer
MF System	Strainer backwash	Intermittent	
	MF backwash	Intermittent	
	MF MC and RC*	Scheduled	
RO System	Primary and secondary RO flush	Scheduled	
	Primary and secondary RO CIP*	Scheduled	
UV/AOP System	Drain to waste	Scheduled	
Administration and Maintenance Building	Sanitary	Intermittent	Onsite maintenance hole, pumped to sewer

*Chemically neutralized
Key: AWPF = advanced water purification facility; CIP = clean in place; MC = maintenance clean; MF = microfiltration; RC = recovery clean; RO = reverse osmosis; UV/AOP = ultraviolet advanced oxidation process

1.4.7.1 Brine

Brine generated by the primary RO process would be further concentrated by the secondary RO process then conveyed in a new pipeline to the brine ponds. The pipeline would be constructed of small-diameter (approximately 6-inch) plastic piping, since plastic is smooth and chemically inert, which mitigates issues with precipitate formation and pipe corrosion. Detailed design of the brine conveyance pipelines would consider adding an acid dosing location, redundant conveyance system, and flushing capabilities. It is assumed that the brine conveyance lines would be 6-inch plastic main pipe for the initial brine effluent flow rate of approximately 0.35 mgd, and additional brine conveyance lines would be constructed in the future for ultimate buildout. Anticipated brine flow rates are summarized in Table 2.

Table 2. Reverse Osmosis Brine Waste Flow Rates

Overall RO Recovery	RO Brine Flow Rate (gpm)	
	Initial Phase	Ultimate Buildout
92%	246	517

Brine generated from the RO system would be conveyed to evaporation ponds, utilizing repurposed oxidation ponds currently owned by LACSD located northeast of the intersection of 40th Street East and East Avenue P (Figure 2). A planning-level analysis, based on a general flow-balance model, estimated approximately 90 acres of pond area would be required (assuming an N+1 pond design) for a design AWPF feed flow of 4.75 mgd. In the future if AWPF feed flow increases, brine flowrate and required brine pond area would increase accordingly.

1.4.8 Power Facilities

The facility would receive power supply from the local utility, Southern California Edison (SCE). In order to comply with SCE capacity requirement of 4000A per 480V transformer and typical capacity ratings of low voltage motor control centers (MCCs), the electrical configuration would be split into two MCCs and coincide with the initial and buildout construction phases. Each MCC would be powered by its own utility transformer. Both transformers would either get power from nearby SCE utility lines or from a potential new SCE substation built on site.

A standby generator would provide power to the lighting; heating, ventilation and air conditioning (HVAC); and flush pump loads within the Process Building and Administration Building in the case of power disruption. The specific location and size of the outdoor generator would be determined during detailed design, although it is assumed to be approximately 800kW. An emergency natural gas generator would also be installed at the PWRP, on an approximately 12 ft by 20 ft concrete pad on the east side of the proposed pump station building.

1.4.9 Project Construction

The AWPF, product water conveyance pipeline, injection wells, corresponding site development, and supporting site infrastructure would be constructed under a progressive design-build contract. This two-phased qualifications approach allows early contractor involvement and iterative design refinement. The production well and the remaining conveyance Project components, including the tertiary water pump station and pipeline, brine conveyance and brine ponds, would be constructed under a design, bid, build approach.

While the construction contractor would determine the specific schedule for construction activities, the general construction sequence would be as follows:

- Mobilization and initial surface preparation (clearing and grubbing of vegetation and debris)
- Foundations and substructure - general grading for foundations and over excavation and scarifying subgrade for roadway construction and parking areas
- Mechanical and piping
- Buildings superstructures
- Buildings envelopes
- Equipment installation
- Finishes - external finishes, windows, doors, HVAC and electrical systems, interior finishes, fixtures, fittings
- Testing and Commissioning

The anticipated number of work days by construction activity is summarized in Table 3.

Table 3. Anticipated Construction Work Days

Major Construction Task	Total duration (days)	Total Work Days
Construction	839	600
General Conditions	839	600
Mobilization Activities	73	53
Off-Site Civil/Utility	171	122
Site Civil Utility	174	125
Outdoor Storage Tanks	208	150
Process Building	729	522
Admin Building	263	189

General construction information includes:

- Approximately 6,200 CY of soil would be exported for disposal by the construction contractor at an applicable Construction and Demolition (C&D) landfill. Approximately 7,650 CY would be imported for backfill. This fill material would consist of backfill soils, topsoil, building structural backfill, road structural backfill, and pipe bedding backfill.
- Concrete deliveries are anticipated to be from an existing concrete supplier in Palmdale. Based on conceptual design, an estimated volume of 3,650 CY of concrete would be required.
- Facilities are anticipated to be constructed over approximately 29 months. The conceptual design assumes that the buildings, AWPF site utilities, and outdoor storage tanks are constructed approximately concurrently, with construction of the Process Building taking the longest at 24 months. Offsite pipelines and pump station would lag 6 months from the start of construction for the buildings.

While the construction contractor would determine the specific equipment necessary for construction activities, typical equipment and estimated durations of use for the proposed facilities are summarized in Table 4.

Table 4. Typical Construction Equipment and Approximate Durations of Use

Equipment type	Equipment Size (hp)	Equipment Time (hr)	Hours per Day of Use
Excavator	165	1454	2.42
Mini-excavator	44	25	0.04
Forklift	110	3674	6.12

Equipment type	Equipment Size (hp)	Equipment Time (hr)	Hours per Day of Use
Paver	142	22	0.04
Roller Compactor	100	852	1.42
Medium Skid steer	74	154	0.26
Loader	117	79	0.13
Water truck	250	197	0.33
Crane	180	1151	1.92
Lift	20	7116	11.86
Dozer	104	1051	1.75
Grader	145	394	0.66
Plate compactor	7	734	1.22
Concrete pump truck	240	49	0.08
Drill rig	440	814	1.36
Generator (15 kW)	33	31223	52.04

Additionally, delivery trucks would be required to transport materials to the Project site. Table 5 summarizes the estimated number of each type of delivery vehicle.

Table 5. Typical Construction Equipment and Approximate Durations of Use

Type of Delivery Vehicle	Number of Trips during the Construction Period
Utility Truck	53
Flat bed Semi	362
Low boy Semi	118
Dry Van Trailers Semi	77
8 CY Concrete Mix Truck	464
20 CY Dump Truck	694
Total	**1,768**

General construction information includes:

- Worker parking and material staging for the AWPF construction would be within the 20-acre PWD-owned parcel.
- Normal construction work hours, including materials deliveries, are anticipated to be limited to Monday to Friday 7:00 a.m. to 7:00 p.m.
- Water for water trucks would be obtained from a fire hydrant located near the proposed AWPF site or a recycled water fill station at PWD.
- Construction equipment and vehicles would be refueled offsite. No on-site fuel storage tanks are anticipated to be required during construction.

- On-site construction workforce would average an estimated 36 people per day (21 craft workers and 15 management workers).

Brine Ponds

Design details for reconfiguration of the existing oxidation ponds into brine ponds have not yet been developed. It is envisioned that the area would be graded with pond berms reconfigured. The brine ponds would be lined with a high-density polyethylene (HDPE) liner. At this time it is anticipated that solids disposal (approximately 4,400 cy/year) would be infrequent. After approximately 20 years of use (life cycle of the liner), each pond cell would be taken offline for removal of all solids and replacement of the liner. It is anticipated that a biosolids disposal company would then dispose of the solids in accordance with applicable local and State regulations.

Best Management Practices

The following best management practices (BMPs) would be implemented during Project construction:

- **Water Trucks.** To control dust emissions, water trucks would spray cleared and grubbed areas, soil stockpiles, and unimproved roadways during construction.
- **High Wind Events.** Construction activities would be stopped during sustained high wind events (i.e., a period or periods of time aggregating more than 3 minutes in any 60-minute period) greater than 20 miles per hour (mph).
- **Haul Trucks**. Cover or maintain at least 2 feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Haul trucks traveling along freeways or major roadways should be covered.
- **Street Sweeping**. Use wet power vacuum street sweepers to remove any visible track-out mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- **Vehicle Speed Limit**. Limit vehicle speeds on unpaved roads to 15 mph.
- **Paving**. Roadways, driveways, sidewalks, and parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- **Stormwater Management**. BMPs for the protection of stormwater quality would be implemented during Project construction. The Storm Water Pollution Prevention Plan (SWPPP) prepared by the construction contractor would detail the specific measures to be implemented and the pollution controls to be monitored during Project construction. Table 6 summarizes typical measures anticipated to be implemented.

Table 6. Typical Stormwater Management Best Management Practices

Housekeeping Measures
• Conduct an inventory of products used or expected to be used
• Cover and/or berm loose stockpiled construction materials
• Store chemicals in watertight containers
Employee Training
• Brief staff on the importance of preventing stormwater pollution
• Have staff review SWPPP
• Conduct refresher training during the wet season
• Document training
Erosion and Sediment Controls
• Provide effective cover for inactive areas – cover, berm, or direct runoff to suitable basins
• Establish and maintain effective perimeter control
• Stabilize construction entrances and exits to control sediment – inspect ingress and egress points daily, and maintain as necessary
• Control dust during earthwork
• Place sandbags or other barriers to direct stormwater flow to suitable basins
Spill Prevention and Control
• Inspect construction equipment for leaking
• Use drip pans until equipment can be repaired
• Cleanup spills Immediately – remove adsorbent promptly
• Notify the proper entities in the event of a spill
Concrete Truck Washing Waste
• Provide containment for capture of wash water
• Maintain containment area
Hazardous Waste Management and Disposal
• Store hazardous wastes in covered, labeled containers with secondary containment for liquid hazardous wastes
• Store wastes separately to promote recycling and to prevent undesirable chemical reactions
Materials Handling and Storage
• Establish a designated area for hazardous materials
• Berm, cover, and/or contain the storage area as necessary to prevent materials from leaking or spilling
• Store the minimum volume of hazardous materials necessary for the work

Vehicle and Equipment Maintenance, Repair, and Storage
• Inspect vehicles and equipment regularly
• Conduct maintenance as necessary
• Designate areas for storage – where fluids can be captured and disposed of properly
Scheduling
• Avoid work during storm events
• Stabilize work areas prior to predicted storm events

1.4.10 Operations

Operation of the AWPF is anticipated to be 24 hours a day, 7 days a week. An estimated 10 PWD operators would be employed at the facility, with approximately 7 staff members on-site at any one time. Some maintenance staff would be shared with other PWD operations. Operations activities would include:

- Monitoring – Numerous AWPF conditions would be monitored including chemical storage tank levels, water quality, equipment failure, and water volumes. A SCADA system would be operational at the AWPF. When conditions are observed outside of thresholds, alarm conditions would be triggered. When alarm conditions exist, plant operators would perform corrective actions. For example, the AWPF would automatically divert or overflow off-specification water to an on-site storage tank (minimum of 500,000 gallons or 2 hours of storage at 4.75 mgd) or to the sewer (minimum diversion pipe diameter of 21 inches).
- Maintenance – Process systems at the AWPF would require on-going routine maintenance to retain performance.
- Laboratory analyses – The Administration Building includes space for a water quality laboratory. Sample analyses to ensure water treatment efficacy would be on-going during operations.
- Reporting – Routine reports would be generated to document plant operating conditions.

1.5 APPLICABLE PLANS AND POLICIES

The City of Palmdale 2045 General Plan (2022a) and the Los Angeles County General Plan 2035 (2022) are the land use planning documents relevant for the proposed Project sites. The proposed site for the AWPF is located in the City of Palmdale on Parcel Numbers: 3025-024-900 and 3022-011-002. The City of Palmdale and Los Angeles County land use designations for the Project sites are described in Section 2.3.11.

1.6 PROJECT APPROVALS

Anticipated permits, approvals, and notifications to other agencies are summarized in Table 7.

Table 7. Summary of Anticipated Permits and Approvals

Agency	Anticipated Permit or Approval
State Water Resources Control Board (SWRCB)	• National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2022-0057-DWQ, NPDES No. CAS000002).
SWRCB Division of Drinking Water (DDW)	• IPR permit • Domestic Water Supply Permit Amendment
Lahontan Regional Water Quality Control Board (Regional Board)	• Waste Discharge and Water Recycling Requirements • User Water Recycling Permit • Title 22 Engineering Report • Operations and Optimization Plan
California Department of Transportation (Caltrans)	• Transportation Permit for transportation of heavy construction equipment and/or materials which require the use of oversized transport vehicles on State highways
Los Angeles County Sanitation District (LACSD)	• Trunk Sewer Connection Permit and Industrial Wastewater Discharge Permit to connect the AWPF's sewer to District No. 20's Trunk "A" Relief Sewer in East Avenue P-8, including payment of all applicable connection and service fees • Agreement for use of PWRP's former oxidation ponds along 40th Street East for AWPF brine management • Agreement to permit construction, operation and maintenance of the proposed tertiary effluent pump station and appurtenances at the PWRP; this could be addressed through an amendment to the October 2016 Recycled Water Purchase and Sale Agreement
Los Angeles County Department of Public Works	• Standard Urban Storm Water Mitigation Plan
Los Angeles County Department of Public Health	• Cross Connection and Water Pollution Control Program compliance
Los Angeles County Fire Department (LACFD; Certified Unified Program Agency (CUPA)	• Fire Protection System Permit/Plan Check • Hazardous Materials Review/Field Inspection • Spill Prevention Control and Countermeasure Plan
Los Angeles County Airport Land Use Commission (ALUC)	• Coordination regarding construction near an airport
Los Angeles World Airport (LAWA)	• Easement (estimated width of 20 – 30 feet) for the proposed utility alignment for the tertiary effluent pipeline • Easement for Well 37
Antelope Valley Air Quality Management District (AVAQMD)	• California Air Resources Board Portable Equipment Registration Program (PERP) registration for use of portable diesel engines or an AVAQMD permit for temporary use during Project construction • Compliance with AVAQMD Rule 401 regarding fugitive dust control during construction • Permit to Construction, Permit to Operate for standby power generators for operations at the AWPF and the PWRP
California Department of Fish and Wildlife (CDFW) and/or United States Fish and Wildlife Service (USFWS)	• As mitigated, significant impacts to special status species or other biological resources are not anticipated for the proposed Project (see Section 2.3.4). However, if Candidate or Listed species are observed prior to or during construction of the Project, notifications to the CDFW and/or USFWS will be made as applicable.

Section 2
Environmental Analysis

2.1 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would result in potentially significant impacts as indicated by the checklist on the following pages. However, mitigation measures have been identified to reduce impacts on these topics to less than significant levels.

☒ Aesthetics	☐ Greenhouse Gas Emissions	☐ Population and Housing
☐ Agriculture and Forest Resources	☒ Geology and Soils	☐ Public Services
☐ Air Quality	☒ Hazards and Hazardous Materials	☐ Recreation
☒ Biological Resources	☒ Hydrology and Water Quality	☒ Transportation
☒ Cultural Resources Tribal Cultural Resources	☐ Land Use and Planning	☐ Utilities and Service Systems
☐ Energy	☐ Mineral Resources	☒ Wildfire
	☒ Noise	

2.2 AGENCY DETERMINATION

On the basis of this initial evaluation:

☐ I find that the project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the applicant. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the project, nothing further is required.

Signature: _____ Title: Assistant General Manager

Printed Name: Scott L. Rogers Date: October 15, 2025

2.3 ENVIRONMENTAL CHECKLIST

2.3.1 Aesthetics

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☒	☐	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☒	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☒	☐	☐

Discussion: The Project is located within the Antelope Valley, an area with regional visual resources such as the San Gabriel Mountains to the southwest, Tehachapi Mountains to the northwest, the extensive flatlands of the Mojave Desert, and the hills and buttes of San Bernardino County. The AWPF is proposed for a vacant undeveloped lot; adjacent land uses include residential and commercial buildings to the south and west, the existing PWRP to the northeast, and the Palmdale Regional Airport to the north. Viewers of the proposed AWPF site include motorists, cyclists, and walkers at adjacent commercial businesses and residential areas.

Although SR-14 and SR138, which are both in the Project vicinity, are considered eligible scenic highways, there are no officially designated State Scenic Highways in the City (Caltrans 2025). The City of Palmdale 2045 General Plan (General Plan) includes a goal to preserve significant natural and constructed open space areas that give the city its distinct form (City of Palmdale 2022a). Section 17.100.190D of the City's Municipal Code requires that "development is designed in a manner that substantially retains the visual qualities and natural elevations of the significant ridgelines and prominent landforms forming the City's skyline backdrop and preserves those portions of the ridgelines visible from the valley floor, or adjacent valleys, as a scenic skyline backdrop to the city" (City of Palmdale 2025). Furthermore, Chapter 17.86 of the City's Municipal Code includes specific requirements for landscaping, lighting, walls and fences (City of Palmdale 2025).

The Los Angeles County General Plan 2035 Conservation and Natural Resources Element (2022) identifies goals and policies to protect scenic resources through land use regulations, such as

protecting ridgelines from incompatible development, reducing light pollution where feasible, and encouraging developments to be designed to create a consistent visual relationship with the natural terrain and vegetation. Chapter 22.80 of the County of Los Angeles Municipal Code establishes the Rural Outdoor Lighting District (ROLD), which includes the proposed locations for the brine ponds and the pump station.

a) **Less than Significant Impact with Mitigation Incorporated.** The Project area includes regionally designated visual resources (i.e., scenic vistas), such as the San Gabriel and Tehachapi Mountains. Construction of Project facilities would result in the modification of a vacant lot including installation of a new AWPF, injection wells and product water conveyance line, monitoring wells and production well, tertiary effluent pump station and pipeline, brine conveyance pipeline, and brine disposal ponds. The most publicly visible Project components would include the new AWPF which would consist of two buildings approximately 15-20 feet tall. However, public views from the Project site would be limited to the surrounding roadways, would be short-term and temporary during construction, and would not substantially obscure views from publicly accessible vantage points (e.g., San Gabriel Mountains and Tehachapi Mountains) during Project operations. Furthermore, consistent with the 2024 SWRP Update PEIR, the Project would implement mitigation measures AES-1, AES-2, and AES-3 requiring preparation of a landscape plan to screen facilities from public view, and designing aboveground buildings to minimize contrasting features and to blend with the surrounding landscape to the extent feasible. Therefore, impacts would be less than significant with mitigation incorporated.

b) **No Impact**. There are no officially designated State Scenic Highways within the Project area. Project parcels include the site for the proposed AWPF (vacant land), brine ponds (existing unused oxidation ponds), the PWRP (pump station location), Well 37 (vacant land) and pipelines within existing street rights-of-way and the LAWA parcel. These locations do not contain significant scenic resources such as trees, rock outcroppings, or historic buildings within a State Scenic Highway. Therefore, there would be no impact.

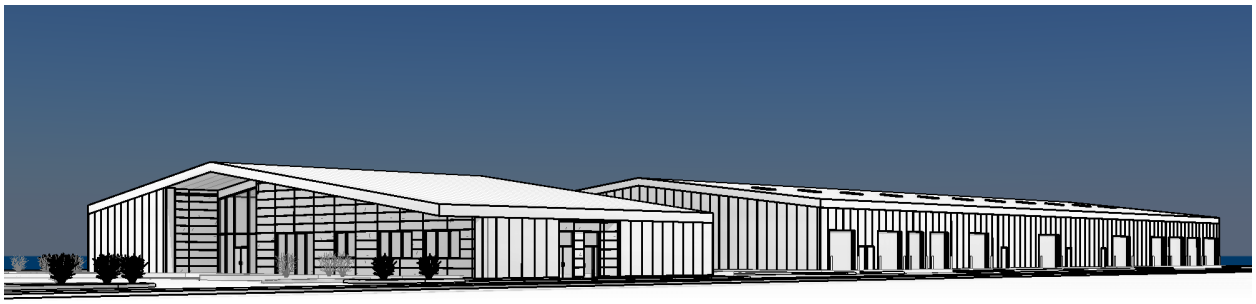
c) **Less than Significant Impact with Mitigation Incorporated.** The Project sites are located on vacant undeveloped parcels, unused oxidation ponds, and existing street rights-of-way which have manufacturing/industrial, office, utility, and airport-related land use designations (City of Palmdale 2022b, County of Los Angeles 2022). Most Project components (e.g., brine ponds, brine pipeline, Well 37, tertiary effluent pipeline, pump station, sewer pipeline) would be located in non-urbanized areas. However, the AWPF would be located immediately adjacent to an urbanized area to the south.

   Construction activities for the Project would include excavation, grading, and earthwork to support the layout of all facilities, yard piping, and equipment pads. Views of the Project site during construction would include approximately 36 construction workers, various construction equipment, and parked worker vehicles. The level of construction activity would alter views in the immediate area of the Project site for approximately 29 months. Although the AWPF and associated infrastructure would be substantially different than the existing open space, the visual impact of ground disturbance associated with Project construction would be short-term and temporary. In general, Project construction would be consistent with the

existing visual character of the surrounding Project area (e.g., commercial and light industrial land uses). Furthermore, mitigation measures AES-1, AES-2, and AES-3 would reduce impacts to the visual character to a less than significant level by incorporating design features for above-ground facilities that would blend structures with the surrounding landscape. Therefore, construction of the Project would result in a less than significant impact with mitigation incorporated.

Location of Project facilities would be exempt from applicable zoning and other regulations governing scenic quality pursuant to Government Code Section 53091. The most publicly visible Project components would include the two new AWPF buildings (approximately 15-20 feet tall). Conceptual design of the buildings is included in Figure 6. Development of the AWPF buildings would not substantially degrade the existing visual character of the Project area and would be consistent with allowable uses in the Office Flex zone and Employment Flex land use designation (City of Palmdale 2022b, 2023). Therefore, the operational impact on visual quality would be less than significant with mitigation incorporated.

From Southeast



From Northeast

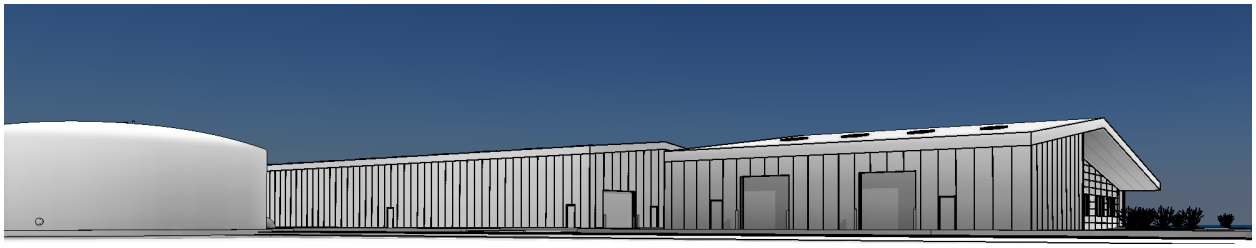


Figure 6. AWPF Site Context Renderings

d) **Less than Significant Impact with Mitigation Incorporated**. Construction activities would primarily occur during daylight hours. However, some nighttime construction could be required, such as 24-hour drilling of injection wells, and portions of the proposed pipelines that require road crossings. These areas would generally not be located in close proximity to residences. Furthermore, the Project would implement mitigation measures AES-4, AES-5 and AES-6 to minimize impacts. AES-4 would require any permanent lighting on buildings and/or structures to be shielded and directed downward to avoid light intrusion onto surrounding land uses. AES-5 would require nighttime construction lighting be shielded and pointed away from surrounding light-sensitive land uses. AES-6 would ensure the treatment plant is designed to

minimize glare or reflection, including non-glare exterior materials or coatings. Since the proposed lighting would be of limited duration and confined to the specific area of construction, impacts from light and glare that could affect day or nighttime views of the Project area during construction would be less than significant with mitigation incorporated.

During operations, permanent lighting may be installed on the exterior of some Project components (e.g., AWPF) for safety purposes as well as streetlights, perimeter lighting, and parking lighting. However, lighting would be designed to minimize light trespass without compromising requirements for adequate lighting for security and road safety. Since the brine ponds are proposed for an area within the Los Angeles County ROLD, security lighting, if deemed necessary, would meet the requirements of Ordinance No. 2012-0047 for shielding, height, motion sensors, and total lumen levels. Since Project operation would not create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the Project area, impacts would be less than significant with mitigation incorporated.

Mitigation Measures

With implementation of the following mitigation measures, Project-related impacts on aesthetics would be less than significant.

AES-1 – Landscape Plan. During Project design, a landscape plan shall be prepared for the proposed AWPF. The landscape plan shall include measures to restore disturbed areas by replanting trees and/or reseeding with a native seed mix typical of the surrounding area. Vegetation screening shall also be included in order to assist in shielding the proposed aboveground facilities from public vantage points.

AES-2 – Pre-Construction Aesthetic Design. Aboveground buildings/structures shall be designed to have similar aesthetic qualities to existing structures in the vicinity to minimize contrasting features in the visual landscape.

AES-3 – Aboveground Building/Structure Design. Aboveground buildings/structures shall be designed to have color palettes and vegetation screening as necessary to blend with the surrounding character of the site and to minimize contrasting features in the visual landscape.

AES-4 – Permanent Exterior Lighting. All new permanent exterior lighting associated with proposed Project components shall be shielded and directed downward to avoid any light intrusion to surrounding uses.

AES-5 – Nighttime Construction Lighting. Lighting used during nighttime construction, including any associated 24-hour well drilling, shall be shielded and pointed away from surrounding light-sensitive land uses.

AES-6 – Non-Glare Design. The proposed advanced water purification facility shall be designed to include non-glare exterior materials and coatings to minimize glare or reflection.

2.3.2 Agricultural and Forest Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Discussion:

a) **No Impact.** The City's General Plan has no significant agricultural lands identified (City of Palmdale 2022a). According to the Farmland Mapping and Monitoring Program (FMMP), the Project components are located on lands classified Urban and Built-Up Land, Grazing Land, and Other Land (California Department of Conservation [CDOC] 2025). As such, the Project site is not located on land identified as farmland by the FMMP, the City of Palmdale's General Plan, or the County of Los Angeles General Plan. The proposed brine ponds would be located adjacent to Prime Farmland, but construction activities would not convert Prime Farmland to non-agricultural use. Operation of the injection wells and Well 37 would not affect groundwater production in such a way that would result in conversion of farmland to non-agricultural use. Therefore, the Project would have no impact on conversion of FMMP-designated Farmland.

b) **No Impact.** Project elements are located on land owned by PWD in the City of Palmdale (AWPF), on parcels within unincorporated Los Angeles County (LACSD parcel for brine ponds and PWRP for the pump station), on LAWA-owned land (portion of the tertiary effluent pipeline and Well 37) and within existing roadway rights-of-way. There are no Willamson Act lands in the Project area, the Project sites are not zoned or designated for agricultural uses, and there is no land designated as Forest or Timberland within the PWD service area as a whole (CDOC 2025). Therefore, the Project would have no impact on agricultural zoning or Williamson Act contracts.

c) d) and e) **No Impact.** Public Resources Code (PRC) Section 12220 (g) defines "Forest land" as land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits (PRC 2008). The City of Palmdale is located approximately 2.5 miles north of the Angeles National Forest and contains no forest land. The Project elements are not located on parcels zoned as forested land and the Project would not result in conversion of forest land to non-forest use. Therefore, there would be no impact.

2.3.3 Air Quality

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) affecting a substantial number of people?	☐	☐	☒	☐

Discussion: The Project site is located within the Antelope Valley Air Quality Management District (AVAQMD) which is responsible for managing air pollution in the northern desert portion of Los Angeles County. One of the roles of the AVAQMD is to reach attainment for the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS) which are limits for criteria air pollutants. Criteria air pollutants include ozone (O_3), particulate matter less than 10 microns (PM_{10}), particulate matter less than 2.5 microns ($PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. NAAQS and CAAQS are designed to protect human health with a margin of safety. Areas in attainment for NAAQS and CAAQS are below the designated thresholds and areas of nonattainment have background levels of pollution above the thresholds. AVAQMD is in nonattainment for state and federal O_3 and state PM_{10} (AVAQMD 2017).

a) **Less Than Significant Impact.** The purpose of an air quality plan is to limit the emissions of criteria air pollutants in order to reach attainment of the NAAQS. The applicable air quality plan within the AVAQMD is the Federal 70 parts per billion (ppb) Ozone Attainment Plan (Western Mojave Desert Nonattainment Area) adopted by AVAQMD in January 2023 (AVAQMD 2023). The Federal 70 ppb Ozone Attainment Plan establishes control measures for stationary, mobile, and other sources to reduce the emissions of ozone precursors (nitrogen oxides [NOx] and volatile organic compounds [VOC]). An individual project would comply with the applicable air quality plan if it does the following: (1) comply with all AVAQMD rules and regulations, (2) comply with the air quality plan's control measures, and (3) be consistent with the area's growth forecast (AVAQMD 2016).

   First, the Project would comply with all applicable rules and regulations established by AVAQMD. Specifically, the Project would comply with Rule 403, Fugitive Dust, during construction to reduce the amount of anthropogenic fugitive dust created on-site, and emergency generators on the Project site would be subject to Rule 201, Permit to Construct, and Rule 203, Permit to Operate. Second, the Project would comply with applicable control measures from the Federal 70 ppb Ozone Attainment Plan. Most control measures, such as locomotive regulations, would not be applicable to the Project. But the Project would comply

with the In-Use Off-Road Diesel-Fueled Fleets Regulation established by the California Air Resources Board (CARB). Third, the Project would not introduce any new housing or residents to the area, or otherwise induce population growth. Since the Project would not conflict with or obstruct implementation of the applicable air quality plan, the impact would be less than significant.

b) **Less Than Significant Impact.** Project emissions were calculated within the California Emissions Estimator Model (CalEEMod) version 2022.1.1.30 (see Appendix A). Emissions were calculated based on Project specific data provided within the Project description or based on modeling default assumptions. Emissions were compared to AVAQMD daily and annual thresholds to determine significance. Construction and operational emissions are discussed separately below.

Construction Emissions. Construction activities associated with the proposed Project would generate criteria pollutant emissions from the use of heavy, off-road equipment as well as construction worker commutes and material deliveries to the site. Construction-related emissions would be intermittent and temporary.

Estimated construction emissions associated with the proposed Project are shown in Table 8. As shown in the table, construction emissions fall below AVAQMD thresholds. Therefore, the proposed Project's construction emissions would not violate any air quality standard or result in a cumulatively considerable net increase of any criteria pollutant and the impact would be less than significant with implementation of standard BMPs noted below.

Table 8. Construction Criteria Pollutant Emissions (Unmitigated)

Year	Emissions					
	VOC	NOx	PM_{10}	$PM_{2.5}$	CO	SOx
Daily Maximum Emissions (lbs/day)						
2027	6.23	43.8	2.89	2.08	120	0.19
2028	5.98	40.4	5.94	2.07	120	0.19
2029	1.86	12.3	0.76	0.36	17.2	0.03
2030	10.7	12.1	0.73	0.34	17.0	0.03
AVAQMD Daily Thresholds (lbs/day)	***137***	***137***	***82***	***65***	***548***	***137***
Exceed Thresholds?	***No***	**No**	**No**	**No**	**No**	**No**
Annual Emissions (tons/year)						
2027	0.10	0.70	0.05	0.03	1.92	<0.005
2028	0.26	2.15	0.16	0.08	3.85	0.01
2029	0.18	1.61	0.10	0.05	2.27	<0.005
2030	0.14	0.27	0.02	0.01	0.39	<0.005
AVAQMD Annual Thresholds (tons/year)	***25***	***25***	***15***	***12***	***100***	***25***

Year	Emissions					
	VOC	NOx	PM_{10}	$PM_{2.5}$	CO	SOx
Exceed Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Appendix A

Operational Emissions. Emissions during operation of the Project would be generated primarily from worker vehicle trips to and from the site, as well as from area and energy sources (Table 9). As shown below, operational emissions would not exceed AVAQMD thresholds at full Project buildout (10 mgd). Operation of Phase 1 would treat less water (4.75 mgd) and therefore generate fewer emissions. Therefore, the Project's operational emissions would not violate any air quality standard or result in a cumulatively considerable net increase of any criteria pollutant, and the impact would be less than significant.

Table 9. Operational Criteria Pollutant Emissions

Source	Emissions					
	ROG	NOx	PM_{10}	$PM_{2.5}$	CO	SOx
Daily Maximum Emissions (lbs/day)						
Mobile (lbs/day)	0.98	0.61	1.36	0.35	6.79	0.01
Area (lbs/day)	1.11	0.01	<0.005	<0.005	1.60	<0.005
Stationary (lbs/day)	47.5	38.6	1.39	1.39	123	0.05
Total (lbs/day)	**49.6**	**39.2**	**2.75**	**1.74**	**132**	**0.07**
AVAQMD Daily Thresholds (lbs/day)	***137***	***137***	***82***	***65***	***548***	***137***
Exceed Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**
Annual Emissions (tons/year)						
Mobile (tons/year)	0.11	0.09	0.17	0.04	0.74	<0.005
Area (tons/year)	0.18	<0.005	<0.005	<0.005	0.14	<0.005
Stationary (tons/year)	0.26	0.21	0.01	0.01	0.69	<0.005
Total (tons/year)	**0.55**	**0.30**	**0.18**	**0.05**	**1.57**	**<0.005**
AVAQMD Annual Thresholds (tons/year)	***25***	***25***	***15***	***12***	***100***	***25***
Exceed Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Appendix A.

c) **Less Than Significant Impact.** This discussion addresses whether the Project would expose sensitive receptors to construction-generated PM_{10}, naturally occurring asbestos (NOA), construction-generated diesel particulate matter (DPM), or operations-related toxic air contaminants (TACs).

According to CARB, some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, or duration of exposure to air

pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, childcare centers, playgrounds, retirement homes, convalescent homes, hospitals, and medical clinics. The nearest sensitive receptors are a school/day care located to the north on E Avenue P, a residence on 25th Street E, and schools and residences located to the south on E Avenue Q.

Construction Emissions

During construction of the Project, the potential exists for emissions of fugitive dust, NOA, and DPM to be released.

Fugitive Dust. PM_{10} would be generated from site grading and other earth-moving activities. Most of this fugitive dust would remain localized and would be deposited on or near the Project site. However, the potential for impacts from fugitive dust exists unless control measures are implemented to reduce the emissions from the Project site. AVAQMD Rule 401, Fugitive Dust, establishes the minimum dust mitigation and control requirements along with the standards to be met from the activities that generate fugitive dust. Rule 401's minimum dust mitigation and control requirements must be used for all construction and grading activities. Additionally, as demonstrated in Table 8, PM_{10} emissions from construction would not exceed the threshold of significance applied in this analysis. Therefore, emissions of fugitive dust from construction of the proposed Project would not adversely affect sensitive receptors.

Naturally Occurring Asbestos. Construction in areas of rock formations that contain NOA could release asbestos to the air and pose a health hazard. However, a review of areas more likely to have rock formations containing NOA in California indicates that there is no asbestos in the immediate Project area (USGS 2011). Therefore, construction of the Project would not expose sensitive receptors to NOA.

Diesel Particulate Matter (DPM). Exposure to DPM from diesel vehicles and off-road construction equipment can result in health risks to nearby sensitive receptors. While the Project would involve the use of diesel fueled vehicles and off-road equipment, construction would be temporary. The Project would be required to comply with CARB's idling restrictions that would reduce DPM generating from diesel trucks and equipment. As shown in Table 8, the emissions of PM_{10} and $PM_{2.5}$, which include exhaust emissions, would fall below AVAQMD significance thresholds. Therefore, the proposed Project would not expose receptors to significant levels of DPM with compliance with CARB restrictions.

Operational Emissions

The greatest potential for exposure to TACs during long-term operations is from the use of stationary generators that use diesel fuel, which produce DPM, and chemicals used on-site for water treatment. The Project would include two stationary generators for emergency use. The outdoor generator would be natural gas and therefore would not generate DPM. The emergency generator for the Process Building and Administration Building may be diesel powered. However, this generator would only be used in the event of power disruption and for routine

maintenance. Both generators would be subject to AVAQMD permitting which would set thresholds and best available control technology to reduce DPM as relevant.

During operation, the water treatment process would use sodium hypochlorite, ferrous sulfate, hydrogen peroxide, sodium hydroxide (NaOH), ferric chloride, magnesium chloride, soda ash, coagulant polymer, sludge dewatering polymer, sodium chloride, citric acid, and hydrochloric acid. NaOH has been identified as an air toxic by the Office of Environmental Health Hazard Assessment (OEHHA) and CARB as having potential noncancer health impacts (OEHHA 2025, CARB 1997). The NaOH will be used to adjust pH at the facility during treatment. No other chemicals were identified by OEHHA, CARB, or the United States Environmental Protection Agency as toxics.

According to AVAQMD, a significant health risk would occur if the Project results in a cancer risk greater than or equal to 10 in a million or there is a hazard index (non-cancerous risk) greater than or equal to 1 (AVAQMD 2016). NaOH is not a carcinogen, therefore it would not create a cancer risk to the public (USEPA 1988). Moreover, NaOH would not be used in high quantities and would not result in a hazard index above 1. Therefore, operation of the proposed Project would not be expected to expose nearby sensitive receptors to substantial amounts of TACs.

Overall, the health risk impacts from construction and operation of the proposed Project would be less than significant.

d) **Less than Significant Impact.** While offensive odors rarely cause any physical harm, they can still be unpleasant, leading to distress among the public and often generating citizen complaints. The occurrence and severity of odor impacts depends on numerous factors, including nature, frequency, and intensity of the source, the wind speed and direction, and the sensitivity of the receptor.

Construction activities associated with the proposed Project could result in short-term odorous emissions from diesel exhaust associated with diesel-fueled equipment. However, these emissions would be intermittent and would dissipate rapidly from the source.

Land uses typically considered as associated with the production of odors during operations include wastewater treatment facilities, waste disposal facilities, and agricultural operations. The Project is a regional water augmentation program using IPR by groundwater augmentation via direct injection. Therefore, the Project is not a traditional wastewater facility and does not include any land uses that are typically associated with emitting objectionable odors. Moreover, the Project would comply with existing AVAQMD rules, including Rule 402, Nuisance which prohibits the discharge of air contaminants that endanger the comfort, health, and safety of the public.

Therefore, the proposed Project would not result in other emissions, such as those leading to odors, affecting a substantial number of people. The impact would be less than significant.

BMPs

Construction and operation of the proposed Project would have less than significant impacts on air quality, therefore mitigation measures are not required. However, as noted in Section 1.4.9, the following BMPs would be implemented during Project construction to minimize fugitive dust emissions to the extent feasible.

- **Water Trucks**. To control dust emissions, water trucks would spray cleared and grubbed areas, soil stockpiles, and unimproved roadways during construction.
- **High Wind Events**. Construction activities would be stopped during sustained high wind events (i.e., a period or periods of time aggregating more than 3 minutes in any 60-minute period) greater than 20 mph.
- **Haul Trucks**. Cover or maintain at least 2 feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Haul trucks traveling along freeways or major roadways should be covered.
- **Street Sweeping**. Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- **Vehicle Speed Limit**. Limit vehicle speeds on unpaved roads to 15 mph.
- **Paving**. Roadways, driveways, sidewalks, and parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.

2.3.4 Biological Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

Discussion: Stantec conducted reconnaissance-level biological field surveys on May 8, 2024, and July 19, 2024, within 300 feet of the Project area for general wildlife, habitat mapping, and focused rare plant surveys. The Biological Study Area (BSA) is mapped as Figure 2 of Appendix B1 (Biological Resources Technical Report (BRTR)). The BRTR describes existing environmental conditions that occur within the BSA and evaluates the potential for biological resources to occur based on those conditions with an emphasis on special-status plant and wildlife species, wildlife corridors, and special status/sensitive natural communities. A full listing of plant and wildlife species observed during the surveys is included in Appendix B1.

Stantec also conducted a reconnaissance-level survey of aquatic resources on May 8, 2024, within accessible portions of the Project site and a surrounding 100-foot buffer area (Aquatic Resource Survey Area). The Aquatic Resources Delineation Report (ARDR) describes the existing aquatic resources that occur within the Survey Area and surrounding areas and evaluates the potential for aquatic resources to occur based on those conditions with an emphasis on jurisdictional waters (Appendix B2).

During these site visits, native and nonnative plant species, wildlife observations and/or applicable sign, habitat types, potentially jurisdictional aquatic resources, and community descriptions were recorded. Plant species were identified to the taxonomic level needed to adequately determine rarity and listing status. Aerial photos and maps to locate the Project boundary were utilized. A visual and auditory search was performed for birds and mammals which included investigation of diagnostic sign (i.e., track, scat, nests, and burrows). A species list was developed for the Project site for all observed wildlife and plant species.

Relevant databases were consulted for information on sensitive plant and wildlife species as well as natural communities that could occur within the Project area, including:

- California Natural Diversity Database (CNDDB) Rarefind 5 using a 10-mile search radius
- CDFW's Biogeographic Information and Observation System (BIOS)
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Vascular Plants of California, Rare Plant ranks 1 and 2
- Calflora, information on California plants

Results of the field surveys, data reviews, and in-house knowledge are presented in the BRTR and ARDR (Appendix B) and summarized below.

Vegetation. The 2024 surveys resulted in the documentation of 65 total species of native and non-native plants within the BSA (see Appendix B for full list of species observed). Generally, mapping and descriptions of plant communities follows the classification system described in the second edition of A Manual of California Vegetation (MCVII) (Sawyer et al. 2009). As defined in MCVII, an alliance is defined as "a category of vegetation classification which describes repeating patterns of plants across a landscape. Each alliance is defined by plant species composition, and reflects the effects of local climate, soil, water, disturbance, and other environmental factors." Vegetation communities and land cover types mapped within the BSA are presented below in Table 10.

Species' scientific and common names correspond to those described in the second edition of the Jepson Manual (Baldwin et al. 2012). Within the BSA, four vegetation communities defined by Sawyer et al. (2009) and one additional land cover type, classified as disturbed/developed were mapped. Detailed descriptions of the plant communities and land cover types are presented in the BRTR (Appendix B).

Table 10. Vegetation Community and Land Cover Types in the BSA

Vegetation Community / Land Cover Type	Total Acres in BSA
Vegetation Communities	
Avena spp. - *Bromus* spp. Herbaceous Semi-Natural Alliance	14.41
Brassica nigra - *Centaurea* (*solstitialis*, *melitensis*) Herbaceous Semi-Natural Alliance	242.50
Yucca brevifolia Woodland Alliance	35.89
Ericameria nauseosa Shrubland Alliance	21.69
Land Cover Types	
Disturbed/Developed	301.59
Total	616.09

Common Wildlife. A variety of common reptiles, birds, and small mammals were observed during the 2024 surveys within the BSA. Refer to Table 11 below for a list of all species observed; a discussion of other common wildlife species that, while not observed, have the potential to occur in the BSA is presented as part of the BRTR in Appendix B.

Table 11. Wildlife Species Observed in the BSA

Scientific Name	Common Name	Notes
Birds		
Agelaius phoeniceus	red-winged blackbird	
Buteo jamaicensis	red-tailed hawk	One red-tailed hawk nest was observed during the May site visit on the water tank in the southwest parcel of the BSA, near the proposed Project facilities. The nest was likely in incubation phase. During the July site visit, the nest had fledged and was no longer active.
Columba livia	rock pigeon	
Corvus brachyrhynchos	American crow	
Corvus corax	common raven	One common raven nest was observed in a Western Joshua tree across the street from the PWRP during the May site visit. It was likely active given the raven's level of agitation within 50 ft. During the July site visit, the nest had fallen off the tree and looked to have failed.
Eremophila alpestris	horned lark	
Haemorhous mexicanus	house finch	
Mimus polyglottos	Northern mockingbird	
Sayornis saya	Say's phoebe	
Setophaga coronata	yellow-rumped warbler	
Sturnus vulgaris	European starling	
Zenaida macroura	mourning dove	
Mammals		
Lepus californicus	Black-tailed jackrabbit	
Otospermophilus beecheyi	California ground squirrel	
Sylvilagus audubonii	Desert cottontail	

Aquatic Resources. A jurisdictional aquatic resources/wetlands delineation was conducted as part of a preliminary jurisdictional determination for the Project in 2024; the area surveyed included the Project area and a 100-ft survey buffer. Sample points/soil test pits were excavated to a depth of approximately 16 inches unless a restrictive layer was present. Hydrophytic vegetation and wetland hydrology indicators were also considered in the vicinity of these sampling locations. Percent cover estimates for vegetation were conducted by visually estimating absolute percent cover for each plant species within a sample plot. Potential jurisdictional aquatic resources were mapped and presented in the ARDR as part of Appendix B. A summary of the delineation is provided below in Table 12.

Table 12. Preliminary Jurisdictional Waters Totals in the Aquatic Resources Study Area

Potential Jurisdictional Aquatic Resources	Acres*	Linear Feet*
State/RWQCB		
Non-wetland Waters of the State (ephemeral drainage)	0.27	11,945
CDFW		
Streambed	0.25	10,964
Riparian	0.02	981

* Areas of potential jurisdiction are subject to final verification and approval by the regulatory agencies.

Special Status Biological Resources. Designated Critical Habitat (DCH) is defined by the USFWS (2024b) as, "specific geographic areas that contain features essential to the conservation of an endangered or threatened species and that may require special management and protection." DCH may also include areas that are not currently occupied by the species but will be needed for its recovery. There is no DCH located within the BSA, and the closest occurrence is Arroyo toad DCH approximately 8.5 miles southeast of the BSA.

Special-status natural communities are defined by CDFW as, "communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects." All vegetation within the state is ranked with an "S" rank, however only those that are of special concern (S1-S3 rank) are generally evaluated under CEQA. One vegetation community within the BSA is considered to have special status: Joshua tree woodland. Joshua tree woodlands have a ranking of S3, meaning this community is vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

The BSA does not occur within a Natural Community Conservation Plan, but it does occur within the Western Joshua Tree Conservation Act range and the Palmdale Native Desert Vegetation Ordinance.

Special-Status Plants

Only one special-status plant (federal- and state-listed species and California Rare Plant Ranks (CRPR) 1-4 species), western Joshua tree (*Yucca brevifolia*) was observed within the BSA. This species was documented towards the northeast periphery of the BSA, bordering the proposed brine ponds (existing unused oxidation ponds), towards the periphery of the BSA along East Avenue P, along with other scattered locations throughout the remainder of the BSA. Refer to the BRTR in Appendix B for more details on the location and status of the species within the BSA.

Special-Status Wildlife

Loggerhead shrike (*Lanius ludovicianus*), a CDFW Species of Special Concern, was the only special-status wildlife species documented within the BSA. While not observed, other special-status wildlife species do have the potential to occur; refer to the BRTR in Appendix B for additional information on these species.

Wildlife Corridors and Special Linkages

The Project is surrounded by agricultural fields, open space, and neighborhoods/developments, and no mapped wildlife corridors were found to occur within the BSA; however, wildlife likely use both the natural and developed portions of the BSA on a regular basis during normal foraging, migration, nesting, and denning activities (USFWS 2024c). Additionally, both flowing drainages within the BSA may occasionally be used as water sources for wildlife during the hot summer months.

The BSA is a part of the Pacific Flyway, a major north-south flyway for migratory birds in America, extending from Alaska to Patagonia. Each year, at least one billion birds migrate along the Pacific Flyway (Audubon 2024).

a) **Less than Significant Impact with Mitigation Incorporated**. Special status plants and animals are discussed below.

Special Status Plants. Only one special status plant species, Western Joshua tree, was found to occur within the Project impact areas. This species is a candidate for state listing as threatened or endangered. Although not observed, two other special-status plant species were determined to have a moderate potential to occur. Sagebrush loeflingia (*Loeflingia squarrosa* var. *artemisiarum*) a CRPR 2B.2 species and Short-joint beavertail (*Opuntia basilaris var. brachyclada*) a CRPR1B.2 species are known from the region, and based on the on-site habitat, have a moderate potential to occur. All other special-status plant species known to occur in the general region were determined to have no or low potential to occur.

Direct impacts to listed or special-status plants could include trampling or crushing from heavy equipment, vehicles, or foot traffic, alterations to the native seed bank due to soil compaction, and modifications to existing hydrological conditions. Potential indirect impacts could include the disruption of native seed banks through soil alterations, the accumulation of fugitive dust, increased erosion and sediment transport, and the colonization of non-native, invasive plant species. Excessive dust can decrease or limit plant survivorship by decreasing photosynthetic output, reducing transpiration, and adversely affecting reproductive success. Ground-disturbing activities that would occur during the proposed Project can result in the proliferation and spread of non-native invasive plants to new areas. Because noxious weeds can permanently degrade rare plant and animal habitats, their proliferation could adversely affect listed plant species if any are present.

Operational impacts from routine maintenance and inspection would include trampling or crushing, increased erosion, exposure to fugitive dust, and the spread and colonization of noxious weeds.

If present during construction, impacts to listed plant species would be considered significant. Since the biological resources assessment was conducted in 2024 and construction is not anticipated to begin until the end of 2027, additional surveys would be conducted prior to construction. Implementation of mitigation measures BIO-1 through BIO-5 and BIO-15 would minimize impacts to special-status plant species. These measures include worker education describing the sensitive biological resources that occur on the

proposed Project site, implementation of BMPs to minimize and avoid impacts, and conducting biological monitoring during ground-disturbing and other construction-related activities. Implementation of these mitigation measures would reduce impacts to listed or special-status plants to a less than significant level.

Special-Status Wildlife. No state or federally listed wildlife species were observed on or near the proposed Project site. Once special-status avian species, loggerhead shrike (*Lanius ludovicianus*), a CDFW Species of Special Concern, was observed along the outer edges of the proposed brine ponds in the northeast portion of the proposed Project area. A variety of other special-status wildlife, while not observed, were determined to have a moderate or high potential to occur (Table 13).

Table 13. Special-Status Wildlife with a Moderate or High Potential to Occur

Scientific Name	Common Name	Status	Potential to Occur
Birds			
Athene cunicularia	Burrowing owl	SC	High
Charadrius montanus	Mountain plover	SSC	Moderate
Toxostoma lecontei	Le Conte's thrasher	SSC	Moderate
Mammals			
Xerospermophilus mohavensis	Mohave ground squirrel	ST	High
Invertebrates			
Bombus crotchii	Crotch's bumble bee	SC	Moderate
Bombus pensylvanicus	American bumble bee	SA	Moderate
Helminthoglypta fontiphila	Soledad shoulderband	SA	Moderate
Reptiles			
Anniella pulchra	Northern California legless lizard	SSC	Moderate
Arizona elegans occidentalis	California glossy snake	SSC	Moderate
Gopherus agassizii	Desert tortoise	FT, ST	Moderate
Phrynosoma blainvillii	Coast horned lizard	SSC	Moderate

Federal Rankings:
FT = Federally Threatened

State Rankings:
SSC = CDFW Species of Special Concern
ST = State Threatened
SA = CDFW Special Animal
SC = State Candidate for Listing

Special-Status Invertebrates and Reptiles

Construction activities associated with the proposed Project could result in the direct loss of sensitive invertebrates and reptiles should they be present. Given the ecology of these species and cryptic nature, it is likely that some or all of the species may occur in or near the proposed Project sites. Direct impacts could result from potential mechanical crushing during construction, fugitive dust, and general disturbance due to increased human activity. Proposed Project implementation may also result in permanent loss of habitat from the removal of debris piles or trampling of soft friable soils required for burrowing. Indirect impacts could include compaction of soils and the introduction of exotic plant species.

Operational impacts include increased human presence, the spread of noxious weeds due to the use of new access roads, and increased perch sites for avian predators. Inspection and maintenance could result in trampling or crushing of small invertebrates and reptiles by vehicular or foot traffic, alterations in topography and hydrology, increased erosion and sedimentation, and the introduction of non-native, invasive plants due to increased human presence.

Special-Status Birds

Construction activities associated with the proposed Project could result in direct and indirect impacts to a variety of sensitive resident and migratory birds. With the exception of burrowing owl (state candidate for listing), direct impacts to most listed species are not anticipated because nesting habitat for most listed birds is not present on the Project sites.

Project activities have the potential to impact nesting birds through direct impacts such as ground-disturbing activities associated with construction of new infrastructure and increased human presence. During the breeding season, construction activities could result in the displacement of breeding birds and the abandonment of active nests. Potential indirect impacts could include the deterioration of habitat as a result of the spread of noxious weeds, increased noise levels from heavy equipment and injection well installation, exposure to fugitive dust, and human presence during repairs to the newly constructed infrastructure or routine inspection of the facilities. Weed management could also affect nesting.

During operations of the proposed Project, impacts to nesting birds would include increased human disturbance, exposure to fugitive dust, the spread of noxious weeds, and disruption of breeding or foraging activity due to routine inspection and maintenance activities. Weed abatement through herbicide application or mechanized tools could also affect nesting.

If Project construction were to occur during the avian nesting season (generally considered to be between February 15th through September 15th; although some raptors species may nest as early as January) indirect impacts to nesting birds could occur; the MBTA of 1918 (16 USC 703-711) does not allow for take of migratory birds.

The MBTA makes it unlawful to possess, buy, sell, purchase, barter or “take” any migratory bird listed in Title 50 of the CFR Part 10. “Take” is defined as possession or destruction of migratory birds, their nests or eggs. Disturbances that cause nest abandonment and/or loss of reproductive effort or the loss of habitats upon which these birds depend may be a violation of the MBTA. The MBTA prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary. This act encompasses whole birds, parts of birds, and bird nests and eggs.

Special Status Mammals

No special-status mammal species were detected within proposed Project impact areas. The proposed Project area and adjacent habitats have the potential to support a variety of special-status mammals including the state listed Mohave ground squirrel. Direct impacts to these species would include mechanical crushing by vehicles and construction equipment, trampling, and loss of habitat. Construction disturbance can also result in the flushing of small animals from refugia which increases the predation risk for small rodents. Potential

indirect impacts include exposure to fugitive dust, alteration of soils, such as compaction, that could preclude burrowing, the spread of exotic weeds, and increased noise levels.

During operation of the proposed Project, impacts to sensitive mammals would include increased human disturbance, exposure to fugitive dust, the spread of noxious weeds, and disruption of breeding or foraging activity due to routine inspection and maintenance activities. Weed abatement through herbicide application or mechanized tools could also affect mammal species.

Construction of the proposed Project would remove or disturb vegetation and could subject sensitive mammals to mortality. Project activities that result in the degradation to habitat for or the loss of endangered, threatened, or other special-status animal species would be considered a significant adverse impact requiring mitigation. Mitigation measures BIO-1 and BIO-4 through BIO-15 shall be implemented to reduce impacts on sensitive wildlife. These measures include worker education describing the sensitive biological resources that occur on the proposed Project site, implementation of BMPs to minimize and avoid impacts, and conducting biological monitoring during ground-disturbing and other construction-related activities. Implementation of these mitigation measures would reduce impacts to listed or special-status animals to a less than significant level.

b) **Less than Significant Impact with Mitigation Incorporated**. Construction of the proposed Project would result in 164.33 acres of permanent and 18.45 acres of temporary disturbance to vegetation communities and land cover types (Table 14, Figure 7). The vast majority of these impacts are limited to disturbed/developed areas or non-native dominated vegetation communities. Temporary impacts to native vegetation would be limited to 1.21 acres of *Ericameria nauseosa* Shrubland Alliance.

One vegetation community within the proposed Project area is considered to have special status: Joshua tree woodland. Joshua tree woodlands have a ranking of S3, meaning this community is vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation. The proposed Project could permanently impact approximately 0.51 acres of Joshua tree woodland. However, detailed design of Project pipelines and the brine ponds (features where Joshua tree woodland is present) has not yet been completed. Therefore, a Joshua tree census would be completed in compliance with mitigation measure BIO-3, and Project elements would be designed to minimize impacts to Joshua trees to the extent feasible. Where impacts to Joshua trees cannot feasibly be avoided, tree relocation or payment of an in-lieu fee to CDFW would occur.

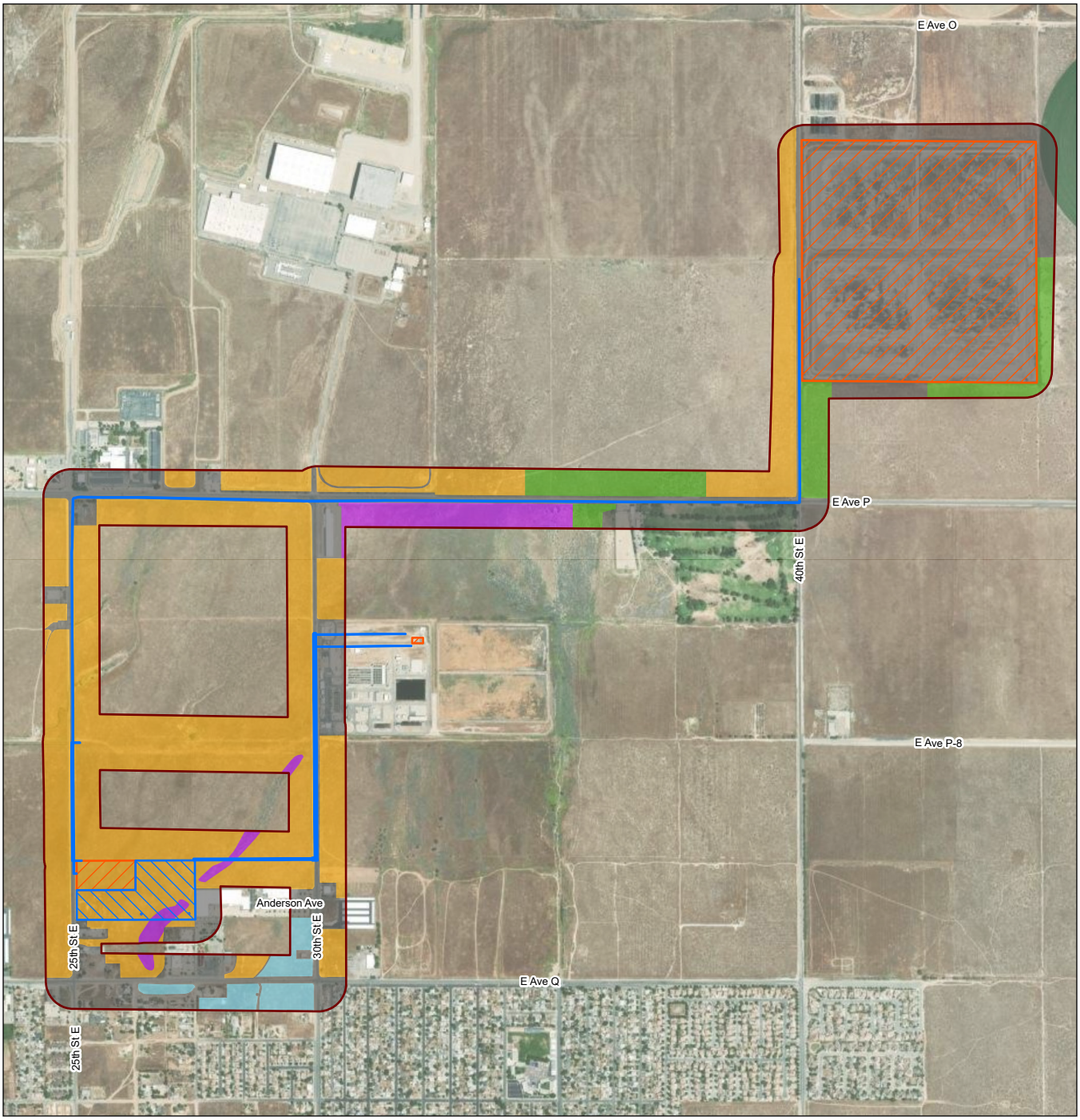
Table 14. Proposed Project Impacts to Vegetation Communities and Land Cover Types

Vegetation Community / Land Cover Type	Project Impacts	
	Temporary (acres)	Permanent (acres)
Vegetation Community		
Brassica nigra - *Centaurea* (*solstitialis, melitensis*) Herbaceous Semi-Natural Alliance	14.24	4.87
Ericameria nauseosa Shrubland Alliance	1.21	--
Yucca brevifolia Woodland Alliance	--	0.51
Land Cover Type		
Disturbed/Developed	2.99	158.96
Total	**18.45**	**164.33**

Construction of the proposed Project would remove vegetation, alter soil conditions, and potentially result in the loss of native seed banks. Construction activities could also result in the spread of noxious weeds within the proposed Project site and adjacent habitats. Vehicle travel on access roads and paved streets could result in increased fugitive dust to native vegetation in adjacent areas. Wind-blown dust can degrade soils and vegetation over a wide area. Dust can have deleterious physiological effects on plants and may affect their productivity and nutritional qualities. Fugitive dust can kill plants by burial and abrasion, interrupt natural processes of nutrient accumulation, and allow the loss of soil resources. The destruction of plants and soil crusts by windblown dust exacerbates the erodibility of soil and accelerates the loss of nutrients.

Operational impacts would occur during routine inspection and maintenance of the proposed Project. These impacts could include trampling or crushing of native vegetation by foot traffic, alterations in topography and hydrology, increased erosion and sedimentation, and the introduction of non-native, invasive plants due to increased human presence on foot or equipment.

Because of their suitability to support several special-status species, the loss of and impacts to native habitat associated with the proposed Project would be considered a significant adverse impact. Implementation of mitigation measures BIO-3, BIO-4, BIO-5, BIO-15, and BIO-16 would reduce Project-related impacts to sensitive natural communities. These measures include worker education describing the sensitive biological resources that occur on the proposed Project site, implementation of BMPs to minimize and avoid impacts, compensation for unavoidable impacts, and conducting biological monitoring during ground-disturbing and other construction-related activities. Implementation of these mitigation measures would reduce impacts to sensitive natural communities to a less than significant level.



BRTR Biological Study Area

Project Impact

Temporary

Permanent

BRTR Vegetation Communities

Agriculture

Avena spp. - Bromus spp. Herbaceous Semi-Natural Alliance

Brassica nigra - Centaurea (solstitialis, melitensis) Herbaceous Semi-Natural Alliance

Ericameria nauseosa Shrubland Alliance

Yucca brevifolia Woodland Alliance

BRTR Land Cover Type

Disturbed/Developed

Notes

1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2025.
3. Background:World Imagery: Maxar
World Ocean Base: Esri, GEBCO, Garmin, NaturalVue

0 850 1,700 Feet

(At original document size of 8.5x11)
1:20,400

N

Stantec

Project Location
City of Palmdale,
Los Angeles County, California

Prepared by DL on 2025-09-08
TR by SET on 2025-09-08
IR by SG on 2025-09-08

Client/Project
184031611

Palmdale Water District
Pure Water Antelope Valley Project

Figure No.
7

Title
Project Biological Resources Impacts

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c) **Less than Significant Impact with Mitigation Incorporated**. A formal delineation of jurisdictional wetlands, other "waters of the U.S.," waters of the State, and CDFW jurisdictional waters was conducted in 2024 and is available in Appendix B2. Based on the results of this delineation the proposed Project would not impact any potentially jurisdictional aquatic resources.

However, since the delineation was conducted in 2024 and Project construction is not anticipated to begin until late 2027, the condition of aquatic resources in the Project area could change. Should they occur, direct impacts to federal non-wetland Waters of the U.S. and CDFW jurisdictional waters could include the removal of native vegetation, the discharge of fill, degradation of water quality, and increased erosion and sediment transport. Potential indirect impacts could include alterations to the existing topographical and hydrological conditions and the introduction of non-native, invasive plant species. Operational impacts to wetland habitats would be similar to direct and potential indirect impacts.

As required by law, PWD would comply with the regulations regarding conducting Project activities in water courses and habitats under the jurisdiction of the State and federal government. Therefore, PWD would obtain required permits pursuant to Section 401 and 404 of the CWA, the State Porter- Cologne Act, and Fish and Game Code Section 1605. Due to the importance of jurisdictional habitats and ephemeral/perennial drainages and their suitability to support special-status species, the loss of these habitats associated with the proposed Project would be considered a significant adverse impact requiring mitigation.

Implementation of mitigation measures BIO-4, BIO-5, BIO-12, BIO-16, and BIO-17 would minimize impacts to sensitive natural communities. These measures include worker education describing the sensitive biological resources that occur on the proposed Project site, implementation of BMPs to minimize and avoid impacts, compensation for unavoidable impacts, and conducting biological monitoring during ground- disturbing and other construction-related activities. Implementation of these mitigation measures would reduce impacts to wetlands to a less than significant level.

d) **Less than Significant Impact**. Habitat fragmentation and isolation of natural areas ultimately results in the loss of native species within those communities. The ability for wildlife to move freely among populations is important to long-term genetic variation and demography. Fragmentation and isolation of natural habitat may cause loss of native species diversity in fragmented habitats. In the short term, wildlife movement may also be important to an animal's ability to occupy home ranges, if a species range extends across a potential movement barrier. These considerations are especially important for rare, threatened, or endangered species, and wide-ranging species such as large mammals, which exist in low population densities.

Direct impacts resulting from the construction of the proposed Project include the placement of physical structures such as pipelines and outbuildings. Ground- disturbing activities would be expected to interfere with terrestrial wildlife movement during construction of the proposed Project. The Project could also affect wildlife in adjacent habitats by interfering

with movement patterns or causing animals to temporarily avoid areas adjacent to the construction zone. More mobile species such as birds and larger mammals would likely disperse into adjacent habitat areas during ground disturbing activities.

Potential indirect impacts include human disturbance, colonization or expansion of invasive weeds, and vehicle traffic. Operational impacts would be the same as described for direct and potential indirect impacts.

Construction activities may temporarily limit terrestrial wildlife movement within the proposed Project area; however, the broad geographic range and habitat that occurs in the region would remain available to wildlife. The Project would not substantially interfere with the movement of any native resident or migratory fish, reptile, or amphibian species. Existing barriers to movement (i.e., landfill and associated structures) and surrounding land uses (i.e., residential and recreational) currently constrain or limit movement in the proposed Project area.

There are no known bird or bat migratory corridors that would be directly impeded by the proposed Project. Large concentrations of migrants are not known to utilize any specific portion of the proposed Project site and Project activities are not expected to preclude use of the area. Migrating birds would have access to native habitat communities within adjacent areas. Although species would be disrupted during certain activities, impacts to wildlife movement and migratory corridors from the proposed Project would be less than significant.

e) **Less than Significant Impact with Mitigation Incorporated**. The Palmdale Native Desert Vegetation Ordinance (City of Palmdale 1992) aims to protect and preserve desert vegetation, and particularly Joshua trees, so as to retain the unique natural desert aesthetics in some areas of the city, and to promote the general welfare of the community. Although it may not be feasible, practicable, or in the public interest to preserve all healthy desert vegetation regulated by the ordinance due to reasonable planning, developmental or property rights considerations, the design of development projects should strive to protect and maintain the most desirable and significant of the healthy desert vegetation in a manner consistent with the city general plan and CEQA. (Ord. 952 §2 (part) 1992). With implementation of mitigation measure BIO-3, the proposed Project would comply with requirements set forth in the ordinance, and impacts would be less than significant.

f) **Less than Significant Impact**. There only known adopted Habitat Conservations Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservations plan within the proposed Project area is the West Mojave Plan (WMP) prepared by the Bureau of Land Management (2004). The WMP is a habitat conservation plan and federal land use plan amendment that:

- Presents a comprehensive strategy to conserve and protect the desert tortoise, the Mohave ground squirrel (MGS) and nearly 100 other sensitive plants and animals and the natural communities of which they are a part.
- Provides a streamlined program for complying with the requirements of the California and federal Endangered Species Acts (CESA and FESA, respectively); the City of Palmdale is a collaborator on the plan.

Where applicable the proposed Project could comply with the requirements of the WMP, therefore, impacts would be less than significant.

Mitigation Measures

Implementation of the following mitigation measures, as relevant, would reduce impacts to biological resources to less than significant levels.

BIO-1 Habitat Assessment Update and Pre-Construction Surveys. Prior to ground-disturbing activities, the habitat assessment completed for the Project in 2024 shall be updated based on Project component siting determined during detailed design. Habitat suitable to support special-status plant species, special-status wildlife species, nesting bird species, sensitive plant communities, and/or native desert vegetation shall be mapped within 500 feet of each proposed Project component footprint. Where suitable habitat is present, implementation of Mitigation Measures BIO-2 through BIO-17 shall be required as relevant based on the resources identified.

A qualified biologist shall conduct two pre-Project surveys within and adjacent to the proposed work area(s) within a one-week period prior to the start of Project-related activities. Pre-Project surveys shall include:

1) General surveys for botanical and wildlife resources;
2) The identification of any active bird nests, burrows, and/or woodrat nests (if active, they shall be recorded, monitored for species observations, and mapped); and
3) Work areas with flowing or standing water shall be visibly surveyed for any aquatic species that may be impacted by Project activities.

If Species of Special Concern (SSC) are observed during pre-construction surveys, a qualified biologist shall implement appropriate avoidance and minimization measures, such as relocation by a qualified biologist, establishment of no-distance buffers, or phased vegetation removal. Measures shall be developed in coordination with CDFW and implemented prior to the start of ground-disturbing activities.

BIO-2 Special-Status Plant Surveys, Avoidance Measures, Mitigation and Monitoring Plan. PWD shall retain a qualified biologist to conduct surveys for special-status plants (other than Joshua trees which are covered in mitigation measure BIO-3) prior to any vegetation removal, grubbing, or other construction activity within the proposed Project footprint. The surveys shall be floristic in nature and seasonally timed to coincide with the blooming periods of the following special-status species with potential to occur:

- short-joint beavertail
- sagebrush loeflingia

The surveys shall be conducted during the relevant target species' blooming periods no more than 2 years prior to construction. Special-status plant species identified on site shall be mapped onto a site-specific aerial photograph. Surveys shall be conducted in accordance with the most current CDFW and USFWS protocols. A report of the survey results shall be submitted to PWD for review and approval. If special-status plants other than western Joshua trees are detected during special-status plant surveys, the observed special-status plants shall be avoided through

proposed Project design where feasible, and vegetation clearing within 50 feet (15 meters) of any identified special-status plant shall be conducted by hand by the construction contractor(s), if practicable. An avoidance buffer of at least 50 feet (15 meters), or other distance as approved by a qualified biologist, shall be established around any identified special-status plants that can be feasibly avoided, and the avoidance buffer shall be delineated with bright orange protective fencing. The avoidance buffers shall be maintained for the duration of construction activities at each construction site and shall be removed only after the conclusion of all grading, clearing, and construction activities at each construction site. If special-status plants other than western Joshua tree are detected during special-status plant surveys and would be impacted by proposed Project construction, PWD shall retain a qualified restoration specialist to develop a Special-Status Plant Mitigation and Monitoring Plan that provides for the on-site or off-site replacement of the species impacted by the proposed Project. The Special-Status Plant Mitigation and Monitoring Plan shall specify the following:

- A summary of impacts
- The location of the mitigation site
- Methods for harvesting seeds or salvaging and transplanting individuals to be impacted
- Measures for propagating plants or transferring living plants from the salvage site to the mitigation site
- Site preparation procedures for the mitigation site
- A schedule and action plan to maintain and monitor the mitigation site
- Criteria and performance standards by which to measure the success of the mitigation, including replacement of impacted plants at a minimum 1:1 ratio
- Measures to exclude unauthorized entry into the mitigation areas
- Contingency measures such as replanting or weeding if mitigation efforts are not successful
- The performance standards for the Special-Status Plant Mitigation and Monitoring Plan shall be, at a minimum, the following:
    - Within five years after introducing the plants to the mitigation site, the number of established, reproductive plants shall equal the number impacted during proposed Project construction; and
    - Restoration shall be considered successful after the success criteria have been met for a period of at least two years without any maintenance or remediation activities other than invasive species control.

The Special-Status Plant Mitigation and Monitoring Plan shall be initiated prior to Project construction (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation) and shall be implemented over a 5-year period. The plan may also be combined with the Habitat Revegetation, Restoration, and Monitoring Program described under Mitigation Measure BIO-16. Annual reports discussing the implementation and management of the Special-Status Plant Mitigation and Monitoring Plan shall be submitted to PWD for review and approval. Five years after the start of the mitigation for the proposed Project, a final report shall be submitted to PWD for review and approval and

shall, at a minimum, discuss the implementation and management of the Special-Status Plant Mitigation and Monitoring Plan over the five-year period and indicate whether the Special-Status Plant Mitigation and Monitoring Plan has been successful based on the established performance standards. Should the success criteria be met before Year Five, the mitigation effort can be deemed complete.

BIO-3 Joshua Tree Census Survey. A western Joshua tree census survey shall be conducted for the proposed Project footprint by a qualified arborist in accordance with CDFW's Western Joshua Tree Census Instructions, which requires a census of all western Joshua trees within the proposed Project area and a 50-foot buffer. Impacts to western Joshua trees and within a minimum 50-foot buffer shall be avoided to the extent feasible. An avoidance buffer of at least 50 feet shall be established around western Joshua tree individuals that can be feasibly avoided. If a 50-foot buffer is not feasible, a reduced buffer can be established if a qualified desert native plant specialist and CDFW determine the reduced buffer would avoid direct impacts to individual western Joshua tree(s). No activities shall occur within the buffer. The avoidance buffers shall be maintained for the duration of construction activities in each work area and shall be removed only after the conclusion of all grading, clearing, and construction activities at the proposed Project construction site.

For each dead or live western Joshua tree individual that cannot be avoided through proposed Project design, PWD shall implement one of the following measures:

- The western Joshua tree individual shall be trimmed or relocated under the guidance of a desert native plant specialist. Tree relocation shall be implemented in accordance with the following measures and CDFW-provided guidelines and relocation protocols, if made available prior to proposed Project construction, to assist the survival of the relocated tree:
  - The relocated western Joshua tree shall be placed in a suitable location and with proper orientation to improve its survival.
  - The western Joshua tree shall be relocated at a time that maximizes its survival, when feasible.
  - A desert native plant specialist shall be on site to oversee relocation of the tree.
- PWD shall submit payment of an in-lieu fee to CDFW pursuant to CDFW's standard mitigation fee structure for western Joshua tree in effect at the time of application for an Incidental Take Permit.

BIO-4 Construction Worker Environmental Awareness Program. PWD shall retain a qualified biologist to conduct a preconstruction WEAP training for all personnel working on the proposed Project. The WEAP shall aid workers in recognizing special-status species and regulated biological resources known to occur (e.g., western Joshua trees, sensitive natural communities, jurisdictional waters or wetlands) or potentially occurring on the proposed Project sites and focus on conditions and protocols necessary to avoid and minimize potential impacts to biological resources. All personnel associated with construction of the proposed Project shall attend the WEAP training prior to initiation of construction activities (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and

excavation). The training shall include information about the special-status species potentially occurring within the proposed Project site, identification of special-status species and habitats, a description of the regulatory status and general ecological characteristics of special-status resources, and a review of the limits of construction and measures required to avoid and minimize impacts to biological resources within the work area. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employees, and other personnel involved with construction. All employees working at the proposed Project site shall sign a form provided by the trainer documenting they have attended the WEAP and understand the information presented to them. The signed form shall be provided to PWD as documentation of training completion. The crew foreman shall be responsible for ensuring crew members adhere to the guidelines and restrictions designed to avoid impacts to special-status species and other regulated biological resources. If new personnel are brought onto the proposed Project after completion of the initial WEAP training, the training shall be conducted for all new personnel before they can participate in proposed Project construction activities. Construction personnel shall be instructed to not directly harm any special-status species on site by halting activities until the species can move to off-site areas or contact a qualified biologist to move the species out of harm's way, if appropriate.

BIO-5 Qualified Biological Monitor. PWD shall retain a qualified biological monitor with relevant experience with the taxa and species in the Antelope Valley desert and mountain foothills for which pre-construction surveys, monitoring, or other support is required during proposed Project construction (potentially including, but not limited to, special-status plants, raptors, nesting birds, and those special-status species with potential to occur based on the results of surveys conducted prior to proposed Project initiation. The qualified biologist role may be satisfied by one or more individuals depending on qualifications and experience with one or more species and taxa. The qualified biologist shall be present during initial ground disturbance or vegetation removal activities and shall have the authority to temporarily stop work if one or more special-status species are observed that may be impacted by proposed Project activities. The biologist shall relocate special-status amphibian, reptile, or mammals present within anticipated proposed Project impact areas to suitable undisturbed habitat outside the areas directly and indirectly affected by construction activities. The biologist shall hold the requisite incidental take permits or authorizations for the capture and handling of the species, if applicable. The biologist shall recommend measures to ensure compliance with avoidance and minimization measures, applicable permit conditions, and conditions required for observed special-status species. When the biologist is present on site, they shall be responsible for:

- Verifying Project compliance with environmental mitigation measures and requirements
- Establishing lines of communication and reporting methods in coordination with the construction crew foreman and PWD
- Conducting pre-construction clearance sweeps for special-status species and nesting birds, as needed
- Documenting special-status species observations
- Recommending preventative or protective actions to avoid and minimize potential proposed Project impacts to regulated biological resources where feasible

- Recommending actions to be taken in the event of non-compliance
- Daily and weekly reporting of compliance

Monitoring logs documenting the above shall be submitted to PWD for review and approval for the duration of proposed Project construction.

BIO-6 Desert Tortoise Avoidance, Minimization and Compensation Measures. This mitigation measure is applicable to suitable habitat for desert tortoise within 500 feet of the Project sites based on the 2024 habitat assessment as updated by mitigation measure BIO-1. Focused protocol surveys shall be conducted by a qualified biologist following the protocol outlined in the most recent USFWS and/or CDFW protocol guidelines. These currently include: 2019 Preparing for Any Action That May Occur Within the Range of the Mojave Desert Tortoise (*Gopherus agassizii*). If any desert tortoise are observed during the focused surveys, these species and their habitat shall be avoided by the proposed Project. If avoidance of desert tortoise is not feasible, and desert tortoise may be potentially impacted by the proposed Project, additional avoidance and mitigation measures will be required, such as constructing proposed Project facilities outside the breeding season, establishing a suitable buffer around known territories, and restricting activities around certain times of year. If the proposed Project results in permanent impacts to habitat occupied by desert tortoise, USFWS and CDFW shall be consulted to ensure compliance with the Endangered Species Act and/or requirements for avoidance, minimization, or mitigation measures (e.g., replacement of impacted occupied habitat at a minimum 1:1 ratio).

BIO-7 Crotch's Bumble Bee Avoidance, Minimization, and Compensation Measures. If Crotch's bumble bee is still considered a California Endangered Species Act (CESA) candidate species or has been listed as threatened or endangered under CESA at the time construction of proposed Project commences, PWD shall implement the following avoidance, minimization, and compensation measures for this species:

- A qualified biologist with the requisite experience and appropriate authorization shall conduct a protocol-level presence/absence survey for Crotch's bumble bee in areas of the proposed Project site with suitable habitat during the peak active period for Crotch's bumble bee (highest detection probability) that occurs prior to the start of the proposed Project's initial ground disturbing activities (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). The peak active period for Crotch's bumble bee in the Project area is anticipated to be April through June given the expected desiccation of Crotch's bumble bee floral resources within the Project area by mid-summer, though this timing could depend on annual climatic factors. Survey methodology shall be based on Section 4.1.1 of CDFW's *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species* (June 6, 2023), or the most current CDFW guidance in effect at the time. Inaccessible areas outside of the proposed Project site can be surveyed using binoculars from the proposed Project edge or from public roads. The timing of the presence/absence survey can be phased with proposed Project build-out, if feasible. Survey results, including negative findings, shall be submitted to CDFW prior to implementing Project ground-disturbing and/or vegetation removal activities.

- If construction starts one year or more after the conclusion of the surveys described above, PWD shall consult with CDFW as to whether additional surveys are required and shall retain a qualified biologist to conduct additional surveys if recommended by CDFW.
- If a Crotch's bumble bee nest is observed during surveys of the Project sites, the qualified biologist shall identify the location of nests in or adjacent to the proposed Project site to the extent feasible and notify CDFW. Inaccessible land adjacent to the proposed Project site shall be observed using binoculars. If nests are identified within the proposed Project site or immediately adjacent to the site, a qualified biologist shall determine the need to establish a no-disturbance buffer around the nest, where feasible, to reduce the risk of disturbance or accidental take. The buffer shall provide at least 50 feet (15 meters) of clearance around active nest entrances. If proposed Project activities may result in disturbance or potential take, the qualified biologist, in coordination with CDFW, shall expand the buffer zone as necessary to prevent disturbance or take. Construction activities shall not occur within the buffer until a qualified biologist determines the colony is no longer active (i.e., no Crotch's bumble bees are seen flying in or out of the nest for three consecutive days, indicating the colony has completed its nesting season and the next season's queens have dispersed from the colony). Once the nest has been determined to be inactive by the qualified biologist, construction activities within the no-disturbance buffer(s) shall be allowed to resume. Otherwise, the no-disturbance buffer shall be maintained for the duration of proposed Project construction activities in each work area and shall be removed only after the conclusion of all grading, clearing, and construction activities at each construction site.
- If establishment of a no-disturbance buffer and/or avoidance of the nest is not feasible, the qualified biologist shall consult with CDFW to determine next steps and whether appropriate take authorization from CDFW is necessary (pursuant to Fish & Game Code § 2080 et seq).
- Except as authorized by CDFW pursuant to Fish & Game Code § 2080 et seq, if an individual Crotch's bumble bee is observed within or adjacent to the Project site during Project construction activities, the individual shall be allowed to move on its own accord and Project construction activities within a buffer distance of 50 feet, or a distance as agreed upon in consultation with CDFW, near the individual shall cease until the individual moves out of the work area.
- If Crotch's bumble bee is determined to be present on the proposed Project site, floral resources associated with the species that will be removed or damaged by proposed Project activities in the areas of the proposed Project site where Crotch's bumble bee is detected and documented shall be replaced at a minimum ratio of a 1:1 (mitigation:impact). Planning and implementation of suitable habitat replacement may be integrated into the Habitat Revegetation, Restoration, and Monitoring Program described under Mitigation Measure BIO-16.

BIO-8 Burrowing Owl Survey and Foraging Habitat Mitigation. PWD shall retain a qualified biologist approved by CDFW to conduct focused breeding season surveys for burrowing owls in accordance with the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012), or the most current CDFW guidance in effect at the time. Biologists surveying

and/or monitoring for burrowing owl shall obtain a Memorandum of Understanding issued by CDFW. Early consultation with CDFW is encouraged to ensure all necessary permits are obtained. Surveys shall be conducted during the burrowing owl breeding season and prior to the start of ground-disturbance and vegetation removal Project activities. The focused surveys shall be conducted by a qualified biologist in the portions of the proposed Project site with suitable burrowing owl habitat plus a 500-foot buffer (burrowing owl survey area). The surveys shall be conducted in the morning or evening to evaluate the presence/absence of burrowing owl during the nesting season and prior to the start of Project activities. All potential burrowing owls and burrows with burrowing owl sign shall be recorded using a GPS unit capable of submeter accuracy. Observations shall be conducted to determine if individual owls and/or nesting pairs are present and their status/disposition (e.g., late winter migrant, actively nesting, single individual not nesting). Representative photos of the habitat, potential and occupied burrows, and vegetation within the burrowing owl survey area shall be taken and included as an appendix to the survey report. All vertebrate fauna detected in the burrowing owl survey area shall be recorded in field notes. Inaccessible areas of the burrowing owl survey area outside the proposed Project site shall be surveyed using binoculars and/or spotting scopes to determine if owls are present.

A survey report shall be prepared and submitted to CDFW that includes survey methodology, survey results, an analysis of potential proposed Project impacts to actively nesting pairs, and a calculation of the compensatory mitigation for foraging habitat, if impacted. Late winter migrants and non-nesting individuals located outside of the proposed Project impact area shall not require habitat mitigation unless passive relocation is necessary. Maps showing burrow locations, a delineation of suitable habitat areas, and burrowing owls observed shall be included in the survey report.

If owls are observed within 500 feet of proposed Project activities, PWD shall coordinate with CDFW to determine next steps and whether appropriate take authorization from CDFW is necessary (pursuant to Fish & Game Code § 2080 et seq). As applicable, compensatory mitigation for impacts to foraging habitat loss would be at a minimum of a 1:1 ratio. Compensatory mitigation for loss of foraging habitat shall be implemented on- or off-site and may include purchase of Conservation Bank credits, payment of an in-lieu fee to benefit burrowing owl, or permanent conservation and management of burrowing owl habitat through the recordation of a conservation easement, funding of a non-wasting endowment, and/or implementation of a Mitigation Land Management Plan based on the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). Mitigation lands shall be identified through coordination with CDFW on, adjacent, or proximate to the impact site where practicable and where habitat is suitable to support burrowing owl.

BIO-9 Burrowing Owl Pre-Construction Clearance Survey and Occupied Burrow Avoidance and Minimization Measures. PWD shall retain a qualified biologist approved by CDFW to conduct a pre-construction burrowing owl clearance survey of areas within the proposed Project site and a 500-foot buffer that contain suitable burrowing owl habitat to confirm presence/absence of burrowing owl individuals no more than 14 days prior to start of construction in each work area. The survey methodology shall be consistent with the methods outlined in the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). If no active breeding or wintering owls or evidence of occupied habitat is identified, then proposed Project construction in the work area may begin, and no further action is required.

If active breeding or wintering owls or evidence of occupied habitat is detected in the proposed Project work area or within a 500-foot buffer, PWD shall coordinate with CDFW to determine next steps and whether appropriate take authorization from CDFW is necessary (pursuant to Fish & Game Code § 2080 et seq).

BIO-10 Swainson's Hawk Avoidance and Minimization Measures. Construction activities shall be limited to the period between September 16 and February 28 to the extent feasible. If construction activities cannot be completed within this timeframe, PWD shall retain a qualified biologist(s) with Swainson's hawk survey experience to conduct a Swainson's hawk nest survey within the proposed Project site and a 0.5-mile buffer during the nesting season immediately prior to the commencement of proposed Project construction. While the proposed Project does not propose to construct renewable energy facilities, nest survey methods and timing shall follow those outlined in the CEC and CDFW protocol for the Antelope Valley (CDFW 2010) with the exception that the nest survey shall occur within a 0.5-mile buffer of the proposed Project site. A report documenting results of the survey shall be prepared and submitted to PWD for review and approval prior to commencement of proposed Project activities. If no Swainson's hawk nests are documented within 0.5 miles of the Project area, no additional action shall be required.
If an active Swainson's hawk nest is detected within 0.5 miles of the proposed Project site, PWD shall implement the following measures:

- Retain a qualified biologist to prepare a Swainson's Hawk Nest Monitoring and Mitigation Plan that incorporates the following measures to avoid and minimize impacts to Swainson's hawk nests in and near the construction areas during the breeding season (March 1 to September 15):

    - If nesting Swainson's hawks are detected within 0.5 miles of proposed Project activities during the breeding season, CDFW shall be consulted regarding the establishment of a no-disturbance buffer to avoid impacts to the active nest. Construction activities shall maintain a 0.25-mile no-disturbance buffer around an active nest unless a reduced buffer is approved in consultation with the qualified biologist and CDFW.

    - If construction activities are necessary within the buffer zone, PWD shall consult with CDFW as to the potential for take. Monitoring of the nest site by a qualified biologist and funding of Swainson's hawk recovery efforts may be necessary.

    - If a hawk is found injured during proposed Project activities on the proposed Project site, the injured hawk shall be immediately relocated to a raptor recovery center approved by CDFW. The qualified biologist shall notify CDFW personnel via telephone or email, followed by a written report that includes the date, time, location, and circumstances of the incident.

PWD and its construction contractor(s) shall implement the provisions of the Swainson's Hawk Nest Monitoring and Mitigation Plan. A report documenting measures taken to avoid and minimize impacts to Swainson's hawk nests shall be prepared by the qualified biologist following the completion of proposed Project construction and submitted to PWD for review and approval.

BIO-11 Mohave Ground Squirrel Avoidance and Minimization Measures. PWD shall retain a qualified biologist to conduct a focused habitat assessment (visual survey) of the proposed Project sites following the CDFW's *Mohave Ground Squirrel Survey Guidelines* (CDFW 2023a) to assess the potential habitat suitability for the species. If suitable habitat is identified, protocol live-trapping surveys shall be conducted in areas of suitable habitat to assess the potential presence and relative abundance of Mohave ground squirrel within the proposed Project site. Pursuant to the protocol outlined in the *Mohave Ground Squirrel Survey Guidelines*, trapping surveys shall take place over three terms in specific timing windows in the period of March 15 and July 15 immediately prior to commencement of proposed Project activities. If construction starts one year or more after the conclusion of surveys, PWD shall consult with CDFW as to whether additional surveys are required and shall retain a qualified biologist to conduct additional surveys if recommended by CDFW. Findings of the habitat assessment and live-trapping surveys shall be documented in a report that also details survey methodology, timing, and surveyor qualifications. If no Mohave ground squirrels are discovered during the protocol surveys, no further action is required.

If Mohave ground squirrels are observed during the surveys, PWD shall retain a qualified biologist to develop a Mohave ground squirrel biological monitoring plan, in coordination with CDFW, that includes measures to avoid, minimize, and/or mitigate potential impacts as a result of proposed Project activities, including, but not limited to:

- A qualified biologist shall conduct pre-construction clearance surveys for Mohave ground squirrel no more than 30 days prior to the start of any ground-disturbing activities in areas of the proposed Project site that contain suitable habitat for the species, as documented in the Mohave ground squirrel habitat assessment and survey report. The survey shall cover 100 percent of the anticipated impact area intersecting suitable Mohave ground squirrel habitat and a 50-foot buffer (survey area). A qualified biologist shall document locations of potential Mohave ground squirrel burrows. A 50-foot no-disturbance buffer shall be established around suspected or known Mohave ground squirrel burrows. Proposed Project activities shall not be conducted within the no-disturbance buffer unless at the discretion of the qualified biologist. A report documenting the results of the survey, locations of suspected or known Mohave ground squirrel burrows, and recommended no-disturbance buffers shall be submitted to PWD for review and approval prior to commencement of proposed Project activities in the survey area.
- If burrows are identified during the survey that are suspected or known to be occupied by Mohave ground squirrel and cannot be avoided, the qualified biologist shall prepare a Mohave Ground Squirrel Relocation Plan outlining measures to relocate individual Mohave ground squirrels prior to construction start. The plan shall be submitted to PWD and CDFW for review and approval and shall be implemented prior to commencement of proposed Project activities in work areas with suspected or known Mohave ground squirrel burrows. The Plan shall outline measures for burrow excavation, handling of individuals, identification of proposed relocation areas, and release of relocated individuals after the conclusion of all grading, clearing, and construction activities. A report documenting relocation activities and outcomes shall be prepared by the qualified biologist and submitted to PWD and CDFW for review and approval after completion of relocation activities.

- Within occupied Mohave ground squirrel habitat (as determined by the results of the focused habitat assessment and live trapping survey results as well as the pre-construction clearance survey results), the area of disturbance of vegetation and soils shall be the minimum required for the proposed Project. Clearing of vegetation and grading shall be minimized. Wherever practicable, rather than clearing vegetation and grading access routes, equipment and vehicles shall use existing surfaces or previously disturbed areas. Where grading is necessary, surface soils shall be stockpiled and replaced following construction. To the extent practicable, disturbance of shrubs and surface soils due to stockpiling shall be minimized. A qualified biologist shall monitor proposed Project activities during initial ground disturbance in suitable Mohave ground squirrel habitat. The qualified biologist shall work with the construction foreman and crew to implement and achieve compliance with the Mohave ground squirrel biological monitoring plan prepared for the proposed Project.

BIO-12 General Best Management Practices. PWD shall require construction contractor(s) and their personnel to adhere to the following general BMPs during construction:

- Construction-related vehicles shall observe a 15-mile-per-hour speed limit within the unpaved limits of construction.
- All open trenches or excavations shall be fenced and/or sloped to prevent entrapment of wildlife species.
- All food-related trash items such as wrappers, cans, bottles, and food scraps generated during construction shall be disposed of in closed containers only and removed daily from the construction site.
- No deliberate feeding of wildlife shall be allowed.
- No pets shall be allowed on the construction site.
- No firearms shall be allowed on the construction site.
- Vehicle or equipment maintenance shall be performed in designated staging areas.
- Access to the construction area outside of established work hours for the proposed Palmdale Ditch Conversion project shall be prohibited.
- If construction must occur at night (i.e., between dusk and dawn), all lighting shall be shielded and directed downward to minimize the potential for glare or spillover.
- During construction, heavy equipment shall be operated in accordance with standard BMPs. All equipment used on-site shall be properly maintained to avoid leaks of oil, fuel, or residues. Provisions shall be in place to remediate accidental spills.
- While encounters with special-status species are not anticipated, any worker who inadvertently injures or kills a special-status species or finds one dead, injured, or entrapped shall immediately report the incident to the construction foreman or biological monitor. The construction foreman or biological monitor shall immediately notify PWD.
- If special status wildlife species are found harmed/injured or dead, work in the immediate area shall stop immediately, the qualified biologist shall be notified, and dead or injured wildlife shall be documented immediately. A formal report shall be sent to CDFW within

three calendar days of the incident or finding. The report shall include the date, time of the finding or incident (if known), and location of the carcass or injured animal and circumstances of its death or injury (if known). Work in the immediate area may resume once proper notifications have been made and measures have been identified to prevent additional injury or death.

BIO-13 Work Limit Delineation. PWD shall clearly identify work area limits on design and construction plans and shall require its construction contractor(s) to delineate and clearly mark approved construction work area limits with flagging or temporary orange construction fencing in the field prior to initial ground disturbing activities (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). The marked boundaries shall be maintained for the duration of construction activities in each work area and shall be clearly visible to personnel on foot and by heavy equipment operators. Fencing or other barriers shall be placed on the impact side of the work area limit (i.e., within the construction site boundaries) to reduce the potential for encroachment and additional vegetation loss within adjacent open space. Fencing shall be installed pursuant to the approved construction and grading plans. Prior to initial ground disturbing activities (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation), the biological monitor (if required under Mitigation Measure BIO-5) shall verify the limits of construction have been properly staked and are readily identifiable. Employees shall strictly limit their activities and vehicles to the designated construction area, staging areas, and routes of travel. Intrusion by unauthorized vehicles outside of construction limits shall be prohibited, with control exercised by an on-site foreman. All temporary fencing shall be removed only after the conclusion of all grading, clearing, and construction activities at each construction site.

BIO-14 Nesting Bird Surveys and Avoidance and Minimization Measures. Proposed Project construction activities shall occur outside of the bird breeding season (February 1 to August 31) to the extent practicable. If construction must commence within the bird breeding season, PWD shall retain a qualified biologist to conduct a pre-construction nesting bird survey within a 500-foot radius of the Project site no more than seven days prior to initiation of ground disturbance (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). If the proposed Project is phased or construction activities stop for more than one week, a subsequent pre-construction nesting bird survey shall be conducted prior to each phase of construction, if initiated during the bird breeding season.

Pre-construction nesting bird surveys shall be conducted during the time of day when birds are active and shall factor in sufficient time to perform this survey adequately and completely. A brief report of the nesting bird survey results, if applicable, shall be submitted to PWD for review and approval prior to ground disturbance and/or vegetation removal activities.

If no nesting birds are observed during pre-construction surveys, no further action is required. If nests are found, an appropriate avoidance buffer of up to 300 feet for passerine (perching birds) nests and up to 500 feet for active, non-listed raptor nests shall be determined by the qualified biologist and demarcated with bright orange construction fencing or other suitable flagging.

Active nests shall be monitored at a minimum of once per week until a qualified biologist has determined the birds have fledged and are no longer reliant upon the nest or parental care for survival. No construction activity shall occur within this buffer until the qualified biologist confirms the breeding/nesting is completed and all the young have fledged.

BIO-15 Invasive Plant Species Control Measures. PWD shall require the construction contractor(s) and their construction personnel to ensure equipment is free of invasive plant seeds, propagules, and any material which may contain them (e.g., soil). For purposes of this mitigation measure, invasive plant species shall include all species with a California Invasive Plant Council rating of moderate or high. Prior to entering the construction site, equipment shall be inspected to confirm it is free of mud, dirt, and debris. Tire track stations shall be installed at construction site entrances and exits. Staging areas and access routes shall avoid weed infestations, and infestations within the work area(s) shall be flagged and avoided to the maximum extent feasible. Only certified weed-free materials (e.g., fiber rolls, straw, and fill) shall be used during construction.

BIO-16 Sensitive Natural Communities and Jurisdictional Features Avoidance, Minimization Measures. Sensitive natural communities and jurisdictional features identified for avoidance within the proposed Project site shall be demarcated using brightly colored flagging, as necessary, and avoided to the extent feasible during proposed Project construction. The marked boundaries shall be maintained for the duration of proposed Project construction activities in each work area and shall be clearly visible to personnel on foot and by heavy equipment operators. Construction personnel shall be instructed to avoid these areas as much as feasible. All temporary flagging shall be removed only after the conclusion of all grading, clearing, and construction activities at each construction site. Compliance with this measure shall be documented in the biological monitoring report, if required under Mitigation Measure BIO-5.

In addition, PWD shall require its construction contractor(s) and their personnel to implement the following measures:

- Any material/spoils generated from construction shall be located away from sensitive natural communities and jurisdictional features and protected from stormwater run-off using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers, as appropriate.
- Materials, hand-held equipment and other non-heavy or non-vehicle equipment shall be stored on impervious surfaces or plastic ground covers to prevent any spills or leakage from contaminating the ground and generally at least 50 feet from sensitive natural communities and jurisdictional areas.
- Any spillage of material shall be stopped if it can be done safely. The contaminated area shall be cleaned, and any contaminated materials shall be properly disposed of. For all spills, the Project foreman and biological monitor (if required under Mitigation Measure BIO-5) shall be notified.

If impacts to sensitive natural communities cannot be avoided, PWD shall identify compensatory mitigation prior to disturbance of the features. Mitigation may take the form of permittee-responsible, on-site or off-site mitigation or the purchase of credits from an approved mitigation

bank or through applicant-sponsored mitigation (e.g., purchase and/or dedication of land for mitigation). If required, compensatory mitigation for unavoidable impacts to sensitive vegetation communities shall be accomplished at a minimum ratio of 1:1; however, the final ratio shall be determined and approved by CDFW. If on-site or off-site restoration would occur, PWD shall retain a qualified biologist to develop a Habitat Revegetation, Restoration, and Monitoring Program and submitted for CDFW approval prior to the commencement of proposed Project construction (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). At a minimum, the program shall include the following:

- A description of the purpose and goals of the restoration
- Identification of success criteria and performance standards
- Methods of site preparation, including topsoil salvage and replacement procedures
- Irrigation plan and schedule
- Best Management Practices (BMPs)
- Maintenance and monitoring program
- Adaptive management strategies
- Key stakeholders and responsible parties
- Funding
- Contingencies

BIO-17 Aquatic Resources Delineation and Compensatory Mitigation. If impacts to jurisdictional waters and wetlands cannot be avoided, PWD shall identify compensatory mitigation prior to disturbance of the features. Compensatory mitigation for impacts to jurisdictional waters and wetlands shall be provided at a minimum 1:1 ratio, unless a higher ratio is required by Lahontan RWQCB, CDFW, and/or USACE. Mitigation may take the form of permittee-responsible, on-site or off-site mitigation or the purchase of credits from an approved mitigation bank. If on-site or off-site mitigation is proposed, a Compensatory Mitigation Plan shall be prepared that outlines the compensatory mitigation in coordination with the Lahontan RWQCB, CDFW, and/or USACE. If on-site mitigation is proposed, the Compensatory Mitigation Plan can be integrated with the Habitat Revegetation, Restoration, and Monitoring Program described in Mitigation Measure BIO-16 and shall identify those portions of the site, such as relocated drainage routes, that contain suitable characteristics (e.g., hydrology) for restoration. Determination of mitigation adequacy shall be based on comparison of the restored habitat with similar, undisturbed habitat in the site vicinity. The Compensatory Mitigation Plan shall include remedial measures if performance criteria are not met. If the Compensatory Mitigation Plan is not integrated with the Habitat Revegetation, Restoration, and Monitoring Program described in Mitigation Measure BIO-16, the same reporting requirements shall apply for monitoring and evaluation of Compensatory Mitigation Plan implementation as detailed in Mitigation Measure BIO-16.

If off-site mitigation is proposed, off-site land shall be preserved through a deed restriction or conservation easement and the Compensatory Mitigation Plan shall identify an approach for funding assurance for the long-term management of the conserved land.

2.3.5 Cultural Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Discussion: The SWRP PEIR identified mitigation measures CUL-1 through CUL-9 for the protection of cultural resources. Measures CUL-1 (Qualified Archaeologist) and CUL-3 (Cultural Resources Assessment) have been implemented for Pure Water AV. Since the proposed Project would not demolish or alter buildings over 45 years in age, SWRP mitigation measure CUL-2 (Historic Resources Assessment) is not relevant to Pure Water AV. The results of the cultural resources assessment completed for the Project did not identify an area of cultural sensitivity. Therefore, SWRP mitigation measure CUL-5 (Archaeological Resource Monitoring) is not warranted for the Project. The Palmdale Ditch is not within the proposed Project area for Pure Water AV and any related construction is associated with the separate Palmdale Ditch Conversion Project. Therefore, SWRP mitigation measure CUL-8 (Historic American Engineering Record) is not relevant to Pure Water AV. Additional relevant mitigation measures including mitigation measures recommended by the Yuhaaviatam of San Manuel Nation (YSMN) for unexpected discoveries, and unexpected discovery of human remains or funerary objects (consistent with SWRP mitigation measures CUL-4, CUL-6, CUL-7 and CUL-9) are defined at the end of this section.

Consistent with mitigation measure CUL-1 and CUL-3 of the SWRP, a Stantec archaeologist meeting the minimum professional qualifications standards (PQS) set forth by the Secretary of the Interior (SOI) (codified in 36 Code of Federal Regulations [CFR] Part 61; 48 FR 44738-44739) (Qualified Archaeologist) conducted a cultural resources assessment for the proposed Project in 2024. The results of the investigation are summarized below and relevant documentation will be filed with the South-Central Coastal Information Center. To protect archaeological resources present in the Project area, the cultural resources report is on file with PWD but is not appended to the Initial Study. The confidentiality of records and information pertaining to the location, character, or ownership of archaeological sites and historic properties will be maintained consistent with National Historic Preservation Act (NHPA) Section 304, Archeological Resources Protection Act (ARPA) Section 9, and California Government Code 6254.10, as applicable.

Precontact Period. Throughout the precontact period, many groups occupied the Mojave Desert. Although long-term habitation sites in the foothills and near rocky buttes have been found to contain significant subsurface depth, most archaeological sites on the valley floor are sparse

surface scatters without subsurface components. Given the rarity of developed cultural middens, Mojave chronologies have relied on temporally diagnostic artifacts, such as projectile points, or upon the presence/absence of other temporal indicators, such as groundstone.

Ethnographic Overview. The homelands of multiple California indigenous groups converge at Antelope Valley, from the Kitanemuk to the north, the Serrano to the east, the Tongva to the south, and the Tataviam to the southwest. The field notes of Smithsonian ethnographer John P. Harrington, collected in the first quarter of the 20th century, indicate that neighboring Tribal groups whose core territories were located elsewhere utilized or traveled through the Antelope Valley occasionally and intermittently. Indeed, archaeological and ethnohistoric sources indicate that the Antelope Valley was an active hub of exchange and communication between coastal populations to the south and the west, interior populations living in the southern San Joaquin Valley to the north, and the Great Basin groups to the east. Harrington's field notes document extensive cultural exchanges (including trade, intermarriage, ceremonial exchanges, and conflict) between coastal, southern, and central California during the Spanish Period and into the historical era. Archaeological data indicate that these networks predated the mission system, characterizing interethnic relations during the precontact period. Southwestern Anasazi pottery sherds (including Tuzigoot White on Red, Flagstaff Black on White, and Wupatki Black on White—all from the Verde River area southwest of Flagstaff) have been found at the Barrel Springs site in the southern foothills of the Antelope Valley, indicating trade networks extending well into the southwest region. Because the Project area is situated in the southern portion of Antelope Valley, this review focuses on the lifeways of the Tataviam and Serrano peoples.

The Tataviam ancestral home stretches from the Liebre and Sawmill Mountains to the upper reaches of the Santa Clara River drainage in Los Angeles and Kern Counties. At the time of European contact, major Tataviam settlements were located along Piru and Castaic Creeks as well as within Antelope Valley along the foothills of Sierra Pelona Ridge (Johnson and Earle 1990). Like the neighboring Chumash, Gabrieliño, and Kitanemuk groups, the Tataviam adopted a hunting and foraging subsistence strategy and did not farm or practice animal husbandry. As with many California indigenous groups (Lightfoot and Parrish 2009), the Tataviam homeland offered a range of environments spanning the steep canyons of the San Gabriel Mountains to the flat desert floor of the Antelope Valley that allowed for a diverse range of resources to be exploited throughout the year. The Tataviam diet included yucca buds, acorns, sage seeds, and juniper berries and they hunted deer, small mammals, and likely antelope (King and Blackburn 1978). The native language of the Tataviam may have been of the Takic family, and it likely diverged from various other languages in the family as late as 1000 BP. The language was mutually exclusive at the onset of the historic period and unrecognizable to neighboring groups. Relatively little historical information regarding the group is available, although their population at the time of historic contact is estimated to have been around 1,000 (King and Blackburn 1978).

The Serrano ethnonym refers to California indigenous groups that occupied the San Gabriel Mountains (Mountain Serrano) and the western Mojave Desert (Desert Serrano or Vanyume) (Sutton and Earle 2017). While Desert Serrano settlements are mostly associated with the Mojave River, Sutton and Earle (2017:8) report Serrano villages as far west as the Palmdale vicinity. The Desert Serrano occupied villages for longer periods than their eastern and northern Mojave Desert contemporaries and consequently had larger and more intricately developed villages (Sutton and

Earle 2017). Features associated with Desert Serrano villages include dance houses, cemeteries, and circular houses with sunken floors excavated into the ground and finished with walls of bunched grasses or sedges (Sutton and Earle 2017). The relationship between Serrano villages is complex, with culturally-mediated spatial organization by clan and marriage affiliation, as well as economic ties that moved large quantities of acorns from mountainous regions northward across the desert floor (Sutton and Earle 2017). With the development of the Franciscan mission system, numerous Serrano people were relocated to the missions between 1800 and 1820. Earle suggests that small Numic-speaking groups of Chemehuevi-Southern Paiute affiliation migrated into the western Mojave Desert from the east and settled across the valley and the San Gabriel Mountains from the 1840s to 1890. More detailed overviews of the ethnography and ethnohistory of the region are available in Heizer (1978). Significant ethnohistoric data on the Tribal groups in the region can also be found in the unpublished ethnographic notes of John Peabody Harrington on file at the Smithsonian Institution. Multiple modern Tribal government organizations represent Serrano and Tataviam people.

Historic Overview. The "historic period" in the Antelope Valley is generally understood to begin with the passage of Spaniards through the region in the mid- to late 18th century. Captain Pedro Fages was the first recorded European to visit the Antelope Valley in 1772. However, the most well-known early entrada was that of Francisco Garcés. He was charged by the San Fernando mission to search out apostate Indians in the Antelope Valley in early 1776.

Fortunately, he left a detailed account of his journey through the region, and these records provide some of the earliest accounts of the native inhabitants of the area (notably, the Chemeheuvi, Kitanemuk, and Kawaiisu), as well as his stay at Willow Springs (near current-day Rosamond). Over the next 100 years, several small expeditions traveled through the region, including Jedediah Smith (1827), Kit Carson (1830), and perhaps most well-known, the John C. Fremont Expedition (1844), which undertook the first significant survey of the various resources of the region (Greenwood and McIntyre 1980).

Euro-American settlement began with the construction of the Southern Pacific Railroad, which laid tracks through the valley in 1876, connecting Los Angeles to San Francisco. The two cities of Lancaster and Palmdale originated in the late 1880s, following penetration by the Southern Pacific Railroad and its chain of stations and small settlements. Settlers flooded the valley between the late 1870s and the turn of the 20th century. Lancaster was the first stable community in the region, created in 1884 when a real estate developer named M.L. Wicks purchased six sections of land from the Southern Pacific Railroad and established a small farming community. By the turn of the 20th century, Lancaster had become a prosperous and rapidly growing town.

Four events played critical roles in the settling of Antelope Valley. The first was the construction of the Southern Pacific Railroad, which provided essential infrastructure and transportation. The second significant event was the 1877 Desert Lands Act, which granted title of government-held lands to private citizens at an affordable price. Third, and equally important, was the 1887 Wright Irrigation Act, which established irrigation districts and agricultural colonies. The fourth event was the completion of the California-Los Angeles Aqueduct system in 1913, which brought reliable water supplies into the region for domestic and agricultural uses.

While agriculture continued as a major industry in the Antelope Valley through the 20th century, the military, mining, and aerospace industries have had a significant impact on the Antelope Valley and its communities. Originally opened as Muroc Field in 1933, Edwards Air Force Base, located approximately 10 miles northeast of Palmdale, witnessed numerous historic advances in aeronautics and is a long-standing hub for aerospace contractors, including Lockheed Martin and Northrup Grumman. The early 20th century was the heyday for gold and silver mining in the volcanic buttes north of Rosamond and the Rio Tinto Borax Mine has been a major global source of borax since it was discovered in 1913 (Shumway et al. 1980).

Records Searches. A CHRIS cultural resources records search was completed on May 2, 2023, for the proposed Project by the South Central Coastal Information Center (SCCIC) at California State University, Fullerton. The SCCIC, an affiliate of the State of California Office of Historic Preservation, is the official state repository of cultural resources records and reports for Los Angeles County. The records search included a review of all previous cultural resource studies and previously recorded cultural resources (historic and precontact) within a 0.25-mile radius of the proposed Project. In addition, the Built Environment Resource Directory (BERD) was consulted, which includes architectural resources that are eligible for, or listed in, the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR).

The records search results identified 18 previous cultural resources studies within a 0.25-mile radius of the proposed Project. Of these, 10 partially overlap with the proposed Project site. The SCCIC records search identified four previously recorded cultural resources within a 0.25-mile radius of the proposed Project, one of which intersects the proposed Project. The historic-period resource is recorded on the east side of 30th Street adjacent to a proposed pipeline within the Project site. When recorded in 2011, it consisted of a sparse scatter of ceramics and glass fragments and a melamine bowl extending in an area 230-feet-long and 30-feet-wide along the road shoulder. The remaining three cultural resources in the search area consist of two isolated precontact artifacts and a historic-period refuse deposit.

Stantec requested a review of the NAHC's Sacred Lands File (SLF). The NAHC maintains the confidential SLF, which documents sites of traditional, cultural, or religious value to Native American tribes. In a letter dated January 13, 2023, the NAHC reported that the results of the SLF search were negative.

Stantec reviewed USGS topographic maps and historical aerial imagery of the proposed Project site and vicinity to characterize the historical land uses of the area and to determine a potential association for the previously recorded historic archaeological site. The earliest topographic map reviewed was from 1915 and shows the proposed Project site and vicinity as largely undeveloped, with early alignments of roads within the proposed Project site present, including 30th Street, 40th Street, and Avenue Q (USGS 1915). Notably, the 1915 topographic map shows a structure depicted near the location of the previously recorded resource on the east side of 30th Street. The structure is no longer present on topographic maps published in the mid-20th century (USGS 1958).

The oldest aerial image reviewed is from 1940 (UC Santa Barbara Framefinder 1940) and shows the area as rural, scrub habitat with some parcels developed with orchards or other row crops. The

structure shown on the 1915 topographic map near the previously recorded site is no longer present.

Field Survey. On April 15 through 17, 2024, Stantec archaeologists Sandra Hollispeasy and Curtis Alcantar, completed an intensive pedestrian survey of all accessible undeveloped areas of the proposed Project site. The survey was completed using 15-meter-wide (~49 feet) or less pedestrian transects across areas where soil was visible. Where present, exposed subsurface sediments (for example, in rodent burrows) were visually examined for cultural resources or midden soils. Surface visibility was variable, with portions of the survey area obscured by asphalt, development, or grasses.

No cultural resources were identified in the proposed Project site. The location of a previously recorded historic trash scatter was intensively surveyed, and no evidence of the site was identified. This resource is believed to have been removed or otherwise destroyed.

a) **No Impact.** No historical resources were identified in the study area for the cultural assessment. Therefore, the Project would have no impacts on historical resources.

b) **Less than Significant Impact with Mitigation Incorporated**. Stantec's study consisted of background research, including a records search at the SCCIC and NAHC; a review of historical topographic maps and aerial imagery; Tribal consultation; and a field survey. The records search identified one cultural resource in the proposed Project site, consisting of historic-period trash scatter, possibly representing a roadside trash dump. The cultural resources survey did not identify the site, and the resource is assumed to be destroyed. The study did not identify any precontact or historic-period cultural resources in the proposed Project corridor. Therefore, the proposed Project is not anticipated to impact cultural resources, including those that qualify as "historical resources" under CEQA (CEQA Guidelines Section 15064.5(a)). However, excavation and earthwork for the proposed Project have the potential to disturb previously unknown cultural resources. Implementation of the mitigation measures noted below would reduce impacts on cultural resources to less than significant levels.

c) **Less than Significant Impact with Mitigation Incorporated**. No recorded cemeteries are known for the Project area. In the unexpected event that human remains are discovered during Project construction or operation, mitigation measure CUL-4 would be implemented. With implementation of CUL-4, Project-related impacts on human remains and associated funerary objects potentially present in the Project area would be less than significant.

Mitigation Measures

With implementation of the following mitigation measures, Project-related impacts on cultural resources would be less than significant.

CUL-1 Construction Worker Cultural Resources Sensitivity Training. Consistent with SWRP PEIR mitigation measure CUL-4, for Project components involving ground disturbance, the Qualified Archaeologist shall implement a cultural resources sensitivity training program. The Qualified Archaeologist, or their designee, shall instruct all construction personnel of the types of

cultural materials that may be encountered, cultural sensitivity issues, applicable laws protecting cultural resources, the proper treatment procedures to be enacted in the event of an inadvertent discovery of cultural materials or human remains, and confidentiality of discoveries. Tribal representatives from each of the tribes consulting on the proposed Project shall be allowed to attend and/or participate in the training should they elect to and shall be given a minimum of 10 days notice prior to the training. In the event that construction crews are phased, additional trainings shall be conducted for new construction personnel. The PWD, or their construction contractor(s), shall ensure construction personnel are made available for and attend the training. PWD shall retain documentation demonstrating attendance.

CUL -2 Archaeological Resources Discoveries. Consistent with SWRP PEIR mitigation measure CUL-6, in the event that cultural resources are unexpectedly encountered during ground-disturbing activities, work within 60 feet of the find shall halt, an Environmentally Sensitive Area physical demarcation/barrier installed, and a Qualified Archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) contacted immediately to evaluate the resource. If the Qualified Archaeologist determines the resource to be Native American in origin, then a representative from the tribes consulting on the proposed Project shall also be contacted to participate in the evaluation of the resource. If the qualified archaeologist and/or representative from the tribes consulting on the Project determines it to be appropriate, archaeological testing for CRHR/NRHP eligibility shall be completed. If the resource proves to be eligible for the CRHR/NRHP and significant impacts to the resource cannot be avoided via project redesign, a Qualified Archaeologist shall prepare a data recovery plan tailored to the physical nature and characteristics of the resource, pursuant to the requirements of CEQA Guidelines Section 15126.4(b)(3)(C). Should the find be deemed Native American in origin, all plans for analysis shall be reviewed and approved by PWD (and LACSD or LAWA depending on land ownership) and the tribes consulting on the proposed Project prior to implementation, and all removed material shall be temporarily curated on site. The data recovery plan shall identify data recovery excavation methods, measurable objectives, and data thresholds to reduce any significant impacts to the resource. Pursuant to the data recovery plan, the Qualified Archaeologist and Native American representative(s) from the tribes consulting on the proposed Project, as appropriate, shall recover and document the scientifically consequential information that justifies the resource's significance. PWD shall review and approve the treatment plan and archaeological testing as appropriate, and the resulting documentation shall be submitted to the regional repository of the CHRIS, pursuant to CEQA Guidelines Section 15126.4(b)(3)(C).

CUL-3 Curation and Disposition of Cultural Materials. Consistent with SWRP PEIR mitigation measure CUL-7, PWD shall work with the tribes consulting on the Project to determine the final disposition of any cultural materials removed. However, if the tribes consulting on the Project are not in agreement on the final disposition, PWD shall rebury the artifacts within the Project site in a location free from future disturbance and share the location with the tribes consulting on the Project. Should a collection require curation, the tribes consulting on the Project shall be given the opportunity to approve the curation facility but must still meet the standards of 36 CFR 79. All draft records/reports containing the significance and treatment findings and data recovery results shall be prepared by the Qualified Archaeologist and submitted to PWD (and LACSD or LAWA, depending on land ownership) and the tribes consulting on the Project for their review and comment. A copy of the final report and all site/isolate records shall be submitted to

PWD (and LACSD or LAWA, depending on land jurisdiction), the tribes consulting on the Project, and the South Central Coastal Information Center. Disposition of Native American human remains and associated funerary objects, or grave goods shall be determined by the landowner in consultation with the PWD and the Most Likely Descendant (MLD).

The PWD shall curate all eligible historic-period archaeological material, or portions thereof at the discretion of the Qualified Archaeologist, at a repository accredited by the American Association of Museums that meets the standards outlined in 36 CFR 79.9. If no accredited repository accepts the collection, then PWD may curate it at a non-accredited repository as long as it meets the minimum standards set forth by 36 CFR 79.9. If neither an accredited nor a non-accredited repository accepts the collection, then PWD may offer the collection to a public, non-profit institution with a research interest in the materials, or to a local school or historical society in the area for educational purposes.

CUL-4 Inadvertent Discovery of Human Remains. Consistent with SWRP PEIR mitigation measure CUL-9, if human remains are encountered, then PWD shall halt work in the vicinity (within 100 feet) of the discovery and contact the County Coroner in accordance with Public Resources Code section 5097.98 and Health and Safety Code section 7050.5. If the County Coroner determines the remains are Native American, then the Coroner shall notify the California Native American Heritage Commission in accordance with Health and Safety Code subdivision 7050.5(c), and Public Resources Code section 5097.98. The California Native American Heritage Commission shall designate a Most Likely Descendant for the remains per Public Resources Code section 5097.98. Until the landowner has conferred with the Most Likely Descendant, the construction contractor(s) shall ensure the immediate vicinity where the discovery occurred is not disturbed by further activity, is adequately protected according to generally accepted cultural or archaeological standards or practices, and that further activities take into account the possibility of multiple burials.

2.3.6 Energy

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Discussion: PWD purchases energy from SCE, Energy for Palmdale's Independent Choice (EPIC, a community choice aggregator), and Southern California Gas Company (SCGC). SCE produces and purchases its energy from a mix of conventional and renewable sources. Energy procured through EPIC is from hydroelectric, wind, and solar. PWD is also a power generator, operating solar array systems at the PWD headquarters building and at a tank site.

Local planning documents related to energy use include the City of Palmdale Energy Action Plan (2011) which focuses on the City's commitment to achieve energy efficiency and independence by reducing greenhouse gas emissions (GHG) consistent with state legislation. The objective of the Plan is to bridge the gap between the City's growth forecast and the state's recommended energy reduction targets, including reduction of GHG emissions by an additional 80 percent by 2050. Current conservation efforts include implementing interior and exterior efficient lighting and HVAC upgrades across City facilities, installing solar panels to generate renewable, carbon-free energy, installing publicly accessible electric vehicle (EV) chargers, and moving forward with EPIC, to supply carbon-free electricity to City residents and businesses.

The Los Angeles County General Plan 2035 Conservation and Natural Resources Element (County of Los Angeles 2022) guides the long-term conservation of natural resources in the County including energy resources. The Natural Resources Element addresses the use and management of valuable energy and mineral resources in the unincorporated areas, and the importance of sustaining and maintaining these resources for future users. County goals and policies related to energy resources are:

GOAL C/NR 12: Sustainable management of renewable and non-renewable energy resources.

- **Policy C/NR 12.1:** Encourage the production and use of renewable energy resources.
- **Policy C/NR 12.2:** Encourage the effective management of energy resources, such as ensuring adequate reserves to meet peak demands.
- **Policy C/NR12.3:** Encourage distributed systems that use existing infrastructure and reduce environmental impacts.

a) **Less Than Significant Impact.** The short-term construction and long-term operation of the proposed Project will require the consumption of energy for construction, water treatment and conveyance, building operations, and routine maintenance.

Construction. Construction would involve the short-term use of non-renewable fossil fuels and electricity for various types of construction equipment and vehicles. Construction would take approximately 29 months, starting in approximately late 2027. Construction equipment would be powered by diesel, gasoline, or propane for heavy equipment, and personal vehicles would require electric power, gasoline or diesel fuel. Temporary electric power for as-necessary lighting and electronic equipment would be required.

Construction equipment would be subject to USEPA Construction Equipment Fuel Efficiency Standard, which would minimize inefficient, wasteful, or unnecessary fuel consumption. Additionally, the construction contractor would be required to comply with CCR Title 13 Sections 2449 and 2485, which prohibit diesel-fueled commercial motor vehicles and off-road diesel vehicles from idling for more than 5 minutes. Idling restrictions would reduce air pollutant emission as well as minimize unnecessary fuel consumption.

Energy consumption during construction would have a nominal effect on local and regional energy supplies. Since construction would be temporary and in compliance with existing energy efficiency regulations, it would not result in wasteful, inefficient, or unnecessary consumption of energy resources. Construction-related energy impacts would be less than significant.

Operation. Advanced water treatment by RO and MF is an energy intensive process. Operational electricity consumption for the Project would be provided by SCE and is estimated at 20.178 GWh/yr for Phase 1 (4.75 mgd) and 32.773 GWh/yr for Phase 2 (10 mgd). Two different options have been considered to supply the new facility with the necessary electrical power: existing utility lines adjacent to the plant via a new overhead or underground SCE utility service connection, or from a new substation from SCE built on or nearby the site. The final choice of power source would be defined during detailed design and in collaboration with SCE. A standby generator would be installed at the AWPF to support human safety loads: lighting, HVAC, and flush pumps within the Process Building and Administration Building. SCE-approved, pad-mounted transformers are anticipated to supply two local MCCs, pumps, lighting, and control equipment. A dedicated electrical room will be used to house the necessary electrical equipment including MCCs, VFDs and control equipment. PWD would continue to work closely with SCE and EPIC to ensure energy consumption is not wasteful and can be supplied by the existing distribution infrastructure.

Energy demand for Pure Water AV would be offset by reduced demand for imported water supply. In a study by the University of California, Los Angeles (California Energy Commission 2023) analyzing energy use for direct potable reuse (IPR was not considered in this study), raw water augmentation was found to be relatively energy efficient when compared to imports and desalination as it avoids large uphill pumping energy costs. Treated water augmentation, however, was shown to be as energy intensive as imports to Los Angeles County. Specifically, for PWRP, the energy needed to supply 6.7 mgd from an alternative water source was

described as 21.354 GWh/yr for the Colorado River Aqueduct, 27.452 GWh/yr for the SWP, and 29.391 GWh/yr for desalination. The Pacific Institute (2021) estimated that the energy demand for imported water sources are up to 4,200 kWh/acre-ft for SWP (approximately 22 GWh/yr at 4.75 mgd) and 2,300 kWh/acre-ft (approximately 12 GWh/yr at 4.75 mgd) for Colorado River for conveyance and treatment. Based on these data, energy use for the Project could be similar to the energy demand for a similar volume of imported or desalinated water, or potentially even less in the case of SWP imports.

In addition to the power demand for water treatment processes, the proposed Process and Administration buildings and the proposed pump station would require energy for Project operations. Energy efficiency features included in Project design include:

- HVAC equipment would be designed to perform at, or above, code required minimum efficiency levels, and according to the latest rules and regulations of the International Energy Conservation Code and U.S Department of Energy.
- Buildings would be designed for energy efficiency per the 2025 California Energy Code (Energy Efficiency Standards)
- Exterior wall assemblies would be designed to meet or exceed minimum requirements of the California Energy Efficiency Standards.
- Roof assemblies would be designed to meet or exceed minimum requirements of the California Energy Efficiency Standards.
- Ductwork conveying mechanically conditioned air would be insulated in accordance with applicable International Energy Conservation Code requirements.
- Lighting systems would comply with the California Energy Code and UL certification requirements.

The proposed Process and Administration buildings would incorporate efficient heating and cooling equipment, lighting, appliances, electronics, and plumbing fixtures to keep energy and water use to a minimum. With incorporation of energy efficient design features, energy use would not be wasteful or inefficient.

Operation of Pure Water AV would increase energy consumption for PWD operations over existing conditions. However, overall, the Project would be consistent with existing policies for energy efficiency and Project operational energy demand would be offset by reduced demand for imported water. Since operation of the Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources, impacts would be less than significant.

b) **Less Than Significant Impact.** Neither PWD nor the County has adopted a plan for renewable energy or energy efficiency that is applicable to the proposed Project, and PWD's energy consumption does not fall within the purview of the City's Energy Action Plan (2011), which focuses on City government operations. Therefore, no local plans for renewable energy or energy efficiency are applicable to the proposed Project. However, the goals of the Energy Action Plan (2011) include reducing water consumption to achieve energy conservation. Water goals include:

    1. Reduce municipal water consumption to reduce energy consumption and conserve water resources.

2. Continue to educate the public about water conservation and showcase municipal water conservation projects.
3. Facilitate a 20% reduction in water use by 2020 to exceed the 20X2020 initiative to reduce energy consumed for water conveyance and treatment.
4. Work with regional partners to stabilize water supplies and conservation capabilities.

The proposed Project includes a new recycled water pipeline to connect the proposed PWRP pump station to the existing recycled water distribution system. This element of the Project would be consistent with the water conservation goals of the Energy Action Plan. The overall project would be consistent with goal 2.4 to stabilize water supplies for PWD customers. The Project would maximize the use of recycled water within PWD's service area to reduce the current demand for imported water and limit the need for more imported water in the future. The Project would increase energy use for recycled water treatment and conveyance locally, but offset energy associated with imported water pumping and conveyance. Furthermore, increasing water levels within the Antelope Valley groundwater basin would serve to decrease energy demand for pumping.

During construction of the Project, the construction contractor would comply with applicable State and local regulations governing energy efficiency. Compliance with CARB construction vehicle rules aimed at pollutant emissions reductions would also reduce construction vehicle idling which would reduce energy demand for Project construction. Since temporary energy use during construction would be consistent with relevant energy policies, impacts would be less than significant.

While operation of the Project would require energy for treatment processes, conveyance, and buildings, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, potential impacts related to energy planning would be less than significant.

Mitigation Measures

As noted above, the Project design includes energy efficient equipment and features, consistent with SWRP PEIR mitigation measure ENE-1: Energy Efficient Equipment. However, since operation of the AWPF is anticipated to be 24/7, shifting of energy demand to off-peak periods would not be feasible for facility operation. As a recycled water project, the Project is consistent with SWRP PEIR mitigation measure ENE-2: Promotion of Recycled Water. Since impacts related to energy planning would be less than significant, additional mitigation measures are not required.

2.3.7 Geology and Soils

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☒	☐	☐
ii) Strong seismic ground shaking?	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) creating substantial risks to life or property?	☐	☒	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems, where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirection destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Discussion: A geotechnical investigation report was prepared for the PWD Demonstration facility (Kleinfelder 2022); the study area included the proposed AWPF site. Relevant information from this report is included below. A separate geotechnical investigation will be conducted during design phase of the Pure Water AV Project facilities.

The Project area is located at the western edge of the Mojave Desert geomorphic province where it abuts the San Gabriel Mountains. The Project area is in the Antelope Valley, a wedge-shaped basin situated between the intersecting Garlock and San Andreas Faults and the Tehachapi and San Gabriel Mountains, opening eastward into the Mojave Desert. Runoff from these mountains is transported by ephemeral stream channels (e.g., Amargosa Creek and Little Rock Wash) to the valley floor. The elevation of the Antelope Valley surface is between 2,270-3,500 feet above msl and generally slopes gently towards playas (i.e., Rosamond Dry Lake and Rogers Dry Lake) to the north and northeast of the Project area (Kleinfelder 2022). Antelope Valley is characterized by surficial alluvial sediments shed off the surrounding mountains that overlie a sequence of lacustrine, nonmarine, volcanic, and marine deposits in the subsurface dating from the Pleistocene

to the Paleozoic (Wiese and Fine 1950). The surficial geology of the Antelope Valley consists of relatively thin and discontinuous deposits of relatively recent alluvium and more extensive older alluvial fans that cover the valley and overlie lacustrine deposits from the Pleistocene (Ponti 1985).

a)-i) and a)-ii) **Less Than Significant Impact with Mitigation Incorporated.** While the Project area is located within a seismically active region known for active faults and historic seismicity, the proposed Project sites are not located within a delineated State of California Alquist-Priolo Earthquake Fault Zone (EFZ) (CGS 2018). The closest EFZ crosses the southern part of the City of Palmdale, approximately 2 miles south-southwest of the proposed AWPF site. The EFZ contains four fault splays of the Mojave Section of the San Andreas Fault Zone. The fault splays, from north to south, include the Cemetery fault, the Little Rock fault, the main branch of the San Andreas fault, and the Nadeau fault. All of these fault splays are Holocene-active and capable of rupturing individually or collectively during an earthquake. While fault rupture potential at the proposed AWPF site is generally considered low, the potential for strong seismic shaking is likely to occur during the design life of the proposed Project (Kleinfelder 2022). However, this hazard is common across California, and the effects of ground shaking would be reduced with adherence to current seismic design requirements per the American Society of Civil Engineers, building codes, and standard engineering practices. For example, all structural steel would be designed per the American Institute of Steel Construction "Manual of Steel Construction," 15th Edition, and per the American Institute of Steel Construction (AISC) "Seismic Design Manual," 3rd Edition. Injection and production wells would be constructed in accordance with Department of Water Resources (DWR) well standards and pipelines would be constructed in accordance with AWWA/ANSI standards. With preparation of a Project-specific geotechnical report to describe design features to mitigate the impacts of potential seismic damage (mitigation measure GEO-1), Project construction and operation would not cause potential substantial adverse effects. Impacts related to potential fault rupture and seismic ground shaking would be less than significant with mitigation incorporated.

a)-iii) **Less Than Significant Impact.** Liquefaction describes a phenomenon in which saturated, cohesionless soils temporarily lose shear strength (liquefy) due to increased pore water pressures induced by strong, cyclic ground motions during an earthquake. Structures founded on or above potentially liquefiable soils may experience bearing capacity failures due to the temporary loss of foundation support, vertical settlements (both total and differential), and/or undergo lateral spreading. A majority of the Project area north of the San Andreas fault, including the proposed AWPF site, is not located within a State and County Hazard Zone for liquefaction (CGS 2023; Pridmore 2003). Because the depth to groundwater north of the EFZ is deep, the potential for liquefaction at the site is considered low (Kleinfelder 2022). Geotechnical engineering analyses would be conducted to develop recommendations for design and construction of Project components. With implementation of the design recommendations, impacts on proposed structures from liquefaction would be less than significant.

a)-iv) **No Impact.** Landslides occur on slopes when soil and base material lose strength, frequently triggered from intense rain or seismic events. The Project area is not located in a designated Earthquake-Induced Landslide Hazard Zone (CGS 2023; and Silva et al. 2003).

The nearest designated landslide hazard zone is south of the Project area in the foothills of the San Gabriel Mountains. Due to the relatively gentle sloping terrain and lack of adverse geologic structure or existing landslides, the potential for damage due to mass wasting or earthquake induced landslides is considered nil (Kleinfelder 2022). Construction and operation of the Project would have no impacts related to landslides.

b) **Less Than Significant Impact with Mitigation Incorporated**. Excavation and earthwork required to install Project facilities have the potential to temporarily increase soil erosion from disturbed areas. Since BMPs would be implemented in accordance with a SWPPP (see Section 1.4.3), wind and water erosion of soils during construction would be minimized. mitigation measure GEO-2 would further ensure topsoil materials excavated during construction are reused and maintained onsite to the extent feasible, and that topsoil stockpiles are wetted, thereby minimizing topsoil loss. Additionally, all disturbed areas for construction of Project pipelines would be restored to pre-existing conditions. Operation of the Project would not disturb soils or result in increased soil erosion or loss of topsoil. Overall, as mitigated, impacts related to soil erosion and loss of topsoil would be less than significant.

c) **Less Than Significant Impact with Mitigation Incorporated.** As discussed above, the Project sites are not located within any landslide or liquefaction zones. Subsidence occurs when a large portion of land is displaced vertically, usually due to the withdrawal of groundwater, oil, or natural gas. The reduction in groundwater levels in the Palmdale area (more than 200 feet since the early 20th century) has resulted in as much as 6.6 feet of land subsidence in portions of the Antelope Valley Groundwater Basin (Kleinfelder 2022). Per the current mapping by the USGS (2022), the nearest area of subsidence is approximately 4.5 miles north and northeast of the Project area. Current subsidence monitoring is occurring throughout the Antelope Valley, primarily north of the Project area (Todd Groundwater 2022). No reported subsidence has occurred within the Project area. Therefore, the potential for subsidence hazard within the Project area is considered to be low to moderate (Kleinfelder 2022). Mitigation measure GEO-1 requires completion of a geotechnical report that includes an assessment of subsidence risk and recommendations to mitigate subsidence risks. Therefore, as mitigated, impacts from Project constructure would be less than significant. Operation of Pure Water AV would replenish the Antelope Valley Groundwater Basin, reducing subsidence potential, a beneficial impact.

d) **Less Than Significant Impact with Mitigation Incorporated.** Expansive soils are characterized by their ability to undergo significant volume changes (shrink or swell) due to variations in moisture content. The proposed AWPF site contains Adelanto coarse sandy loam, very deep, well drained soils that formed in granitic parent material on alluvial fans and plains (USDA-NRCS). While these soils have low potential for soil expansion, design of Project facilities would incorporate design recommendations related to expansive soils. With implementation of mitigation measure GEO-1, Project facilities would be designed in accordance with a site-specific geotechnical investigation. With completion of this additional analysis and incorporation of design recommendations, impacts related to expansive soils would be less than significant as mitigated.

e) **No Impact.** The proposed Project would not include the installation of septic tanks or alternative wastewater disposal systems. Therefore, there would be no impacts related to suitability of soils for septic tanks or alternative wastewater disposal systems.

f) **Less than Significant Impact with Mitigation Incorporated.** Fossils are evidence of ancient life, and as such are nonrenewable. This includes the remains of the body of an organism, such as bones, skin impressions, shell, or leaves, as well as traces of an organism's activity, such as footprints or burrows, called trace fossils (Society of Vertebrate Paleontology [SVP] 2010). Fossils are generally considered to be at least 5,000 years in age, dating to the middle Holocene or older (SVP 2010). While CEQA does not define a significance threshold for paleontological resources, the standards of the SVP are often used to establish what constitutes a "unique" paleontological resource for the purposes of CEQA:

> Identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years). [SVP 2010: 11].

Using this definition, the concept of scientific significance is included in the definition of paleontological resources; thus, not all fossils are considered to be paleontological resources. The threshold for scientific importance varies with factors such as geologic unit, geographic area, the current state of scientific research, and may also vary between different agencies (Murphey et al. 2019). Paleontological studies have developed criteria for the assessment of scientific significance of fossil discoveries (e.g., Murphey et al. 2019; Scott and Springer 2003).

Because fossil localities occur within a geologic unit and are typically identified after they are exposed through natural or artificial means, paleontologists evaluate the potential for a geologic unit to yield paleontological resources as a means of assessing a project's potential impacts. The SVP (2010) paleontological potential scale is designed to inform the development of appropriate mitigation measures for the protection of paleontological resources and is widely accepted as an industry standard in paleontological mitigation (Murphey et al. 2019; Scott and Springer 2003). This scale classes geologic units as having high, low, or no paleontological potential based on the possibility of encountering scientifically important fossils.

Project Area Geology and Paleontology. A review of geologic mapping indicates the Project area is underlain by two types of surficial sediments, distinguished by their age (Figure 8). Modern alluvium and alluvial fans that date from the Recent to the Holocene are mapped in the southwestern and eastern portions of Project area (Olson and Hernandez 2013). The surficial parts of this unit are Recent in age and therefore too young to preserve fossils, per the guidelines of the SVP (2010). As such they have low paleontological potential. However, they span the Holocene in age, and so deeper portions of this unit are of an age to preserve fossils. The second age category of sediments in the Project area are young alluvial fan deposits that date from the middle to early Holocene (Olson and Hernandez 2013). These sediments are mapped across the central Project area and likely underlie the modern surficial sediments

across the remainder of the Project area (Olson and Hernandez 2013). As these deposits are middle Holocene or older, they may preserve fossils throughout their extent.

A review of the scientific literature, the online records of the University of California Museum of Paleontology (UCMP), and records from the Natural History Museum of Los Angeles County (LACM) indicates a variety of paleontological resources are known from similar geologic settings in the region, including in the vicinity of the Project. The records of the LACM (2025) indicate they have several Pleistocene and early Holocene-aged localities in greater Palmdale and Lancaster, the closest of which are under 10 miles from the Project area (Table 15). The closest locality is approximately 7 miles northwest of the Project area in Lancaster and produced a camel fossil (LACM 2025). A more diverse Pleistocene locality 9.4 miles northwest of the Project area yielded a variety of taxa including camel, rabbit, rodents, and lizards (LACM 2025). Localities from the early Holocene include a gopher from 9.9 miles southeast of the Project area, a lizard form 16.2 miles to the southeast, and rabbit and rodent fossils from 16.2 miles to the southeast (LACM 2025).

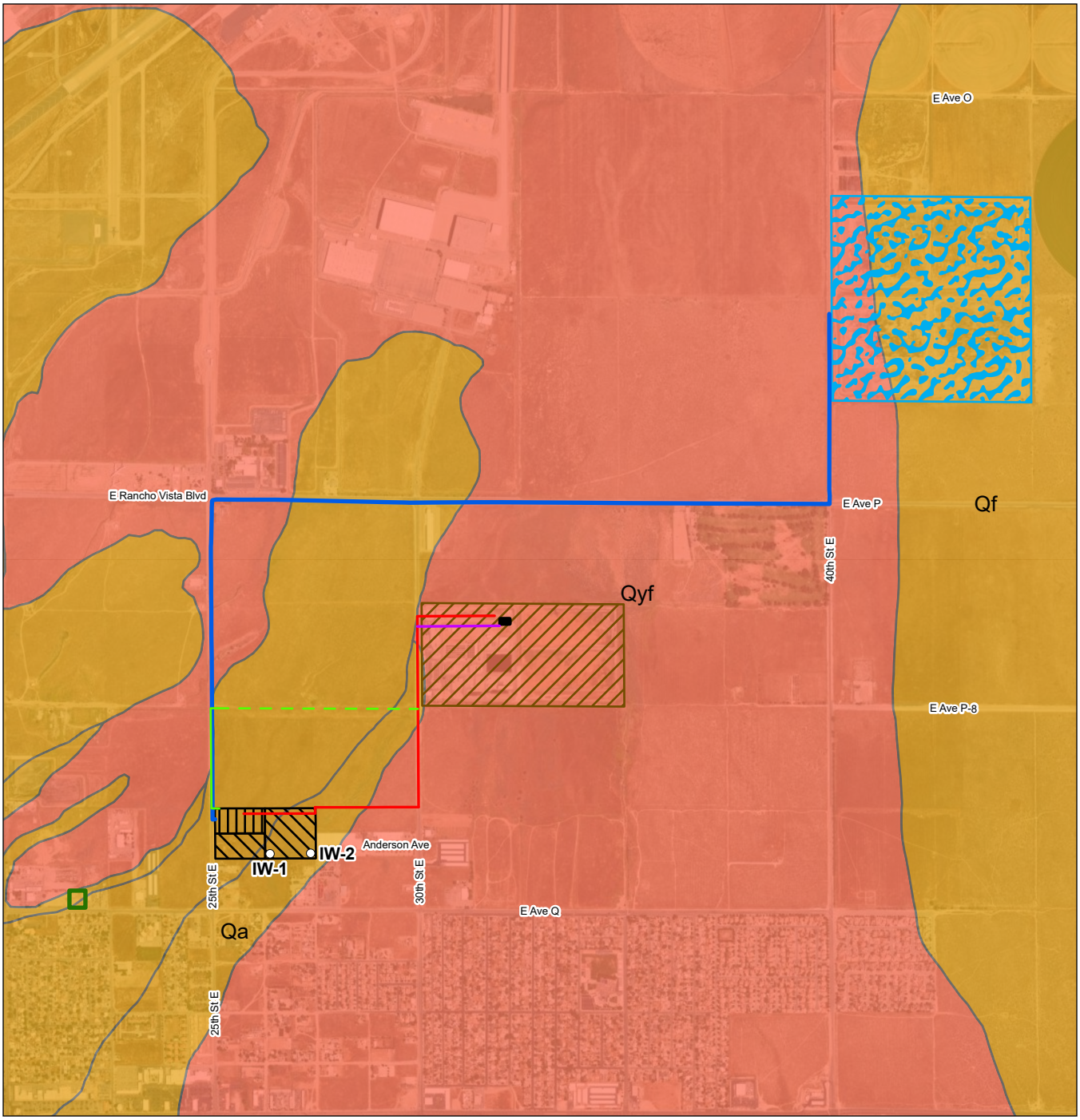
The online database of the UCMP (2025) contains records of 92 Holocene or Pleistocene-aged fossil localities from the Los Angeles, Kern, and San Bernardino County that are nonmarine and not assigned to a formal geologic unit and therefore may represent discoveries from similar geologic units as those in the Project area. The majority of these, 67 sites, preserved invertebrates, with 10 preserving plants and 13 preserving vertebrates (UCMP 2025). While place names are not provided for most of these sites, some are from Tehachapi and Red Rock Canyon, on the north side of Antelope Valley, and one is from the Arvin County Landfill (UCMP 2025). This site has been published in the scientific literature as a distinct suite of fossils defined as the Arvin Landfill Local Fauna, comprised of small mammals such as mice and rats, one canid, one amphibian, and one reptile (Fay and Thiessen 1993). While the site is on the north side of the El Tejon Range, the geologic setting within a broad alluvial plain bordered fault-bounded mountains is the same as that of the Project area, and the fauna reported are similar to those reported in the LACM (2025) records search.

Additional sites reported in the scientific literature include the discovery of a fossil locality in the nearby community of Rosamond during the course of a land development project. The locality is approximately 19 miles northwest of the Project area and contains fossil material from a variety of Pleistocene taxa including Columbian mammoth, horse, bison, giant ground sloth, and camel (Wilkerson 2011). The fossils were discovered in lacustrine deposits present at shallow depths below alluvial deposits (Wilkerson 2011). Ice Age taxa have been recovered from early Holocene and Pleistocene-aged deposits in Los Angeles County, San Bernardino County, and Kern County, including in the vicinity of the Project, yielding a variety of megafauna such as mammoth, camel, horse, pronghorn, deer, sheep, bison, and tortoise, as well as smaller animals such as birds, lizards, snakes, and rodents (Jefferson 1989, 1991a, 1991b; Scott and Cox 2008).

The SWRP PEIR assessed the upper layers of the Recent to Holocene-aged deposits as having low paleontological potential, increasing to high potential at approximately 4 feet bgs (Woodard & Curran 2024). As these older, high sensitivity units are mapped at the surface in the central portion of the Project area, the paleontological sensitivity of these deposits is high beginning at the surface.

Table 15. Natural History Museum of Los Angeles County Records Search Summary

Locality Number	Formation	Age	Taxa	Approximate Location
LACM VP 7884	Unknown formation (fluvial brown clayey silt)	Pleistocene	Camel (*Camelops hesternus*)	7.25 miles northwest of the Project area from 4 feet bgs
LACM VP 7853	Unknown formation (sandy loess under a dune deposit strand, sandy siltstone, siltstone to clayey siltstone)	Pleistocene	Rabbit (*Sylvagus*), camel family (Camelidae), antelope squirrel (*Ammospermophilus*), kangaroo rat (*Dipodymus*), pocket mouse (*Perognathus*), pack rat (*Neotoma*), deer mouse (*Peromyscus*), vole family (Microtinae), iguana (*Dipsosaurus*), pocket gopher (*Thomomys*), spiny lizard (*Sceloporus*), side blotched lizard (*Uta*), colubrid snakes (*Trimorphodon, Masticophis, Phyllorhynchus*), night lizard (*Xantusia*), western alligator lizard (*Elgaria*), toothy skinks (*Plestiodon*), whiptail lizard (*Aspidocelis*), spiny lizards (Phrynosomatidae), smelt (Osmeridae)	9.4 miles northwest of the Project area from 3-11 feet bgs
LACM VP 5946	Unknown formation	Early Holocene	Lizard (*Gambelia wislizenii*)	15.4 miles southeast of the Project area from surface to 9 feet bgs
LACM VP 5947	Unknown formation	Early Holocene	Pocket gopher (*Thomomys*)	9.9 miles southeast of the Project area from surface to 9 feet bgs
LACM VP 5952	Unknown formation	Early Holocene	Rabbit (*Sylvilagus*); pocket mouse (*Chaetodippus*); kangaroo rat (*Dipodomys*)	16.2 miles southeast of the Project area from surface to 9 feet bgs



- Proposed Injection Well (Approximate Location)
- Existing Sewer Pipeline
- Proposed Brine Pipeline
- Proposed Sewer Pipeline
- Proposed Tertiary Effluent Pipeline
- Proposed Recycled Water Pipeline
- Existing Demonstration Facility
- Proposed Brine Ponds (Existing Oxidation Ponds)
- Existing Palmdale Water Reclamation Plant (PWRP)
- Proposed Advanced Water Purification Facility (AWPF)
- Proposed Advanced Water Purification Facility (AWPF) Staging Areas
- Proposed Pump Station

Paleontological Potential

- low-to-high, increasing with depth
- high

Qa - modern alluvium
Qf - modern alluvial fan
Qyf - younger alluvial fan

0 1,000 2,000 Feet
(At original document size of 8.5x11)
1:24,000

N

Stantec

Project Location
City of Palmdale,
Los Angeles County, California

Prepared by DL on 2025-09-08
TR by SET on 2025-09-08
IR by SG on 2025-09-08

Client/Project
Palmdale Water District
Pure Water Antelope Valley

184031611

Figure No.
8

Title
Geology Map

Notes
1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2025.
3. Background:World Imagery: Earthstar Geographics
World Ocean Base: Esri, GEBCO, Garmin, NaturalVue

U:\18401_proposals\184031611_Palmdale_FieldMap\Pro_Maps\Pro_Maps2.aprx Revised: 2025-10-03 By: dalaw

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Operation of the Project would not involve new excavations. Therefore, the potential impacts of Project construction on paleontological resources are reviewed. The proposed Project will include drilling for injection, production and monitoring wells, grading associated with brine pond construction, excavating for foundation construction, and trenching for utility installation. Current Project plans specify well drilling will extend to depths ranging from 500 feet to 800 feet bgs at a maximum diameter of 24 inches. Ground disturbance from grading is anticipated to be limited to a few feet in depth. Foundation excavations are anticipated to extend up to 10 feet bgs and trenching for utilities to range between 8 feet and 17 feet bgs. In the eastern and southwestern Project area, under portions of the brine ponds and pipeline, and the tertiary effluent pipeline, as well as underlying most of the AWPF and associated staging areas and the sewer pipeline, these activities may encounter paleontological resources once depths of disturbance exceed 4 feet bgs. In the remainder of the Project area, underlying the western side of the brine ponds, most of the brine pipeline, and a portion of the tertiary effluent pipeline, ground disturbance may encounter paleontological resources beginning at the surface.

Ground disturbance that encounters paleontological resources may damage or destroy them, thus posing a potential direct adverse impact to paleontological resources for the purposes of CEQA. This Project is not expected to pose indirect impacts to paleontological resources, as the Project is not expected to contribute to increased erosion that could expose additional resources outside the Project footprint or beyond the duration of construction. Should the Project cause direct adverse impacts, they would contribute to cumulative impacts to paleontological resources in the region.

A successful mitigation program is one which provides for the identification and appropriate treatment of paleontological resources. Important components are therefore worker training, so the construction personnel are aware of their obligations and actions to take in the event they discover a fossil, as well as oversight by trained paleontologists. Paleontological monitoring is the most common mitigation tool, during which a trained paleontologist observes construction activities and halts construction temporarily to inspect the exposed sediments. Monitoring by experienced paleontologists greatly increases the probability that fossils will be discovered during ground-disturbing activities and that, if they are scientifically important, successful mitigation and salvage efforts may be undertaken to prevent adverse impacts to these resources.

The ability to apply mitigation is tied to the nature of the ground disturbing activity. Construction monitoring therefore requires a paleontologist to be able to observe either cuts into the ground, such as the sidewalls of trenches or a graded ground surface, or to observe spoils piles, such as from drilling or trenching. The diameter of the drill is an important consideration for the successful application of monitoring; in general, the larger the auger, the higher the probability that salvageable macrofossils can be brought to the surface. Also of importance is the size of the encountered fossils and the style of preservation. Large vertebrate fossils are unlikely to be recovered from small diameter augers, while invertebrates and microvertebrates may well be salvaged. The records of paleontological localities discussed above show that the majority of paleontological resources collected from the vicinity of the Project area are micro-vertebrate fossils such as rodents, lizards, and snakes. As such fossils

are much smaller than the 24-inch diameter planned for augering, they may well be brought to the surface relatively undamaged such that they can be salvaged for curation.

As the methods of ground disturbance planned for this Project produce cuts, spoils, or, in some cases, both, they are ideal targets of construction monitoring as a successful means of reducing potential impacts on paleontological resources to a less than significant level. With implementation of mitigation measure PALEO-1, Project-related impacts on paleontological resources would be less than significant.

Mitigation Measures

With implementation of the following mitigation measure, Project-related impacts on geology and soils would be less than significant.

GEO-1 Geotechnical Investigation Report. A licensed geologist or engineer shall perform a design-level geotechnical investigation prior to construction, which shall include evaluation of fault ruptures and soil and slope stability hazards such as strong seismic ground-shaking, liquefaction, landslides, and soil expansion. Based on the results of the geotechnical investigations, appropriate support and protection measures shall be designed and implemented to maintain the stability of soils and slopes adjacent to work areas during and after construction.

GEO-2 – Topsoil Materials. During Project construction, excavated topsoil materials shall be reused and maintained onsite to the extent possible. Topsoil stockpiles shall be wetted, thereby minimizing topsoil loss.

PALEO-1 - Paleontological Resources Avoidance and Monitoring. PWD shall avoid impacts, if feasible, on areas identified as having a high potential to contain significant paleontological resources. This includes the entirety of the Project area in excess of 4 feet depth and portions of the Project area mapped as young alluvial fan deposits at the surface. For these high sensitivity paleontological areas that are planned for excavation, PWD shall implement the following measures during ground-disturbing construction activities in previously undisturbed sediments within the Project area:

- **Qualified Professional Paleontologist.** Prior to the start of Project construction activities, PWD shall retain a Qualified Professional Paleontologist, as defined by the Society of Vertebrate Paleontology (SVP 2010). The Qualified Professional Paleontologist shall draft a Paleontological Resources Mitigation and Monitoring Plan, which shall direct mitigation measures related to paleontological resources.
- **Paleontological Worker Environmental Awareness Program.** Prior to the start of ground-disturbing construction activities, the Qualified Professional Paleontologist (see SVP 2010) or their designee shall conduct a paleontological Worker Environmental Awareness Program training for all construction personnel regarding the appearance of fossils and the procedures to follow should fossils be discovered.
- **Paleontological Monitoring.** Full-time paleontological monitoring shall be conducted during ground disturbance within previously undisturbed geologic units assigned low to high paleontological sensitivity once activities reach 4 feet bgs. Full-time paleontological

monitoring shall be conducted during ground disturbance within previously undisturbed geologic units assigned high paleontological sensitivity beginning at the surface.

- Bulk matrix sampling may be necessary to recover microfossils (i.e., fossils too small to be easily recognized within the matrix) from the Project area, as directed by the Qualified Professional Paleontologist.
- In the event of a fossil discovery by the paleontological monitor or construction personnel, all construction activity within 50 feet of the find shall cease, and the Qualified Professional Paleontologist shall evaluate the find. If the fossil is not scientifically significant, then construction activity may resume. If it is determined the fossil is scientifically significant, a fossil salvage shall be completed and the fossil shall be prepared and curated as deemed appropriate by the Qualified Professional Paleontologist.
- The Qualified Professional Paleontologist may recommend monitoring be reduced in frequency or ceased entirely based on geologic observations. Such decisions shall be subject to review and approval by PWD.

- **Final Paleontological Mitigation Report.** Upon completion of ground-disturbing activities (or laboratory preparation and curation of fossils, if necessary), the Qualified Professional Paleontologist shall prepare a final report describing the results of the paleontological monitoring efforts. The report shall be submitted to PWD and, if fossil curation occurred, the designated scientific institution.

2.3.8 Greenhouse Gas Emissions

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Discussion: GHGs absorb and emit radiation within the thermal infrared range. When radiation from the sun reaches the Earth's surface, some of it is reflected back into the atmosphere as infrared radiation (heat). GHGs absorb this infrared radiation and trap the heat in the atmosphere. Over time, the amount of energy from the sun to the Earth's surface should be approximately equal to the amount of energy radiated back into space, leaving the temperature of the earth's surface roughly constant. GHGs, which are transparent to solar radiation, are effective in absorbing infrared radiation. This phenomenon is known as the greenhouse effect.

Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), nitrogen trifluoride (NF_3) and sulfur hexafluoride (SF_6). Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weigh each gas by its global warming potential (GWP).

GHG emissions are predominantly associated with activities related to energy production; changes in land use, such as deforestation and land clearing; industrial sources; agricultural activities; transportation; waste and wastewater generation; and commercial and residential land uses. Worldwide, energy production, including the burning of coal, natural gas, and oil for electricity and heat, is the largest single source of global GHG emissions.

a) **Less Than Significant Impact**. As discussed in Section 15064.4 of the CEQA Guidelines, the determination of the significance of GHG emissions calls for careful determination by the lead agency consistent with CEQA Guidelines Section 15064. CEQA Guidelines Section 15064.4 further states that a lead agency should make a good faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project.

   Emissions were calculated within CalEEMod and compared to AVAQMD thresholds. AVAQMD has established an annual GHG threshold of 100,000 short tons per year (90,718 Metric tons per year (MT/year) and 548,000 pounds per day (AVAQMD 2016). AVAQMD's threshold was developed to meet the mandate of AB 32 for emissions to be reduced to 1990

levels by 2020. As the Project would not be fully constructed until 2030, the analysis uses an adjusted threshold to account for the anthropogenic GHG emissions reductions required under SB 32 and AB 1279. SB 32 requires a 40 percent reduction below 1990 levels by 2030 and AB 1279 requires that anthropogenic GHG emissions are reduced to 85 percent below 1990 levels by 2045. Therefore, this analysis uses an adjusted thresholds of 15,000 CO2e short tons per year (13,608 Metric Tons [MT]) for AB 1279.

Project construction and operational GHG emissions were estimated with CalEEMod. Modeling assumptions are described in Appendix A.

Construction Emission Inventory. Construction GHGs would be emitted from off-road construction equipment and vehicle travel by workers and material deliveries to the Project site. The estimated construction GHG emissions are shown in Table 16. Because construction GHG emissions are temporary, they are typically amortized over the life of the project and added to operational emissions (SCAQMD 2008). The lifetime of the proposed Project was assumed to be 30 years.

Table 16. Construction Greenhouse Gas Emissions

Year	Annual Emissions ($MTCO_2e/yr$)
2027	304
2028	699
2029	391
2030	67.5
Total	**1,462**
Amortized Emissions	***48.72***

Operational Emission Inventory. Operational or long-term emissions occur over the life of the proposed Project. Operational activities of the proposed Project would generate GHG emissions from area and energy sources, stationary equipment, and employee vehicle trips to and from the Project site (Table 17).

Table 17. Operational Greenhouse Gas Emissions

Source	Annual Emissions ($MTCO_2e/yr$)
Mobile	160
Area	0.54
Energy	3,903
Water	17.5
Waste	14.3
Refrigeration	1.59
Stationary	34
Subtotal	**4,131**
Amortized Construction	48.72
Total	**4,180**

Source	Annual Emissions ($MTCO_2e$/yr)
MDAQMD Adjusted Thresholds for 2045	13,608
Exceed?	***No***

Source: Appendix A

As shown in Table 17, the Project would not exceed the GHG thresholds used in this analysis; therefore, the proposed Project would not generate GHG emissions that may have a significant impact on the environment, and impacts would be less than significant.

b) **Less than Significant Impact.** Pursuant to Appendix G of the CEQA Guidelines, a significant GHG impact is identified if the Project could conflict with applicable GHG reduction plans, policies, or regulations. The Project would be subject to complying with the California Air Resources Board (CARB) 2022 Scoping Plan which includes measures adopted for the purpose of reducing GHG emissions.

CARB approved the 2022 Scoping Plan in December 2022. The 2022 Scoping Plan builds upon previous iterations of State scoping plans to achieve carbon neutrality and reduce anthropogenic GHG emissions 85 percent below 1990 levels no later than 2045, as directed by AB 1279 (CARB 2022a). Table 18 identifies and evaluates Project consistency with the Scoping Plan policies that may be relevant to the proposed Project.

Table 18. Project Consistency with 2022 Scoping Plan Greenhouse Gas Reduction Strategies

Measure	Consistency Determination
Deploy ZEVs and reduce driving demand	**Consistent.** The Project is a regional water augmentation program using IPR by groundwater augmentation via direct injection. The Project would not generate a large amount of vehicle trips. Vehicles traveling to the site would be subject to CARB rules and regulations such as the Advanced Clean Truck regulations which would promote ZEV trucks. Additionally, the Project would provide at least 2 EV parking spaces for employees.
Coordinate supply of liquid fossil fuels with declining CA fuel demand	**Not Applicable.** This measure is aimed at petroleum refineries and fossil fuel extraction operations.
Generate clean electricity	**Consistent.** The proposed Project would use electricity to treat IPR to augment groundwater. All stationary equipment used on the site, excluding emergency generators, would be electric. Electricity would be supplied by SCE which is subject to the State's Renewable Portfolio Standard which mandates that at least 60% of the electricity sold by utilities is renewable by 2030 and 100% by 2045. Therefore, since the Project is anticipated to go online after 2030, at least 60% of the electricity provided to the site would be from clean sources. Moreover, while the Project would not directly generate clean electricity, the Project would allow for a sustainable source of groundwater in the region which would reduce the electricity required to transport water from other areas to Palmdale.
Decarbonize Buildings	**Consistent.** The structures would comply with all relevant provisions of the California Green Building Code and, as shown in Table 17, emissions would not contribute substantially to regional carbon emissions.
Decarbonize Industrial Energy Supply	**Not Applicable.** The Project is a regional water augmentation program using IPR by groundwater augmentation via direct injection. The Project is not an industrial development.

Measure	Consistency Determination
Reduce non-combustion emissions (Methane)	**Consistent.** The proposed Project would not include any land uses that generate significant levels of methane, such as landfills or dairy farms.
Reduce non-combustion emissions (Hydrofluorocarbons [HFCs])	**Consistent.** The proposed Project would comply with all state regulations governing short-lived climate pollutants (SLCPs), including HFCs.
Compensate for remaining emissions	**Not Applicable.** This measure is aimed at the state government to reduce statewide emissions to meet AB 1279 goals. The proposed Project would not interfere with this goal.

Source: CARB 2022a

The proposed Project would be consistent with the applicable strategies recommended in the 2022 Scoping Plan. Therefore, the proposed Project would not conflict with an applicable plan adopted for the purpose of reducing GHG emissions; therefore, impacts would be considered less than significant.

2.3.9 Hazards and Hazardous Materials

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒	☐	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☒	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

Discussion: With the exception of the existing PWRP, hazardous materials are not currently used or stored on the Project sites.

a) **Less than Significant Impact with Mitigation Incorporated**. During construction, commonly used hazardous substances, such as gasoline, diesel fuel, lubricating oil, grease, solvents, adhesives, and paints would be temporarily used. Construction equipment that would contain oil, gasoline, or other fluids, and would likely be stored onsite and transported during the construction period. Accidental release of these materials could occur during routine transport, disposal, or use and could potentially injure construction workers, contaminate soil, and/or affect nearby groundwater or surface water bodies. Impacts associated with accidental release, although localized, could potentially create a significant hazard to the public or the environment. However, these types of materials are not acutely hazardous, and all storage, handling, and disposal of these materials are regulated by the California Department of Toxic Substances Control, Occupational Safety & Health Administration, and the Los Angeles County Fire Department. The transport, use, and disposal of construction-related hazardous materials would occur in conformance with applicable federal, State, and local regulations governing such activities. Additionally, as

described in mitigation measure HAZ-1, a Hazardous Materials Management and Spill Prevention and Control Plan would be developed and implemented during Project construction to limit the risks of hazardous material use and transport. With compliance with applicable regulations for the transport, storage, use and disposal of hazardous materials, and development of the Plan per HAZ-1, impacts related to hazardous materials during project construction would be less than significant as mitigated.

Fuels for vehicles and equipment, diesel for standby power generation, and routine maintenance chemicals (lubricants, solvents) would be required for Project operation. Water treatment processes would require various chemicals for treatment, biofouling control, scale prevention, cleaning, and post treatment (Table 19). Chemical storage and feed systems for the AWPF would consist of chemical storage units (e.g., tanks/totes), secondary containment of chemical storage units, chemical metering pumps, and chemical transfer pumps. Anticipated bulk chemical storage for Phase 1 (4.75 mgd AWPF) is described in Table 20.

Table 19. Pure Water AV Anticipated Water Treatment Chemical Use

Chemical	Application Point(s)	Dose (mg/L)	Purpose
Ammonium Sulfate (40%)	MF Feed	0.25-1.25 (as N)	MF and RO biofouling control
Sodium Hypochlorite (12.5%)	MF Feed	1-5 (as Cl2)	MF and RO biofouling control
	UV/AOP Feed	2.5-5	Oxidant for AOP
	MF CIP System	500 (MC); 3,500 (RC)	MF CIP
Antiscalant (100%)	Primary RO Feed	2-4	Scale prevention
	CCRO Feed	1-5	Scale Prevention
Sulfuric Acid (93%)	Primary RO Feed	50-100	Scale prevention
	CCRO Feed	1-20	Scale prevention
	UV/AOP Feed	As needed (not part of storage)	As needed pH adjustment for AOP
	MF CIP System	~5,000	MF cleaning and neutralization
	RO CIP System	~5,000	RO cleaning and neutralization
Sodium Hydroxide (25%)	MF CIP System	1,000	MF cleaning and neutralization
	RO CIP System	20,000	RO cleaning and neutralization
	Product Water	27-66	Post Treatment (pH, alkalinity, LSI)
Calcium Chloride	Product Water	15-188	Post Treatment (LSI)
Citric Acid (50%)	MF CIP System	1,000	MF cleaning
	RO CIP System	20,000	RO cleaning
Sodium Bisulfite (38%)	MF CIP System	183 (MC); 1,284 (RC)	MF CIP Neutralization

Table 20. Pure Water AV Anticipated Bulk Chemical Storage

Chemical	Daily Usage, Average (Max) (gpd)	Storage Duration, Average (Max) (days)	Storage Type (Tank/Tote)	No. of Storage Units	Capacity per Tank/Tote (gal)
Ammonium Sulfate[1,2] (40%)	34 (56)	96 (59)	Tank	2	2,050
Sodium Hypochlorite[1,2] (12.5%)	248 (315)	16 (13)	Tank	2	2,550
Antiscalant (100%)	8 (16)	60 (30)	Tote	2	300
Sulfuric Acid[1] (93%)	196 (261)	19 (14)	Tank	1	4,600
Sodium Hydroxide[1] (25%)	589 (880)	14 (10)	Tank	2	5,300
Calcium Chloride[1] (35%)	505 (1,632)	32 (10)	Tank	2	8,000
Citric Acid (50%)[3]	25	32	Tote	3	330
Sodium Bisulfite (38%)[3]	0.5	83	Drum	1	55

[1]Assumed minimum delivery volumes for AWPF chemicals stored in tanks are as follows: sodium hypochlorite (5,000 gal), ammonium sulfate (4000 gal), sulfuric acid (2,800 gal), sodium hydroxide (3,600 gal), and calcium chloride (4,500 gal).
[2]Single truck delivery will need to be split between duty/standby tanks.
[3] Daily usage is calculated based on discrete events where 30-105 gallons of citric are used and 0.4-2 gallons of sodium bisulfite are used.
gpd – gallons per day; gal - gallons

Project storage vessels would be designed to ensure hazardous materials would be properly contained and not spill or leak. Design features to manage chemical use, ensure proper facility operation, and prevent accidental release of chemicals at the AWPF would include:

- Secondary containment of hazardous liquids would be designed in accordance with National Fire Protection Association (NFPA) standards, the Uniform Fire Code, and requirements of the Los Angeles County Fire Department.
- Linings, coatings, and proper ventilations would be provided in accordance with the properties of the specific liquid being contained.
- Chemical lines will have airgaps or reduced pressure backflow preventor systems.
- A Cross Connection Control Plan would be developed which identifies points in the AWPF of potential cross control vulnerability between potable water, recycled water, chemical lines, or other non-potable systems.
- The chemical storage tank levels would be continuously transmitted to the master plant control system (PCS). The PCS would relay real-time chemical tank level data to vendor systems requiring the chemicals. Chemical levels would be monitored by operators and inform the schedule of chemical deliveries to maintain levels above critical thresholds. If low chemical levels are detected, interlocks may be triggered across process systems. Low chemical levels may also result in a system-wide interlock, initiating a shutdown of the AWPF.
- Chemical delivery zones at the AWPF have been located to minimize interference with routine operations and to provide direct access from perimeter roads.
- In areas where chemical storage is required, primary access for vehicle entry would be fenced and gated. Secondary access immediately into chemical storage areas would, at a minimum, include a chain-link fence enclosure with lockable gates.

- The chemical unloading area would be constructed of concrete and sealed in accordance with Los Angeles County Fire Department requirements to ensure containment of potential spills.
- Chemical storage and use areas will have eyewash stations with a flow switch for remote alarming.

With implementation of these design measures to manage chemical use and compliance with relevant federal, State, and local regulations, operation of the proposed Project would not pose a significant hazard to the public or the environment. Impacts during Project operation related to the routine transport, use and handling of hazardous materials would be less than significant.

b) **Less Than Significant Impact with Mitigation Incorporated.** As described above, construction activities would involve transport, storage, and use of hazardous materials such as gasoline, diesel fuel, lubricating oil, grease, solvents, adhesives, and paints. If not properly handled, accidental release of these substances could expose construction workers, degrade soils, or become entrained in stormwater runoff, resulting in adverse effects on the public or the environment. However, Cal/OSHA regulations provide for the proper labeling, storage, and handling of hazardous materials to reduce the potential harmful health effects that could result from worker exposure to hazardous materials. Additionally, PWD would implement mitigation measure HAZ-1, which would develop a Hazardous Materials Management and Spill Prevention and Control Plan to limit the risk of hazardous materials use. With compliance with applicable regulations for the transport, storage, use and disposal of hazardous materials, and development of the Plan per HAZ-1, impacts related to reasonably foreseeable upset accident conditions involving the release of hazardous materials during Project construction would be less than significant as mitigated.

Operation of the Project could pose a hazard to the environment through the accidental release of hazardous materials, such as chemical spills from storage tanks, leaks from piping systems, or malfunctioning dosing pumps. As described above, the proposed Project would incorporate design elements to enable the safe handling and storage of the hazardous materials required to carry out the treatment processes at the AWPF. Additionally, regular maintenance and inspections, staff training, and monitoring systems would further reduce the potential for accidental releases of hazardous materials. Chemical deliveries would be regulated by CalEPA and the California Emergency Management Agency, with enforcement by the California Highway Patrol and Caltrans. With incorporation of safe handling and storage measures for hazardous materials and compliance with existing federal, State, and local regulations, operational impacts related to reasonably foreseeable upset accident conditions involving the release of hazardous materials would be less than significant.

c) **Less than Significant Impact with Mitigation Incorporated.** The closest school to PWD's 20-acre parcel proposed for the AWPF is the Palmdale SOAR High School, located approximately 0.20 miles away at 2270 E Ave Q. The Process Building at the AWPF and associated chemical storage and use would be approximately 0.29 miles from the High School property. Construction of the proposed Project would involve the handling of materials such as fuels, lubricating fluids, and solvents, which can emit toxic air pollutants. The proposed

Project would comply with applicable federal, State, and local regulations related to the transport, use, and disposal of hazardous materials during construction. Additionally, implementation of mitigation measure HAZ-1 would reduce the risk of accidental hazardous material releases, and mitigation measure HAZ-2 would ensure notification to schools within 1 mile of Project facilities. Therefore, impacts during Project construction would be less than significant with mitigation incorporated.

Operation of the AWPF would be slightly outside 0.25 mile of Palmdale SOAR High School. The proposed Project would require routine transport, use of chemicals for treatment, and possible storage of diesel fuel. With implementation of the design features described above to manage chemical use, and compliance with relevant federal, State, and local regulations, operation of the proposed Project would not pose a significant hazard to a school. Impacts during Project operation would be less than significant.

d) **No Impact.** Section 65962.5 of the California Government Code requires the California Environmental Protection Agency (CalEPA) to update a list of known hazardous materials sites, which is also called the "Cortese List." The sites on the Cortese List are designated by the SWRCB, the Integrated Waste Management Board, and the Department of Toxic Substances Control (DTSC).

The Project sites are not included on any hazardous waste site lists including the DTSC EnviroStor database, the SWRCB's GeoTracker site (2025), CalEPA's list of solid waste disposal sites identified by the Water Board with waste constituents above hazardous waste levels outside of the waste management unit (2025), the United States Environmental Protection Agency's database of regulated facilities (2025), or other lists compiled pursuant to Section 65962.5 of the Government Code. The closest active site is Air Force Plant 42, (a research and development facility) which is approximately 1 mile away. A groundwater treatment system for the remediation of Trichloroethylene (TCE) is currently in operation at the site. Since no Cortese List sites are present within 1,000 feet of the Project sites, and since recharge of the groundwater basin with purified recycled water would not adversely impact existing groundwater treatment, construction and operation of the Project would have no impact related to hazardous waste sites.

e) **Less Than Significant Impact**. The pump station at the PWRP, Well 37 brine ponds, and segments of Project pipelines would be constructed within the Palmdale Regional Airport influence area but outside the 65 Community Noise Equivalent Level (CNEL) noise contour for the airport (LACALUC 2004). The proposed site for the AWPF would be outside the airport influence area and 65 CNEL noise contour. Construction of the Project would temporarily expose construction workers to airport noise, but below 65 CNEL. Operations staff at the AWPF would also be exposed to airport noise, but below 65 CNEL. The Project would not result in new residences near the airport, nor would it create long-term employment within the airport 65 CNEL noise contour. Since the proposed Project would not expose residences or workers to excessive aircraft noise or airport-related safety hazards, impacts would be less than significant.

f) **Less Than Significant Impact with Mitigation Incorporated**. Fire protection and police services within the Project area are provided by the LACFD and Los Angeles County Sheriff's Department. During construction, temporary lane closures or detours associated with pipeline installation in existing roadway rights-of-way (e.g., 30th Street East, Avenue P, and 40th Street East) could delay emergency response times or disrupt emergency service delivery if not properly managed. mitigation measure TRA-1 would require the preparation and implementation of a Traffic Management Plan (TMP) that includes coordination with emergency service providers at least one month prior to construction, advance public notifications, and measures to maintain emergency access at all times. The TMP would also identify alternate routes and staging practices to avoid blocking critical corridors. As mitigated, construction-related impacts on emergency response and evacuation would be less than significant.

During operations, vehicular access to the AWPF site would be from 25th Street East via gated entrances and internal service roads. The Project would be designed to allow proper ingress and egress and comply with LACFD requirements for emergency vehicle turning radii and fire apparatus access. Similarly, site security features (e.g., motorized gates) would be designed to allow emergency override access. The Project does not propose new public road closures or geometric changes that would conflict with emergency response routes or adopted emergency plans. Pipelines would be installed underground within existing rights-of-way, so they would not obstruct emergency access once construction is complete. With compliance with LACFD design standards, the Project would not result in inadequate emergency access. During Project operations, PWD staff would be present at the AWPF and occasionally visit the brine ponds, wells, and pipeline locations for periodic maintenance. These routine activities would not interfere with an adopted emergency response plan or emergency evacuation plan. Operations-related impacts on emergency response and evacuation would be less than significant.

g) **No Impact**. The proposed Project elements are not located in or near SRAs or lands classified as very high FHSZ in the LRA. Project facilities are water treatment, injection and conveyance facilities, wells, and ponds for brine disposal. Development of these Project elements would reduce onsite vegetation for the construction of the proposed buildings, pump station, wells, and brine disposal ponds. No steep slopes are present or would be created as a result of the proposed Project. Construction and operation of these infrastructure elements would have no impact on the existing moderate risk of wildfire. Therefore, the Project would have no impact regarding the exposure of people or structures to a significant risk of loss, injury, or death involving wildland fires.

Mitigation Measures

With implementation of the following mitigation measures, Project impacts related to hazardous materials would be less than significant.

HAZ-1 – Hazardous Materials Management Spill Prevention and Control Plan. Prior to the start of construction, PWD shall require its construction contractor(s) to prepare a Hazardous Materials Management Spill Prevention and Control Plan that includes a Project-specific contingency plan for hazardous materials and waste operations. The Plan shall be applicable to all construction activities and shall establish policies and procedures according to federal and

California OSHA regulations for hazardous materials. Elements of the Plan shall include, but not be limited to:

- A discussion of hazardous materials management, including delineation of hazardous material storage areas, access and egress routes, waterways, emergency assembly areas, and temporary hazardous waste storage areas
- Notification and documentation of procedures
- Spill control and countermeasures, including employee spill prevention/response training

HAZ-2 – School Notification. Prior to the start of Project construction within 1 mile of a school, PWD will notify relevant schools regarding the construction schedule.

2.3.10 Hydrology and Water Quality

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?	☐	☒	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial erosion or siltation on- or offsite?	☐	☒	☐	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?	☐	☒	☐	☐
iii) Create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or?	☐	☒	☐	☐
iv) Impede or redirect flood flows?	☐	☒	☐	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Discussion: The Project area is located in the South Lahontan Hydrologic Region, within the Antelope Hydrologic Unit, one of 29 drainage areas designated for the South Lahontan Hydrologic Basin in the Lahontan RWQCB Water Quality Control Plan (Basin Plan, as amended through 2025). The Project area is located within the Antelope Valley Groundwater Basin, a basin within the southwestern Mojave Desert, nearly 40 miles north-northeast of Los Angeles, California. Three primary aquifers – the upper, middle, and lower – occur in the Antelope Valley Groundwater Basin. The upper and middle aquifers are the primary water-bearing aquifers in the Project area and PWD existing potable water wells are completed in these layers above a clay unit.

Drillers' logs for wells completed in the Project area indicate basin-fill deposits of the upper and middle aquifers extend to a depth of approximately 850 to 1,000 feet bgs and are predominantly a mixture of sand and gravel with interbedded clay deposits in some areas. Coarse-grained sediments

comprise approximately 30 to 90 percent of the geologic materials encountered during well drilling, with an average percentage of approximately 70 percent.

Groundwater in the upper and middle aquifers is unconfined beneath the Project area and constitutes an unconfined groundwater system. Groundwater generally flows northward toward a pumping depression that extends beneath and to the northwest of the Project area (Todd Groundwater 2025). In the Project area depth to groundwater varies between approximately 380 ft bgs near Avenue Q to 530 ft bgs in the vicinity of Avenue P-8 and 20th Street East (Todd Groundwater 2025). Owing to the increased depth to groundwater and the abundance of sand and gravel beneath the Project area, geologic and hydrogeologic conditions appear to be favorable for the injection of advanced treated recycled water.

Since groundwater extractions have exceeded the Antelope Valley Groundwater Basin's natural recharge, an adjudication process has defined groundwater rights for the Basin's users to equal the safe or sustainable yield of the Basin (PWD 2021). On December 23, 2015, a Stipulated Judgement created a five-member Watermaster Board of Directors and appointed the Antelope Valley Watermaster Engineer. The Antelope Valley Watermaster Engineer is responsible for monitoring the groundwater basin to ensure groundwater pumping is appropriately sustained by groundwater recharge. Per the Judgement, PWD has a native groundwater production right of 2,769 AFY. PWD has been in full compliance with the Judgement, pumping within its final adjudication right since 2016. In addition to its groundwater production right, PWD is also entitled to a share of the unused federal reserved right, which averages 1,450 AFY, and return flow credit of 39 percent of all imported water served to its customers. Return flow credits are calculated on a 5-year rolling average and are available to PWD following imported water delivery or after banked imported water has been pumped. Return flow credits are projected to decrease from 4,220 AFY in 2025 and 4,100 AFY in 2050 (PWD 2023a).

a) **Less than Significant Impact**.

Construction. Anticipated construction activities would require grading, excavation, and other soil disturbing activities, which could result in soil erosion and the migration of soil and sediment in stormwater runoff to downstream surface waters and storm drains. Drilling would be required for injection and monitoring well installation, and installation of proposed pipelines would involve trenching using a conventional cut and cover technique. With groundwater depths over 300 feet bgs, dewatering during Project construction is not anticipated. Construction activities could introduce sediment and chemicals to runoff. Fuels, lubricants, and other hazardous materials associated with construction equipment could adversely impact water quality if spilled or stored improperly. Since the proposed Project would be constructed on over 1 acre, a SWPPP would be prepared which will include BMPs designed to prevent impacts to water quality. Table 6 summarizes typical stormwater BMPs. With the implementation of the BMPs outlined in the Project-specific SWPPP, impacts on surface water quality during Project construction would be less than significant.

Operation. Beneficial uses and water quality objectives are specified in the Basin Plan prepared by the Lahontan Regional. Beneficial uses designated for Antelope Valley Basin groundwater are: municipal and domestic supply, agricultural supply, and freshwater

replenishment. Water quality objectives that apply to all groundwater in the Lahontan region are: coliform bacteria, chemical constituents, radioactivity, and taste and odor.

AWPF Feed Water Quality

The PWRP effluent meets CCR Title 22 Water Recycling Criteria for disinfected tertiary effluent and would be the feed water for the AWPF. Table 21 summarizes the expected feed water quality to the AWPF and includes the key water quality parameters most relevant to the sizing of the MF, RO, and UV/AOP systems. The data set spans from 2017 to 2025. A special sampling campaign was conducted from September 2023 to April 2025 to obtain water quality data to guide the design of the AWPF. Additional water quality data will continue to be collected during the operation of the demonstration facility (anticipated to begin operation in 2026).

Table 21. Expected Feed Water Quality to AWPF

Constituent	Unit	Average	Minimum	Maximum	90th Percentile	Count
1,4-Dioxane [1]	µg/L	ND (<0.40)	ND (<0.40)	ND (<0.40)	ND (<0.40)	18
Alkalinity, Total [1]	mg/L	104	85	156	120	22
Aluminum [1]	µg/L	9.5	6.4	10.6	<10	18
Ammonia, Total [1]	mg/L-N	1.4	0.74	5.5	1.9	24
Barium [1]	µg/L	21.0	13.9	25.4	24.8	18
Boron [1]	mg/L	0.289	0.182	0.389	0.376	18
Bromide [1]	mg/L	ND (<0.200)	ND (<0.200)	ND (<0.200)	ND (<0.200)	18
Calcium[2]	mg/L	34.5	24.5	42.3	39.4	34
Chloride[2]	mg/L	145	107	180	166	32
Fluoride [1]	mg/L	0.189	0.145	0.281	0.219	18
Iron[1]	mg/L	0.077	0.032	0.243	0.102	16
Magnesium[2]	mg/L	8.8	5.0	12.9	11.2	35
Manganese[1]	µg/L	21.5	14.1	35.4	26.9	18
Nitrate[2]	mg/L-N	2.3	0.5	8.9	3.6	107
Nitrite[2]	mg/L-N	0.13	0.03	0.95	0.30	85
N-nitrosodimethylamine (NDMA)[3]	ng/L	27	6.9	84	57	7
N-nitrosodiethylamine (NDEA)[3]	ng/L	ND (<10)	ND (<10)	ND (<10)	ND (<10)	6
pH[1]	s.u.	7.3	6.8	8.2	7.7	24
Potassium[1]	mg/L	15.5	13.6	17.3	16.8	18
Phosphate, Total[1]	mg/L	1.8	0.54	4.0	3.1	24
Silica[1]	mg/L	13.6	11.2	17.8	15.6	18
Sodium[2]	mg/L	119	95.3	14139	1341	34
Strontium[1]	µg/L	287	222	344	322	18
Sulfate[2]	mg/L	68.3	49.4	90.0	83.0	34
Total Dissolved Solids (TDS)[1]	mg/L	465	388	593	490	17
Temperature[4]	°C	23.0	14.5	30.1	27.5	261
Total Organic Carbon (TOC)[1]	mg/L	6.9	5.7	8.0	7.6	18

[1] Based on water quality data collected from March 2023 to April 2025 as part of special sampling campaign.
[2] Based on water quality data collected from February 2017 to April 2025.
[3] Based on water quality data collected after switching to emulsion polymer, ranging from August 2024 to April 2025.
[4] Based on weekly temperature data from January 2017 to December 2021.
mg/L = milligrams per liter; ND = non-detect; ng/L = nanograms per liter; s.u. = standard unit; µg/L = micrograms per liter

Groundwater Modeling

Groundwater flow simulations for the proposed injection wells were presented in the technical memorandum entitled *Summary of Numerical Groundwater Model Results – Pure Water Antelope Valley Technical Memorandum* (Stantec and Montgomery & Associates 2023). Groundwater flow modeling was developed to assess whether the injection of tertiary treated wastewater would meet Title 22 IPR regulations. Title 22 regulations require a minimum of 2 months of underground retention time and allow for up to 6 months of log virus reduction credit. Modeling scenarios indicated that underground retention times for the initial phase (4.75 mgd) and ultimate buildout (10.0 mgd) scenarios exceed the 2-month requirement. The modeling results also indicated that underground retention times for the initial phase and ultimate buildout scenarios exceed 6 months to qualify for the maximum credit. Modeling results indicated that operating injection wells on the PWD 20-acre parcel would result in manageable groundwater level mounding and is conceptually feasible. The technical memorandum recommended that:

- Site-specific testing be conducted to assess injection feasibility and estimate injection capacity
- A tracer test be completed to assist with model parameters and future Title 22 permitting
- A site characterization plan be prepared to guide field activities

The site characterization work is currently underway to assess the feasibility of injecting treated water at operational rates using injection wells located on the PWD 20-acre parcel as recommended in the modeling results. This work will include test well construction, monitoring well construction, pumping and injection tests, and a tracer test. In addition to meeting the primary goal of assessing injection well feasibility, 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 PWD's groundwater production wells. It is expected that construction and testing described in the work plan will be completed by the end of 2026. The results of the injection testing will be utilized for full-scale well design and well siting.

All recycled water produced and used for groundwater recharge would meet the IPR standards per CCR Title 22 (PWD 2023b). It is expected that recycled water produced by the Pure Water AV Project could be of higher quality than existing groundwater sources (PWD 2023b). Additionally, recycled water will be directly injected into the Antelope Valley Groundwater Basin, which will move any existing contaminants further from drinking water extraction wells (PWD 2023b). PWD monitors drinking water constituents consistent with federal and State laws and treats groundwater with chlorine before being pumped into the distribution systems, ensuring that drinking water meets State and federal water quality standards (PWD 2021; PWD 2022). Additionally, PWD would be required to obtain a permit for waste discharges into the LACSD system. Therefore, impacts on water quality from Project operation would be less than significant.

b) **Less than Significant Impact with Mitigation Incorporated**.

Construction. Groundwater discharges associated with well installation and testing would comply with the Lahontan Regional Board Limited Threat Discharges permit. Compliance includes designation of a discharge disposal site and implementation of BMPs to control discharges. Drainage systems in the City either drain to earthen channels or retention basins, and thus any discharged groundwater would either evaporate or eventually percolate into the Antelope Valley Groundwater Basin. Impacts associated with construction groundwater discharges during well drilling would be less than significant.

Operation. The Project includes installation of buildings and internal roadways at the AWPF site which would increase impervious surface area, however, the majority of the 20-acre parcel would remain undeveloped open space. The proposed pump station at the PWRP and the injection, production, and monitoring wells would slightly increase impervious surface area. The brine ponds would be lined which would increase impervious area at the existing oxidation pond site. Once installed, proposed Project pipelines would be buried and would not affect stormwater percolation along the alignments. Stormwater flows would be managed onsite and reductions to groundwater recharge, if any, would be less than significant. The Project also includes minor potable water use for employees at the AWPF and process water demand. These water volumes would not substantially deplete groundwater supplies and impacts would be less than significant.

Operation of the AWPF and injection of the product water to the Antelope Valley Groundwater Basin would increase groundwater supplies by approximately 4.75 mgd in Phase 1 and 10.0 mgd in Phase 2. The Project is beneficial for groundwater supplies and sustainable groundwater management of the Antelope Valley Groundwater Basin.

PWD would coordinate with the Antelope Valley Watermaster for installation and operation of Well 37. In accordance with mitigation measure HYD-1, the Antelope Valley Watermaster Engineer would ensure operational criteria for the wells do not result in a net deficit in aquifer volume or a lowering of the local groundwater table such that the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted. With incorporation of mitigation, impacts on groundwater volumes would be less than significant.

c) i, ii, iii, iv **Less than Significant Impact with Mitigation Incorporated**.

Construction. Project construction would not alter the course of a stream or river. However, excavation and earthwork of new facilities would result in minor localized changes to drainage patterns in the immediate vicinity of the construction area and potentially erosion and siltation on- and off-site. Construction of the AWPF and the brine ponds would require grading and earthwork on approximately 100 acres. The construction of injection wells would include site preparation, mobilization of equipment to the well site, well drilling, installation of the well casing, gravel packing, and finishing with a cement seal. Construction of the recycled water pipelines would involve trenching. Removal of vegetation at excavation areas would expose bare soil that could be eroded during rainfall events. If runoff from rainfall flows over

construction sites, the runoff can transport sediment and other pollutants such as building materials, concrete washout, paint, fuel, oil, and solvents into the stormwater system. Fuels, lubricants, and hazardous materials associated with construction equipment could adversely affect water quality if spilled or stored improperly. A Project-specific SWPPP would document erosion and sediment control BMPs to be incorporated during construction of Project facilities.

Operation. Project operation would not alter the course of a stream or river. However, the Project would include installation of facilities (AWPF, lined brine pods, wells, and pump station) which would increase impervious area at the Project sites which would alter site drainage. Drainage for the proposed Project would be designed in accordance with the City of Palmdale Public Works Standards and the Los Angeles County Hydrology Manual. The proposed grading and drainage improvements would ensure that post-development runoff is conveyed safely and efficiently to approved discharge points without adverse impacts to downstream properties or public infrastructure. The general drainage pattern across the AWPF site flows from southwest to northeast. This existing drainage pattern would be maintained as part of Project grading and drainage design. Proposed Low Impact Development (LID) facilities would be strategically located north of the project site to treat and manage roadway and site runoff. LID measures would be defined during final design and may include drainage swales and basins that utilize natural treatment systems to promote infiltration, pollutant removal, and flow attenuation.

On-site and off-site drainage facilities would be designed to accommodate the 50-year storm event in compliance with City requirements. Surface runoff will be collected via a network of swales, catch basins, and underground storm drain pipelines designed per current hydraulic design standards. The drainage system would direct flow toward the designated public right-of-way and/or approved drainage facilities consistent with the City's Master Plan of Drainage.

LID and stormwater quality compliance measures would be incorporated into the Project design to meet the requirements of the City's Municipal Separate Storm Sewer System (MS4) permit. BMPs, such as bioretention planters, infiltration areas, and vegetated swales, would be provided to treat and reduce runoff in accordance with the City of Palmdale SUSMP/LID Manual.

Hydrology and hydraulic calculations would be prepared to demonstrate that the proposed system meets required capacities and that peak flow rates do not exceed pre-development conditions. Drainage design for the Project would comply with Palmdale Municipal Code Chapter 14.05 (Stormwater Management and Discharge Control Ordinance) and provide long-term stormwater conveyance and water quality protection.

Implementation of mitigation measure HYD-2 would require PWD to complete a drainage study and develop a drainage plan to verify that drainage would not contribute to runoff that would result in flooding. Mitigation measure HYD-2 would ensure that any alteration to site drainage would not result in onsite or offsite flooding. Therefore, Project alternations to site drainage would not result in onsite or offsite flooding and impacts would be less than significant with mitigation incorporated. With implementation of these drainage management

facilities and BMPs, operational impacts on erosion, drainage patterns and stormwater would be less than significant.

d) **Less than Significant Impact**. The proposed AWPF site is located within Zone X (0.2% Annual Chance Flood Hazard) as identified by FEMA Flood Insurance Rate Map (FIRM) Panel 06037C0700F, effective September 26, 2008. This designation indicates an area of minimal flood hazard, outside the Special Flood Hazard Area (SFHA), and subject to a 500-year storm event. No regulatory base flood elevation (BFE) is established for this site. The site is suitable for development under current FEMA floodplain regulations, with no additional flood mitigation measures required beyond standard drainage design practices.

Project facilities would not be located in a tsunami or seiche zone based on the CDOC's Tsunami Hazard Area Map (CDOC n.d.). The proposed Project would be in the zone of possible inundation due to dam failure at the Littlerock Dam and Palmdale Dam. However, construction of Project facilities would not increase the risk of pollutant release due to inundation as construction would comply to seismic standards set forth by the American Water Works Association and the California Building Code, which include required safety factors to prevent catastrophic failures. Therefore, impacts would be less than significant.

e) **Less than Significant Impact**. The state of California adopted the Sustainable Groundwater Management Act (SGMA) in 2014 to mandate sustainable groundwater development. This legislation mandates avoidance of adverse groundwater conditions by defining what constitutes an adverse condition (a minimum threshold) and by requiring avoidance of the adverse condition by management action. The Antelope Valley Groundwater Basin has been adjudicated since 2015 and is exempt from the requirements of SGMA. The proposed Project would replenish the Antelope Valley Groundwater Basin, a beneficial impact. The Project would not alter or conflict with the Judgement and PWD would continue to comply with the Judgement set forth in 2015.

Project compliance with the Basin Plan is described above. Operation of the Project would not conflict or obstruct implementation of a Water Quality Plan or a GSP. The Project would produce and inject purified water that meets Title 22 Standards, complying with State regulations. Therefore, impacts on water resources planning would be less than significant.

Mitigation Measures

With implementation of the following mitigation measures, Project-related impacts on hydrology and water quality would be less than significant.

HYD-1 Material Harm Review. PWD shall coordinate with the Antelope Valley Watermaster Engineer and conduct a material harm review of the proposed groundwater Well 37 and groundwater rights. The Antelope Valley Watermaster Engineer would ensure operational criteria for the wells do not result in a net deficit in aquifer volume or a lowering of the local groundwater table such that the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted. This analysis

will be completed as part of a groundwater storage agreement application process through the Antelope Valley Watermaster.

HYD-2 Drainage Plan. PWD shall complete drainage assessment and design in accordance with all applicable laws, regulations, and best management practices. The assessment and design shall be submitted as a drainage plan to appropriate jurisdictions to verify that drainage would not contribute to runoff that would result in flooding.

2.3.11 Land Use and Planning

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Discussion: Existing zoning and land use designations for the Project parcels are defined by the City of Palmdale and County of Los Angeles:

- AWPF and purified water injection wells – City of Palmdale (APNs 3022-011-001, 3022-011-002)
  - Zone Office Flex
  - Land Use Designation Employment Flex
- Brine Ponds – Unincorporated Los Angeles County (APN 3025-024-900)
  - Zone M-1.5 (Restricted Heavy Manufacturing) [Prezone Utilities per City of Palmdale]
  - Land Use Designation P - Public and Semi-Public [Utilities per City of Palmdale]
  - Rural Outdoor Lighting District
  - Within Palmdale Regional Airport Area of Influence
- PWRP – Unincorporated Los Angeles County (APN 3022-007-900)
  - Zone M-1.5 (Restricted Heavy Manufacturing) [Utilities per City of Palmdale]
  - Land Use Designation P - Public and Semi-Public [Public Facilities - Civic per City of Palmdale]
  - Rural Outdoor Lighting District
  - Within Palmdale Regional Airport Area of Influence
- Tertiary Effluent Pipeline (portion on parcel to the north of the AWPF owned by LAWA, Unincorporated Los Angeles County APN 3022-006-272)
  - Zone M-1.5 (Restricted Heavy Manufacturing) [Prezone Aerospace Industrial per City of Palmdale]
  - Land Use Designation P - Public and Semi-Public [Aerospace Industrial per City of Palmdale]
  - Rural Outdoor Lighting District
  - Within Palmdale Regional Airport Area of Influence
- Well 37 – Unincorporated Los Angeles County APN 3022-006-270
  - Zone M-2.5 (Aircraft and Heavy Manufacturing) [Prezone Aerospace Industrial per City of Palmdale]
  - Land Use Designation P - Public and Semi-Public [Aerospace Industrial per City of Palmdale]
  - Rural Outdoor Lighting District

- Within Palmdale Regional Airport Area of Influence

Transmission lines, water storage tanks, and supportive buildings and structures are allowed uses within the Utilities zone. Mixed-use development of lighter industrial uses and more intensive service, retail, and commercial uses are allowed uses within the Employment Flex designation. Mixed-use development of office/flex uses and supportive service, retail, and commercial uses are allowed uses within the Office Flex zone. The Aerospace Industrial zone allows many uses, such as intensive manufacturing, production, repair, and distribution, that are not suitable adjacent to other sensitive uses (City of Palmdale 2023). The Restricted Heavy Manufacturing Zone (Zone M-1.5) allows for light and restricted heavy industry, repair, wholesale, and packaging, including manufacture, assembly, distribution, and storage of goods with low to medium nuisance impacts, but excluding raw-materials production, processing, or bulk handling (Los Angeles County Code Section 22.22.010). However, utilities such as the proposed Project elements are generally allowed in any zone. Additionally, pursuant to California Government Code Section 53091, the building and zoning ordinances of a county or city do not apply to the location or construction of facilities for production, generation, storage, treatment, or transmission of water or wastewater by a local agency.

The City of Palmdale's General Plan Sustainability, Climate Action, and Resilience Element; Palmdale Water District's SWRP Update (2023); Los Angeles County's Water Plan (2023); and Antelope Valley's Integrated Regional Water Management (IRWM) Plan (2019) are planning documents that have helped identify the community's water needs and priorities. The Project directly aligns with the SWRP Update which includes a plan for developing and diversifying PWD's water supply through 2050. To sustainably meet future water demands and address existing groundwater overdraft, the SWRP examines maximizing PWD imported water supplies for internal water storage, purified recycled water injection (such as proposed by the Project), well rehabilitation and/or replacement of existing wells, new wells, and local supply enhancements. The Project would predominantly serve residents within the PWD service area, and in the long-term would positively impact local residents due to the benefits that potable reuse would have on the local Antelope Valley Groundwater Basin.

a) **No Impact**. The physical division of an established community refers to the construction of features that impact mobility within an existing community or between a community and outlying area, such as interstate highways, railroad tracks, or permanent removal of a means of access, such as a local road or bridge. Although the proposed Project pipelines are linear features, they would be installed underground and would not permanently divide an established community. Other Project elements (AWPF, wells) would be limited to the PWD 20-acre parcel and immediately adjacent area, the brine ponds would be limited to the area of existing unused oxidation ponds, and the pump station would be located on vacant land at the existing PWRP. Construction and operation of these Project elements would not physically divide an established community. Therefore, no impacts would occur.

b) **Less than Significant Impact**. According to City and County designations, Project components would be located within Office Flex, Utilities, Aerospace Industrial and Restricted Heavy Manufacturing zones. The County may conduct ministerial site plan review if the brine ponds (located in the County M-1.5 zone) are considered facilities accessory to the storage and

distribution of water (County Table 22.22.030-B). Construction and operation of the brine ponds would occur on the same parcel previously used as wastewater oxidation ponds. No substantial change in land use is proposed. The proposed pump station and portions of the Project pipelines would be located at the existing PWRP, an existing wastewater treatment plant; no change in land use is proposed. Well 37 would be a replacement for an adjacent well located on a LAWA-owned open space parcel. The AWPF would represent a change in land use on PWD's 20-acre parcel, from vacant to water treatment facility. However, since the building and zoning ordinances of a county or city do not apply to the location or construction of water facilities by a local agency, the Project would not conflict with zoning and land use designations by the City of Palmdale or County of Los Angeles. The Project would also support the City's goal of increasing the municipal reuse of local recycled water (City of Palmdale 2022a).

The pump station at the PWRP, brine ponds, Well 37, and some of the proposed Project pipelines would be within the Airport Influence Area (AIA) for Palmdale Regional Airport. The Los Angeles County Airport Land Use Plan includes policies and programs that apply to Palmdale Regional Airport, including prohibiting uses which would attract large concentrations of birds, emit smoke, or which may otherwise affect safe air navigation. Construction of facilities within the AIA has the potential to disrupt airport operations due to construction equipment (e.g., cranes) which could pose temporary hazards to aviation within the AIA. PWD would coordinate with the County of Los Angeles Airport Land Use Commission (ALUC) and Federal Aviation Administration (FAA) and prepare an airport construction safety plan that would identify best management practices to be used before Project construction. The FAA requires anyone proposing to build a structure near an airport to submit Form 7460 which initiates the FAA obstruction evaluation/airport airspace analysis process. PWD would notify the Palmdale Regional Airport of proposed construction activities in advance and participate in the FAA's 7460 process so that the proposed construction equipment does not pose hazards to aviation.

Operation of the Project would include discharge of brine for evaporation at the brine ponds. However, due to the salinity of the water to be discharged at the brine ponds, attraction of large numbers of birds would not be anticipated. Additionally, the parcel proposed for the brine ponds was previously used for oxidation ponds. With coordination with federal and local airport authorities to ensure facility locations and heights would not pose a hazard to aviation, conflict with the ALUP and impacts to land use planning would be less than significant.

2.3.12 Mineral Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Discussion: As mapped by the California Department of Conservation Division of Mine Reclamation (2025), mines near the Project area include Palmdale mine (ID 91-19-0020) located approximately 6.5 miles southeast of the Project site and 75th Street Quarry (ID 91-19-0049) located approximately 9.5 miles southeast of the Project site. The City of Palmdale General Plan 2045 includes a Mineral Resource Zone (Production-Consumption region) designation, covering Palmdale and Lancaster. The Mineral Resource Zone includes sand and gravel deposits from alluvial fans, specifically the Little Rock Fan and Big Rock Creek Fan.

California's Surface Mining and Reclamation Act of 1975 (SMARA) requires the State Geologist to classify land into mineral resource zones based on the known or inferred mineral resource potential of that land. The California Department of Conservation's Mineral Resources Program provides data about California's varied non-fuel mineral resources, and information about active and historic mining activities throughout the state.

The City of Palmdale has adopted its own SMARA-certified ordinance and zoning designations. As such, the City of Palmdale is the Lead Agency for the processing of surface mining reclamation plan applications on private lands. All surface mining operations that disturb greater than 1 acre or move more than 1,000 cubic yards must have an approved reclamation plan before the start of mining activity. Reclamation plans are required by SMARA to assure that:

- Adverse environmental effects are prevented or minimized and mined lands are reclaimed to a useable condition readily adaptable for alternate land uses.
- Production and conservation of minerals are encouraged, while considering recreation, watershed, wildlife, aesthetic, range and forage values.
- Residual hazards to public health and safety are eliminated.

a) **No Impact.** The Project sites are not currently used for the purpose of mineral extraction, and the Project sites are not designated as areas of known mineral resources. Furthermore, the Project would not include any mineral extraction activities. Therefore, construction and operation of the Project would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state, and no impacts would occur.

b) **No Impact**. No mineral resource recovery sites are delineated for the Project sites in a General Plan, specific plan, or any other land use plan prepared by the City of Palmdale or the County of Los Angeles. Therefore, no impacts would occur.

2.3.13 Noise

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

Discussion: Proposed Project elements are located within the incorporated area of the City of Palmdale (AWPF and pipeline segments) and the unincorporated area of Los Angeles County (brine ponds, pump station at the PWRP, Well 37, and pipeline segments). The proposed AWPF site is undeveloped and ambient noise results from transportation (roadway traffic noise and the adjacent airport) and agricultural and industrial activities on nearby parcels. The brine ponds and existing site for the proposed pump station at the PWRP are located on parcels surrounded by open space and agriculture. Existing vibration sources at the Project sites include heavy vehicle use on area roadways.

Chapter 8.28 of the City of Palmdale Municipal Code (Noise Ordinance) governs construction and operational noise for various land uses and regulates the impact of offensive noise from various sources. The Municipal Code's Noise Ordinance does not contain any specific limits, but rather states that "It shall be unlawful for any person to willfully make or continue, or cause or to be made or continued, any loud, unnecessary, or unusual noise…" According to Section 8.28.030, no person shall perform any construction or repair work on any Sunday, or any other day after 8:00 p.m. or before 6:30 a.m., in any residential zone or within 500 feet of any residence, hotel, motel or recreational vehicle park. According to Section 8.28.070, construction work or excavation by a public utility may also be exempt from the noise level limits for the preservation of life or property and where such necessity makes it necessary to construct, repair, or excavate during the prohibited hours (City of Palmdale 2025). The Palmdale Municipal Code establishes a restriction on excessive noise that would disturb neighborhoods or other sensitive uses.

Chapter 12.08, Noise Control, of the County of Los Angeles Municipal Code serves as the Noise Ordinance for the County and establishes standards to control unnecessary, excessive, and annoying noise and vibration in the County. Chapter 12.08 of the Los Angeles County Code, Section 12.08.380 assigns standards for receptor properties in four noise zones in the County (Table 22). The exterior noise levels are meant to be further applied as noise standards based on the duration of the noise; i.e., the louder the noise, the shorter the time it is allowed to last.

Table 22. County of Los Angeles Exterior Noise Standards by Noise Zone

Noise Zone	Designated Noise Zone Land Use (Receptor Property)	Time Interval	Exterior Noise Level (dB)
I	Noise-sensitive area	Anytime	45
II	Residential properties	10:00 P.M. to 7:00 A.M. (nighttime)	45
		7:00 A.M. to 10:00 P.M. (daytime)	50
III	Commercial properties	10:00 P.M. to 7:00 A.M. (nighttime)	55
		7:00 A.M. to 10:00 P.M. (daytime)	60
IV	Industrial properties	Anytime	70

With respect to construction noise in the County, Section 12.08.440 of the Noise Ordinance prohibits the operation of any tools or equipment used between weekday hours of 7:00 P.M. and 7:00 A.M., or at any time on Sundays or holidays, which will create a noise disturbance across a residential or commercial real-property line. The only exceptions would be emergency work or public safety projects (Section 12.08.0570, part 5, exemption H, Public Health and Safety Activities) or by variance issued by the health officer. Additionally, both the working hours and maximum levels of equipment and activity noise that are allowable from both mobile and stationary equipment in the County are defined by land use (Table 23).

Table 23. County of Los Angeles Construction Noise Standards

Allowable Work Dates and Hours	Residential Structures					
	Single-Family		Multi-Family		Semi-Residential/Commercial	
	Mobile Equipment[a]	Stationary Equipment[b]	Mobile Equipment[a]	Stationary Equipment[b]	Mobile Equipment[a]	Stationary Equipment[b]
Daily 7:00 A.M. to 8:00 P.M.[c]	75 dBA	60 dBA	80 dBA	65 dBA	85 dBA	70 dBA
Daily 8:00 P.M. to 7:00 A.M.[d]	60 dBA	50 dBA	64 dBA	55 dBA	70 dBA	60 dBA
Business Structures						
Daily[d]	85 dBA					

Source: County of Los Angeles Ordinance No. 11743, Section 12.08.440
a Represents maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days).
b Represents maximum noise level for repetitively scheduled and relatively long-term operation (periods of 10 days or more).
c Exception for Sundays and legal holidays.
d Includes all day Sunday and legal holidays.

a) **Less Than Significant Impact with Mitigation Incorporated.** The closest noise receptors to the proposed AWPF site are a residence on 25th Street East located approximately 625 feet south, a maintenance company office approximately 450 feet south, and a warehouse located immediately east of the site. The closest residence to the proposed pump station location at the PWRP is over 0.75 miles south on Avenue Q. The closest noise receptors to the proposed brine pipeline are located on East Avenue P and include the Air Force Plant 42 Fire Department, National Weather Service, American Red Cross donation center, and the Desert Aire Golf Course. These uses would be within approximately 170 feet of brine pipeline installation on East Avenue P, with the exception of the golf course building which would be within approximately 20 feet of brine pipeline installation. Sensitive noise receptors are not present adjacent to the proposed pump station location at the PWRP or the brine ponds which are adjacent to open space and agricultural land uses.

Construction. During installation of the proposed Project facilities, noise would be temporarily generated from excavators, backhoes, dozers, delivery trucks, water trucks, dump trucks, and other construction equipment. Noise could be intermittently noticeable to adjacent residences, offices, and industrial buildings. For example, typical construction equipment (e.g., concrete saw, flatbed truck, grader, paver, and backhoe) emits maximum noise levels from 74 to 90 dBA at 50 feet (FHWA 2006). However, noise would attenuate within a short distance. For example, noise from a concrete saw emitting 90 dBA at 50 feet would attenuate to approximately 68.1 dBA at 625 feet, approximately 70.9 dBA at 450 feet, and approximately 79.4 dBA at 170 feet (Canter 1996). Additionally, most noise receptors along the brine pipeline alignment on East Avenue P where construction would be closest to existing development would be within buildings, which would substantially reduce observed noise levels.

Average noise levels during construction would vary depending on type, number and duration of use for different construction equipment. Composite noise levels for typical construction phases are noted in Table 24.

Table 24. Typical Noise Levels from Construction Activity

Construction Phase	Noise Level (dBA, L_{eq})
Ground clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89
Well Drilling	83

Source: Woodard & Curran 2024

Although the number of noise receptors to Project sites is limited, construction could generate substantial temporary increases in ambient noise levels. While the noise generated during Project construction in the daytime would not be expected to exceed the County's residential standard (75 dBA for mobile equipment and 60 dBA for stationary equipment in the daytime), installation of the proposed brine pipeline could temporarily exceed the County's business standard of 85 dBA. Additionally, construction noise generated outside the City or County's acceptable construction hours and days could expose sensitive receptors to significant noise

levels. Injection wells drilling may require 24-hour construction. As conceptually sited, an injection well may be within 650 of the existing residence south of the PWD 20-acre parcel. Well drilling noise of 83 dBA (per Table 24) would reduce to approximately 60.7 dBA at 650 feet (Canter 1996). To reduce potentially significant noise impacts to sensitive receptors, mitigation measures NOISE-1 and NOISE-2 would be implemented during Project construction. As mitigated, impacts would be less than significant.

Operation. Operation of the Project would include new sources of operations and maintenance noise from process equipment such as pumps, compressors, and fans, and from utility vehicles and delivery trucks. The AWPF design would include the following considerations:

- HVAC systems serving occupied areas will be designed to meet the average noise criteria levels recommended by ASHRAE.
- Where efficient HVAC equipment selection does not result in acceptable noise levels, sound attenuation devices such as duct silencers will be utilized to reduce noise levels.
- Duct velocities will be maintained in accordance with the recommendations in the ASHRAE Applications Handbook.
- Noise produced outside of the buildings will be evaluated to comply with local codes and ordinances. The evaluations will also consider the sound emission criteria for all other sources.
- Indoor Design Criteria:
  - Lab Room - 45 dBA
  - Office, hallway, lobby, kitchenette, I/T, community room - 45 dBA
  - Restrooms - 55 dBA

Operation of the brine ponds would not be noise generating except for occasional maintenance. The existing PWRP site for the proposed pump station is surrounded by open space and located away from sensitive receptors. Operation of these Project components would not conflict with the County's Noise Ordinance or General Plan.

Goal N-1 of the City of Palmdale General Plan (2022a) is to minimize resident exposure to excessive noise, and N-1.3 establishes a 65 dBA CNEL (at the property line) exterior noise standard for sensitive land uses. The majority of noise-generating activities at the AWPF would occur within buildings. The nearest residential receptor is approximately 625 feet away. With implementation of the design considerations noted above, especially the evaluation of noise produced outside of the buildings, operation of the AWPF would not conflict with the City's Noise Ordinance or General Plan. Project-related impacts on noise during operations would be less than significant.

b) **Less Than Significant Impact with Mitigation Incorporated.** Equipment used for Project construction would create groundborne vibration and groundborne noise. The closest structure to the proposed AWPF site is a maintenance company building located approximately 450 south and the closest structure to the PWD 20-acre parcel where the injection wells would be sited is a warehouse located immediately adjacent to the parcel. Existing process units at the

PWRP are within approximately 30 feet of the proposed location for the pump station. Along the pipeline alignments, the closest building is at the Desert Aire golf course, within approximately 20 feet of brine pipeline installation

Construction. Typical vibration (peak particle velocity (PPV) at 25 feet) produced by construction and maintenance equipment includes small bulldozers at 0.003 (inches/second), loaded trucks at 0.076 inches/second, large bulldozers and caisson drills at 0.089 inches/second, and vibratory rollers at 0.21 inches/second (FTA 2006). The Federal Transit Administration (FTA) has published architectural damage criterion for continuous vibrations of 0.20 inch/second for non-engineered timber and masonry buildings and 0.30 inch/second for engineered concrete and masonry (no plaster) (FTA 2006). The FTA threshold of human annoyance to ground-borne vibration is 80 root mean square (RMS) velocity in decibels (VdB) (FTA 2006).

Construction of the proposed Project would employ conventional equipment and techniques which would generally not cause excessive ground-borne vibration. However, drilling would be required for installation of the injection and monitoring wells and rollers would be used during construction. Based on analysis presented in the SWRP Update PEIR (Woodard & Curran 2024), groundborne vibration noise from the drilling rig would attenuate to below 80 VdB at a distance of 43 feet. Installation of the proposed injection wells could occur in close proximity to the adjacent warehouse building but temporary vibration would not exceed the 0.30 inch/second standard for engineered concrete and masonry buildings, and temporary groundborne vibration noise would not be significant at this type of receptor. However, brine pipeline installation would occur in close proximity to existing structures on East Avenue P and use of vibratory rollers could exceed established thresholds. With implementation of mitigation measure NOISE-3, impacts related to ground-borne vibration and noise during Project construction would be less than significant.

Operation. Operation and maintenance of Project facilities would include periodic chemical deliveries potentially including the use of tractor trailers; vibration generation would be substantially below the 0.20 inch/second PPV threshold. Process equipment associated with the proposed Project would not include the use of equipment that could create groundborne vibration. Since the nearest structure is over 450 feet south of the proposed AWPF site, operation and maintenance would not result in the generation of excessive groundborne vibration or groundborne noise levels, and impacts would be less than significant.

c) **Less than Significant Impact.** The Los Angeles County Airport Land Use Commission (ALUC) implements State law regarding airports and surrounding land use compatibility for the County. The ALUC is responsible for designating an Airport Influence Area (AIA) and noise contours for each airport within its jurisdiction. Noise contours are lines drawn about a noise source indicating constant energy levels of noise exposure. The proposed Project sites are located outside of the Palmdale Regional Airport 65 CNEL noise contour (LACAPLU 2004).

The proposed Project would not result in new residences near any airports. During operation of the AWPF PWD employees would experience intermittent noise typical of aircraft takeoff

and landing. Installation of the pump station at the PWRP would not expose additional LACSD workers to airport-related noise, and brine disposal would not be noise generating. Water treatment facilities are not considered noise sensitive uses. Office and laboratory activities would take place within the proposed Administration Building which would substantially attenuate airport-generated noise. Conceptual design criteria include 45 dB indoor noise criteria maximum for the laboratory, office space, hallway, lobby, kitchenette, I/T, and conference room of the Administration Building. Since the 65 CNEL contour around the airport is mapped north of proposed Project facilities (LACAPLU 2004), Project-related impacts on noise near an airport/airstrip would be less than significant.

Mitigation Measures

Implementation of the following mitigation measures would reduce impacts related to noise and vibration to less than significant levels.

NOISE-1 Noise Measures. PWD shall require the construction contractor(s) to implement the following measures, as applicable, during construction of the proposed Project:

- Construction activities shall meet municipal, or County code requirements related to noise. Construction activities shall be limited to between 7:00 am and 7:00 pm Monday through Saturday to avoid noise-sensitive hours of the day, as feasible (well drilling may be 24-hours per day). Construction activities shall be prohibited on Sunday and holidays.
- Sensitive receptors of the proposed Project construction activities shall be identified and mapped.
- Construction equipment noise shall be minimized by muffling and shielding intakes and exhaust on construction equipment (per the manufacturer's specifications) and by shrouding or shielding impact tools.
- Construction contractor(s) shall locate fixed construction equipment and construction staging areas as far as possible from nearby sensitive receptors.
- Where feasible, and especially during 24-hour well drilling, construct barriers between noise sources and noise-sensitive land uses to block sound transmission. Enclose construction equipment where practicable.

NOISE-2 Noise Coordinator. PWD shall require the construction contractor(s) to notify in writing all landowners and occupants of properties within 500 feet of the construction area of the construction schedule at least two weeks prior to groundbreaking. The construction contractor(s) shall designate a Noise Coordinator who shall be responsible for responding to complaints regarding construction noise. The Noise Coordinator shall ensure that reasonable measures are implemented to correct any problems. A contact telephone number for the Noise Coordinator shall be conspicuously posted at the construction site and included in the written notification of the construction schedule sent to surrounding properties.

NOISE-3 Vibration Measures. PWD shall require the construction contractor(s) to implement the following measures, as applicable, during construction of proposed facilities:

- Sensitive receptors shall be identified and mapped.
- Limit construction activities that cause excessive groundborne vibrations including use of vibratory rollers to at least 43 feet from sensitive receptors and 15 feet from any structures. Alternative construction equipment for paving could include static/pneumatic rollers in areas within 15 feet of structures.

2.3.14 Population and Housing

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion: The Project area is dominated by disturbed open space desert scrubland, agricultural land, and industrial uses. Existing developments in the Project area include the Desert Aire Golf Course, an American Red Cross office building, the Palmdale Regional Airport, a United States Federal Aviation Agency complex, an outdoor historical airplane exhibit, and a small cluster of industrial-commercial businesses (e.g., storage facility and auto repair shop). According to the City's land use designations, Project components would be located on parcels zoned for Office Flex, Restricted Heavy Industrial, Utilities, and Aerospace Industrial. The nearest residence to any Project facilities is located at 38832 25th Street East, approximately 300 feet south of the PWD 20-acre parcel that is the proposed site of the AWPF.

a) **Less Than Significant Impact.** The purpose of the Project is to improve water supply reliability by augmenting the Antelope Valley groundwater basin with purified recycled water, consistent with PWD's SWRP Update (2023). Any water supply benefits would serve existing and planned land uses under the City of Palmdale and County of Los Angeles General Plans and zoning and would not induce growth beyond those plans. The Project does not include residential or commercial development and would therefore not induce any additional, unplanned growth within the PWD service area.

   Construction: The Project would involve construction of an AWPF and two injection wells and associated conveyance facilities on a PWD-owned 20-acre parcel, a new pump station at the existing PWRP, conversion of existing unused oxidation ponds to brine disposal ponds, installation of a replacement production well, and new pipelines in existing streets and on a LAWA-owned parcel north of the AWPF site. Worker parking and material staging would be on the PWD parcel. The construction workforce for the AWPF would average ~36 workers/day and would be temporary, commuting from the existing regional labor pool, with no provision of on-site housing. Materials and equipment deliveries would use existing street networks during normal weekday hours. Access roads to support construction and long-term operations would consist of internal service roads located entirely within the PWD parcel, with site access from existing 25th Street East. No new public roads or roadway extensions are proposed. Because the Project would not provide housing, would not create or extend public access roads, and would not extend new urban services or transportation infrastructure into previously unserved areas, it would not directly or indirectly induce substantial unplanned population growth.

Operations: The AWPF would operate 24/7 and be staffed by PWD personnel, with at most a minimal increase in operations and maintenance staffing (an estimated 10 PWD operators would be employed at the facility, with approximately 7 staff members on-site at any one time). The facility would not function as a new employment center capable of attracting substantial new population to the area. Product-water pipelines would remain within PWD's parcel, the tertiary effluent pipeline from the PWRP to the AWPF would occur within existing public rights-of-way and an easement across LAWA property, and the brine line would follow existing roadway corridors to repurposed LACSD oxidation ponds. Proposed Well 37 would serve as a replacement well for PWD's potable water system. Operational access would continue to rely on the internal service roads inside the PWD parcel and existing public streets. No new off-site access roads or capacity-increasing roadway improvements are part of the Project. These facilities would not open new areas to development or extend urban services beyond already planned utility corridors. As a result, the Project does not remove an obstacle to growth or extend infrastructure in a manner that would indirectly induce substantial unplanned population growth.

Considering the temporary nature of construction, location of Project facilities, the minimal operational staffing, and that access is provided by internal on-parcel service roads and existing public streets only, the Project would not directly (e.g., through housing or employment centers) or indirectly (e.g., via infrastructure extensions that open new areas) induce substantial unplanned population growth. Therefore, impacts would be less than significant.

b) **No Impact.** The Project would construct and operate an AWPF and two injection wells on a PWD-owned 20-acre parcel, install product-water conveyance within the parcel, add a tertiary effluent pump station at the PWRP with an ~6,500-foot 18-inch pipeline in 30th Street East, install a small-diameter brine pipeline in existing roadway rights-of-way (e.g., 25th Street East, East Avenue P, 40th Street East) to reach existing LACSD oxidation ponds to be reconfigured for brine evaporation, install a replacement groundwater well, and install groundwater monitoring wells. Construction staging and worker parking would occur on the 20-acre PWD parcel. The Project site traverses disturbed and open lands and is adjacent to industrial facilities, and no residences occur on parcels overlapped by the Project. No acquisition, removal, or relocation of housing is proposed. Therefore, the Project would not displace existing people or housing or necessitate the construction of replacement housing elsewhere. Temporary construction activities would be confined to the PWD parcel, LAWA easement, LACSD brine pond site, and existing public rights-of-way/easements and would not block access to residences or require temporary residential relocation. The operational facilities would be staffed by existing PWD personnel with, at most, a minimal increase (an estimated 10 PWD operators would be employed at the facility, with approximately 7 staff members on-site at any one time), would not convert housing to non-residential use, and would not change land use designations or extend urban services into previously unserved areas. The brine disposal approach reuses existing LACSD oxidation ponds rather than creating new service areas. Therefore, the Project would not create conditions that indirectly displace people or housing (e.g., by opening new areas to development or catalyzing land use conversion). Any water-supply reliability benefits would serve existing and planned land uses consistent with the City of Palmdale and County of Los Angeles General Plans and the SWRP Update (2023).

Because the Project requires no demolition, acquisition, or relocation of housing; confines work to PWD, LAWA and LACSD parcels and existing corridors; and does not alter land use controls or extend services in a growth-inducing manner, it would not displace existing people or housing and would not necessitate construction of replacement housing elsewhere. There would be no impact.

2.3.15 Public Services

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?	☐	☐	☒	☐
ii) Police protection?	☐	☐	☒	☐
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

Discussion: The Los Angeles County Fire Department (LACFD) provides emergency medical services, fire and rescue services and safe haven services for unincorporated Los Angeles County and for contract cities including the City of Palmdale (LACFD 2025). LACFD Station #131 is responsible for the Project area (LACFD 2024) and would provide fire protection to the Project site. Station #131 is located at 2629 East Avenue S, approximately 2.1 miles south of the proposed AWPF site.

The Palmdale Sheriff's Station, located at 750 E Ave Q, would provide police services to the Project. The Sheriff's Station is approximately 1.8 miles west of the proposed AWPF site (LACSD 2023).

The Project area is within the Antelope Valley Union High School District (LACBE 2023) and Palmdale School District. Schools closest to the 20-acre PWD parcel proposed for the AWPF include Palmdale SOAR High School (0.20 miles southwest), Manzanita Elementary School (0.7 miles southeast), Tamarisk Elementary School (0.7 miles southwest), the Palmdale Aerospace Academy (0.8 miles southeast), and Just Plane Kids Preschool / Day Care (0.8 miles north of the 20-acre parcel, 170 feet north of the proposed brine pipeline).

Parks closest to the 20-acre PWD parcel proposed for the AWPF include Desert Sands Park (2.3 miles west), Poncitlán Square (1.8 miles southwest), Melville J. Courson Park (1.6 miles southwest), and William J. McAdam Park (0.6 miles south).

a)i) and ii) **Less than Significant Impact**. The Project would construct and operate an AWPF with two injection wells and internal service roads on a PWD-owned 20-acre parcel, install product-water conveyance within the parcel, construct a tertiary effluent pump station at the PWRP with an ~6,500-ft pipeline in existing public right-of-way, install a small-diameter brine pipeline in existing roadway corridors to repurposed LACSD oxidation ponds, and install a replacement groundwater well and monitoring wells.

Primary site access (and emergency vehicle access) would be from 25th Street East. Internal roads would be on-parcel with no new public road extensions proposed. Construction would be temporary, with an average of ~36 workers/day during weekday daytime hours. Staging and worker parking would occur on the PWD parcel, and deliveries would use existing public streets. Given the temporary nature, controlled access, and existing road network use, construction would not necessitate new or physically altered fire or police facilities to maintain service levels. Therefore, impacts related to fire and police services during Project construction would be less than significant.

The AWPF would incorporate security features (e.g., perimeter fencing, motorized access gates at vehicular entries, lockable chain-link enclosures for chemical areas, and video cameras) and include a standby generator. Designed in coordination with the Los Angeles County Fire Department, AWPF fire protection systems would meet applicable Fire Code requirements. Areas requiring sprinkler protection would be provided with a fire riser and pressure regulation. Design of the AWPF would include a separate dedicated fire protection supply connection for the facility's fire protection system, including hydrants, fire sprinklers, or wet standpipes. This connection would be equipped with backflow prevention and control valves and would be sized to meet fire flow requirements established by the Fire Department.

The AWPF would operate 24/7 and would be staffed by approximately 10 PWD personnel. The facility would not be a public destination, and the Administration Building occupancy is 49. This activity level would not materially affect fire and/or police service ratios or response times. The Project would not open new development fronts or extend urban services to previously unserved areas that would indirectly require new fire or police facilities. With incorporation of security features, fire-protection and hazardous-materials compliance, and with operations relying on minimal staffing, operation of the Project would not create the need for new or physically altered fire or police facilities to maintain acceptable service ratios, response times, or performance objectives. Therefore, impacts related to fire and police services during Project operation would be less than significant.

iii) **No impact**. As discussed in section 2.3.14, the Project does not include housing or substantially induce population growth; therefore, it would not generate new students or increase enrollment at nearby schools. Since no new school facilities would be required as a result of the Project, there would be no impact.

iv) **No Impact**. The Project would not generate substantial population growth and would therefore not increase recreational demand. Nearby parks would not experience increased use due to the Project. The Project components are not located within any parks or recreational facilities, but the Project does include a new pipeline to connect the proposed pump station at the PWRP to the existing recycled water system. Recycled water is currently provided to McAdam Park for landscape irrigation. The Project would have benefits related to expansion of the recycled water system. Since the Project would not require new or expanded park facilities, there would be no impact.

v) **No impact**. The Project would not generate substantial population growth or create the need for new or expanded public services such as libraries, community centers, or other public facilities. Since no new or physically altered facilities would be needed, there would be no impact.

2.3.16 Recreation

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

Discussion:

a) **Less Than Significant Impact.** As discussed in Section 2.3.14, the Project would not provide housing and would not directly or indirectly induce substantial population growth. The Project's construction and operations would not result in a substantial influx of new residents to the area, as the workforce for both construction (approximately 36 workers) and operations (approximately 10 staff members) would be minimal. Thus, construction and operation of the proposed facilities would not result in a substantial increase in use of existing neighborhood and regional parks or other recreational facilities such that substantial deterioration of the facility would occur or be accelerated. The closest park is William J. McAdam Park, approximately 0.6 miles south of the PWD 20-acre parcel proposed for the AWPF. The Project components are not located within any parks or recreational facilities, but the Project does include a new pipeline to connect the proposed pump station at the PWRP to the existing recycled water system. Recycled water is currently provided to McAdam Park for landscape irrigation. The Project would have benefits related to expansion of the recycled water system.

A Class I bikeway is located on Avenue S, approximately 2 miles south of the proposed site for the AWPF, with other bikeways designated south and west of the Project sites (City of Palmdale 2019). No Project pipelines are proposed for Avenue S or other roadway segments with designated bikeways. The proposed brine pipeline would be constructed immediately adjacent to the entrance of the Desert Aire Golf Course. Coordination with the golf course during that segment of pipeline construction would be conducted as part of the Transportation Management Plan described below. Project pipeline installation would disrupt traffic patterns in the immediate area of the construction but the impacts at any one location would be temporary; pipeline installation would progress at approximately 100 feet per day. Overall, impacts on recreation would be less than significant.

b) **Less Than Significant Impact.** The Project does not include construction of new recreational facilities nor are any Project components located within parks or other recreational facilities. The Project does include a new recycled water pipeline to connect the proposed pump station at the PWRP to the existing recycled water system, a benefit to landscape irrigation at existing parks. As discussed in Section 2.3.14, the Project would not generate substantial population

growth that would require the construction or expansion of recreational facilities. Overall, impacts on recreation would be less than significant.

2.3.17 Transportation and Traffic

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities.	☐	☒	☐	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
d) Result in inadequate emergency access?	☐	☒	☐	☐

Discussion: The proposed Project is located in the Antelope Valley within the City of Palmdale and unincorporated areas of Los Angeles County. Contractors and staff would use State Route (SR) 138, which extends easterly from the SR 14/SR 138 Interchange, to access Project areas. SR 138 extends south to merge with Palmdale Boulevard to become an east-west highway. Bus service is provided through the Antelope Valley Transit Authority (AVTA). Several AVTA bus routes pass through the Project area, including routes 1, 2, 3, 8, 51, 52, and 98. The Metrolink Antelope Valley Line also runs in a north south direction through the Project area along SR 14. The Metrolink Palmdale stop is located near the intersection of E Avenue Q and SR 14 (AVTA 2025).

No pedestrian facilities (e.g., sidewalks, crosswalks, and pedestrian signals) are located within the proposed AWPF site. No bikeways are located in the Project areas per the City's Bikeway and Multi-Purpose Trail Plan (City of Palmdale 2019) and Los Angeles County Bikeways Map (County of Los Angeles 2016).

Applicable Regulatory Context

State

- California Streets and Highways Code: Establishes Caltrans encroachment regulations applicable to pipeline construction within or adjacent to roadways and to the movement of construction crews and equipment. Permits are required for transporting oversized loads, certain materials, and for construction-related traffic disturbances.[1] The California Vehicle Code regulates vehicle licensing, size, weight, and load for vehicles operating on highways.[2]
- Project Development Procedures Manual: Chapter 17 of the Caltrans Project Development Procedures Manual outlines requirements for encroachment onto State highways and for

[1] California Streets and Highways Code §§ 660–711

[2] California Vehicle Code §§ 35000–35796

the placement and protection of utilities within State highway rights-of-way (Caltrans, 2022).

Local

- Connect SoCal (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy): Connect SoCal is a long-range visioning plan designed to expand mobility options and promote sustainable growth by integrating transportation networks, planning strategies, and stakeholder collaboration. The 2024 plan was approved by the Southern California Association of Governments (SCAG) in April 2024 (SCAG 2024).
- Congestion Management Program (CMP): The Los Angeles County Metropolitan Transportation Authority (LACMTA) prepared the CMP in 2010, summarizing 18 years of highway and transit monitoring and 15 years of local growth monitoring. The CMP outlines requirements, implementation responsibilities, and transit system expansion, and provides level of service data and traffic growth projections (LACMTA 2010).
- City of Palmdale General Plan: The Circulation and Mobility Element of the City's General Plan addresses upgrades to pedestrian walkways, surface streets, arterial and regional highways, public transportation, rail, and air service. Recreational trails and bikeways are addressed in the Parks, Recreation, and Open Space Element. The 2045 General Plan serves as a blueprint for the City's long-term vision (City of Palmdale 2022a).
- County of Los Angeles General Plan: The Los Angeles County General Plan 2035 Mobility Element provides strategies for an efficient, multimodal transportation network, assessing system challenges and offering policy guidance to achieve long-term mobility goals. The Highway Plan and Bicycle Master Plan supplement this element (County of Los Angeles 2022).

a) **Less Than Significant Impact with Mitigation Incorporated**. Construction of the Project would generate vehicle trips associated with both construction worker commutes and material and equipment hauling. During Project construction, the workforce would average approximately 36 workers per day (21 craft workers and 15 management staff), and construction would occur over an estimated 29-month period. Normal work hours would be Monday through Friday, 7:00 a.m. to 7:00 p.m. Equipment deliveries would include concrete trucks, flatbed semis, low-boy semis, and dump trucks, with an estimated 1,768 total delivery trips over the construction period (including 464 concrete truck trips and 694 dump truck trips). These increases in daily trips on local and regional roadways could temporarily affect roadway capacity and circulation. Slower movements and larger turning radii of construction trucks compared to passenger vehicles could also reduce roadway efficiency. Construction of pipelines would impede traffic flow and disrupt AVTA bus routes since pipelines installed in existing streets could temporarily require partial or complete road closures. Per mitigation measure TRA-1, PWD would develop and implement a TMP for the Project construction phase which includes construction worker and truck routes, construction traffic control and site access, construction phasing and staffing levels, pavement maintenance, and mitigations for short-term impacts. The TMP would recommend various mitigation measures, including minimizing deliveries during the A.M. and P.M. peak travel hours, as well as alternative haul

routes to avoid traffic disruption to minimize disturbance to traffic flow. With implementation of mitigation measure TRA-1, impacts on the circulation system would be less than significant.

b) **Less Than Significant Impact**. The City of Palmdale applies the County of Los Angeles guidelines for review of vehicle miles traveled (VMT) assessment pursuant to the Office of Land Use and Climate Innovation Technical Advisory on Evaluating Transportation Impacts in CEQA (State of California 2018). The VMT guidelines recommend screening criteria to identify types, characteristics, or locations of projects that would not result in significant impacts to VMT. If a project meets screening criteria, then it is presumed that VMT impacts would be less than significant for the project and a detailed VMT analysis is not required. The County's screening criteria for non-retail project trip generation is a net increase of 110 or more daily vehicle trips. Since the expected daily staff levels on the site would be 5 to 7 employees, the Project is expected to generate less than 110 average daily trips (ADT) and would be exempted from further VMT analysis. Construction VMT would be temporary and would not be applicable to the transportation thresholds of significance recommended in the LCI Technical Advisory, which are based on a measurement of the operational average VMT per capita. Therefore, the Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b). Impacts would be less than significant.

c) **Less Than Significant Impact with Mitigation Incorporated**. Service roads would be constructed throughout the AWPF site, surrounding and connecting the buildings to facilitate operational and maintenance access. A primary access road along the southern side would support site entry for maintenance vehicles and chemical deliveries, leading directly to the chemical area located on the south side of the Process Building. Roadway design would be developed in accordance with the City of Palmdale Public Works Standards, PWD maintenance requirements, and applicable industry design guidelines including AASHTO and Caltrans. Roadways would support safe and durable access for operational, maintenance, and emergency vehicles throughout the facility. Circulation routes will be designed for two-way traffic where needed, with minimum lane widths of 32 feet to meet fire department access requirements. Secondary or service drives may have reduced widths where permitted. Roadway geometry, including turning radii and hammerheads, would accommodate large maintenance trucks and chemical delivery vehicles. Road striping, traffic signage, and site lighting would be included to enhance visibility and safety. Pedestrian safety features would be integrated into the design, including walkways and crossing areas as appropriate. Coordination with utility corridors and drainage infrastructure would ensure roadway designs are fully integrated into the overall site layout and maintainable per PWD standards. With implementation of these design considerations, the Project would not increase hazards due to a design feature like a sharp curve or dangerous intersection.

Construction would involve delivery of heavy equipment and materials to the AWPF site, PWRP, brine ponds, Well 37 site, and along pipeline alignments. Conveyance facilities (including the tertiary effluent pipeline, brine pipeline, recycled water pipeline, and sewer) would be installed underground within existing roadway rights-of-way. Temporary lane closures during trenching and installation could create short-term traffic conflicts. However, oversize loads would be required to comply with California Vehicle Code and Caltrans

requirements pertaining to licensing, size, weight, and roadway encroachment of construction vehicles.

Operation and maintenance activities would be contained within the AWPF, PWRP, brine pond sites, and Well 37 site. Since pipelines would be installed underground within existing rights-of-way they would not present a permanent hazard to roadway users.

Mitigation measure TRA-1 would require preparation of a TMP including development of Project-specific traffic counts and recommendations for construction-related oversize haul routes. Implementation of mitigation measure TRA-1 and compliance with applicable California Vehicle Code and Caltrans requirements would minimize the potential for hazards to other vehicles to less than significant levels.

c) **Less Than Significant Impact with Mitigation Incorporated**. Fire protection and police services within the Project area are provided by the LACFD and Los Angeles County Sheriff's Department. During construction, temporary lane closures or detours associated with pipeline installation in existing roadway rights-of-way (e.g., 30th Street East, East Avenue P, and 40th Street East) could delay emergency response times or disrupt emergency service delivery if not properly managed. To address this, mitigation measure TRA-1 would require preparation and implementation of a TMP that includes coordination with emergency service providers at least one month prior to construction, advance public notifications, and measures to maintain emergency access at all times. The TMP would also identify alternate routes and staging practices to avoid blocking critical corridors.

During operations, vehicular access to the AWPF site would be from 25th Street East via gated entrances and internal service roads. The Project would be designed to allow proper ingress and egress and comply with LACFD requirements for emergency vehicle turning radii and fire apparatus access, as confirmed through Fire Department plan review. Similarly, site security features (e.g., motorized gates) would be designed to allow emergency override access. The Project does not propose new public road closures or geometric changes that would conflict with emergency response routes or adopted emergency plans. Pipelines would be installed underground within existing rights-of-way, so they would not obstruct emergency access once construction is complete. With implementation of the TMP, coordination with Fire and Police prior to construction, and compliance with LACFD design standards, the Project would not result in inadequate emergency access. Therefore, impacts would be less than significant with mitigation incorporated.

Mitigation Measure

With implementation of the following mitigation measure, Project-related impacts on transportation and traffic would be less than significant.

TRA-1: Transportation Management Plan. Prior to construction, PWD shall require its construction contractor(s) to prepare and implement a Transportation Management Plan (TMP), subject to approval by the City of Palmdale and/or the County of Los Angeles, depending on jurisdiction. The TMP documents worker and truck routes, construction traffic control and site access, construction phasing and staffing levels, pavement maintenance and mitigations for short-term impacts. The plan shall include traffic counts at intersections near the proposed Project facilities to establish existing traffic conditions. Based on these counts, the plan shall recommend measures to minimize impacts on traffic flow. These measures shall include, but are not limited to:

- Identification of construction and delivery hours, with consideration of avoiding A.M. and P.M. peak periods.
- Specification of construction-related vehicle and oversize haul routes, including alternative routes to reduce traffic disruption.
- Limits on open trench length, delineation of work areas, and requirements for traffic control, flagging, and signage.
- Identification of access and parking restrictions.
- Designation of staging locations for construction activities.
- Identification of potential road or lane closures.
- Establishment of haul routes for construction-related traffic.
- Identification of alternative safe routes to maintain pedestrian and bicyclist safety during construction.

At least three days prior to construction, PWD shall coordinate with emergency service providers (police, fire, and others) to notify them of the construction schedule, Project alignment, and potential delays. PWD shall identify roadways and access points critical for emergency response and minimize disruptions or closures at these locations.

The plan shall also include provisions for traffic control measures such as barricades, warning signs, cones, lights, and flaggers to ensure safe circulation for vehicles, bicycles, pedestrians, and emergency responders.

2.3.18 Tribal Cultural Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Discussion: California Assembly Bill (AB) 52, through its implementing regulations, requires that lead agencies consult with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed Project and who have requested in writing to be informed by the lead agency of proposed projects in the tribe's geographic area (PRC Section 21080.3.1[b] and [d]).

In a letter dated January 13, 2023, the NAHC reported that the results of the SLF search failed to indicate the presence of Native American cultural resources in the immediate proposed Project site; though they stated that negative results do not preclude the presence of Native American cultural resources within the Project site. The NAHC also provided a list of Native American tribes who are traditionally or culturally affiliated with the geographic area of the Project and may have direct knowledge of Native American cultural resources in the Project area.

Consultation with Native American organizations and individuals was initiated to satisfy the requirements of AB 52. PWD sent consultation letters via certified mail on March 1, 2023, to the following six Native American tribes that are traditionally and culturally affiliated within the Pure Water Antelope Valley Project area informing them of their opportunity to consult on the Project's potential impacts to Tribal cultural resources.

- Fernandeño Tataviam Band of Mission Indians (FTBMI)
- Morongo Band of Mission Indians
- Quechan Tribe of the Fort Yuma Reservation

- San Fernando Band of Mission Indians
- Yuhaaviatam of San Manuel Nation (formerly known as the San Manuel Band of Mission Indians) (YSMN)
- Serrano Nation of Mission Indians

The three responses received to date are summarized below.

Morongo Band of Mission Indians. On March 28, 2023, Ann Brierty, Tribal Historic Preservation Officer with the Morongo Band of Mission Indians stated in a letter to the District that the "Project is not located within the ancestral territory and traditional use area of the Cahuilla and Serrano people of the Morongo Band of Mission Indians." The Morongo Band of Mission Indians did not request to consult with the District for the Project.

Yuhaaviatam of San Manuel Nation. On March 22, 2023, Ryan Nordness, Cultural Resource Analyst with YSMN, sent an email to the District stating that "The proposed project area exists within Serrano ancestral territory and, therefore, is of interest to the Tribe. However, due to the nature and location of the proposed project, and given the CRM Department's present state of knowledge, YSMN does not have any concerns with the project's implementation, as planned, at this time." The tribe did not request consultation pursuant to CEQA unless there is an unanticipated discovery of cultural resources during Project implementation. However, the YSMN did recommend mitigation measures be implemented for the Project, as included below.

Quechan Indian Tribe. On March 9, 2023, Jill McCormick, Historic Preservation Officer with the Quechan Indian Tribe, sent an email to the District stating "we do not wish to comment on this project. We defer to the more local Tribes and support their determinations on this matter."

a) i and ii) **Less than Significant Impact with Mitigation Incorporated.** Since significant tribal cultural resources are not known for the proposed Project sites, Project construction and operation would not be anticipated to significantly impact Tribal Cultural Resources. However, cultural resources mitigation measures (see Sections 2.3.5) and mitigation measures TCR-1 shall be implemented to further protect unknown tribal cultural resources. As mitigated, the proposed Project would have a less than significant impact on CRHR-listed or eligible resources, or on resources significant to a California Native American tribe.

Mitigation Measures

With implementation of the following mitigation measure TCR-1, and mitigation measures CUL-1 through CUL-4, Project-related impacts on Tribal cultural resources would be less than significant.

TCR-1 Tribal Notification. In the event that an archaeological resource inadvertently discovered during Project construction is determined to be potentially of Native American origin based on the initial assessment of the find by a qualified archaeologist pursuant to California Public Resources Code Section 21083.2(i), the Native American tribes that consulted on the proposed Project pursuant to California Assembly Bill 52 shall be notified and be provided information about the

find to allow for early input from the tribal representatives with regards to the potential significance and treatment of the resource.

If, as a result of the resource evaluation and tribal consultation process, the resource is considered to be a tribal cultural resource in accordance with California PRC Section 21074, determined to be eligible for inclusion in the CRHR or a local register of historical resources or determined to be significant by PWD (the CEQA lead agency), the qualified archaeologist shall monitor all remaining ground-disturbing activities in the area of the resource, and a tribal monitor from a consulting Native American tribe shall be invited to monitor the ground-disturbing activities. The tribal monitor shall be ancestrally affiliated with the Project area and qualified by their tribe to monitor tribal cultural resources.

The input of all consulting tribes shall be taken into account in the preparation of any required treatment plan for the resources prepared by the qualified archaeologist. Work in the area of the discovery may not resume until evaluation and treatment of the resource are completed and/or the resource is recovered and removed from the site. Construction activities may continue on other parts of the construction site while evaluation and treatment of the resource takes place.

Archaeological/cultural documents created as a part of the Project shall be supplied to PWD for dissemination to the consulting Native American Tribes and consultation will continue throughout the life of the Project.

2.3.19 Utilities and Service Systems

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statues and regulations related to solid waste?	☐	☐	☒	☐

Discussion: PWD supplies water to the Project as well as the southeastern portion of the City of Palmdale and areas of unincorporated Los Angeles County. PWD provides their customers with a combination of groundwater, surface water, and recycled water. Groundwater comes from PWD's operation of groundwater wells and surface water is supplied from the SWP and Littlerock Creek. PWD has a direct Table "A" amount of 21,300 acre-feet from the SWP. Surface water from Littlerock Creek is stored in Littlerock Dam Reservoir, which is jointly owned by PWD and Littlerock Creek Irrigation District. Both sources of surface water are transferred to Palmdale Lake for local storage. Recycled water available for use within the PWD service area is supplied by LACSD's PWRP. A contract with LACSD entitles PWD to up to 5,325 AFY of recycled water.

LACSD provides wastewater management services in the Project area with PWRP providing tertiary treatment for up to 12,000 AFY of wastewater generated in and around the City (LACSD 2025). On average, approximately 10,700 AFY of recycled water is produced at PWRP.

Storm water drainage infrastructure in Palmdale consists of a network of flood control channels and culverts maintained by the Los Angeles County Flood Control District (LACFCD). Floodwaters are restricted by catch basins feeding into a network of 396 miles of gravity flow sewer mainlines and 2,790 feet of forced flow mainlines. There are approximately 172 catch basins within the City's limits. Two pump stations operate within the city. LACFCD maintains three debris retention basins along the southern edge of the city.

Currently, Waste Management of Antelope Valley (WMAV) is the local division of Waste Management, Inc. that provides collection, disposal, recycling, and environmental services in the Project area. WMAV operates two landfills: the Antelope Valley Recycling and Disposal Facility located at 1200 West City Ranch Road in Palmdale and the Lancaster Landfill and Recycling Center located at 600 East Avenue F in Lancaster. Materials accepted by both landfills include municipal solid wastes, industrial waste, construction and demolition material, contaminated soils, and waste tires.

Electricity is provided to the Project area by SCE and natural gas services are provided by SCGC.

a) **Less Than Significant Impact**. The Project involves construction and operation of an AWPF on a PWD-owned parcel, groundwater injection wells, associated product water pipelines, a tertiary effluent pump station at the PWRP and pipeline, a replacement groundwater well and monitoring wells, new sewer and recycled water pipelines, and a small-diameter brine pipeline to existing LACSD oxidation ponds for brine disposal. These facilities are integral to the Project and do not represent off-site relocation or expansion of unrelated water, wastewater, storm drainage, natural gas, or telecommunications infrastructure. Project construction activities would require grading, excavation, and other soil disturbing activities, which would result in soil erosion and the migration of soil and sediment in stormwater runoff. Fuels, lubricants, and other hazardous materials associated with construction equipment could adversely affect water if spilled or stored improperly. Implementation of BMPs as part of the construction SWPPP would control erosion and sediment during Project construction.

   The Project would require electrical service from SCE and includes a standby generator for emergency power. These improvements, potentially including a new substation, would occur on or near the Project site and would not require construction or relocation of off-site electric power facilities. No natural gas or telecommunications extensions beyond standard service connections are proposed. Because all utility improvements are limited to on-site (or nearby) facilities necessary for Project function, the Project would not require or result in the relocation or construction of new or expanded off-site utility infrastructure that could cause significant environmental impacts. Therefore, impacts would be less than significant.

b) **Less Than Significant Impact.** Construction of the Project would use water for dust control, concrete mixing, and equipment cooling. PWD's water supply reliability can be impacted by many factors, including changes in the availability of supplies due to climatic or infrastructure changes, as well as the efficient use of those supplies in both average and dry periods (PWD 2021). However, PWD has invested in diversifying its water supply portfolio with imported water, local and regional supplies, groundwater, and recycled water. Due to this diversification, it is anticipated that PWD would have sufficient water for construction of the Project.

   Project operations would involve treating wastewater effluent for IPR. During operations, limited quantities of potable water would be used intermittently for activities such as equipment cleaning and maintenance; these volumes are minor relative to PWD's available supplies and do not represent a new, material potable demand. Operation of the AWPF would increase supply reliability by 4.75 mgd in the near term (with potential buildout to 10 mgd), consistent with the SWRP Update (2023). PWD would have sufficient water supply to support Project operations, and the Project would increase PWD's overall water supply reliability. The

Project would be beneficial for water supply, and adverse impacts would be less than significant.

c) **Less Than Significant Impact.** The Project would include treatment of wastewater effluent for IPR. Waste streams from the MF and RO processes and the Administration Building would be pumped to the sewer for further treatment by LACSD. The Project would not result in unplanned population growth (see Section 2.3.14) and would serve the existing and projected population growth in PWD's service area as indicated in the 2020 Urban Water Management Plan. Operation of the Project would increase the treatment capacity available to manage wastewater within PWD's service area. Therefore, impacts would be less than significant.

d) e) **Less Than Significant Impact**. Construction of the Project would result in a temporary increase in solid waste generation. PWD would dispose of debris and other solid wastes generated from construction activities in accordance with local and State regulations. It is anticipated that any solid waste generated from construction of the Project would be transferred to the Antelope Valley Public Landfill, which is operated by Antelope Valley Recycling and Disposal. The Antelope Valley Public Landfill has a remaining capacity of 17,911,225 cubic yards and a maximum capacity of 30,200,000 cubic yards (CalRecycle 2025). Based on the remaining capacity of the landfill, construction of the Project would not generate solid waste in excess of available disposal capacities.

Operation of the Project would generate brine discharge from the RO systems which would be conveyed to the brine ponds for evaporation. It is anticipated that solids disposal (approximately 4,400 cy/year) would be infrequent. After approximately 20 years of use (life cycle of the liner), each pond cell would be taken offline for removal of all solids and replacement of the liner. It is anticipated that a biosolids disposal company would dispose of the solids in accordance with applicable local and State regulations.

Construction of the Project would generate solid waste, including excavated soils. Construction of the Project would comply with the Chapter 20.87 of Los Angeles County Code requiring recycling of at least 65 percent of the waste generated during construction and with Section 5.408.1.1 of the California Green Building Standards, which requires preparation of a Construction Waste Management Plan that would disclose how much waste would be removed from the waste stream and submittal of this information to the City Building and Safety Division. Since the proposed Project would comply with all applicable solid waste regulations, impacts would be less than significant.

2.3.20 Wildfire

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands as classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
b) Due to slope, prevailing winds, or other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

Discussion: Fire protection for the Project area is provided by the Los Angeles County Fire Department, the Palmdale Volunteer Fire Department and the California Department of Forestry and Fire Protection (CalFire). CalFire is required by state law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. Per CalFire's Fire Hazard Severity Zone (FHSZ) Viewer, the majority of the AWPF 20-acre parcel is mapped as Moderate FHSZ in the Local Responsibility Area (LRA), the brine ponds and PWRP are not mapped but are adjacent to parcels mapped as Moderate FHSZ in the LRA, and the pipelines cross areas of Moderate and High FHSZ in the LRA (CalFire 2025). The closest State Responsibility Area (SRA) and the closest LRA Very High FHSZ are located over 2 miles southwest of the Project sites.

a) **Less Than Significant Impact with Mitigation Incorporated.** The City of Palmdale has an Emergency Operations Plan (2012) that outlines the coordination needed in the event of an evacuation but does not map specific evacuation routes. SR-14, the Antelope Valley Freeway, and SR-138, Pearblossom Highway, serve as the main travel routes for the City of Palmdale. During Project construction, equipment and vehicles would access the AWPF site via 25th Street East, the PWRP via 30th Street East, and the brine ponds via 40th Street West. These north-south roadways connect to SR-138 to the south which then connects to SR-14 to the west. Construction of Project pipelines would require temporary road closures, which could disrupt emergency vehicle access and impair emergency evacuation. Implementation of mitigation measure TRA-1 would require preparation of a construction TMP to minimize impacts to existing traffic conditions and maintain access for emergency response. As mitigated, impacts on emergency response or evacuation during Project construction would be less than significant.

Design of the AWPF would be done in coordination with the Los Angeles County Fire Department for consistency with applicable fire codes including site access, emergency vehicle turn-around, setbacks, fire suppression, and water supply requirements. With incorporation of these design considerations, operation of the Project would not disrupt or prevent emergency vehicle access to the Project site or in the Project vicinity. The Project would have no operational impacts on emergency response or evacuation planning.

b) **No Impact**. The proposed Project elements are not located in or near SRAs or lands classified as very high FHSZ in the LRA. Project facilities are water treatment, injection and conveyance facilities as well as ponds for brine disposal. Development of these Project elements would reduce onsite vegetation for the construction of the proposed buildings, pump station, injection wells, groundwater wells, and brine disposal ponds. No steep slopes are present or would be created as a result of the proposed Project. Construction and operation of these infrastructure elements would have no impact on the existing moderate risk of wildfire. Therefore, the Project would not expose Project occupants to pollutant concentrations from wildfire or the uncontrolled spread of wildfire. No impact would occur.

c) **Less Than Significant Impact.** The proposed Project elements are not located in or near SRAs or lands classified as very high FHSZ in the LRA. The proposed Project would not require installation of fuel breaks or emergency water sources. The Project would include creation of internal roadways at the AWPF and potentially the expansion of the power system including a new substation on the AWPF site. Roads would be designed in collaboration with Los Angeles County Fire Department and constructed to allow fire and maintenance vehicle access. Design of the new electrical substation, if required, would be consistent with SCE requirements. Landscaping at the AWPF would be limited to drought-resistant plantings. Therefore, construction and operation of the Project would have a less than significant impact on fire risk associated with installation or maintenance of infrastructure.

d) **No Impact**. The proposed Project elements are not located in or near SRAs or lands classified as very high FHSZ in the LRA. The Project sites and surrounding vicinity are flat to very gently sloping. Landslides and slope instability are not hazards identified for the Project area. Drainage changes associated with the Project would be localized and minimal and would not result in excess runoff that could result in post-fire flooding or landslides compared to existing conditions. Therefore, construction and operation of the Project would not expose people or structures to significant post-fire risks. Therefore, there would be no impact.

2.3.21 Mandatory Findings of Significance

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	☐	☐	☐	☒
c) Does the project have impacts that are individually limited, but cumulatively considerable ("cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, effects of other current projects, and the effects of probable future projects.)?	☐	☐	☒	☐
d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Discussion:

a) **Less than Significant Impact with Mitigation Incorporated.** Construction and operation of the proposed Project have the potential to impact biological, tribal, cultural, and paleontological resources. However, with incorporation of mitigation measures, the proposed Project would not substantially degrade biological resources and impacts would be less than significant. Cultural resources are not known for the Project site, however BMPs, standard measures, and mitigation measures have been identified to protect resources in the unlikely event they are discovered during construction. The proposed Project would not eliminate important examples of the major periods of California history or prehistory. With implementation of mitigation measures, impacts to cultural and tribal resources would be less than significant.

b) **No Impact**. The long-term goal of the Project is to provide water supply reliability in the PWD service area by recharging the Antelope Valley Groundwater Basin. Mitigation measures, BMPs, and standard measures to be implemented during Project construction and operation would prevent significant environmental effects. There are no short-term goals related to the Project that would be disadvantageous to this long-term goal. Therefore, there would be no impacts.

c) **Less than Significant Impact.** Combined impacts of the proposed Project together with other projects identified in the SWRP Update would be cumulatively beneficial for water supply in the Project area. Since Project construction would occur over 2+ years, it is anticipated that

several development and/or transportation projects would be constructed in the Project vicinity concurrently with the proposed Project. However, construction for the proposed Project would be isolated to a few parcels. Additionally, environmental impacts related to the Project would be mitigated to less than significant levels. Therefore, the proposed Project would not be anticipated to result in cumulatively considerable impacts. Overall, impacts would be less than significant.

d) **Less than Significant Impact with Mitigation Incorporated.** The Project as mitigated would result in less than significant impacts on aesthetics, air quality, geology and soils, hazards, noise, traffic, and wildfire during Project construction. Therefore, with incorporation of mitigation measures, adverse impacts on human beings would not be substantially adverse.

Section 3
References, Abbreviations and Report Preparation

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3.2 ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ADA	Americans with Disabilities Act
ADT	Average Daily Trips
af	acre-feet
AIA	Airport Influence Area
AISC	American Institute of Steel Construction
ALUC	Airport Land Use Commission
ALUP	Airport Land Use Plan
APN	Assessor Parcel Number
ARDR	Aquatic Resources Delineation Report
ARPA	Archaeological Resources Protection Act
AVAQMD	Antelope Valley Air Quality Management District
AVTA	Antelope Valley Transit Authority
AWPF	Advanced Water Purification Facility
AWT	Advanced Water Treatment
BERD	Built Environment Resources Directory
bgs	below ground surface
BIOS	Biogeographic Information and Observation System
BMP	best management practice
BRTR	Biological Resources Technical Report
BSA	Biological Study Area
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CCRO	Closed-Circuit Reverse Osmosis
C&D	Construction & Demolition
CDFW	California Department of Fish and Wildlife
CDOC	California Department of Conservation
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations

CGS	California Geological Survey
CH_4	methane
CIP	clean-in-place
CMP	Congestion Management Plan
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Ranks
cy	cubic yard
dB	decibel
dBA	A-weighted decibel
DCH	Designated Critical Habitat
DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substances Control
DWR	(California) Department of Water Resources
EFZ	Earthquake Fault Zone
EIR	Environmental Impact Report
EPA	(United States) Environmental Protection Agency
EPIC	Energy for Palmdale's Independent Choice
EV	Electric Vehicle
FAA	Federal Aviation Administration
Farmland	Prime Farmland, Unique Farmland, or Farmland of Statewide Importance
FAT	Full Advanced Treatment
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
FTBMI	Fernandeño Tataviam Band of Mission Indians
GHG	greenhouse gas

gpm	gallon per minute
GRRP	groundwater replenishment reuse project
GSP	Groundwater Sustainability Plan
GWP	global warming potential
GWR	groundwater recharge
HCP	Habitat Conservation Plan
HDPE	high-density polyethylene
HFC	Hydrofluorocarbon
Hp	Horsepower
HVAC	Heating, Ventilation and Air Conditioning
IPR	Indirect Potable Reuse
IRWM	Integrated Regional Water Management
IS	Initial Study
kWh	kilowatt hour
lbs	Pounds
LACALUC	Los Angeles County Airport Land Use Committee
LACFD	Los Angeles County Fire Department
LACM	Los Angeles County Museum
LACMTA	Los Angeles County Metropolitan Transportation Authority
LACSD	Los Angeles County Sanitation Districts
LAWA	Los Angeles World Airports
LID	Low Impact Development
LRA	Local Responsibility Area
MBTA	Migratory Bird Treaty Act
MC	maintenance clean
MCC	Motor Control Center
MCL	Maximum Contaminant Level
MF	microfiltration
mgd	million gallons per day
mg/L	milligram per liter
MGS	Mohave Ground Squirrel
MLD	Most Likely Descendant
MND	Mitigated Negative Declaration
mph	miles per hour
MS4	municipal separate storm sewer system

msl	mean sea level
MT	metric tons
MW	megawatt
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NaOH	Sodium hydroxide
NCCP	Natural Community Conservation Plan
NF_3	nitrogen trifluoride
NFPA	National Fire Protection Association
NL	Notification Level
NO_2	nitrogen dioxide
NOx	nitrous oxides
NOA	Naturally Occurring Asbestos
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O_3	Ozone
OEHHA	Office of Environmental Health Hazard Assessment
O&M	Operations & Maintenance
Pb	Lead
PCS	Process Control System
PEIR	Program Environmental Impact Report
PERP	Portable Equipment Registration Program
PFC	perfluorocarbon
PM	particulate matter
PM_{10}	particulate matter 10 microns or less in diameter
$PM_{2.5}$	particulate matter 2.5 microns or less in diameter
ppb	parts per billion
PPV	peak particle velocity
PQS	professional qualifications standards
PRA	Paleontological Resources Assessment
PRC	Public Resources Code
PWD	Palmdale Water District
PWRP	Palmdale Water Reclamation Plant

RC	Recovery Check
RMS	root mean square
RO	reverse osmosis
ROG	Reactive Organic Gas
ROLD	Rural Outdoor Lighting District
SB	Senate Bill
SCADA	supervisory control and data acquisition
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SCGC	Southern California Gas Company
SF_6	sulfur hexafluoride
SFHA	Special Flood Hazard Area
SGMA	Sustainable Groundwater Management Act
SIP	State Implementation Plan
SLCP	Short-lived climate pollutant
SLF	Sacred Lands File
SMARA	Surface Mining and Reclamation Act
SNA	Significant Natural Areas
SO_2	sulfur dioxide
SOI	Secretary of the Interior
SR	State Route
SRA	State Responsibility Area
SSC	Species of Special Concern
SVP	Society of Vertebrate Paleontology
SWA	Surface Water Augmentation
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SWRP	Strategic Water Resources Plan
TAC	toxic air contaminants
TCE	Trichloroethylene
TMP	Transportation Management Plan
TN	Total Nitrogen
TOC	Total Organic Carbon

UCMP	University of California Museum of Paleontology
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UV/AOP	ultraviolet/advanced oxidation processes
VdB	velocity in decibels
VFD	variable frequency drive
VMT	vehicle miles traveled
VOC	volatile organic compound
WEAP	worker environmental awareness program
WMAV	Waste Management of Antelope Valley
WMP	West Mojave Plan
YSMN	Yuhaaviatam of San Manuel Nation
ZEV	zero emission vehicle

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Pure Water Antelope Valley

CEQA Initial Study

APPENDIX A

Air Quality Modeling Output

Palmdale Water AV Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Palmdale Water AV
Construction Start Date	11/17/2027
Operational Year	2030
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	4.50
Precipitation (days)	13.0
Location	34.59787812365278, -118.09957481904654
County	Los Angeles-Mojave Desert
City	Unincorporated
Air District	Antelope Valley AQMD
Air Basin	Mojave Desert
TAZ	3655
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.30

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Heavy Industry	36.9	1000sqft	0.85	36,900	0.00	0.00	—	—

User Defined Linear	3.50	Mile	4.25	0.00	0.00	—	—	—
Parking Lot	18.0	Space	0.16	0.00	0.00	—	—	—
Other Non-Asphalt Surfaces	0.24	1000sqft	0.01	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.74	1.45	12.6	18.4	0.03	0.30	0.49	0.79	0.28	0.12	0.39	—	3,336	3,336	0.13	0.05	1.76	3,356
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.0	10.7	43.8	120	0.19	1.83	5.44	5.94	1.68	1.59	2.08	—	20,777	20,777	0.84	2.26	0.76	20,855
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.69	1.41	11.8	21.1	0.04	0.33	0.53	0.86	0.30	0.15	0.45	—	4,188	4,188	0.16	0.11	0.87	4,224
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.31	0.26	2.15	3.85	0.01	0.06	0.10	0.16	0.06	0.03	0.08	—	693	693	0.03	0.02	0.14	699

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2028	1.74	1.45	12.6	18.4	0.03	0.30	0.49	0.79	0.28	0.12	0.39	—	3,336	3,336	0.13	0.05	1.76	3,356
2029	1.66	1.39	12.3	18.1	0.03	0.27	0.49	0.76	0.25	0.12	0.36	—	3,327	3,327	0.13	0.05	1.61	3,346
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	7.42	6.23	43.8	120	0.19	1.83	1.06	2.89	1.68	0.40	2.08	—	20,777	20,777	0.84	0.19	0.05	20,855
2028	7.13	5.98	40.4	120	0.19	1.63	5.44	5.94	1.50	1.59	2.07	—	20,772	20,772	0.84	2.26	0.76	20,850
2029	2.12	1.86	12.3	17.2	0.03	0.27	0.49	0.76	0.25	0.12	0.36	—	3,273	3,273	0.12	0.05	0.04	3,291
2030	11.0	10.7	12.1	17.0	0.03	0.24	0.49	0.73	0.22	0.12	0.34	—	3,264	3,264	0.12	0.05	0.04	3,282
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.65	0.55	3.86	10.5	0.02	0.16	0.09	0.25	0.15	0.04	0.18	—	1,831	1,831	0.07	0.02	0.07	1,838
2028	1.69	1.41	11.8	21.1	0.04	0.33	0.53	0.86	0.30	0.15	0.45	—	4,188	4,188	0.16	0.11	0.87	4,224
2029	1.18	0.98	8.82	12.4	0.02	0.19	0.35	0.54	0.18	0.08	0.26	—	2,347	2,347	0.09	0.03	0.50	2,360
2030	0.82	0.78	1.49	2.13	< 0.005	0.03	0.06	0.09	0.03	0.01	0.04	—	405	405	0.01	0.01	0.08	407
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.12	0.10	0.70	1.92	< 0.005	0.03	0.02	0.05	0.03	0.01	0.03	—	303	303	0.01	< 0.005	0.01	304
2028	0.31	0.26	2.15	3.85	0.01	0.06	0.10	0.16	0.06	0.03	0.08	—	693	693	0.03	0.02	0.14	699
2029	0.21	0.18	1.61	2.27	< 0.005	0.03	0.06	0.10	0.03	0.01	0.05	—	389	389	0.01	0.01	0.08	391
2030	0.15	0.14	0.27	0.39	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	—	67.1	67.1	< 0.005	< 0.005	0.01	67.5

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	19.1	49.6	39.2	132	0.07	1.40	1.35	2.75	1.40	0.34	1.74	41.0	31,491	31,532	12.6	0.50	13.7	32,009
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	18.7	49.3	39.2	129	0.06	1.40	1.35	2.74	1.40	0.34	1.74	41.0	31,358	31,399	12.6	0.50	9.71	31,874
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.16	3.04	1.65	8.61	0.01	0.05	0.93	0.98	0.05	0.24	0.28	41.0	24,581	24,622	7.32	0.45	10.8	24,949
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.39	0.55	0.30	1.57	< 0.005	0.01	0.17	0.18	0.01	0.04	0.05	6.79	4,070	4,076	1.21	0.07	1.79	4,131

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.04	0.98	0.61	6.79	0.01	0.01	1.35	1.36	0.01	0.34	0.35	—	1,467	1,467	0.07	0.07	4.12	1,492
Area	1.14	1.11	0.01	1.60	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.60	6.60	< 0.005	< 0.005	—	6.62
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	23,392	23,392	2.96	0.36	—	23,573
Water	—	—	—	—	—	—	—	—	—	—	—	16.4	35.1	51.5	1.68	0.04	—	106
Waste	—	—	—	—	—	—	—	—	—	—	—	24.7	0.00	24.7	2.46	0.00	—	86.3
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.61	9.61
Stationary	17.0	47.5	38.6	123	0.05	1.39	0.00	1.39	1.39	0.00	1.39	0.00	6,591	6,591	5.45	0.03	0.00	6,736
Total	19.1	49.6	39.2	132	0.07	1.40	1.35	2.75	1.40	0.34	1.74	41.0	31,491	31,532	12.6	0.50	13.7	32,009
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.94	0.88	0.67	5.46	0.01	0.01	1.35	1.36	0.01	0.34	0.35	—	1,341	1,341	0.07	0.07	0.11	1,363

Area	0.85	0.85	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	23,392	23,392	2.96	0.36	—	23,573
Water	—	—	—	—	—	—	—	—	—	—	—	16.4	35.1	51.5	1.68	0.04	—	106
Waste	—	—	—	—	—	—	—	—	—	—	—	24.7	0.00	24.7	2.46	0.00	—	86.3
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.61	9.61
Stationary	17.0	47.5	38.6	123	0.05	1.39	0.00	1.39	1.39	0.00	1.39	0.00	6,591	6,591	5.45	0.03	0.00	6,736
Total	18.7	49.3	39.2	129	0.06	1.40	1.35	2.74	1.40	0.34	1.74	41.0	31,358	31,399	12.6	0.50	9.71	31,874
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.66	0.61	0.47	4.07	0.01	0.01	0.93	0.93	0.01	0.24	0.24	—	950	950	0.05	0.05	1.23	967
Area	0.99	0.98	0.01	0.79	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.25	3.25	< 0.005	< 0.005	—	3.27
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	23,392	23,392	2.96	0.36	—	23,573
Water	—	—	—	—	—	—	—	—	—	—	—	16.4	35.1	51.5	1.68	0.04	—	106
Waste	—	—	—	—	—	—	—	—	—	—	—	24.7	0.00	24.7	2.46	0.00	—	86.3
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.61	9.61
Stationary	0.52	1.45	1.17	3.76	< 0.005	0.04	0.00	0.04	0.04	0.00	0.04	0.00	201	201	0.17	< 0.005	0.00	205
Total	2.16	3.04	1.65	8.61	0.01	0.05	0.93	0.98	0.05	0.24	0.28	41.0	24,581	24,622	7.32	0.45	10.8	24,949
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.12	0.11	0.09	0.74	< 0.005	< 0.005	0.17	0.17	< 0.005	0.04	0.04	—	157	157	0.01	0.01	0.20	160
Area	0.18	0.18	< 0.005	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.54	0.54	< 0.005	< 0.005	—	0.54
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,873	3,873	0.49	0.06	—	3,903
Water	—	—	—	—	—	—	—	—	—	—	—	2.71	5.81	8.52	0.28	0.01	—	17.5
Waste	—	—	—	—	—	—	—	—	—	—	—	4.08	0.00	4.08	0.41	0.00	—	14.3
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.59	1.59
Stationary	0.09	0.26	0.21	0.69	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	0.00	33.2	33.2	0.03	< 0.005	0.00	34.0
Total	0.39	0.55	0.30	1.57	< 0.005	0.01	0.17	0.18	0.01	0.04	0.05	6.79	4,070	4,076	1.21	0.07	1.79	4,131

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Linear, Grubbing & Land Clearing (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Linear, Grubbing & Land Clearing (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Linear, Grubbing & Land Clearing (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Linear, Grading & Excavation (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Linear, Grading & Excavation (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Linear, Grading & Excavation (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Linear, Grading & Excavation (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Linear, Drainage, Utilities, & Sub-Grade (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Linear, Drainage, Utilities, & Sub-Grade (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.21. Linear, Drainage, Utilities, & Sub-Grade (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.23. Linear, Drainage, Utilities, & Sub-Grade (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.25. Linear, Paving (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.27. Linear, Paving (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.29. Linear, Paving (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.31. Linear, Paving (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.33. Site Preparation (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	7.24	6.07	43.5	117	0.19	1.83	—	1.83	1.68	—	1.68	—	20,271	20,271	0.82	0.16	—	20,340
Dust From Material Movement	—	—	—	—	—	—	0.58	0.58	—	0.29	0.29	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	0.53	3.83	10.3	0.02	0.16	—	0.16	0.15	—	0.15	—	1,785	1,785	0.07	0.01	—	1,791
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.70	1.89	< 0.005	0.03	—	0.03	0.03	—	0.03	—	296	296	0.01	< 0.005	—	297
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.18	0.16	0.19	2.14	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	447	447	0.02	0.02	0.05	453
Vendor	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	58.6	58.6	< 0.005	0.01	< 0.005	61.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.21	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	40.5	40.5	< 0.005	< 0.005	0.07	41.1
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.16	5.16	< 0.005	< 0.005	0.01	5.39
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.71	6.71	< 0.005	< 0.005	0.01	6.80
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.85	0.85	< 0.005	< 0.005	< 0.005	0.89
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.35. Site Preparation (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	6.95	5.83	40.1	118	0.19	1.63	—	1.63	1.50	—	1.50	—	20,275	20,275	0.82	0.16	—	20,345
Dust From Material Movement	—	—	—	—	—	—	0.58	0.58	—	0.29	0.29	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.57	0.48	3.30	9.67	0.02	0.13	—	0.13	0.12	—	0.12	—	1,666	1,666	0.07	0.01	—	1,672
Dust From Material Movement	—	—	—	—	—	—	0.05	0.05	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.60	1.76	< 0.005	0.02	—	0.02	0.02	—	0.02	—	276	276	0.01	< 0.005	—	277
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.17	2.01	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	439	439	0.02	0.02	0.04	445
Vendor	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	57.2	57.2	< 0.005	0.01	< 0.005	59.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.18	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	37.1	37.1	< 0.005	< 0.005	0.06	37.7
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.70	4.70	< 0.005	< 0.005	< 0.005	4.90
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.15	6.15	< 0.005	< 0.005	0.01	6.24
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.78	0.78	< 0.005	< 0.005	< 0.005	0.81
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.37. Grading (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.54	1.28	12.4	15.3	0.03	0.30	—	0.30	0.28	—	0.28	—	2,784	2,784	0.11	0.02	—	2,793
Dust From Material Movement	—	—	—	—	—	—	0.65	0.65	—	0.30	0.30	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.34	0.42	< 0.005	0.01	—	0.01	0.01	—	0.01	—	76.3	76.3	< 0.005	< 0.005	—	76.5
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.6	12.6	< 0.005	< 0.005	—	12.7
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.17	2.01	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	439	439	0.02	0.02	0.04	445
Vendor	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	57.2	57.2	< 0.005	0.01	< 0.005	59.6
Hauling	0.32	0.29	15.1	3.73	0.11	0.20	4.29	4.50	0.20	1.18	1.38	—	14,274	14,274	0.02	2.22	0.72	14,935
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.4	12.4	< 0.005	< 0.005	0.02	12.6
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.57	1.57	< 0.005	< 0.005	< 0.005	1.63
Hauling	0.01	0.01	0.41	0.10	< 0.005	0.01	0.12	0.12	0.01	0.03	0.04	—	391	391	< 0.005	0.06	0.33	409
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.05	2.05	< 0.005	< 0.005	< 0.005	2.08
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.26	0.26	< 0.005	< 0.005	< 0.005	0.27
Hauling	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	64.7	64.7	< 0.005	0.01	0.05	67.8

3.39. Building Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.55	1.28	12.4	15.4	0.03	0.30	—	0.30	0.28	—	0.28	—	2,785	2,785	0.11	0.02	—	2,795
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.55	1.28	12.4	15.4	0.03	0.30	—	0.30	0.28	—	0.28	—	2,785	2,785	0.11	0.02	—	2,795
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.94	0.78	7.53	9.31	0.02	0.18	—	0.18	0.17	—	0.17	—	1,690	1,690	0.07	0.01	—	1,695
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.37	1.70	< 0.005	0.03	—	0.03	0.03	—	0.03	—	280	280	0.01	< 0.005	—	281

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.16	2.98	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	494	494	0.02	0.02	1.64	502
Vendor	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	57.1	57.1	< 0.005	0.01	0.12	59.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.17	2.01	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	439	439	0.02	0.02	0.04	445
Vendor	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	57.2	57.2	< 0.005	0.01	< 0.005	59.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.09	0.11	1.36	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	274	274	0.01	0.01	0.43	278
Vendor	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	34.7	34.7	< 0.005	< 0.005	0.03	36.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.25	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	45.4	45.4	< 0.005	< 0.005	0.07	46.1
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.74	5.74	< 0.005	< 0.005	0.01	5.99
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.41. Building Construction (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.48	1.22	12.1	15.3	0.03	0.27	—	0.27	0.25	—	0.25	—	2,786	2,786	0.11	0.02	—	2,795
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.48	1.22	12.1	15.3	0.03	0.27	—	0.27	0.25	—	0.25	—	2,786	2,786	0.11	0.02	—	2,795
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.04	0.87	8.59	10.8	0.02	0.19	—	0.19	0.17	—	0.17	—	1,973	1,973	0.08	0.02	—	1,980
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.57	1.98	< 0.005	0.03	—	0.03	0.03	—	0.03	—	327	327	0.01	< 0.005	—	328
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.18	0.16	0.14	2.78	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	485	485	0.02	0.02	1.50	493
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	55.6	55.6	< 0.005	0.01	0.10	58.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.16	1.88	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	432	432	0.01	0.02	0.04	437
Vendor	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	55.6	55.6	< 0.005	0.01	< 0.005	58.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.12	1.49	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	315	315	0.01	0.01	0.46	319
Vendor	< 0.005	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	39.4	39.4	< 0.005	0.01	0.03	41.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.27	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	52.1	52.1	< 0.005	< 0.005	0.08	52.8
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.52	6.52	< 0.005	< 0.005	0.01	6.81
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.43. Paving (2029) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	1.48	1.22	12.1	15.3	0.03	0.27	—	0.27	0.25	—	0.25	—	2,786	2,786	0.11	0.02	—	2,795
Paving	0.48	0.48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.4	16.4	< 0.005	< 0.005	—	16.4
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.71	2.71	< 0.005	< 0.005	—	2.72
Paving	< 0.005	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.17	0.15	0.16	1.88	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	432	432	0.01	0.02	0.04	437
Vendor	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	55.6	55.6	< 0.005	0.01	< 0.005	58.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.61	2.61	< 0.005	< 0.005	< 0.005	2.64
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.33	0.33	< 0.005	< 0.005	< 0.005	0.34
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.43	0.43	< 0.005	< 0.005	< 0.005	0.44
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.05	0.05	< 0.005	< 0.005	< 0.005	0.06
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.45. Paving (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.42	1.17	11.9	15.2	0.03	0.24	—	0.24	0.22	—	0.22	—	2,786	2,786	0.11	0.02	—	2,795
Paving	0.48	0.48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.72	0.92	< 0.005	0.01	—	0.01	0.01	—	0.01	—	169	169	0.01	< 0.005	—	170
Paving	0.03	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	28.0	28.0	< 0.005	< 0.005	—	28.1
Paving	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.14	1.77	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	425	425	0.01	0.02	0.04	430
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	54.0	54.0	< 0.005	0.01	< 0.005	56.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	26.5	26.5	< 0.005	< 0.005	0.04	26.9
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.28	3.28	< 0.005	< 0.005	< 0.005	3.42
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.39	4.39	< 0.005	< 0.005	0.01	4.45
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.54	0.54	< 0.005	< 0.005	< 0.005	0.57
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.47. Architectural Coating (2030) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.42	1.17	11.9	15.2	0.03	0.24	—	0.24	0.22	—	0.22	—	2,786	2,786	0.11	0.02	—	2,795
Architectural Coatings	9.39	9.39	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.75	0.96	< 0.005	0.02	—	0.02	0.01	—	0.01	—	176	176	0.01	< 0.005	—	176
Architectural Coatings	0.59	0.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.14	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	29.1	29.1	< 0.005	< 0.005	—	29.2

Architectural Coating	0.11	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.14	1.77	0.00	0.00	0.47	0.47	0.00	0.11	0.11	—	425	425	0.01	0.02	0.04	430
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	54.0	54.0	< 0.005	0.01	< 0.005	56.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.5	27.5	< 0.005	< 0.005	0.04	27.9
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.40	3.40	< 0.005	< 0.005	< 0.005	3.55
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.56	4.56	< 0.005	< 0.005	0.01	4.62
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.56	0.56	< 0.005	< 0.005	< 0.005	0.59
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	1.04	0.98	0.61	6.79	0.01	0.01	1.35	1.36	0.01	0.34	0.35	—	1,467	1,467	0.07	0.07	4.12	1,492
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.04	0.98	0.61	6.79	0.01	0.01	1.35	1.36	0.01	0.34	0.35	—	1,467	1,467	0.07	0.07	4.12	1,492
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	0.94	0.88	0.67	5.46	0.01	0.01	1.35	1.36	0.01	0.34	0.35	—	1,341	1,341	0.07	0.07	0.11	1,363
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.94	0.88	0.67	5.46	0.01	0.01	1.35	1.36	0.01	0.34	0.35	—	1,341	1,341	0.07	0.07	0.11	1,363
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	0.12	0.11	0.09	0.74	< 0.005	< 0.005	0.17	0.17	< 0.005	0.04	0.04	—	157	157	0.01	0.01	0.20	160
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.12	0.11	0.09	0.74	< 0.005	< 0.005	0.17	0.17	< 0.005	0.04	0.04	—	157	157	0.01	0.01	0.20	160

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	23,387	23,387	2.96	0.36	—	23,568
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	4.42	4.42	< 0.005	< 0.005	—	4.45
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	23,392	23,392	2.96	0.36	—	23,573
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	23,387	23,387	2.96	0.36	—	23,568
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	4.42	4.42	< 0.005	< 0.005	—	4.45
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	23,392	23,392	2.96	0.36	—	23,573
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	3,872	3,872	0.49	0.06	—	3,902

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	0.73	0.73	< 0.005	< 0.005	—	0.74
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,873	3,873	0.49	0.06	—	3,903

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.79	0.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.06	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.29	0.26	0.01	1.60	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.60	6.60	< 0.005	< 0.005	—	6.62
Total	1.14	1.11	0.01	1.60	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.60	6.60	< 0.005	< 0.005	—	6.62
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consum Products	0.79	0.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.06	0.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.85	0.85	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.14	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.03	0.02	< 0.005	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.54	0.54	< 0.005	< 0.005	—	0.54
Total	0.18	0.18	< 0.005	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.54	0.54	< 0.005	< 0.005	—	0.54

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	16.4	35.1	51.5	1.68	0.04	—	106

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	16.4	35.1	51.5	1.68	0.04	—	106
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	16.4	35.1	51.5	1.68	0.04	—	106
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	16.4	35.1	51.5	1.68	0.04	—	106
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	2.71	5.81	8.52	0.28	0.01	—	17.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	2.71	5.81	8.52	0.28	0.01	—	17.5

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	24.7	0.00	24.7	2.46	0.00	—	86.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	24.7	0.00	24.7	2.46	0.00	—	86.3
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	24.7	0.00	24.7	2.46	0.00	—	86.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	24.7	0.00	24.7	2.46	0.00	—	86.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	4.08	0.00	4.08	0.41	0.00	—	14.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	4.08	0.00	4.08	0.41	0.00	—	14.3

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.61	9.61
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.61	9.61
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.61	9.61
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.61	9.61
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Heavy Industry	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.59	1.59
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.59	1.59

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	17.0	47.5	38.6	123	0.05	1.39	0.00	1.39	1.39	0.00	1.39	0.00	6,591	6,591	5.45	0.03	0.00	6,736
Total	17.0	47.5	38.6	123	0.05	1.39	0.00	1.39	1.39	0.00	1.39	0.00	6,591	6,591	5.45	0.03	0.00	6,736
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	17.0	47.5	38.6	123	0.05	1.39	0.00	1.39	1.39	0.00	1.39	0.00	6,591	6,591	5.45	0.03	0.00	6,736
Total	17.0	47.5	38.6	123	0.05	1.39	0.00	1.39	1.39	0.00	1.39	0.00	6,591	6,591	5.45	0.03	0.00	6,736

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.09	0.26	0.21	0.69	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	0.00	33.2	33.2	0.03	< 0.005	0.00	34.0
Total	0.09	0.26	0.21	0.69	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	0.00	33.2	33.2	0.03	< 0.005	0.00	34.0

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	11/17/2027	3/5/2030	5.00	600	—
Linear, Grading & Excavation	Linear, Grading & Excavation	11/17/2027	3/5/2030	5.00	600	—
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	11/17/2027	3/5/2030	5.00	600	—
Linear, Paving	Linear, Paving	11/17/2027	3/5/2030	5.00	600	—
Site Preparation	Site Preparation	11/17/2027	2/11/2028	5.00	63.0	—
Grading	Grading	2/12/2028	2/25/2028	5.00	10.0	—
Building Construction	Building Construction	2/26/2028	12/28/2029	5.00	480	—
Paving	Paving	12/29/2029	1/31/2030	5.00	24.0	—
Architectural Coating	Architectural Coating	2/1/2030	3/5/2030	5.00	23.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Excavators	Diesel	Average	1.00	242	165	0.38
Site Preparation	Excavators	Diesel	Average	1.00	0.04	44.0	0.38
Site Preparation	Forklifts	Diesel	Average	1.00	6.12	110	0.20
Site Preparation	Pavers	Diesel	Average	1.00	0.04	142	0.42
Site Preparation	Rollers	Diesel	Average	1.00	1.42	100	0.38
Site Preparation	Skid Steer Loaders	Diesel	Average	1.00	0.26	74.0	0.37
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	1.00	0.13	117	0.37

Site Preparation	Off-Highway Trucks	Diesel	Average	1.00	0.33	250	0.38
Site Preparation	Cranes	Diesel	Average	1.00	1.92	180	0.29
Site Preparation	Aerial Lifts	Diesel	Average	1.00	11.9	20.0	0.31
Site Preparation	Rubber Tired Dozers	Diesel	Average	1.00	1.75	104	0.40
Site Preparation	Graders	Diesel	Average	1.00	0.66	145	0.41
Site Preparation	Plate Compactors	Diesel	Average	1.00	1.22	7.00	0.43
Site Preparation	Off-Highway Trucks	Diesel	Average	1.00	0.08	240	0.38
Site Preparation	Bore/Drill Rigs	Diesel	Average	1.00	1.36	440	0.50
Site Preparation	Generator Sets	Diesel	Average	5.00	10.4	33.0	0.74
Grading	Excavators	Diesel	Average	1.00	2.42	165	0.38
Grading	Excavators	Diesel	Average	1.00	0.04	44.0	0.38
Grading	Forklifts	Diesel	Average	1.00	6.12	110	0.20
Grading	Pavers	Diesel	Average	1.00	0.04	142	0.42
Grading	Rollers	Diesel	Average	1.00	1.42	100	0.38
Grading	Skid Steer Loaders	Diesel	Average	1.00	0.26	74.0	0.37
Grading	Tractors/Loaders/Back hoes	Diesel	Average	1.00	0.13	117	0.37
Grading	Off-Highway Trucks	Diesel	Average	1.00	0.33	250	0.38
Grading	Cranes	Diesel	Average	1.00	1.92	180	0.29
Grading	Aerial Lifts	Diesel	Average	1.00	11.9	20.0	0.31
Grading	Rubber Tired Dozers	Diesel	Average	1.00	1.75	104	0.40
Grading	Graders	Diesel	Average	1.00	0.66	145	0.41
Grading	Plate Compactors	Diesel	Average	1.00	1.22	7.00	0.43
Grading	Off-Highway Trucks	Diesel	Average	1.00	0.08	240	0.38
Grading	Bore/Drill Rigs	Diesel	Average	1.00	1.36	440	0.50
Grading	Generator Sets	Diesel	Average	5.00	10.4	33.0	0.74
Building Construction	Excavators	Diesel	Average	1.00	2.42	165	0.38
Building Construction	Excavators	Diesel	Average	1.00	0.04	44.0	0.38
Building Construction	Forklifts	Diesel	Average	1.00	6.12	110	0.20

Building Construction	Pavers	Diesel	Average	1.00	0.04	142	0.42
Building Construction	Rollers	Diesel	Average	1.00	1.42	100	0.38
Building Construction	Skid Steer Loaders	Diesel	Average	1.00	0.26	74.0	0.37
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Building Construction	Off-Highway Trucks	Diesel	Average	1.00	0.33	250	0.38
Building Construction	Cranes	Diesel	Average	1.00	1.92	180	0.29
Building Construction	Aerial Lifts	Diesel	Average	1.00	11.9	20.0	0.31
Building Construction	Rubber Tired Dozers	Diesel	Average	1.00	1.75	104	0.40
Building Construction	Graders	Diesel	Average	1.00	0.66	145	0.41
Building Construction	Plate Compactors	Diesel	Average	1.00	1.22	7.00	0.43
Building Construction	Off-Highway Trucks	Diesel	Average	1.00	0.08	240	0.38
Building Construction	Bore/Drill Rigs	Diesel	Average	1.00	1.36	440	0.50
Building Construction	Generator Sets	Diesel	Average	5.00	10.4	33.0	0.74
Paving	Excavators	Diesel	Average	1.00	2.42	165	0.38
Paving	Excavators	Diesel	Average	1.00	0.04	44.0	0.38
Paving	Forklifts	Diesel	Average	1.00	6.12	110	0.20
Paving	Pavers	Diesel	Average	1.00	0.04	142	0.42
Paving	Rollers	Diesel	Average	1.00	1.42	100	0.38
Paving	Skid Steer Loaders	Diesel	Average	1.00	0.26	74.0	0.37
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	0.13	117	0.37
Paving	Off-Highway Trucks	Diesel	Average	1.00	0.33	250	0.38
Paving	Cranes	Diesel	Average	1.00	1.92	180	0.29
Paving	Aerial Lifts	Diesel	Average	1.00	11.9	20.0	0.31
Paving	Rubber Tired Dozers	Diesel	Average	1.00	1.75	104	0.40
Paving	Graders	Diesel	Average	1.00	0.66	145	0.41
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Paving	Off-Highway Trucks	Diesel	Average	1.00	0.08	240	0.38

Paving	Bore/Drill Rigs	Diesel	Average	1.00	1.36	440	0.50
Paving	Generator Sets	Diesel	Average	5.00	10.4	33.0	0.74
Architectural Coating	Excavators	Diesel	Average	1.00	2.42	165	0.38
Architectural Coating	Excavators	Diesel	Average	1.00	0.04	44.0	0.38
Architectural Coating	Forklifts	Diesel	Average	1.00	6.12	110	0.20
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Architectural Coating	Rollers	Diesel	Average	1.00	1.42	100	0.38
Architectural Coating	Skid Steer Loaders	Diesel	Average	1.00	0.26	74.0	0.37
Architectural Coating	Tractors/Loaders/Backhoes	Diesel	Average	1.00	0.13	117	0.37
Architectural Coating	Off-Highway Trucks	Diesel	Average	1.00	0.33	250	0.38
Architectural Coating	Cranes	Diesel	Average	1.00	1.92	180	0.29
Architectural Coating	Aerial Lifts	Diesel	Average	1.00	11.9	20.0	0.31
Architectural Coating	Rubber Tired Dozers	Diesel	Average	1.00	1.75	104	0.40
Architectural Coating	Graders	Diesel	Average	1.00	0.66	145	0.41
Architectural Coating	Plate Compactors	Diesel	Average	1.00	1.22	7.00	0.43
Architectural Coating	Off-Highway Trucks	Diesel	Average	1.00	0.08	240	0.38
Architectural Coating	Bore/Drill Rigs	Diesel	Average	1.00	1.36	440	0.50
Architectural Coating	Generator Sets	Diesel	Average	5.00	10.4	33.0	0.74

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	36.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	2.03	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT

Grading	—	—	—	—
Grading	Worker	36.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	2.03	10.2	HHDT,MHDT
Grading	Hauling	232	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	36.0	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	2.03	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	36.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	2.03	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	36.0	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	2.03	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	0.00	18.5	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	0.00	10.2	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	0.00	18.5	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	0.00	10.2	HHDT,MHDT

Linear, Grading & Excavation	Hauling	0.00	20.0	HHDT
Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	0.00	18.5	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	0.00	10.2	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	0.00	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	0.00	18.5	LDA,LDT1,LDT2
Linear, Paving	Vendor	0.00	10.2	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	55,350	18,450	438

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Linear, Grubbing & Land Clearing	—	—	4.25	0.00	—
Linear, Grading & Excavation	—	—	4.25	0.00	—
Linear, Drainage, Utilities, & Sub-Grade	—	—	4.25	0.00	—
Site Preparation	—	—	9.49	0.00	—
Grading	11,300	6,233	1.51	0.00	—
Paving	0.00	0.00	0.00	0.00	4.42

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Heavy Industry	0.00	0%
User Defined Linear	4.25	100%
Parking Lot	0.16	100%
Other Non-Asphalt Surfaces	0.01	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O

2027	0.00	532	0.03	< 0.005
2028	0.00	532	0.03	< 0.005
2029	0.00	532	0.03	< 0.005
2030	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
General Heavy Industry	145	237	188	59,954	1,165	1,903	1,509	481,706
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	55,350	18,450	438

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Heavy Industry	32,733,000	261	0.0330	0.0040	0.00
Parking Lot	6,182	261	0.0330	0.0040	0.00
Other Non-Asphalt Surfaces	0.00	261	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
General Heavy Industry	8,533,125	0.00
Parking Lot	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Heavy Industry	45.8	—
Parking Lot	0.00	—
Other Non-Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Heavy Industry	Other commercial A/C and heat pumps	R-410A	2,088	0.30	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Emergency Generator	Diesel	1.00	4.50	50.0	1,075	0.73
Emergency Generator	CNG	1.00	4.50	50.0	1,000	0.73

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	30.3	annual days of extreme heat
Extreme Precipitation	1.70	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	1.96	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	88.7
AQ-PM	6.32
AQ-DPM	16.0
Drinking Water	50.7
Lead Risk Housing	90.6
Pesticides	56.5
Toxic Releases	98.8
Traffic	14.4
Effect Indicators	—
CleanUp Sites	50.3
Groundwater	0.00
Haz Waste Facilities/Generators	91.6
Impaired Water Bodies	0.00
Solid Waste	22.1
Sensitive Population	—
Asthma	91.7
Cardio-vascular	85.3
Low Birth Weights	88.0

Socioeconomic Factor Indicators	—
Education	92.7
Housing	79.6
Linguistic	61.5
Poverty	91.8
Unemployment	94.3

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	19.82548441
Employed	6.723983062
Median HI	14.29488002
Education	—
Bachelor's or higher	8.520467086
High school enrollment	100
Preschool enrollment	7.070447838
Transportation	—
Auto Access	35.49339151
Active commuting	40.30540228
Social	—
2-parent households	65.41768254
Voting	20.50558193
Neighborhood	—
Alcohol availability	80.5338124
Park access	17.07943026
Retail density	41.52444501

Supermarket access	9.893494161
Tree canopy	19.99230078
Housing	—
Homeownership	42.78198383
Housing habitability	5.735916848
Low-inc homeowner severe housing cost burden	13.43513409
Low-inc renter severe housing cost burden	0.384960862
Uncrowded housing	10.95855255
Health Outcomes	—
Insured adults	37.31553959
Arthritis	60.6
Asthma ER Admissions	25.2
High Blood Pressure	51.5
Cancer (excluding skin)	87.6
Asthma	13.4
Coronary Heart Disease	37.1
Chronic Obstructive Pulmonary Disease	17.9
Diagnosed Diabetes	19.9
Life Expectancy at Birth	11.5
Cognitively Disabled	41.3
Physically Disabled	65.4
Heart Attack ER Admissions	37.4
Mental Health Not Good	8.1
Chronic Kidney Disease	27.1
Obesity	13.8
Pedestrian Injuries	19.6
Physical Health Not Good	9.8
Stroke	26.0

Health Risk Behaviors	—
Binge Drinking	66.7
Current Smoker	7.4
No Leisure Time for Physical Activity	14.6
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	10.6
Elderly	98.5
English Speaking	11.0
Foreign-born	64.9
Outdoor Workers	5.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	82.8
Traffic Density	17.5
Traffic Access	23.0
Other Indices	—
Hardship	89.2
Other Decision Support	—
2016 Voting	5.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	88.0
Healthy Places Index Score for Project Location (b)	13.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	linear construction assumed to take place at the same time as plant construction
Construction: Off-Road Equipment	linear construction would use the same equipment as the land use construction phases.
Construction: Trips and VMT	Average of 36 construction workers required per day. Linear construction overlaps land use construction, therefore the same workers would be used for both. Grading import and export would use 20 CY trucks and concrete import would use 8 CY trucks. 3,650 CY of concrete / 8 CY + 11,304 CY soil import and export / 20 CY = ~ 2,316 hauling trucks (one-way) for grading period (1,158 concrete and dump trucks). 1,220 total vendor trips (one-way trips) required during construction, ~2 vendor trips/day
Operations: Energy Use	The Pure Water Antelope Valley would involve a net increase in PWD’s electricity usage to operate. It is estimated that the proposed 5 mgd AWPF would require approximately 32.733 gigawatt-hours per year of power at full buildout

Pure Water Antelope Valley

CEQA Initial Study

APPENDIX B1

Biological Resources Technical Report

Pure Water Antelope Valley

Biological Resources Technical Report

January 15, 2025

Prepared for:
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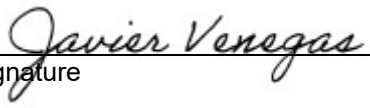
Stantec

The conclusions in the Report titled Biological Resources Technical Report for Pure Water Antelope Valley are Stantec's professional opinion, as of the time of the Report, and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the scope of work was conducted and do not take into account any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

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Acronyms / Abbreviations

AWPF	Advanced Water Purification Facility
BGEPA	Bald and Golden Eagle Protection Act
BRTR	Biological Resources Technical Report
BSA	Biological Study Area
Cal-IPC	California Invasive Plant Council
CCH	Consortium of California Herbaria
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
DCH	Designated Critical Habitat
ESRI	Environmental Systems Research Institute
FESA	Federal Endangered Species Act
°F	degrees Fahrenheit
FGC	California Fish and Game Code
FR	Federal Register
HUC	Hydrologic Unit Code
MBTA	Migratory Bird Treaty Act
MCVII	Manual of California Vegetation, 2nd Edition
NEPA	National Environmental Policy Act
NHD	National Hydrography Dataset
NMFS	National Marine Fisheries Service
NPPA	California's Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
Project	Pure Water Antelope Valley
RHA	Rivers and Harbors Act
PWD	Palmdale Water District
SSC	California Species of Special Concern
Stantec	Stantec Consulting Services Inc.
U.S.	United States
USACE	United States Army Corps of Engineers
USC	United States Code
USEPA	U.S. Environmental Protection Agency

USFWS	United States Fish & Wildlife Service
USGS	United States Geological Survey
WOTUS	Waters of the US
WJTCA	Western Joshua Tree Conservation Act
WRP	Water Reclamation Plant

1 Introduction

This Biological Resources Technical Report (BRTR) is intended to document the biological resources that are associated with Pure Water Antelope Valley (Project) located near the City of Palmdale, Los Angeles County, California. The Project is located outside of the northeastern extent of the City of Palmdale (refer to **Appendix A, Figure 1**). The surveys conducted and discussions presented in this BRTR are intended to support planning and regulatory agency permitting and associated documentation.

Reconnaissance-level surveys were conducted on May 8, 2024, and July 19, 2024, by Stantec Consulting Services Inc. (Stantec) biologists within 300 feet of the Project for general wildlife, habitat mapping, and focused rare plant surveys. These areas are defined as the Biological Study Area (BSA) (refer to **Appendix A Figures 1** through **6b**). The BRTR describes existing environmental conditions that occur within the BSA and evaluates the potential for biological resources to occur based on those conditions with an emphasis on special-status plant and wildlife species, wildlife corridors, and special-status/sensitive natural communities.

1.1 Project Location

The Project is partially located within the City of Palmdale in Los Angeles County, California. The BSA is surrounded by agricultural fields, open space, and neighborhoods/developments associated with the City of Palmdale. The Project site is in Sections 16, 17, 18, 19, 20, 21, 29, and 30; Townships 6 North and 11 West; within United States Geological Survey (USGS) Palmdale NW, California, 7.5-minute topographic quadrangle. The Project occurs at an elevation of approximately 2,537-2,576 feet above mean sea level, with average annual temperatures ranging from a low of 49 degrees Fahrenheit (°F) to a high of 78°F. Annual precipitation averages approximately 7.4 inches (U.S. Climate Data 2024).

1.2 Project Description

Stantec was retained by the Palmdale Water District (PWD) to provide program management services for its regional water augmentation program (Pure Water Antelope Valley or Program). Program components include an advanced water purification facility, conveyance pipelines, groundwater production and injection wells, and brine disposal (evaporation) ponds. Using advanced treatment processes including microfiltration, reverse osmosis, and ultraviolet light with advanced oxidation, Pure Water Antelope Valley will further purify tertiary treated wastewater to produce water that will meet all applicable state and federal drinking water standards and regulations. This purified water will be injected into the local groundwater aquifer, thereby supplementing PWD's existing water supplies. Pure Water Antelope Valley is intended to provide safe and reliable drinking water in the Antelope Valley.

2 Methods

The biological resources assessment of the BSA included but was not limited to a literature review, reconnaissance-level surveys, a habitat assessment, vegetation mapping, and rare plant surveys. Prior to the survey, a preliminary literature review of readily available resources was performed. The surveys were conducted on foot throughout the BSA.

2.1 Literature Review

A focused literature search of the BSA was conducted prior to the field survey. The BSA is located within the USGS Palmdale, 7.5-minute topographic quadrangle. A search of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) was conducted for the BSA and a surrounding 10-mile buffer area to determine special-status plants, wildlife, and vegetation communities that have been documented within this area (CDFW 2024a). The database included portions of the following quadrangles surrounding the BSA: Acton, Pacifico Mountain, Juniper Hills, Little Rock, Palmdale, Ritter Ridge, Lancaster West, Lancaster East, and Alpine Butte.

Additional data regarding the potential occurrence of special-status species and policies relating to these special-status natural resources were gathered from the following sources:

- State and Federally Listed Endangered and Threatened Animals of California (CDFW 2024b)
- State and Federally Listed Endangered, Threatened, and Rare Plants of California (CDFW 2024c)
- Special Animals List (CDFW 2024d)
- California's Wildlife – Life History and Range (CDFW 2024e)
- California Sensitive Natural Communities (CDFW 2024f)
- United States Fish & Wildlife Service (USFWS) Information for Planning and Consultation (USFWS 2024a)
- Inventory of Rare and Endangered Vascular Plants of California (California Native Plant Society [CNPS] 2024)
- Consortium of California Herbaria (CCH) (CCH 2024)
- Western Joshua Tree Conservation Act (WJTCA) (CDFW 2024g)

2.2 Biological Surveys

2.2.1 Site Reconnaissance and Wildlife Surveys

Stantec conducted one pedestrian survey of the Demo Facility Location on October 5, 2022, and two reconnaissance-level surveys on May 8 and July 19, 2024, to document the environmental conditions present within the BSA. A jurisdictional aquatic resources/wetlands delineation was also conducted on May 8, 2024; results are presented in a separate report. The primary goal of the reconnaissance surveys

was to assess the habitat that may be capable of supporting special-status species and determine the potential need for additional focused surveys for such species. Biologists recorded all incidental plant and wildlife observations during these surveys.

The surveys were conducted during a season and time of day when resident and migratory birds would be expected to be present and exhibiting normal activity, small mammals would be active and detectable visually or by sign, and above-ground amphibian and reptile movement would generally be detectable. However, it should be noted that some wildlife species and individuals may have been difficult to detect due to their elusive nature, cryptic morphology, or nocturnal behavior. The survey was conducted during daylight hours when temperatures were such that reptiles and other wildlife would be active.

The BSA was investigated on foot (where accessible) by experienced field biologists walking throughout publicly accessible areas at an average pace of approximately 1 mile per hour while visually scanning for wildlife and their sign and listening to wildlife songs and calls. Biologists paused as necessary to listen for wildlife or to identify, record, or enumerate any observed species. Species present were identified and recorded through direct visual observation, sound, or their sign (e.g., scat, tracks, etc.). Species identifications conform to the most up-to-date online databases and technical literature.

2.2.2 Rare Plant Surveys

Focused rare plant surveys were also conducted during the May and July site visits. Prior to initiating field efforts, biologists reviewed the CNDDB and CNPS inventory of rare plants to identify known occurrences of special status plant species and review the blooming period for each species. The timing of the two site visits was planned to ensure coverage during the bloom periods for potential special status plants. Surveys were conducted within 300-feet of the Project area.

2.2.3 Sensitive Biological Species

During surveys all species were recorded, and coordinates were taken for special status species. The plant and wildlife species compendiums for all observations during the May and July 2024 surveys are included in **Tables 2** and **3**.

2.2.4 Vegetation Mapping

Vegetation descriptions and nomenclature are based on the second edition of A Manual of California Vegetation (MCVII) (Sawyer et al. 2009), where applicable, and have been defined to the alliance level. Vegetation maps were prepared by recording tentative vegetation type boundaries over recent aerial photograph base maps using the Environmental Systems Research Institute (ESRI) Collector for ArcGIS app on an Apple iPhone coupled with an Arrow 100 Submeter Global Navigation Satellite System Receiver external global positioning system unit. Mapping was further refined in the office using ESRI ArcGIS (version 10.7) with aerial photograph base maps with an accuracy of 1 foot. Most boundaries shown on the maps are accurate within approximately 3 feet; however, boundaries between some vegetation types are less precise due to difficulties in interpreting aerial imagery and accessing stands of vegetation.

Vegetation communities can overlap in many characteristics and over time may shift from one community type to another. All vegetation maps and descriptions are subject to variability for the following reasons:

- In some cases, vegetation boundaries result from distinct events, such as wildfire or flooding, but vegetation types usually tend to intergrade on the landscape, without precise boundaries between them. Even distinct boundaries caused by fire or flood can be disguised after years of post-disturbance succession. Mapped boundaries represent the best professional judgment, but usually should not be interpreted as literal delineations between sharply defined vegetation types.
- Natural vegetation tends to exist in generally recognizable types, but also may vary over time and geographic region. Written descriptions cannot reflect all local or regional variation. Many (perhaps most) stands of natural vegetation do not strictly fit into any named type. Therefore, a mapped unit is given the best name available in the classification system being used, but this name does not imply that the vegetation unambiguously matches written descriptions.
- Vegetation tends to be patchy. Small patches of one named type are often included within larger stands mapped as units of another type.

3 Regulatory Environment

3.1 Federal Endangered Species Act

Federal Endangered Species Act (FESA) provisions protect federally listed threatened and endangered species and their habitats from unlawful "take" and ensure that federal actions do not jeopardize the continued existence of a listed species or result in the destruction or adverse modification of Designated Critical Habitat (DCH). Under FESA, take is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any of the specifically enumerated conduct." The USFWS regulations define harm to mean "an act which actually kills or injures wildlife." Such an act "may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering" (50 Code of Federal Regulations [CFR] Section 17.3).

DCH is defined in FESA Section 3(5)(A) as "(i) the specific areas within the geographical area occupied by the species on which are found those physical or biological features: (I) essential to the conservation of the species; (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species upon a determination by the Secretary of Commerce or the Secretary of the Interior that such areas are essential for the conservation of the species." The effects analyses for DCH must consider the role of the critical habitat in both the continued survival and the eventual recovery (i.e., the conservation) of the species in question, consistent with the recent Ninth Circuit judicial opinion, Gifford Pinchot Task Force v. USFWS.

Activities that may result in "take" of individuals are regulated by USFWS. USFWS produced an updated list of candidate species on December 6, 2007 (72 Federal Register [FR] 69034). Candidate species are not afforded any legal protection under FESA; however, candidate species typically receive special attention from federal and state agencies during the environmental review process.

3.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 (16 United States Code [USC] 703-711) makes it unlawful to possess, buy, sell, purchase, barter or take any migratory bird listed in Title 50 of CFR Part 10. "Take" is defined as possession or destruction of migratory birds, their nests, and eggs. Disturbances that cause nest abandonment or loss of reproductive effort or the loss of habitats upon which these birds depend may be a violation of the MBTA. The MBTA prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary. The MBTA encompasses whole birds, parts of birds, bird nests, and eggs.

3.3 Bald and Golden Eagle Protection Act of 1940 (16 USC 668)

The Bald and Golden Eagle Protection Act (BGEPA) of 1940 (16 USC 668, enacted by 54 Stat. 250) protects bald and golden eagles by prohibiting the taking, possession, and commerce of such birds and establishes civil penalties for violation of this Act. Take of bald and golden eagles is defined as follows: “disturb means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior’’ (72 FR 31132; 50 CFR 22.3).

USFWS is the primary federal authority charged with the management of golden eagles in the United States (U.S.). USFWS guidance on the applicability of current BGEPA statutes and mitigation is currently under review. On November 10, 2009, the USFWS implemented rules (74 FR 46835) governing the take of golden and bald eagles. The rules were released under the existing BGEPA, which has been the primary regulatory protection for unlisted eagle populations since 1940.

All activities that may disturb or incidentally take an eagle or its nest as a result of an otherwise legal activity must be permitted by the USFWS under this act. The definition of disturb (72 FR 31132) includes interfering with normal breeding, feeding, or sheltering behavior to the degree that it causes or is likely to cause decreased productivity or nest abandonment. If a permit is required, due to the current uncertainty on the status of golden eagle populations in the western U.S., it is expected that permits would only be issued for safety emergencies or if conservation measures implemented in accordance with a permit would result in a reduction of ongoing take or a net take of zero.

3.4 Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act, as amended in 1964, requires that federal agencies consult with National Marine Fisheries Service (NMFS), USFWS, and state wildlife agencies (i.e., CDFW) when proposed actions might result in modification of a natural stream or body of water. Federal agencies must consider the effects these projects would have on fish and wildlife development and provide for improvement of these resources. The Fish and Wildlife Coordination Act allows NMFS, USFWS, and CDFW to provide comments to United States Army Corps of Engineers (USACE) during review of projects under Section 404 of the Clean Water Act (concerning the discharge of dredged materials into navigable “waters of the U.S.” [WOTUS]) and Section 10 of the Rivers and Harbors Act (RHA) regarding obstructions in navigable waterways. NMFS comments provided under the Fish and Wildlife Coordination Act are intended to reduce environmental impacts to migratory, estuarine, and marine fisheries and their habitats.

3.5 Western Joshua Tree Conservation Act

The WJTCA is a California Law that was enacted in July 2023. The WJTCA prohibits the importation, export, take, possession, purchase, or sale of any western Joshua tree (*Yucca brevifolia*) in California unless authorized by CDFW. The act authorizes CDFW to issue permits for the incidental take of one or more western Joshua trees if the permittee meets certain conditions. Permittees may pay specified fees in lieu of conducting mitigation activities. The act also authorizes CDFW to issue permits for the removal of dead western Joshua trees and the trimming of live western Joshua trees under certain circumstances. Pursuant to the WJTCA, CDFW may enter into an agreement with any county or city to delegate limited authority to permit the taking of a western Joshua tree associated with developing single-family residences, multifamily residences, accessory structures, and public works projects. CDFW may similarly enter into an agreement with any county or city to delegate limited authority to permit the removal of dead western Joshua trees and the trimming of live western Joshua trees. Under the act, all in-lieu fees collected will be deposited into the Western Joshua Tree Conservation Fund for appropriation to CDFW solely for the purposes of acquiring, conserving, and managing western Joshua tree conservation lands and completing other activities to conserve the western Joshua tree.

Additionally, the act requires CDFW to develop and implement a western Joshua tree conservation plan in collaboration with governmental agencies, California Native American Tribes, and the public. The complete draft conservation plan must be presented no later than December 31, 2024, at a public meeting of the Fish and Game Commission for its review and approval. CDFW must also develop annual reports assessing the conservation status of the western Joshua tree and submit them to the commission and the State Legislature no later than January 1 of each year, starting in 2025.

In March 2022, CDFW prepared a status review report for western Joshua tree evaluating whether listing the species as endangered or threatened under the California Endangered Species Act would be warranted. The WJTCA requires CDFW to prepare an updated status review report by January 1, 2033, unless the Fish and Game Commission directs CDFW to complete the update sooner, and directs the Fish and Game Commission to consider the effectiveness of the conservation measures of the WJTCA, the updated status review report, and other factors before deciding whether the current petition to list the western Joshua tree under the California Endangered Species Act is warranted. (CDFW 2024g)

3.6 Federally Regulated Habitats

Areas that meet the regulatory definition of WOTUS are subject to the jurisdiction of the USACE under provisions of Section 404 of the Clean Water Act (CWA) (1972) and Section 10 of the RHA (1899). WOTUS may include all waters used or potentially used for interstate commerce, including all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (e.g., intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, etc.), all impoundments of waters otherwise defined as WOTUS, tributaries of waters otherwise defined as WOTUS, territorial seas, and wetlands (i.e., “Special Aquatic Sites”) adjacent to WOTUS (33 CFR Part 328, Section 328.3). The Project Area falls within the South Pacific Division of the USACE and is under the jurisdiction of the Los Angeles District. Construction activities within WOTUS are regulated by USACE. The placement of fill into such

waters must comply with permit requirements of USACE. USACE permits must also be consistent with State Water Quality Certification pursuant to Section 401 of the CWA.

In 1986, the federal agencies (USACE and U.S. Environmental Protection Agency [USEPA]) implemented historic regulations (the 1986 Regulations) that defined WOTUS to mean traditional navigable waters, the territorial seas, interstate waters, and intrastate waters whose use or degradation could affect interstate or foreign commence, as well as tributaries (streams that flow into larger streams or other bodies of water) of and wetlands adjacent to any of those waters.

The jurisdictional extent of USACE regulation changed with the 2001 Solid Waste Agency of Northern Cook County ruling. The U.S. Supreme Court held that the USACE could not apply Section 404 of the CWA to extend their jurisdiction over an isolated quarry pit. The Court ruled that the CWA does not extend Federal regulatory jurisdiction over non-navigable, isolated, intra-state waters. However, the Court made it clear that non-navigable wetlands adjacent to navigable waters are still subject to USACE jurisdiction.

In 2006, the U.S. Supreme Court issued its seminal decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (collectively referred to as *Rapanos*). Justice Scalia narrowly interpreted the statutory term “waters of the United States” in a four-Justice plurality opinion, holding that CWA jurisdiction extended over only “relatively permanent, standing or continuously flowing bodies of water” that are connected to traditional navigable waters, plus wetlands with a “continuous surface connection” to such relatively permanent water bodies. Justice Kennedy wrote separately, concurring with the Court’s judgment with respect to the facts of the case, but interpreted “waters of the United States” to include wetlands that possess a “significant nexus” to waters that are or were navigable in fact or that could reasonably be so made.

The Court’s split decision and lack of a commanding majority opinion in *Rapanos* created confusion among the federal agencies and public. On December 2, 2008, the federal agencies released a regulatory guidance document, *Clean Water Act Jurisdiction Following the U.S. Supreme Court’s Decision in Rapanos v. United States & Carabell v. United States* (USACE and USEPA 2008), addressing common questions about federal jurisdiction over WOTUS and clarifying the two jurisdictional standards from *Rapanos*. In the 2008 *Rapanos* Guidance, the federal agencies concluded that federal jurisdiction existed over certain waterbodies that meet the “relatively permanent” standard from Justice Scalia’s plurality opinion or Justice Kennedy’s “significant nexus” standard, the latter of which would be determined by a fact-specific analysis.

The 1986 Regulations as interpreted by the 2008 *Rapanos* Guidance were later replaced by the 2015 Clean Water Rule. The federal agencies attempted to provide clarification on jurisdiction following the *Rapanos* ruling by replacing the numerous categories of waterbodies found in the 1986 Regulations with four broader categories: (1) waters that are categorically “jurisdictional by rule” without the need for further analysis, including traditional navigable waters, interstate waters, the territorial seas, and impoundments of these waters; (2) waters that are jurisdictional by rule, if they meet the definitions for tributaries and adjacent waters established in the 2015 Clean Water Rule; (3) waters that are subject to case-specific jurisdictional analysis under the “significant nexus” standard; and (4) waters that are

categorically excluded from jurisdiction. The 2015 Clean Water Rule therefore resulted in an expansion in federal jurisdiction over waterbodies that might have otherwise been excluded from the definition of WOTUS on a case-by-case basis under the 1986 Regulations and the *Rapanos* ruling.

On June 9, 2021, the USACE and USEPA under the Biden Administration announced their intent to revise the definition of WOTUS to protect more waterways, beginning a new rulemaking process that restores protections put in place before 2015.

On January 18, 2023, the federal agencies published the final "Revised Definition of 'Waters of the United States'" rule (2023 Rule) in the Federal Register, which became effective on March 20, 2023 (USACE and USEPA 2023a). The 2023 Rule generally returns to the pre-2015 definition. The implications of the final 2023 WOTUS rule are such that many ephemeral waters not considered protected under the former 2020 NWPR would now be protected.

On September 8, 2023, the USACE and USEPA amended the CFR with a new Final Rule to conform the definition of WOTUS to the 2023 Supreme Court Sackett decision (USACE and USEPA 2023b). This conforming rule amends the provisions of the agencies' definition of WOTUS that are invalid under the Supreme Court's interpretation of the CWA in the 2023 decision. While EPA's and USACE's 2023 WOTUS rule defining WOTUS was not directly before the Supreme Court, the decision in Sackett made clear that certain aspects of the WOTUS 2023 rule are invalid. The amendments issued are limited and change only parts of the 2023 rule that are invalid under the Sackett decision. For example, the final rule removes the significant nexus test from consideration when identifying tributaries and other waters as federally protected. The result of the Sackett legal ruling and new Final Rule for WOTUS is that it rejected the 17-year-old "significant nexus" test from *Rapanos* and instead authored a new test – the "continuous surface connection" test – to determine what wetlands constitute WOTUS subject to the CWA.

3.7 National Environmental Policy Act

The National Environmental Policy Act (NEPA) of 1969 requires federal agencies to examine the environmental impacts of their actions, incorporate environmental information, and use public participation in the planning and implementation of all actions. Federal agencies must integrate NEPA into other planning requirements and prepare appropriate NEPA documents to facilitate better environmental decision-making. NEPA requires Federal agencies to review and comment on Federal agency environmental plans and documents when the agency has jurisdiction by law or special expertise with respect to any environmental impacts involved (42 USC 4321- 4327; 40 CFR 1500-1508). These guidelines establish an overall federal process for the environmental evaluation of projects.

3.8 California Environmental Quality Act

The California Environmental Quality Act (CEQA) establishes State policy to prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures. CEQA applies to discretionary actions directly undertaken, financed, or permitted by local or State lead agencies when those actions are found to have or are likely to have direct or indirect environmental impacts. Regulations for implementation are found in the State CEQA Guidelines published by the Resources Agency. These guidelines establish an overall process for the environmental evaluation of projects.

3.9 California Endangered Species Act

Provisions of the California Endangered Species Act (CESA) protect State-listed Threatened and Endangered species. The CDFW regulates activities that may result in "take" of individuals ("take" means "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") listed under CESA. Habitat degradation or modification is not expressly included in the definition of "take" under the California Fish and Game Code. The CDFW may authorize take under the CESA via an Incidental Take Permit through California Fish and Game Code Section 2081(b). CDFW also maintains lists for Candidate-Endangered Species and Candidate-Threatened Species. California Candidate Species are afforded the same level of protection as listed species. Additionally, the California Fish and Game Code contains lists of vertebrate species designated as "fully protected" (California Fish & Game Code §§ 3511 [birds], 4700 [mammals], 5050 [reptiles and amphibians], 5515 [fish]). Such species may not be taken or possessed without an approved Natural Communities Conservation Plan.

In addition to Federal and State-listed species, the CDFW also has produced a list of California Species of Special Concern (SSCs) to serve as a "watch list." Species on this list are of limited distribution or the extent of their habitats has been reduced substantially, such that threat to their populations may be imminent. These SSCs may receive special attention during environmental review, but they do not have statutory protection.

3.10 Native Plant Protection Act (Fish & Game Code 1900-1913)

California's Native Plant Protection Act (NPPA) requires all State agencies to utilize their authority to carry out programs to conserve endangered and rare native plants. Provisions of NPPA prohibit the taking of listed plants from the wild and require notification of the CDFW at least 10 days in advance of any change in land use. This allows CDFW to salvage listed plant species that would otherwise be destroyed. The Applicant is required to conduct botanical inventories and consult with CDFW during project planning to comply with the provisions of this act and sections of CEQA that apply to rare or endangered plants.

3.11 California Fish and Game Code Section 1602

Section 1602 of the California Fish and Game Code requires an entity to notify CDFW before commencing an activity that will:



- Substantially divert or obstruct the natural flow, or substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or
- Deposit or dispose of debris, waste or other material where it may pass into any river, stream, or lake.

If any of these activities may substantially alter its bed, channel, or bank, or adversely affect existing fish and wildlife resources, a Lake and Streambed Alteration Agreement is required. A Lake and Streambed Alteration Agreement lists the CDFW conditions of approval relative to a proposed project and serves as an agreement between an applicant and the CDFW for the performance of activities subject to Section 1602. For the purposes of this Report, potential CDFW jurisdiction is interpreted as extending from the streambed/thalweg to the outer edge of adjacent riparian vegetation (for both natural and anthropogenic drainage features) and for this BSA, is roughly equivalent to “waters of the State” as defined by the Regional Water Quality Control Board.

3.12 Section 3503 & 3503.5 of the Fish and Game Code

Birds of prey are protected under the California Fish and Game Code. Sections 3503 and 3503.5 state it is “unlawful to take, possess, or destroy any birds of prey (in the order Falconiformes or Strigiformes) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this Code or any regulation adopted pursuant thereto.” Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “take” by the CDFW. Under Sections 3503 and 3503.5 of the California Fish and Game Code, activities that would result in the taking, possessing, or destroying of any birds-of-prey, taking or possessing of any migratory nongame bird as designated in the MBTA, or the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or non-game birds protected by the MBTA, or the taking of any non-game bird pursuant to Fish and Game Code Section 3800 are prohibited.

3.13 Palmdale Native Desert Vegetation Ordinance

The Palmdale Native Desert Vegetation Ordinance (City of Palmdale 1992) aims to protect and preserve desert vegetation, and particularly Joshua trees, so as to retain the unique natural desert aesthetics in some areas of the city, and to promote the general welfare of the community. Although it may not be feasible, practicable, or in the public interest to preserve all healthy desert vegetation regulated by the ordinance due to reasonable planning, developmental or property rights considerations, the design of development projects should strive to protect and maintain the most desirable and significant of the healthy desert vegetation in a manner consistent with the city general plan and CEQA. (Ord. 952 §2 (part) 1992)

All public and private property within the City which contains Joshua trees or other desert vegetation as defined by the ordinance shall follow the provisions for prohibition of removal, desert vegetation preservation plan requirements, and the desert vegetation preservation criteria and maintenance requirements. In summary, these provisions require that:

- A native desert vegetation removal permit shall be obtained from the city's landscape architect, or in lieu thereof, the director of public works' designee, prior to the removal of any native desert vegetation as defined in the ordinance. (Ord. 952 §2(part), 1992)
- All development proposal applications for sites containing native desert vegetation shall include a desert vegetation preservation plan, submitted with the development application.
- All development proposals for land which contains desert vegetation shall be subject to provisions regarding the preservation and ongoing maintenance of native desert vegetation both on-and off-site.

4 Existing Conditions

4.1 Setting

The BSA is partially located in the City of Palmdale in Los Angeles County, California. The BSA is surrounded by agricultural fields, open space, and neighborhoods/developments associated with Palmdale. The photographic log for the survey is included in **Appendix B** and depicts representative environmental conditions within the BSA and surrounding areas.

4.2 Vegetation Communities and Land Cover Types

As defined in the MCVII, a vegetation alliance is "a category of vegetation classification which describes repeating patterns of plants across a landscape. Each alliance is defined by plant species composition and reflects the effects of local climate, soil, water, disturbance and other environmental factors" (Sawyer et al. 2009). Generally, Stantec's mapping and description of plant communities follows the classification system described in MCVII. The MCVII is generally limited to communities that are native or naturalized within California. Biological resources observed within the BSA during the reconnaissance/botanical field surveys consisted primarily of common plant species and vegetation communities characteristic of the southeastern Antelope Valley.

The extent and condition of vegetation communities within the BSA varied depending on the level of existing development and land use activities, which have resulted in disturbed conditions with relatively low plant diversity. Within the BSA, Stantec biologists mapped and quantified acreages for four plant communities defined by Sawyer et al. (2009), and one landcover type (**Table 1**). The botanical nomenclature within this report follows the Jepson Herbarium online database, eFlora (Jepson Flora Project 2024). Plant species documented during the surveys are provided in Section 4.3.

Table 1 Vegetation Communities and Land Cover Types occurring within the BSA

Vegetation Communities and Land Cover Types	Area (acres) of BSA
Vegetation Communities	
Avena spp. - *Bromus* spp. Herbaceous Semi-Natural Alliance	14.31
Brassica nigra - *Centaurea* (*solstitialis, melitensis*) Herbaceous Semi-Natural Alliance	242.50
Ericameria nauseosa Shrubland Alliance	21.69
Yucca brevifolia Woodland Alliance	35.89
Land Cover Type	
Disturbed/Developed	301.59
Total	616.09

4.2.1 Vegetation Communities

Avena spp. - Bromus spp. Herbaceous Semi-Natural Alliance

This community occurs around the southeast corner of the BSA, concentrated by E Avenue Q and 30th St E; 14.31 acres of this community were mapped within the BSA. Vegetation characteristic of the *Avena spp. - Bromus spp*. herbaceous semi-natural alliance consists of slim oat (*Avena barbata),* wildoats *(Avena fatua)*, purple false brome *(Brachypodium distachyon)*, rattlesnake grass *(Briza maxima)*, ripgut brome *(Bromus diandrus)*, soft chess *(Bromus hordeaceus)* and/or foxtail (*Hordeum murinum)* dominant or co-dominant with other non-natives in the herbaceous layer such as Australian saltbush (*Atriplex semibaccata)* and foxtail. Emergent trees and shrubs may be present at low cover. The applicable membership rule for this alliance is *Avena*, B*rachypodium*, *Briza*, *Bromus*, *Erodium* and/or *Hypochaeris* > 30% relative cover individually, or share > 50% relative cover in the herbaceous layer; and overall non-native herbs > 80% relative cover. This alliance occurs where cover is open to continuous. This alliance observed on site was dominated by ripgut brome, wildoats, foxtail, and stork's bill *(Erodium cicutarium).*

Brassica nigra - Centaurea (solstitialis, melitensis) Herbaceous Semi-Natural Alliance

This community occurs throughout a majority of the BSA and is the most dominant vegetation community; 242.5 acres of this community were mapped within the BSA. Vegetation characteristic of the *Brassica nigra – Centaurea* herbaceous semi-natural alliance consists of black mustard (*Brassica nigra),* common mustard *(Brassica rapa),* Italian thistle *(Carduus pycnocephalus),* Tocalote *(Centaurea melitensis), y*ellow starthistle *(Centaurea solstitialis),* cardoon *(Cynara cardunculus),* geraldton carnation weed *(Euphorbia terracina),* short-podded mustard *(Hirschfeldia incana),* dyers woad *(Isatis tinctoria)* or wild radish (*Raphanus sativus)* or similar ruderal forb dominant in the herbaceous layer. Emergent trees and shrubs may be present at low cover. The applicable membership rule for this alliance is black mustard*,* short-podded mustard*,* wild radish, or other mustards occur with non-native plants at > 80% relative cover in the herbaceous layer, and mustards are the dominant herbs. This alliance occurs where cover is open to continuous. This alliance observed on site was widespread through most of the BSA and dominated by short-podded mustard*,* black mustard*,* tumble mustard *(Sisymbrium altissimum),* and Russian thistle *(Salsola tragus).*

Ericameria nauseosa Shrubland Alliance

This community is limited to the south side of E Avenue P and also concentrated around a drainage like feature that diagonals across the southern portion of the BSA; 21.69 acres if this community were mapped within the BSA. Vegetation characteristic of the *Ericameria nauseosa* shrubland alliance consists of rubber rabbitbrush *(Ericameria nauseosa)* dominant or co-dominant in the shrub canopy with common sagebrush (*Artemisia tridentata),* green rabbitbrush *(Chrysothamnus viscidiflorus), Ephedra spp.,* California buckwheat *(Eriogonum fasciculatum),* scalebroom *(Lepidospartum squamatum)* and *a*ntelope bush *(Purshia tridentata)*. Emergent trees may be present at low cover, including California juniper (*Juniperus californica),* Jeffrey pine *(Pinus jeffreyi),* single leaf pinyon *(Pinus monophyla)* or Joshua tree. The applicable membership rule for this alliance is rubber rabbitbrush >50% relative cover in the shrub canopy; rubber rabbitbrush ≥ 2% absolute cover or > 25% relative cover in the shrub canopy. This association occurs where canopy is open to continuous, and the herbaceous layer is sparse or grassy.

This alliance within the BSA was dominated by rubber rabbitbrush, Nevada ephedra, and California buckwheat.

Yucca brevifolia Woodland Alliance

This community mostly occurs around the northeastern BSA, adjacent to the oxidation ponds and along E Avenue P; 35.89 acres of this community were mapped within the BSA. Vegetation characteristic of the *Yucca brevifolia* woodland alliance consists of Joshua tree as an emergent small tree over a shrub or grass layer with burro weed (*Ambrosia Dumosa),* burrobrush (*Ambrosia Salsola),* common sagebrush, green sagebrush, black brush *(Coleogyne ramosissima),* buck horn cholla *(Cylindropuntia acanthocarpa),* Nevada ephedra, California buckwheat, sticky snakeweed *(Gutierrezia microcephala),* winter fat *(Krascheninnikovia lanata),* creosote bush *(Larrea tridentata),* Anderson thornbush *(Lycium andersonii),* Spanish bayonet *(Yucca baccata) and* Mohave yucca *(Yucca schidigera).* Other trees may be present at low cover, including California juniper, Utah juniper *(Juniperus osteosperma)* or single leaf pinyon. The applicable membership rule for this alliance is Joshua tree evenly distributed at ≥ 1% cover, *Juniperus* and/or *Pinus* spp. < 1% absolute cover in the tree canopy. This alliance occurs where both the canopy and shrub layer are open to intermittent, and the herbaceous layer is open to intermittent with perennial grasses and seasonal annuals. Within the BSA, Joshua tree was the dominant species for this alliance and it was codominant with creosote bush, Anderson thornbush, Nevada ephedra, and California buckwheat.

4.2.2 Land Cover Types

Disturbed/Developed

Within the BSA, this land cover type is defined and mapped by commercial and industrial buildings/structures, roads, the golf course, and the former oxidation ponds; 301.59 acres of this land cover type were mapped within the BSA. These areas are either typically cleared of vegetation, or are vegetated with developed landscaping, golf course lawns, and sparsely interspersed with ruderal pioneer plant species that colonized the disturbed soil. The oxidation ponds, for example, are currently dominated by bare ground and a variety of non-native, annual mustards, thistles, and grasses.

4.3 Plant Species Observed

The surveys resulted in the documentation of 65 total species of native and non-native plants within the BSA (**Table 2**)**.** Where applicable, the California Invasive Plant Council (Cal-IPC) inventory ranking is provided (Cal-IPC 2024).

Table 2. Vascular Plant Species Observed in the BSA

Scientific	Common	Origin/Status
Acmispon americanus	Spanish lotus	Native
Ailanthus altissima	Tree of heaven	Non-native, Cal-IPC Moderate
Ambrosia dumosa	Burro weed	Native
Amsinckia tessellata	Devil's lettuce	Native
Atriplex canescens	Hoary saltbush	Native
Atriplex lentiformis	Big saltbush	Native
Atriplex semibaccata	Australian saltbush	Non-native, Cal-IPC Moderate
Baccharis salicifolia	Mulefat	Native
Brassica nigra	Black mustard	Non-native, Cal-IPC Moderate
Brassica tournefortii	Saharan mustard	Non-native, Cal-IPC High
Bromus diandrus	Ripgut brome	Non-native, Cal-IPC Moderate
Bromus rubens	Red brome	Non-native, Cal-IPC High
Bromus tectorum	Cheatgrass	Non-native, Cal-IPC High
Calochortus kennedyi	Desert mariposa lily	Native
Clarkia sp.	Clarkia	N/A
Croton setiger	Turkey-mullein	Native
Cylindropuntia echinocarpa	Silver cholla	Native
Cylindropuntia sp.	Cholla	Native
Datura wrightii	Jimsonweed	Native
Descurainia sophia	Flix sophia	Non-native, Cal-IPC Limited
Dipterostemon capitatus	Blue dicks	Native
Eleocharis palustris	Common spikerush	Native
Ephedra nevadensis	Nevada ephedra	Native
Epilobium canum	California fuchsia	Native
Ericameria linearifolia	Interior goldenbush	Native
Ericameria nauseosa	Rubber rabbitbrush	Native
Erigeron canadensis	Canada horseweed	Native
Eriogonum angulosum	Anglestem buckwheat	Native
Eriogonum fasciculatum	California buckwheat	Native
Eriogonum mohavense	Western mojave buckwheat	Native
Erodium cicutarium	Coastal heron's bill	Non-native, Cal-IPC Limited
Euphorbia albomarginata	Rattlesnake sandmat	Native
Grayia spinosa	Hop sage	Native
Gutierrezia microcephala	Sticky snakeweed	Native
Helianthus annuus	Hairy leaved sunflower	Native

Scientific	Common	Origin/Status
Hirschfeldia incana	Short podded mustard	Non-native, Cal-IPC Moderate
Hordeum murinum	Foxtail barley	Non-native, Cal-IPC Moderate
Juncus torreyi	Torrey's rush	Native
Lactuca serriola	Prickly wild lettuce	Non-native
Larrea tridentata	Creosote bush	Native
Lasthenia californica	California goldfields	Native
Lupinus succulentus	Arroyo lupine	Native
Lycium andersonii	Anderson thornbush	Native
Malacothrix glabrata	Desert dandelion	Native
Malva parviflora	Cheeseweed	Non-native
Melilotus albus	White sweetclover	Non-native
Oenothera californica	California evening primrose	Native
Pinus sp.	Pine	N/A
Rumex crispus	Curly dock	Non-native, Cal-IPC Limited
Rumex salicifolius	Willow dock	Native
Salix exigua	Sandbar willow	Native
Salix laevigata	Red willow	Native
Salix lasiolepis	Arroyo willow	Native
Salsola tragus	Russian thistle	Non-native, Cal-IPC Limited
Schoenoplectus americanus	Chairmaker's bulrush	Native
Scirpus microcarpus	Small fruited bulrush	Native
Sisymbrium altissimum	Tumble mustard	Non-native
Sonchus oleraceus	Sow thistle	Non-native
Sphaeralcea ambigua	Desert mallow	Native
Tamarix ramosissima	Tamarisk	Non-native, Cal-IPC High
Trichostema lanceolatum	Vinegarweed	Native
Typha latifolia	Broadleaf cattail	Native
Ulmus pumila	Siberian elm	Non-native
Veronica anagallis-aquatica	Water speedwell	Non-native
Yucca brevifolia	Western Joshua tree	Native

4.4 Common Wildlife

This section describes the common wildlife observed during the reconnaissance-level survey and those species expected to occur within the BSA based on habitat characteristics and species known to occur in the region.

4.4.1 Terrestrial Invertebrates

As in all ecological systems, invertebrates in the BSA play a crucial role in biological processes. They serve as the primary or secondary food source for amphibian, bird, reptile, and mammal predators; they provide important pollination vectors for numerous plant species; they act as efficient components in controlling pest populations; and they support the naturally occurring maintenance of an area by consuming detritus and contributing to necessary soil nutrients. Though moderately urbanized, habitat conditions within the BSA provide a suite of microhabitat conditions for a wide variety of terrestrial insects and other invertebrates that are known to adapt to such disturbance. A focused insect survey was not performed within the BSA for this Project; however, a variety of common insects were observed during the reconnaissance-level survey including grasshoppers (*Orthoptera* spp.), moths and butterflies (*Lepidoptera* spp.), wasps, bees, and ants (*Hymenoptera* spp.), and dragonflies and damselflies (*Odonata* spp.).

4.4.2 Fish

There is no suitable aquatic habitat for fish within the BSA. While the two drainages in the western extent of the BSA contained water during both site visits, neither drainage maintains standing water year-round nor are they connected to any larger drainage system.

4.4.3 Amphibians

There were two drainages towards the western extent of the BSA that contained standing water and had a minimal wetland vegetation footprint. Each drainage stems from and experiences water input from their upstream PWD groundwater pumping stations. Therefore, there is poor suitable amphibian habitat because each drainage only supports ephemeral/perennial flows, which do not provide long periods of standing water and are not connected to any larger natural drainage system. While amphibian species were not observed during the reconnaissance-level survey within the BSA, there have been prior observations in the greater area for western toad (*Bufo boreas*).

4.4.4 Reptiles

The number and type of reptile species that may occur at a given site are related to biotic and abiotic features present in the BSA. These include the diversity of plant communities, substrate, soil type, and presence of refugia such as rock piles, boulders, and native debris. Weather conditions were favorable during the survey for reptile activity.

Many reptile species, even if present, are difficult to detect because they are cryptic and their life history characteristics (e.g., foraging, thermoregulatory behavior, fossorial nature, camouflage, etc.) limit their ability to be observed during most surveys. Further, many species are only active within relatively narrow thermal limits, avoiding both cold and hot conditions, and most take refuge in microhabitats that are not directly visible to the casual observer, such as rodent burrows, in crevices, under rocks and boards, and in dense vegetation where they are protected from unsuitable



environmental conditions and predators (USACE and California Department of Fish and Game [CDFG] 2010). In some cases, they are only observed when flushed from their refugia.

Gopher snake (*Pituophis catenifer*), Southern alligator lizard (*Elgaria multicarinata*), Western whiptail (*Aspidoscelis tigris*), and Western side blotch lizard (*Uta stansburiana elegans*) were observed within the BSA. Species not observed within the BSA but known to occur in the area include Mojave rattlesnake (*Crotalus scutulatus*), Desert horned lizard (*Phrynosoma platyrhinos*), Desert night lizard (*Xantusia vigilis*), and Western fence lizard (*Sceloporus occidentalis*).

4.4.5 Birds

Birds were identified by sight and song and were observed throughout the BSA. House finch *(Haemorhous mexicanus),* American crow *(Corvus brachyrhynchos),* horned lark *(Eremophila alpestris),* common raven *(Corvus corax),* and mourning dove *(Zenaida macroura)* were observed within the BSA. During the May site visit, one active red-tailed hawk nest was observed in the water tower by the southwest parcel of project, near the proposed facilities; during the July site visit, the nest appeared to have fledged. In May, there was an active common raven nest in a Western Joshua tree across from the Palmdale Water Reclamation Plant (WRP). During the July survey the nest was determined to have failed, likely due to predation, considering its nest contents were scattered and a raven carcass was observed nearby. Species not observed within the BSA but known to occur in the area include House sparrow (*Passer domesticus*) and Great Horned Owl (*Bubo virginianus*).

4.4.6 Mammals

Generally, the distribution of mammals on a given site is associated with factors such as access to perennial water, topographical and structural components (e.g., rock piles, vegetation) that provide cover and support prey base, and the presence of suitable soils for fossorial mammals (e.g., sandy areas). Many small burrows were observed consistently throughout the BSA. Some of these burrows were actively being used by Desert cottontail (*Sylvilagus audubonii*) and California ground squirrel (*Spermophilus beecheyi*) and individuals were seen flushing from burrows as they were approached. Mammal species observed within the BSA are detailed in **Table 3**.

Table 3 Wildlife Species Observed in the BSA

Scientific Name	Common Name	Notes
Reptiles		
Aspidoscelis tigris	Western whiptail	
Elegaria multicarinata	southern alligator lizard	
Pituophis catenifer	gopher snake	
Uta stansburiana	common side-blotched lizard	
Birds		
Agelaius phoeniceus	red-winged blackbird	

Scientific Name	Common Name	Notes
Reptiles		
Aspidoscelis tigris	Western whiptail	
Elegaria multicarinata	southern alligator lizard	
Pituophis catenifer	gopher snake	
Uta stansburiana	common side-blotched lizard	
Buteo jamaicensis	red-tailed hawk	One red-tailed hawk nest was observed during the May site visit on the water tank in the southwest parcel of project, near the proposed facilities. The nest was likely in incubation phase. During the July site visit, the nest had fledged and was no longer active.
Columba livia	rock pigeon	
Corvus brachyrhynchos	American crow	
Corvus corax	common raven	One common raven nest was observed in a Western Joshua tree across the street from the Palmdale WRP during the May site visit. It was likely active given the raven's level of agitation within 50 ft. During the July site visit, the nest had fallen off the tree and looked to have failed.
Eremophila alpestris	horned lark	
Haemorhous mexicanus	house finch	
Mimus polyglottos	Northern mockingbird	
Sayornis saya	Say's phoebe	
Setophaga coronata	yellow-rumped warbler	
Sturnus vulgaris	European starling	
Zenaida macroura	mourning dove	
Mammals		
Lepus californicus	Black-tailed jackrabbit	
Otospermophilus beecheyi	California ground squirrel	
Sylvilagus audubonii	Desert cottontail	

4.5 Soils

Historical soils data from the Natural Resources Conservation Service (NRCS) were used to determine potential soil types that may occur within the Study Area. NRCS GIS data accessible online (NRCS 2023a) provide information on soil types collected from soil surveyors who have surveyed the landscape and provided taxonomic classification and mapping of soil types. This allows for estimation of acreages of each soil type identified within a specified area. Characteristics of soils present within the Study Area are summarized in **Table 4** – Historical Soils Occurring Within the Study Area; NRCS soils mapping is presented in **Appendix, Figure 4.**

Table 4 Historical Soil Units Occurring within the BSA

Map Unit Symbol	Map Unit Name	Description	Area within BSA (acres)
AcA	Adelanto coarse loamy sand, 2 to 5 percent slopes	The Adelanto series consists of very deep, well drained soils that formed in granitic parent material on alluvial fans and plains.	190.75
CaA	Cajon loamy sand, 0 to 2 percent slopes	The Cajon series consists of very deep, excessively drained soils that formed in sandy alluvium from dominantly granitic rocks. Cajon soils are associated with alluvial fans, fan aprons, fan skirts, inset fans, and river terraces.	13.63
CbA	Cajon loamy sand, loamy substratum, 0 to 2 percent slopes	The Cajon series consists of very deep, excessively drained soils that formed in sandy alluvium from dominantly granitic rocks. Cajon soils are associated with alluvial fans, fan aprons, fan skirts, inset fans, and river terraces.	65.30
GsA	Greenfield sandy loam, 0 to 2 percent slopes	The Greenfield series consists of deep well drained soils that formed in moderately coarse and coarse textured alluvium derived from granitic and mixed rock sources. Greenfield soils are on alluvial fans and terraces and have slopes of 0 to 30 percent.	16.73
HkA	Hesperia fine sandy loam, 0 to 2 percent slopes	The Hesperia series consists of very deep, well drained soils that formed in alluvium derived primarily from granite and related rocks. Hesperia soils are on alluvial fans, valley plains and stream terraces and have slopes of 0 to 9 percent.	64.07
M-W	Miscellaneous water	Mapped as Los Angeles County Sanitation Districts Oxidation Ponds within the Survey Area.	163.60
Ro	Rosamond fine sandy loam	The Rosamond series consists of deep, well drained soils that formed in material weathered and mainly from granitic alluvium. Rosamond soils are on the lower margin of the alluvial fans between sloping fans and the playas and have slopes of 0 to 2 percent.	62.07
Rp	Rosamond loam	The Rosamond series consists of deep, well drained soils that formed in material weathered and mainly from granitic alluvium. Rosamond soils are on the lower margin of the alluvial fans between sloping fans and the playas and have slopes of 0 to 2 percent.	39.93
		Total	**616.09**

Source: NRCS 2024a, 2024b

4.6 Aquatic Resources

The BSA is within Hydrologic Unit Code (HUC)-8 18090206 – Antelope – Fremont Valleys. The BSA is located within the Antelope Valley groundwater basin, and in the Landcaster groundwater subbasin. In general, groundwater in the Antelope Valley Basin flows northeasterly from the mountain ranges to the dry lakes. The basin is principally recharged by infiltration of precipitation and runoff from the surrounding mountains and hills in ephemeral stream channels (Los Angeles County Public Works 2014).

A review was conducted of aerial imagery, USGS topographic maps, the National Wetlands Inventory (NWI; USFWS 2024), and the National Hydrography Dataset (NHD; USGS 2024) within and adjacent to the BSA. Several unnamed drainages occur within the southwestern portion of the BSA as mapped by

NWI/NHD but only one of these drainages was observed to have any discernable drainage characteristics (i.e., bed, bank, and ordinary high water mark). This drainage enters the BSA in the southwestern section and traverses through open land until it enters the BSA again to the north. Additionally, there is another drainage that enters the BSA just north of the drainage previously discussed where they confluence in the open land before reentering the BSA.

Two other regional streams mapped by NWI and/or NHD as formerly traversing the BSA likely were channelized from runoff from nearby foothills and may have flowed unhindered at a point in their history. However, most sections of these streams within the BSA have been virtually eliminated as a result of depositional characteristics of typical desert systems in an arid climate.



5 Special-Status Biological Resources

The background information presented above combined with habitat assessments performed during the surveys was used to evaluate special-status natural communities and special-status plant and animal taxa that either occur or may have the potential to occur within the BSA and adjacent habitats. For the purposes of this BRTR, special-status taxa are defined as plants or animals that:

- Have been designated as either rare, threatened, or endangered by CDFW or the USFWS, and are protected under either the California Endangered Species Act or FESA,
- Are candidate species being considered or proposed for listing under these same acts,
- Are recognized as California Species of Special Concern (SSC) by the CDFW,
- Are ranked by CNPS as California Rare Plant Rank (CRPR) 1, 2, 3, or 4 plant species,
- Are fully protected by the California Fish and Game Code (FGC), Sections 3511, 4700, 5050, or 5515,
- Included in the CDFW Special Animals List (CDFW 2024), or
- Are of expressed concern to resource/regulatory agencies, or local jurisdictions.

5.1 Special-Status Natural Communities

Special-status natural communities are defined by CDFW (2009) as, “communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects.” All vegetation within the state is ranked with an “S” rank, however only those that are of special concern (S1-S3 rank) are generally evaluated under CEQA. One vegetation community within the BSA is considered to have special status: Joshua tree woodland. Joshua tree woodlands have a ranking of S3, meaning this community is vulnerable in the state due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

The BSA does not occur within a Natural Community Conservation Plan, but it does occur within the Western Joshua Tree Conservation Act range and the Palmdale Native Desert Vegetation Ordinance

5.2 Designated Critical Habitat

DCH is defined by the USFWS (2020b) as, “specific geographic areas that contain features essential to the conservation of an endangered or threatened species and that may require special management and protection.” DCH may also include areas that are not currently occupied by the species but will be needed for its recovery. There is no DCH located within the BSA, and the closest occurrence is Arroyo toad DCH approximately 8.5 miles southeast of the BSA.

5.3 Special-Status Plants

Table 5 presents a list of special-status plants, including federal- and state-listed species and CRPR 1-4 species that are known to occur in and in the region surrounding the BSA (within 10 miles) (**Appendix A Figure 6**).

Records searches of the CNDDB and the CNPS Online Inventory were performed for special-status plant taxa. Each of the taxa identified in the record searches was assessed for their potential to occur within the BSA based on the following criteria:

- **Present:** Taxa were observed within the BSA during recent botanical surveys or population has been acknowledged by CDFW, USFWS, or local experts.
- **High:** Both a documented recent record (within 10 years) exists of the taxa within the BSA, or immediate vicinity (approximately 5 miles) and the environmental conditions (including soil type) associated with taxa presence occur within the BSA.
- **Moderate:** Both a documented recent record (within 10 years) exists of the taxa within the BSA, or the immediate vicinity (approximately 5 miles) and the environmental conditions associated with taxa presence are marginal and/or limited within the BSA; the BSA is located within the known current distribution of the taxa and the environmental conditions (including soil type) associated with taxa presence occur within the BSA.
- **Low:** A historical record (over 10 years) exists of the taxa within the BSA, or general vicinity (approximately 10 miles) and the environmental conditions (including soil type) associated with taxa presence are marginal and/or limited within the BSA.
- **Not Likely to Occur:** The environmental conditions associated with taxa presence do not occur within the BSA.

Table 5 Known and Potential Occurrences of Special-Status Plant Taxa within the BSA

Scientific Name	Common Name	Status	Habitat and Distribution	Blooming Period	Potential to Occur
Astragalus hornii Var. hornii	Horn's milk-vetch	S1, 1B.1	Meadows and seeps, playas, alkaline, lake margins; 60-850 m.	Mar - Oct	**Not Likely to Occur**: Suitable habitat does not occur within the BSA. The nearest and most recent recorded occurrence is approximately 2.15 miles southwest of the BSA; this occurrence was recorded in 1929.
Astragalus preussii var. laxiflorus	Lancaster milk-vetch	S1, 1B.1	Chenopod scrub; 700 m.	Mar - May	**Low**: Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 6.23 miles northwest of the BSA; this occurrence was recorded in 1902.
Calochortus clavatus var. gracilis	Slender mariposa-lily	S2S3, 1B.2	Chaparral, coastal scrub, valley and foothill grassland, shaded foothill canyons; < 1,000 m.	May – Jun	**Not Likely to Occur**: Suitable habitat does not occur within the BSA. The nearest and most recent recorded occurrence is approximately 9.47 miles west of the BSA; this occurrence was recorded in 2010
Calochortus striatus	Alkali mariposa-lily	S2S3, 1B.2	Chaparral, chenopod scrub, Mojavean desert scrub, meadows and seeps; 70-1,595m,	Apr - Jun	**Low**: Limited marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 6.60 miles northwest of the BSA; this occurrence was recorded in 2005.
Canbya candida	White pygmy-poppy	S3S4	Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland; 600-1,460 m.	Mar - Jun	**Low**: Limited marginally suitable habitat occurs within the BSA. The most recent recorded occurrence is approximately 8.36 miles south of the BSA; this occurrence was recorded in 1926.



Scientific Name	Common Name	Status	Habitat and Distribution	Blooming Period	Potential to Occur
Chorizanthe parryi var. parryi	Parry's spineflower	S2, 1B.1	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; 275-1,220 m.	Apr - Jun	**Not Likely to Occur**: Suitable habitat does not occur within the BSA. The nearest and most recent recorded occurrence is approximately 6.23 miles north of the BSA; this occurrence was recorded in 1896.
Eriastrum rosamondense	Rosamond eriastrum	S1, 1B.1	Chenopod scrub (openings), vernal pools (edges), often sandy microhabitats; 700-1,175 m.	Apr - Jul	**Low**: Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 9.53 miles northwest of the BSA; this occurrence was recorded in 1993.
Loeflingia squarrosa var. artemisiarum	Sagebrush loeflingia	S2, 2B.2	Desert dunes, Great basin scrub, Sonoran desert scrub, sandy; 700-1,615 m.	Apr - May	**Moderate**: Limited suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 4.55 miles northwest of the BSA; this occurrence was recorded in 2005.
Opuntia basilaris var. brachyclada	Short-joint beavertail	S3, 1B.2	Chaparral, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland; 425-1,800 m.	Apr – Jun (Aug)	**Moderate**: Limited suitable habitat occurs within the BSA. The most recent recorded occurrence is approximately 9.42 miles south of the BSA; this occurrence was recorded in 2018.
Stylocline masonii	Mason's neststraw	S1, 1B.1	Chenopod scrub, pinyon and juniper woodland, sandy; 100-1,200 m.	Mar - May	**Low**: Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 9.83 miles southwest of the BSA; this occurrence was recorded in 1991.
Symphyotrichum greatae	Greata's aster	S2, 1B.3	Broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, riparian woodland, damp places in canyons; 300–2,000 m.	Jun – Oct	**Not Likely to Occur**: Suitable habitat does not occur within the BSA. The nearest and most recent recorded occurrence is approximately 9.22 miles southwest of the BSA; this occurrence was recorded in 1893.



Scientific Name	Common Name	Status	Habitat and Distribution	Blooming Period	Potential to Occur
Thysanocarpus rigidus	Rigid fringepod	S2, 1B.2	Pinyon and juniper woodland, dry and rocky microhabitats; 600-2,200 m.	Feb - May	**Not Likely to Occur**: Suitable habitat does not occur within the BSA. The nearest and most recent recorded occurrence is approximately 8.30 miles south of the BSA; this occurrence was recorded in 2005.
Yucca brevifolia	Josha tree	SC	Desert flats, slopes; 400-2,300m	Mar - Jun	**Present:** Mostly documented towards the northeast periphery of the BSA, bordering the oxidation ponds. Also concentrated towards the periphery of the BSA along E Avenue P, with several other individuals scattered throughout the rest of the BSA.

Sources: CNPS 2024, Jepson Flora Project 2024, CDFW 2024a

Federal Designation
FE = Federally Endangered
FT = Federally Threatened
FC = Federal Candidate Species for Listing CDFW State Designation

State Ranking
SE = State Endangered
SR = State Rare
ST = State Threatened
SC= State Candidate for listing
S1 = Critically Imperiled
S2 = Imperiled
S3 = Vulnerable
S4 = Apparently Secure
S5 = Secure

California Rare Plant Rank (CRPR)
1A Plants considered by the CNPS to be extinct in California.
1B Plants rare, threatened, or endangered in California and elsewhere.
2B Plants presumed extinct in California but more common elsewhere.
3 Review List: Plants about which more information is needed.
4 Plants of limited distribution – a watch list
.1 Seriously threatened in California (high degree/immediacy of threat).
.2 Fairly threatened in California (moderate degree/immediacy of threat).
.3 Not very threatened in California (low degree/ immediacy of threat or no current threats known).

5.4 Special-Status Wildlife

Special-status taxa include those listed as threatened or endangered under the federal or California Endangered Species Acts, taxa proposed for such listing, SSC, and other taxa that have been identified by the USFWS, CDFW, or local jurisdictions as unique or rare and which have the potential to occur within the BSA.

The CNDDB was queried for occurrences of special- status wildlife taxa within the BSA and surrounding 10-mile area, as discussed above in Section 2.0. **Table 6** summarizes the special-status wildlife taxa known to occur regionally (within 10 miles) and their potential for occurrence in the BSA (**Appendix A, Figure 6a**).

Each of the taxa identified in the database reviews/searches were assessed for potential to occur within the BSA based on the following criteria:

- **Present:** Taxa (or sign) were observed in the BSA or in the same watershed (aquatic taxa only) during the most recent surveys, or a population has been acknowledged by CDFW, USFWS, or local experts.
- **High:** Habitat (including soils) for the taxa occurs on site and a known occurrence occurs within the BSA or adjacent areas (within 5 miles of the BSA) within the past 20 years; however, these taxa were not detected during the most recent surveys.
- **Moderate:** Habitat (including soils) for the taxa occurs on site and a known regional record occurs within the database search, but not within 5 miles of the BSA or within the past 20 years; or a known occurrence occurs within 5 miles of the BSA and within the past 20 years and marginal or limited amounts of habitat occurs on site; or the taxa's range includes the geographic area and suitable habitat exists.
- **Low:** Limited habitat for the taxa occurs on site and no known occurrences were found within the database search and the taxa's range includes the geographic area.
- **Not Likely to Occur:** The environmental conditions associated with taxa presence do not occur within the BSA.

Table 6. Known and Potential Occurrences of Special-Status Wildlife within the BSA

Taxa		Status	Habitat Types	Potential to Occur
Scientific Name	**Common Name**			
Invertebrates				
Bombus crotchii	Crotch's bumble bee	SC, S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include *Antirrhinum*, *Phacelia*, *Clarkia*, *Dendromecon*, *Eschscholzia*, and *Eriogonum*.	**Moderate**: Limited marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 0.81 miles west of the BSA; this occurrence was recorded in 1931.
Bombus pensylvanicus	American bumble bee	S2	Open farmland and grassland. Uses decaying wood for hibernating sites. This species is a generalist forager, so native, high floral diversity is preferred.	**Moderate:** Limited suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 8.34 miles south of the BSA; this occurrence was recorded in 1982.
Helminthoglypta fontiphila	Soledad shoulderband	S1	Rock outcrops and talus slopes of the three mountain peaks southeast of Bakersfield. Prefers north facing slopes but has been observed on south facing slopes.	**Moderate:** Limited marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is potentially within the BSA; the date of this occurrence is unknown.
Amphibians				
Anaxyrus californicus	Arroyo toad	FE, S2, SSC	Alongside creeks and rivers with shallow pebble bottoms near sandy terrains. When out of water takes refuge in sandy soil for protection and shelter.	**Not Likely to Occur:** No suitable habitat within the BSA. The most recent recorded occurrence is approximately 8.36 miles south of the BSA; this occurrence was recorded in 2001.
Rana draytonii	California red-legged frog	FT, SSC, S2S3	Sheltered, permanent or seasonal ponds, marshes, springs, quiet stream pools, or lakes. Breeding habitat is in areas with deep pools and dense, shrubby riparian or emergent vegetation.	**Not Likely to Occur:** No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 9.93 miles west of the BSA; this occurrence was recorded in 1995.



Taxa		Status	Habitat Types	Potential to Occur
Scientific Name	**Common Name**			
Rana musacosa	Southern mountain yellow-legged frog	FE, SE, S2, WL	Mountain creeks, lakes and lakeshores, streams, and pools, preferring sunny areas in the Sierra Nevada and the Transverse Ranges.	**Not Likely to Occur:** No suitable habitat within the BSA. The nearest recorded occurrence is approximately 9.53 miles south of the BSA; this occurrence was recorded in 1969.
Reptiles				
Anniella pulchra	Northern California legless lizard	S2S3, SSC	Coastal sand dunes, sandy washes, alluvial fans, valley-foothill, chaparral, and coastal scrub habitats. Preferably moist, warm, loose soil with some plant cover.	**Moderate:** Limited marginally suitable habitat occurs within the BSA. The most recent recorded occurrence is 3.68 miles southeast of the BSA; the date of this occurrence was 2017.
Arizona elegans occidentalis	California glossy snake	S2, SSC	Deserts and open dry places, such as grassland and chaparral.	**Moderate**: Limited marginally suitable habitat occurs within the BSA. The most recent recorded occurrence is approximately 7.76 miles southeast of the BSA; this occurrence was recorded in 2015.
Emys marmorata	Western pond turtle	FC, S3, SSC	Marshes, streams, rivers, ponds and lakes with emergent logs or boulders for nesting.	**Not Likely to Occur:** No suitable habitat within the BSA. The most recent recorded occurrence is approximately 8.48 miles west of the BSA; this occurrence was recorded in 1999.
Gopherus agassizii	Desert tortoise	FT, ST, S2S3	Sandy flats to rocky foothills with creosote bush, grasses, and wildflowers.	**Moderate**: Suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 9.10 miles east, northeast of the BSA; this occurrence was recorded in 1991.
Phrynosoma blainvillii	Coast horned lizard	S4, SSC	Sandy soils for burrowing near ant hills with logs or rocks for basking in preferably Alkali Desert scrub, annual grassland, and various oak and closed-cone woodlands	**Moderate**: Marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 1.14 miles west of the BSA; this occurrence was recorded in 1964.

Taxa		Status	Habitat Types	Potential to Occur
Scientific Name	**Common Name**			
Thamnophis hammondii	Two-striped garter snake	S3S4, SSC	Generally found in or near permanent fresh water, often along streams with rocky beds bordered by willows and other riparian vegetation, including mountain slopes and desert oases.	**Not Likely to Occur:** No suitable habitat within the BSA. The nearest recorded occurrence is approximately 8.17 miles west of the BSA; this occurrence was recorded in 1995.
Birds				
Accipiter cooperii	Cooper's hawk	S4, WL	Nest in coniferous, deciduous, and mixed woods, typically those with tall trees and with openings or edge habitat nearby.	**Not Likely to Occur (nesting) / Not Likely to Occur (foraging):** No suitable habitat within the BSA. The nearest recorded occurrence is approximately 1.5 miles west of the BSA; this occurrence was recorded in 1921.
Agelaius tricolor	Tricolored blackbird	ST, S2, SSC	Breeds near fresh water, preferably in emergent wetlands with tall, dense cattails or tules, but also in thickets of willow, blackberry, wild rose, tall herbs. Feeds in grassland and cropland habitats.	**Low (nesting) / Moderate (foraging)**: Limited suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 2.88 miles south of the BSA; this occurrence was recorded in 2011.
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	S4, WL	Moderate to steep, dry, rocky, south-, west-, or east-facing slopes vegetated with low scattered scrub cover interspersed with patches of grasses and forbs or rock outcrops.	**Not Likely to Occur (foraging) / Not Likely to Occur (nesting):** No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 6.85 miles west, southwest of the BSA; this occurrence was recorded in 2005.
Aquila chrysaetos	Golden eagle	SL, FP, WL	Open grassland or desert scrub habitat, as well as agricultural areas. For nesting, prefer cliff edges or high trees.	**Low (nesting) / Moderate (foraging)**: Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 9.09 miles south, southwest of the BSA; this occurrence was recorded in 1965.

Taxa		Status	Habitat Types	Potential to Occur
Scientific Name	**Common Name**			
Artemisiospiza belli belli	Bell's sage sparrow	S3, WL	Chaparral dominated by chamise and/or California sagebrush. Nests on the ground or in a shrub, up to about 1 m above ground.	**Not Likely to Occur (nesting) / Not Likely to Occur (foraging):** No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 8.15 miles west of the BSA; this occurrence was recorded in 2005.
Athene cunicularia	Burrowing owl	S2, SSC	A yearlong resident of open, dry grassland and desert habitats, and in grass, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats. Usually, nests in old burrows of ground squirrels, or other small mammals. May dig own burrow in soft soil. Nest chamber lined with excrement, pellets, debris, grass, feathers; sometimes unlined. Pipes, culverts, and nest boxes used where burrows are scarce.	**High (nesting) / High (foraging)**: Suitable habitat and soils occur within the BSA. The nearest recorded occurrence is approximately 0.79 miles north of the BSA; this occurrence was recorded in 2004. A potential pellet was found near a burrow of suitable size within the BSA. Pellet appeared around a year old, and no activity was observed at the burrow.
Buteo regalis	Ferruginous hawk	S3S4, WL	Arid and semiarid grassland including open, level, or rolling prairies, agricultural land, ranches, and desert edges largely devoid of trees.	**Low (nesting) / High (foraging)**: Suitable habitat and soils occur within the BSA. The nearest recorded occurrence is approximately 3.41 miles north of the BSA; this occurrence was recorded in 2008.
Buteo swainsoni	Swainson's hawk	ST, S4	Plains, dry grassland, farmland, and ranch country with scattered groves of trees for nest sites.	**Low (nesting) / High (foraging)**: Suitable habitat and soils occur within the BSA. The nearest recorded occurrence is approximately 1.21 miles northeast of the BSA; this occurrence was recorded in 2020.
Charadrius montanus	Mountain plover	S2, SSC	Semi-arid plains, grasslands, and plateaus. Nests in mostly short grass prairie and arid plains.	**Moderate (nesting) / Moderate (foraging)**: Limited suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 0.01 miles north of the BSA; this occurrence was recorded in 2007.



Taxa		Status	Habitat Types	Potential to Occur
Scientific Name	**Common Name**			
Falco mexicanus	Prairie falcon	S4, WL	Open country in arid regions. Shortgrass prairie, high desert, low deserts in winter, farmland. Nests often on rock cliffs or ledges.	**Low (nesting) / Moderate (foraging)**: Limited marginally suitable habitat occurs within the BSA. The nearest recorded occurrence is approximately 6.40 miles south, southwest of the BSA; this occurrence was recorded in 1977.
Lanius ludovicianus	Loggerhead shrike	S4, SSC	Agricultural fields, pastures, old orchards, riparian areas, desert scrublands, savannas, and prairies. Nest in thorny vegetation or brush piles or tumbleweeds.	**Present (foraging) / High (nesting)**: Species observed within outer edges of oxidation ponds on 7/19/24 survey. The nearest recorded occurrence is approximately 2.49 miles west, northwest of the BSA; this occurrence was recorded in 2008.
Toxostoma lecontei	Le Conte's thrasher	S3, SSC	Open habitats, on dry flats with only scattered low shrubs. Sparse saltbush, or on creosote bush flats; mainly where there are few slightly larger mesquites or cholla cactus.	**Moderate (nesting) / Moderate (foraging)**: Limited marginally suitable habitat occurs within the BSA. The most recent recorded occurrence is approximately 9.88 miles east of the BSA; this occurrence was recorded in 1987.
Vireo bellii pusillus	Least Bell's vireo	FE, SE, S3	Dense brush, mesquite, willow-cottonwood forest, streamside thickets, and scrub oak, in arid regions but often near water. Nests in shrub or low tree, usually averaging about 1 m above ground, usually in horizontal or down sloping twig fork, typically near edge of thicket.	**Not Likely to Occur (nesting) / Not Likely to Occur (foraging):** No suitable habitat within the BSA. The nearest recorded occurrence is approximately 2.91 miles south, southwest of the BSA; this occurrence was recorded in 2005.

Mammals				
Corynorhinus townsendii	Townsend's big-eared bat	S2, SSC	Coniferous forest, woodlands, deciduous woodland, riparian areas with trees, and semi-desert and montane shrublands. Require large cavities for roosting.	**Not Likely to Occur:** No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 9.22 miles southwest of the BSA; this occurrence was recorded in 1943.
Myotis yumanensis	Yuma myotis	S4	Forests, riparian zones, deserts, and grasslands. Closely associated with rivers, streams, and lakes for foraging.	**Not Likely to Occur:** No suitable habitat within the BSA. The nearest and most recent recorded occurrence is approximately 7.48 miles southeast of the BSA; this occurrence was recorded in 1999.
Perognathus inornatus	San Joaquin pocket mouse	S2S3	Open grasslands, savanna, and desert shrub communities. Often in sandy washes and finely textured soils. Found in the Tehachapi mountains, lower slopes of the western Sierra Nevada, upper Sacramento Valley, San Joaquin Valley, Salinas Valley, and Mojave Desert.	**Low:** Limited marginally suitable habitat occurs within the BSA. The nearest and most recent recorded occurrence is approximately 0.81 miles west, southwest of the BSA; this occurrence was recorded in 1931.
Xerospermophilus mohavensis	Mohave ground squirrel	ST, S2	Joshua tree woodlands, creosote scrub, saltbush scrub, and Mojave mixed woody scrub	**High**: Suitable habitat occurs within the BSA. The nearest recorded occurrence is potentially within the BSA; this occurrence was recorded in 1934. The most recent occurrence was in 2005, 4.30 miles north, northwest of the BSA.

Sources: CDFW 2024a, 2024e, Center for Biological diversity 2015, CEQAnet 2024, Gallegos 2019, Los Padres Forest Watch 2024, IUCN 2024, NatureServe 2024, Nafis, G. 2022, USFWS 2024d, WDFW 2010.

Federal Rankings:

FE = Federally Endangered
FT = Federally Threatened
FC = Federal Candidate for Listing
BCC = USFWS Bird of Conservation Concern
Delisted = removed from federal listing

State Rankings:

S1 = Critically Imperiled
S2 = Imperiled
S3 = Vulnerable
S4 = Apparently Secure
S5 - Secure

5.5 Wildlife Corridors and Special Linkages

Linkages and corridors facilitate regional animal movement and are generally centered in or around waterways, riparian corridors, flood control channels, contiguous habitat, and upland habitat. Drainages generally serve as movement corridors because wildlife can move easily through these areas, and fresh water is available. Corridors also offer wildlife unobstructed terrain for foraging and for dispersal of young individuals.

As the movements of wildlife species are more intensively studied using radio-tracking devices, there is mounting evidence that some wildlife species do not necessarily restrict their movements to some obvious landscape element, such as a riparian corridor. For example, recent radio-tracking and tagging studies of Coast Range newts, California red-legged frogs, southwestern pond turtles, and two-striped garter snakes found that long-distance dispersal involved radial or perpendicular movements away from a water source with little regard to the orientation of the assumed riparian "movement corridor" (Hunt 1993; Rathbun et al. 1992; Bulger et al. 2002; Trentham 2002; Ramirez 2003). Likewise, carnivores do not necessarily use riparian corridors as movement corridors, frequently moving overland in a straight line between two points when traversing large distances (Newmark 1995; Beier 1993, 1995; Noss et al. 1996; Noss et al. no date). In general, the following corridor functions can be utilized when evaluating impacts to wildlife movement corridors:

- Movement corridors are physical connections that allow wildlife to move between patches of suitable habitat. Simberloff et al. (1992) and Beier and Loe (1992) correctly state that, for most species, we do not know what corridor traits (length, width, adjacent land use, etc.) are required for a corridor to be useful. But, as Beier and Loe (1992) also note, the critical features of a movement corridor may not be its physical traits but rather how well a particular piece of land fulfills several functions, including allowing dispersal, plant propagation, genetic interchange, and recolonization following local extirpation.
- Dispersal corridors are relatively narrow, linear landscape features embedded in a dissimilar matrix that links two or more areas of suitable habitat that would otherwise be fragmented and isolated from one another by rugged terrain, changes in vegetation, or human-altered environments. Corridors of habitat are essential to the local and regional population dynamics of a species because they provide physical links for genetic exchange and allow animals to access alternative territories as dictated by fluctuating population densities.
- Habitat linkages are broader connections between two or more habitat areas. This term is commonly used as a synonym for a wildlife corridor (Meffe and Carroll 1997). Habitat linkages may themselves serve as source areas for food, water, and cover, particularly for small- and medium-size animals.
- Travel routes are usually landscape features, such as ridgelines, drainages, canyons, or riparian corridors within larger natural habitat areas that are used frequently by animals to facilitate movement and provide access to water, food, cover, den sites, or other necessary resources. A travel route is generally preferred by a species because it provides the least amount of topographic resistance in moving from one area to another yet still provides adequate food, water, or cover (Meffe and Carroll 1997).



Wildlife crossings are small, narrow areas of limited extent that allow wildlife to bypass an obstacle or barrier. Crossings typically are human-made and include culverts, underpasses, drainage pipes, bridges, tunnels to provide access past roads, highways, pipelines, or other physical obstacles. Wildlife crossings often represent “choke points” along a movement corridor because usable habitat is physically constricted at the crossing by human-induced changes to the surrounding areas (Meffe and Carroll 1997).

5.6 Wildlife movement in the BSA

The Project is surrounded by agricultural fields, open space, and neighborhoods/developments associated with Palmdale, and no mapped wildlife corridors were found to occur within the BSA; however, wildlife likely use both the natural and developed portions of the BSA on a regular basis during normal foraging, migration, nesting, and denning activities (USFWS 2024c). Additionally, both flowing drainages within the BSA may occasionally be used as water sources for wildlife during the hot summer months.

The BSA is a part of the Pacific Flyway, a major north-south flyway for migratory birds in America, extending from Alaska to Patagonia. Each year, at least one billion birds migrate along the Pacific Flyway (Audubon 2024).

6 Project Impact Discussion

The Project involves trenching, clearing/grubbing, drilling and other ground disturbing activities associated with construction of the proposed treatment plant, pipelines, brine ponds, and ancillary facilities. The spatial extent and impact calculations related to these impacts will be included in the CEQA document for the project. Below is a brief preliminary discussion of potential impacts on sensitive plant and wildlife resources known to occur or with the potential to occur in and near the Project area.

6.1 Special-Status Plants

Only one special status plant species, Western Joshua tree, was found to occur within the Project impact area while several others have some potential to occur (refer to Section 5.3 above). Direct impacts to listed or special-status plants could include trampling or crushing from heavy equipment, vehicles, or foot traffic, alterations to the native seed bank due to soil compaction and trenching, and modifications to existing hydrological conditions. Potential indirect impacts could include the disruption of native seed banks through soil alterations, the accumulation of fugitive dust, increased erosion and sediment transport, and the colonization of non-native, invasive plant species. Excessive dust can decrease or limit plant survivorship by decreasing photosynthetic output, reducing transpiration, and adversely affecting reproductive success. Ground-disturbing activities that would occur during construction of the proposed Project could result in the proliferation and spread of non-native invasive plants to new areas. Because noxious weeds can permanently degrade rare plant and animal habitats, their proliferation could adversely affect listed plant species if they are present.

1. Western Joshua tree – Compensation for Tree Removal: Surveys conducted within the BSA identified Joshua tree woodland habitat along with multiple individual and groups of Western Joshua trees scattered throughout the BSA. Where possible, the Project shall be designed to allow Western Joshua trees to remain in place; this will require a focused Joshua tree survey to determine the location of all trees within the Project site. CDFW generally considers any disturbance within a 186-foot radius (56.7 meters) to be an impact on an individual tree. If impacts are to occur within this radius than a more detailed focused survey for Joshua tree, documenting health, height, reproductive status, etc., will need to be completed as part of the environmental impact analysis for the project; this data may also be collected as part of the first focused survey that serves to document the location of all trees. All habitat within a 186-foot radius (56.7 meters; impact evaluation buffer), or as recommended by CDFW, of individual Joshua trees within the Project boundary will be evaluated to account for Project-specific (i.e., newly impacted) impacts to individual trees and dispersed seeds. Some of the habitat within the impact evaluation buffer may not be suitable habitat for western Joshua tree given the existing levels of disturbance in the Project boundary (e.g., existing roads, OHV tracks, and illegal trash piles). Where impacts to Western Joshua tree cannot be avoided and a tree must be removed, the condition of the tree and landscape suitability of the surrounding habitat within the impact evaluation buffer will be evaluated. The final impact evaluation will account for the general health condition of trees that are removed, as well as the magnitude of landscape-level threats including predation, invasive species, wildfire, climate change, and habitat loss. Based on the final impact assessment, compensatory mitigation for impacts to western Joshua trees shall be provided at a minimum ratio of 1:1 (or as otherwise required by CDFW as part of an Incidental Take Permit). Where the Project will not remove, but will encroach upon western Joshua trees, mitigation for indirect impacts shall be as follows (or as otherwise required by CDFW as part of an Incidental Take Permit):

    a. The final acreage of mitigation land acquired to compensate for impacts to western Joshua tree will depend on the density of trees on the mitigation land. Mitigation lands shall not already be public land. Mitigation may also be accomplished by providing mitigation fees to the CDFW Western Joshua Tree Mitigation Fund. Proposed compensatory mitigation for the western Joshua tree shall satisfy CDFW under CESA.

6.2 Special-Status Wildlife

6.2.1 Invertebrates and Reptiles

Special-status invertebrates and reptiles known to occur in the general Project area were determined to have a moderate or no potential to occur. Should one of these species be present, during construction activities could result in the direct loss of sensitive invertebrates and reptiles. Direct impacts could result from potential mechanical crushing during construction, fugitive dust, wildlife becoming trapped in improperly covered trenching, and general disturbance due to increased human activity. The proposed Project implementation may also result in permanent loss of habitat from the removal of debris piles or trampling of soft friable soils required for burrowing. Indirect impacts could include compaction of soils and the introduction of exotic plant species.



6.2.2 Birds

Several bird species are known to occur on or near the Project site. There were no federally listed, or California threatened or endangered bird species documented in the Project area; However, loggerhead shrikes were observed foraging within the oxidation ponds and showed no signs of nesting in the project area. Additionally, an owl pellet that could potentially belong to Burrowing owl *(Athene cunicularia*) was observed next to a burrow of suitable size and shape for this species. The pellet was found west of Brine Pipeline 1, near the intersection of E Avenue P and 30th St. E. The pellet appeared to be almost a year old, and no other signs of Burrowing Owl were observed within the BSA. Direct impacts to these species could include mechanical crushing by vehicles and construction equipment, trenching/excavating activities, and general disturbance due to increased human activity. The proposed project implementation may also result in permanent loss of habitat from the removal of debris piles or trampling/developing over soft friable soils required for burrowing.

Project activities have the potential to directly impact nesting birds through ground- disturbing activities associated with excavation for pipelines, construction of new facilities, scrub habitat removal from vegetation grubbing, and increased human presence. During the breeding season, construction activities could result in the displacement of breeding birds and the abandonment of active nests. Potential indirect impacts could include the deterioration of habitat resulting from the spread of noxious weeds, increased noise levels from heavy equipment, exposure to fugitive dust, and human presence during construction or routine inspection of the facilities. Weed management could also affect nesting.

If project construction were to occur during the avian nesting season (generally considered to be between February 15th through September 15th; although some raptors species may nest as early as January) indirect impacts to nesting birds could occur. The MBTA does not allow for take of migratory birds. Disturbances that cause nest abandonment and/or loss of reproductive effort or the loss of habitats upon which these birds depend may be a violation of the MBTA. The MBTA prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary. This act encompasses whole birds, parts of birds, and bird nests and eggs. The FGC also protects most California birds and their nests.

6.2.3 Mammals

There were no federally listed, or California SSC mammal species documented in the Project area. Direct impacts to these species could include collisions and/or mechanical crushing by vehicles and construction equipment, trampling, and loss of habitat from proposed developments. Construction disturbance can also result in the flushing of small animals from refugia which increases the predation risk for small rodents. Potential indirect impacts include exposure to fugitive dust, alteration of soils, such as compaction, which could preclude burrowing, the spread of exotic weeds, and increased noise levels that can affect foraging, breeding, and dispersal behaviors.

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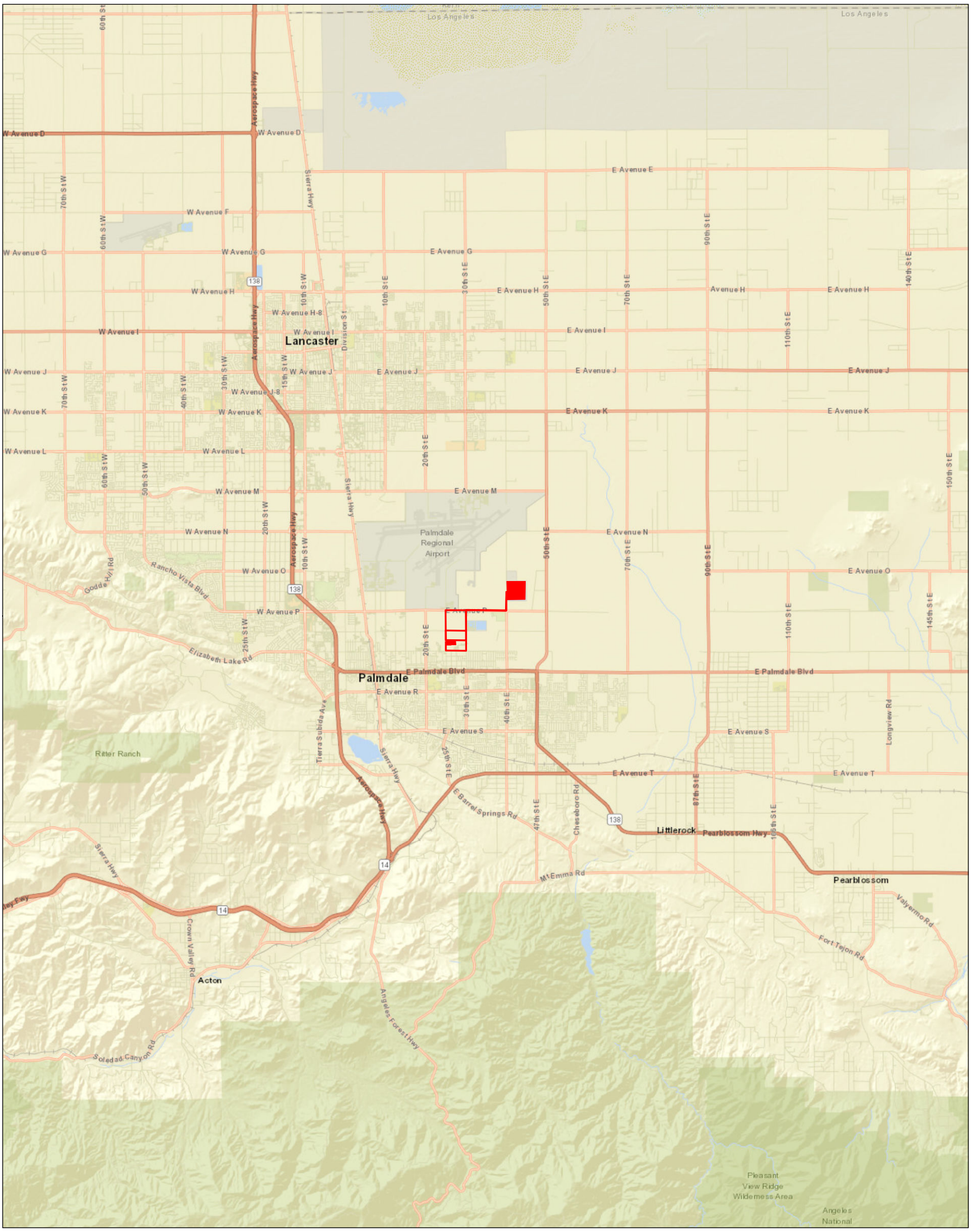
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Appendices

Appendix A Figures





Project Location

0 2.5 5 Miles

(At original document size of 11x17)
1:162,342

Stantec

Project Location City of Palmdale, Los Angeles County, California	Prepared by DL on 2024-10-11 TR by SET on 2024-10-11 IR by JV on 2024-10-11
Client/Project	184031611

Palmdale Water District
Pure Water Antelope Valley
Biological Resources Technical Report

Figure No.

1

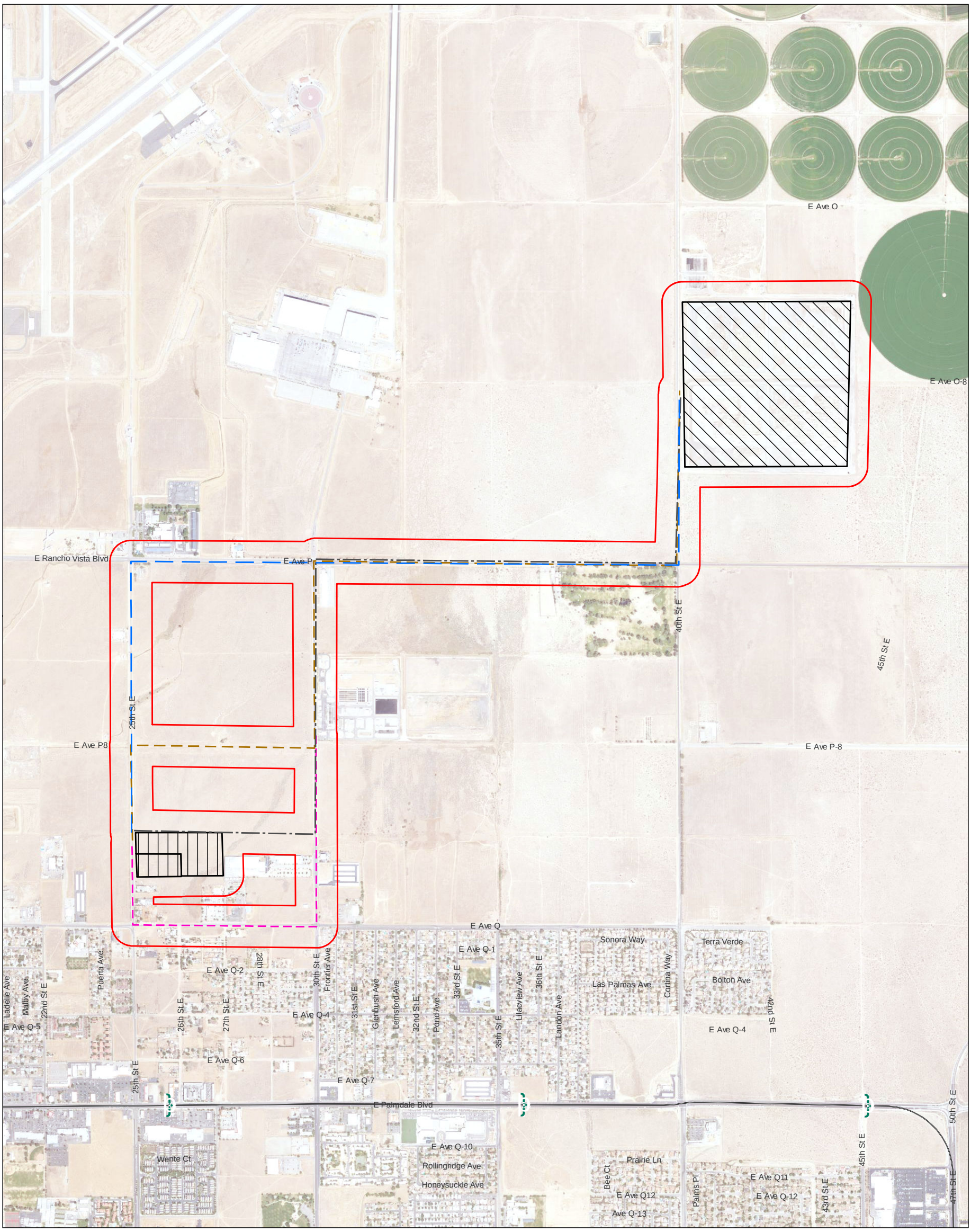
Title

Project Location Map

Notes
1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2024,
3. Background: Sources: Esri, GEBCO, NOAA, National Geographic, Garmin, HERE, Geonames.org, and other contributors
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors

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Biological Study Area

Project Features

- AWPF Site
- Brine Ponds
- Brine Pipeline 1
- Brine Pipeline 2
- Brine Pipeline 3
- New Tertiary Effluent Pipeline

0 1,500 3,000 Feet

(At original document size of 11x17)
1:18,000

Stantec

Project Location City of Palmdale, Los Angeles County, California	Prepared by DL on 2024-10-10 TR by SET on 2024-10-10 IR by JV on 2024-10-10
Client/Project	184031611

Palmdale Water District
Pure Water Antelope Valley
Biological Resources Technical Report

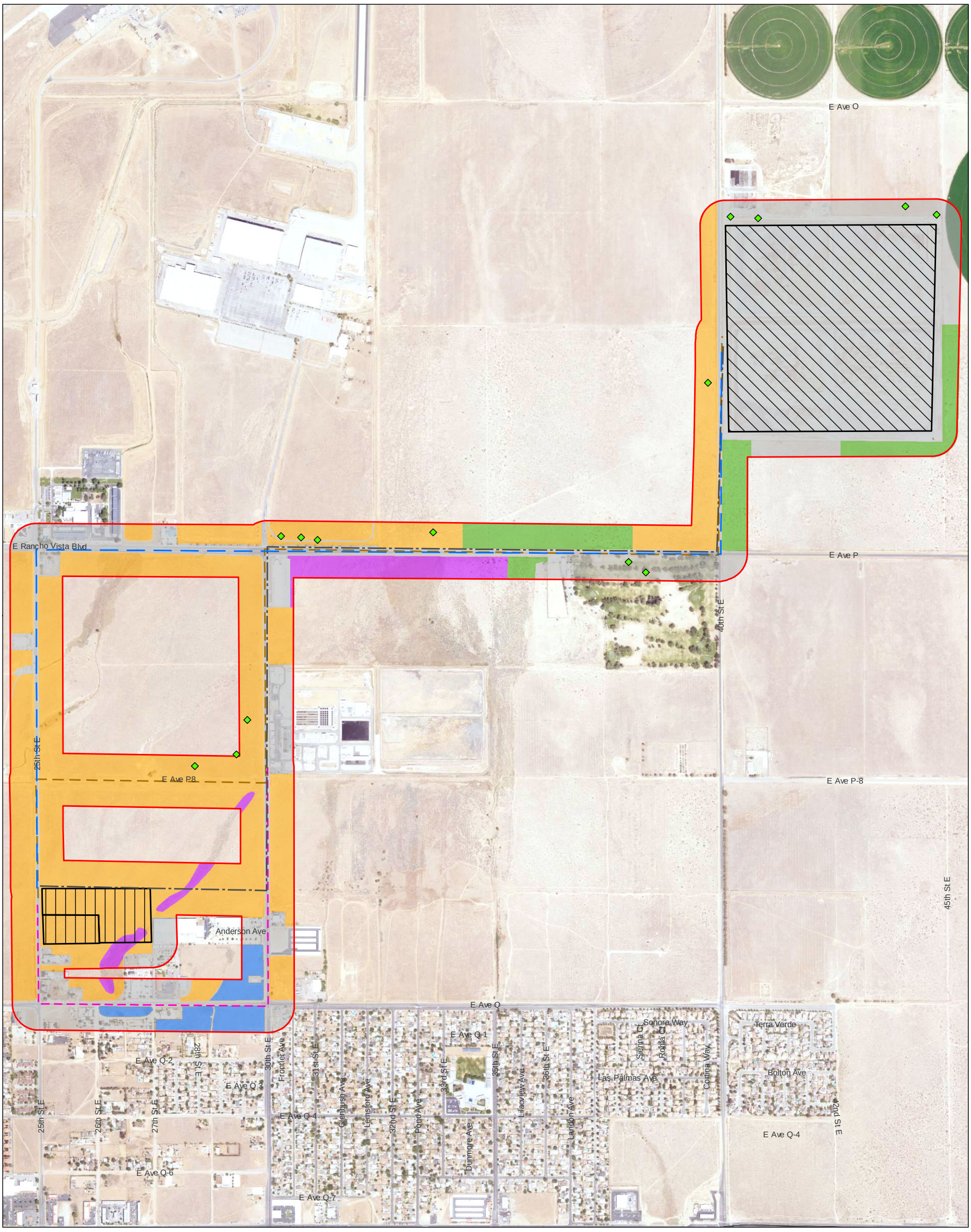
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Title
Project Site

Notes
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2. Data Sources: Stantec 2024,
3. Background: Sources: Esri, GEBCO, NOAA, National Geographic, Garmin, HERE, Geonames.org, and other contributors
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors California NAIP 2022 60cm

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Biological Study Area

Project Features

- AWPF Site
- Brine Ponds
- Brine Pipeline 1
- Brine Pipeline 2
- Brine Pipeline 3
- New Tertiary Effluent Pipeline

Isolated Western Joshua Tree (*Yucca brevifolia*) Occurences

Vegetation Communities

- *Avena spp. - Bromus spp.* Herbaceous Semi-Natural Alliance
- *Brassica nigra - Centaurea* (solstitialis, melitensis) Herbaceous Semi-Natural Alliance
- *Ericameria nauseosa* Shrubland Alliance
- *Yucca brevifolia* Woodland Alliance

Land Cover Type

- Disturbed/Developed

0 1,200 2,400 Feet

(At original document size of 11x17)
1:14,400

Stantec

Project Location
City of Palmdale,
Los Angeles County, California

Prepared by DL on 2024-10-11
TR by SET on 2024-10-11
IR by JV on 2024-10-11

Client/Project
184031611

Palmdale Water District
Pure Water Antelope Valley
Biological Resources Technical Report

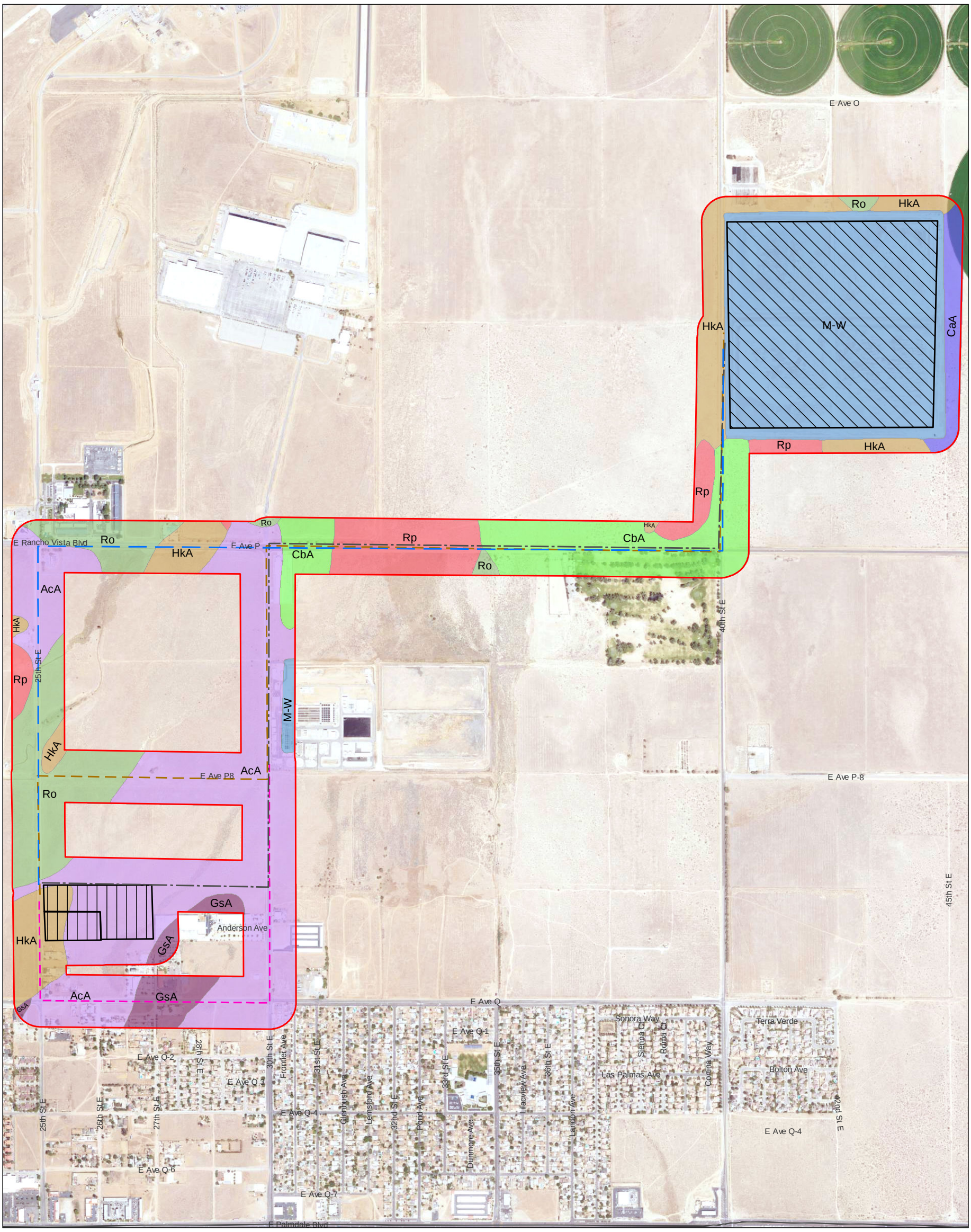
Figure No.
3

Title
Vegetation Communities, Land Cover Types, and Western Joshua Tree Occurrences

Notes
1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2024,
3. Background: California NAIP 2022 60cm

V:\18558\Active\184031611_Palmdale_FieldMap\BRTR_Figure3_Vegetation_20240603.mxd Revised: 2024-10-11 By: dalaw

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Biological Study Area

Project Features

- AWPF Site
- Brine Ponds
- Brine Pipeline 1
- Brine Pipeline 2
- Brine Pipeline 3
- New Tertiary Effluent Pipeline

Soil Map Unit Symbol

- AcA; Adelanto coarse sandy loam, 2 to 5 percent slopes
- CaA; Cajon loamy sand, 0 to 2 percent slopes
- CbA; Cajon loamy sand, loamy substratum, 0 to 2 percent slopes
- GsA; Greenfield sandy loam, 0 to 2 percent slopes
- HgA2; Hesperia loamy fine sand, 0 to 2 percent slopes, hummocky
- HkA; Hesperia fine sandy loam, 0 to 2 percent slopes
- M-W; Miscellaneous water
- Ro; Rosamond fine sandy loam
- Rp; Rosamond loam

0 1,200 2,400 Feet

(At original document size of 11x17)
1:14,400

Stantec

Project Location	Prepared by DL on 2024-10-10
City of Palmdale,	TR by SET on 2024-10-10
Los Angeles County, California	IR by JV on 2024-10-10
Client/Project	184031611

Palmdale Water District
Pure Water Antelope Valley
Biological Resources Technical Report

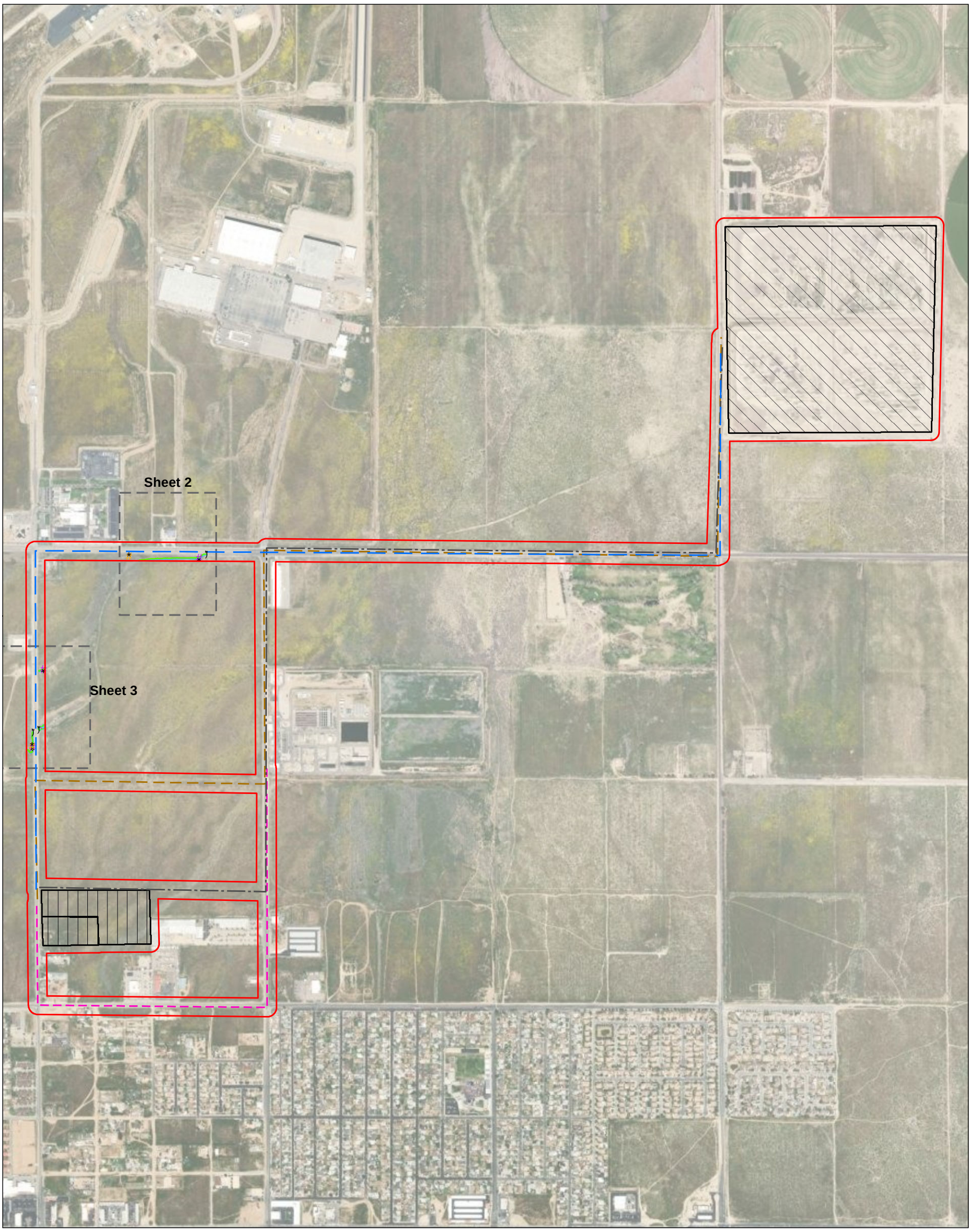
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4

Title
Historical Soils

Notes
1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2024. Soils from NRCS 2024.
3. Background: California NAIP 2022 60cm

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Aquatic Resources Survey Area

Project Features

- Brine Pipeline 1
- Brine Pipeline 2
- Brine Pipeline 3
- New Tertiary Effluent Pipeline
- AWPF Site
- Brine Ponds

Culvert

Sample Locations

- Upland
- Wetland

State/RWQCB Jurisdiction

- Waters of the State (Streambed)

CDFW Jurisdiction

- Riparian
- Streambed

0 1,200 2,400 Feet

(At original document size of 11x17)
1:14,400

Stantec

Project Location
City of Palmdale,
Los Angeles County, California

Prepared by DL on 2024-10-10
TR by SET on 2024-10-10
IR by JV on 2024-10-10

Client/Project
184031611

Palmdale Water District
Pure Water Antelope Valley
Biological Resources Technical Report

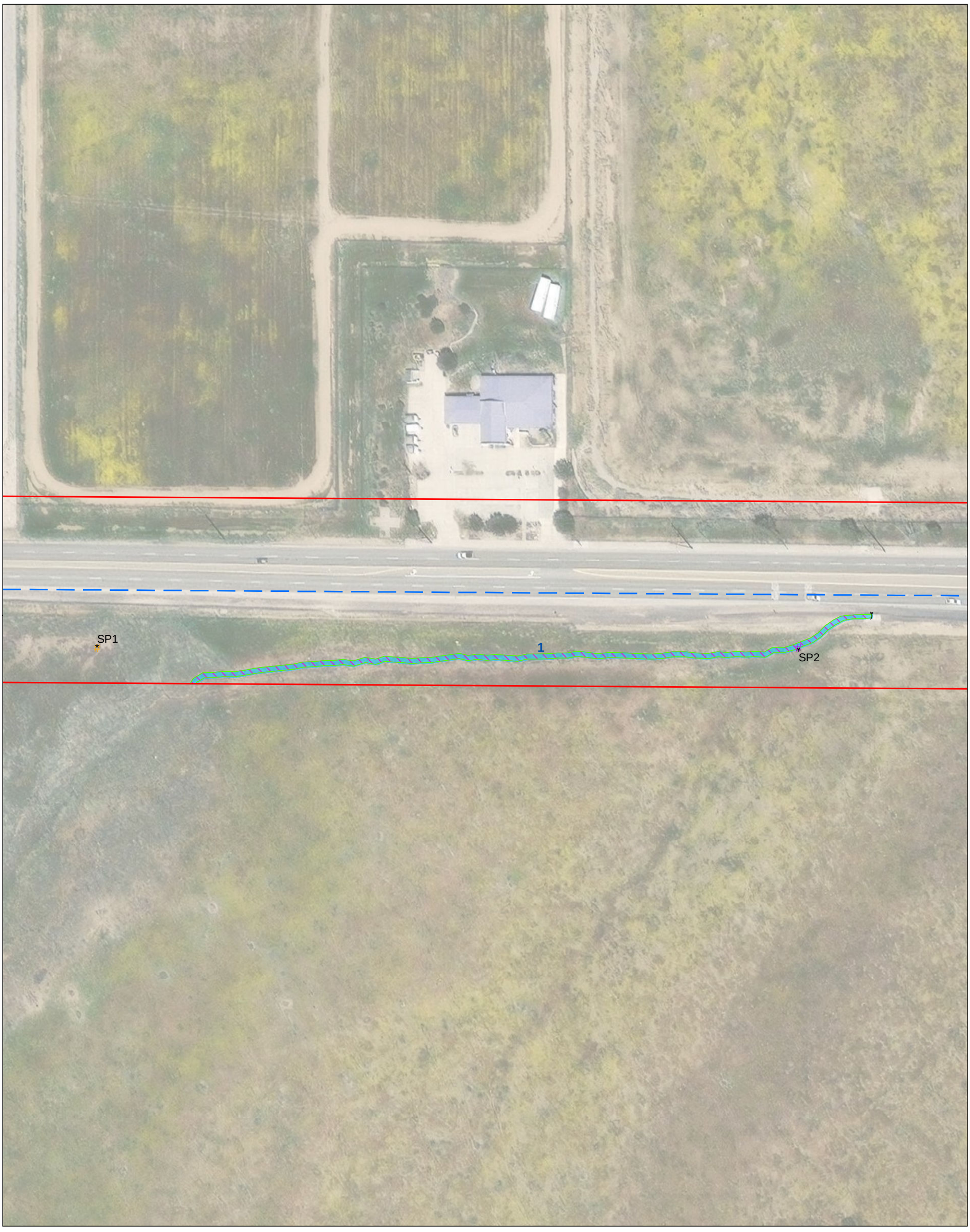
Figure No.
5

Title
Aquatic Resources

Notes
1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2024,
3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

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Aquatic Resources Survey Area

Project Features

Brine Pipeline 3

Culvert

Sample Locations

Upland

Wetland

State/RWQCB Jurisdiction

Waters of the State (Streambed)

CDFW Jurisdiction

Riparian

Streambed

0 120 240 Feet

(At original document size of 11x17)
1:1,440

Stantec

Project Location
City of Palmdale,
Los Angeles County, California

Prepared by DL on 2024-10-10
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Client/Project
184031611

Palmdale Water District
Pure Water Antelope Valley
Biological Resources Technical Report

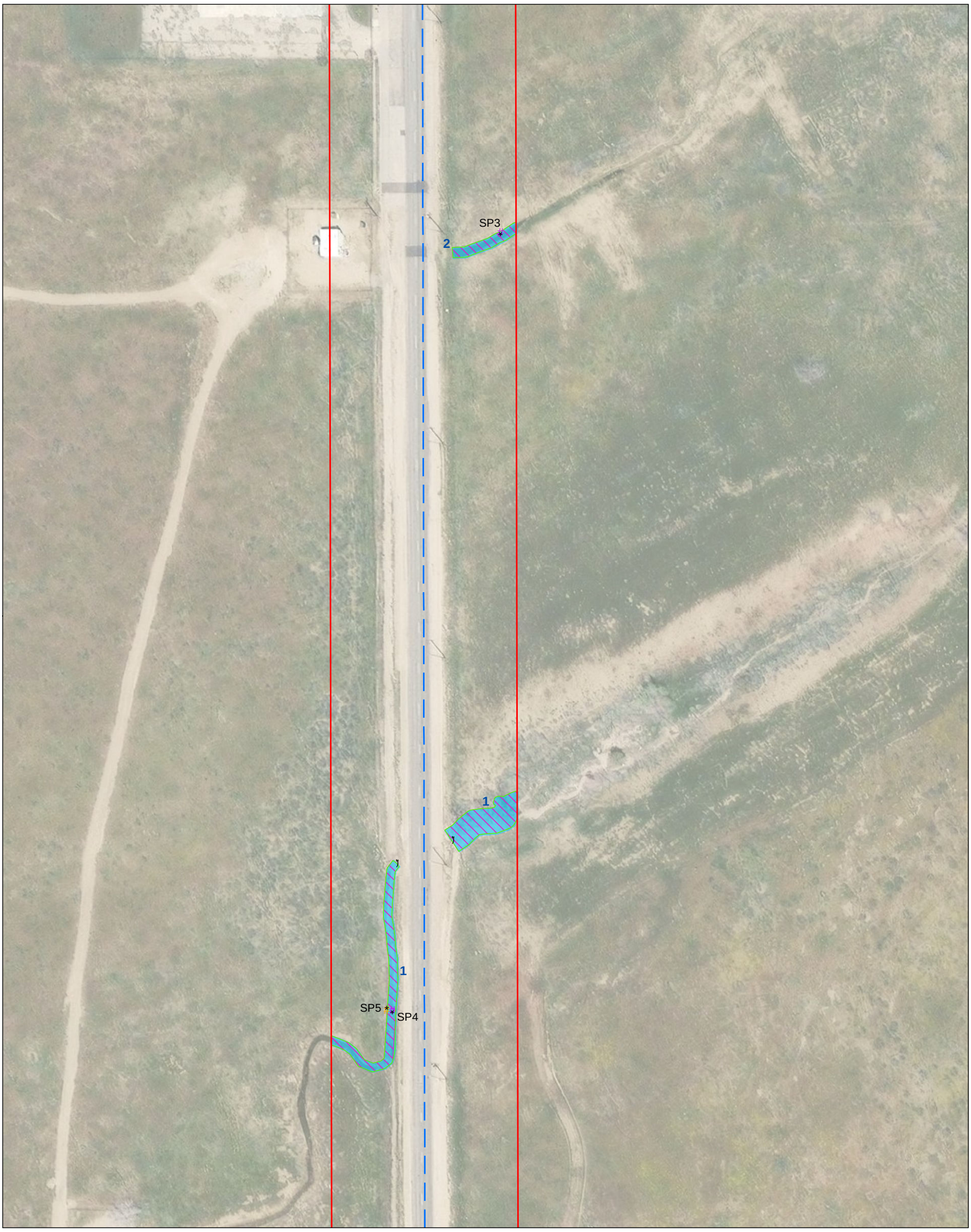
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5

Title
Aquatic Resources

Notes
1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2024,
3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

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Aquatic Resources Survey Area

Project Features

Brine Pipeline 3

Culvert

Sample Locations

Upland

Wetland

State/RWQCB Jurisdiction

Waters of the State (Streambed)

CDFW Jurisdiction

Riparian

Streambed

0 120 240 Feet

(At original document size of 11x17)
1:1,440

Stantec

Project Location City of Palmdale, Los Angeles County, California	Prepared by DL on 2024-10-10 TR by SET on 2024-10-10 IR by JV on 2024-10-10
Client/Project	184031611

Palmdale Water District
Pure Water Antelope Valley
Biological Resources Technical Report

Figure No.

5

Title

Aquatic Resources

Notes

1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2024,
3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

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Biological Study Area
10 Mile Search Radius

CNDDB

Plant (80m)
Plant (specific)
Plant (non-specific)
Plant (circular)
Animal (80m)
Animal (specific)
Animal (non-specific)
Animal (circular)
Terrestrial Comm. (specific)

Multiple (specific)
Multiple (circular)
Sensitive EO's (Commercial only)

0 2.5 5 Miles

(At original document size of 11x17)
1:158,400

Stantec

Project Location
City of Palmdale,
Los Angeles County, California

Prepared by DL on 2024-10-11
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Palmdale Water District
Pure Water Antelope Valley
Biological Resources Technical Report

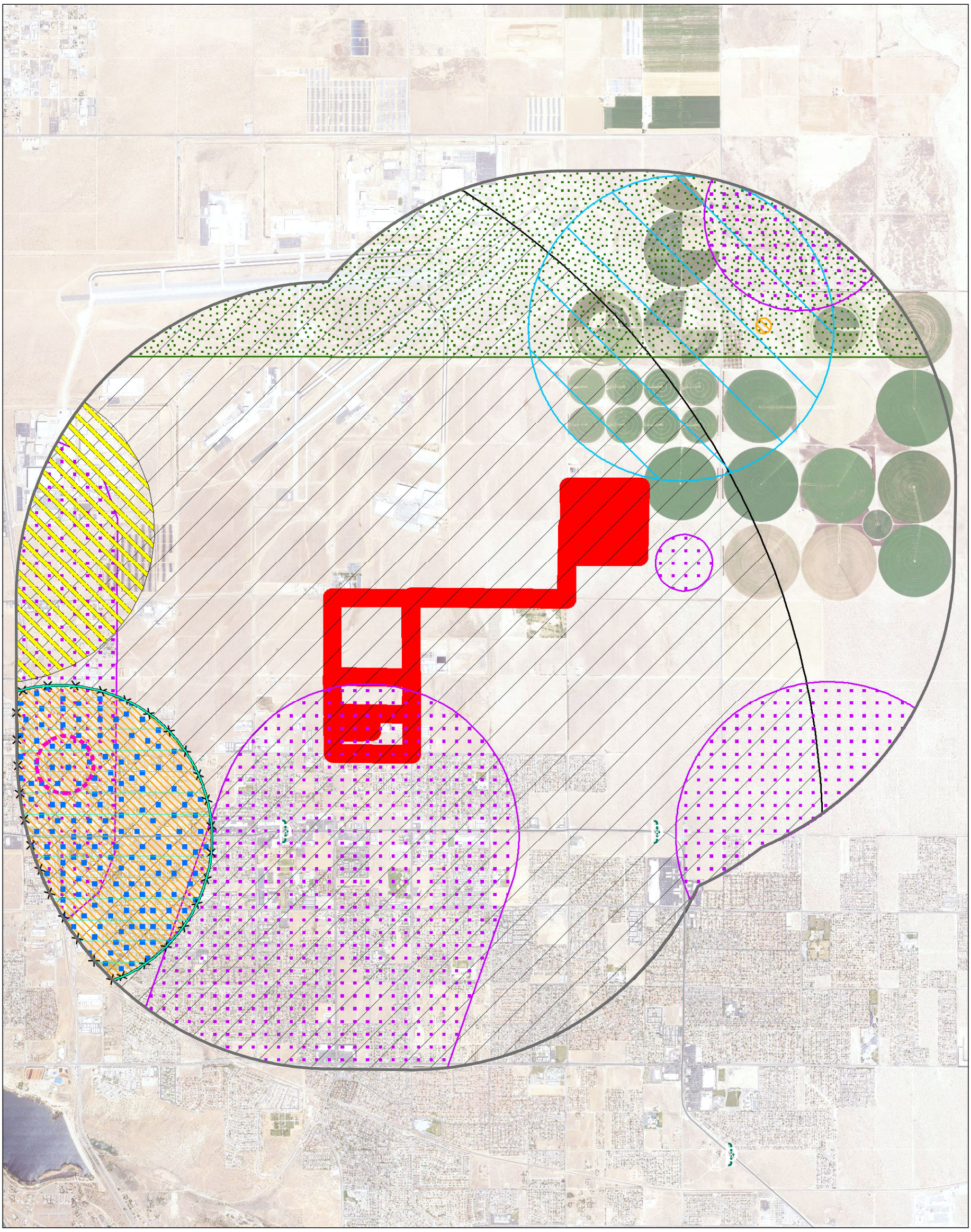
Figure No.
6a

Title
10 Mile CNDDB Results

Notes
1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2024, CNDDB from CDFW 2024.
3. Background: California NAIP 2022 60cm

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Biological Study Area
2 Mile Search Radius

2 Mile CNDDB Results

Wildlife

Phrynosoma blainvillii
Charadrius montanus
Toxostoma lecontei
Bombus crotchii
Perognathus inornatus
Athene cunicularia
Accipiter cooperii
Buteo swainsoni
Xerospermophilus mohavensis
Helminthoglypta fontiphila

0 3,500 7,000 Feet

(At original document size of 11x17)
1:42,000

Stantec

Project Location
City of Palmdale,
Los Angeles County, California

Prepared by DL on 2024-10-11
TR by SET on 2024-10-11
IR by JV on 2024-10-11

Client/Project
184031611

Palmdale Water District
Pure Water Antelope Valley
Biological Resources Technical Report

Figure No.
6b

Title
2 Mile CNDDB Results

Notes
1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2024, CNDDB from CDFW 2024.
3. Background: California NAIP 2022 60cm

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Appendix B Photolog

Stantec

Photographic Log

Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, CA**

Photograph ID: 1

Survey date: 5/8/2024

Photo Location:
LACSD Oxidation ponds

Comments:
Western Joshua trees along eastern side of the brine ponds.



Photograph ID: 2

Survey date: 5/8/2024

Photo Location:
LACSD Oxidation ponds

Comments:
Western Joshua trees along southern side of brine ponds.



Stantec

Photographic Log

Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, CA**

Photograph ID: 3

Survey date: 5/8/2024

Photo Location:
Palmdale, E Avenue P

Comments:
Western Joshua trees along eastern side of the brine ponds.



Photograph ID: 4

Survey date: 5/8/2024

Photo Location:
LACSD Oxidation ponds

Comments:
Overview photo of brine pool. Consistent habitat across all four brine ponds.



Stantec

Photographic Log

Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, CA**

Photograph ID: 5

Survey date: 5/8/2024

Photo Location:
LACSD Oxidation ponds

Comments:
Overview photo of the proposed brine pools. Consistent habitat across all four brine ponds.



Photograph ID: 6

Survey date: 5/8/2024

Photo Location:
LACSD Oxidation ponds

Comments:
Burrows similar to this photo can be seen throughout the BSA.



Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, CA**

Photograph ID: 7

Survey date: 5/8/2024

Photo Location:
LACSD Oxidation ponds

Comments:
Overview of red pipes that run through oxidation ponds.



Photograph ID: 8

Survey date: 5/8/2024

Photo Location:
LACSD Oxidation ponds

Comments:
Holes within the red pipes that run throughout the oxidation ponds and could provide potentially suitable burrowing habitat for burrowing owl.



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Photographic Log

Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, CA**

Photograph ID: 9

Survey date: 5/8/2024

Photo Location:
Palmdale BSA

Comments:
Invasive mustard species were seen throughout the BSA.



Photograph ID: 10

Survey date: 5/8/2024

Photo Location:
Palmdale southwest parcel

Comments:
Red-tailed hawk nest on water tower.



Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, CA**

Photograph ID: 11

Survey date: 5/8/2024

Photo Location:
Palmdale southwest parcel

Comments:
Ericameria nauseosa habitat seen throughout the Southern portions of the BSA.



Photograph ID: 12

Survey date: 5/8/2024

Photo Location:
Palmdale BSA

Comments:
Owl pellet found adjacent to a burrow that could potentially belong to Burrowing Owl. Pellet appears to be old, and no other fresh signs of burrowing owl were observed in the area.



Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, CA**

Photograph ID: 13

Survey date: 5/8/2024

Photo Location:
Palmdale BSA

Comments:
Common raven nest in Western Joshua tree in southeast parcel.



Photograph ID: 14

Survey date: 5/8/2024

Photo Location:
Palmdale BSA

Comments:
Ericameria nauseosa habitat seen throughout the Southern portions of the BSA.



Stantec

Photographic Log

Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, CA**

Photograph ID: 15

Survey date: 7/19/2024

Photo Location:
40th St. E

Comments:
Dry invasive grasslands across from the oxidation ponds.



Photograph ID: 16

Survey date: 7/19/2024

Photo Location:
LACSD oxidation ponds

Comments:
View of disturbed vegetation in oxidations ponds.



Stantec

Photographic Log

Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, CA**

Photograph ID: 17

Survey date: 7/19/2024

Photo Location:
LACSD oxidation ponds

Comments:
Inactive Cactus wren nest in telephone pole.



Photograph ID: 18

Survey date: 7/19/2024

Photo Location:
E Avenue P

Comments:
Western Joshua Tree woodland.



Stantec

Photographic Log

Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, CA**

Photograph ID: 19

Survey date: 7/19/2024

Photo Location: Proposed Brine Pipeline 1

Comments: View of dry vegetation along Brine Pipeline 1.



Photograph ID: 20

Survey date: 7/19/2024

Photo Location: LACSD oxidation ponds

Comments: Western Joshua tree woodland to east of oxidation ponds.



Stantec

Photographic Log

Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, CA**

Photograph ID: 21

Survey date:
7/19/2024

Photo Location:
Brine Pipeline 1

Comments:
Willow grove along Brine Pipeline 1.



Photograph ID: 22

Survey date:
7/19/2024

Photo Location:
25th St. E and E Avenue P8

Comments:
Small drainage with water.



Stantec

Photographic Log

Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, CA**

Photograph ID: 23

Survey date: 7/19/2024

Photo Location:
Brine Pipeline 1

Comments:
Failed Raven nest in Western Joshua tree.



Photograph ID: 24

Survey date: 7/19/2024

Photo Location:
Brine Pipeline 1

Comments:
Failed raven nest contents on ground adjacent to Western Joshua tree.



Stantec

Stantec is a global leader in sustainable architecture, engineering, and environmental consulting. The diverse perspectives of our partners and interested parties drive us to think beyond what's previously been done on critical issues like climate change, digital transformation, and future-proofing our cities and infrastructure. We innovate at the intersection of community, creativity, and client relationships to advance communities everywhere, so that together we can redefine what's possible.



Pure Water Antelope Valley

CEQA Initial Study

APPENDIX B2

Aquatic Resources Delineation Report

AQUATIC RESOURCES DELINEATION REPORT

Pure Water Antelope Valley – Advanced Water Treatment Project

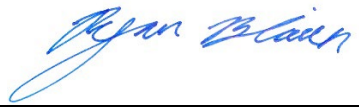
June 21, 2024

Prepared for:
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Prepared by:
Stantec Consulting Services Inc.

Project Number:
184031611

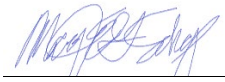
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Prepared by: 

Signature

Ryan Blaich, Project Biologist

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Acronyms / Abbreviations

ARDR	Aquatic Resources Delineation Report
CDFW	California Department of Fish and Wildlife
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CWA	Clean Water Act
°F	degrees Fahrenheit
FAC	Facultative Plants
FACU	Facultative Upland Plants
FACW	Facultative Wetland Plants
ft	foot/feet
ft^2	square foot/feet
LSA	Lake and Streambed Alteration Agreement
NL	Plants not listed in the National Wetland Plant List
NHD	National Hydrography Dataset
NRCS	National Resources Conservation Service
NWI	National Wetlands Inventory
NWP	Nationwide Permit
NWPL	National Wetland Plant List
NWPR	Navigable Waters Protection Rule
OBL	Obligate Wetland Plants
OHWM	ordinary high water mark
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
Procedures	State Wetland Definition and Procedures of Dredged or Fill Material to Waters of the State
Project	Pure Water Antelope Valley – Advanced Water Treatment Project
PWD	Palmdale Water District
Rapanos	*Rapanos v. United States and Carabell v. United States*
RWQCB	Regional Water Quality Control Board
Sackett	*Sackett v. Environmental Protection Agency*
Stantec	Stantec Consulting Services Inc.
SWANCC	Solid Waste Agency of Northern Cook County
SWP	State Water Project
SWRCB	State Water Resources Control Board
UPL	Upland Plants
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey
USEPA	U.S. Environmental Protection Agency
Waters of the State	Waters of the State of California
WDR	Water Discharge Requirement

WIS	Wetland Indicator Status
WOTUS	Waters of the United States
WQC	Water Quality Certification

1 Introduction

This Aquatic Resources Delineation Report (ARDR) is intended to document the jurisdictional resources that are associated with the Pure Water Antelope Valley – Advanced Water Treatment Project (Project) located near Palmdale, Los Angeles County, California. The Project is located outside of the northeastern extent of the City of Palmdale (refer to Appendix A, Figure 1). The surveys conducted and discussions presented within this ARDR are intended to support planning and regulatory agency permitting and associated documentation.

A reconnaissance-level survey was conducted on May 8, 2024, by Stantec Consulting Services Inc. (Stantec) Biologist Ryan Blaich within accessible portions of the Project site and a surrounding 100-foot (ft) buffer area (Survey Area). The ARDR describes the existing aquatic resources that occur within the Survey Area and surrounding areas and evaluates the potential for aquatic resources to occur based on those conditions with an emphasis on jurisdictional waters.

1.1 Project Description

Stantec was retained by the Palmdale Water District (PWD) to provide program management services for its regional water augmentation program, referred to as Pure Water Antelope Valley or Program. Using advanced treatment processes including microfiltration, reverse osmosis, and ultraviolet light with advanced oxidation, Pure Water Antelope Valley will further purify tertiary treated wastewater to produce water that will meet all applicable state and federal drinking water standards and regulations. This purified water will be injected into the local groundwater aquifer, thereby supplementing PWD's existing water supplies. Pure Water Antelope Valley is intended to provide safe and reliable drinking water for Antelope Valley.

1.2 Project Location

The Project is located just northeast of the City of Palmdale. The Survey Area is bordered by the agricultural fields to the north, west, and east, and the City of Palmdale to the south. It is located within the United States Geological Survey (USGS) Palmdale NW, California, 7.5-minute topographic quadrangle. The site occurs at an elevation of approximately 2,537-2,576 feet above mean sea level within California annual grassland and rubber rabbitbrush scrub habitats. Average annual temperatures range from a low of 49 degrees Fahrenheit (°F) to a high of 78°F. Annual precipitation averages approximately 7.4 inches (U.S. Climate Data 2024). A National Wetland Inventory (NWI) and National Hydrography Dataset (NHD) (USGS 2024) map and an Natural Resources Conservation Service (NRCS) Soils Map of the Project location are included in Appendix A (Figures 2 and 3).

2 Regulatory Background

2.1 Clean Water Act Section 404 and Federal Jurisdictional Waters

The Clean Water Act (CWA), introduced in 1977 via amendatory legislation of the Federal Water Pollution Control Act, is the primary federal law in the United States regulating water pollution. Section 404 of the CWA regulates the discharge of dredged material, placement of fill material, or certain types of excavation within federal waters of the United States (WOTUS) and authorizes the Secretary of the Army, through the Chief of Engineers, to issue permits for such actions. Permits can be issued for individual projects (individual permits) or for general categories of projects (general permits). Terrestrial WOTUS as defined by the CWA have typically included rivers, creeks, streams, and lakes extending to their headwaters and any associated wetlands. Wetlands are defined by the CWA as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." The U.S. Army Corps of Engineers (USACE) has adopted several revisions to their regulations in order to more clearly define WOTUS. The protection of federal jurisdictional WOTUS has been particularly contentious and subject to numerous legal decisions since 2001.

2.1.1 1986 REGULATIONS

In 1986, the federal agencies (USACE and U.S. Environmental Protection Agency [USEPA]) implemented historic regulations (the 1986 Regulations) that defined WOTUS to mean traditional navigable waters, the territorial seas, interstate waters, and intrastate waters whose use or degradation could affect interstate or foreign commence, as well as tributaries (streams that flow into larger streams or other bodies of water) of and wetlands adjacent to any of those waters.

2.1.2 2001 SWANCC RULING

Until the beginning of 2001, WOTUS included isolated wetlands and lakes, intermittent streams, prairie potholes, and other waters that are not part of a tributary system to interstate waters or to navigable WOTUS. The jurisdictional extent of USACE regulation changed with the 2001 *Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers* ruling. The U.S. Supreme Court held that the USACE could not apply Section 404 of the CWA to extend their jurisdiction over an isolated quarry pit. The Court ruled that the CWA does not extend federal regulatory jurisdiction over non-navigable, isolated, intra-state waters. However, the Court made it clear that non-navigable wetlands adjacent to navigable waters are still subject to USACE jurisdiction.

2.1.3 2006 RAPANOS RULING

In 2006, the U.S. Supreme Court issued its seminal decision in the consolidated cases *Rapanos v. United States and Carabell v. United States* (collectively referred to as "*Rapanos*"). Justice Scalia narrowly interpreted the statutory term "waters of the United States" in a four-Justice plurality opinion, holding that

CWA jurisdiction extended over only "relatively permanent, standing or continuously flowing bodies of water" that are connected to traditional navigable waters, plus wetlands with a "continuous surface connection" to such relatively permanent water bodies. Justice Kennedy wrote separately, concurring with the Court's judgment with respect to the facts of the case, but interpreted "waters of the United States" to include wetlands that possess a "significant nexus" to waters that are or were navigable in fact or that could reasonably be so made.

The Court's split decision and lack of a commanding majority opinion in *Rapanos* created confusion among the federal agencies and public. On December 2, 2008, the federal agencies released a regulatory guidance document, Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos* (USACE and USEPA 2008), addressing common questions about federal jurisdiction over WOTUS and clarifying the two jurisdictional standards from *Rapanos*. In the 2008 *Rapanos* Guidance, the federal agencies concluded that federal jurisdiction existed over certain waterbodies that meet the "relatively permanent" standard from Justice Scalia's plurality opinion or Justice Kennedy's "significant nexus" standard, the latter of which would be determined by a fact-specific analysis.

2.1.4 2015 CLEAN WATER RULE

The 1986 Regulations as interpreted by the 2008 *Rapanos* Guidance were later replaced by the 2015 Clean Water Rule. The federal agencies attempted to provide clarification on jurisdiction following the *Rapanos* ruling by replacing the numerous categories of waterbodies found in the 1986 Regulations with four broader categories: (1) waters that are categorically "jurisdictional by rule" without the need for further analysis, including traditional navigable waters, interstate waters, the territorial seas, and impoundments of these waters; (2) waters that are jurisdictional by rule, if they meet the definitions for tributaries and adjacent waters established in the 2015 Clean Water Rule; (3) waters that are subject to case-specific jurisdictional analysis under the "significant nexus" standard; and (4) waters that are categorically excluded from jurisdiction. The 2015 Clean Water Rule therefore resulted in an expansion in federal jurisdiction over waterbodies that might have otherwise been excluded from the definition of WOTUS on a case-by-case basis under the 1986 Regulations and the *Rapanos* ruling.

After the final 2015 Clean Water Rule was published, the Sixth Circuit Court of Appeals issued an order staying the rule nationwide, pending a determination by the court on jurisdiction to review the rule. While the 2015 Clean Water Rule was stayed, the pre-2015 regulatory regime remained in effect. Following additional litigation and administrative processes, the 2015 Clean Water Rule was briefly in effect in select states beginning in August 2018.

2.1.5 2020 NAVIGABLE WATERS PROTECTION RULE

In 2017, the Trump Administration issued Executive Order 13778, "Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the 'Waters of the United States' Rule." The executive order directed the federal agencies to review the 2015 Clean Water Rule for consistency with the policy "to ensure that the nation's navigable waters are kept free from pollution, while at the same time promoting economic growth, minimizing regulatory uncertainty, and showing due regard for the roles of

the Congress and the States under the Constitution." It further directed the federal agencies to issue a proposed rule rescinding or revising the 2015 Clean Water Rule as appropriate and consistent with law.

On December 11, 2018, the federal agencies proposed a revised definition of WOTUS, which would repeal the 2015 Clean Water Rule. On December 23, 2019, the federal agencies repealed the 2015 Rule and restored the previous regulatory regime as it existed prior to finalization of the 2015 Clean Water Rule with the publication of a final rule described as "Definition of 'Waters of the United States'—Recodification of Pre-Existing Rules."

On April 21, 2020, the federal agencies published the Navigable Waters Protection Rule (NWPR) to redefine WOTUS. The agencies streamlined the definition to include four simple categories of jurisdictional waters:

1. Traditional navigable waters and the territorial seas;
2. Tributaries of traditional navigable waters and the territorial seas;
3. Lakes, ponds, and impoundments of the first two categories of waters; and
4. Wetlands adjacent to the first three categories of waters.

The NWPR provided clear exclusions for many water features that traditionally have not been regulated, and defined terms in the regulatory text that had never been defined before. Congress, in the CWA, explicitly directed the federal agencies to protect "navigable waters." The intent of the NWPR was to regulate waters and the core tributary systems that provide perennial or intermittent flow and excluded ephemeral waters. The final NWPR fulfilling Executive Order 13788 became effective on June 22, 2020. However, on August 30, 2021, the U.S. District Court for the District of Arizona vacated the NWPR finding "fundamental, substantive flaws that cannot be cured without revising or replacing the NWPR's definition." The federal agencies subsequently announced that they would interpret WOTUS consistent with the pre-2015 regulatory regime until further notice.

2.1.6 2023 REVISED DEFINITION OF "WATER OF THE UNITED STATES" RULE

On June 9, 2021, the USACE and USEPA under the Biden Administration announced their intent to revise the definition of WOTUS to protect more waterways, beginning a new rulemaking process that restores protections put in place before 2015.

On January 18, 2023, the federal agencies published the final "Revised Definition of 'Waters of the United States'" rule (2023 Rule) in the Federal Register, which became effective on March 20, 2023 (USACE and USEPA 2023a). The 2023 Rule generally returns to the pre-2015 definition. The implications of the final 2023 WOTUS rule are such that many ephemeral waters not considered protected under the former 2020 NWPR would now be protected.

The 2023 Rule defines WOTUS to include:

1. Traditional navigable waters, the territorial seas, and interstate waters;

2. Impoundments of other jurisdictional WOTUS, except for those that qualify under category 5, below;

3. Tributaries to either of the above waters and tributaries that meet the “relatively permanent” standard or the “significant nexus” standard, (collectively, “jurisdictional tributaries”);

4. Wetlands adjacent to traditional waters, wetlands adjacent and with a continuous surface connection to relatively permanent tributaries and impoundments, and wetlands adjacent to other jurisdictional tributaries when those wetlands meet the “significant nexus” standard; and

5. Intrastate lakes and ponds, streams, or wetlands that are not identified in categories 1–4 above that meet either the “relatively permanent” standard or the “significant nexus” standard.

For purposes of characterizing a “jurisdictional adjacent wetland” under the 2023 WOTUS Rule, a wetland may be considered “adjacent” to WOTUS if it is bordering, contiguous, or neighboring a WOTUS, including wetlands separated from other WOTUS by man-made dikes or barriers, natural river berms, beach dunes, and similarly situated wetlands.

However, a wetland, even if “adjacent,” must satisfy either the “relatively permanent” standard or the “significant nexus” standard to be considered WOTUS. The federal agencies have not necessarily defined "relatively permanent" or “significant nexus” and will likely determine the applicability of these standards on a case-by-case basis.

On March 19, 2023, the U.S. District Court for the Southern District of Texas enjoined the 2023 Rule in Texas and Idaho pending its consideration of those states’ legal challenges to the rule. On April 12, 2023, the U.S. District Court for the District of North Dakota similarly issued a preliminary injunction preventing the application of the 2023 Rule in 24 states: Alabama, Alaska, Arkansas, Florida, Georgia, Indiana, Iowa, Kansas, Louisiana, Mississippi, Missouri, Montana, Nebraska, New Hampshire, North Dakota, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Utah, Virginia, West Virginia, and Wyoming. The federal agencies announced that, pending resolution of the litigation, they will apply the pre-2015 regulatory regime in the 26 states subject to injunctions and the 2023 Rule in the remaining 24 states, including California.

2.1.7 2023 SACKETT RULING

On May 25, 2023, the U.S. Supreme Court issued its ruling in *Sackett v. Environmental Protection Agency* (Sackett), which established a more stringent test to determine whether the CWA applies to certain categories of wetland. With *Sackett*, the U.S. Supreme Court unanimously reversed the previous *Rapanos* guidance regarding waters that are adjacent or have a significant nexus to a WOTUS. The new *Sackett* ruling states that the CWA applies to a particular wetland only if it blends or flows into a neighboring water that is a channel for interstate commerce. While the Court decided that some “adjacent” wetlands will also qualify under the CWA as “waters of the United States,” wetlands that are entirely separate from traditional bodies of water will not qualify. The CWA will apply only to wetlands that are “as a practical matter indistinguishable from waters of the United States” because they have a “continuous surface connection” with a larger body of water, “making it difficult to determine where the ‘water’ ends and the ‘wetland’ begins.

2.1.8 AMENDMENT TO THE 2023 WOTUS RULE

On September 8, 2023, the USACE and USAPE amended the Code of Federal Regulations (CFR) with a new Final Rule to conform the definition of WOTUS to the 2023 Supreme Court *Sackett* decision (USACE and USEPA 2023b). This conforming rule amends the provisions of the agencies' definition of WOTUS that are invalid under the Supreme Court's interpretation of the CWA in the 2023 decision. While EPA's and USACE's 2023 WOTUS rule defining WOTUS was not directly before the Supreme Court, the decision in Sackett made clear that certain aspects of the WOTUS 2023 rule are invalid. The amendments issued are limited and change only parts of the 2023 rule that are invalid under the *Sackett* decision. For example, the final rule removes the significant nexus test from consideration when identifying tributaries and other waters as federally protected. The result of the *Sackett* legal ruling and new Final Rule for WOTUS is that it rejected the seventeen-year-old "significant nexus" test from *Rapanos* and instead authored a new test – the "continuous surface connection" test – to determine what wetlands constitute WOTUS subject to the CWA.

2.1.9 EXEMPTIONS UNDER CLEAN WATER ACTION SECTION 404

Activities that are exempt under CWA Section 404(f) include

1. Nominal farming, silviculture, and ranching activities,

2. (Emergency) maintenance activities that would not change the original fill design;

3. Construction and maintenance of farm ponds, stock ponds, or irrigation ditches or the maintenance of drainage ditches;

4. Construction of temporary sedimentation basins;

5. Any activity with respect to which a State has an approved program under CWA Section 208(b)(4) which meets the requirements of sections 208(b)(4) (B) and (C) (this pertains to certain applicable statewide waste treatment management programs); and

6. Construction or maintenance of farm roads, forest roads, or temporary roads for moving mining equipment.

Exceptions to these exemptions (USACE 2023b) include:

1. Discharge of toxic pollutants, and

If it is part of an activity whose purpose is to convert an area of a WOTUS into a use to which it was not previously subject, where the flow and/or circulation of waters may be impaired, or the reach of the waters reduced.

2.1.10 EXTENT OF JURISDICTION

The extent of CWA Section 404 jurisdiction for non-tidal waters includes non-isolated aquatic features (including wetlands qualifying under the original federal 1986 standards and non-wetland WOTUS) bound by an "ordinary high water mark" (OHWM) as defined by 33 CFR 328.3(e):

> *"The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."*

Features considered isolated from traditional navigable waters and the exemptions listed above are not considered WOTUS under the jurisdiction of CWA Section 404.

2.2 Clean Water Act Section 401, Porter-Cologne Water Quality Control Act, and Waters of the State of California

2.2.1 CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION

Section 401 of the CWA ensures that federally permitted activities comply with the federal CWA and state water quality laws. Under CWA Section 401, an applicant for a federal permit or license for any activity which may result in a discharge to federal waters must obtain a Water Quality Certification (WQC) certifying that the proposed activity will comply with applicable water quality standards. WQCs are generally issued by the state or tribe with jurisdiction over the area in which the activity will occur. If there is not a state or tribe with authority over the activity, the USEPA will issue a WQC.

In California, CWA Section 401 is implemented either by the State Water Resources Control Board (SWRCB) or the applicable Regional Water Quality Control Board (RWQCB), with most WQCs issued in connection with USACE CWA Section 404 permits for dredge and fill discharges. The SWRCB or RWQCB issues a WQC via the CWA Section 401 process verifying that a proposed project complies with water quality standards and other conditions of California law. CWA Section 401 certification typically precedes USACE CWA Section 404 permit issuance.

In addition, the Porter-Cologne Water Quality Control Act (Porter-Cologne Act) serves as the primary water quality state law in California and addresses two primary functions: water quality control planning and waste discharge regulation. The SWRCB and various RWQCBs are charged with protecting all Waters of the State of California (Waters of the State), broadly defined as "any surface water or groundwater, including saline waters, within the boundaries of the State." This encompasses all Waters of the State, including those waters not under federal jurisdiction; therefore, the State of California's jurisdiction expands beyond federal jurisdiction. The Porter-Cologne Act does not include physical descriptors or interstate commerce limitations in defining "Waters of the State."

2.2.2 PORTER-COLOGNE ACT WASTE DISCHARGE REQUIREMENTS

Under the Porter-Cologne Act, discharges of dredged or fill material to Waters of the State not subject to CWA Section 404 (i.e., non-USACE jurisdictional) are regulated under the Porter-Cologne Act Chapter 3,

Article 4 via Waste Discharge Requirements (WDRs). The WDR permit requirements ensure that the permitted activities comply with state water quality standards over the term of the action and are consistent with the requirements of the Porter-Cologne Act, CEQA, and the California Endangered Species Act. There are two types of WDRs: individual WDRs, which are tailored to specific dischargers, and general WDRs, which are for a similar group of dischargers. The applicable RWQCB (for respective regions) or the SWRCB (for statewide applicability) can adopt general WDRs for categories of discharges if they involve similar operations, types of waste, and monitoring. Applicants must file an application with the Water Boards for any activity that could result in the discharge of dredged or fill material to Waters of the State in accordance with Title 23 California Code of Regulations Section 3855. Procedures for complying with WDR regulations, including submittal of an application with a project description and impact assessment, are similar to CWA Section 401 procedures.

2.2.3 STATE WETLAND DEFINITION AND PROCEDURES FOR DISCHARGES OF DREDGED OR FILL MATERIAL TO WATERS OF THE STATE

On April 2, 2019, the California Water Boards (including the SWRCB and the nine RWQCBs) adopted the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (Procedures) (SWRCB 2021). The Procedures became effective on May 28, 2020, and were subsequently revised on April 6, 2021. Additional *Implementation Guidance for the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* was released in April 2020 (SWRCB 2020); this implementation guidance has been considered during the preparation of this ARDR.

The Procedures define wetlands as follows:

> *"An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation."*

Per the Procedures, the following wetlands are considered Waters of the State (SWRCB 2021):

1. Natural wetlands,

2. Wetlands created by modification of a surface water of the state, and

3. Artificial wetlands (that result from human activity) that meet any of the following criteria:

    a. Approved by an agency as compensatory mitigation for impacts to other Waters of the State, except where the approving agency explicitly identifies the mitigation as being of limited duration;

    b. Specifically identified in a water quality control plan as a wetland or other water of the state;

    c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or

d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not Waters of the State unless they also satisfy the criteria set forth in 2, 3a, or 3b);

    i. Industrial or municipal wastewater treatment or disposal,

    ii. Settling of sediment,

    iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,

    iv. Treatment of surface waters,

    v. Agricultural crop irrigation or stock watering,

    vi. Fire suppression,

    vii. Industrial processing or cooling,

    viii. Active surface mining – even if the site is managed for interim wetlands functions and values,

    ix. Log storage,

    x. Treatment, storage, or distribution of recycled water, or

    xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or

    xii. Fields flooded for rice growing.

All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c as outlined above are not Waters of the State. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state (SWRCB 2021).

2.2.4 EXTENT OF JURISDICTION

The extent of CWA Section 401 jurisdiction is identical to CWA Section 404 jurisdiction (i.e., up to the OHWM of a federal wetland or non-wetland WOTUS); Porter-Cologne jurisdiction may extend beyond CWA Section 401 jurisdiction. If there happens to be both CWA Section 404/401 WOTUS and non-WOTUS Waters of the State that could be impacted by a proposed project, the Water Boards may issue coverage under a single CWA Section 401 WQC permitting action, rather than separate WQC and WDR permitting actions.

2.3 Jurisdictional Aquatic Resources Under California Fish and Game Code Section 1602

2.3.1 NOTIFICATION

Section 1602 of the California Fish and Game Code (CFGC) requires a proponent proposing a project that may affect a “river, stream, or lake” to notify the California Department of Fish and Wildlife (CDFW) before beginning the project, within a format similar to a permit application process. Any activities that result in one or more of the following require a CDFW notification (CDFW 2023):

1. Substantially divert or obstruct the natural flow of any river, stream, or lake;

2. Substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or

3. Deposit or dispose of debris, waste or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

Note that "any river, stream, or lake" includes those features that are dry for periods of time (e.g., intermittent and ephemeral features) as well as those that flow perennially year-round. If an applicant is not certain a particular activity requires notification, CDFW recommends the applicant notify. CDFW has historically required a Lake and Streambed Alteration Agreement (LSA) for activities within a feature that has a definable “bed and bank.” In addition, CDFW does not necessarily distinguish between a “pond” and a “lake;” therefore, natural and artificial pond features may be regulated under CFGC Section 1602.

2.3.2 LAKE AND STREAMBED ALTERATION AGREEMENT

Once a Section 1602 notification is processed, CDFW may issue a draft LSA. An LSA is an agreement between the applicant and CDFW for the performance of activities subject to CFGC Section 1602. An LSA lists the conditions relative to a proposed project that CDFW identifies as necessary to protect applicable water quality, plants, and wildlife. If the parties agree to the conditions, they will execute the LSA, which will govern the activities described in the agreement.

2.3.3 EXTENT OF JURISDICTION

CFGC Section 1602 jurisdiction typically extends from the thalweg of a non-tidal river, stream, or lake up to the TOB, outer edge of associated riparian vegetation, or outer edge of the associated floodplain (whichever is greater).

3 Existing Conditions

3.1 Land Uses

The Project is located northeast of the City of Palmdale, Los Angeles County, California. The Study Area covers all potential impacts from the implementation of the Pure Water Antelope Valley – Advanced Water Treatment Project. Elevation ranges from approximately 2,537 feet above sea level for the southernmost section and gently increases in elevation to 2,576 feet above sea level northeast to the PWD Reclamation Plant's oxidation ponds. Surrounding land use consists of open private land that has been historically used for agriculture, agricultural fields, existing PWD infrastructure, and a golf course.

3.2 Topography and Elevation

Locally, the Project is located within the Antelope Valley and are bordered by the San Gabriel Mountains to the south and the Mojave Desert to the north. The Study Area is characterized by the flat valley floors associated with the Antelope Valley. Elevation ranges from 2,537 feet in the southwestern corner of the Study Area to 2,576 feet in the northwestern corner.

3.3 Climate

Climate in the Study Area is based on historical weather data collected in Palmdale, California (Western Regional Climate Center 2024):

- **Type:** The climate of the area is characterized as Mediterranean with moderate winters and hot, dry summers.
- **Precipitation:** Precipitation in the Study Area primarily occurs as rain and snow. The average annual rainfall is approximately 5.05 inches and snowfall is approximately 4.2 inches.
- **Air Temperature:** Air temperatures in the Study Area ranges between an average January temperature range of 29.0 to 56.8 degrees Fahrenheit (ºF) and an average July temperature range of 64.1 to 98.9ºF.

The growing season (i.e., the longest continuous period of a non-freezing air temperature of 32ºF or higher) in the Study Area is approximately 300 days and occurs between approximately January 20 and December 15 (Weather Spark 2024).

3.4 Hydrology and Geomorphology

The Study Area is within Hydrologic Unit Code (HUC)-8 18090206 – Antelope – Fremont Valleys. The Study Area is located within the Antelope Valley groundwater basin, and in the Landcaster groundwater subbasin. In general, groundwater in the Antelope Valley Basin flows northeasterly from the mountain ranges to the dry lakes. The basin is principally recharged by infiltration of precipitation and runoff from the surrounding mountains and hills in ephemeral stream channels (Los Angeles County Public Works 2014).

A review was conducted of aerial imagery, USGS topographic maps, the NWI (U.S. Fish and Wildlife Service [USFWS], 2024), and the NHD (USGS, 2024) within and adjacent to the Study Area; NWI and NHD mapping data are presented in Appendix A, Figure 3. Several unnamed drainages occur within the southwestern portion of the Survey Area as mapped by NWI/NHD but only one of these drainages was observed to have any discernable drainage characteristics (i.e. bed, bank, and OHWM). This drainage enters the Survey Area in the southwestern section and traverses through open land until it enters the Survey Area again to the north. Additionally, there is another drainage that enters the Survey Area just north of the drainage previously discussed where they confluence in the open land before reentering the Survey Area.

Two other regional streams mapped by NWI and/or NHD as formerly traversing the Study Area likely were channelized from runoff from nearby foothills and may have flowed unhindered at a point in their history. However, most sections of these streams within the Study Area have been virtually eliminated as a result of depositional characteristics of typical desert systems in an Arid climate (as described in Section 5.2).

3.5 Soils

Historic soils data from the NRCS were used to determine potential soil types that may occur within the Study Area. NRCS GIS data accessible online (NRCS 2023a) provides information on soil types collected from soil surveyors who have surveyed the landscape and provided taxonomic classification and mapping of soil types. This allows for estimation of acreages of each soil type identified within a specified area. Characteristics of soils present within the Study Area are summarized in Table 1 – Historic Soils Occurring Within the Study Area; NRCS soils mapping is presented in Appendix, Figure 2.

Table 1. Historic Soils Occurring Within the Study Area

Map Unit Symbol	Map Unit Name	Description	Hydric	Acreage in Study Area
AcA	Adelanto coarse loamy sand, 2 to 5 percent slopes	The Granoso series consists of very deep, well drained soils that formed in granitic parent material on alluvial fans and plains.	No	87.73
CaA	Cajon loamy sand, 0 to 2 percent slopes	The Cajon series consists of very deep, excessively drained soils that formed in sandy alluvium from dominantly granitic rocks. Cajon soils are associated with alluvial fans, fan aprons, fan skirts, inset fans, and river terraces.	No	0.67
CbA	Cajon loamy sand, loamy substratum, 0 to 2 percent slopes	The Cajon series consists of very deep, excessively drained soils that formed in sandy alluvium from dominantly granitic rocks. Cajon soils are associated with alluvial fans, fan aprons, fan skirts, inset fans, and river terraces.	No	27.06

Map Unit Symbol	Map Unit Name	Description	Hydric	Acreage in Study Area
GsA	Greenfield sandy loam, 0 to 2 percent slopes	The Chanac series consists of deep well drained soils that formed in moderately coarse and coarse textured alluvium derived from granitic and mixed rock sources. Greenfield soils are on alluvial fans and terraces and have slopes of 0 to 30 percent.	No	4.16
HkA	Hesperia fine sandy loam, 0 to 2 percent slopes	The Hesperia series consist of very deep, well drained soils that formed in alluvium derived primarily from granite and related rocks. Hesperia soils are on alluvial fans, valley plains and stream terraces and have slopes of 0 to 9 percent.	No	19.92
M-W	Miscellaneous water	Mapped as the PWD Reclamation Plant's Oxidation Ponds within the Survey Area.	No	156.19
Ro	Rosamond fine sandy loam	The Rosamond series consists of deep, well drained soils that formed in material weathered and mainly from granitic alluvium. Rosamond soils are on the lower margin of the alluvial fans between sloping fans and the playas and have slopes of 0 to 2 percent.	No	22.56
Rp	Rosamond loam	The Rosamond series consists of deep, well drained soils that formed in material weathered and mainly from granitic alluvium. Rosamond soils are on the lower margin of the alluvial fans between sloping fans and the playas and have slopes of 0 to 2 percent.	No	11.21
			Total	329.51

Source: NRCS 2024a, 2024b

3.6 Vegetation Communities and Land Covers

As defined in A Manual of California Vegetation, 2nd Edition (MCVII), a vegetation alliance is "a category of vegetation classification which describes repeating patterns of plants across a landscape. Each alliance is defined by plant species composition and reflects the effects of local climate, soil, water, disturbance and other environmental factors" (Sawyer et al. 2009). Generally, Stantec's mapping and description of plant communities follows the classification system described in MCVII. The MCVII is generally limited to communities that are native or naturalized within California. Biological resources observed within the Study Area during the reconnaissance and botanical field surveys consisted primarily of common plant species and vegetation communities characteristic of the southeastern Antelope Valley. The extent and condition of vegetation communities within the Study Area varied depending on the level of existing development and ongoing mineral extraction activities, which have resulted in disturbed conditions with relatively low plant diversity. Within the BSA, Stantec biologists mapped and quantified acreages for five plant communities defined by Sawyer et al. (2009) and one landcover type (Table 2).

These are described further below; however, acreages and description of vegetation communities and land cover types will be included in a separate report.

Table 2. Vegetation Communities and Land Cover Types

Vegetation Community/Land Cover Type
Avena spp. - *Bromus* spp. Herbaceous Semi-Natural Alliance
Brassica nigra - *Centaurea* (*solstitialis, melitensis*) Herbaceous Semi-Natural Alliance
Bromus rubens – *Schismus* (*arabicus, barbatus*) Herbaceous Semi-Natural Alliance
Disturbed/Developed
Ericameria nauseosa Shrubland Alliance
Yucca brevifolia Woodland Alliance

4 Jurisdictional Waters and Wetlands Assessment

4.1 Description of Federal and State Waters

Various agencies regulate activities within inland streams, wetlands, and riparian areas in California. The USACE Regulatory Program regulates activities pursuant to Section 404 of the federal CWA; the CDFW regulates activities under CFGC Section 1600-1607; and the SWRCB/RWQCB regulate activities under Section 401 of the CWA and the Porter-Cologne Act.

Positive indicators for each of the three parameters outlined below are required for a wetland to meet the USACE criteria for jurisdictional wetland determination. Indicators are as follows:

- Hydrophytic vegetation is defined as macrophytic vegetation that is adapted to, and occurs in, areas where soils are frequently or permanently saturated of sufficient duration to exert a controlling influence on the plant species present. Plant species adjacent to the sample points were identified and included following the "50/20 rule," meaning that plant species in each vegetation stratum (i.e., tree, sapling/shrub, herb, and woody vine) were included in order of abundance until at least 50% of the total vegetation cover was accounted for, plus any other species that, by itself, accounts for at least 20% of the total. Plants are assigned a Wetland Indicator Status (WIS) based on frequency of occurrence in wetland habitats following the 2020 National Wetland Plant List (NWPL) (USACE 2020) and using the Indicator Ratings Definitions (Lichvar et al. 2012) as follows:

    - OBL (Obligate Wetland Plants): Almost always occur under natural conditions in wetlands. With few exceptions, these plants (herbaceous or woody) are found in standing water or seasonally saturated soils (14 or more consecutive days) near the surface;

    - FACW (Facultative Wetland Plants): Usually occur in wetlands but may occur in non-wetlands. These plants predominately occur with hydric soils, often in geomorphic settings where water saturates the soils or floods the soil surface at least seasonally;

    - FAC (Facultative Plants): Occur in wetlands and non-wetlands. These plants can grow in hydric, mesic, or xeric habitats. The occurrence of these plants in different habitats represents responses to a variety of environmental variables other than just hydrology, such as shade tolerance, soil pH, and elevation, and they have a wide tolerance of soil moisture conditions;

    - FACU (Facultative Upland Plants): Usually occur in non-wetlands but may occur in wetlands. These plants predominately occur on drier or more mesic sites in geomorphic settings, where water rarely saturates the soils or floods the soil surface seasonally; and

    - UPL (Upland Plants): Almost never occur under natural conditions in wetlands. These plants occupy mesic to xeric non-wetland habitats. They almost never occur in standing water or saturated soils. Typical growth forms include herbaceous, shrubs, woody vines, and trees.

The hydrophytic vegetation parameter is met when at least one of the following tests is fulfilled:

- The prevalent vegetation (more than 50% of the dominant plant species) is typically adapted to areas having wetland hydrology and hydric soil conditions and rated OBL, FACW, or FAC;
- The prevalence index, which is a value determined by accounting for the relative cover and WIS and ranges from 1 (only OBL species present) to 5 (only UPL species present), is less than or equal to 3; or
- Vegetation has morphological adaptations to growing in inundated or saturated conditions.

In the text results that follow, the abbreviations for the WIS categories have been inserted after the initial use of Latin/scientific names for identified dominant plants to reflect the hydrophytic indicator status as most recently presented by USACE (2020). Plants not listed or with no indicator status (NI) in USACE (2020) are treated as UPL.

- Hydric Soils are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (U.S. Department of Agriculture [USDA] Soil Conservation Service [SCS] 1994). Hydric soils are identified based on observable properties that result from prolonged saturated-anaerobic conditions. To assess whether hydric soil was present at each sample point, soil attributes (including color [hue, value, and chroma], redoximorphic features [color patterns in a soil formed by oxidation/reduction of iron and/or manganese that are caused by loss/depletion], or gain/concentration of pigment compared to the matrix color, mottling, texture, grain size, structure, streaking, etc.) were recorded on the delineation forms. Soil colors were assessed using Munsell Soil Color Charts (Munsell 2009).

- Wetland hydrology refers to inundation and/or saturation of the soil by flooding or a shallow water table for a prolonged period during the growing season, such that the character of the soil and vegetation are substantially different from areas that do not experience inundation/saturation in this manner. The identification of wetland hydrology follows the Wetlands Delineation Manual (Environmental Laboratory 1987) and Arid West Regional Supplement (USACE 2008). Visual evidence among the positive indicators of wetland hydrology includes surface water, high water table, or soil saturation; geomorphic features associated with inundation (e.g., channels, shorelines); and water marks, sediment deposits, or drift deposits.

Regarding the types of federal WOTUS regulated by the USACE:

- The term “wetlands” includes WOTUS in the instances where all three wetland parameters i.e., hydrophytic vegetation, hydric soil, and wetland hydrology) are present.
- The term “other waters” typically encompasses drainages and other features bound by a definable OHWM with connectivity to jurisdictional waters and includes WOTUS lacking one or more of the three wetland parameters.
- Refer to Section 2.1.6-2.1.9 for a full list of WOTUS regulated by USACE.

Potential jurisdictional boundaries for waters of the state under SWRCB jurisdiction were delineated using the latest available recommended procedures per the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2019). While there is no standard definition in place for “Waters of the State,” typically they are accepted to extend from the channel bed to the top of a bank or outer edge of riparian canopy dominated by hydrophytic vegetation (whichever is

greater) and also include adjacent waters, non-federal isolated waters (if present), and certain anthropogenic features (such as concrete drainage ditches) that are not considered to be jurisdictional federal WOTUS. Refer to Section 2.2.3 for aquatic resources SWRCB regulates as a State Wetland.

For the purposes of aquatic resources delineations, Stantec conservatively considers potential CDFW jurisdiction to extend from the channel bed to the top of an adjacent bank or outer edge of adjacent riparian canopy (whichever is greater) and also may include smaller swales and certain anthropogenic drainage features such as drainage ditches not considered to be jurisdictional federal WOTUS.

4.2 Methodology

A jurisdictional aquatic resources/wetlands delineation was conducted as part of a preliminary jurisdictional determination for the Survey Area on May 8, 2024. The aquatic resources delineation Survey Area includes the Project area and a 100-ft survey buffer. Sample points/soil test pits were excavated to a depth of approximately 16 inches unless a restrictive layer was present. Hydrophytic vegetation and wetland hydrology indicators were also considered in the vicinity of these sampling locations. Percent cover estimates for vegetation were conducted by visually estimating absolute percent cover for each plant species within a sample plot. Generally, sample plot sizes included a 5-ft radius for herbs and saplings/shrubs, and a 30-ft radius for trees and woody vines (when present) per recommendations in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). Plant species were identified to the lowest possible taxonomic level using *The Jepson Manual: Higher Plants of California, 2nd Edition* (Baldwin et al. 2012). Sample points/soil test pits were backfilled after being examined.

Potential jurisdictional aquatic resources are mapped and presented in Appendix A, Figure 4. Data were recorded on standard Wetland Determination Data Forms from the *Arid West Regional Supplemen*t (included in USACE 2008) and an OHWM Delineation Data Sheet (David et al. 2022). The Wetland Determination Data Forms are included in Appendix B. A summary of the delineation and data captured in the datasheets is provided below.

4.3 Resulting Delineation and Preliminary Jurisdictional Determination

Appendix A, Figure 4 includes a delineation map for potential jurisdictional features, which has been prepared consistent with the *Updated Map and Drawing Standards for the South Pacific Division Regulatory Program* (USACE 2016).

Table 3 provides a summary of vegetation, soil, and hydrology wetland parameters present/absent based on observed indicators recorded on the jurisdictional delineation data sheets (see Appendix B); and a characterization of the potential federal and state jurisdictional features occurring within the vicinity of the sample points.

Table 3. Preliminary Jurisdictional Determination Summary

Sample Point/Soil Pit	Hydrophytic Vegetation	Hydric Soil	Wetland Hydrology	Potential Jurisdiction		
				Federal / USACE	State / RWQCB	CDFW
SP1	N	N	Y	Non-jurisdictional[1]	Non-wetland Waters of the State (Ephemeral drainage)[2]	Streambed[3]
SP2	N	N	Y	Upland	Upland	Upland
SP3	Y	N	Y	Non-jurisdictional[1]	Non-wetland Waters of the State (Ephemeral drainage)[2]	Streambed[3]
SP4	Y	Y	Y	Non-jurisdictional[3]	Non-wetland Waters of the State (Ephemeral drainage)[4]	Streambed[3]
SP5	N	N	N	Upland	Upland	Upland

[1] This ephemeral drainage will not fall under the jurisdiction of the USACE since it does not meet the "relatively permanent" standard or the "significant nexus" with a traditional navigable water standard.
[2]Qualifies as a potential non-wetland Waters of the State since it is an ephemeral drainage.
[3]Does not qualify as a potential USACE wetland since it does not have continuous surface water connection to a relatively permanent tributary that meets the "significant nexus" standard to a traditional navigable water.
[4]Does not qualify as a wetland Waters of the State since it is an artificial wetland that is less than one acre in size, it resulted from historic human activity, and is subject to ongoing operation and maintenance. Since the feature is an ephemeral drainage it qualifies as a non-wetland Waters of the State.

Table 4 quantifies the potential jurisdictional aquatic resources (in acres, square feet, and linear feet) for the delineated resources within the Survey Area and includes footnotes summarizing the key characteristics of potential jurisdictional aquatic resources for each agency/regulatory jurisdiction based on Stantec's understanding of current regulatory guidance.

Table 4. Preliminary Jurisdictional Waters Totals in the Study Area

Potential Jurisdictional Aquatic Resources	Acres	Linear Feet
State/RWQCB		
Non-wetland Waters of the State (ephemeral drainage)	0.27	11,945
CDFW		
Streambed	0.25	10,964
Riparian	0.02	981

[1] Areas of potential jurisdiction are subject to final verification and approval by the regulatory agencies.

4.4 Results

Five sample points within the Survey Area were positioned along the wetland/upland interface (see Appendix A: Figure 4), each determined to be sufficient to analyze wetland and OHWM indicators and assign potential jurisdiction.

4.4.1 DRAINAGES AND OTHER AQUATIC RESOURCES

Refer to Appendix B and C for the comprehensive Wetland Data Sheets and Photo Log to view soils, location of soil pits, and vegetation near the sampling areas.

Sample Point 1 (SP1)

This sample point was positioned within what seemed to be an ephemeral drainage from aerial imagery on the western portion of the Survey Area within its northern extent. Vegetation at SP1 was dominated by soft brome (*Bromus hordeaceus*) (FACU) and wall barley (*Hordeum murinum*) (FACU) in the herb stratum; there were no species within the tree, sapling/shrub, or woody vine strata present. These species collectively do not meet the requirements to pass the dominance test. Soil observed included brown (7.5YR 4/4) clay loam with a depth from 0 to 16 inches within the soil profile. No hydric soil indicators along the soil profile were observed. The Primary Wetland Hydrology indicator of Surface Soil Cracks (B6) was observed. SP1 meets one of the three wetland parameters; therefore, the Sampled Area is not within a wetland.

Sample Point 2 (SP2)

This sample point was positioned within an ephemeral drainage just to the east of SP1. Vegetation at SP2 was dominated by rubber rabbitbrush (*Ericameria nauseosa*) (NI) within the sapling/shrub stratum, shortpod mustard (*Hirschfeldia incana*) (NI), Canada horseweed (*Erigeron canadensis*) (FACU), white sweetclover (*Melilotus albus*) (NI), red brome (*Bromus madritensis* ssp*. Rubens*) (UPL), and common sunflower (FACU) in the herb stratum; there were no species within the tree or woody vine strata present. These species do not meet the requirements to pass the dominance test. Soil observed included brown (10YR 4/3) silty clay loam with a depth from 0 to 16 inches within the soil profile. No hydric soil indicators along the soil profile were observed. Additionally, both Surface Soil Cracks (B6) (Primary Indicator) and Sediment Deposits (B2) (**Riverine**) (Secondary Indicator) were observed within the sampling area; therefore, Wetland Hydrology is present at SP2. SP2 meets one of the three wetland parameters; therefore, the Sampled Area is not within a wetland.

Sample Point 3 (SP3)

This point was positioned in the western most section of the Survey Area along a drainage ditch downstream of the PWD's groundwater pumping station. Vegetation in this area was dominated by rubber rabbitbrush (NI) in the sapling/shrub stratum and broadleaf cattail (*Typha latifolia*) (OBL) and curly dock (*Rumex crispus*) (FAC) in the herb stratum; there were no species within the tree or woody vine strata present. These species collectively pass the Dominance Test; therefore, hydrophytic vegetation is present within the SP3 sampling location. Soil observed included dark yellowish brown (10YR 4/4) clay

loam with a depth from 0 to 16 inches within the soil profile. No hydric soil indicators along the soil profile were observed. The wetland hydrology primary indicator of Saturation (A3) was observed. Thus, wetland hydrology was present at this sample point. Wetland Hydrology in this pit is only present due to the water pumping station draining water into the drainage upstream of the soil pit. SP3 does not have indicators of hydric soils; therefore, the Sampled Area is not within a wetland.

Sample 4 (SP4)

This sample point was positioned south of SP3 within an ephemeral drainage downstream of another PWD's groundwater pumping station that was suspected to meet the three wetland parameters. Vegetation in this area was dominated by red willow (*Salix laevigata*) (FACW) and arroyo willow (*Salix lasiolepis*) (FACW) in the sapling/shrub stratum and chainmaker's bullrush (*Schoenoplectus americanus*) (OBL) within the herb stratum; there were no species within the tree or woody vine strata present. These species meet the requirements to pass the dominance test and can be classified as hydrophytic vegetation. Soil observed included very dark grayish brown (10YR 3/2) sandy clay loam with a depth from 0 to 2 inches within the soil profile, brown (10YR 5/3) loamy sand making up 97% of the matrix with yellowish red (5YR 4/6) redox covered sand grains making up 3% of the matrix with a depth 2-10 inches, and grayish brown (10YR 5/2) loamy sand making up 95% of the matrix with strong brown (7.5YR 4/6) redox concentrations from 10 to 12 inches within the soil profile. This soil meets the requirements detailed within the "Vegetated Sand and Gravel Bars within floodplain" under the "Problematic hydric soils" section of the Arid West Regional supplement since there is evidence of sand deposition from high flow events. Since a high water table, saturation, and redoximorphic concentrations are present within the soil pit, it can be assumed that anaerobic conditions are present enough for hydric soil development; however, with the influx of sandy material none of the hydric soil indicators are met. Hydric soils are assumed to be present. Additionally, the Primary Wetland Hydrology Indicators High Water Table (A2), Saturation (A3), Oxidized Rhizospheres along Living Roots (C3), and Presence of Reduced Iron (C4) were observed. SP4 meets all three wetland parameters, therefore the Sampled Area is within a wetland.

Sample Point 5 (SP5)

This point was positioned uphill from SP4 on the assumed upland habitat. Vegetation in this area was dominated by red willow (FACW) and rubber rabbitbrush (NI) in the sapling/shrub stratum and red brome (UPL) in the herb stratum; there were no species within the tree or woody vine strata present. These species do not pass the dominance test. Soil observed included brown (10YR 4/3) sandy loam with a depth from 0 to 16 inches within the soil profile. No hydric soil indicators along the soil profile were observed. No wetland hydrology indicators were observed. SP5 does not meet any of the three wetland parameters; therefore, the Sampled Area is not within a wetland.

4.4.2 RATIONALE FOR PRELIMINARY JURISDICTIONAL DETERMINATION

Within the Survey Area there is one major ephemeral drainage and a tributary channel that provides additional ephemeral flow to the main channel. These drainages stem from and experience water input from their upstream PWD's groundwater pumping stations. The drainages travel northeast from 25th St E where they confluence and then make their way to where they flow underground at a concrete culvert at E Avenue P until where they are assumed to reach the Palmdale Water Reclamation Plant's oxidation

ponds. At the SP4 sampling location, three wetland parameters are met, and the wetland boundaries were mapped in accordance with the transition of hydrophytic vegetation to upland vegetation. The wetland and associated ephemeral channel does not fall under the jurisdiction of USACE since it does not meet the “relatively permanent” standard or the “significant nexus” with a traditional navigable water standard. Since this is an artificial wetland that resulted from historic human activity, and is subject to ongoing operation and maintenance, it does not qualify as a wetland Waters of the State. Since its channel has presence of a bed, bank, and OHWM, it is subject to potential jurisdiction of the State/RWQCB as a non-wetland Waters of the State. Additionally, since the channel has clear evidence of a bed and bank, it is subject to the potential jurisdiction of CDFW, where their jurisdiction extends out to the limit of riparian vegetation. The only location where CDFW jurisdiction may extend outside the boundaries of bed and bank is just east of 25th St E where riparian trees extend outside of the bank of the ephemeral drainage. The SP2 sampling location is a downstream study of the same drainage as SP4. At the SP3 sampling location, hydrophytic vegetation and wetland hydrology were met; however, hydric soils were not present. Therefore, this location is not a wetland; however, the drainage has presence of bed, bank, and an OHWM. This drainage will also be subject to potential jurisdiction of the State/RWQCB as a non-wetland Waters of the State and CDFW. Since this drainage lacks the “relative permanence” standard and “significant nexus” standard, it does not fall under jurisdiction of the USACE. It is recommended that PWD provide CDFW with a Section 1602 notification for an LSA and obtain a WDR Permit from the RWQCB in compliance with the Porter-Cologne Act if PWD plans on impacting any of the aquatic resources within the Survey Area.

It should be noted that Stantec’s assessments regarding areas of potential jurisdiction are subject to final verification and approval by the regulatory agencies, including the USACE, SWRCB/RWQCB, and CDFW.

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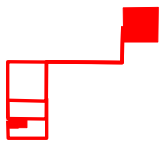
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APPENDICES

Appendix A Figures

Figure 1. Site Location Map



Project Location

0 2.5 5 Miles

(At original document size of 11x17)
1:162,342

N

Stantec

Project Location
City of Palmdale,
Los Angeles County, California

Prepared by DL on 2024-06-19
TR by SET on 2024-06-19
IR by JV on 2024-06-19

Client/Project
184031611
Palmdale Water District
Pure Water Antelope Valley – Advanced Water Treatment Project
Aquatic Resources Delineation Report

Figure No.
1

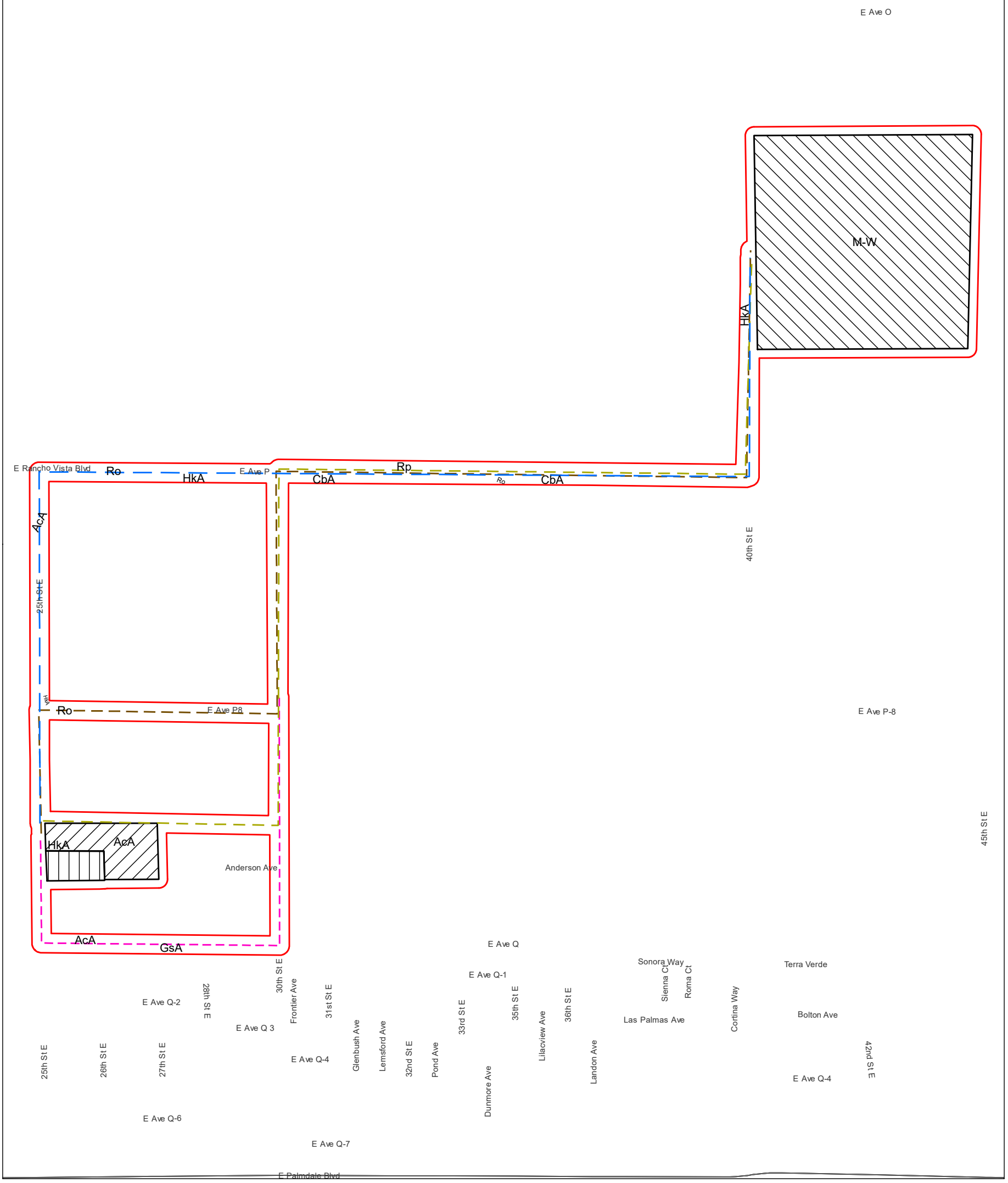
Title
Project Location Map

Notes
1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2024,
3. Background: Sources: Esri, GEBCO, NOAA, National Geographic, Garmin, HERE, Geonames.org, and other contributors
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
Esri, Garmin, GEBCO, NOAA NGDC, and other contributors California NAIP 2022 60cm

V:\1858\Active\184031611_Palmdale_FieldMap\ARDR_Figure1_ProjectLocation_20240603.mxd Revised: 2024-06-19 By: dalaw

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Figure 2. Soils Map



Survey Area

Project Features

- AWPF Site
- Brine Ponds - Location 1
- C6
- Brine Pipeline 1
- Brine Pipeline 2
- Brine Pipeline 3
- New Tertiary Effluent Pipeline

Soil Map Unit Symbol

- AcA; Adelanto coarse sandy loam, 2 to 5 percent slopes
- CaA; Cajon loamy sand, 0 to 2 percent slopes
- CbA; Cajon loamy sand, loamy substratum, 0 to 2 percent slopes
- GsA; Greenfield sandy loam, 0 to 2 percent slopes
- HkA; Hesperia fine sandy loam, 0 to 2 percent slopes
- M-W; Miscellaneous water
- Ro; Rosamond fine sandy loam
- Rp; Rosamond loam

0 1,200 2,400 Feet

(At original document size of 11x17)
1:14,400

N

Stantec

Project Location
City of Palmdale,
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Prepared by DL on 2024-06-19
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Aquatic Resources Delineation Report

Figure No.
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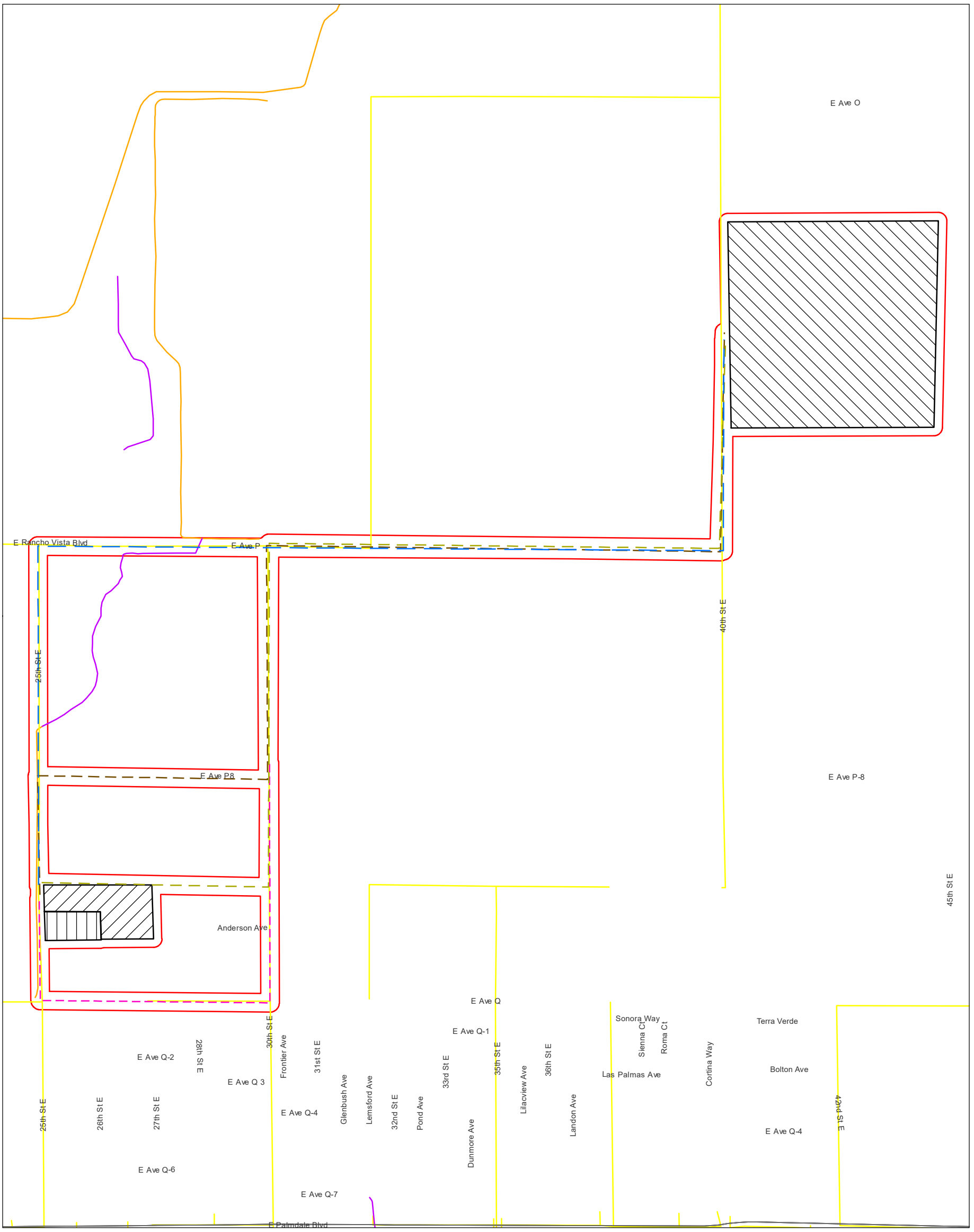
Title
Historic Soils

Notes
1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2024. Soils from NRCS 2024.
3. Background: California NAIP 2022 60cm

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Figure 3. NWI and NHD Map



Survey Area

Project Features

- AWPF Site
- Brine Ponds - Location 1
- C6
- Brine Pipeline 1
- Brine Pipeline 2
- Brine Pipeline 3
- New Tertiary Effluent Pipeline

National Wetlands Inventory

- Freshwater Pond
- Lake
- Riverine

National Hydrography Dataset

- Canal/ Ditch
- Pipeline
- Stream/ River

0 1,200 2,400 Feet

(At original document size of 11x17)
1:14,400

N

Stantec

Project Location
City of Palmdale,
Los Angeles County, California

Prepared by DL on 2024-06-21
TR by SET on 2024-06-21
IR by JV on 2024-06-21

Client/Project
184031611
Palmdale Water District
Pure Water Antelope Valley – Advanced Water Treatment Project
Aquatic Resources Delineation Report

Figure No.
3

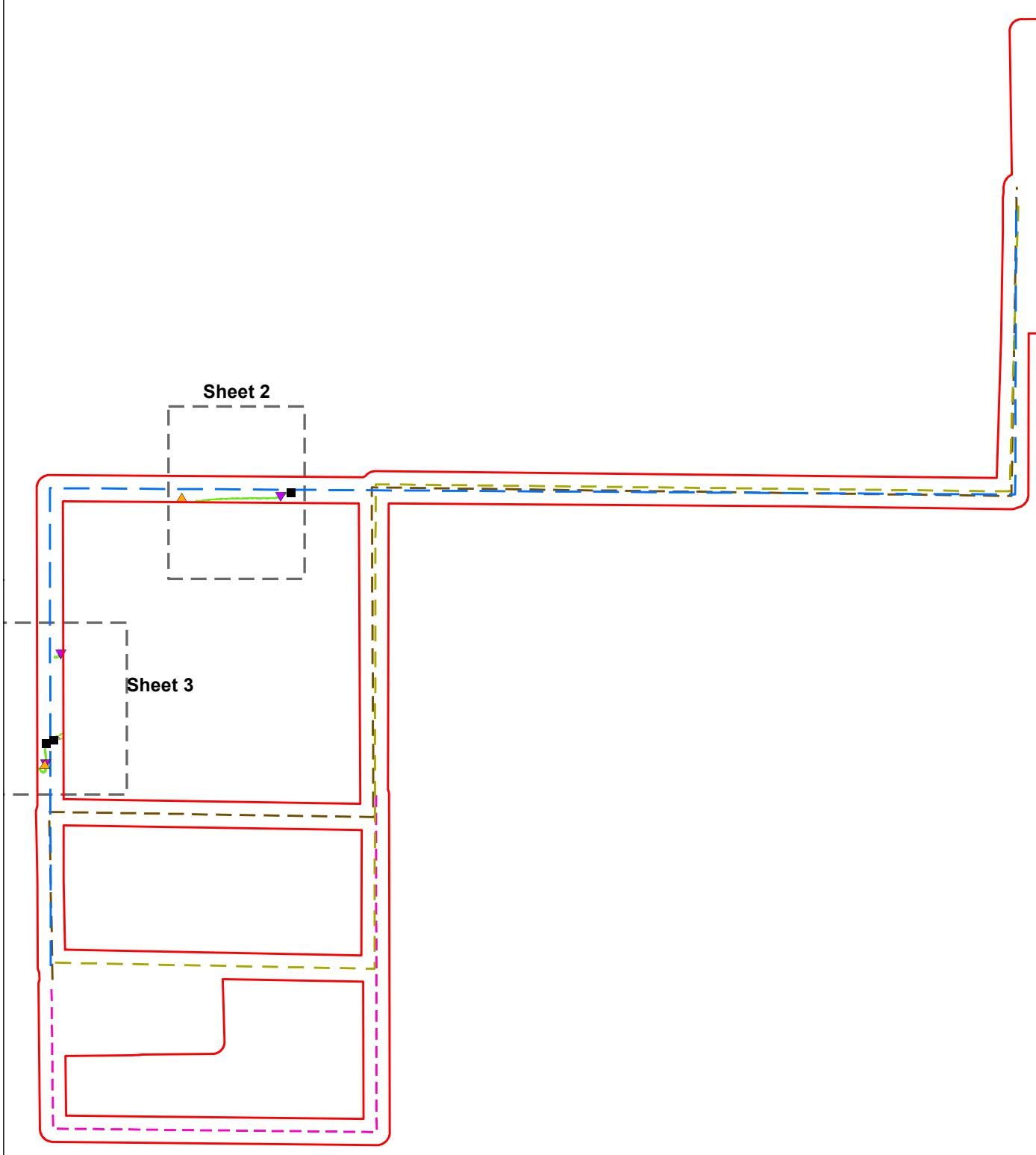
Title
National Wetlands Inventory & National Hydrography Dataset

Notes
1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2024. NWI from USFWS 2023. National Hydrography Dataset from USGS 2023.
3. Background: California NAIP 2022 60cm

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Figure 4. Potentially Jurisdictional Features



Survey Area

Project Features

- Brine Pipeline 1
- Brine Pipeline 2
- Brine Pipeline 3
- New Tertiary Effluent Pipeline
- AWPF Site
- Brine Ponds - Location 1
- C6

- Culvert

Sample Locations

- Upland
- Wetland

State/RWQCB Jurisdiction

- Waters of the State (Streambed)

CDFW Jurisdiction

- Riparian
- Streambed

0 1,200 2,400 Feet

(At original document size of 11x17)
1:14,400

N

Stantec

Project Location City of Palmdale, Los Angeles County, California	Prepared by DL on 2024-06-21 TR by SET on 2024-06-21 IR by JV on 2024-06-21
Client/Project	184031611

Palmdale Water District
Pure Water Antelope Valley – Advanced Water Treatment Project
Aquatic Resources Delineation Report

Figure No.

4

Title

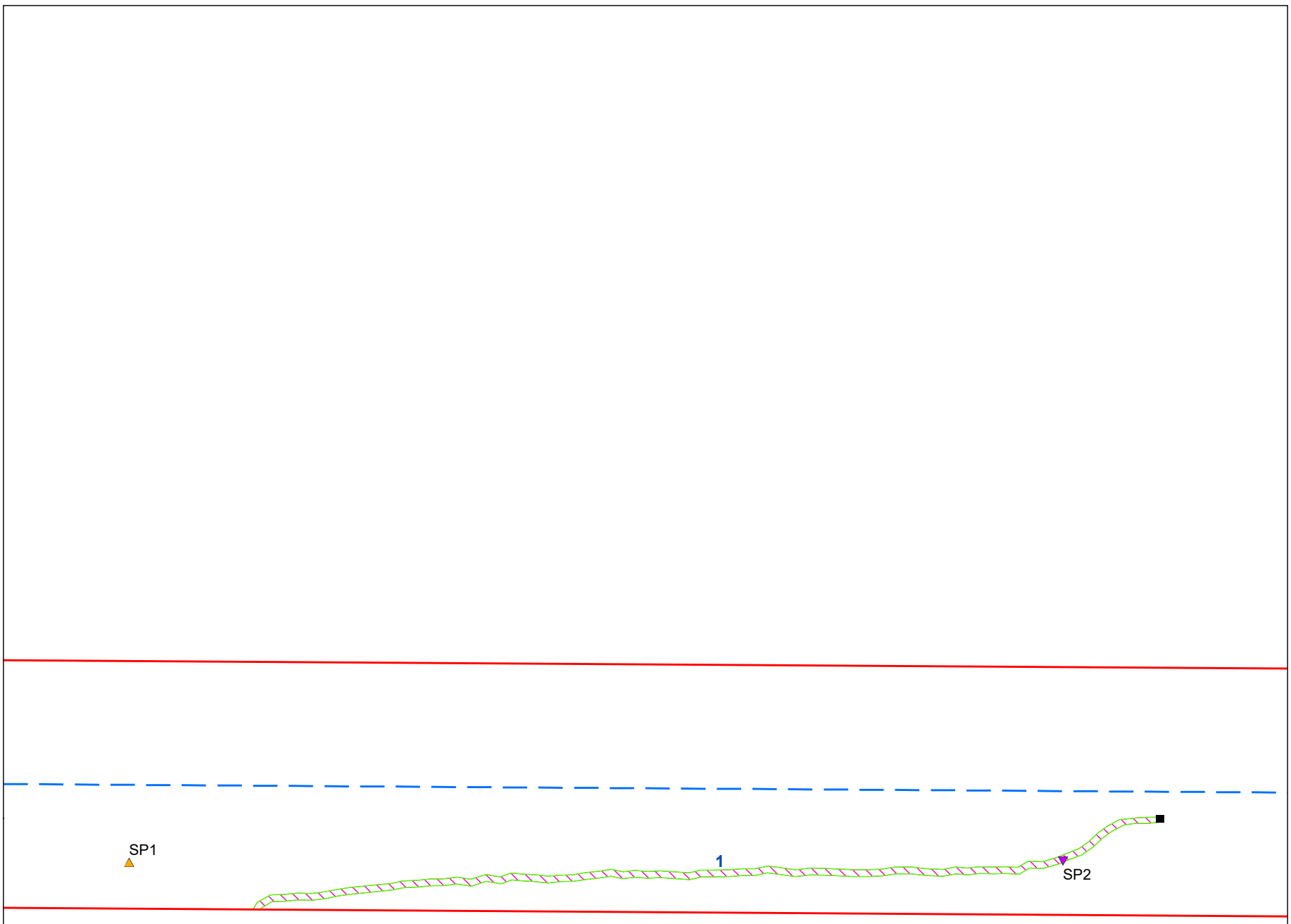
Aquatic Resources

Notes

1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2024,
3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

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Survey Area

Project Features

Brine Pipeline 3

Culvert

Sample Locations

Upland

Wetland

State/RWQCB Jurisdiction

Waters of the State (Streambed)

CDFW Jurisdiction

Riparian

Streambed

0 120 240 Feet

(At original document size of 11x17)
1:1,440

N

Stantec

Project Location
City of Palmdale,
Los Angeles County, California

Prepared by DL on 2024-06-21
TR by SET on 2024-06-21
IR by JV on 2024-06-21

Client/Project
184031611
Palmdale Water District
Pure Water Antelope Valley – Advanced Water Treatment Project
Aquatic Resources Delineation Report

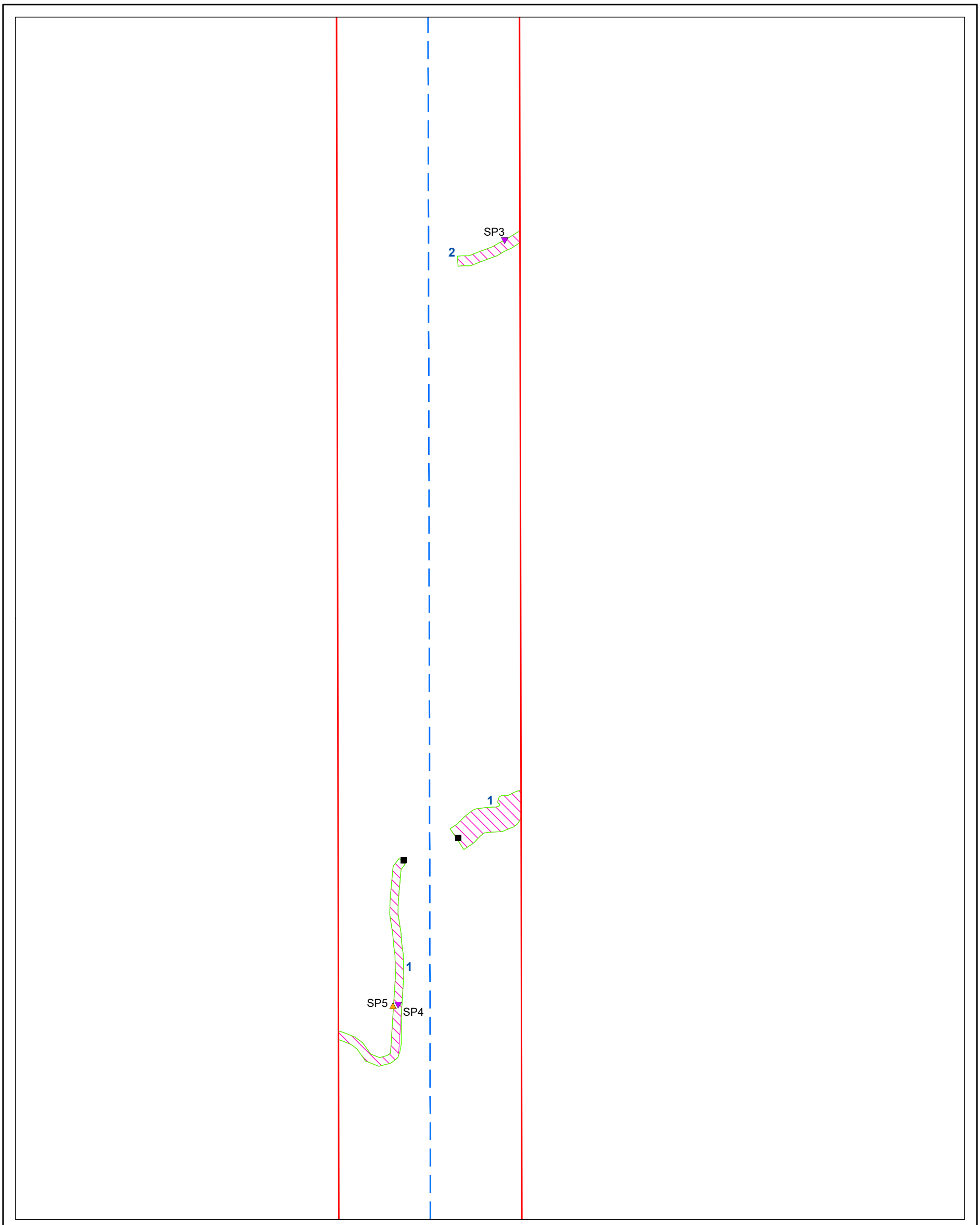
Figure No.
4

Title
Aquatic Resources

Notes
1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2024,
3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

V:\1858\Active\184031611_Palmdale_FieldMap\ARDR_Figure4_Waters_20240603.mxd Revised: 2024-06-21 By: dalaw

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Survey Area

Project Features

Brine Pipeline 3

Culvert

Sample Locations

Upland

Wetland

State/RWQCB Jurisdiction

Waters of the State (Streambed)

CDFW Jurisdiction

Riparian

Streambed

0 120 240 Feet

(At original document size of 11x17)
1:1,440

N

Stantec

Project Location
City of Palmdale,
Los Angeles County, California

Prepared by DL on 2024-06-21
TR by SET on 2024-06-21
IR by JV on 2024-06-21

Client/Project
184031611

Palmdale Water District
Pure Water Antelope Valley – Advanced Water Treatment Project
Aquatic Resources Delineation Report

Figure No.

4

Title

Aquatic Resources

Notes

1. Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
2. Data Sources: Stantec 2024,
3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

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Appendix B Wetland Data Sheets

SOIL

Sampling Point: SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16"	7.5YR 4/4	100%					Clay loam	Soil is moist but not saturated.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No ✔

Remarks:

No hydric soil indicators present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ✔ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ___ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ✔ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Surface soil cracks present; however, might just be from the clay nature of the soil.

SOIL

Sampling Point: SP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16"	10YR 4/3	100%					Silty clay lo	Soil is moist but not saturated.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☑

Remarks:

Soil is moist but not saturated.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☑ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☑ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☑ Depth (inches): _____

Water Table Present? Yes ☐ No ☑ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ No ☑ Depth (inches): _____

Wetland Hydrology Present? Yes ☑ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Surface soil cracks present and soil deposits. Soil is moist; however, not moist enough to be considered saturated.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Pure Water Antelope Valley – AdvancedWater | City/County: Palmdale/Los Angeles | Sampling Date: 5/8/24

Applicant/Owner: Palmdale Water District | State: CA | Sampling Point: SP2

Investigator(s): Ryan Blaich | Section, Township, Range: 19, 6N, 11W

Landform (hillslope, terrace, etc.): Low terrace | Local relief (concave, convex, none): Convex | Slope (%): 1%

Subregion (LRR): LRR C: Mediterranean California | Lat: 34.6020026 | Long: -118.0789401 | Datum:

Soil Map Unit Name: Hesperia fine sandy loam, 0 to 2 percent slopes (HkA) | NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:

Point taken within ephemeral drainage just outside of the OHWM and below top of bank (right).

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. Ericameria nauseosa	10%	Y	NL
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5')			
1. Hirschfeldia incana	5%	Y	NL
2. Erigeron canadensis	5%	Y	FACU
3. Melilotus albus	5%	Y	NL
4. Bromus madritensis	5%	Y	UPL
5. Helianthus annuus	5%	Y	FACU
6.			
7.			
8.			
	25% = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 75% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:

No hydrophytic vegetation present.

SOIL

Sampling Point: SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16"	10YR 4/3	100%					Silty clay	Soil is moist but not saturated.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✓

Remarks:

Soil is moist but not saturated.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ✓ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ✓ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? **Yes** ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Surface soil cracks present and soil deposits. Soil is moist; however, not moist enough to be considered saturated.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Pure Water Antelope Valley – AdvancedWater T | City/County: Palmdale/Los Angeles | Sampling Date: 5/8/24

Applicant/Owner: Palmdale Water District | State: CA | Sampling Point: SP3

Investigator(s): Ryan Blaich | Section, Township, Range: 19, 6N, 11W

Landform (hillslope, terrace, etc.): Low terrace | Local relief (concave, convex, none): Convex | Slope (%): 1%

Subregion (LRR): LRR C: Mediterranean California | Lat: 34.5983941 | Long: -118.0850583 | Datum:

Soil Map Unit Name: Rosamond fine sandy loam (Ro) | NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ✓ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:

Drainage is used to convey water for some reason. There is water present within the drainage; however, pit was dug approximately 3" away from surface water and water table is not present.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. Ericameria nauseosa	10%	Y	NL
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5')			
1. Rumex crispus	10%	Y	FAC
2. Typha latifolia	40%	Y	OBL
3. Melilotus albus	3%	N	NL
4. Sphaeralcea ambigua	5%	N	NL
5. Bromus madritensis	5%	N	UPL
6.			
7.			
8.			
	66% = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 34% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

No dominant hydrophytic vegetation present.

SOIL

Sampling Point: SP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16"	10YR 4/3	100%					Silty clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** ✓

Remarks:

Silty clay loam, no hydric soil indicators.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 3"

Wetland Hydrology Present? **Yes** ✓ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology is only present due to the water valve draining into ditch.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Pure Water Antelope Valley – AdvancedWater | City/County: Palmdale/Los Angeles | Sampling Date: 5/8/24

Applicant/Owner: Palmdale Water District | State: CA | Sampling Point: SP4

Investigator(s): Ryan Blaich | Section, Township, Range: 19, 6N, 11W

Landform (hillslope, terrace, etc.): Low flow channel | Local relief (concave, convex, none): Concave | Slope (%): 1%

Subregion (LRR): LRR C: Mediterranean California | Lat: 34.5958573 | Long: -118.0854714 | Datum:

Soil Map Unit Name: Rosamond fine sandy loam (Ro) | NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:

Ditch receives water input from water district pump upstream of where the sampling location is. Wetland hydrology is only present due to water input.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. Salix laevigata	10%	Y	FACW
2. Salix lasiolepis	10%	Y	FACW
3. Baccharis salicifolia	5%	N	FAC
4. Ericameria nauseosa	5%	N	NI
5.			
	30% = Total Cover		
Herb Stratum (Plot size: 5')			
1. Eleochris palustris	5%	N	OBL
2. Veronica anagallis-aquatica	10%	N	OBL
3. Typha latifolia	2%	N	OBL
4. Schoenoplectus americanus	70%	Y	OBL
5.			
6.			
7.			
8.			
	87% = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 13% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

SOIL

Sampling Point: SP4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-2"	10YR 3/2	100%					Sandy cla	Roots present.
2-10"	10YR 5/3	97%	5YR 4/6	3%	CS	M	Loamy sa	Distinct
10-12"	10YR 5/2	95%	7.5YR 4/6	5%	C	M	Loamy sa	Distinct

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ✓ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

This point meets the indicators for Problematic Hydric Soils: Vegetated sand and gravel bars within floodplains. The point occurs within an ephemeral drainage that has sandy soils. There is evidence of redoximorphic features within the soil profile. The influx of new sand from upstream sources do not allow this soil to meet one of the above Hydric Soil Indicators. Rock rejection at 12".

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ✓ Oxidized Rhizospheres along Living Roots (C3)
- ✓ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ✓ No ___ Depth (inches): 10"

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 3"

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology is only present due to the water valve draining into ditch.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Pure Water Antelope Valley – AdvancedWater T4 City/County: Palmdale/Los Angeles Sampling Date: 5/8/24

Applicant/Owner: Palmdale Water District State: CA Sampling Point: SP5

Investigator(s): Ryan Blaich Section, Township, Range: 19, 6N, 11W

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2%

Subregion (LRR): LRR C: Mediterranean California Lat: 34.5958552 Long: -118.0854931 Datum:

Soil Map Unit Name: Rosamond fine sandy loam (Ro) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ✓ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	

Remarks:

Point taken upslope from SP4.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. Salix laevigata	10%	Y	FACW
2. Baccharis salicifolia	2%	N	FAC
3. Ericameria nauseosa	30%	Y	NL
4.			
5.			
	42% = Total Cover		
Herb Stratum (Plot size: 5')			
1. Hirschfeldia incana	10%	N	NL
2. Bromus madritensis	75%	Y	UPL
3. Melilotus albus	5%	N	NL
4.			
5.			
6.			
7.			
8.			
	90% = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 10% % Cover of Biotic Crust 0%

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:

SOIL

Sampling Point: SP5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
1-16"	10YR 4/3	100%					Sandy loa	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-CO-R.

OMB Control No. 0710-XXXX

Approval Expires:

Project ID #: 184031611	Site Name: Pure Water Antelope Valley	Date and Time: 5/8/24 11:32 am
Location (lat/long): 34.6019977, -118.0789786	Investigator(s): Ryan Blaich	

Step 1 Site overview from remote and online resources
Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] LiDAR
- [ ] geologic maps
- [ ] climatic data
- [x] satellite imagery
- [ ] land use maps
- [x] aerial photos
- [ ] topographic maps
- [ ] Other: _____

Describe land use and flow conditions from online resources.
Were there any recent extreme events (floods or drought)?
Land is adjacent to the Palmdale airport and road E Avenue P. This last winter this drainage experienced above average rainfall.

Step 2 Site conditions during field assessment
First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.

There is a culvert that the drainage ends at at E Avenue P, where it drains into an underground storm drain.

Step 3 Check the boxes next to the indicators used to identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below `b', at `x', or just above `a' the OHWM.
OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.

Geomorphic indicators

- [x] **Break in slope:**
  - [x] *on the bank:* a
  - [ ] *undercut bank:*
  - [ ] *valley bottom:*
  - [ ] Other: _____
- [x] **Shelving:**
  - [x] *shelf at top of bank:* a
  - [ ] *natural levee:*
  - [ ] *man-made berms or levees:*
  - [ ] *other berms:* _____
- [x] **Channel bar:**
  - [ ] *shelving (berms) on bar:*
  - [x] *unvegetated:* x
  - [ ] *vegetation transition (go to veg. indicators)*
  - [ ] *sediment transition (go to sed. indicators)*
  - [ ] *upper limit of deposition on bar:*
- [x] **Instream bedforms and other bedload transport evidence:**
  - [x] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)* x
  - [ ] *bedforms (e.g., poofs, riffles, steps, etc.):*
  - [x] *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)* a
- [ ] **Secondary channels:**

Sediment indicators

- [ ] **Soil development:**
- [ ] **Changes in character of soil:**
- [ ] **Mudcracks:**
- [x] **Changes in particle-sized distribution:** x
  - [x] *transition from* clay to gravels
  - [ ] *upper limit of sand-sized particles*
  - [ ] *silt deposits:*

Vegetation Indicators

- [ ] **Change in vegetation type and/or density:**
  Check the appropriate boxes and select the general vegetation change *(e.g., graminoids to woody shrubs).* ***Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain.***
  - [ ] *vegetation absent to:*
  - [ ] *moss to:*
  - [ ] *forbs to:*
  - [ ] *graminoids to:*
  - [ ] *woody shrubs to:*
  - [ ] *deciduous trees to:*
  - [ ] *coniferous trees to:*
- [ ] **Vegetation matted down and/or bent:**
- [ ] **Exposed roots below intact soil layer:**

Ancillary indicators

- [ ] **Wracking/presence of organic litter:**
- [ ] **Presence of large wood:**
- [ ] **Leaf litter disturbed or washed away:**
- [ ] **Water staining:**
- [ ] **Weathered clasts or bedrock:**

Other observed indicators?

Describe:

Step 4 Is additional information needed to support this determination?

- [ ] Yes
- [x] No

If yes, describe and attach information to datasheet:

Project ID #: 184031611

Step 5 Describe rationale for location of OHWM

Within the top of banks of the drainage there is a steep decline up until a sudden low terrace shelf, on both sides. Within the low flow terrace, there is evidence of sediment deposition of fine sediments and small gravels.

Additional observations or notes

Attach a photo log of the site. Use the table below, or attach separately.

Photo log attached? ☐ Yes ☒ No If no, explain why not: Photos included in photo log.

List photographs and include descriptions in the table below.

Number photographs in the order that they are taken. Attach photographs and include annotations of features.

Photo Number	Photograph description

OHWM Field Identification Datasheet Instructions and Field Procedure

Step 1 **Site overview from remote and online resources** **Complete Step 1 prior to site visit.**

Online Resources: Identify what information is available for the site. Check boxes on datasheet next to the resources used to assess this site.

a. gage data
b. aerial photos
c. satellite imagery
d. LiDAR
e. topographic maps
f. geologic maps
g. land use maps
h. climatic data (precipitation and temperature)

Landscape context: Use the online resources to put the site in the context of the surrounding landscape.

a. **Note on the datasheet under Step 1:**
   i. Overall land use and change if known
   ii. Recent extreme events if known (e.g., flood, drought, landslides, debris flows, wildfires)
b. Consider the following to inform weighting of evidence observed during field visit.
   i. What physical characteristics are likely to be observed in specific environments?
   ii. Was there a recent flood or drought? Are you expecting to see recently formed or obscured indicators?
   iii. How will land use affect specific stream characteristics? How natural is the hydrologic regime? How stable has the landscape been over the last year, decade, century?

Step 2 Site conditions during the field assessment (assemble evidence)

a. Identify the assessment area.
b. Walk up and down the assessment area noting all the potential OHWM indicators.
c. Note broad trends in channel shape, vegetation, and sediment characteristics.
   i. Is this a single thread or multi-thread system? Is this a stream-wetland complex?
   ii. Are there any secondary and/or floodplain channels?
   iii. Are there obvious man-made alterations to the system?
   iv. Are there man-made (e.g., bridges, dams, culverts) or natural structures (e.g., bedrock outcrops, Large Wood jams) that will influence or control flow?
d. Look for signs of recurring fluvial action.
   i. Where does the flow converge on the landscape?
   ii. Are there signs of fluvial action (sediment sorting, bedforms, etc.) at the convergence zone?
e. Look for indicators on both banks. If the opposite bank is not accessible, then look across the channel at the bank.
f. **In Step 2 of the datasheet** describe any adjacent land use or flow conditions that may influence interpretation of each line of evidence.
   i. What land use and flow conditions may be affecting your ability to observe indicators at the site?
   ii. What recent extreme events may have caused changes to the site and affected your ability to observe indicators?

Step 3a List evidence

Assemble evidence by checking the boxes next to each line of evidence:

a. If needed, use a separate scratch datasheet to check boxes next to possible indicators, or check boxes of possible indicators in pencil and use pen for final decision.
b. If using fillable form, then follow the instructions for filling in the fillable form.

Context is important when assembling evidence. For instance, pool development may be an indicator of interest on the bed of a dry stream, but may not be a useful indicator to take note of in a flowing stream. On the other hand, if the pool is found in a secondary channel adjacent to the main channel, it could provide a line of evidence for a minimum elevation of high flows. Therefore, consider the site context when deciding which indicators provide evidence for identifying the OHWM. Explain reasoning in Step 5.

Questions to consider while making observations and listing evidence at a site:

Geomorphic indicators	**Sediment and soil indicators**	**Vegetation Indicators**	**Ancillary indicators**
Where are the breaks in slope?	Where does evidence of soil formation appear?	Where are the significant transitions in vegetation species, density, and age?	Is there organic litter present?
Are there identifiable banks?		Is there vegetation growing on the channel bed?	
Is there an easily identifiable top of bank?	Are there mudcracks present?	If no, how long does it take for the non-tolerant vegetation to establish relative to how often flows occur in the channel?	Is there any leaf litter disturbed or washed away?
Are the banks actively eroding?			
Are the banks undercut?	Is there evidence of sediment sorting by grain size?	Where are the significant transitions in vegetation?	Is there large wood deposition?
Are the banks armored?			
Is the channel confined by the surrounding hillslopes?		Is the vegetation tolerant of flowing water?	Is there evidence of water staining?
Are there natural or man-made berms and levees?		Has any vegetation been flattened by flowing water?	
Are there fluvial terraces?			
Are there channel bars?			

Are the following features of fluvial transport present?

Evidence of erosion: obstacle marks, scour, armoring
Bedforms; riffles, pools, steps, knickpoints/headcuts
Evidence of deposition: imbricated clasts, gravel sheets, etc.

In some cases, it may be helpful to explain why an indicator was NOT at the OHWM elevation, but found above or below. It can also be useful to note if specific indicators (e.g., vegetation) are NOT present. For instance, note if the site has no clear vegetation zonation.

OHWM Field Identification Datasheet Instructions and Field Procedure

Step 3b Weight each line of evidence and weigh body of evidence

Weight each indicator by considering its importance based upon:

a. Relevance:

i. Is this indicator left by low, high, or extreme flows?

Tips on how to assess the indicator relative to type of flow:

Consider the elevation of the indicator relative to the channel bed. What is the current flow level based on season or nearby gages? Consider the elevation of the indicator relative to the current flow. If the stream is currently at baseflow and indicator is adjacent to that, then it is likely a low flow indicator. The difference between high and extreme flow indicators can sometimes be difficult to determine.

***Landscape context from Step 1 can help determine the relevance, strength, and reliability of the indicators observed in the field.**

***Information in Chapter 2 of the OHWM field manual provides information on specific indicators which can assist in putting these in context and determining relevance, strength, and reliability.**

ii. Did recent extreme events and/or land use affect this indicator?

1. Recent floods may have left many extreme flow indicators, or temporarily altered channel form. Other resources will likely be needed to support any OHWM identification at this site. Field evidence of the OHWM may have to wait for the site to recover from the recent flood.
2. Droughts may cause field evidence of OHWM to be obscured, because there has been an extended time since the last high flow event. There can be overgrowth of vegetation or deposition of material from surrounding landscape that can obscure indicators.
3. Both man-made (e.g., dams, construction, mining activities, urbanization, agriculture, grazing) and natural (e.g., fires, floods, debris flows, beaver dams) disturbances can all alter how indicators are expected to appear at a site. Chapter 6 and Chapter 7 of the OHWM field manual provides specific case-studies that can help in interpreting evidence at these sites.

b. Strength:

i. Is this indicator persistent across the landscape?

1. Look up and downstream and across the channel to see if you see the same indicator at multiple locations.
2. Does the indicator occur at the same elevation as other indicators?

c. Reliability:

i. Is this indicator persistent on the landscape over time? Will this indicator still persist across seasons?

1. This can be difficult to determine for some indicators and may be specific to climatic region (in terms of persistence of vegetation) and history of land use or other natural disturbances.
2. Chapter 2, Chapter 6, and Chapter 7 of the OHWM field manual describes each indicator in detail and provides examples of areas where indicators are difficult to interpret.

d. Weigh body of evidence:

i. Combine weights: integrate the weighted line of evidence (relevance, strength, reliability) of each indicator.

ii. For each of the observed indicators, which are more heavily weighted? Where do high value indicators co-occur along the stream reach? Do they co-occur at a similar elevation along the banks relative to water surface (or channel bed if there is no water).

iii. On datasheet, select the indicators used to identify the OHWM. Information in Chapter 2 of the OHWM field manual provides descriptions of specific indicators which can assist in putting these in context and determining relevance, strength, and relieability.

e. Take photographs of indicators and attach a log using either page 2 of datasheet or another method of logging photos.

i. Annotate photos with descriptions of indicators.

Step 4 Is additional information needed? Are other resources needed to support the lines of evidence observed in the field?

a. If additional resources are needed, then repeat steps 3a and 3b for the resources selected in Step 1 of assembling, weighting, and weighing evidence collected from online resources. Chapter 5 of the OHWM field manual provides information on using online resources.

b. Any data collected from online tools have strengths and weaknesses. Make sure these are clear when determining relevance, strength, and reliability of the remotely collected data. Clearly describe why other resources were needed to support the lines of evidence observed in the field, as well as the relevance, strength, and reliability of the supporting data and/or resources.

c. Attach any remote data and data analysis to the datasheet.

Step 5 Describe rationale for location of OHWM:

a. Why do the combination of indicators represent the OHWM?

b. If there are multiple possibilites for the OHWM, explain why there are two (or more) possibilities. Include any relevant discussion on why specific indicators were not included in the final decision.

c. If needed, add additional site notes on page 2 of the datasheet under Step 5.

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-CO-R.

OMB Control No. 0710-XXXX

Approval Expires:

Project ID #: 184031611	Site Name: Pure Water Antelope Valley	Date and Time: 5/8/24 1:50 pm
Location (lat/long): 34.598373, -118.085057	Investigator(s): Ryan Blaich	

Step 1 Site overview from remote and online resources
Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] LiDAR
- [ ] geologic maps
- [ ] climatic data
- [x] satellite imagery
- [ ] land use maps
- [x] aerial photos
- [ ] topographic maps
- [ ] Other: _____

Describe land use and flow conditions from online resources.
Were there any recent extreme events (floods or drought)?
Water valve drains into the ditch.

Step 2 Site conditions during field assessment

First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or man-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls etc.

Ther is a water valve that flows into the drainage. There is no surface water present; however, no surface water flow.

Step 3 Check the boxes next to the indicators used to identify the location of the OHWM.

OHWM is at a transition point, therefore some indicators that are used to determine location may be just below and above the OHWM. From the drop-down menu next to each indicator, select the appropriate location of the indicator by selecting either just below `b', at `x', or just above `a' the OHWM.

OHWM. Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and to attach a photo log.

Geomorphic indicators

- [x] **Break in slope:**
  - [x] *on the bank:* a
  - [ ] *undercut bank:*
  - [ ] *valley bottom:*
  - [ ] Other: _____
- [x] **Shelving:**
  - [x] *shelf at top of bank:* a
  - [ ] *natural levee:*
  - [ ] *man-made berms or levees:*
  - [ ] *other berms:* _____
- [x] **Channel bar:**
  - [x] *shelving (berms) on bar:* a
  - [ ] *unvegetated:*
  - [x] *vegetation transition (go to veg. indicators)* x
  - [ ] *sediment transition (go to sed. indicators)*
  - [ ] *upper limit of deposition on bar:*
- [ ] **Instream bedforms and other bedload transport evidence:**
  - [ ] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)* x
  - [ ] *bedforms (e.g., poofs, riffles, steps, etc.):*
  - [ ] *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)* a
- [ ] **Secondary channels:**

Sediment indicators

- [ ] **Soil development:**
- [ ] **Changes in character of soil:**
- [ ] **Mudcracks:**
- [ ] **Changes in particle-sized distribution:**
  - [ ] *transition from* _____ to _____
  - [ ] *upper limit of sand-sized particles*
  - [ ] *silt deposits:*

Vegetation Indicators

- [x] **Change in vegetation type and/or density:**

Check the appropriate boxes and select the general vegetation change *(e.g., graminoids to woody shrubs).* ***Describe the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain.***

- [ ] *vegetation absent to:*
- [ ] *moss to:*
- [ ] *forbs to:*
- [x] *graminoids to:* woody shrubs
- [ ] *woody shrubs to:*
- [ ] *deciduous trees to:*
- [ ] *coniferous trees to:*
- [ ] **Vegetation matted down and/or bent:**
- [ ] **Exposed roots below intact soil layer:**

Ancillary indicators

- [ ] **Wracking/presence of organic litter:**
- [ ] **Presence of large wood:**
- [ ] **Leaf litter disturbed or washed away:**
- [ ] **Water staining:**
- [ ] **Weathered clasts or bedrock:**

Other observed indicators?

Describe:
Typha spp. present within the OHWM and just above it.

Step 4 Is additional information needed to support this determination?

- [ ] Yes
- [x] No

If yes, describe and attach information to datasheet:

Project ID #: 184031611

Step 5 Describe rationale for location of OHWM

There is a break in slope where surface water is present. There is also a break in vegetation just above the OHWM.

Additional observations or notes

There is a water valve draining into the ditch.

Attach a photo log of the site. Use the table below, or attach separately.

Photo log attached? ☐ Yes ☒ No If no, explain why not: Photos included in photo log.

List photographs and include descriptions in the table below.

Number photographs in the order that they are taken. Attach photographs and include annotations of features.

Photo Number	Photograph description

OHWM Field Identification Datasheet Instructions and Field Procedure

Step 1 **Site overview from remote and online resources** **Complete Step 1 prior to site visit.**

Online Resources: Identify what information is available for the site. Check boxes on datasheet next to the resources used to assess this site.

a. gage data
b. aerial photos
c. satellite imagery
d. LiDAR
e. topographic maps
f. geologic maps
g. land use maps
h. climatic data (precipitation and temperature)

Landscape context: Use the online resources to put the site in the context of the surrounding landscape.

a. **Note on the datasheet under Step 1:**
   i. Overall land use and change if known
   ii. Recent extreme events if known (e.g., flood, drought, landslides, debris flows, wildfires)
b. Consider the following to inform weighting of evidence observed during field visit.
   i. What physical characteristics are likely to be observed in specific environments?
   ii. Was there a recent flood or drought? Are you expecting to see recently formed or obscured indicators?
   iii. How will land use affect specific stream characteristics? How natural is the hydrologic regime? How stable has the landscape been over the last year, decade, century?

Step 2 Site conditions during the field assessment (assemble evidence)

a. Identify the assessment area.
b. Walk up and down the assessment area noting all the potential OHWM indicators.
c. Note broad trends in channel shape, vegetation, and sediment characteristics.
   i. Is this a single thread or multi-thread system? Is this a stream-wetland complex?
   ii. Are there any secondary and/or floodplain channels?
   iii. Are there obvious man-made alterations to the system?
   iv. Are there man-made (e.g., bridges, dams, culverts) or natural structures (e.g., bedrock outcrops, Large Wood jams) that will influence or control flow?
d. Look for signs of recurring fluvial action.
   i. Where does the flow converge on the landscape?
   ii. Are there signs of fluvial action (sediment sorting, bedforms, etc.) at the convergence zone?
e. Look for indicators on both banks. If the opposite bank is not accessible, then look across the channel at the bank.
f. **In Step 2 of the datasheet** describe any adjacent land use or flow conditions that may influence interpretation of each line of evidence.
   i. What land use and flow conditions may be affecting your ability to observe indicators at the site?
   ii. What recent extreme events may have caused changes to the site and affected your ability to observe indicators?

Step 3a List evidence

Assemble evidence by checking the boxes next to each line of evidence:

a. If needed, use a separate scratch datasheet to check boxes next to possible indicators, or check boxes of possible indicators in pencil and use pen for final decision.
b. If using fillable form, then follow the instructions for filling in the fillable form.

Context is important when assembling evidence. For instance, pool development may be an indicator of interest on the bed of a dry stream, but may not be a useful indicator to take note of in a flowing stream. On the other hand, if the pool is found in a secondary channel adjacent to the main channel, it could provide a line of evidence for a minimum elevation of high flows. Therefore, consider the site context when deciding which indicators provide evidence for identifying the OHWM. Explain reasoning in Step 5.

Questions to consider while making observations and listing evidence at a site:

Geomorphic indicators	**Sediment and soil indicators**	**Vegetation Indicators**	**Ancillary indicators**
Where are the breaks in slope?	Where does evidence of soil formation appear?	Where are the significant transitions in vegetation species, density, and age?	Is there organic litter present?
Are there identifiable banks?		Is there vegetation growing on the channel bed?	
Is there an easily identifiable top of bank?	Are there mudcracks present?	If no, how long does it take for the non-tolerant vegetation to establish relative to how often flows occur in the channel?	Is there any leaf litter disturbed or washed away?
Are the banks actively eroding?			
Are the banks undercut?	Is there evidence of sediment sorting by grain size?	Where are the significant transitions in vegetation?	Is there large wood deposition?
Are the banks armored?			
Is the channel confined by the surrounding hillslopes?		Is the vegetation tolerant of flowing water?	Is there evidence of water staining?
Are there natural or man-made berms and levees?		Has any vegetation been flattened by flowing water?	
Are there fluvial terraces?			
Are there channel bars?			

Are the following features of fluvial transport present?

Evidence of erosion: obstacle marks, scour, armoring
Bedforms; riffles, pools, steps, knickpoints/headcuts
Evidence of deposition: imbricated clasts, gravel sheets, etc.

In some cases, it may be helpful to explain why an indicator was NOT at the OHWM elevation, but found above or below. It can also be useful to note if specific indicators (e.g., vegetation) are NOT present. For instance, note if the site has no clear vegetation zonation.

OHWM Field Identification Datasheet Instructions and Field Procedure

Step 3b Weight each line of evidence and weigh body of evidence

Weight each indicator by considering its importance based upon:

a. Relevance:

i. Is this indicator left by low, high, or extreme flows?

Tips on how to assess the indicator relative to type of flow:

Consider the elevation of the indicator relative to the channel bed. What is the current flow level based on season or nearby gages? Consider the elevation of the indicator relative to the current flow. If the stream is currently at baseflow and indicator is adjacent to that, then it is likely a low flow indicator. The difference between high and extreme flow indicators can sometimes be difficult to determine.

***Landscape context from Step 1 can help determine the relevance, strength, and reliability of the indicators observed in the field.**

***Information in Chapter 2 of the OHWM field manual provides information on specific indicators which can assist in putting these in context and determining relevance, strength, and reliability.**

ii. Did recent extreme events and/or land use affect this indicator?

1. Recent floods may have left many extreme flow indicators, or temporarily altered channel form. Other resources will likely be needed to support any OHWM identification at this site. Field evidence of the OHWM may have to wait for the site to recover from the recent flood.
2. Droughts may cause field evidence of OHWM to be obscured, because there has been an extended time since the last high flow event. There can be overgrowth of vegetation or deposition of material from surrounding landscape that can obscure indicators.
3. Both man-made (e.g., dams, construction, mining activities, urbanization, agriculture, grazing) and natural (e.g., fires, floods, debris flows, beaver dams) disturbances can all alter how indicators are expected to appear at a site. Chapter 6 and Chapter 7 of the OHWM field manual provides specific case-studies that can help in interpreting evidence at these sites.

b. Strength:

i. Is this indicator persistent across the landscape?

1. Look up and downstream and across the channel to see if you see the same indicator at multiple locations.
2. Does the indicator occur at the same elevation as other indicators?

c. Reliability:

i. Is this indicator persistent on the landscape over time? Will this indicator still persist across seasons?

1. This can be difficult to determine for some indicators and may be specific to climatic region (in terms of persistence of vegetation) and history of land use or other natural disturbances.
2. Chapter 2, Chapter 6, and Chapter 7 of the OHWM field manual describes each indicator in detail and provides examples of areas where indicators are difficult to interpret.

d. Weigh body of evidence:

i. Combine weights: integrate the weighted line of evidence (relevance, strength, reliability) of each indicator.

ii. For each of the observed indicators, which are more heavily weighted? Where do high value indicators co-occur along the stream reach? Do they co-occur at a similar elevation along the banks relative to water surface (or channel bed if there is no water).

iii. On datasheet, select the indicators used to identify the OHWM. Information in Chapter 2 of the OHWM field manual provides descriptions of specific indicators which can assist in putting these in context and determining relevance, strength, and relieability.

e. Take photographs of indicators and attach a log using either page 2 of datasheet or another method of logging photos.

i. Annotate photos with descriptions of indicators.

Step 4 Is additional information needed? Are other resources needed to support the lines of evidence observed in the field?

a. If additional resources are needed, then repeat steps 3a and 3b for the resources selected in Step 1 of assembling, weighting, and weighing evidence collected from online resources. Chapter 5 of the OHWM field manual provides information on using online resources.

b. Any data collected from online tools have strengths and weaknesses. Make sure these are clear when determining relevance, strength, and reliability of the remotely collected data. Clearly describe why other resources were needed to support the lines of evidence observed in the field, as well as the relevance, strength, and reliability of the supporting data and/or resources.

c. Attach any remote data and data analysis to the datasheet.

Step 5 Describe rationale for location of OHWM:

a. Why do the combination of indicators represent the OHWM?

b. If there are multiple possibilites for the OHWM, explain why there are two (or more) possibilities. Include any relevant discussion on why specific indicators were not included in the final decision.

c. If needed, add additional site notes on page 2 of the datasheet under Step 5.

Appendix C Photo Log

Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, Los Angeles County, CA**

Photograph ID: 1	
Photo Location: Palmdale, Los Angeles County, CA	
Direction: West	
Survey Date: 5/8/2024	
Comments: Culvert on east end of 25th S E	

Photograph ID: 2	
Photo Location: Palmdale, Los Angeles County, CA	
Direction: East	
Survey Date: 5/8/2024	
Comments: Culvert on west end of 25th S E	

Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, Los Angeles County, CA**

Photograph ID: 3	
Photo Location: Palmdale, Los Angeles County, CA	
Direction: Northeast	
Survey Date: 5/8/2024	
Comments: Culvert underneath E P Ave	

Photograph ID: 4	
Photo Location: Palmdale, Los Angeles County, CA	
Direction: West	
Survey Date: 5/8/2024	
Comments: Drainage near E P Ave 1	

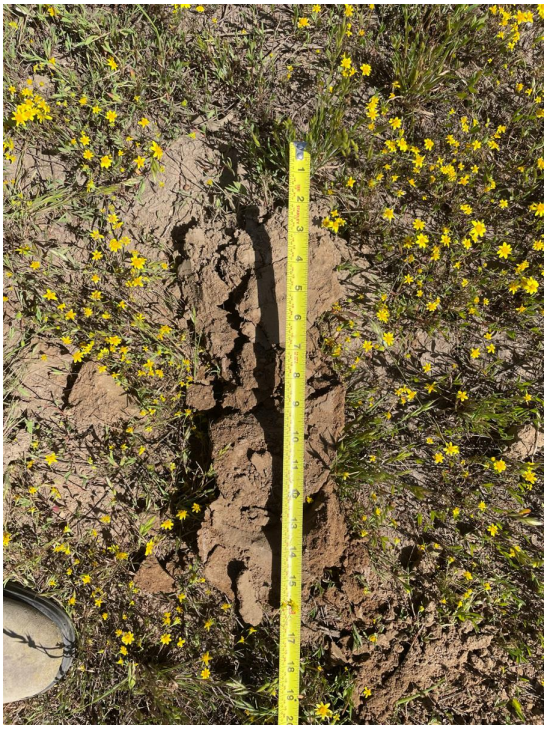
Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, Los Angeles County, CA**

Photograph ID: 5 **Photo Location:** Palmdale, Los Angeles County, CA **Direction:** East **Survey Date:** 5/8/2024 **Comments:** Drainage near E P Ave	
Photograph ID: 6 **Photo Location:** Palmdale, Los Angeles County, CA **Direction:** Southwest **Survey Date:** 5/8/2024 **Comments:** Drainage on east end of 25th St E	

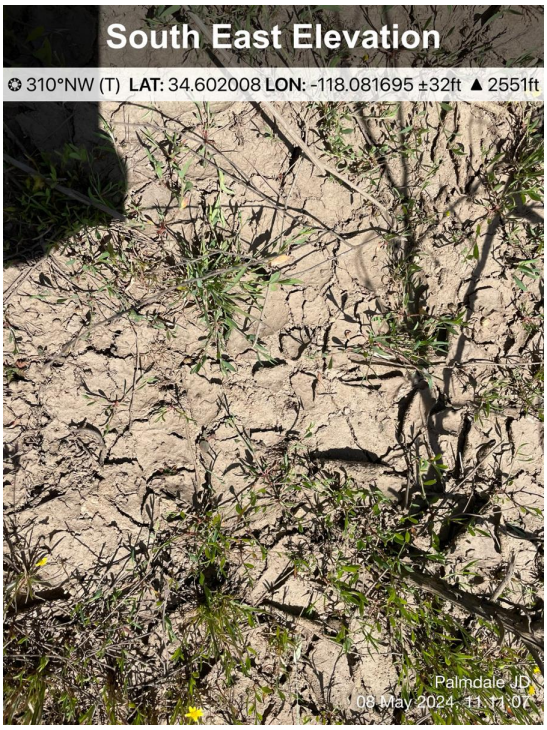
Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, Los Angeles County, CA**

Photograph ID: 7 **Photo Location:** Palmdale, Los Angeles County, CA **Direction:** North **Survey Date:** 5/8/2024 **Comments:** Picture of rabbitbrush scrub that looks like a drainage from aerial imagery.	
Photograph ID: 8 **Photo Location:** Palmdale, Los Angeles County, CA **Direction:** Southeast **Survey Date:** 5/8/2024 **Comments:** SP1 sampling location	

Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, Los Angeles County, CA**

Photograph ID: 9 **Photo Location:** Palmdale, Los Angeles County, CA **Direction:** North **Survey Date:** 5/8/2024 **Comments:** SP1 soil pit	
Photograph ID: 10 **Photo Location:** Palmdale, Los Angeles County, CA **Direction:** South **Survey Date:** 5/8/2024 **Comments:** SP1 soil	

Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, Los Angeles County, CA**

Photograph ID: 11 **Photo Location:** Palmdale, Los Angeles County, CA **Direction:** Northwest **Survey Date:** 5/8/2024 **Comments:** SP1 Surface Soil Cracks	
Photograph ID: 12 **Photo Location:** Palmdale, Los Angeles County, CA **Direction:** West **Survey Date:** 5/8/2024 **Comments:** SP2 sampling location	

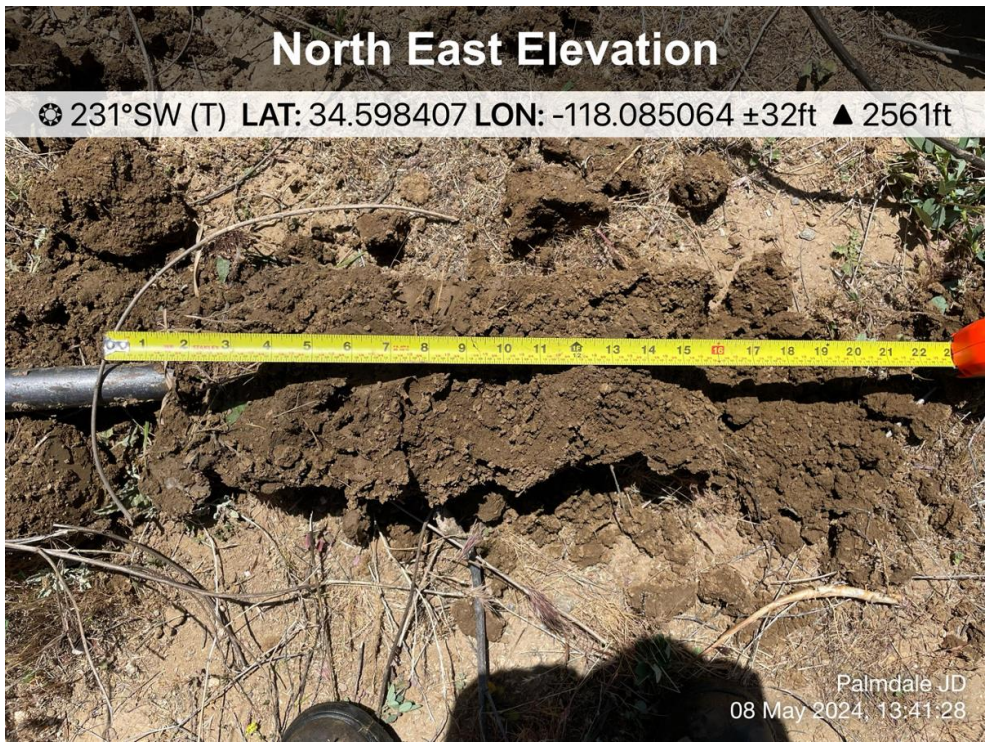
Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, Los Angeles County, CA**

Photograph ID: 13 **Photo Location:** Palmdale, Los Angeles County, CA **Direction:** East **Survey Date:** 5/8/2024 **Comments:** SP2 soil pit	
Photograph ID: 14 **Photo Location:** Palmdale, Los Angeles County, CA **Direction:** Southeast **Survey Date:** 5/8/2024 **Comments:** SP2 soil	

Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, Los Angeles County, CA**

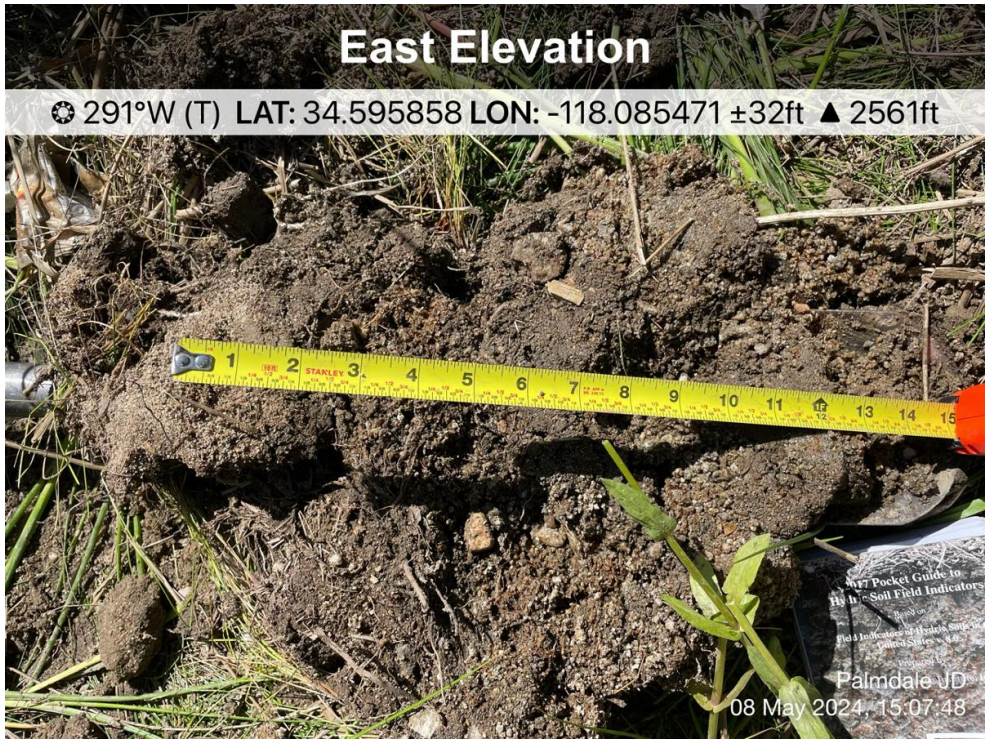
Photograph ID: 15 **Photo Location:** Palmdale, Los Angeles County, CA **Direction:** Southwest **Survey Date:** 5/8/2024 **Comments:** SP3 drainage and sampling location	
Photograph ID: 16 **Photo Location:** Palmdale, Los Angeles County, CA **Direction:** Northeast **Survey Date:** 5/8/2024 **Comments:** SP3 soil pit	

Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, Los Angeles County, CA**

Photograph ID: 17	
Photo Location: Palmdale, Los Angeles County, CA	
Direction: Southwest	
Survey Date: 5/8/2024	
Comments: SP3 soil	

Photograph ID: 18	
Photo Location: Palmdale, Los Angeles County, CA	
Direction: South	
Survey Date: 5/8/2024	
Comments: SP4 sampling location and drainage.	

Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, Los Angeles County, CA**

Photograph ID: 19 **Photo Location:** Palmdale, Los Angeles County, CA **Direction:** South **Survey Date:** 5/8/2024 **Comments:** SP4 soil pit	
Photograph ID: 20 **Photo Location:** Palmdale, Los Angeles County, CA **Direction:** West **Survey Date:** 5/8/2024 **Comments:** SP4 soil	

Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, Los Angeles County, CA**

Photograph ID: 21 **Photo Location:** Palmdale, Los Angeles County, CA **Direction:** North **Survey Date:** 5/8/2024 **Comments:** SP5 soil pit	
Photograph ID: 22 **Photo Location:** Palmdale, Los Angeles County, CA **Direction:** North **Survey Date:** 5/8/2024 **Comments:** SP5 soil	

Client:	**Palmdale Water District**	**Project:**	**Pure Water Antelope Valley – Advanced Water Treatment Project**
Site Name:	**Palmdale**	**Site Location:**	**Palmdale, Los Angeles County, CA**

Photograph ID: 23

Photo Location:
Palmdale, Los Angeles County, CA

Direction:
North

Survey Date:
5/8/2024

Comments:
Within middle of the Survey Area in the South West Square where no drainage occurs.



Pure Water Antelope Valley

Mitigation Monitoring and Reporting Program

December 2025

Lead Agency:

Palmdale Water District
2029 East Avenue Q
Palmdale, California 93550
Attn: Scott L. Rogers, PE, Assistant General Manager
Email: srogers@palmdalewater.org
d: 661-456-1020 c: 206-303-9303

MITIGATION MONITORING AND REPORTING PROGRAM

Pure Water Antelope Valley
Mitigated Negative Declaration
State Clearinghouse Number 2025100946

Introduction

Palmdale Water District (PWD) prepared an Initial Study for the Pure Water Antelope Valley Project (Pure Water AV). Based on the information contained in the Initial Study, PWD intends to adopt a Mitigated Negative Declaration (MND) for the project under the California Environmental Quality Act (CEQA). This Mitigation Monitoring and Reporting Program (MMRP) has been developed to ensure implementation of the mitigation measures outlined in the MND (State Clearinghouse No. 2025100946). The MMRP has been prepared by PWD, the lead agency for the project under CEQA, in conformance with Public Resources Code Section 21081.6 and CEQA Guidelines Section 15097. Adoption of a MMRP is required for projects in which the Lead Agency has required changes or adopted mitigation to avoid significant environmental effects.

Project Description Summary

Pure Water AV is a regional water augmentation program using indirect potable reuse (IPR) by groundwater augmentation via direct injection. Using advanced treatment processes including microfiltration (MF), reverse osmosis (RO), and ultraviolet/advanced oxidation processes (UV/AOP), Pure Water AV would further purify tertiary treated (Title 22) wastewater to produce water that would meet all applicable state and federal drinking water standards and regulations for IPR. Product water from the proposed Advanced Water Purification Facility (AWPF) would be injected into the Antelope Valley groundwater basin, thereby supplementing PWD's existing water supplies. Phase 1 of the AWPF would treat 4.75 million gallons per day (mgd), Phase 2 would treat 10 mgd.

The Initial Study describes potentially significant impacts of the proposed Project on aesthetics, biological resources, cultural resources, geology and soils, paleontological resources, hazards, hydrology and water quality, noise, transportation, and Tribal cultural resources. Mitigation measures have been defined to reduce impacts to less than significant levels. Other effects found to be less than significant are also described in the Initial Study.

Mitigation Monitoring and Reporting Responsibility

PWD shall have primary responsibility for administrating the MMRP activities to staff, consultants, or contractors. PWD has the responsibility of ensuring that monitoring is documented through periodic reports and that deficiencies are promptly corrected. PWD's designated environmental monitor will track and document compliance with

mitigation measures, note any problems that may result, and take appropriate action to remedy problems. Specific responsibilities of PWD include:

- Coordination of all mitigation monitoring activities
- Verify compliance through field inspection and written documentation
- Management of the preparation, approval, and filing of monitoring or permit compliance reports
- Maintenance of records concerning the status of all approved mitigation measures
- Coordination with other agencies and relevant Tribal representatives, including reporting of confirmed occurrences of special status species to California Department of Fish and Wildlife (CDFW)

Resolution of Noncompliance Complaints

PWD will act as the contact for interested parties who wish to register comments or complaints. Any person or agency may file a complaint that states noncompliance with the mitigation measures that were adopted as part of the approval process for the Pure Water AV Project. The complaint shall be directed to PWD (2029 East Avenue Q, Palmdale, California 93550) in written form, providing detailed information on the purported violation. PWD shall conduct an investigation and determine the validity of the complaint. If noncompliance with a mitigation measure is verified, PWD shall take the necessary action(s) to remedy the violation. The complainant shall receive written confirmation indicating the results of the investigation or the final corrective action that was implemented to respond to the specific noncompliance issue.

Mitigation Monitoring and Reporting Plan Matrix

The MMRP is organized in a matrix format and includes: mitigation measure by number, impact summary, text of the mitigation measures, time frame for monitoring, agency responsible, and space to indicate verification that the measures were implemented. The MMRP matrix includes the mitigation measures identified in the Initial Study. In some cases, mitigation measures to protect biological resources include additional detail to reflect comments received from the California Department of Fish and Wildlife (CDFW). The verification columns will be used to document the person who verified the implementation of the mitigation measure, the date on which this verification occurred, and any other notable remarks.

MITIGATION MONITORING AND REPORTING PROGRAM

SCH # 2025100946

Pure Water Antelope Valley Project
Mitigated Negative Declaration

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
AES-1	Proposed facilities could be inconsistent with the visual character of the local area.	**Landscape Plan**. During Project design, a landscape plan shall be prepared for the proposed AWPF. The landscape plan shall include measures to restore disturbed areas by replanting trees and/or reseeding with a native seed mix typical of the surrounding area. Vegetation screening shall also be included in order to assist in shielding the proposed aboveground facilities from public vantage points.	Design phase	PWD			
AES-2	Proposed facilities could be inconsistent with the visual character of the local area.	**Pre-Construction Aesthetic Design**. Aboveground buildings/structures shall be designed to have similar aesthetic qualities to existing structures in the vicinity to minimize contrasting features in the visual landscape.	Design phase	PWD			
AES-3	Proposed facilities could be inconsistent with the visual character of the local area.	**Aboveground Building/Structure Design**. Aboveground buildings/structures shall be designed to have color palettes and vegetation screening as necessary to blend with the surrounding character of the site and to minimize contrasting features in the visual landscape.	Design phase	PWD			
AES-4	Proposed facilities may cause light intrusion onto surrounding land uses.	**Permanent Exterior Lighting**. All new permanent exterior lighting associated with proposed Project components shall be shielded and directed downward to avoid any light intrusion to surrounding uses.	Design phase	PWD			
AES-5	Construction activity may	**Nighttime Construction Lighting**. Lighting used during nighttime construction, including any	Construction phase	PWD			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
	cause light intrusion onto surrounding land uses.	associated 24-hour well drilling, shall be shielded and pointed away from surrounding light-sensitive land uses.					
AES-6	Proposed facilities may cause light intrusion onto surrounding land uses.	**Non-Glare Design**. The proposed advanced water purification facility shall be designed to include non-glare exterior materials and coatings to minimize glare or reflection.	Design phase	PWD			
BIO-1	Biological resources conditions on the project sites may change by the start of the Project construction.	**Habitat Assessment Update and Pre-Construction Surveys**. Prior to ground-disturbing activities, the habitat assessment completed for the Project in 2024 shall be updated based on Project component siting determined during detailed design. Habitat suitable to support special-status plant species, special-status wildlife species, nesting bird species, sensitive plant communities, and/or native desert vegetation shall be mapped within 500 feet of each proposed Project component footprint. Where suitable habitat is present, implementation of Mitigation Measures BIO-2 through BIO-17 shall be required as relevant based on the resources identified. A qualified biologist shall conduct two pre-Project surveys within and adjacent to the proposed work area(s) within a one-week period prior to the start of Project-related activities. Pre-Project surveys shall include: 1) General surveys for botanical and wildlife resources; 2) The identification of any active bird nests, burrows, and/or woodrat nests (if active, they shall be recorded, monitored for species observations, and mapped); and 3) Work areas with flowing or standing water shall be visibly surveyed for any aquatic	Habitat assessment update prior to ground disturbing activities Preconstruction surveys within one week of Project construction start	PWD / Qualified Biologist (Notifications to CDFW and USFWS, as applicable)			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		species that may be impacted by Project activities. If Species of Special Concern (SSC) are observed during pre-construction surveys, a qualified biologist shall implement appropriate avoidance and minimization measures, such as relocation by a qualified biologist, establishment of no-distance buffers, or phased vegetation removal. Measures shall be developed in coordination with CDFW and implemented prior to the start of ground-disturbing activities.					
BIO-2	Special status plants, if present, may be impacted by Project construction.	**Special-Status Plant Surveys, Avoidance Measures, Mitigation and Monitoring Plan**. PWD shall retain a qualified biologist to conduct surveys for special-status plants (other than Joshua trees which are covered in mitigation measure BIO-3) prior to any vegetation removal, grubbing, or other construction activity within the proposed Project footprint. The surveys shall be floristic in nature and seasonally timed to coincide with the blooming periods of the following special-status species with potential to occur: • short-joint beavertail • sagebrush loeflingia The surveys shall be conducted during the relevant target species' blooming periods no more than 2 years prior to construction. Special-status plant species identified on site shall be mapped onto a site-specific aerial photograph. Surveys shall be conducted in accordance with the most current CDFW and USFWS protocols. A report of the survey results shall be submitted to PWD for review and approval. If special-status plants other than western Joshua trees are detected during special-status plant surveys, the observed special-status plants shall be avoided through	Surveys during the relevant target species' blooming periods no more than 2 years prior to construction Special-Status Plant Mitigation and Monitoring Plan, if applicable, to be initiated prior to Project construction	PWD / Qualified Biologist (Notifications to CDFW and USFWS, as applicable)			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		proposed Project design where feasible, and vegetation clearing within 50 feet (15 meters) of any identified special-status plant shall be conducted by hand by the construction contractor(s), if practicable. An avoidance buffer of at least 50 feet (15 meters), or other distance as approved by a qualified biologist, shall be established around any identified special-status plants that can be feasibly avoided, and the avoidance buffer shall be delineated with bright orange protective fencing. The avoidance buffers shall be maintained for the duration of construction activities at each construction site and shall be removed only after the conclusion of all grading, clearing, and construction activities at each construction site. If special-status plants other than western Joshua tree are detected during special-status plant surveys and would be impacted by proposed Project construction, PWD shall retain a qualified restoration specialist to develop a Special-Status Plant Mitigation and Monitoring Plan that provides for the on-site or off-site replacement of the species impacted by the proposed Project. The Special-Status Plant Mitigation and Monitoring Plan shall specify the following: • A summary of impacts • The location of the mitigation site • Methods for harvesting seeds or salvaging and transplanting individuals to be impacted • Measures for propagating plants or transferring living plants from the salvage site to the mitigation site • Site preparation procedures for the mitigation site • A schedule and action plan to maintain and monitor the mitigation site					

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		• Criteria and performance standards by which to measure the success of the mitigation, including replacement of impacted plants at a minimum 1:1 ratio • Measures to exclude unauthorized entry into the mitigation areas • Contingency measures such as replanting or weeding if mitigation efforts are not successful • The performance standards for the Special-Status Plant Mitigation and Monitoring Plan shall be, at a minimum, the following: – Within five years after introducing the plants to the mitigation site, the number of established, reproductive plants shall equal the number impacted during proposed Project construction; and – Restoration shall be considered successful after the success criteria have been met for a period of at least two years without any maintenance or remediation activities other than invasive species control. The Special-Status Plant Mitigation and Monitoring Plan shall be initiated prior to Project construction (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation) and shall be implemented over a 5-year period. The plan may also be combined with the Habitat Revegetation, Restoration, and Monitoring Program described under Mitigation Measure BIO-16. Annual reports discussing the implementation and management of the Special-					

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		Status Plant Mitigation and Monitoring Plan shall be submitted to PWD for review and approval. Five years after the start of the mitigation for the proposed Project, a final report shall be submitted to PWD for review and approval and shall, at a minimum, discuss the implementation and management of the Special-Status Plant Mitigation and Monitoring Plan over the five-year period and indicate whether the Special-Status Plant Mitigation and Monitoring Plan has been successful based on the established performance standards. Should the success criteria be met before Year Five, the mitigation effort can be deemed complete.					
BIO-3	Western Joshua trees, if present, may be impacted by Project construction.	**Joshua Tree Census Survey**. A western Joshua tree census survey shall be conducted for the proposed Project footprint by a qualified arborist in accordance with CDFW's Western Joshua Tree Census Instructions, which requires a census of all western Joshua trees within the proposed Project area and a 50-foot buffer. Impacts to western Joshua trees and within a minimum 50-foot buffer shall be avoided to the extent feasible. An avoidance buffer of at least 50 feet shall be established around western Joshua tree individuals that can be feasibly avoided. If a 50-foot buffer is not feasible, a reduced buffer can be established if a qualified desert native plant specialist and CDFW determine the reduced buffer would avoid direct impacts to individual western Joshua tree(s). No activities shall occur within the buffer. The avoidance buffers shall be maintained for the duration of construction activities in each work area and shall be removed only after the conclusion of all grading, clearing, and construction activities at the proposed Project	Census survey prior to Project construction	PWD (CDFW)			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		construction site. For each dead or live western Joshua tree individual that cannot be avoided through proposed Project design, PWD shall implement one of the following measures: • The western Joshua tree individual shall be trimmed or relocated under the guidance of a desert native plant specialist. Tree relocation shall be implemented in accordance with the following measures and CDFW-provided guidelines and relocation protocols, if made available prior to proposed Project construction, to assist the survival of the relocated tree: – The relocated western Joshua tree shall be placed in a suitable location and with proper orientation to improve its survival. – The western Joshua tree shall be relocated at a time that maximizes its survival, when feasible. – A desert native plant specialist shall be on site to oversee relocation of the tree. • PWD shall submit payment of an in-lieu fee to CDFW pursuant to CDFW's standard mitigation fee structure for western Joshua tree in effect at the time of application for an Incidental Take Permit.					
BIO-4	Construction workers may inadvertently impact biological resources.	**Construction Worker Environmental Awareness Program**. PWD shall retain a qualified biologist to conduct a preconstruction WEAP training for all personnel working on the proposed Project. The WEAP shall aid workers in recognizing special-status species and regulated biological resources known to occur (e.g., western Joshua trees, sensitive natural communities, jurisdictional waters	Prior to the start of Project construction; repeated as applicable for new construction staff	PWD / Qualified Biologist			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		or wetlands) or potentially occurring on the proposed Project sites and focus on conditions and protocols necessary to avoid and minimize potential impacts to biological resources. All personnel associated with construction of the proposed Project shall attend the WEAP training prior to initiation of construction activities (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). The training shall include information about the special-status species potentially occurring within the proposed Project site, identification of special-status species and habitats, a description of the regulatory status and general ecological characteristics of special-status resources, and a review of the limits of construction and measures required to avoid and minimize impacts to biological resources within the work area. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employees, and other personnel involved with construction. All employees working at the proposed Project site shall sign a form provided by the trainer documenting they have attended the WEAP and understand the information presented to them. The signed form shall be provided to PWD as documentation of training completion. The crew foreman shall be responsible for ensuring crew members adhere to the guidelines and restrictions designed to avoid impacts to special-status species and other regulated biological resources. If new personnel are brought onto the proposed Project after completion of the initial WEAP training, the training shall be conducted for all new personnel before they can participate in proposed Project construction activities. Construction personnel shall be instructed to not directly harm any special-status					

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		species on site by halting activities until the species can move to off-site areas or contact a qualified biologist to move the species out of harm's way, if appropriate.					
BIO-5	Construction may impact special status biological resources.	**Qualified Biological Monitor**. PWD shall retain a qualified biological monitor with relevant experience with the taxa and species in the Antelope Valley desert and mountain foothills for which pre-construction surveys, monitoring, or other support is required during proposed Project construction (potentially including, but not limited to, special-status plants, raptors, nesting birds, and those special-status species with potential to occur based on the results of surveys conducted prior to proposed Project initiation. The qualified biologist role may be satisfied by one or more individuals depending on qualifications and experience with one or more species and taxa. The qualified biologist shall be present during initial ground disturbance or vegetation removal activities and shall have the authority to temporarily stop work if one or more special-status species are observed that may be impacted by proposed Project activities. The biologist shall relocate special-status amphibian, reptile, or mammals present within anticipated proposed Project impact areas to suitable undisturbed habitat outside the areas directly and indirectly affected by construction activities. The biologist shall hold the requisite incidental take permits or authorizations for the capture and handling of the species, if applicable. The biologist shall recommend measures to ensure compliance with avoidance and minimization measures, applicable permit conditions, and conditions required for observed special-status species. When the	Construction phase	PWD / Qualified Biologist (Notifications to CDFW and USFWS, as applicable)			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		biologist is present on site, they shall be responsible for: • Verifying Project compliance with environmental mitigation measures and requirements • Establishing lines of communication and reporting methods in coordination with the construction crew foreman and PWD • Conducting pre-construction clearance sweeps for special-status species and nesting birds, as needed • Documenting special-status species observations • Recommending preventative or protective actions to avoid and minimize potential proposed Project impacts to regulated biological resources where feasible • Recommending actions to be taken in the event of non-compliance • Daily and weekly reporting of compliance Monitoring logs documenting the above shall be submitted to PWD for review and approval for the duration of proposed Project construction.					
BIO-6	Desert Tortoise, if present, may be impacted by Project construction.	**Desert Tortoise Avoidance, Minimization and Compensation Measures**. This mitigation measure is applicable to suitable habitat for desert tortoise within 500 feet of the Project sites based on the 2024 habitat assessment as updated by mitigation measure BIO-1. Focused protocol surveys shall be conducted by a qualified biologist following the protocol outlined in the most recent USFWS and/or CDFW protocol guidelines. These currently include: 2019 Preparing for Any Action That May Occur Within the Range of the Mojave Desert Tortoise (*Gopherus agassizii*). If any desert tortoise are observed during the focused	Prior to the start of construction	PWD / Qualified Biologist (Notifications to CDFW and USFWS, as applicable)			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		surveys, these species and their habitat shall be avoided by the proposed Project. If avoidance of desert tortoise is not feasible, and desert tortoise may be potentially impacted by the proposed Project, additional avoidance and mitigation measures will be required, such as constructing proposed Project facilities outside the breeding season, establishing a suitable buffer around known territories, and restricting activities around certain times of year. If the proposed Project results in permanent impacts to habitat occupied by desert tortoise, USFWS and CDFW shall be consulted to ensure compliance with the Endangered Species Act and/or requirements for avoidance, minimization, or mitigation measures (e.g., replacement of impacted occupied habitat at a minimum 1:1 ratio).					
BIO-7	Crotch's Bumble Bee, if present, may be impacted by Project construction.	**Crotch's Bumble Bee Avoidance, Minimization, and Compensation Measures**. If Crotch's bumble bee is still considered a California Endangered Species Act (CESA) candidate species or has been listed as threatened or endangered under CESA at the time construction of proposed Project commences, PWD shall implement the following avoidance, minimization, and compensation measures for this species: • A qualified biologist with the requisite experience and appropriate authorization shall conduct a protocol-level presence/absence survey for Crotch's bumble bee in areas of the proposed Project site with suitable habitat during the peak active period for Crotch's bumble bee (highest detection probability) that occurs prior to the start of the proposed Project's initial ground disturbing activities	Surveys prior to the start of construction and during the peak active period of Crotch's Bumble Bee (anticipated to be April through June) Submit survey findings to CDFW prior to the start of construction	PWD / Qualified Biologist (Findings to CDFW)			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		(including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). The peak active period for Crotch's bumble bee in the Project area is anticipated to be April through June given the expected desiccation of Crotch's bumble bee floral resources within the Project area by mid-summer, though this timing could depend on annual climatic factors. Survey methodology shall be based on Section 4.1.1 of CDFW's *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species* (June 6, 2023), or the most current CDFW guidance in effect at the time. Inaccessible areas outside of the proposed Project site can be surveyed using binoculars from the proposed Project edge or from public roads. The timing of the presence/absence survey can be phased with proposed Project build-out, if feasible. Survey results, including negative findings, shall be submitted to CDFW prior to implementing Project ground-disturbing and/or vegetation removal activities. • If construction starts one year or more after the conclusion of the surveys described above, PWD shall consult with CDFW as to whether additional surveys are required and shall retain a qualified biologist to conduct additional surveys if recommended by CDFW. • If a Crotch's bumble bee nest is observed during surveys of the Project sites, the qualified biologist shall identify the location of nests in or adjacent to the proposed Project site to the extent feasible and notify CDFW. Inaccessible land adjacent to the proposed Project site shall					

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		be observed using binoculars. If nests are identified within the proposed Project site or immediately adjacent to the site, a qualified biologist shall determine the need to establish a no-disturbance buffer around the nest, where feasible, to reduce the risk of disturbance or accidental take. The buffer shall provide at least 50 feet (15 meters) of clearance around active nest entrances. If proposed Project activities may result in disturbance or potential take, the qualified biologist, in coordination with CDFW, shall expand the buffer zone as necessary to prevent disturbance or take. Construction activities shall not occur within the buffer until a qualified biologist determines the colony is no longer active (i.e., no Crotch's bumble bees are seen flying in or out of the nest for three consecutive days, indicating the colony has completed its nesting season and the next season's queens have dispersed from the colony). Once the nest has been determined to be inactive by the qualified biologist, construction activities within the no-disturbance buffer(s) shall be allowed to resume. Otherwise, the no-disturbance buffer shall be maintained for the duration of proposed Project construction activities in each work area and shall be removed only after the conclusion of all grading, clearing, and construction activities at each construction site. • If establishment of a no-disturbance buffer and/or avoidance of the nest is not feasible, the qualified biologist shall consult with CDFW to determine next steps and whether appropriate take authorization from CDFW is necessary (pursuant to Fish & Game Code § 2080 et seq).					

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		• Except as authorized by CDFW pursuant to Fish & Game Code § 2080 et seq, if an individual Crotch's bumble bee is observed within or adjacent to the Project site during Project construction activities, the individual shall be allowed to move on its own accord and Project construction activities within a buffer distance of 50 feet, or a distance as agreed upon in consultation with CDFW, near the individual shall cease until the individual moves out of the work area. • If Crotch's bumble bee is determined to be present on the proposed Project site, floral resources associated with the species that will be removed or damaged by proposed Project activities in the areas of the proposed Project site where Crotch's bumble bee is detected and documented shall be replaced at a minimum ratio of a 1:1 (mitigation:impact). Planning and implementation of suitable habitat replacement may be integrated into the Habitat Revegetation, Restoration, and Monitoring Program described under Mitigation Measure BIO-16.					
BIO-8	Burrowing owl, if present, may be impacted by Project construction.	**Burrowing Owl Survey and Foraging Habitat Mitigation**. PWD shall retain a qualified biologist approved by CDFW to conduct focused breeding season surveys for burrowing owls in accordance with the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012), or the most current CDFW guidance in effect at the time. Biologists surveying and/or monitoring for burrowing owl shall obtain a Memorandum of Understanding issued by CDFW. Early consultation with CDFW is encouraged to ensure all necessary permits are obtained. Surveys shall be conducted during the	Focused surveys during burrowing owl breeding season and prior to the start of construction	PWD / Qualified Biologist (Notifications to CDFW, as applicable)			

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		burrowing owl breeding season and prior to the start of ground-disturbance and vegetation removal Project activities. The focused surveys shall be conducted by a qualified biologist in the portions of the proposed Project site with suitable burrowing owl habitat plus a 500-foot buffer (burrowing owl survey area). The surveys shall be conducted in the morning or evening to evaluate the presence/absence of burrowing owl during the nesting season and prior to the start of Project activities. All potential burrowing owls and burrows with burrowing owl sign shall be recorded using a GPS unit capable of submeter accuracy. Observations shall be conducted to determine if individual owls and/or nesting pairs are present and their status/disposition (e.g., late winter migrant, actively nesting, single individual not nesting). Representative photos of the habitat, potential and occupied burrows, and vegetation within the burrowing owl survey area shall be taken and included as an appendix to the survey report. All vertebrate fauna detected in the burrowing owl survey area shall be recorded in field notes. Inaccessible areas of the burrowing owl survey area outside the proposed Project site shall be surveyed using binoculars and/or spotting scopes to determine if owls are present. A survey report shall be prepared and submitted to CDFW that includes survey methodology, survey results, an analysis of potential proposed Project impacts to actively nesting pairs, and a calculation of the compensatory mitigation for foraging habitat, if impacted. Late winter migrants and non-nesting individuals located outside of the proposed Project impact area shall not require habitat mitigation unless passive relocation is necessary. Maps showing burrow locations, a					

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		delineation of suitable habitat areas, and burrowing owls observed shall be included in the survey report. If owls are observed within 500 feet of proposed Project activities, PWD shall coordinate with CDFW to determine next steps and whether appropriate take authorization from CDFW is necessary (pursuant to Fish & Game Code § 2080 et seq). As applicable, compensatory mitigation for impacts to foraging habitat loss would be at a minimum of a 1:1 ratio. Compensatory mitigation for loss of foraging habitat shall be implemented on- or off-site and may include purchase of Conservation Bank credits, payment of an in-lieu fee to benefit burrowing owl, or permanent conservation and management of burrowing owl habitat through the recordation of a conservation easement, funding of a non-wasting endowment, and/or implementation of a Mitigation Land Management Plan based on the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). Mitigation lands shall be identified through coordination with CDFW on, adjacent, or proximate to the impact site where practicable and where habitat is suitable to support burrowing owl.					
BIO-9	Burrowing owl, if present, may be impacted by Project construction.	**Burrowing Owl Pre-Construction Clearance Survey and Occupied Burrow Avoidance and Minimization Measures**. PWD shall retain a qualified biologist approved by CDFW to conduct a pre-construction burrowing owl clearance survey of areas within the proposed Project site and a 500-foot buffer that contain suitable burrowing owl habitat to confirm presence/absence of burrowing	Surveys no more than 14 days prior to start of construction in each work area	PWD / Qualified Biologist (CDFW)			

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		owl individuals no more than 14 days prior to start of construction in each work area. The survey methodology shall be consistent with the methods outlined in the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). If no active breeding or wintering owls or evidence of occupied habitat is identified, then proposed Project construction in the work area may begin, and no further action is required. If active breeding or wintering owls or evidence of occupied habitat is detected in the proposed Project work area or within a 500-foot buffer, PWD shall coordinate with CDFW to determine next steps and whether appropriate take authorization from CDFW is necessary (pursuant to Fish & Game Code § 2080 et seq).					
BIO-10	Swainson's hawk, if present, may be impacted by Project construction.	**Swainson's Hawk Avoidance and Minimization Measures**. Construction activities shall be limited to the period between September 16 and February 28 to the extent feasible. If construction activities cannot be completed within this timeframe, PWD shall retain a qualified biologist(s) with Swainson's hawk survey experience to conduct a Swainson's hawk nest survey within the proposed Project site and a 0.5-mile buffer during the nesting season immediately prior to the commencement of proposed Project construction. While the proposed Project does not propose to construct renewable energy facilities, nest survey methods and timing shall follow those outlined in the CEC and CDFW protocol for the Antelope Valley (CDFW 2010) with the exception that the nest survey shall occur within a 0.5-mile buffer of the proposed Project site. A report documenting results of the survey shall be prepared and submitted to PWD for review and	Nesting season immediately prior to Project construction	PWD / Qualified Biologist (Notifications to CDFW, as applicable)			

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		approval prior to commencement of proposed Project activities. If no Swainson's hawk nests are documented within 0.5 miles of the Project area, no additional action shall be required. If an active Swainson's hawk nest is detected within 0.5 miles of the proposed Project site, PWD shall implement the following measures: • Retain a qualified biologist to prepare a Swainson's Hawk Nest Monitoring and Mitigation Plan that incorporates the following measures to avoid and minimize impacts to Swainson's hawk nests in and near the construction areas during the breeding season (March 1 to September 15): – If nesting Swainson's hawks are detected within 0.5 miles of proposed Project activities during the breeding season, CDFW shall be consulted regarding the establishment of a no-disturbance buffer to avoid impacts to the active nest. Construction activities shall maintain a 0.25-mile no-disturbance buffer around an active nest unless a reduced buffer is approved in consultation with the qualified biologist and CDFW. – If construction activities are necessary within the buffer zone, PWD shall consult with CDFW as to the potential for take. Monitoring of the nest site by a qualified biologist and funding of Swainson's hawk recovery efforts may be necessary. – If a hawk is found injured during proposed Project activities on the proposed Project site, the injured hawk shall be immediately relocated to a					

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		raptor recovery center approved by CDFW. The qualified biologist shall notify CDFW personnel via telephone or email, followed by a written report that includes the date, time, location, and circumstances of the incident. PWD and its construction contractor(s) shall implement the provisions of the Swainson's Hawk Nest Monitoring and Mitigation Plan. A report documenting measures taken to avoid and minimize impacts to Swainson's hawk nests shall be prepared by the qualified biologist following the completion of proposed Project construction and submitted to PWD for review and approval.					
BIO-11	Mohave ground squirrel, if present, may be impacted by Project construction.	**Mohave Ground Squirrel Avoidance and Minimization Measures**. PWD shall retain a qualified biologist to conduct a focused habitat assessment (visual survey) of the proposed Project sites following the CDFW's *Mohave Ground Squirrel Survey Guidelines* (CDFW 2023a) to assess the potential habitat suitability for the species. If suitable habitat is identified, protocol live-trapping surveys shall be conducted in areas of suitable habitat to assess the potential presence and relative abundance of Mohave ground squirrel within the proposed Project site. Pursuant to the protocol outlined in the *Mohave Ground Squirrel Survey Guidelines*, trapping surveys shall take place over three terms in specific timing windows in the period of March 15 and July 15 immediately prior to commencement of proposed Project activities. If construction starts one year or more after the conclusion of surveys, PWD shall consult with CDFW as to whether additional surveys are required and shall retain a qualified biologist to conduct additional	Period between March 15 and July 15 immediately prior to the start of construction	PWD / Qualified Biologist (Notifications to CDFW, as applicable)			

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		surveys if recommended by CDFW. Findings of the habitat assessment and live-trapping surveys shall be documented in a report that also details survey methodology, timing, and surveyor qualifications. If no Mohave ground squirrels are discovered during the protocol surveys, no further action is required. If Mohave ground squirrels are observed during the surveys, PWD shall retain a qualified biologist to develop a Mohave ground squirrel biological monitoring plan, in coordination with CDFW, that includes measures to avoid, minimize, and/or mitigate potential impacts as a result of proposed Project activities, including, but not limited to: • A qualified biologist shall conduct pre-construction clearance surveys for Mohave ground squirrel no more than 30 days prior to the start of any ground-disturbing activities in areas of the proposed Project site that contain suitable habitat for the species, as documented in the Mohave ground squirrel habitat assessment and survey report. The survey shall cover 100 percent of the anticipated impact area intersecting suitable Mohave ground squirrel habitat and a 50-foot buffer (survey area). A qualified biologist shall document locations of potential Mohave ground squirrel burrows. A 50-foot no-disturbance buffer shall be established around suspected or known Mohave ground squirrel burrows. Proposed Project activities shall not be conducted within the no-disturbance buffer unless at the discretion of the qualified biologist. A report documenting the results of the survey, locations of suspected or known Mohave ground squirrel burrows, and recommended no-disturbance buffers shall be					

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		submitted to PWD for review and approval prior to commencement of proposed Project activities in the survey area. • If burrows are identified during the survey that are suspected or known to be occupied by Mohave ground squirrel and cannot be avoided, the qualified biologist shall prepare a Mohave Ground Squirrel Relocation Plan outlining measures to relocate individual Mohave ground squirrels prior to construction start. The plan shall be submitted to PWD and CDFW for review and approval and shall be implemented prior to commencement of proposed Project activities in work areas with suspected or known Mohave ground squirrel burrows. The Plan shall outline measures for burrow excavation, handling of individuals, identification of proposed relocation areas, and release of relocated individuals after the conclusion of all grading, clearing, and construction activities. A report documenting relocation activities and outcomes shall be prepared by the qualified biologist and submitted to PWD and CDFW for review and approval after completion of relocation activities. • Within occupied Mohave ground squirrel habitat (as determined by the results of the focused habitat assessment and live trapping survey results as well as the pre-construction clearance survey results), the area of disturbance of vegetation and soils shall be the minimum required for the proposed Project. Clearing of vegetation and grading shall be minimized. Wherever practicable, rather than clearing vegetation and grading access routes, equipment and vehicles shall use existing					

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		surfaces or previously disturbed areas. Where grading is necessary, surface soils shall be stockpiled and replaced following construction. To the extent practicable, disturbance of shrubs and surface soils due to stockpiling shall be minimized. A qualified biologist shall monitor proposed Project activities during initial ground disturbance in suitable Mohave ground squirrel habitat. The qualified biologist shall work with the construction foreman and crew to implement and achieve compliance with the Mohave ground squirrel biological monitoring plan prepared for the proposed Project.					
BIO-12	Construction activities may impact biological resources in the Project area.	**General Best Management Practices**. PWD shall require construction contractor(s) and their personnel to adhere to the following general BMPs during construction: • Construction-related vehicles shall observe a 15-mile-per-hour speed limit within the unpaved limits of construction. • All open trenches or excavations shall be fenced and/or sloped to prevent entrapment of wildlife species. • All food-related trash items such as wrappers, cans, bottles, and food scraps generated during construction shall be disposed of in closed containers only and removed daily from the construction site. • No deliberate feeding of wildlife shall be allowed. • No pets shall be allowed on the construction site. • No firearms shall be allowed on the construction site. • Vehicle or equipment maintenance shall be performed in designated staging areas.	Construction phase	PWD / Qualified Biologist (Notifications to CDFW and USFWS, as applicable)			

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		• Access to the construction area outside of established work hours for the proposed Palmdale Ditch Conversion project shall be prohibited. • If construction must occur at night (i.e., between dusk and dawn), all lighting shall be shielded and directed downward to minimize the potential for glare or spillover. • During construction, heavy equipment shall be operated in accordance with standard BMPs. All equipment used on-site shall be properly maintained to avoid leaks of oil, fuel, or residues. Provisions shall be in place to remediate accidental spills. • While encounters with special-status species are not anticipated, any worker who inadvertently injures or kills a special-status species or finds one dead, injured, or entrapped shall immediately report the incident to the construction foreman or biological monitor. The construction foreman or biological monitor shall immediately notify PWD. • If special status wildlife species are found harmed/injured or dead, work in the immediate area shall stop immediately, the qualified biologist shall be notified, and dead or injured wildlife shall be documented immediately. A formal report shall be sent to CDFW within three calendar days of the incident or finding. The report shall include the date, time of the finding or incident (if known), and location of the carcass or injured animal and circumstances of its death or injury (if known). Work in the immediate area may resume once proper notifications have been made and measures have been identified to prevent additional injury or death.					

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BIO-13	Construction activites outside of surveyed areas may impact sensitive biological resources.	**Work Limit Delineation**. PWD shall clearly identify work area limits on design and construction plans and shall require its construction contractor(s) to delineate and clearly mark approved construction work area limits with flagging or temporary orange construction fencing in the field prior to initial ground disturbing activities (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). The marked boundaries shall be maintained for the duration of construction activities in each work area and shall be clearly visible to personnel on foot and by heavy equipment operators. Fencing or other barriers shall be placed on the impact side of the work area limit (i.e., within the construction site boundaries) to reduce the potential for encroachment and additional vegetation loss within adjacent open space. Fencing shall be installed pursuant to the approved construction and grading plans. Prior to initial ground disturbing activities (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation), the biological monitor (if required under Mitigation Measure BIO-5) shall verify the limits of construction have been properly staked and are readily identifiable. Employees shall strictly limit their activities and vehicles to the designated construction area, staging areas, and routes of travel. Intrusion by unauthorized vehicles outside of construction limits shall be prohibited, with control exercised by an on-site foreman. All temporary fencing shall be removed only after the conclusion of all grading, clearing, and construction activities at each construction	Delineation during design phase Flagging and fencing prior to the start of construction in each work area	PWD			

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		site.					
BIO-14	Nesting birds, if present, may be impacted by Project construction.	**Nesting Bird Surveys and Avoidance and Minimization Measures**. Proposed Project construction activities shall occur outside of the bird breeding season (February 1 to August 31) to the extent practicable. If construction must commence within the bird breeding season, PWD shall retain a qualified biologist to conduct a pre-construction nesting bird survey within a 500-foot radius of the Project site no more than seven days prior to initiation of ground disturbance (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). If the proposed Project is phased or construction activities stop for more than one week, a subsequent pre-construction nesting bird survey shall be conducted prior to each phase of construction, if initiated during the bird breeding season. Pre-construction nesting bird surveys shall be conducted during the time of day when birds are active and shall factor in sufficient time to perform this survey adequately and completely. A brief report of the nesting bird survey results, if applicable, shall be submitted to PWD for review and approval prior to ground disturbance and/or vegetation removal activities. If no nesting birds are observed during pre-construction surveys, no further action is required. If nests are found, an appropriate avoidance buffer of up to 300 feet for passerine (perching birds) nests and up to 500 feet for active, non-listed raptor nests shall be determined by the qualified biologist and demarcated with bright orange construction fencing or other suitable	Surveys no more than seven days prior to the start of construction in each work area	PWD / Qualified Biologist			

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		flagging. Active nests shall be monitored at a minimum of once per week until a qualified biologist has determined the birds have fledged and are no longer reliant upon the nest or parental care for survival. No construction activity shall occur within this buffer until the qualified biologist confirms the breeding/nesting is completed and all the young have fledged.					
BIO-15	Construction activites could spread invasive plants.	**Invasive Plant Species Control Measures**. PWD shall require the construction contractor(s) and their construction personnel to ensure equipment is free of invasive plant seeds, propagules, and any material which may contain them (e.g., soil). For purposes of this mitigation measure, invasive plant species shall include all species with a California Invasive Plant Council rating of moderate or high. Prior to entering the construction site, equipment shall be inspected to confirm it is free of mud, dirt, and debris. Tire track stations shall be installed at construction site entrances and exits. Staging areas and access routes shall avoid weed infestations, and infestations within the work area(s) shall be flagged and avoided to the maximum extent feasible. Only certified weed-free materials (e.g., fiber rolls, straw, and fill) shall be used during construction.	Construction phase	PWD			
BIO-16	Construction activities could impact sensitive natural communities and jurisdictional	**Sensitive Natural Communities and Jurisdictional Features Avoidance, Minimization Measures**. Sensitive natural communities and jurisdictional features identified for avoidance within the proposed Project site shall be demarcated using brightly colored flagging, as necessary, and avoided to the extent feasible during proposed Project construction. The marked boundaries shall be	Flagging prior to the start of construction Habitat Revegetation, Restoration, and Monitoring	PWD (Notifications to CDFW, as applicable)			

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	features.	maintained for the duration of proposed Project construction activities in each work area and shall be clearly visible to personnel on foot and by heavy equipment operators. Construction personnel shall be instructed to avoid these areas as much as feasible. All temporary flagging shall be removed only after the conclusion of all grading, clearing, and construction activities at each construction site. Compliance with this measure shall be documented in the biological monitoring report, if required under Mitigation Measure BIO-5. In addition, PWD shall require its construction contractor(s) and their personnel to implement the following measures: • Any material/spoils generated from construction shall be located away from sensitive natural communities and jurisdictional features and protected from stormwater run-off using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers, as appropriate. • Materials, hand-held equipment and other non-heavy or non-vehicle equipment shall be stored on impervious surfaces or plastic ground covers to prevent any spills or leakage from contaminating the ground and generally at least 50 feet from sensitive natural communities and jurisdictional areas. • Any spillage of material shall be stopped if it can be done safely. The contaminated area shall be cleaned, and any contaminated materials shall be properly disposed of. For all spills, the Project foreman and biological monitor (if required under Mitigation Measure BIO-5) shall be notified. If impacts to sensitive natural communities cannot	Program, as applicable, prior to the start of construction in relevant work areas BMPs during construction phase				

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		be avoided, PWD shall identify compensatory mitigation prior to disturbance of the features. Mitigation may take the form of permittee-responsible, on-site or off-site mitigation or the purchase of credits from an approved mitigation bank or through applicant-sponsored mitigation (e.g., purchase and/or dedication of land for mitigation). If required, compensatory mitigation for unavoidable impacts to sensitive vegetation communities shall be accomplished at a minimum ratio of 1:1; however, the final ratio shall be determined and approved by CDFW. If on-site or off-site restoration would occur, PWD shall retain a qualified biologist to develop a Habitat Revegetation, Restoration, and Monitoring Program and submitted for CDFW approval prior to the commencement of proposed Project construction (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). At a minimum, the program shall include the following: • A description of the purpose and goals of the restoration • Identification of success criteria and performance standards • Methods of site preparation, including topsoil salvage and replacement procedures • Irrigation plan and schedule • Best Management Practices (BMPs) • Maintenance and monitoring program • Adaptive management strategies • Key stakeholders and responsible parties • Funding • Contingencies					

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BIO-17	Construction activities could impact jurisdictional resources.	**Aquatic Resources Delineation and Compensatory Mitigation**. If impacts to jurisdictional waters and wetlands cannot be avoided, PWD shall identify compensatory mitigation prior to disturbance of the features. Compensatory mitigation for impacts to jurisdictional waters and wetlands shall be provided at a minimum 1:1 ratio, unless a higher ratio is required by Lahontan RWQCB, CDFW, and/or USACE. Mitigation may take the form of permittee-responsible, on-site or off-site mitigation or the purchase of credits from an approved mitigation bank. If on-site or off-site mitigation is proposed, a Compensatory Mitigation Plan shall be prepared that outlines the compensatory mitigation in coordination with the Lahontan RWQCB, CDFW, and/or USACE. If on-site mitigation is proposed, the Compensatory Mitigation Plan can be integrated with the Habitat Revegetation, Restoration, and Monitoring Program described in Mitigation Measure BIO-16 and shall identify those portions of the site, such as relocated drainage routes, that contain suitable characteristics (e.g., hydrology) for restoration. Determination of mitigation adequacy shall be based on comparison of the restored habitat with similar, undisturbed habitat in the site vicinity. The Compensatory Mitigation Plan shall include remedial measures if performance criteria are not met. If the Compensatory Mitigation Plan is not integrated with the Habitat Revegetation, Restoration, and Monitoring Program described in Mitigation Measure BIO-16, the same reporting requirements shall apply for monitoring and evaluation of Compensatory Mitigation Plan implementation as detailed in Mitigation Measure BIO-16.	Prior to the start of construction in relevant areas	PWD (Notifications to Lahontan RWQCB, CDFW, and/or USACE, as applicable)			

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		If off-site mitigation is proposed, off-site land shall be preserved through a deed restriction or conservation easement and the Compensatory Mitigation Plan shall identify an approach for funding assurance for the long-term management of the conserved land.					
CUL-1	Construction may disturb unknown cultural resources.	**Construction Worker Cultural Resources Sensitivity Training**. Consistent with SWRP PEIR mitigation measure CUL-4, for Project components involving ground disturbance, the Qualified Archaeologist shall implement a cultural resources sensitivity training program. The Qualified Archaeologist, or their designee, shall instruct all construction personnel of the types of cultural materials that may be encountered, cultural sensitivity issues, applicable laws protecting cultural resources, the proper treatment procedures to be enacted in the event of an inadvertent discovery of cultural materials or human remains, and confidentiality of discoveries. Tribal representatives from each of the tribes consulting on the proposed Project shall be allowed to attend and/or participate in the training should they elect to and shall be given a minimum of 10 days notice prior to the training. In the event that construction crews are phased, additional trainings shall be conducted for new construction personnel. The PWD, or their construction contractor(s), shall ensure construction personnel are made available for and attend the training. PWD shall retain documentation demonstrating attendance.	Worker training prior to the start of Project construction; repeated as applicable for new construction staff	PWD / Qualified Archaeologist			
CUL -2	Construction may disturb unknown cultural	**Archaeological Resources Discoveries**. Consistent with SWRP PEIR mitigation measure CUL-6, in the event that cultural resources are unexpectedly encountered during ground-disturbing	Construction phase	PWD / Qualified Archaeologist			

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	resources.	activities, work within 60 feet of the find shall halt, an Environmentally Sensitive Area physical demarcation/barrier installed, and a Qualified Archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) contacted immediately to evaluate the resource. If the Qualified Archaeologist determines the resource to be Native American in origin, then a representative from the tribes consulting on the proposed Project shall also be contacted to participate in the evaluation of the resource. If the qualified archaeologist and/or representative from the tribes consulting on the Project determines it to be appropriate, archaeological testing for CRHR/NRHP eligibility shall be completed. If the resource proves to be eligible for the CRHR/NRHP and significant impacts to the resource cannot be avoided via project redesign, a Qualified Archaeologist shall prepare a data recovery plan tailored to the physical nature and characteristics of the resource, pursuant to the requirements of CEQA Guidelines Section 15126.4(b)(3)(C). Should the find be deemed Native American in origin, all plans for analysis shall be reviewed and approved by PWD (and LACSD or LAWA depending on land ownership) and the tribes consulting on the proposed Project prior to implementation, and all removed material shall be temporarily curated on site. The data recovery plan shall identify data recovery excavation methods, measurable objectives, and data thresholds to reduce any significant impacts to the resource. Pursuant to the data recovery plan, the Qualified Archaeologist and Native American representative(s) from the tribes consulting on the proposed Project, as appropriate, shall recover and document the scientifically consequential		(Notification to relevant Tribes, as applicable)			

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		information that justifies the resource's significance. PWD shall review and approve the treatment plan and archaeological testing as appropriate, and the resulting documentation shall be submitted to the regional repository of the CHRIS, pursuant to CEQA Guidelines Section 15126.4(b)(3)(C).					
CUL-3	Construction may disturb unknown cultural resources.	**Curation and Disposition of Cultural Materials**. Consistent with SWRP PEIR mitigation measure CUL-7, PWD shall work with the tribes consulting on the Project to determine the final disposition of any cultural materials removed. However, if the tribes consulting on the Project are not in agreement on the final disposition, PWD shall rebury the artifacts within the Project site in a location free from future disturbance and share the location with the tribes consulting on the Project. Should a collection require curation, the tribes consulting on the Project shall be given the opportunity to approve the curation facility but must still meet the standards of 36 CFR 79. All draft records/reports containing the significance and treatment findings and data recovery results shall be prepared by the Qualified Archaeologist and submitted to PWD (and LACSD or LAWA, depending on land ownership) and the tribes consulting on the Project for their review and comment. A copy of the final report and all site/isolate records shall be submitted to PWD (and LACSD or LAWA, depending on land jurisdiction), the tribes consulting on the Project, and the South Central Coastal Information Center. Disposition of Native American human remains and associated funerary objects, or grave goods shall be determined by the landowner in consultation with the PWD and the Most Likely Descendant (MLD). The PWD shall curate all eligible historic-period archaeological material, or portions thereof at the	Construction phase	PWD (Notifications to relevant Tribes, LACSD, and/or LAWA, as applicable)			

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					Initials	Date	Remarks
		discretion of the Qualified Archaeologist, at a repository accredited by the American Association of Museums that meets the standards outlined in 36 CFR 79.9. If no accredited repository accepts the collection, then PWD may curate it at a non-accredited repository as long as it meets the minimum standards set forth by 36 CFR 79.9. If neither an accredited nor a non-accredited repository accepts the collection, then PWD may offer the collection to a public, non-profit institution with a research interest in the materials, or to a local school or historical society in the area for educational purposes.					
CUL-4	Construction may result in the inadvertent discovery of human remains.	**Inadvertent Discovery of Human Remains**. Consistent with SWRP PEIR mitigation measure CUL-9, if human remains are encountered, then PWD shall halt work in the vicinity (within 100 feet) of the discovery and contact the County Coroner in accordance with Public Resources Code section 5097.98 and Health and Safety Code section 7050.5. If the County Coroner determines the remains are Native American, then the Coroner shall notify the California Native American Heritage Commission in accordance with Health and Safety Code subdivision 7050.5(c), and Public Resources Code section 5097.98. The California Native American Heritage Commission shall designate a Most Likely Descendant for the remains per Public Resources Code section 5097.98. Until the landowner has conferred with the Most Likely Descendant, the construction contractor(s) shall ensure the immediate vicinity where the discovery occurred is not disturbed by further activity, is adequately protected according to generally accepted cultural or archaeological standards or practices, and that further activities take into	Construction phase	PWD (Los Angeles County Coroner shall be contacted if human remains discovered.) (Notifications to relevant Tribes, as warranted)			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		account the possibility of multiple burials.					
GEO-1	Geologic hazards that could impact Project facilities may be present at the Project sites.	**Geotechnical Investigation Report**. A licensed geologist or engineer shall perform a design-level geotechnical investigation prior to construction, which shall include evaluation of fault ruptures and soil and slope stability hazards such as strong seismic ground-shaking, liquefaction, landslides, and soil expansion. Based on the results of the geotechnical investigations, appropriate support and protection measures shall be designed and implemented to maintain the stability of soils and slopes adjacent to work areas during and after construction.	Design phase	PWD			
GEO-2	Project construction could result in loss of topsoil.	**Topsoil Materials**. During Project construction, excavated topsoil materials shall be reused and maintained onsite to the extent possible. Topsoil stockpiles shall be wetted, thereby minimizing topsoil loss.	Construction phase	PWD			
PALEO-1	Paleontological resources, if present, may be impacted during Project construction.	**Paleontological Resources Avoidance and Monitoring**. PWD shall avoid impacts, if feasible, on areas identified as having a high potential to contain significant paleontological resources. This includes the entirety of the Project area in excess of 4 feet depth and portions of the Project area mapped as young alluvial fan deposits at the surface. For these high sensitivity paleontological areas that are planned for excavation, PWD shall implement the following measures during ground-disturbing construction activities in previously undisturbed sediments within the Project area: • Qualified Professional Paleontologist. Prior to the start of Project construction activities, PWD shall retain a Qualified Professional Paleontologist, as defined by the Society of	Identify Qualified Professional Paleontologist prior to Project construction Worker training prior to the start of Project construction; repeated as applicable for new construction staff	PWD / Qualified Paleontologist			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		Vertebrate Paleontology (SVP 2010). The Qualified Professional Paleontologist shall draft a Paleontological Resources Mitigation and Monitoring Plan, which shall direct mitigation measures related to paleontological resources. • Paleontological Worker Environmental Awareness Program. Prior to the start of ground-disturbing construction activities, the Qualified Professional Paleontologist (see SVP 2010) or their designee shall conduct a paleontological Worker Environmental Awareness Program training for all construction personnel regarding the appearance of fossils and the procedures to follow should fossils be discovered. • Paleontological Monitoring. Full-time paleontological monitoring shall be conducted during ground disturbance within previously undisturbed geologic units assigned low to high paleontological sensitivity once activities reach 4 feet bgs. Full-time paleontological monitoring shall be conducted during ground disturbance within previously undisturbed geologic units assigned high paleontological sensitivity beginning at the surface. – Bulk matrix sampling may be necessary to recover microfossils (i.e., fossils too small to be easily recognized within the matrix) from the Project area, as directed by the Qualified Professional Paleontologist. – In the event of a fossil discovery by the paleontological monitor or construction personnel, all construction activity within 50 feet of the find shall cease, and the Qualified Professional Paleontologist shall evaluate the find. If the fossil is not	Monitoring during Construction phase, as applicable				

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		scientifically significant, then construction activity may resume. If it is determined the fossil is scientifically significant, a fossil salvage shall be completed and the fossil shall be prepared and curated as deemed appropriate by the Qualified Professional Paleontologist. – The Qualified Professional Paleontologist may recommend monitoring be reduced in frequency or ceased entirely based on geologic observations. Such decisions shall be subject to review and approval by PWD. • Final Paleontological Mitigation Report. Upon completion of ground-disturbing activities (or laboratory preparation and curation of fossils, if necessary), the Qualified Professional Paleontologist shall prepare a final report describing the results of the paleontological monitoring efforts. The report shall be submitted to PWD and, if fossil curation occurred, the designated scientific institution.					
HAZ-1	Spills could release hazardous materials during construction.	**Hazardous Materials Management Spill Prevention and Control Plan**. Prior to the start of construction, PWD shall require its construction contractor(s) to prepare a Hazardous Materials Management Spill Prevention and Control Plan that includes a Project-specific contingency plan for hazardous materials and waste operations. The Plan shall be applicable to all construction activities and shall establish policies and procedures according to federal and California OSHA regulations for hazardous materials. Elements of the Plan shall include, but not be limited to: • A discussion of hazardous materials	Prepare Plan prior or to the start of construction Implement measures during Construction phase	PWD			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		management, including delineation of hazardous material storage areas, access and egress routes, waterways, emergency assembly areas, and temporary hazardous waste storage areas • Notification and documentation of procedures • Spill control and countermeasures, including employee spill prevention/response training					
HAZ-2	Hazardous materials use during construction could impact schools near the Project sites.	**School Notification**. Prior to the start of Project construction within 1 mile of a school, PWD will notify relevant schools regarding the construction schedule.	Prior to the start of construction	PWD			
HYD-1	Well operation could impact the local groundwater basin.	**Material Harm Review**. PWD shall coordinate with the Antelope Valley Watermaster Engineer and conduct a material harm review of the proposed groundwater Well 37 and groundwater rights. The Antelope Valley Watermaster Engineer would ensure operational criteria for the wells do not result in a net deficit in aquifer volume or a lowering of the local groundwater table such that the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted. This analysis will be completed as part of a groundwater storage agreement application process through the Antelope Valley Watermaster.	Design phase	PWD (Antelope Valley Watermaster Engineer)			
HYD-2	Runoff from Project sites may contribute to local flooding.	**Drainage Plan**. PWD shall complete drainage assessment and design in accordance with all applicable laws, regulations, and best management practices. The assessment and design shall be submitted as a drainage plan to appropriate	Design phase	PWD			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		jurisdictions to verify that drainage would not contribute to runoff that would result in flooding.					
NOISE-1	Construction noise could impact noise-sensitive land uses near the Project sites.	**Noise Measures**. PWD shall require the construction contractor(s) to implement the following measures, as applicable, during construction of the proposed Project: • Construction activities shall meet municipal, or County code requirements related to noise. Construction activities shall be limited to between 7:00 am and 7:00 pm Monday through Saturday to avoid noise-sensitive hours of the day, as feasible (well drilling may be 24-hours per day). Construction activities shall be prohibited on Sunday and holidays. • Sensitive receptors of the proposed Project construction activities shall be identified and mapped. • Construction equipment noise shall be minimized by muffling and shielding intakes and exhaust on construction equipment (per the manufacturer's specifications) and by shrouding or shielding impact tools. • Construction contractor(s) shall locate fixed construction equipment and construction staging areas as far as possible from nearby sensitive receptors. • Where feasible, and especially during 24-hour well drilling, construct barriers between noise sources and noise-sensitive land uses to block sound transmission. Enclose construction equipment where practicable.	Construction phase	PWD			
NOISE-2	Construction noise could impact noise-sensitive land	**Noise Coordinator**. PWD shall require the construction contractor(s) to notify in writing all landowners and occupants of properties within 500 feet of the construction area of the construction	At least two weeks prior to the start of construction	PWD			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
	uses near the Project sites.	schedule at least two weeks prior to groundbreaking. The construction contractor(s) shall designate a Noise Coordinator who shall be responsible for responding to complaints regarding construction noise. The Noise Coordinator shall ensure that reasonable measures are implemented to correct any problems. A contact telephone number for the Noise Coordinator shall be conspicuously posted at the construction site and included in the written notification of the construction schedule sent to surrounding properties.					
NOISE-3	Construction vibration could impact sensitive land uses near the Project sites.	**Vibration Measures**. PWD shall require the construction contractor(s) to implement the following measures, as applicable, during construction of proposed facilities: • Sensitive receptors shall be identified and mapped. • Limit construction activities that cause excessive groundborne vibrations including use of vibratory rollers to at least 43 feet from sensitive receptors and 15 feet from any structures. Alternative construction equipment for paving could include static/pneumatic rollers in areas within 15 feet of structures.	Mapping of sensitive receptors prior to the start of construction Equipment limits during construction phase	PWD			
TRA-1	Construction related vehicles and equipment may impact traffic in the immediate construction area.	**Transportation Management Plan**. Prior to construction, PWD shall require its construction contractor(s) to prepare and implement a Transportation Management Plan (TMP), subject to approval by the City of Palmdale and/or the County of Los Angeles, depending on jurisdiction. The TMP documents worker and truck routes, construction traffic control and site access, construction phasing and staffing levels, pavement maintenance and mitigations for short-term impacts. The plan shall include traffic counts at intersections	Develop Plan prior to the start of construction Notify emergency service providers at least three days prior to the start of construction	PWD (Reviews by City of Palmdale and/or County of Los Angeles, as applicable)			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		near the proposed Project facilities to establish existing traffic conditions. Based on these counts, the plan shall recommend measures to minimize impacts on traffic flow. These measures shall include, but are not limited to: • Identification of construction and delivery hours, with consideration of avoiding A.M. and P.M. peak periods. • Specification of construction-related vehicle and oversize haul routes, including alternative routes to reduce traffic disruption. • Limits on open trench length, delineation of work areas, and requirements for traffic control, flagging, and signage. • Identification of access and parking restrictions. • Designation of staging locations for construction activities. • Identification of potential road or lane closures. • Establishment of haul routes for construction-related traffic. • Identification of alternative safe routes to maintain pedestrian and bicyclist safety during construction. At least three days prior to construction, PWD shall coordinate with emergency service providers (police, fire, and others) to notify them of the construction schedule, Project alignment, and potential delays. PWD shall identify roadways and access points critical for emergency response and minimize disruptions or closures at these locations. The plan shall also include provisions for traffic control measures such as barricades, warning signs, cones, lights, and flaggers to ensure safe circulation for vehicles, bicycles, pedestrians, and emergency responders.					

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
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TCR-1	Tribal cultural resources, if present, may be impacted during Project construction.	**Tribal Notification**. In the event that an archaeological resource inadvertently discovered during Project construction is determined to be potentially of Native American origin based on the initial assessment of the find by a qualified archaeologist pursuant to California Public Resources Code Section 21083.2(i), the Native American tribes that consulted on the proposed Project pursuant to California Assembly Bill 52 shall be notified and be provided information about the find to allow for early input from the tribal representatives with regards to the potential significance and treatment of the resource. If, as a result of the resource evaluation and tribal consultation process, the resource is considered to be a tribal cultural resource in accordance with California PRC Section 21074, determined to be eligible for inclusion in the CRHR or a local register of historical resources or determined to be significant by PWD (the CEQA lead agency), the qualified archaeologist shall monitor all remaining ground-disturbing activities in the area of the resource, and a tribal monitor from a consulting Native American tribe shall be invited to monitor the ground-disturbing activities. The tribal monitor shall be ancestrally affiliated with the Project area and qualified by their tribe to monitor tribal cultural resources. The input of all consulting tribes shall be taken into account in the preparation of any required treatment plan for the resources prepared by the qualified archaeologist. Work in the area of the discovery may not resume until evaluation and treatment of the resource are completed and/or the resource is recovered and removed from the site. Construction activities may continue on other parts of the construction site while evaluation and treatment of	Construction phase	PWD (Notifications to relevant Tribes, as applicable)			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency (Reviews)	Verification of Compliance		
					Initials	Date	Remarks
		the resource takes place. Archaeological/cultural documents created as a part of the Project shall be supplied to PWD for dissemination to the consulting Native American Tribes and consultation will continue throughout the life of the Project.					

DEPARTMENT OF TRANSPORTATION
DISTRICT 7
100 S. MAIN STREET, MS 16
LOS ANGELES, CA 90012
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Making Conservation
a California Way of Life

November 19, 2025

Scott L. Rogers, PE, Assistant General Manager
Palmdale Water District
2029 East Avenue Q
Palmdale, California 93550

RE: Pure Water Antelope Valley Project –
Mitigated Negative Declaration (MND)
SCH# 2025100946
GTS #07-LA-2025-04935
Vic. LA 138 PM 46.31

Dear Scott L. Rogers,

Thank you for including the California Department of Transportation (Caltrans) in the review process for the above referenced project. Pure Water Antelope Valley is a regional water augmentation program using indirect potable reuse (IPR) by groundwater augmentation via direct injection. Using advanced treatment processes including microfiltration (MF), reverse osmosis (RO), and ultraviolet/advanced oxidation processes (UV/AOP), Pure Water AV would further purify tertiary treated (Title 22) wastewater to produce water that would meet all applicable state and federal drinking water standards and regulations for IPR. Product water from the proposed Advanced Water Purification Facility (AWPF) would be injected into the Antelope Valley groundwater basin, thereby supplementing PWD's existing water supplies. Phase 1 of the AWPF would treat 4.75 million gallons per day (mgd), Phase 2 (Ultimate) would treat 10 mgd.

After reviewing the MND, Caltrans has the following comments:

Caltrans concurs with the findings in Section 2.3.17 of the Initial Study, which identify encroachment regulations, development procedures, and the preparation of a Transportation Management Plan (CMP) per Mitigation Measure TRA-1. Please be aware that transportation of heavy construction equipment and/or materials which requires the use of oversized transport vehicles on State highways will also require a Caltrans transportation permit. Please be prepared to submit the aforementioned CMP to the Office of Permits when applying for the Transportation Permit.

Caltrans District 7 Office of Permits contact information:
Mailing Address: 100 S Main Street, Ste 100 Los Angeles, CA 90012
Office Hours: 8:00 a.m. to 5:00 p.m. Monday-Friday
Phone: 213-897-3631 | E-mail: D7.Permits@dot.ca.gov

Finally, please note that any proposed changes to infrastructure within or along Caltrans Right-of-way will be determined by the Office of Permits. At the time of permit application there will be rounds of review and corrections to ensure all design, Right-of-way, access management, water runoff, environmental, and statutory requirements are adequately addressed.

If you have any questions, please contact project coordinator Anthony Higgins, at anthony.higgins@dot.ca.gov and refer to GTS #07-LA-2025-04935.

Sincerely,

Miya Edmonson

Miya Edmonson
LDR Branch Chief

Cc: State Clearinghouse

PALMDALE WATER DISTRICT

A CENTURY OF SERVICE

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ACWA
PROUD MEMBER

December 9, 2025

Miya Edmonson
LDR Branch Chief
California Department of Transportation
District 7
100 S. Main Street, MS 16
Los Angeles, CA 90012

Subject: Palmdale Water District Pure Water Antelope Valley – California Environmental Quality Act Initial Study/Mitigated Negative Declaration State Clearinghouse #2025100946

Dear Ms. Edmonson:

Palmdale Water District (PWD) appreciates your comment letter received during the California Environmental Quality Act (CEQA) review period for the Pure Water Antelope Valley Project. The Project would implement indirect potable reuse (IPR) by groundwater augmentation via direct injection. Product water from the proposed Advanced Water Purification Facility (AWPF) would be injected into the Antelope Valley groundwater basin, thereby supplementing PWD's existing water supplies.

For transportation of heavy construction equipment on State highways, PWD or our construction contractor will apply for a Caltrans Transportation Permit. A Transportation Management Plan will be developed and submitted to Caltrans as part of the Transportation Permit application.

Project facilities are not proposed to be constructed within or immediately adjacent to State highways. However, PWD understands that the Caltrans Office of Permits will review the proposed Project for changes to infrastructure within or along Caltrans Right-of-way to ensure all design, Right-of-way, access management, water runoff, environmental, and statutory requirements are adequately addressed.

PWD is committed to collaborating closely with Caltrans to ensure that all necessary approvals are obtained to successfully construct, operate and maintain Pure Water Antelope Valley facilities. As Project planning proceeds, we will contact Caltrans regarding Transportation Permits.

Please note that the public meeting where the MND will be considered by the PWD Board will be held:

December 15, 2025, 6:00 p.m.
Palmdale Water District
2029 East Avenue Q
Palmdale, California 93550

Sincerely,

Scott Rogers, PE
Assistant General Manager
Palmdale Water District
srogers@palmdalewater.org
(661) 456-1020

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State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region
3883 Ruffin Road
San Diego, CA 92123
wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

November 19, 2025

Scott L. Rogers
Palmdale Water District
2029 East Avenue Q
Palmdale, CA 93550
srogers@palmdalewater.org

SUBJECT: Mitigated Negative Declaration for the Pure Water Antelope Valley Project, SCH No. 2025100946; Los Angeles County

Dear Scott L. Rogers:

The California Department of Fish and Wildlife (CDFW) has reviewed the Mitigated Negative Declaration (MND) from the Palmdale Water District (PWD) for the Pure Water Antelope Valley Project (Project) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines[1].

Thank you for the opportunity to provide comments and recommendations regarding Project activities that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to comment on those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Fish & G. Code, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW may also act as a Responsible Agency under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law[2] of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.) or the Native Plant Protection Act (NPPA; Fish & G. Code, §1900 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code.

PROJECT DESCRIPTION SUMMARY

Proponent: Palmdale Water District

Objective: The primary objective of the proposed Project is to develop advanced treatment processes to purify tertiary-treated wastewater to produce water that will meet all applicable state and federal drinking water standards. The purified water will be injected into the local groundwater aquifer to supplement the Proponent's existing water supplies. The components of the Project include an Advanced Water Purification Facility (AWPF), conveyance pipelines, groundwater production and injection wells, and brine disposal via evaporation ponds.

Location: The proposed Project's components are within the City of Palmdale and unincorporated areas of Los Angeles County. The AWPF and two groundwater injection wells will be situated on a 20-acre parcel bounded by 25th Street East and 27th Street East (Latitude: 34.59, Longitude: -118.08). Proposed pipelines will be located within the existing roadways rights-of-way and on property owned by Los Angeles World Airports, north of the proposed AWPF. Brine disposal from the AWPF will occur within existing oxidation ponds owned by the Los Angeles County Sanitation District, east of 40th Street East and north of East Avenue P. The Project will also replace a groundwater production well (Well 37) that will be located west of the existing Palmdale Water Reclamation Plant.

Biological Setting: Vegetation communities within the Biological Study Area (BSA) include *Avena* spp. – *Bromus* spp. herbaceous semi-natural alliance (14.31 acres), *Brassica nigra* – *Centaurea* (*solstitalis*, *melitensis*) herbaceous semi-natural alliance (242.50 acres), *Yucca brevifolia* woodland alliance (35.89 acres), and *Ericameria nauseosa* shrubland alliance (21.69 acres) along with one land cover type – disturbed/developed (301.59 acres). The surrounding area is characterized as agricultural fields, open space, and residential/developments.

An aquatic resources/wetland delineation was conducted on May 8, 2024, and the results showed the presence of ephemeral drainage (0.27 acre, 11,945 linear feet), streambed (0.25 acre, 10,964 linear feet), and riparian habitat (0.02 acre, 981 linear feet). In addition, two reconnaissance surveys were conducted (May 8, 2024, and July

[2] "Take" is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

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19, 2024), which documented 65 total species of native and non-native plants within the BSA. Plants species include, but is not limited to, natives such as Spanish lotus (*Acmispon americanus*), burro weed (*Ambrosia dumosa*), Devil's lettuce (*Amsinckia tessellata)*, Hoary saltbush (*Atriplex canescens*), big saltbush (*Atriplex lentiformis*), mulefat (*Baccharis salicifolia*), desert mariposa lily (*Calochortus kennedyi*), silver cholla (*Cylindropuntia echinocarpa*), jimsonweed (*Datura wrightii*), creosote bush (*Larrea tridentata*), sagebrush loeflingia (*Loeflingia squarrosa* var. *artemisiarum*), arroyo lupin (*Lupinus succulentus*), California evening primrose (*Oenothera californica*), short joint beavertail (*Opuntia basilaris* var. *brachyclada*), arroyo willow (*Salix lasiolepis*), desert mallow (*Sphaeralcea ambigua*), broadleaf cattail (*Typha latifolia*), western Joshua tree (*Yucca brevifolia*), etc. Non-native plant species included, but are not limited to, tree of heaven (*Ailanthus altissima*), Australian saltbush (*Atriplex semibaccata*), black mustard (*Brassica nigra*), cheatgrass (*Bromus tectorum*), foxtail barley (*Hordeum murinum*), etc.

Wildlife species observed or expected to occur include, but are not limited to, Crotch's bumble bee (*Bombus crotchii*), desert tortoise (*Gopherus agassizii*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), Loggerhead shrike (*Lanius ludovicianus*), Le Conte's thrasher (*Toxostoma lecontei*), Mohave ground squirrel (*Xerospermophilus mohavensis*), western toad (*Anaxyrus boreas halophilus*), gopher snake (*Pituophis catenifer*), southern alligator lizard (*Elgaria multicarinata*), western whiptail (*Aspidoscelis tigris*), Mojave rattlesnake (*Crotalus sculatus*), desert horned lizard (*Phrynosoma platyrhinos*), Great horned owl (*Bubo virginianus*), morning dove (*Zenaida macroura*), desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Otospermophilus beecheyi*), etc.

If impacts occur to western Joshua tree, the proponent proposes mitigation at a minimum ratio of 1:1. Additionally, tree relocation or payment of an in-lieu fee to CDFW is proposed.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist PWD in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources.

COMMENT # 1: Brine Pond Impacts

Issue: The MND may not fully evaluate the impacts of the brine ponds, which are a component of the Project. Because the brine ponds are located near vegetation communities such as Joshua tree woodland, *Ericameria* shrubland, and other desert scrub habitats, as well as mapped ephemeral drainages, a more detailed analysis is warranted.

Specific impact: Impacts to adjacent vegetation communities and wildlife may occur from construction, operation, and maintenance of the brine ponds. These impacts may include degradation of native plant communities, loss of habitat function, or reduced

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suitability of adjacent areas for special-status wildlife such as Mohave ground squirrel, burrowing owl, loggerhead shrike, and Le Conte's thrasher.

Why impact would occur: The MND states that there are existing oxidation ponds that will be converted into brine ponds. Although the design of the brine ponds is not fully developed, brine is known to have a high salt concentration that can alter the chemical and physical properties of soils (Meehan 2023). Brine can also impair a plant's ability to take up water and nutrients, which may result in plant mortality. Given the presence of salt-sensitive native vegetation, including western Joshua tree, desert mariposa lily, and multiple Atriplex species, and the proximity of ephemeral drainage features that may facilitate the movement of salts, indirect impacts are reasonably foreseeable.

Evidence impact may be significant: CDFW considers adverse impacts to plants and wildlife, for the purposes of CEQA, to be significant without mitigation or consideration of additional project design features. Native vegetation communities in the Project area, including Joshua tree woodland and *Ericameria* shrubland, are susceptible to soil salinization and associated declines in cover and function. In addition, because special-status wildlife species, such as Mohave ground squirrel, desert tortoise, and burrowing owl may occur in the area, any decline in vegetation or habitat quality near the brine ponds could affect their ability to forage, nest, or move through the area. To ensure the MND provides sufficient basis for evaluating these impacts under CEQA (CEQA Guidelines, §§ 15126.4(a)(4)(B), 15064, and 15065), the MND should specify mitigation that is proportionate to the level of impacts.

Recommended Potentially Feasible Mitigation Measure(s)

To ensure that potential indirect impacts to biological resources from construction, operation, and maintenance of the brine ponds are adequately addressed, the following mitigation measures are provided. These measures are intended to reduce the potentially significant impacts to less-than-significant levels and to ensure consistency with CEQA requirements for feasible and enforceable mitigation.

Recommendation #1: Brine Pond Impact Evaluation

CDFW recommends that the MND be updated to include a comprehensive evaluation of the impacts that may occur from the construction, operation, and maintenance of the brine ponds. The MND may not yet provide a detailed evaluation of the potential for brine ponds to degrade adjacent vegetation communities or indirectly affect wildlife through soil salinization, habitat degradation, or long-term exposure to elevated salt concentrations. Because the design of the brine ponds is not fully developed and the MND lacks a detailed analysis of potential exposure pathways, both avoidance-oriented design features and long-term monitoring should be incorporated to detect and respond to habitat degradation. CEQA Guidelines, sections 15064, 15065, and 15126.4(a)(1)(B) require that potentially significant impacts to biological resources be clearly identified and mitigated through feasible and effective measures. Inclusion of the following mitigation measures would provide substantial evidence that the Lead Agency has

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adequately addressed this project component and reduced potential impacts to less-than-significant levels.

Mitigation Measure #1: Brine Pond Impact Analysis

The Project proponent shall evaluate the potential for brine pond construction, operation, and maintenance to result in indirect impacts to adjacent vegetation communities and wildlife habitat. This evaluation shall include an assessment of brine composition, potential exposure pathways, and the sensitivity of surrounding biological resources. Because native habitats near the brine ponds include Joshua tree woodland, *Ericameria* shrubland, and creosote scrub, and because special-status species identified under CEQA Guidelines, section 15380 may use nearby habitat, the evaluation shall consider whether these communities or species could be affected by salinity-related changes or other indirect effects.

Based on this evaluation, the brine pond design shall incorporate features to prevent brine from entering the surrounding environment. These features may include impermeable liners, engineered berms, run-on and runoff controls, covered systems, or other feasible containment features. A vegetated buffer of at least 25 feet shall be maintained between the brine pond and adjacent natural communities to intercept runoff or seepage and protect habitat integrity. If sensitive vegetation (e.g., Joshua tree or other salt-intolerant species) is documented within the 25-foot buffer, the buffer may be adjusted as needed to maintain adequate protection.

As appropriate for site conditions, the evaluation shall consider whether other project-related activities such as dust generation during construction, operational lighting, noise or potential wildlife attraction to ponds could contribute to indirect effects on vegetation or wildlife. If applicable, feasible design features and best management practices shall be incorporated to reduce these effects.

Mitigation Measure #2: Long-Term Monitoring Plan

A long-term monitoring plan shall be developed and implemented to assess potential impacts to native vegetation and habitat function. The plan shall include baseline vegetation mapping and soil salinity testing prior to pond operation, followed by annual monitoring for vegetation health, species composition, and soil chemistry for a minimum of ten years. If brine exposure to the surrounding environment is anticipated, Mitigation Measure BIO-2 (Special-Status Plant Surveys, Avoidance Measures, Mitigation and Monitoring Plan) should be updated to a long-term monitoring plan to identify the impacts from brine exposure to all native vegetation.

The monitoring plan shall include performance standards, such as maintenance of baseline native vegetation cover and habitat function, and adaptive management triggers. If monitoring identifies measurable habitat decline, appropriate corrective actions shall be implemented.

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Mitigation Measure #3: Brine Pond Compensatory Mitigation

If impacts to native vegetation or habitat function are identified and cannot be reversed through adaptive management, compensatory mitigation shall be implemented at a minimum ratio of 2:1 (mitigation to impact), in coordination with CDFW. Where feasible, compensatory mitigation shall consider the affected habitat type to ensure the mitigation is biologically appropriate for the species that rely on these habitat communities.

Impacts to Crotch's Bumble Bee

Issue: The Project has the potential to impact suitable nesting habitat and foraging opportunities for Crotch's bumble bee or may result in direct or indirect mortality.

Specific impact: The Project may result in temporary or permanent loss of suitable nesting and foraging habitat for Crotch's bumble bee. Project ground-disturbing activities may cause death or injury of adults, eggs, and larvae; burrow collapse; nest abandonment; and reduced nest success.

Why impact would occur: According to CDFW's Crotch's Bumble Bee Range Dataset (CDFW 2025a), the Project area is within the current range for Crotch's bumble bee. The MND also acknowledges that some suitable habitat for this species occurs within the BSA.

Absent appropriate surveys and avoidance, minimization, and mitigation measures, the Project may result in mortality and/or injury of undetected Crotch's bumble bees that may be present during Project activities. The Project's ground and/or vegetation disturbance activities could result in significant impacts to Crotch's bumble bee, including loss of foraging resources, changes in foraging behavior, burrow collapse, nest abandonment, reduced nest success, reduced health and vigor of eggs, young, and/or queens, and direct mortality.

For reference, Crotch's bumble bees primarily nest from late February through late October and typically nest underground in abandoned small mammal burrows. However, they may also nest under perennial bunch grasses, thatched annual grasses, under-brush piles, in old bird nests, and in dead trees or hollow logs (Hatfield et al. 2012).

Evidence impact may be significant: Crotch's bumble bee is a candidate species protected under CESA, and, as such, is granted full protection under CESA. The California Fish and Game Commission accepted a petition to list the Crotch's bumble bee as endangered under CESA, determining the listing "may be warranted" and advancing the species to the candidacy stage of the CESA listing process. Take of any endangered, threatened, candidate species that results from the Project is prohibited, except as authorized by State law (Fish & G. Code, §§ 86, 2062, 2067, 2068, 2080, 2085; Cal. Code Regs., tit. 14, § 786.9). CDFW considers impacts to species that are candidates for CESA listing to be significant, under CEQA. Crotch's bumble bee meets

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the CEQA definition of rare, threatened, or endangered (CEQA Guidelines, § 15380). Therefore, take of Crotch's bumble bee could require a mandatory finding of significance by PWD (CEQA Guidelines, § 15065).

Recommended Potentially Feasible Mitigation Measure(s)

CDFW recommends that the Lead Agency revise the MND to more fully disclose the presence of suitable habitat, analyze potential impacts, and incorporate enforceable mitigation measures for Crotch's bumble bee. Without this information, the environmental document may not provide a sufficient basis for evaluating potential impacts to this CESA candidate species under CEQA.

CDFW requests the following recommendations and mitigation measures are incorporated into the final CEQA document. These measures are intended to address gaps in the environmental analysis and ensure compliance with CEQA, which requires feasible mitigation for significant impacts to biological resources (CEQA Guidelines, §§ 15064, 15126.4).

Recommendation #2: Crotch's Bumble Bee

The MND should be revised to provide a thorough discussion on the Project's potential direct and indirect impacts on Crotch's bumble bee throughout the entire Project area. The discussion should be of a depth and scope that a CESA Incidental Take Permit (ITP) could be issued based on the analysis provided in the final document.

Recommendation #3: CESA and CEQA

CDFW's issuance of an ITP for a Project is subject to CEQA. As a Responsible Agency, CDFW may consider the CEQA document from the Lead Agency/Project proponent for the Project. However, additional documentation may be required as part of an ITP application for the Project in order for CDFW to adequately develop an accurate take analysis and identify measures that would fully mitigate for take of CESA-listed species. To minimize additional requirements by CDFW pursuant to Fish and Game Code, section 2081 and/or under CEQA, the Project's CEQA document should fully identify the potential impacts to Crotch's bumble bee and provide adequate avoidance, mitigation, monitoring, and reporting commitments for issuance of the ITP.

Mitigation Measure BIO-7: Crotch's Bumble Bee Avoidance, Minimization, and Compensation Measures

The PWD should revise MM BIO-7 to incorporate the underlined language and omit language in strikethrough.

If Crotch's bumble bee is still considered a California Endangered Species Act (CESA) candidate species or has been listed as threatened or endangered under CESA at the

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time construction of proposed Project commences, PWD shall implement the following avoidance, minimization, and compensation measures for this species:

- The Project proponent shall retain a qualified biologist(s) with the appropriate handling permits to conduct focused surveys. A qualified biologist shall conduct a protocol-level presence/absence survey for Crotch's bumble bee in areas of the proposed Project site with suitable habitat during the peak active period for Crotch's bumble bee (highest detection probability) that occurs prior to the start of the proposed Project's initial ground disturbing activities (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). The peak active period for Crotch's bumble bee in the Project area is anticipated to be April through June given the expected desiccation of Crotch's bumble bee floral resources within the Project area by mid-summer, though this timing could depend on annual climatic factors. Survey methodology shall be based on Section 4.1.1 of CDFW's Survey Considerations for CESA Candidate Bumble Bee Species (CDFW 2023), or the most current CDFW guidance in effect at the time. Inaccessible areas outside of the proposed Project site can be surveyed using binoculars from the proposed Project edge or from public roads. The timing of the presence/absence survey can be phased with proposed Project build-out, if feasible. Survey results, including negative findings, shall be submitted to CDFW prior to implementing Project ground-disturbing and/or vegetation removal activities.

- If construction starts one year or more after the conclusion of the surveys described above, PWD shall consult with CDFW as to whether additional surveys are required and shall retain a qualified biologist to conduct additional surveys if recommended by CDFW.

- If a Crotch's bumble bee nest is observed during surveys or Project activities, the qualified biologist shall identify the location of nests in or adjacent to the proposed Project site to the extent feasible and notify CDFW. Inaccessible land adjacent to the proposed Project site shall be observed using binoculars. If nests are identified within the proposed Project site or immediately adjacent to the site, a qualified biologist shall determine the need to establish a no-disturbance buffer around the nest, where feasible, to reduce the risk of disturbance or accidental take. The buffer shall provide at least 50 feet (15 meters) of clearance around active nest entrances. If proposed Project activities may result in disturbance or potential take, the qualified biologist, in coordination with CDFW, shall expand the buffer zone as necessary to prevent disturbance or take. ~~If establishment of a no-disturbance buffer is feasible,c~~ Construction activities shall not occur within the buffer until a qualified biologist determines the colony is no longer active (i.e., no Crotch's bumble bees are seen flying in or out of the nest for three consecutive days, indicating the colony has completed its nesting season and the next season's queens have dispersed from the colony). Once the nest has been determined to be inactive by the qualified biologist, construction activities within

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the no-disturbance buffer(s) shall be allowed to resume. Otherwise, the no-disturbance buffer shall be maintained for the duration of proposed Project construction activities in each work area and shall be removed only after the conclusion of all grading, clearing, and construction activities at each construction site.

- If establishment of a no-disturbance buffer and/or avoidance of the nest is not feasible, the qualified biologist shall consult with CDFW to determine next steps and whether appropriate take authorization from CDFW is necessary (pursuant to Fish & Game Code, § 2080 et seq). ~~regarding potential encroachment into the no disturbance buffer and for proposed Project activities that may result in take of Crotch's bumble bee.~~

- If an individual Crotch's bumble bee is observed within or adjacent to the Project site during Project activities, the individual shall be allowed to move on its own accord and Project activities near the individual shall cease until the individual moves out of the work area.

- If Crotch's bumble bee is determined to be present on the proposed Project site, floral resources associated with the species that will be removed or damaged by proposed Project activities ~~in the areas of the proposed Project site where Crotch's bumble bee is detected and documented~~ shall be at a level sufficient to offset impacts, as determined in consultation with CDFW. Compensatory mitigation is expected to include replacement or enhancement of floral resources, at a minimum ratio of 3:1 (mitigation:impact). ~~replaced at a 1:1 ratio.~~ Planning and implementation of suitable habitat replacement may be integrated into the Habitat Revegetation, Restoration, and Monitoring Program described under Mitigation Measure BIO-16.

COMMENT # 2: Impacts to Western Burrowing Owl (*Athene cunicularia*)

Issue: The Project has the potential to impact nesting and wintering habitat of western burrowing owl.

Specific impact: The Project may result in the temporary and permanent loss of nesting and wintering habitat as well as disturbance to western burrowing owl due to the Project-related activities. Such activities include, but are not limited to, trenching/excavating, vegetation removal, vehicle usage that may lead to crushing or compaction of burrows, and increased human activity.

Why impact would occur: According to CDFW's Western Burrowing Owl Range (CDFW 2025b), the Project area lies within the current range for western burrowing owl. Burrowing owls are well adapted to open, dry annual and perennial grasslands, deserts, and scrublands with low-growing vegetation. They can be found on relatively flat expanses and vacant lots. Burrowing owls are dependent on burrows year-round for

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survival and/or reproduction. Loss of access to burrows may result in increased stress could elevate predation risk.

Evidence impact would be significant: On October 10, 2024, the California Fish and Game Commission determined that listing of western burrowing owl as endangered under CESA was warranted as a candidate species. If Project activities could result in take, appropriate CESA authorization, such as an ITP pursuant to Fish and Game Code, section 2081 prior to commencement of Project activities. Take of any endangered, threatened, or candidate species that results from the Project is prohibited, except as authorized by State law (Fish & G. Code, §§ 86, 2062, 2067, 2068, 2080, 2085; Cal. Code Regs., tit. 14, § 786.9). Take of individual burrowing owls and their nests is defined by Fish and Game Code, section 86, and prohibited by sections 3503, 3503.5 and 3513.

Recommended Potentially Feasible Mitigation Measure(s)

Recommendation #4: Western Burrowing Owl Impact Analysis

CDFW recommends that the PWD revise the MND to clearly identify suitable habitat for burrowing owl, analyze potential impacts, and incorporate enforceable mitigation measures. Without this information, the environmental document may not adequately support impact analysis for this CESA candidate species under CEQA. To address these concerns and ensure compliance with CEQA requirements for mitigating significant impacts to biological resources (CEQA Guidelines, §§ 15064, 15126.4), CDFW requests this recommendation and the following recommendations and mitigation measures be included in the final CEQA document.

Mitigation Measure BIO-8 Burrowing Owl ~~Breeding Season~~ Survey and Foraging Habitat Mitigation

The PWD should revise MM BIO-8 to incorporate the underlined language and omit language in strikethrough.

PWD shall retain a qualified biologist and shall be approved by CDFW to conduct focused breeding season surveys for burrowing owls in accordance with the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFG 2012), or the most current CDFW guidance in effect at the time. All biologists surveying and/or monitoring for burrowing owl shall obtain a Memorandum of Understanding[3] issued by CDFW. Early consultation with CDFW is encouraged to ensure all necessary permits are obtained. Surveys shall be conducted during the burrowing owl breeding season ~~immediately~~ and prior to the start of ground-disturbance and vegetation removal ~~proposed~~ Project activities. ~~construction~~. The focused surveys shall be conducted by a qualified biologist in the portions of the proposed Project site with suitable burrowing owl habitat plus a 500-foot

[3] https://wildlife.ca.gov/Conservation/CESA/Permitting#550391512-memorandum-of-understanding-mou--2081-a

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buffer (burrowing owl survey area). The surveys shall be conducted in the morning or evening to evaluate the presence/absence of burrowing owl during the nesting season and prior to the start of Project activities. All potential burrowing owls and burrows with burrowing owl sign shall be recorded using a GPS unit capable of submeter accuracy. Observations shall be conducted to determine if individual owls and/or nesting pairs are present and their status/disposition (e.g., late winter migrant, actively nesting, single individual not nesting). Representative photos of the habitat, potential and occupied burrows, and vegetation within the burrowing owl survey area shall be taken and included as an appendix to the survey report. All vertebrate fauna detected in the burrowing owl survey area shall be recorded in field notes. Inaccessible areas of the burrowing owl survey area outside the proposed Project site shall be surveyed using binoculars and/or spotting scopes to determine if owls are present.

A survey report shall be prepared that includes survey methodology, survey results, an analysis of potential proposed Project impacts to actively nesting pairs, and a calculation of the compensatory mitigation for foraging habitat, if impacted to CDFW. Late winter migrants and non-nesting individuals located outside of the proposed Project impact area shall not require habitat mitigation unless passive relocation is necessary. Maps showing burrow locations, a delineation of suitable habitat areas, and burrowing owls observed shall be included in the survey report.

If ~~actively breeding~~ owls are observed within 500 feet of proposed Project activities, PWD shall coordinate with CDFW to determine next steps and whether appropriate take authorization from CDFW is necessary (pursuant to Fish & Game Code, § 2080 et seq).

~~implement compensatory mitigation for impacts to foraging habitat based on the following methodology:~~

- ~~A 500-foot buffer shall be established around each active nest burrow to indicate the primary foraging habitat area for each nesting pair.~~
- ~~Permanent proposed Project disturbance areas shall be overlain onto the foraging buffer zone(s) to calculate the area(s) of habitat loss.~~
- ~~Permanent foraging habitat loss shall be mitigated at a 1:1 ratio.~~

Compensatory mitigation for loss of foraging habitat shall be implemented on- or off-site and may include purchase of Conservation Bank credits, payment of an in-lieu fee to benefit burrowing owl, or permanent conservation and management of burrowing owl habitat through the recordation of a conservation easement, funding of a non-wasting endowment, and/or implementation of a Mitigation Land Management Plan based on the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). Mitigation lands shall be identified through coordination with CDFW on, adjacent, or proximate to the impact site where practicable and where habitat is suitable to support burrowing owl.

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Mitigation Measure BIO-9: Burrowing Owl Pre-Construction Clearance Survey and Occupied Burrow Avoidance and Minimization Measures

The PWD should revise MM BIO-9 to incorporate the underlined language and omit language in strikethrough.

PWD shall retain a qualified biologist approved by CDFW to conduct a pre-construction burrowing owl clearance survey of areas within the proposed Project site and a 500-foot buffer that contain suitable burrowing owl habitat to confirm presence/absence of burrowing owl individuals no more than 14 days prior to start of construction in each work area. The survey methodology shall be consistent with the methods outlined in the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). If no active breeding or wintering owls or evidence of occupied habitat is identified, then proposed Project construction in the work area may begin, and no further action is required.

If active breeding or wintering owls or evidence of occupied habitat is detected in the proposed Project work area or within a 500-foot buffer, PWD shall coordinate with CDFW to determine next steps and whether appropriate take authorization from CDFW is necessary (pursuant to Fish & Game Code, § 2080 et seq).

~~implement the following measures for mitigation of potential burrowing owl presence in the Project area in accordance with the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012):~~

~~• A qualified biologist shall be present on site during initial ground disturbing activities in potential burrowing owl habitat identified in the habitat assessment.~~

~~• Occupied burrows shall not be disturbed during the nesting season (February 1 to August 31).~~

~~• No ground disturbing activities shall be permitted within a buffer no less than 656 feet (200 meters) from an active burrowing owl burrow during the breeding season, depending on the level of disturbance, unless the qualified biologist determines a reduced buffer would not adversely affect the burrowing owl(s).~~

~~• During the nonbreeding (winter) season (September 1 to January 31), ground disturbing work can proceed near active burrowing owl burrows at the discretion of the qualified biologist as long as the work occurs no closer than 165 feet (50 meters) from the burrow, depending on whether the level of disturbance is low and if the active burrow is not directly affected by the proposed Project activity. A smaller/larger buffer may be established by the qualified biologist following monitoring and assessment of the proposed Project's effects on the burrowing owl(s).~~

~~• If active winter burrows are found that would be directly affected by ground disturbing activities, owls can be excluded from winter burrows according to recommendations in the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). The qualified biologist shall~~

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~~prepare a passive relocation program in accordance with Appendix E (Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans) of the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012) and submit the passive relocation program to PWD and CDFW for review and approval prior to the commencement of ground disturbance activities. If required, a compensatory mitigation agreement shall be developed in coordination with CDFW prior to passive relocation of owls.~~

~~• Smaller non-disturbance buffers may be permitted in the winter (and sometimes breeding season) for the burrowing owl individuals if a noise and visual barrier, such as hay bale walls, is installed between the occupied burrowing owl burrow and construction activities, as long as the qualified biologist determines the reduced buffer will provide adequate protection.~~

~~· When a qualified biologist determines burrowing owls are no longer occupying the proposed Project site and passive relocation is complete, ground disturbing activities may begin. A final letter shall be prepared by a qualified biologist documenting the results of the passive relocation. The letter shall be submitted to CDFW.~~

COMMENT # 3: **Impacts on California Species of Special Concern (California Legless Lizard, California Glossy Snake, and Coast Horned Lizard)**

Issue: No specific mitigation measures were proposed in the MND for Project activities that may impact Species of Special Concern (SSC), including California legless lizard, California glossy snake, and coast horned lizard.

Specific Impact: Direct impacts to California legless lizard, California glossy snake, and coast horned lizard could result from Project activities. Such activities include, but are not limited to, equipment staging; mobilization; trenching/excavating; grading; trampling or crushing from construction equipment, vehicles, and foot traffic; fugitive dust; and increased human activity.

Why impact would occur: The MND states that California legless lizard, California glossy snake, and coast horned lizard have the potential to occur within the BSA. Project ground-disturbing activities such as vegetation removal and grading would result in habitat destruction, causing the death or injury of adults, juveniles, eggs, or hatchlings. Habitat loss on a local and regional scale is a major cause of population decline for these SSC species. Removal or disturbance of confirmed SSC habitat may constitute a potentially significant impact under CEQA and should be addressed with appropriate mitigation.

Evidence impact would be significant: An SSC is a species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

1) If the species is extirpated from the State or, in the case of birds, is extirpated in

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its primary season or breeding role;
2) If the species is listed as threatened or endangered under the ESA-, but not under CESA;
3) If the species meets the State definition of threatened or endangered but has not formally been listed;
4) If the species is experiencing, or formerly experienced, serious (non-cyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify the species for State threatened or endangered status; and,
5) Has naturally small populations exhibiting high susceptibility to risk from any factor(s) that, if realized, could lead to declines qualifying it for CESA threatened or endangered status (CDFW 2025c).

CEQA provides protection not only for CESA-listed species, but for any species including but not limited to SSC that can be shown to meet the criteria for State listing. These SSC meet the CEQA definition of rare, threatened, or endangered species (CEQA Guidelines, § 15380). The MND does not provide mitigation for potential impacts on SSC. Without adequate avoidance, minimization, and mitigation measures, the environmental document may not provide sufficient basis for evaluating whether the Project would result in substantial adverse direct, indirect, and cumulative effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species by CDFW.

Recommended Potentially Feasible Mitigation Measure(s)

To ensure compliance with CEQA Guidelines § 15126.4(a)(1)(B), which requires that mitigation measures be feasible, enforceable, and capable of reducing impacts to less-than-significant levels, the following measures are recommended. Adoption of these measures would provide substantial evidence that the Lead Agency has adequately addressed potential impacts to SSC species, including California legless lizard, California glossy snake, and coast horned lizard. These species meet the CEQA definition of rare, threatened, or endangered species under § 15380, and therefore require appropriate mitigation to reduce potentially significant impacts to less-than-significant levels.

Mitigation Measure #4: Pre-Work Biological Surveys

A qualified biologist shall conduct two pre-Project surveys within and adjacent to the proposed work area(s) within a one-week period prior to the start of Project-related activities. Pre-Project surveys shall include:

1) General surveys for botanical and wildlife resources;
2) The identification of any active bird nests, burrows, and/or woodrat nests (if active, they shall be recorded, monitored for species observations, and mapped); and,

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3) Work areas with flowing or standing water shall be visibly surveyed for any aquatic species that may be impacted by Project activities.

Mitigation Measure #5: Observation of Species of Special Concern

If SSC species are observed during pre-construction surveys, the qualified biologist shall implement appropriate avoidance and minimization measures, such as relocation by a qualified biologist, establishment of no-disturbance buffers, or phased vegetation removal. All measures shall be developed in coordination with CDFW and implemented prior to the start of ground-disturbing activities.

Mitigation Measure #6: Injured or Dead Wildlife

If any special status wildlife species are found harmed/injured or dead, work in the immediate area shall stop immediately, the qualified biologist shall be notified, and dead or injured wildlife shall be documented immediately. A formal report shall be sent to CDFW within three calendar days of the incident or finding. The report shall include the date, time of the finding or incident (if known), and location of the carcass or injured animal and circumstances of its death or injury (if known). Work in the immediate area may only resume once the proper notifications have been made and additional mitigation measures have been identified to prevent additional injury or death.

COMMENT # 4: Impacts on Bats

Issue: The MND does not discuss potential direct and indirect impacts to bat species from Project activities.

Specific Impact: Project activities include ground disturbance, vegetation trimming and removal, use of mechanized equipment, and increased human activity. These activities may have adverse impacts on bat species within the Project site.

Why impacts would occur: The MND states that Townsend's big-eared bat and Yuma Myotis are not likely to occur within the BSA. However, Appendix B1 of the MND states that suitable habitat is present within the BSA. The MND does not clearly discuss potential Project impacts to bats or provide mitigation measures. Focused bat surveys have not been conducted within the project footprint. Due to lack of focus surveys and discussion, impacts to bats could occur through mortality of individuals, disturbance of breeding or roosting activity, abandonment of roosts and loss of habitat.

Evidence impacts would be significant: Bats are considered nongame mammals and are afforded protection by state law from take and harassment (Fish & G. Code § 4150; Cal. Code of Regs § 251.1). CEQA provides protection not only for CESA-listed species, but for any species including but not limited to SSC that can be shown to meet the criteria for State listing. These SSC meet the CEQA definition of rare, threatened, or endangered species (CEQA Guidelines, § 15380). The MND does not provide mitigation for potential impacts on SSC. Inadequate avoidance, minimization, and

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mitigation measures for impacts to sensitive or special status species may result in the Project having substantial adverse direct, indirect, and cumulative effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species by CDFW.

Recommended Potentially Feasible Mitigation Measure(s)

To ensure compliance with CEQA Guidelines § 15126.4(a)(1)(B), which requires that mitigation measures be feasible, enforceable, and capable of reducing impacts to less-than-significant levels, the following measure is recommended. Adoption of this measure would provide substantial evidence that the Lead Agency has adequately addressed potential impacts to special-status bat species.

Mitigation Measure #7: Bat Surveys

The PWD shall retain a qualified biologist to conduct seasonally appropriate daytime and nighttime bat surveys throughout the BSA (plus the 100-foot buffer as access allows). These surveys shall identify potential habitats that could provide daytime or nighttime roost sites, and any maternity roosts, hibernacula, or other sensitive roosts types. Surveys shall be conducted during active bat season (typically April through September) and include a minimum of two consecutive nights of acoustic monitoring using full-spectrum detectors. Acoustic recognition technology shall be utilized during day and night surveys to maximize detection of bats. Survey results, including negative findings, shall be provided to CDFW. If bat species are detected, and activities will cause disturbance or loss of bat habitat, activities shall not commence, and PWD shall develop and implement avoidance and minimization, such as seasonal work windows, buffer zones, or exclusion protocols acceptable to CDFW. If avoidance is not feasible, compensatory mitigation (e.g., installation of bat boxes or habitat enhancement) shall be developed in coordination with CDFW.

ADDITIONAL COMMENTS

Mitigation and Monitoring Reporting Plan. CDFW recommends the environmental document include mitigation measures recommended in this letter. CDFW has provided comments via a mitigation monitoring and reporting plan to assist in the development of feasible, specific, detailed (i.e., responsible party, timing, specific actions, location), and fully enforceable mitigation measures (CEQA Guidelines, § 15097; Pub. Resources Code, § 21081.6). PWD is welcome to coordinate with CDFW to further review and refine the Project's mitigation measures. Per Public Resources Code, section 21081.6(a)(1), CDFW has provided a summary of our suggested mitigation measures and recommendations in the form of an attached Draft Mitigation Monitoring and Reporting Plan (Attachment A).

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ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNDDB website[4] provides direction regarding the types of information that should be reported and allows on-line submittal of field survey forms.

In addition, information on special status native plant populations and sensitive natural communities, should be submitted to CDFW's Vegetation Classification and Mapping Program using the Combined Rapid Assessment and Relevé Form[5].PWD should ensure that any data collected for the MND is properly submitted.

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of environmental document filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the environmental document filing fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

CONCLUSION

CDFW appreciates the opportunity to comment on the MND to assist PWD in identifying and mitigating Project impacts on biological resources. CDFW requests an opportunity to review and comment on any response that PWD has to our comments and to receive notification of any forthcoming hearing date(s) for the Project (CEQA Guidelines, § 15073(e)).Questions regarding this letter or further coordination should be directed to Mayra Molina, Senior Environmental Scientist (Specialist)[6].

Sincerely,

DocuSigned by:
Heather A. Pert
DF423498814B441...

Heather A. Pert
Environmental Program Manager
South Coast Region

[4] https://wildlife.ca.gov/Data/CNDDB
[5] https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities/Submit
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ec: California Department of Fish and Wildlife
Heather Pert, Environmental Program Manager
Baron Barrera, Senior Environmental Scientist (Supervisory)
Mayra Molina, Senior Environmental Scientist (Specialist)

Office of Land Use and Climate Innovation
State.Clearinghouse@lci.ca.gov

ATTACHMENTS

Attachment A: Draft Mitigation, Monitoring, and Reporting Program

REFERENCES

California Department of Fish and Game (CDFG). 2012. Staff Report on Burrowing Owl Mitigation. Available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843

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[CDFWa] California Department of Fish and Wildlife. 2025a. Crotch's Bumble Bee Range Dataset 3095. Available at CDFW's Biogeographic Information and Observation System, https://wildlife.ca.gov/Data/BIOS

[CDFWb] California Department of Fish and Wildlife. 2025b. Western Burrowing Owl Range Dataset 907. Available at CDFW's Biogeographic Information and Observation System, https://wildlife.ca.gov/Data/BIOS

[CDFWc] California Department of Fish and Wildlife. 2025c. Threatened and Endangered Species. Available at: https://wildlife.ca.gov/Conservation/CESA

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ATTACHMENT A: DRAFT MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

CDFW provides the following language to be incorporated into the MMRP for the Project.

Mitigation Measure	Timing	Responsible Party
Recommendation #1: Brine Pond Impact Evaluation CDFW recommends that the MND be updated to include a comprehensive evaluation of the impacts that may occur from the construction, operation, and maintenance of the brine ponds. The MND may not yet provide a detailed evaluation of the potential for brine ponds to degrade adjacent vegetation communities or indirectly affect wildlife through soil salinization, habitat degradation, or long-term exposure to elevated salt concentrations. Because the design of the brine ponds is not fully developed and the MND lacks a detailed analysis of potential exposure pathways, both avoidance-oriented design features and long-term monitoring should be incorporated to detect and respond to habitat degradation. CEQA Guidelines, sections 15064, 15065, and 15126.4(a)(1)(B) require that potentially significant impacts to biological resources be clearly identified and mitigated through feasible and effective measures. Inclusion of the following mitigation measures would provide substantial evidence that the Lead Agency has adequately addressed this project component and reduced potential impacts to less-than-significant levels.	Prior to Project Initiation	Lead Agency
Mitigation Measure #1: Brine Pond Impact Analysis The Project proponent shall evaluate the potential for brine pond construction, operation, and maintenance to result in indirect impacts to adjacent vegetation communities and wildlife habitat. This evaluation shall include an assessment of brine composition, potential exposure pathways, and the sensitivity of	Prior to Project Initiation	Lead Agency

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Mitigation Measure	Timing	Responsible Party
surrounding biological resources. Because native habitats near the brine ponds include Joshua tree woodland, *Ericameria* shrubland, and creosote scrub, and because special-status species identified under CEQA Guidelines, section 15380 may use nearby habitat, the evaluation shall consider whether these communities or species could be affected by salinity-related changes or other indirect effects. Based on this evaluation, the brine pond design shall incorporate features to prevent brine from entering the surrounding environment. These features may include impermeable liners, engineered berms, run-on and runoff controls, covered systems, or other feasible containment features. A vegetated buffer of at least 25 feet shall be maintained between the brine pond and adjacent natural communities to intercept runoff or seepage and protect habitat integrity. If sensitive vegetation (e.g., Joshua tree or other salt-intolerant species) is documented within the 25-foot buffer, the buffer may be adjusted as needed to maintain adequate protection. As appropriate for site conditions, the evaluation shall consider whether other project-related activities such as dust generation during construction, operational lighting, noise or potential wildlife attraction to ponds could contribute to indirect effects on vegetation or wildlife. If applicable, feasible design features and best management practices shall be incorporated to reduce these effects.		
Mitigation Measure #2: Long-Term Monitoring Plan A long-term monitoring plan shall be developed and implemented to assess potential impacts to native vegetation and habitat function. The plan shall include baseline vegetation mapping and soil salinity testing prior to pond	Prior to Project Initiation	Lead Agency/Qualified Biologist

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Mitigation Measure	Timing	Responsible Party
operation, followed by annual monitoring for vegetation health, species composition, and soil chemistry for a minimum of ten years. If brine exposure to the surrounding environment is anticipated, Mitigation Measure BIO-2 (Special-Status Plant Surveys, Avoidance Measures, Mitigation and Monitoring Plan) should be updated to a long-term monitoring plan to identify the impacts from brine exposure to all native vegetation. The monitoring plan shall include performance standards, such as maintenance of baseline native vegetation cover and habitat function, and adaptive management triggers. If monitoring identifies measurable habitat decline, appropriate corrective actions shall be implemented.		
Mitigation Measure #3: Brine Pond Compensatory Mitigation If impacts to native vegetation or habitat function are identified and cannot be reversed through adaptive management, compensatory mitigation shall be implemented at a minimum ratio of 2:1 (mitigation to impact), in coordination with CDFW. Where feasible, compensatory mitigation shall consider the affected habitat type to ensure the mitigation is biologically appropriate for the species that rely on these habitat communities.	Prior to Project Initiation	Lead Agency
Recommendation #2: Crotch's Bumble Bee The MND should be revised to provide a thorough discussion on the Project's potential direct and indirect impacts on Crotch's bumble bee throughout the entire Project area. The discussion should be of a depth and scope that a CESA Incidental Take Permit (ITP) can be issued based on the analysis provided in the final document.	Prior to Project Initiation	Lead Agency

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Mitigation Measure	Timing	Responsible Party
Recommendation #3: CESA and CEQA CDFW's issuance of an ITP for a Project is subject to CEQA. As a Responsible Agency, CDFW may consider the CEQA document from the Lead Agency/Project proponent for the Project. However, additional documentation may be required as part of an ITP application for the Project in order for CDFW to adequately develop an accurate take analysis and identify measures that would fully mitigate for take of CESA-listed species. To minimize additional requirements by CDFW pursuant to Fish and Game Code, section 2081 and/or under CEQA, the Project's CEQA document should fully identify the potential impacts to Crotch's bumble bee and provide adequate avoidance, mitigation, monitoring, and reporting commitments for issuance of the ITP.	Prior to Project Initiation	Lead Agency
Mitigation Measure BIO-7: Crotch's Bumble Bee Avoidance, Minimization, and Compensation Measures If Crotch's bumble bee is still considered a California Endangered Species Act (CESA) candidate species or has been listed as threatened or endangered under CESA at the time construction of proposed Project commences, PWD shall implement the following avoidance, minimization, and compensation measures for this species: • The Project proponent shall retain a qualified biologist(s) with the appropriate handling permits to conduct focused surveys. A qualified biologist shall conduct a protocol-level presence/absence survey for Crotch's bumble bee in areas of the proposed Project site with suitable habitat during the peak active period for Crotch's bumble bee (highest detection probability) that occurs prior to the start of the proposed	Prior to Project Initiation/During Project Activities	Lead Agency/Qualified Biologist

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Mitigation Measure	Timing	Responsible Party
Project's initial ground disturbing activities (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). The peak active period for Crotch's bumble bee in the Project area is anticipated to be April through June given the expected desiccation of Crotch's bumble bee floral resources within the Project area by mid-summer, though this timing could depend on annual climatic factors. Survey methodology shall be based on Section 4.1.1 of CDFW's Survey Considerations for CESA Candidate Bumble Bee Species (CDFW 2023), or the most current CDFW guidance in effect at the time. Inaccessible areas outside of the proposed Project site can be surveyed using binoculars from the proposed Project edge or from public roads. The timing of the presence/absence survey can be phased with proposed Project build-out, if feasible. Survey results, including negative findings, shall be submitted to CDFW prior to implementing Project ground-disturbing and/or vegetation removal activities. • If construction starts one year or more after the conclusion of the surveys described above, PWD shall consult with CDFW as to whether additional surveys are required and shall retain a qualified biologist to conduct additional surveys if recommended by CDFW. • If a Crotch's bumble bee nest is observed during surveys or Project activities, the qualified biologist shall identify the location of nests in or adjacent to the proposed Project site to the extent feasible and notify CDFW. Inaccessible land adjacent to the proposed Project site shall be observed using binoculars. If nests are identified within the proposed Project site or immediately adjacent to the site, a qualified biologist shall		

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Mitigation Measure	Timing	Responsible Party
determine the need to establish a no-disturbance buffer around the nest, where feasible, to reduce the risk of disturbance or accidental take. The buffer shall provide at least 50 feet (15 meters) of clearance around active nest entrances. If proposed Project activities may result in disturbance or potential take, the qualified biologist, in coordination with CDFW, shall expand the buffer zone as necessary to prevent disturbance or take. ~~If establishment of a no-disturbance buffer is feasible,c~~ Construction activities shall not occur within the buffer until a qualified biologist determines the colony is no longer active (i.e., no Crotch's bumble bees are seen flying in or out of the nest for three consecutive days, indicating the colony has completed its nesting season and the next season's queens have dispersed from the colony). Once the nest has been determined to be inactive <u>by the qualified biologist</u>, construction activities within the no-disturbance buffer(s) shall be allowed to resume. Otherwise, the no-disturbance buffer shall be maintained for the duration of proposed Project construction activities in each work area and shall be removed only after the conclusion of all grading, clearing, and construction activities at each construction site. • If establishment of a no-disturbance buffer and/or avoidance of the nest is not feasible, the qualified biologist shall consult with CDFW <u>to determine next steps and whether appropriate take authorization from CDFW is necessary (pursuant to Fish & Game Code, § 2080 et seq).</u> ~~regarding potential encroachment into the no disturbance buffer and for proposed Project activities that may result in take of Crotch's bumble bee.~~ • <u>If an individual Crotch's bumble bee is observed within or adjacent to the Project site during Project activities, the individual shall be allowed to</u>		

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Mitigation Measure	Timing	Responsible Party
move on its own accord and Project activities near the individual shall cease until the individual moves out of the work area. • If Crotch's bumble bee is determined to be present on the proposed Project site, floral resources associated with the species that will be removed or damaged by proposed Project activities ~~in the areas of the proposed Project site where Crotch's bumble bee is detected and documented~~ shall be at a level sufficient to offset impacts, as determined in consultation with CDFW. Compensatory mitigation is expected to include replacement or enhancement of floral resources, at a minimum ratio of 3:1 (mitigation:impact). ~~replaced at a 1:1 ratio.~~ Planning and implementation of suitable habitat replacement may be integrated into the Habitat Revegetation, Restoration, and Monitoring Program described under Mitigation Measure BIO-16.		
Recommendation #4: Western Burrowing Owl Impact Analysis CDFW recommends that the PWD revise the MND to clearly identify suitable habitat for burrowing owl, analyze potential impacts, and incorporate enforceable mitigation measures. Without this information, the environmental document may not adequately support impact analysis for this CESA candidate species under CEQA. To address these concerns and ensure compliance with CEQA requirements for mitigating significant impacts to biological resources (CEQA Guidelines, §§ 15064, 15126.4), CDFW requests this recommendation and the following recommendations and mitigation measures be included in the final CEQA document.	Prior to Project Initiation	Lead Agency

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Mitigation Measure	Timing	Responsible Party
Mitigation Measure BIO-8 Burrowing Owl ~~Breeding Season~~ Survey and Foraging Habitat Mitigation The PWD should revise MM BIO-8 to incorporate the underlined language and omit language in strikethrough. PWD shall retain a qualified biologist and shall be approved by CDFW to conduct focused breeding season surveys for burrowing owls in accordance with the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFG 2012), or the most current CDFW guidance in effect at the time. All biologists surveying and/or monitoring for burrowing owl shall obtain a Memorandum of Understanding[3] issued by CDFW. Early consultation with CDFW is encouraged to ensure all necessary permits are obtained. Surveys shall be conducted during the burrowing owl breeding season ~~immediately~~ and prior to the start of ground-disturbance and vegetation removal ~~proposed~~ Project activities. ~~construction.~~ The focused surveys shall be conducted by a qualified biologist in the portions of the proposed Project site with suitable burrowing owl habitat plus a 500-foot buffer (burrowing owl survey area). The surveys shall be conducted in the morning or evening to evaluate the presence/absence of burrowing owl during the nesting season and prior to the start of Project activities. All potential burrowing owls and burrows with burrowing owl sign shall be recorded using a GPS unit capable of submeter accuracy. Observations shall be conducted to determine if individual owls and/or nesting pairs are present and their status/disposition (e.g., late winter migrant, actively nesting, single individual not nesting). Representative photos of the habitat, potential and occupied burrows, and vegetation within the burrowing owl survey area shall be taken and included as an appendix to the survey report. All vertebrate fauna detected in the burrowing owl survey area shall be recorded in field notes. Inaccessible areas of	Prior to Project Initiation/During Project Construction	Lead Agency/Qualified Biologist

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Mitigation Measure	**Timing**	**Responsible Party**
the burrowing owl survey area outside the proposed Project site shall be surveyed using binoculars and/or spotting scopes to determine if owls are present. A survey report shall be prepared that includes survey methodology, survey results, an analysis of potential proposed Project impacts to actively nesting pairs, and a calculation of the compensatory mitigation for foraging habitat, if impacted to CDFW. Late winter migrants and non-nesting individuals located outside of the proposed Project impact area shall not require habitat mitigation unless passive relocation is necessary. Maps showing burrow locations, a delineation of suitable habitat areas, and burrowing owls observed shall be included in the survey report. If ~~actively breeding~~ owls are observed within 500 feet of proposed Project activities, PWD shall coordinate with CDFW to determine next steps and whether appropriate take authorization from CDFW is necessary (pursuant to Fish & Game Code, § 2080 et seq). ~~implement compensatory mitigation for impacts to foraging habitat based on the following methodology:~~ • ~~A 500-foot buffer shall be established around each active nest burrow to indicate the primary foraging habitat area for each nesting pair.~~ • ~~Permanent proposed Project disturbance areas shall be overlain onto the foraging buffer zone(s) to calculate the area(s) of habitat loss.~~ • ~~Permanent foraging habitat loss shall be mitigated at a 1:1 ratio.~~		

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Mitigation Measure	**Timing**	**Responsible Party**
Compensatory mitigation for loss of foraging habitat shall be implemented on- or off-site and may include purchase of Conservation Bank credits, payment of an in-lieu fee to benefit burrowing owl, or permanent conservation and management of burrowing owl habitat through the recordation of a conservation easement, funding of a non-wasting endowment, and/or implementation of a Mitigation Land Management Plan based on the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). Mitigation lands shall be identified through coordination with CDFW on, adjacent, or proximate to the impact site where practicable and where habitat is suitable to support burrowing owl.		
Mitigation Measure BIO-9: Burrowing Owl Pre-Construction Clearance Survey and Occupied Burrow Avoidance and Minimization Measures The PWD should revise MM BIO-9 to incorporate the underlined language and omit language in strikethrough. PWD shall retain a qualified biologist <u>approved by CDFW</u> to conduct a pre-construction burrowing owl clearance survey of areas within the proposed Project site and a 500-foot buffer that contain suitable burrowing owl habitat to confirm presence/absence of burrowing owl individuals no more than 14 days prior to start of construction in each work area. The survey methodology shall be consistent with the methods outlined in the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). If no active breeding or wintering owls or evidence of occupied habitat is identified, then proposed Project construction in the work area may begin, and no further action is required.	Prior to Project Initiation	Lead Agency/Qualified Biologist

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Mitigation Measure	**Timing**	**Responsible Party**
If active breeding or wintering owls or evidence of occupied habitat is detected in the proposed Project work area or within a 500-foot buffer, PWD shall coordinate with CDFW to determine next steps and whether appropriate take authorization from CDFW is necessary (pursuant to Fish & Game Code, § 2080 et seq). ~~implement the following measures for mitigation of potential burrowing owl presence in the Project area in accordance with the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012):~~ ~~• A qualified biologist shall be present on site during initial ground disturbing activities in potential burrowing owl habitat identified in the habitat assessment.~~ ~~• Occupied burrows shall not be disturbed during the nesting season (February 1 to August 31).~~ ~~• No ground disturbing activities shall be permitted within a buffer no less than 656 feet (200 meters) from an active burrowing owl burrow during the breeding season, depending on the level of disturbance, unless the qualified biologist determines a reduced buffer would not adversely affect the burrowing owl(s).~~ ~~• During the nonbreeding (winter) season (September 1 to January 31), ground disturbing work can proceed near active burrowing owl burrows at the discretion of the qualified biologist as long as the work occurs no closer than 165 feet (50 meters) from the burrow, depending on whether the level of disturbance is low and if the active burrow is not directly affected by the proposed Project activity. A smaller/larger buffer may be established by the qualified biologist following~~		

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Mitigation Measure	Timing	Responsible Party
~~monitoring and assessment of the proposed Project's effects on the burrowing owl(s).~~ ~~• If active winter burrows are found that would be directly affected by ground disturbing activities, owls can be excluded from winter burrows according to recommendations in the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). The qualified biologist shall prepare a passive relocation program in accordance with Appendix E (Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans) of the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012) and submit the passive relocation program to PWD and CDFW for review and approval prior to the commencement of ground disturbance activities. If required, a compensatory mitigation agreement shall be developed in coordination with CDFW prior to passive relocation of owls.~~ ~~• Smaller non-disturbance buffers may be permitted in the winter (and sometimes breeding season) for the burrowing owl individuals if a noise and visual barrier, such as hay bale walls, is installed between the occupied burrowing owl burrow and construction activities, as long as the qualified biologist determines the reduced buffer will provide adequate protection.~~ ~~· When a qualified biologist determines burrowing owls are no longer occupying the proposed Project site and passive relocation is complete, ground disturbing activities may begin. A final letter shall be prepared by a qualified biologist documenting the results of the passive relocation. The letter shall be submitted to CDFW.~~		

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Mitigation Measure	**Timing**	**Responsible Party**
Mitigation Measure #4: Pre-Work Biological Surveys A qualified biologist shall conduct two pre-Project surveys within and adjacent to the proposed work area(s) within a one-week period prior to the start of Project-related activities. Pre-Project surveys shall include: 1. General surveys for botanical and wildlife resources; 2. The identification of any active bird nests, burrows, and/or woodrat nests (if active, they shall be recorded, monitored for species observations, and mapped); and, **3.** Work areas with flowing or standing water shall be visibly surveyed for any aquatic species that may be impacted by Project activities.	Prior to Project Initiation	Lead Agency/Qualified Biologist
Mitigation Measure #5: Observation of Species of Special Concern If SSC species are observed during pre-construction surveys, the qualified biologist shall implement appropriate avoidance and minimization measures, such as relocation by a qualified biologist, establishment of no-disturbance buffers, or phased vegetation removal. All measures shall be developed in coordination with CDFW and implemented prior to the start of ground-disturbing activities.	During Project Activities	Lead Agency/Qualified Biologist

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Mitigation Measure	Timing	Responsible Party
Mitigation Measure #6: Injured or Dead Wildlife If any special status wildlife species are found harmed/injured or dead, work in the immediate area shall stop immediately, the qualified biologist shall be notified, and dead or injured wildlife shall be documented immediately. A formal report shall be sent to CDFW within three calendar days of the incident or finding. The report shall include the date, time of the finding or incident (if known), and location of the carcass or injured animal and circumstances of its death or injury (if known). Work in the immediate area may only resume once the proper notifications have been made and additional mitigation measures have been identified to prevent additional injury or death.	Anytime	Lead Agency/Qualified Biologist
Mitigation Measure #7: Bat Surveys The PWD shall retain a qualified biologist to conduct seasonally appropriate daytime and nighttime bat surveys throughout the BSA (plus the 100-foot buffer as access allows). These surveys shall identify potential habitats that could provide daytime or nighttime roost sites, and any maternity roosts, hibernacula, or other sensitive roosts types. Surveys shall be conducted during active bat season (typically April through September) and include a minimum of two consecutive nights of acoustic monitoring using full-spectrum detectors. Acoustic recognition technology shall be utilized during day and night surveys to maximize detection of bats. Survey results, including negative findings, shall be provided to CDFW. If bat species are detected, and activities will cause disturbance or loss of bat habitat, activities shall not commence, and PWD shall develop and implement avoidance and minimization, such as seasonal work windows, buffer zones, or exclusion protocols acceptable to CDFW. If avoidance	Prior to Project Initiation	Lead Agency/Qualified Biologist

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Mitigation Measure	**Timing**	**Responsible Party**
is not feasible, compensatory mitigation (e.g., installation of bat boxes or habitat enhancement) shall be developed in coordination with CDFW.		

PALMDALE WATER DISTRICT
A CENTURY OF SERVICE

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December 9, 2025

Heather A. Pert
California Department of Fish and Wildlife
Environmental Program Manager
South Coast Region
3883 Ruffin Road San Diego, CA 92123

Subject: Palmdale Water District Pure Water Antelope Valley – California Environmental Quality Act Initial Study/Mitigated Negative Declaration State Clearinghouse #2025100946

Dear Ms.Pert:

Palmdale Water District (PWD) appreciates California Department of Fish and Wildlife's (CDFW's) comment letter received during the California Environmental Quality Act (CEQA) review period for the Pure Water Antelope Valley Project. The Project would implement indirect potable reuse (IPR) by groundwater augmentation via direct injection. Product water from the proposed Advanced Water Purification Facility (AWPF) would be injected into the Antelope Valley groundwater basin, thereby supplementing PWD's existing water supplies.

PWD prepared an Initial Study to assess the potential impacts of the Project, and for environmental topics with potentially significant impacts (including impacts to biological resources), PWD identified mitigation measures to reduce impacts to less than significant levels under CEQA. PWD has reviewed and considered CDFW's comments dated November 19, 2025, and, although not required by CEQA, PWD is providing the following responses to comments.

Brine Pond Impacts – The brine disposal ponds are proposed for an area previously disturbed for the construction and operation of wastewater oxidation ponds (disturbed/developed land cover type). CDFW raises the issue of salinity impacts on adjacent habitat as a result of brine pond operation. As noted in the Initial Study, the brine ponds would be separated by berms and each pond would be lined with a high-density polyethylene

(HDPE) liner. With installation of the liner, offsite migration of salts and brine exposure to the surrounding environment are not anticipated. Therefore, under CEQA, significant impacts to vegetation adjacent to the brine ponds related to brine evaporation within the ponds are not anticipated. Additional assessment, development of a long-term monitoring plan, and compensatory mitigation for impacts on adjacent vegetation would therefore not be warranted.

As recommended by CDFW, during design of the brine ponds, PWD will maintain a buffer of 25 feet between the brine ponds and adjacent natural communities. A buffer distance of 25 feet is consistent with onsite constraints yet still protective. Note that the current distance between the unused oxidation ponds and the parcel boundary exceeds 100 feet and is sparsely vegetated. Brine pond design will also consider measures to reduce wildlife attraction to the site, including:

- Fencing surrounding the brine ponds
- Steep-sided, rip-rap, or concrete lined berms
- Exclusion methods such as screening, netting, and/or grid wires (including consideration of material type, mesh size, pattern and height above water)

PWD will also incorporate routine inspection and maintenance procedures for the liners and berms as part of facility operations. These inspections will verify material integrity and help ensure continued containment throughout the life of the facility.

Best management practices and mitigation measures to reduce dust, lighting, and noise impacts are described in the Initial Study (sections 1.4.9, 2.3.1, and 2.3.13) and will be implemented during Project construction.

Impacts to Crotch's Bumble Bee

As described in Initial Study, Crotch's bumble bee was not observed at the Project sites but was determined to have a moderate potential to occur in the Project area. Potential direct and indirect impacts to sensitive invertebrates, including Crotch's bumble bee, are described in Initial Study section 2.3.4.

Although mitigation measure BIO-7 is sufficient under CEQA to reduce impacts on Crotch's bumble bee to less than significant levels, PWD has incorporated some of the revisions recommended by CDFW (attached below). PWD will implement the measures for the protection of Crotch's bumble bee as part of the Mitigation Monitoring and Reporting Program (MMRP) for the Project. PWD will notify CDFW in the event that Crotch's bumble bee is observed on the Project sites. Surveyor qualifications will be as specified by CDFW in *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species* (June 6, 2023), or the most current guidance at the time of the survey. PWD will follow the most current CDFW protocols for all sensitive invertebrates that are California Endangered Species Act (CESA) listed or CESA candidate species.

Impacts to Western Burrowing Owl

As described in Initial Study section 2.3.4, burrowing owl were determined to have a high potential to occur in the Project area. Habitat for this species and the nearest recorded occurrences are noted in Appendix B1 of the Initial Study (Biological Resources Technical Report). Although mitigation measure BIO-8 and BIO-9 are sufficient under CEQA to reduce impacts on burrowing owl to less than significant levels, PWD has incorporated revisions recommended by CDFW (attached below). PWD will implement the measures for the protection of burrowing owl as part of the MMRP for the Project. In addition to construction phase protections, PWD will apply the same avoidance procedures if burrowing owls are encountered during future operation or maintenance activities.

Pre-Construction Biological Surveys and Observation of Species of Special Concern

PWD will coordinate with CDFW in the event that species of special concern (SSC) are observed during pre-construction surveys. Mitigation measure BIO-1 has been revised (attached below) to include the text recommended by CDFW regarding pre-construction biological surveys and observation of SSC.

Injured or Dead Wildlife

PWD will notify CDFW if any special status wildlife are found harmed, injured or dead on the Project sites. Mitigation measure BIO-12 has been revised (attached below) to include the text recommended by CDFW.

Impacts to Bat Species

Table 6 of Appendix B1 includes a determination that the Project sites do not provide suitable habitat for Townsend's big-eared bat or Yuma Myotis, and the species are not likely to occur. Construction of the Project would occur in roadways and road shoulders, at an existing wastewater treatment plant, on a parcel vegetated with *Brassica nigra – Centaurea* (Herbaceous Semi-Natural Alliance), and on the site of unused oxidation ponds. Since suitable roosting habitat is not known for the Project sites and since bat species are considered not likely to occur, bat surveys are not proposed. However, if roosting bats are observed during pre-construction surveys, PWD will contact CDFW to develop appropriate avoidance and minimization measures.

Mitigation Monitoring and Report Program

The MMRP for the Project will include the revisions to the mitigation measures attached below. These revisions will be incorporated into the Final MND considered by the PWD Board.

Environmental Data

PWD understands that relevant environmental data shall be submitted to CDFW.

Filing Fees

PWD will submit applicable filing fees.

Public Meeting for the Project

Please note that the public meeting where the MND will be considered by the PWD Board will be held:

December 15, 2025, 6:00 p.m.
Palmdale Water District
2029 East Avenue Q
Palmdale, California 93550

Closing

PWD is committed to collaborating with CDFW during the construction, operation and maintenance of the Pure Water Antelope Valley Project. Please contact the undersigned if you have any additional comments or questions regarding the Project.

Sincerely,

Scott Rogers, PE
Assistant General Manager
Palmdale Water District
srogers@palmdalewater.org
(661) 456-1020

Revised Biological Resources Mitigation Measures Referenced Above

BIO-1 Habitat Assessment Update and Pre-Construction Surveys. Prior to ground-disturbing activities, the habitat assessment completed for the Project in 2024 shall be updated based on Project component siting determined during detailed design. Habitat suitable to support special-status plant species, special-status wildlife species, nesting bird species, sensitive plant communities, and/or native desert vegetation shall be mapped within 500 feet of each proposed Project component footprint. Where suitable habitat is present, implementation of Mitigation Measures BIO-2 through BIO-17 shall be required as relevant based on the resources identified.

A qualified biologist shall conduct two pre-Project surveys within and adjacent to the proposed work area(s) within a one-week period prior to the start of Project-related activities. Pre-Project surveys shall include:

1) General surveys for botanical and wildlife resources;
2) The identification of any active bird nests, burrows, and/or woodrat nests (if active, they shall be recorded, monitored for species observations, and mapped); and
3) Work areas with flowing or standing water shall be visibly surveyed for any aquatic species that may be impacted by Project activities.

If Species of Special Concern (SSC) are observed during pre-construction surveys, a qualified biologist shall implement appropriate avoidance and minimization measures, such as relocation by a qualified biologist, establishment of no-distance buffers, or phased vegetation removal. Measures shall be developed in coordination with CDFW and implemented prior to the start of ground-disturbing activities.

BIO-7 Crotch's Bumble Bee Avoidance, Minimization, and Compensation Measures. If Crotch's bumble bee is still considered a California Endangered Species Act (CESA) candidate species or has been listed as threatened or endangered under CESA at the time construction of proposed Project commences, PWD shall implement the following avoidance, minimization, and compensation measures for this species:

- A qualified biologist with the requisite experience and appropriate authorization shall conduct a protocol-level presence/absence survey for Crotch's bumble bee in areas of the proposed Project site with suitable habitat during the peak active period for Crotch's bumble bee (highest detection probability) that occurs prior to the start of the proposed Project's initial ground disturbing activities (including, but not limited to, site preparation, staging and mobilization, vegetation clearance/mowing/trimming, grading, and excavation). The peak active period for Crotch's bumble bee in the Project area is anticipated to be April through June given the expected desiccation of Crotch's bumble bee floral resources within the Project area by mid-summer, though this timing could depend on annual climatic factors. Survey methodology shall be based on Section 4.1.1 of CDFW's *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species* (June 6, 2023), or the most current CDFW guidance in effect at the time. Inaccessible areas outside of the proposed Project site can be surveyed using binoculars from the proposed Project edge or from public roads. The timing of the

presence/absence survey can be phased with proposed Project build-out, if feasible. Survey results, including negative findings, shall be submitted to CDFW prior to implementing Project ground-disturbing and/or vegetation removal activities.

- If construction starts one year or more after the conclusion of the surveys described above, PWD shall consult with CDFW as to whether additional surveys are required and shall retain a qualified biologist to conduct additional surveys if recommended by CDFW.
- If a Crotch's bumble bee nest is observed during surveys of the Project sites, the qualified biologist shall identify the location of nests in or adjacent to the proposed Project site to the extent feasible and notify CDFW. Inaccessible land adjacent to the proposed Project site shall be observed using binoculars. If nests are identified within the proposed Project site or immediately adjacent to the site, a qualified biologist shall determine the need to establish a no-disturbance buffer around the nest, where feasible, to reduce the risk of disturbance or accidental take. The buffer shall provide at least 50 feet (15 meters) of clearance around active nest entrances. If proposed Project activities may result in disturbance or potential take, the qualified biologist, in coordination with CDFW, shall expand the buffer zone as necessary to prevent disturbance or take. Construction activities shall not occur within the buffer until a qualified biologist determines the colony is no longer active (i.e., no Crotch's bumble bees are seen flying in or out of the nest for three consecutive days, indicating the colony has completed its nesting season and the next season's queens have dispersed from the colony). Once the nest has been determined to be inactive by the qualified biologist, construction activities within the no-disturbance buffer(s) shall be allowed to resume. Otherwise, the no-disturbance buffer shall be maintained for the duration of proposed Project construction activities in each work area and shall be removed only after the conclusion of all grading, clearing, and construction activities at each construction site.
- If establishment of a no-disturbance buffer and/or avoidance of the nest is not feasible, the qualified biologist shall consult with CDFW to determine next steps and whether appropriate take authorization from CDFW is necessary (pursuant to Fish & Game Code § 2080 et seq).
- Except as authorized by CDFW pursuant to Fish & Game Code § 2080 et seq, if an individual Crotch's bumble bee is observed within or adjacent to the Project site during Project construction activities, the individual shall be allowed to move on its own accord and Project construction activities within a buffer distance of 50 feet, or a distance as agreed upon in consultation with CDFW, near the individual shall cease until the individual moves out of the work area.
- If Crotch's bumble bee is determined to be present on the proposed Project site, floral resources associated with the species that will be removed or damaged by proposed Project activities in the areas of the proposed Project site where Crotch's bumble bee is detected and documented shall be replaced at a minimum ratio of a 1:1 (mitigation:impact). Planning and implementation of suitable habitat replacement may

be integrated into the Habitat Revegetation, Restoration, and Monitoring Program described under Mitigation Measure BIO-16.

BIO-8 Burrowing Owl Survey and Foraging Habitat Mitigation. PWD shall retain a qualified biologist approved by CDFW to conduct focused breeding season surveys for burrowing owls in accordance with the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012), or the most current CDFW guidance in effect at the time. Biologists surveying and/or monitoring for burrowing owl shall obtain a Memorandum of Understanding issued by CDFW. Early consultation with CDFW is encouraged to ensure all necessary permits are obtained. Surveys shall be conducted during the burrowing owl breeding season and prior to the start of ground-disturbance and vegetation removal Project activities. The focused surveys shall be conducted by a qualified biologist in the portions of the proposed Project site with suitable burrowing owl habitat plus a 500-foot buffer (burrowing owl survey area). The surveys shall be conducted in the morning or evening to evaluate the presence/absence of burrowing owl during the nesting season and prior to the start of Project activities. All potential burrowing owls and burrows with burrowing owl sign shall be recorded using a GPS unit capable of submeter accuracy. Observations shall be conducted to determine if individual owls and/or nesting pairs are present and their status/disposition (e.g., late winter migrant, actively nesting, single individual not nesting). Representative photos of the habitat, potential and occupied burrows, and vegetation within the burrowing owl survey area shall be taken and included as an appendix to the survey report. All vertebrate fauna detected in the burrowing owl survey area shall be recorded in field notes. Inaccessible areas of the burrowing owl survey area outside the proposed Project site shall be surveyed using binoculars and/or spotting scopes to determine if owls are present.

A survey report shall be prepared and submitted to CDFW that includes survey methodology, survey results, an analysis of potential proposed Project impacts to actively nesting pairs, and a calculation of the compensatory mitigation for foraging habitat, if impacted. Late winter migrants and non-nesting individuals located outside of the proposed Project impact area shall not require habitat mitigation unless passive relocation is necessary. Maps showing burrow locations, a delineation of suitable habitat areas, and burrowing owls observed shall be included in the survey report.

If owls are observed within 500 feet of proposed Project activities, PWD shall coordinate with CDFW to determine next steps and whether appropriate take authorization from CDFW is necessary (pursuant to Fish & Game Code § 2080 et seq). As applicable, compensatory mitigation for impacts to foraging habitat loss would be at a minimum of a 1:1 ratio. Compensatory mitigation for loss of foraging habitat shall be implemented on- or off-site and may include purchase of Conservation Bank credits, payment of an in-lieu fee to benefit burrowing owl, or permanent conservation and management of burrowing owl habitat through the recordation of a conservation easement, funding of a non-wasting endowment, and/or implementation of a Mitigation Land Management Plan based on the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). Mitigation lands shall be identified through

coordination with CDFW on, adjacent, or proximate to the impact site where practicable and where habitat is suitable to support burrowing owl.

BIO-9 Burrowing Owl Pre-Construction Clearance Survey and Occupied Burrow Avoidance and Minimization Measures. PWD shall retain a qualified biologist approved by CDFW to conduct a pre-construction burrowing owl clearance survey of areas within the proposed Project site and a 500-foot buffer that contain suitable burrowing owl habitat to confirm presence/absence of burrowing owl individuals no more than 14 days prior to start of construction in each work area. The survey methodology shall be consistent with the methods outlined in the CDFW *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). If no active breeding or wintering owls or evidence of occupied habitat is identified, then proposed Project construction in the work area may begin, and no further action is required.

If active breeding or wintering owls or evidence of occupied habitat is detected in the proposed Project work area or within a 500-foot buffer, PWD shall coordinate with CDFW to determine next steps and whether appropriate take authorization from CDFW is necessary (pursuant to Fish & Game Code § 2080 et seq).

BIO-12 General Best Management Practices. PWD shall require construction contractor(s) and their personnel to adhere to the following general BMPs during construction:

- Construction-related vehicles shall observe a 15-mile-per-hour speed limit within the unpaved limits of construction.
- All open trenches or excavations shall be fenced and/or sloped to prevent entrapment of wildlife species.
- All food-related trash items such as wrappers, cans, bottles, and food scraps generated during construction shall be disposed of in closed containers only and removed daily from the construction site.
- No deliberate feeding of wildlife shall be allowed.
- No pets shall be allowed on the construction site.
- No firearms shall be allowed on the construction site.
- Vehicle or equipment maintenance shall be performed in designated staging areas.
- Access to the construction area outside of established work hours for the proposed Palmdale Ditch Conversion project shall be prohibited.
- If construction must occur at night (i.e., between dusk and dawn), all lighting shall be shielded and directed downward to minimize the potential for glare or spillover.
- During construction, heavy equipment shall be operated in accordance with standard BMPs. All equipment used on-site shall be properly maintained to avoid leaks of oil, fuel, or residues. Provisions shall be in place to remediate accidental spills.

- While encounters with special-status species are not anticipated, any worker who inadvertently injures or kills a special-status species or finds one dead, injured, or entrapped shall immediately report the incident to the construction foreman or biological monitor. The construction foreman or biological monitor shall immediately notify PWD.
- If special status wildlife species are found harmed/injured or dead, work in the immediate area shall stop immediately, the qualified biologist shall be notified, and dead or injured wildlife shall be documented immediately. A formal report shall be sent to CDFW within three calendar days of the incident or finding. The report shall include the date, time of the finding or incident (if known), and location of the carcass or injured animal and circumstances of its death or injury (if known). Work in the immediate area may resume once proper notifications have been made and measures have been identified to prevent additional injury or death.

LOS ANGELES COUNTY SANITATION DISTRICTS
Converting Waste Into Resources

Robert C. Ferrante
Chief Engineer and General Manager
1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
(562) 699-7411 • www.lacsd.org

November 17, 2025

Ref. DOC 7623022

VIA EMAIL srogers@palmdalewater.org

Mr. Scott L. Rogers, Assistant General Manager
Palmdale Water District
2029 East Avenue Q
Palmdale, CA 93550

Dear Mr. Rogers:

Comments on Notice of Intent to Adopt a Mitigated Negative Declaration for Pure Water Antelope Valley Project

The Los Angeles County Sanitation Districts (Sanitation Districts) received a Notice of Intent to Adopt a Mitigated Negative Declaration for the subject project in the City of Palmdale on October 16, 2025. The proposed Pure Water Antelope Valley project, which includes construction of an Advanced Water Purification Facility (AWPF), and most of Palmdale Water District's (PWD) service area is located within the jurisdictional boundaries of Sanitation District No. 20 (District No. 20). We offer the following comments:

1. PWD's proposal to construct, operate and maintain a tertiary effluent pump station and appurtenant improvements at District No. 20's Palmdale Water Reclamation Plant (PWRP) to convey effluent to the AWPF is subject to approval of an agreement by the Board of Directors of District No. 20 and the Board of Directors of PWD. This could be addressed through an amendment to the October 2016 Recycled Water Purchase and Sale Agreement, which would also allow the parties to update certain other terms, conditions and milestones in the recycled water agreement.

2. PWD's proposal to use property owned by District No. 20 along 40th Street East to manage brine generated by the AWPF is subject to approval of an agreement by the Board of Directors of District No. 20 and the Board of Directors of PWD. This agreement will contain all the terms and conditions concerning use of the property for brine management prior to disposal. Specifically, this property, which is the site of the PWRP's former wastewater oxidation ponds, will require installation of a liner system designed in accordance with the requirements of the Lahontan Regional Water Quality Control Board (Lahontan Board) prior to any potential use for brine management purposes in order to ensure protection of groundwater quality. For reference, PWD is advised to review the Lahontan Board's requirements for the Fort Irwin U.S. Army National Training Center's Irwin Water Works project at the following links: Fort Irwin Waste Discharge Requirements; Fort Irwin Final Evaporation Pond CQA Report; CQA Report Appendices A-I; CQA Report Appendices J-R

3. PWD's proposal to discharge treatment residuals and other waste streams from the AWPF into District No. 20's sewerage system will require an Industrial Wastewater (IW) Discharge Permit from the Sanitation Districts. PWD will be required to obtain the IW Discharge Permit before beginning project construction. Information about this permit process can be found on our website at Industrial Wastewater Discharge Permits.

4. PWD's proposal to connect the AWPF's sewer pipeline directly to any portion of District No. 20's sewer system, including the Trunk "A" Relief Sewer in East Avenue P-8, will require a Trunk Sewer Connection Permit from the Sanitation Districts. Information about this permit process can be found on our website at Trunk Sewer Connection Permits.

5. District No. 20 owns and maintains sewerage facilities within the project area that may be affected by the proposed project. The Sanitation Districts cannot provide detailed comments on, or permit construction of, the proposed project until plans incorporating District No. 20's facilities are submitted for our review. To obtain copies of as-built drawings of District No. 20's facilities within the project limits, please contact the Sanitation Districts' Engineering Counter at engineeringcounter@lacsd.org. When project plans that incorporate our facilities have been prepared, please submit copies to the Engineering Counter for our review and comment.

6. The entry in Table 7 on Page 1-21 of the Initial Study listing the anticipated permits and approvals that PWD will have to obtain from LACSD should be as follows:

   - Trunk Sewer Connection Permit and Industrial Wastewater Discharge Permit to connect the AWPF's sewer to District No. 20's Trunk "A" Relief Sewer in East Avenue P-8, including payment of all applicable connection and service fees
   - Agreement for use of PWRP's former oxidation ponds along 40th Street East for AWPF brine management
   - Agreement to permit construction, operation and maintenance of the proposed tertiary effluent pump station and appurtenances at the PWRP; this could be addressed through an amendment to the October 2016 Recycled Water Purchase and Sale Agreement

7. Please consider using recycled water instead of potable water to control dust emissions during construction in the paragraph about BMPs on Page 2-13 of the Initial Study.

8. The Sanitation Districts are empowered by the California Health and Safety Code to charge a fee to connect facilities (directly or indirectly) to the Sanitation Districts' Sewerage System or to increase the strength or quantity of wastewater discharged from connected facilities. This connection fee is used by the Sanitation Districts for its capital facilities. Payment of a connection fee may be required before this project is permitted to discharge to the Sanitation Districts' Sewerage System. For more information and a copy of the Connection Fee Information Sheet, go to www.lacsd.org, under Services, then Wastewater (Sewage) and select Rates & Fees. In determining the impact to the Sewerage System and applicable connection fees, the Sanitation Districts will determine the user category (e.g. Condominium, Single Family Home, etc.) that best represents the actual or anticipated use of the parcel(s) or facilities on the parcel(s) in the development. For more specific information regarding the connection fee application procedure and fees, please contact the Sanitation Districts' Wastewater Fee Public Counter at (562) 908-4288, extension 2727. If an IW Discharge Permit is required, connection fee charges will be determined by the Sanitation Districts' IW Section.

9. In order for the Sanitation Districts to conform to the requirements of the Federal Clean Air Act (CAA), the capacities of the Sanitation Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into clean air plans, which are prepared by the South Coast and Antelope Valley Air Quality Management Districts in order to improve air quality in the South Coast and Mojave Desert Air Basins as mandated by the CAA. All expansions of Sanitation Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Sanitation Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service but is to advise the Palmdale Water District that the Sanitation Districts intend to provide this service up to the levels that are legally permitted

and to inform the Palmdale Water District of the currently existing capacity and any proposed expansion of District No. 20's facilities.

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2742, or phorsley@lacsd.org.

Very truly yours,

Patricia Horsley

Patricia Horsley
Environmental Planner
Facilities Planning Department

PLH:plh

cc: Engineering Counter
P. Palencia
R. Paracuelles

PALMDALE WATER DISTRICT
A CENTURY OF SERVICE

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ALESHIRE & WYNDER LLP
Attorneys

December 9, 2025

Ms. Patricia Horsley
Environmental Planner
Facilities Planning Department
Los Angeles County Sanitation Districts
1955 Workman Mill Road
Whittier, CA 90607-4998

Subject: Palmdale Water District Pure Water Antelope Valley – California Environmental Quality Act Initial Study/Mitigated Negative Declaration State Clearinghouse #2025100946

Dear Ms. Horsley:

Palmdale Water District (PWD) appreciates your comment letter received during the California Environmental Quality Act (CEQA) review period for the Pure Water Antelope Valley Project. The Project would implement indirect potable reuse (IPR) by groundwater augmentation via direct injection. Product water from the proposed Advanced Water Purification Facility (AWPF) would be injected into the Antelope Valley groundwater basin, thereby supplementing PWD's existing water supplies.

PWD understands that implementation of the Project would require agreements with Los Angeles County Sanitation Districts (LACSD) including:

- Approval to construct, operate and maintain a tertiary effluent pump station and appurtenant improvements at District 20's Palmdale Water Reclamation Plant (could be addressed through amendment to the October 2016 Water Purchase and Sale Agreement)

- Use of LACSD property for brine disposal (site formally used for wastewater oxidation ponds) and installation of a liner system in accordance with the requirements of the Lahontan Regional Water Quality Control Board

- Industrial Wastewater Discharge Permit for discharge of treatment residuals and other wastes from the AWPF to the District 20 sewer system

- Trunk Sewer Connection Permit to connect the AWPF sewer pipeline to the District 20 sewer system

- Project drawing review to prevent impacts to existing sewerage facilities within the Project area

Anticipated permits and approvals (Table 7) of the Initial Study have been revised as noted in your letter. Please note that recycled water may be used for construction dust suppression, with water trucks using the recycled water fill station at PWD. Regarding consistency of wastewater treatment capacity and Southern California Association of Governments regional growth forecasts, please note that Pure Water Antelope Valley facilities are proposed to sustainably meet future water demands and address existing groundwater overdraft. The Project would not expand potable water distribution facilities or increase primary wastewater treatment capacity. The Project would therefore not induce substantial unplanned population growth.

PWD is committed to collaborating closely with LACSD to ensure that all necessary approvals are obtained to successfully construct, operate and maintain Pure Water Antelope Valley facilities. As Project planning proceeds, we will contact LACSD regarding design reviews and permit applications.

Please note that the public meeting where the MND will be considered by the PWD Board will be held:

December 15, 2025, 6:00 p.m.
Palmdale Water District
2029 East Avenue Q
Palmdale, California 93550

Sincerely,

Scott Rogers, PE
Assistant General Manager
Palmdale Water District
srogers@palmdalewater.org
(661) 456-1020

Shadi Bader

Subject: FW: US Air Force Plant 42 CEQA NOI Comment

From: Kim, Justin S (FAA) <Justin.S.Kim@faa.gov>
Sent: Monday, October 20, 2025 11:54 AM
To: Scott Rogers <srogers@palmdalewater.org>
Cc: Garibaldi, Camille (FAA) <Camille.Garibaldi@faa.gov>; Kessler, Dave (FAA) <Dave.Kessler@faa.gov>
Subject: US Air Force Plant 42 CEQA NOI Comment

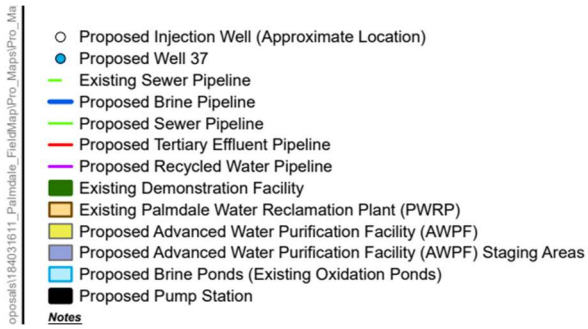
CAUTION: This email originated from outside of PWD. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good morning Scott,

My name is Justin Kim, and I am from the FAA Los Angeles Airports District Office. We have received a Notice of Intent for the CEQA initial study for the Pure Water Antelope Valley Project (Resources - Pure Water Antelope Valley) from Zoe Dascalos. During our review, we have safety concerns regarding the ponds (blue color under project components map) that are in proximity to the airport that are not compatible with aviation operations. This is because ponds will attract wildlife, which can then go onto the airport and crash into the aircraft. I have attached our FAA Advisory Circular 150/5200/33-C, *Hazardous Wildlife Attractants on or near Airports (Advisory Circular 150/5200-33C, Hazardous Wildlife Attractants on or near Airports, 21 February 2020)* for your reference.

Project Components Map:





Current Google Earth:



Thank you,

Justin Kim

Environmental Protection Specialist

Los Angeles Airports District Office | El Segundo, CA

Email: justin.s.kim@faa.gov | Phone: 424.405.7283

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PALMDALE WATER DISTRICT

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General Manager

ALESHIRE & WYNDER LLP
Attorneys

ACWA
PROUD MEMBER

December 9, 2025

Mr. Justin Kim
Environmental Protection Specialist
Los Angeles Airports District Office | El Segundo, CA
Email: justin.s.kim@faa.gov | Phone: 424.405.7283

Subject: Palmdale Water District Pure Water Antelope Valley – California Environmental Quality Act Initial Study/Mitigated Negative Declaration State Clearinghouse #2025100946

Dear Mr. Kim:

Palmdale Water District (PWD) appreciates your comments received during the California Environmental Quality Act (CEQA) review period for the Pure Water Antelope Valley Project. The Project would implement indirect potable reuse (IPR) by groundwater augmentation via direct injection. Product water from the proposed Advanced Water Purification Facility (AWPF) would be injected into the Antelope Valley groundwater basin, thereby supplementing PWD's existing water supplies.

The Project also proposes to repurpose existing out-of-service oxidation ponds owned by the Los Angeles County Sanitation Districts (LASAN) for brine disposal. The existing ponds would be re-engineered (graded, pond berms reconfigured, and liner installed) and brine would be conveyed from the proposed AWPF in small diameter pipeline in local roadways. The brine pond parcel is located approximately 1.4 miles southeast of the nearest runway of Palmdale Regional Airport (PRA) within the Planning Boundary/Airport Influence Area as mapped by Los Angeles County Airport Land Use Commission.

The following information is provided in response to your comments received on October 20, 2025, which referenced *AC No. 150-5200-33C* and conveyed your safety concerns regarding the proposed brine ponds and their proximity to PRA.

Brine Quality and Volume

The brine resulting from the AWPF's reverse osmosis (RO) treatment is anticipated to range from 6,600 to 17,000 mg/L in total dissolved solids (TDS), and the anticipated range of flows would be 0.18 to 0.45 million gallons per day (mgd). Brine salinity and flow rate would vary based on the percent recovery of the reverse osmosis system, which will be selected from within the range of 90 to 96% based on the results of the upcoming demonstration study. Design of the brine ponds has not been completed, but it is assumed that the maximum pond depth would be 6 feet, which includes conservative allowances for salt accumulation and freeboard. The working volume is anticipated to vary between approximately 0 to 2 feet. During the hottest/driest times of year with the highest net evaporation loss, the ponds are anticipated to be nearly empty, and during the coolest/wettest times of year, there will be some carryover volume to the subsequent month. Solids accumulation at the bottom of the brine ponds is expected to range from 0.1 feet to 0.5 feet in the form of precipitated salts. Using a conservative 0.5-foot depth of solids, an annual equivalent of 4,400 cubic yards/year (cy/yr) of salt disposal would be needed. Pond cell rotation will be utilized over the long-term, with an allowance for a cell to be kept offline to remove and dispose of precipitated salts while the remaining cells are in service.

PWD will include routine inspection and maintenance of the brine pond liner and berms as part of ongoing facility operations to ensure continued containment performance.

Potential to Attract Wildlife[1]

The Federal Aviation Administration (FAA) *Advisory Circular (AC) No. 150-5200-33C, Hazardous Wildlife Attractants on or near Airports* provides guidance on certain land uses that have the potential to attract hazardous wildlife on or near public-use airports. Per the AC, it "does not constitute a regulation, is not mandatory, and is not legally binding in its own right" and "conformity with this AC is voluntary"; however, other agencies may require adherence to the FAA guidance to meet their own standards and/or for CEQA review purposes.

As noted in the AC, drinking water intake and treatment facilities, storm water and wastewater treatment facilities, associated retention and settling ponds, ponds built for recreational use, ponds and fountains for ornamental purposes, and ponds that result from mining activities have the potential to attract large numbers of potentially hazardous wildlife. Per the AC, development of new open water facilities within the separation criteria identified below should be avoided, eliminated, or mitigated to prevent hazardous wildlife attractants:

- PERIMETER A: For airports serving piston-powered aircraft, it is recommended hazardous wildlife attractants be 5,000 feet from the nearest aircraft operations area;

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[1] Note that this assessment is not considered a formal Wildlife Hazard Assessment (WHA) per FAA *AC No. 150/5200-36 - Qualifications for Wildlife Biologist Conducting Wildlife Hazard Assessments and Training Curriculums for Airport Personnel Involved in Controlling Wildlife Hazards on Airports.*

- PERIMETER B: For airports serving turbine-powered aircraft, it is recommended hazardous wildlife attractants be 10,000 feet from the nearest aircraft operations area; and

- PERIMETER C: Recommended for all airports, 5-mile range to protect approach, departure and circling airspace.

The proposed brine ponds are not located within 5,000 feet of the nearest aircraft operations area but are located within perimeter B and C. For projects located within 5 miles of an airport's aircraft operations area, the FAA may review development plans, proposed land-use changes, operational changes, major federal actions, or wetland mitigation plans to determine if such changes increase risk to airport safety by attracting hazardous wildlife on and around airports. Because the FAA is not a permitting agency for land use modifications that occur off airport properties, such reviews are typically initiated by state or federal permitting agencies seeking FAA input on new or revised permits for land uses with the potential to pose a risk to airport operations when they are located within the separation distances provided above.

The final acreage of the brine ponds and detention time will be dependent on the recovery performance of the reverse osmosis systems at the AWPF. The District's goal is to minimize this acreage by maximizing the sustainable recovery of the RO system. Currently, different systems are being evaluated as part of a demonstration facility, with the final design recovery anticipated to be in the range of 90 to 96%. The brine ponds would be filled with salty RO reject flows that would be further concentrated by evaporation. The ponds will be lined with high-density polyethylene (HDPE) material to provide a barrier to local surface hydrology, and in operation this liner will be covered with deposited salts. The brine ponds will not contain the kinds of benthic sediment or vegetation common in freshwater ponds, thereby limiting bird attraction.

The salinity for the brine is estimated to range between 0.66% to 1.7% salinity (6,600-17,000 mg/L TDS). While the brine pond conditions would likely not be saline enough for brine shrimp (*Artemia* spp.), which need higher salinity levels from 2.5% to 25% (25,000 mg/L to 250,000 mg/L TDS)[2], several aquatic plant and animal species (e.g., invertebrates, fish, and amphibians) and avian species can tolerate salinity levels within the range of 0 to 10% salinity. Fish-eating birds generally tolerate a range of salinities from 0 to 5% (0-50,000 mg/L TDS), and waterfowl shorebirds can tolerate a range up to 200,000 mg/L TDS (20%)[3]. Even if the brine ponds do not

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[2] John K. Warren. 2006. "Halotolerant life in feast or famine (a source of hydrocarbons and a fixer of metals)". *Evaporites: Sediments, Resources and Hydrocarbons*. Birkhäuser. pp. 617–704. ISBN 978-3-540-26011-0.

[3] Chesney, C. 2022. Technical Memorandum (TM) #8.2 - Species Salinity Tolerance. Prepared for Salton Sea Water Importation Proposal Review, Independent Review Panel Submittal. Online: https://transform.ucsc.edu/wp-content/uploads/2022/12/Species-Salinity-Tolerance.pdf.

eventually support aquatic life that persists in the saline environment of the ponds, particularly because of the intermittent nature of the water column, the ponds may still serve as an attractant to curious waterfowl species and other birds searching for food or aquatic habitats during foraging and/or migration.

Design Features to Reduce Wildlife Attractants at the Brine Ponds

Per *AC No. 150-5200-33C*, where possible, detention ponds should be designed to allow a maximum 48-hour detention period for the design storm. Water management facilities holding water longer than 48 hours should be maintained in a manner that keeps them free of both emergent and submergent vegetation. According to the *Guidebook for Addressing Aircraft/Wildlife Hazards at General Aviation Airports* (Cleary and Dickey 2010[4]), there are five basic strategies to manage hazardous wildlife at or near airports.

- **Repelling techniques:** Use of various audio, visual, or chemical repellents to harass and repel problem wildlife;
- **Habitat modification:** Elimination or reduction of food, water, or shelter attractive to wildlife;
- **Exclusion:** Use of physical barriers to stop wildlife from gaining access to food, water, or shelter;
- **Population management:** Reduction or elimination of wildlife populations that are posing a hazard to aircraft at or near the airport by either capturing (live capture and relocation) or killing the problem animals; and
- **Notices to Airmen (NOTAM) of potential wildlife hazards**: Delaying or advancing takeoff and landing times; changing or closure of active runways.

Repelling techniques and population management often require intensive cost and effort with minimal effectiveness, and NOTAM of potential wildlife hazards is likely not a viable coordination option for a water treatment facility of this relatively small scope and size. Some habitat modification is provided by the HDPE liner system and precipitated salts instead of benthic sediments, which create an unfavorable environment for vegetation that could provide food and shelter to wildlife. Control/removal of saline-tolerant vegetation in the brine ponds (if any vegetation growth occurs) may be feasible and could assist in minimizing the potential for attracting birds and other wildlife.

Since standing brine in the proposed brine ponds is anticipated to persist over 48 hours during winter months, brine pond design will include consideration of features to minimize wildlife hazards including:

- Fencing surrounding the brine ponds
- Steep-sided and rip-rap- or concrete-lined berms

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[4] National Academies of Sciences, Engineering, and Medicine. 2010. *Guidebook for Addressing Aircraft/Wildlife Hazards at General Aviation Airports*. Washington, DC: The National Academies Press. https://doi.org/10.17226/22949.

- Exclusion methods such as screening, netting, and/or grid wires (including consideration of material type, mesh size, pattern and height above water)
- Vegetation removal as needed

ALUC and FAA Consultation

As noted in the Initial Study, PWD will coordinate with the County of Los Angeles Airport Land Use Commission (ALUC) and Federal Aviation Administration (FAA) and prepare an airport construction safety plan that would identify best management practices to be used before Project construction. PWD would notify the Palmdale Regional Airport of proposed construction activities in advance and participate in the FAA's 7460 process so that the proposed construction of the Project does not pose hazards to aviation. PWD is committed to collaborating closely with the FAA regarding the design of the proposed brine ponds. As Project planning proceeds, we will contact the FAA regarding brine pond design features to minimize wildlife hazards.

Please note that the public meeting where the MND will be considered by the PWD Board will be held:

December 15, 2025, 6:00 p.m.
Palmdale Water District
2029 East Avenue Q
Palmdale, California 93550

Sincerely,

Scott Rogers, PE
Assistant General Manager
Palmdale Water District
srogers@palmdalewater.org
(661) 456-1020

BOARD MEMORANDUM

DATE: December 15, 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 APPROVAL OF RESOLUTION NO. 25-11 BEING A RESOLUTION OF THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT ADOPTING THE INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION FOR THE PURE WATER ANTELOPE VALLEY PROJECT AND AUTHORIZING STAFF TO FILE THE NOTICE OF DETERMINATION WITH THE CALIFORNIA STATE CLEARINGHOUSE. (NO BUDGET IMPACT – PROJECT NO. 22-656 – ENGINEERING MANAGER BADER)***

Recommendation:

Staff recommends that the Board approve Resolution No. 25-11 being a Resolution of the Board of Directors of the Palmdale Water District Adopting the Draft Initial Study – Mitigated Negative Declaration for the Pure Water Antelope Valley Project and Authorizing Staff to File the Notice of Determination (NOD) with the California State Clearinghouse.

Alternative Options:

The alternative is not to approve this Resolution.

Impact of Taking No Action:

The District will not be able to approve the California Environmental Quality Act (CEQA) document and approve the Pure Water Antelope Valley Project.

Background:

The District is advancing the Pure Water Antelope Valley Project, which will introduce a new drought-resilient water supply through indirect potable reuse by groundwater augmentation. The District is serving as the Lead Agency for environmental review. Stantec prepared the Initial Study and Mitigated Negative Declaration for the Project. The document was completed and released for public review through the California State Clearinghouse on October 21, 2025, under State Clearinghouse No. 2025100946.

The 30-day review period concluded on December 9, 2025. A Notice of Intent to Adopt a Mitigated Negative Declaration Notice of an Initial Study was also posted on the District's website on October 28, 2025 and was recorded at the Los Angeles County Registrar/Recorder's Office with the County Clerk and was posted from October 20, 2025 until November 19, 2025. Staff additionally published legal notices in the Antelope Valley Press on October 17 and November 14, 2025, with the second publication advising the public of the updated Board meeting date.

District staff posted the Clearinghouse link to the District's website on October 21, 2025. The report reviews air quality, biological resources, tribal resources, cultural resources, aesthetics, and other required parameters. It did not find any significant impacts that cannot be mitigated. The report also has plans for the contractor to assess and follow whether it encounters any of the issues listed.

Staff have reviewed and responded to all the comments and is asking the Board to adopt Resolution 25-11 Adopting the Notice of Intent for the Draft Initial Study – Mitigated Negative Declaration Study for the Solar Energy Project and to authorize staff to file the Notice of Determination (NOD) with the California State Clearinghouse.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiatives No. 1 – Water Resources Reliability, No. 3 – Systems Efficiency and No. 6 – Customer Care, Advocacy and Outreach.

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

Budget:

There is no budget impact.

Supporting Documents:

- Resolution No. 25-11 being a Resolution of the Board of Directors of the Palmdale Water District Adopting the Initial Study and Mitigated Negative Declaration for the Pure Water Antelope Valley Project and Authorizing Staff to File the Notice of Determination with the California State Clearinghouse

RESOLUTION NO. 25-11

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT ADOPTING THE INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION FOR THE PURE WATER ANTELOPE VALLEY PROJECT AND AUTHORIZING STAFF TO FILE THE NOTICE OF DETERMINATION WITH THE CALIFORNIA STATE CLEARINGHOUSE

WHEREAS, the Palmdale Water District (District) seeks to advance regional water supply reliability through the development of the Pure Water Antelope Valley Project (Project) which will produce advanced treated recycled water for groundwater recharge and long-term sustainability; and

WHEREAS, the Project includes advanced treatment facilities, conveyance pipelines, brine basins, monitoring wells, production wells, injection wells, booster pump stations, and related improvements necessary to implement indirect potable reuse within the Antelope Valley Groundwater Basin; and

WHEREAS, the District serves as the Lead Agency for the Project under the California Environmental Quality Act CEQA; and

WHEREAS, pursuant to CEQA requirements and the District's Local CEQA Guidelines, the District prepared an Initial Study analyzing potential environmental effects associated with the Project; and

WHEREAS, the Initial Study determined that with the implementation of identified mitigation measures the Project would not result in significant adverse impacts to the environment and therefore a Mitigated Negative Declaration was prepared; and

WHEREAS, pursuant to the authority and criteria contained in the CEQA, the District, as the Lead Agency, has analyzed the proposed project and has prepared a Mitigated Negative Declaration (SCH No. 2025100946) for the Project; and

WHEREAS, the Mitigated Negative Declaration and Initial Study was circulated for the required public review for the required minimum of 30 days from October 21, 2025, through December 9, 2025 through the State Clearinghouse and were made available on the District website and at the District office for public inspection; and

WHEREAS, all comments received during the public review period were considered by District staff and incorporated as appropriate into the final environmental document; and

WHEREAS, a public meeting of the Board of Directors to consider adoption of the Initial Study and Mitigated Negative Declaration was duly noticed and held on December 15, 2025, during which staff presented the environmental analysis and all public testimony and evidence both written and oral was received and considered, after which public testimony was closed; and

WHEREAS, the Board of Directors now desires to adopt the Initial Study and Mitigated Negative Declaration for the Project.

THEREFORE, THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT DOES HEREBY RESOLVE AS FOLLOWS:

1. The above recitals are true and correct and incorporated herein.

2. Pursuant to the California Environmental Quality Act ("CEQA") and the District's Local CEQA Guidelines, District prepared an Initial Study for the Project. It was determined that there was no substantial evidence that the Project would have a significant effect on the environment after the implementation of Mitigation Measures. Based on that determination, a Mitigated Negative Declaration was prepared. Thereafter, the District staff provided public notice of the public comment period and of the intent to adopt the Mitigated Negative Declaration.

3. The Board's additional findings regarding the Project are set forth in the Initial Study/Mitigated Negative Declaration attached hereto as Exhibit 1, which findings the Board incorporates herein by this reference.

4. The Board of Directors hereby approves and adopts the Mitigated Negative Declaration for the Project in the form attached hereto as Exhibit 1.

5. The General Manager and District staff are hereby authorized and directed to take such further actions as may be necessary and appropriate to implement this Resolution, including filing the Notice of Determination with the appropriate county or other governmental authorities pursuant to CEQA and taking such other and further action as may be necessary or appropriate to carry out the purposes of this Resolution.

PASSED AND ADOPTED by the Board of Directors of the Palmdale Water District this 15th day of December 2025, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Kathy Mac Laren-Gomez, President
Board of Directors

ATTEST:

_____
Cynthia Sanchez, Secretary
Board of Directors

APPROVED AS TO FORM:

_____
Aleshire & Wynder, LLP, General Counsel

BOARD MEMORANDUM

DATE: December 15, 2025

TO: **BOARD OF DIRECTORS**

FROM: Mr. Dennis D. LaMoreaux, General Manager

RE: ***CONSIDERATION AND POSSIBLE ACTION TO ISSUE A LETTER OF SUPPORT FOR THE CANYONS TO DESERT RESOURCE CONSERVATION DISTRICT'S MONARCH BUTTERFLY, POLLINATOR RESCUE, AND HABITAT RESTORATION PROGRAM PROPOSITION 4 GRANT APPLICATION. (GENERAL MANAGER LaMOREAUX)***

CONSIDERATION AND POSSIBLE ACTION TO DIRECT STAFF TO INVESTIGATE HOSTING A NATIVE POLLINATOR GARDEN FOR THE CANYONS TO DESERT RESOURCE CONSERVATION DISTRICT'S MONARCH BUTTERFLY, POLLINATOR RESCUE, AND HABITAT RESTORATION PROGRAM (GENERAL MANAGER LaMOREAUX)

Attached is information provided by the Canyon to Desert Resource Conservation District regarding their Monarch Butterfly, Pollinator Rescue, and Habitat Restoration Project. Mr. Neal Weisenberger will be present to provide an overview of the Project and to answer any questions related to the Project and the support request submitted to the District.

Canyons to Desert Resource Conservation District

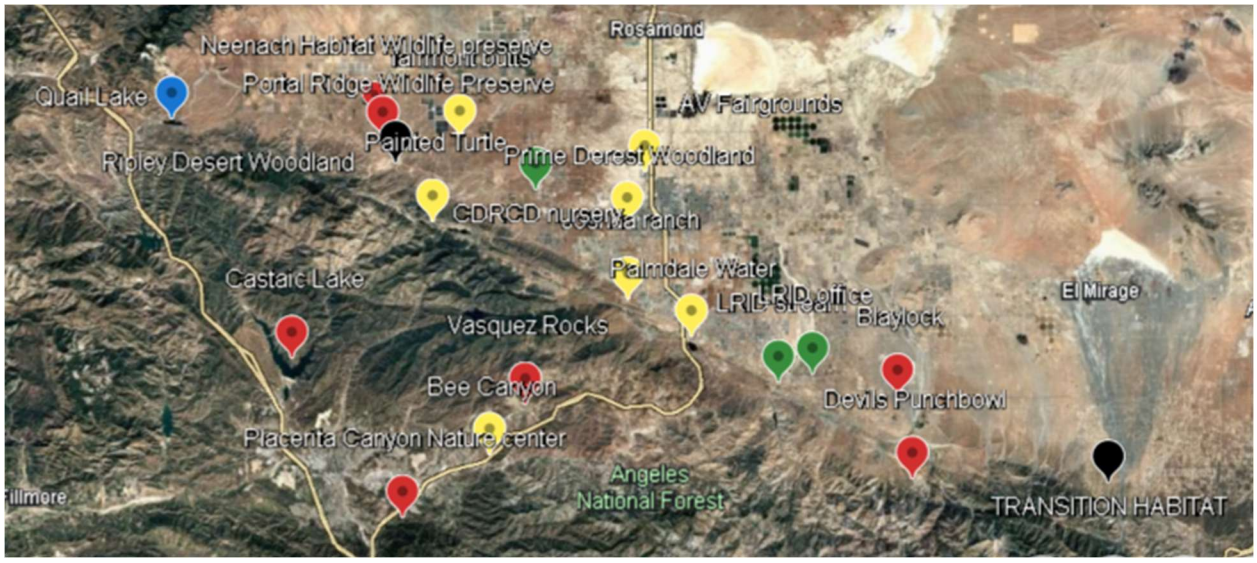
Antelope Valley Resource Conservation District, now known as Canyons to the Desert Resource Conservation District is currently working on a Monarch Butterfly, Pollinator Rescue and Habitat Restoration project that would be funded by the Wildlife Conservation Board through a Prop 4 grant. The Monarch Butterfly and Pollinator Rescue Program was created by Assembly Bill 2421, and signed into law in 2018. The Program was created for the purpose of recovering and sustaining populations of monarch butterflies and other pollinators.

Our goal is to install native pollinator gardens in select areas throughout the Antelope Valley that will provide resources necessary for monarchs and other local pollinator species to produce successive generations and sustain their migration.

Some sites may be a mix of 75% native plants and 25% drought tolerant plants based upon irrigation and conditions set by the property owner. We are currently in the process of constructing a demonstration garden at our nursery location here in Lancaster.



Our site will have a number of drought tolerant pollinators that have been grown in our nursery. It will include pathways, Monarch watering stations and educational signs for the public to learn more about pollinators.



How can you help us?

- We have identified Palmdale Water District Water Treatment Plant as a potential site
- Identify new sites within your organization
- Provide a letter of support for the project
- No cost to your organization (unless you decide to do your own installation and maintenance)

All costs will be funded through the Prop 4 grant if our application is accepted. We are open to considering other sites you may want added to our list. Providing a letter of support for our project would also greatly increase our chances of having our grant application accepted.

What does the CDRCD do?

- Design, provide plant materials, irrigation and installation (through our staff or your own appointed staff)
- Project site maintained for 25 years (through our staff or your own appointed staff)

One a site has been chosen we can provide the design of the garden, plant materials, irrigation equipment and installation. The prop 4 guidelines require the site be maintained for a total of 25 years. All of the work can be done by CDRCD staff or if your organization has guidelines to use your own staff and equipment we can provide resources to help complete the project.

Any help getting this project running would be greatly appreciated. Thank you for your time and we are looking forward to working with you.

Website: https://www.cdrcd.org/

Phone Number: 661-942-7306

Email: avrcd@carcd.org

Address: 10148 West Ave I Lancaster CA 93536

BOARD MEMORANDUM

DATE: December 15, 2025

TO: **BOARD OF DIRECTORS**

FROM: Mrs. Claudia Bolanos, Resource and Analytics Director

VIA: Mr. Dennis D. LaMoreaux, General Manager

RE: ***CONSIDERATION AND POSSIBLE ACTION TO APPROVE AND AUTHORIZE THE GENERAL MANAGER OR HIS DESIGNEE TO EXECUTE AMENDMENT NO. 7 (SWP #25-818) TO THE AGREEMENT FOR THE SUPPLY AND CONVEYANCE OF WATER UNDER THE DRY YEAR WATER PURCHASE PROGRAM BETWEEN THE DEPARTMENT OF WATER RESOURCES AND PALMDALE WATER DISTRICT. (NO BUDGET IMPACT – RESOURCE AND ANALYTICS DIRECTOR BOLANOS).***

Recommendation:

Staff recommend that the Board approves and authorizes the General Manager or his designee to execute Amendment No. 7 (SWP #25-818) with the Department of Water Resources (DWR), extending the Dry Year Purchase Program for an additional 25 years, revising pricing and purchase thresholds, and ensuring continued access to supplemental water during critically dry water years.

Alternative Options:

The Board may choose not to approve Amendment No. 7.

Impact of Taking No Action:

If Palmdale Water District (PWD) does not approve Amendment No. 7, participation in the Dry Year Water Purchase Program will end after the current term. While the impact is not large, the program provides a valuable safety net during drought conditions. Without this agreement, PWD would lose access to an additional supplemental supply.

Background:

The Dry Year Water Purchase Program is a cooperative arrangement between DWR and participating agencies, including PWD, designed to provide supplemental water during critically dry years. The program leverages transfers from Yuba County Water Agency through reservoir releases and groundwater substitution, ensuring flexibility and reliability in California's water supply system.

PWD entered the original agreement to secure an additional source of water during drought conditions without committing to fixed purchases. Historically, PWD has utilized the program for small but important quantities: 550 acre-feet in 2020, 261 acre-feet in 2021, and 168 acre-feet in 2022.

Amendment No. 7 updates key provisions of the agreement, including pricing adjustments, purchase thresholds, and administrative language to align with current regulatory requirements. It also extends the program term to 2050 and includes a provision allowing PWD to opt out every five years. This amendment reflects the District's commitment to maintaining water supply resilience and cost-effective strategies during drought periods.

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:

There is no budget impact.

Supporting Documents:

- Amendment No. 7 to Agreement for the Supply and Conveyance of Water between DWR and PWD

State of California
California Natural Resources Agency
DEPARTMENT OF WATER RESOURCES

_____

AMENDMENT NO. 7
TO
AGREEMENT FOR THE SUPPLY AND CONVEYANCE OF WATER BY THE DEPARTMENT OF WATER RESOURCES OF THE STATE OF CALIFORNIA UNDER THE DRY YEAR WATER PURCHASE PROGRAM
BETWEEN
THE DEPARTMENT OF WATER RESOURCES
AND
THE PALMDALE WATER DISTRICT

_____

SWP #25-818

This AMENDMENT 7 (Amendment) to the "Agreement for the Supply and Conveyance of Water by the Department of Water Resources of the State of California Under the Dry Year Water Purchase Program" (Participation Agreement) is entered into as of _____ between the Department of Water Resources of the State of California (DWR), pursuant to the provisions of the California Water Resources Development Bond Act, the State Central Valley Project Act, and other applicable laws of the State of California, and the Palmdale Water District, a public agency in the State of California, herein referred to as the "AGENCY." DWR and the AGENCY are herein referred to separately as the "Party" and collectively as the "Parties." Unless otherwise provided in this Amendment, the definitions in the Yuba Water Purchase Agreement, and the exhibits to that agreement shall apply to this Amendment.

RECITALS

A. The Yuba County Water Agency (Yuba) is engaged in the Yuba River Accord initiative (Yuba River Accord) to resolve issues associated with operation of the Yuba Project in a way that protects lower Yuba River fisheries and local water-supply reliability, while providing revenues for local flood control projects, water to use for protection and restoration of Sacramento-San Joaquin Delta (Delta) fisheries, and improvements in state-wide water supply management.

B. The Yuba River Accord includes three major elements, all of which must be in place for the Yuba River Accord to become effective: (1) the Fisheries Agreement (dated November 3, 2007) to provide higher flows for fish in the lower Yuba River under certain conditions, (2) Conjunctive Use Agreements between Yuba and its Member Units for implementing a conjunctive use and water use efficiency program; and (3) the "Agreement for the Long-Term Purchase of Water from Yuba County Water Agency by the Department of Water Resources" dated December 4, 2007 (Yuba Water Purchase Agreement), as amended.

C. Under the Yuba Water Purchase Agreement, Yuba makes surface water available for delivery and purchase by DWR, some of which is made available through substitution of groundwater for surface flows that would otherwise be used by its Member Units.

D. In 2007 and 2008, 21 State Water Project (SWP) Contractors and the San Luis & Delta-Mendota Water Authority (Authority) entered into agreements with DWR for the purchase and delivery of the water made available under the Yuba Water Purchase Agreement (cumulatively referred to as the Participation Agreements). The Participating SWP Contractors and the Authority are jointly referred to as "Participating Contractors." In 2014, two additional Participating SWP Contractors entered into Participation Agreements; and in 2020, one Participating SWP Contractor declined to renew the Participation Agreements. As of 2025, there are a total of 23 Participating Contractors.

E. Since entering into the Participation Agreements, the Participating Contractors have approved Amendments 1 through 6.

F. The Parties desire to extend the term and other provisions of this water supply and conveyance agreement whereby DWR will purchase water under the Yuba River Accord to make available for purchase by the Participating Contractors, including the AGENCY, through this Amendment 7.

Now, therefore, in accordance with the Recitals and in consideration of the terms and conditions herein, the Parties agree to the following:

1. DEFINITIONS

When used in this Participation Agreement, the following definitions will apply:

"Amendment" means this Amendment 7 to this Participation Agreement.

"Balanced Conditions" mean the hydrologic condition of the Delta as defined in the November 24, 1986 "Agreement between the United States of America and the State of California for Coordinated Operations of the Central Valley Project and the State Water Project" (COA), as amended.

"Banks Pumping Plant" means a SWP facility in the south Delta owned and operated by DWR.

"Carriage Water" means the water losses due to increased Delta outflow necessary to maintain baseline Delta salinity conditions as determined by DWR and Reclamation, that are associated with Storage Component Water and Net Accrued Groundwater Substitution Component Water that is exported by the Projects.

"Conference Year" means a Water Year for which the North Yuba Index is less than 500,000 acre-feet, calculated according to the procedures and formulas set forth in Exhibits 4 and 5 of the Fisheries Agreement, and using the latest available forecasts for the Water Year.

"Delivered Transfer Water" means Released Transfer Water from Yuba that is accounted as being exported by the Projects, or contributing to exports, as described in Section 5 of Exhibit 1 of the Yuba Water Purchase Agreement.

"Final Classification" means the Water Year classification for the Sacramento Valley Index in the May issue of DWR's Bulletin 120.

"Fisheries Agreement" means the agreement, which is part of the Yuba River Accord, among Yuba, the California Department of Fish and Game (now known as Department of Fish and Wildlife), and other parties, under which Yuba operates the Yuba Project to provide higher flows in the lower Yuba River under certain conditions to improve fisheries protection.

“Management Committee” means the committee, consisting of one representative each from Yuba, DWR, and Participating Contractors, established under Section 12 ("Technical Committee and Management Committee") of the Yuba Water Purchase Agreement.

“Member Unit” means a "Member Unit" as defined in Section 2(g) of the 1959 Yuba County Water Agency Act.

“Net Accrued Groundwater Substitution Component Water” is the net amount of water resulting from Yuba’s groundwater substitution pumping program that is made available to the Participating Contractors. The Net Accrued Groundwater Substitution Component Water will be released and delivered by Yuba to DWR in accordance with the Yuba Water Purchase Agreement.

“Participating Contractors” means all SWP Contractors and the Authority that have executed an agreement with DWR to purchase water originating from the Yuba Water Purchase Agreement.

“Participating SWP Contractors” means all Participating Contractors that are also SWP contractors.

“Participation Agreement” means the December 21, 2007 “Agreement for the Supply and Conveyance of Water by the Department of Water Resources of the State of California Under the Dry Year Water Purchase Program” as amended.

“Projects” means the State Water Project (SWP) and the Central Valley Project (CVP).

“Purchased Water” means the supply of Storage Component Water and Net Accrued Groundwater Substitution Component Water that has been delivered by Yuba to DWR and is accounted for as Delivered Transfer Water in the manner set forth in Exhibit 1 (“Scheduling and Accounting Principles”) of the Yuba Water Purchase Agreement. Purchased Water includes Carriage Water, water used as Delta outflow when the Export/Inflow ratio is controlling in the time period of July 1 through January 31 pursuant to the Revised Water Right Decision 1641, evaporation, and other losses assessed by DWR.

“Released Transfer Water” means the average daily flows measured at the Marysville Gage that are greater than the Baseline Flows and is further described in Section 4.2 of Exhibit 1 of the Yuba Water Purchase Agreement.

“Storage Component Water” means the water supplies available to DWR pursuant to Section 6 of the Yuba Water Purchase Agreement.

“SWP Long-Term Water Supply Contract” means the long-term water supply contract between the Parties, as amended.

“Technical Committee” means the committee, consisting of technical representatives from Yuba, DWR, and Participating Contractors, established under Section 12 ("Technical Committee and Management Committee") of the Yuba Water Purchase Agreement.

“Third Party” means an agency, entity or individual other than DWR, a Participating Contractor, a Member Unit, customer, landowner, or any other entity within the boundaries of a Participating Contractor, as defined in Section 9 (“Right of Yuba to Transfer Certain Quantities of Water to a Third Party”) of the Yuba Water Purchase Agreement.

“Third-Party Transfer” means a water transfer from Yuba to a Third Party as defined in Section 9 (“Right of Yuba to Transfer Certain Quantities of Water to a Third Party”) of the Yuba Water Purchase Agreement.

“Water Accounting Year” means the twelve-month period commencing January 1 through December 31.

“Water Year” means the twelve-month period from October 1 of one year through September 30 of the following year. For this Participation Agreement, each Water Year will be classified: (1) as "Wet," "Above Normal," "Below Normal," "Dry" or "Critical," based on the Sacramento Valley Water Year Hydrologic Classification in Figure 1 on page 188 of the State Water Resources Control Board's March 15, 2000, Revised Water-Right Decision 1641; or (2) as a "Conference Year."

“Yuba Project” means the Yuba River Development Project, including New Bullards Bar Dam and Reservoir on the North Yuba River.

“Yuba River Accord” means Yuba’s initiative as described in Recitals A and B of this Participation Agreement.

“Yuba Water Purchase Agreement” means the Agreement for the Long-Term Purchase of Water from Yuba County Water Agency by the Department of Water Resources, which is attached hereto as Attachment A, and as amended.

2. EFFECT OF THIS AMENDMENT

After December 31, 2025, this Amendment supersedes the Participation Agreement in its entirety.

3. TERM OF PARTICIPATION AGREEMENT

A. This Participation Agreement will become effective upon execution by the Parties and will terminate on December 31, 2050.

B. The Parties may terminate this Participation Agreement on December 31, 2030, if the Parties fail to amend this Participation Agreement pursuant to Section 4.B.3 as necessary to address amendments made to the Yuba Water Purchase Agreement regarding the quantity and pricing of water pursuant to Section 10 thereof.

C. This Participation Agreement will remain in effect beyond the termination dates set forth above to the extent required to enable the Parties to satisfy all obligations then existing or outstanding.

4. PURCHASED WATER

A. METHODS FOR ESTABLISHING ALLOCATIONS AND SHARING OF WATER

1. DWR will make available to the Participating SWP Contractors, as a group, 50% of the following types of water: Storage Component Water and Net Accrued Groundwater Substitution Component Water.

2. DWR will make available to the Participating SWP Contractors, and the Participating SWP Contractors may accept and purchase, Storage Component Water and Net Accrued Groundwater Substitution Component Water that is made available to the Authority, if the Authority elects to not take said water.

3. All water made available to the Participating SWP Contractors shall be allocated among the Participating SWP Contractors as follows:

a) DWR will allocate to the AGENCY its share of water that is made available to the Participating SWP Contractors based on the AGENCY'S maximum Table A amount in its SWP Long-Term Water Supply Contract

as a proportion of the total Table A amounts provided under the Long-Term Water Supply Contracts of the Participating SWP Contractors.

b) If any Participating SWP Contractor does not request some or any of its share of the water, the remaining Participating SWP Contractors have the first right to that water, and DWR will allocate that water among them, but excluding from the calculation the maximum Table A amount of the Participating SWP Contractors not requesting their full allocation.

c) The above process will repeat until all water is allocated to all Participating SWP Contractors that requested Purchased Water.

4. DWR will offer to the Authority any Storage Component Water and Net Accrued Groundwater Substitution Component Water made available pursuant to this Section and remaining unrequested water after completing the above allocation process.

5. For Storage Component Water, if the AGENCY does not take some or all of the water made available to it after the May 22 initial allocation, DWR will make that water available first to the other Participating SWP Contractors and then to the Authority. If that water is not purchased by the Participating SWP Contractors or the Authority, then the AGENCY will be required to purchase the remaining amount.

B. TYPES AND PRICES OF PURCHASED WATER

1. STORAGE COMPONENT WATER

a) For Storage Component Water that is accounted for as Purchased Water and made available to the AGENCY from January 1, 2026 through December 31, 2030, the AGENCY will pay:

i) Wet Year. $75 per acre-foot in a Final Classification Wet Water Year.

ii) Above Normal Year. $150 per acre-foot in a Final Classification Above Normal Water Year.

iii) Below Normal Year. $225 per acre-foot in a Final Classification Below Normal Water Year.

iv) Dry Year. $300 per acre-foot in a Final Classification Dry Water Year (except as provided in subsection vi, below).

v) Critical Year. $450 per acre-foot in a Final Classification Critical Water Year (except as provided in subsection vi, below).

vi) Consecutive Dry or Critical Years. $525 per acre-foot in two or more consecutive years with either a Final Classification of Dry or Critical Water Years.

b) Specified quantities of Storage Component Water in Dry and Critical Years (previously known as Component 2 Water) are subject to a price reduction. In 2004 during development of the Yuba River Accord, the Participating Contractors identified quantities of water they believed that the SWP and CVP would have received in Dry and Critical Years from the Yuba Project if alternative regulatory conditions of D-1644 had gone into effect (i.e., the long-term flow requirements). To address this concern, DWR and Yuba agreed to discount pricing for a portion of the Storage Component Water delivered in these year types. As a result, the price for such discounted Storage Component Water in Dry and Critical Water Years is 80% of the price of Storage Component Water agreed to by the Parties for the following quantities.

i) In any Water Year that has a Final Classification as Dry, the first 15,000 acre-feet of Storage Component Water; and

ii) In any Water Year that has a Final Classification as Critical, the first 30,000 acre-feet of Storage Component Water.

2. <u>NET ACCRUED GROUNDWATER SUBSTITUTION COMPONENT WATER</u>

The following provisions shall apply to Net Accrued Groundwater Substitution Component Water made available by Yuba, through DWR, to the AGENCY beginning on January 1, 2016 and continuing through the term of this Participation Agreement.

a) Except as otherwise provided herein, Net Accrued Groundwater Substitution Component Water will be accounted for in accordance with the provisions of the Yuba Water Purchase Agreement.

b) In every year within the term of this Participation Agreement when one or more Participating Contractors desire to purchase Net Accrued Groundwater Substitution Component Water from Yuba through DWR, the Management Committee representatives of DWR, Yuba, and the Participating Contractors will convene by February 15 and conclude by March 31 to negotiate the price per acre-foot of Net Accrued Groundwater Substitution Component Water, any provisions for the Delta export priority for such water, and any other terms applicable to the transfer of Net Accrued Groundwater Substitution Component Water. If necessary, the dates herein may be adjusted if approved in writing by Yuba and DWR with written notice to the AGENCY.

c) In every Water Accounting Year when: (1) one or more Participating Contractors desire to purchase Net Accrued Groundwater Substitution Component Water; (2) the annual negotiations referenced in Section 4.B.2.b have reached a successful conclusion calling for the purchase of such water that year; (3) the Management Committee representatives have agreed as to the terms of, and each of these representatives has recommended in writing said terms and the approval of, a letter agreement between Yuba and DWR establishing the price per acre-foot and any modified terms that will be applicable to the Net Accrued Groundwater Substitution Component Water for that Water Accounting Year; and (4) DWR and Yuba have executed said letter agreement, DWR will offer in writing to the AGENCY the opportunity to purchase Net Accrued Groundwater Substitution Component Water at the price and terms as provided in the letter agreement between DWR and Yuba.

3. POSSIBLE FUTURE ADJUSTMENTS TO QUANTITIES

If the provisions of Section 10 or 20 of the Yuba Water Purchase Agreement require changes to the quantity of water available therein, the Parties agree that amendment of this Participation Agreement for such purposes will be a condition precedent of any amendment of the Yuba Water Purchase Agreement pursuant to Section 10 or 20 thereof. The Parties agree to meet and negotiate in good faith potential changes to this Participation Agreement.

4. PRICE FOR FALL DELIVERED WATER

   Storage Component Water and Net Accrued Groundwater Substitution Component Water that is accounted as Delivered Transfer Water in the months of October and November will be priced using the determination of Water Year that was in effect before September 30 of that year.

C. THIRD-PARTY TRANSFERS PURSUANT TO SECTION 9 OF THE YUBA WATER PURCHASE AGREEMENT

The Yuba Water Purchase Agreement provides for the sale of water to Third Parties under the terms outlined in Section 9 ("Right of Yuba to Transfer Certain Quantities of Water to a Third Party") of the Yuba Water Purchase Agreement. So long as a Third-Party Transfer is carried out consistent with the accounting provisions of Exhibit 1 for Released Transfer Water during Balanced Conditions in the Yuba Water Purchase Agreement, the AGENCY will not object based on the use of the transfer water accounting provisions of Exhibit 1 to such a transfer as not protective of DWR and the AGENCY as legal users of water during the time the AGENCY remains a Participating Contractor. The AGENCY also agrees that, as a Participating Contractor, it will not purchase water directly from Yuba other than through the Yuba Water Purchase Agreement.

5. REQUESTS, SCHEDULING, CONVEYANCE, AND STORAGE

Scheduling and conveyance of Purchased Water will be dependent on factors like releases by Yuba (including the flow schedule for the lower Yuba River as provided for in the Fisheries Agreement, the North Yuba Index, or the Yuba River Index), capacity of CVP and SWP facilities, and Bay-Delta conditions. To meet the goals of Section 7, the AGENCY may modify the requests in writing and DWR may update the allocation of Purchased Water without amending this Participation Agreement.

A. REQUESTS FOR STORAGE COMPONENT WATER

1. On or about April 11 of each Water Accounting Year, DWR will inform the AGENCY of the potential quantity of Storage Component Water that is available to the AGENCY.

2. On or before April 18, the AGENCY will submit an initial request to DWR for Storage Component Water.

3. On or about May 22, DWR will notify the AGENCY of the quantity of Storage Component Water to be allocated to the AGENCY pursuant to Section 5.A. DWR will continue to update the allocation to reflect the latest conditions.

4. In the event that Yuba wishes to conduct the First Type of Third-Party Transfer (as described in the Yuba Water Purchase Agreement) in the months of July through November during Balanced Conditions, and Yuba notifies DWR to not back a specified quantity of Released Transfer Water into Project storage, DWR will notify the AGENCY within 5 business days after Yuba issued the notice and provide an opportunity for the AGENCY to guarantee purchase of that portion of such water allocated to the AGENCY in accordance with Section 4.A at the current year pricing regardless of whether it becomes Delivered Transfer Water. Such water, when stored in Project storage, will be released in a subsequent year to the AGENCY provided it was stored in Project storage and not spilled by flood control releases before its scheduled release. The AGENCY will pay for this allocated amount at the current year pricing regardless of whether it becomes Delivered Transfer Water in the current year.

B. REQUESTS FOR NET ACCRUED GROUNDWATER SUBSTITUTION COMPONENT WATER

1. On or about April 1 of each Water Accounting Year, DWR will notify the AGENCY of the quantity of Net Accrued Groundwater Substitution Component Water that Yuba will make available and the terms of such water, including the price per acre-foot, and any other applicable terms.

2. On or before April 11, the AGENCY will submit an initial request to DWR for the amount of Net Accrued Groundwater Substitution Component Water.

3. On or before May 14, the AGENCY may adjust the requested quantity of Net Accrued Groundwater Substitution Component Water.

4. On or before May 14, the AGENCY will commit to the final quantity of Net Accrued Groundwater Substitution Component Water to be purchased during the Water Accounting Year, but such amount will not be less than the actual amount of Net Accrued Groundwater Substitution Component Water made available between April 1 and May 15 in accordance with the accounting provisions for Net Accrued Groundwater Substitution

Component Water set forth in Exhibit 1 of the Yuba Water Purchase Agreement.

5. On or about May 22, DWR will notify the AGENCY of the final quantity of Net Accrued Groundwater Substitution Component Water to be allocated to the AGENCY.

6. DWR will provide Yuba not less than 72-hours' notification for suspension or termination of groundwater pumping due to limitations on the ability to divert the Net Accrued Groundwater Substitution Component Water. In the event of such suspension or termination, the AGENCY will pay for its allocated quantity of Net Accrued Groundwater Substitution Component Water, including the amount incurred through the 72-hour notification period irrespective of whether DWR was able to divert the Net Accrued Groundwater Substitution Component Water.

7. The Parties acknowledge that Section 5.1.8 of the Yuba Accord Fisheries Agreement allows the River Management Team to schedule the release of a portion of Net Accrued Groundwater Substitution Component Water at a time when it might not be transferable. The AGENCY will not be required to pay for any portion of Net Accrued Groundwater Substitution Component Water that is released under Section 5.1.8 to the extent that it is not transferable under the accounting provisions set forth in Exhibit 1 of the Yuba Water Purchase Agreement.

8. The final allocated Net Accrued Groundwater Substitution Component Water can be reduced if Yuba Member Units pump less than the quantity in letter agreement between Yuba and DWR. The AGENCY will not be required to pay for this reduction.

9. If necessary, the dates herein may be adjusted if approved in writing by Yuba and DWR with written notice to the AGENCY.

C. SCHEDULING

1. The AGENCY shall submit monthly water delivery schedules and revised monthly schedules, if any, for approval to the Division of Operation and Maintenance, Office of the Division Manager, Water Deliveries Reporting Unit, indicating timing and point of delivery requested under this Agreement

with reference to SWP #25-818. Monthly and revised schedules shall be sent by electronic mail to SWP-SWDS@water.ca.gov.

2. The AGENCY shall submit weekly water delivery schedules that indicate timing and point of delivery requested with reference to SWP #25-818, by electronic mail by 10:00 am, Wednesday, for Monday through Sunday of next week to the following:

   a) Water Delivery Scheduling
   Water_deliv_sched@water.ca.gov

   b) Power Management and Optimization Section
   POCOptimization@water.ca.gov

   c) Day-Ahead Scheduling Unit
   Presched@water.ca.gov

   d) Water Operations Scheduling Section
   WOSS@water.ca.gov

D. CONVEYANCE

1. Purchased Water is subject to deduction of Carriage Water and other losses assessed by DWR. The conveyance of the remaining Purchased Water to the AGENCY's turnouts from the SWP Delta facilities is subject to the terms and conditions of this Participation Agreement, Article 55 of the AGENCY's SWP Long-Term Water Supply Contract, and applicable laws. Use of Purchased Water under this Participation Agreement shall be restricted to the AGENCY's service area inside SWP place of use. Delivery priorities shall be determined in accordance with Article 12(f) of the AGENCY's SWP Long-Term Water Supply Contract, with Purchased Water being classified as non-project water.

2. The AGENCY shall be responsible for, and shall bear all risks for, all conveyance losses and other water losses, if applicable. DWR shall deduct any losses, as determined by DWR, from the amount of Purchased Water.

3. In the event that further adjustments are required, including if final Carriage Water value differs from the initial estimate, DWR may, after consulting with the AGENCY, reclassify the AGENCY's Table A water to address any discrepancies.

E. STORAGE

The storage of Purchased Water under this Participation Agreement is subject to the terms and conditions of this Participation Agreement, Article 56(c) of the AGENCY's SWP Long-Term Water Supply Contract, and applicable laws. AGENCY acknowledges that DWR solely determines the available storage capacity and such storage may not interfere with SWP operations or other SWP Contractor's contractual rights. DWR will notify AGENCY of the risk of loss of the stored Purchased Water as soon as practicable. AGENCY acknowledges that stored Purchased Water is subject to spill, actual or theoretical, as determined by DWR. No power credit will accrue to AGENCY for storage of Purchased Water.

6. INVOICING AND PAYMENTS

DWR will invoice the AGENCY and the AGENCY will submit payment to DWR based on each invoice as provided below.

A. INVOICING FOR PURCHASED WATER

1. Initial Storage Component Water Invoice: On or about May 22 (or within 10 business days of the date that DWR receives an invoice from Yuba), DWR will invoice the AGENCY for 50% of the estimated amount of Storage Component Water allocated to the AGENCY.

2. Initial Net Accrued Groundwater Substitution Component Water Invoice: On or about May 22 (or within 10 business days of the date that DWR receives an invoice from Yuba) DWR will invoice the AGENCY for 50% of the amount of Net Accrued Groundwater Substitution Component Water allocated to the AGENCY.

3. Second Net Accrued Groundwater Substitution Component Water Invoice: On or about August 30 (or within 10 business days of the date that DWR receives an invoice from Yuba) DWR will invoice the AGENCY for 40% of the allocated Net Accrued Groundwater Substitution Component Water allocated to the AGENCY.

4. Final Invoice for Purchased Water: On January 17 of the next calendar year (or within 10 business days of the date that DWR receives an invoice from Yuba), DWR will invoice the AGENCY for the remaining unpaid cost for Purchased Water.

B. INVOICE FOR CONVEYANCE COSTS

DWR will invoice the AGENCY monthly for conveyance charges in accordance with Article 55 of the SWP Long-Term Water Supply contract. Specifically, the AGENCY shall pay the power resources (including on-aqueduct, off-aqueduct, and any other power) incurred in the conveyance of such water from the Delta for the year in which the Purchased Water is conveyed.

C. PAYMENTS FOR COSTS ATTRIBUTABLE TO YUBA WATER PURCHASE AGREEMENT

The Parties agree that costs DWR is obligated to pay Yuba pursuant to the Yuba Water Purchase Agreement, and that have not been identified by this Participation Agreement, will be an obligation of the Participating Contractors. If necessary, the Parties will amend this Participation Agreement to provide for invoicing and payment of such costs if not provided for herein.

D. PAYMENT TERMS AND CONDITIONS

1. The AGENCY will pay DWR within 31 days after receiving an invoice.

2. DWR will assess on the AGENCY a 1% interest rate per month from the due date until paid in full.

3. If the AGENCY disputes an invoice, the AGENCY will still pay the full invoiced amount. The AGENCY will submit a notice to DWR identifying the dispute within 31 days of receipt of the invoice. Within 21 days after DWR receives the notice, the Parties will meet and, if appropriate, obtain assistance from the Technical Committee and Management Committee to resolve the dispute. If the Parties find that the AGENCY overpaid, DWR will apply a credit on the next invoice. If there is no resolution, the Parties will follow the dispute resolution process in Section 11.

4. Invoices will itemize any prior payments and credits, and the total due, less any additional credits.

7. EFFORTS TO MAXIMIZE THE BENEFICIAL USE OF WATER

DWR will use all reasonable efforts to maximize the amount of Purchased Water available to the Participating Contractors. Those efforts will include, but are not limited to fully exercising its rights and obligations under the Yuba Water Purchase Agreement,

coordinating with Reclamation on the operations of the SWP and CVP, and storing water in SWP facilities when Delta pumping is constrained, as provided in the Yuba Water Purchase Agreement.

8. MEMBERSHIP ON COMMITTEES

DWR agrees that a representative of the Participating Contractors will be a member of the Management Committee and Technical Committee.

9. CONFERENCE YEAR PRINCIPLES

During any Conference Year, DWR will meet with Yuba and the other parties to the Fisheries Agreement and the Conjunctive Use Agreements to: (1) determine how to address the circumstances, and (2) discuss the operation of the Yuba Project during that Water Accounting Year.

10. LIABILITY

A. DWR will not assert that the AGENCY, its directors, officers, agents or employees, are liable for damages of any nature whatsoever arising out of any actions or omissions by DWR, its Director, officers, agents or employees, related to DWR's performance of this Participation Agreement, where such liability is caused by an act, error or omission of DWR, its Director, officers, agents or employees.

B. The AGENCY will not assert that DWR, its Director, officers, agents or employees, are liable for damages of any nature whatsoever arising out of any actions or omissions by the AGENCY, its directors, officers, agents or employees, related to the AGENCY's performance of this Participation Agreement, where such liability is caused by an act, error or omission of the AGENCY, its director, officers, agents or employees.

C. To the extent permitted by California law, the AGENCY will indemnify, defend and hold DWR, its Director, officers, agents and its employees safe and harmless from any and all, claims, judgments, damages, penalties, costs, liabilities and losses (including without limitation, sums paid in settlement of claims, actual attorney's fees paralegal fees, consultant fees, engineering fees, expert fees, and any other professional fees) that arise from or are related in any way to the AGENCY's activities or performance under this Participation Agreement that are under the exclusive control of the AGENCY, including but

not limited to the release, conveyance, use or distribution of water by the AGENCY for purposes of this Participation Agreement.

D. To the extent permitted by California law, DWR will indemnify, defend and hold the AGENCY, its directors, officers, agents and its employees safe and harmless from any and all, claims, judgments, damages, penalties, costs, liabilities and losses (including without limitation, sums paid in settlement of claims, actual attorney's fees, paralegal fees, consultant fees, engineering fees, expert fees, and any other professional fees) that arise from or are related in any way to DWR's activities or performance under this Participation Agreement that are under the exclusive control of DWR, including but not limited to the release, conveyance, use or distribution of water by DWR for purposes of this Participation Agreement.

11. DISPUTE RESOLUTION

A. Should any material disputes arise concerning any provision of this Participation Agreement, or the rights and obligations of the Parties hereunder, including those involving possible termination or those that might cause the initiation of any administrative or judicial proceeding to enforce or interpret this Participation Agreement, the Party that believes a dispute exists will notify the other Party, and the Parties will promptly meet and confer to attempt to resolve the perceived dispute.

B. If the process described in the preceding subsection fails to resolve the dispute within 30 days, the Parties will submit the dispute to a mediator who has experience in water-related disputes. The costs of any such mediation will be borne equally by the Parties. Initiation of this mediation process will be through written notice by one Party to the other Party. The Parties reserve all of their other remedies that may be provided by law or equity in the event that such mediation fails to resolve a dispute. The Parties, in consultation with the mediator, will use their best efforts to resolve the dispute within 30 days. Under no circumstances, however, will mediation under this Section result in a requirement that diminishes, limits or contravenes the discretion, authority or any delegated authority of the Director of DWR or the AGENCY under State law.

C. If mediation fails to resolve the dispute, and prior to commencing any legal action to resolve the dispute, the Party proposing to commence legal action will provide the other Party 30 days' written notice of such action, provided that

such notice will not be required where a delay in commencing an action would prejudice the interests of the Party that intends to file suit. During the 30-day notice period, the Parties will continue to attempt to resolve the dispute.

12. NOT A PRECEDENT

The terms and conditions set forth in this Participation Agreement are not intended to set a precedent for any future contractual arrangements for conveying non-SWP water by DWR to the AGENCY.

13. PAYMENTS, NOTICES, OR OTHER COMMUNICATIONS

The time for providing any payments, notices, or other communications specified in this Participation Agreement may be extended within the term of this Participation Agreement with the consent of the Parties, confirmed in writing, without requiring an amendment to this Participation Agreement. All payments, notices, or other communications required under this Participation Agreement will be in writing, and will be deemed to have been duly given upon the date of service, if: (a) served personally on the Party to whom notice is to be given; (b) sent by electronic mail, and the Party to whom notice is to be given confirms receipt; or (c) on the third day after mailing, if mailed to the Party to whom payment, notice or other communication is directed, by first-class mail, postage prepaid, and properly addressed to the designated representatives of the Party set forth below.

DWR:

Assistant Division Manager of Water Management
Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236-0001
cc: swpwatertransfers@water.ca.gov

AGENCY:

Claudia Bolanos, Resource and Analytics Director
Palmdale Water District
2029 East Avenue Q
Palmdale, CA 93550
cbolanos@palmdalewater.org
(661) 456-1092

A Party may notify the other Party in writing of a change in its designated representatives, without requiring an amendment to this Participation Agreement. When requested, unless otherwise specified in this Participation Agreement, DWR will provide to the AGENCY copies of any and all communications it sends or receives pursuant to the terms of the Yuba Water Purchase Agreement. These communications will be shared as soon as possible, but not later than 14 days after DWR receives, or sends, such communications to Yuba, the Authority, and/or other Participating SWP Contractors.

14. SIGNATORIES' AUTHORITY

The signatories to this Participation Agreement represent that they have authority to execute this Participation Agreement and to bind the Party on whose behalf they execute this Participation Agreement.

The Parties agree that this Participation Agreement will be executed using DocuSign by electronic signature, which shall be considered an original signature for all purposes and shall have the same force and effect as an original signature. All Parties will receive an executed copy of this Agreement via DocuSign after all Parties have signed.

15. COUNTERPARTS OF THIS PARTICIPATION AGREEMENT

This Participation Agreement may be signed in any number of counterparts by the Parties, each of which will be deemed to be an original, and all of which together will be deemed to one and the same instrument. This Participation Agreement, if executed in counterparts, will be valid and binding on a Party as if fully executed all in one copy.

16. BINDING ON SUCCESSORS/ASSIGNMENT

This Participation Agreement will bind and inure to the benefit of the respective successors and assigns of the Party, except that, none of the obligations of the Parties set forth in this Participation Agreement will be assigned without the prior, written approval of the other Party, which approval will not unreasonably be withheld.

17. NO THIRD-PARTY BENEFICIARIES

This Participation Agreement will not be construed to create any third-party beneficiaries, except as set forth in this section. This Participation Agreement is for the sole benefit of the Parties, their respective successors and assigns, and no other person or entity will be entitled to rely on or receive any benefit from this Participation Agreement or any of its terms.

18. AMENDMENTS

A. This Participation Agreement may be amended or modified only by written agreement approved and executed by the Parties.

B. Prior to any amendment of this Participation Agreement, the Parties will meet and confer with the other Participating SWP Contractors and the Authority. The Parties will not agree to any amendment to this Participation Agreement that would adversely affect the rights and obligations of the Participating SWP Contractors under each of their respective "Agreement for the Supply and Conveyance of Water by the Department of Water Resources of the State of California to the Participating SWP Contractors under the Dry Year Water Purchase Program" or the Authority under its "Agreement for the Supply and Conveyance of Water by the Department of Water Resources of the State of California to the San Luis & Delta-Mendota Water Authority under the Dry Year Water Purchase Program."

C. Prior to any amendment of any "Agreement for the Supply and Conveyance of Water by the Department of Water Resources of the State of California to the Participating SWP Contractors Under the Dry Year Water Purchase Program", DWR will meet and confer with the AGENCY. DWR will not agree to any amendments to any "Agreement for the Supply and Conveyance of Water by the Department of Water Resources of the State of California to the Participating SWP Contractors Under the Dry Year Water Purchase Program" or the "Agreement for the Supply and Conveyance of Water by the Department of Water Resources of the State of California to the San Luis & Delta-Mendota Water Authority under the Dry Year Water Purchase Program" that would adversely affect the rights and obligations under this Participation Agreement.

D. DWR will meet and confer with the AGENCY, the other Participating SWP Contractors and the Authority before agreeing to any proposed changes, amendments, or supplements to the Yuba Water Purchase Agreement. DWR will not agree to any changes, amendments, or supplements to the Yuba Water Purchase Agreement or its Exhibits that would be inconsistent with or adversely affect the Parties' rights and obligations under this Participation Agreement, any other "Agreement for the Supply and Conveyance of Water by the Department of Water Resources of the State of California to the Participating SWP Contractors Under the Dry Year Water Purchase Program" or under the "Agreement for the Supply and Conveyance of Water by the Department of

Water Resources of the State of California to the San Luis & Delta-Mendota Water Authority under the Dry Year Water Purchase Program."

19. OPINIONS AND DETERMINATIONS

Where the terms of this Participation Agreement provide for action to be based upon the opinion, determination, approval or review of either Party, such terms are not intended to be, and will not be construed as permitting such actions to be arbitrary, capricious or unreasonable. Any opinion, determination, approval or review required of a Party under this Participation Agreement will be provided in a timely manner.

20. REASONABLE COOPERATION

The Parties will reasonably cooperate with each other, including the execution of all necessary documents and providing assistance in obtaining approvals and permits from regulatory agencies required to perform the obligations under this Participation Agreement and to carry out the purpose and intent of this Participation Agreement.

21. CONSTRUCTION AND INTERPRETATION

This Participation Agreement is entered into freely and voluntarily. This Participation Agreement has been arrived at through negotiation, and each Party has had a full and fair opportunity to revise the terms of this Participation Agreement. Consequently, the normal rule of construction that any ambiguities are to be resolved against the drafting party will not apply in construing or interpreting this Participation Agreement.

22. COMPLETE CONTRACT

This Participation Agreement constitutes the sole, final, complete, exclusive and integrated expression and statement of the terms of this Participation Agreement among the Parties concerning the subject matter, and supersedes all prior negotiations, representations or agreements, either oral or written, that may be related to the subject matter of this Participation Agreement, except as to those other agreements that are expressly referred to in this Participation Agreement.

23. DETERMINATION OF UNENFORCEABLE PROVISIONS

If any term or provision of this Participation Agreement is deemed invalid or unenforceable by any court of final jurisdiction, the Parties will meet and attempt to address this situation pursuant to the provisions of Section 11 of this Participation Agreement.

24. WAIVER

The waiver at any time by a Party of its rights with respect to a default or other matter arising in connection with this Participation Agreement will not be deemed a waiver with respect to any other default or matter.

25. TIME

Time is of the essence in this Participation Agreement. Any date specified in this Participation Agreement may be changed with the written consent of the Parties.

26. APPLICABLE LAW

This Participation Agreement will be construed under and will be deemed to be governed by the laws of the State of California.

27. VENUE

Any appropriate County under California law will be venue for any state court litigation concerning the enforcement or interpretation of this Participation Agreement.

28. REMEDIES NOT EXCLUSIVE

The remedies provided in this Participation Agreement are cumulative and not exclusive, and are in addition to any other remedies that may be provided by law or equity. The exercise by the Party of any remedy under this Participation Agreement will be without prejudice to the enforcement of any other remedy.

29. OFFICIALS NOT TO BENEFIT

No member or delegate to Congress, Resident Commissioner, or Federal or State official will be admitted to any share or part of this Participation Agreement or to any benefit that may arise therefrom.

30. STANDARD CLAUSES

With respect to the mutual obligations of the Parties under this Participation Agreement, the Parties will comply with the Standard Clauses as shown on Attachment B ("State of California Standard Clauses") to this Participation Agreement for the State of California, Contracts with Public Entities.

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31. ATTACHMENTS INCORPORATED

Each attachment to which reference is made is deemed incorporated in this Participation Agreement, whether or not actually attached.

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IN WITNESS WHEREOF, the Parties hereto, by their authorized representatives, have executed this Participation Agreement on the last date set forth below.

Approved as to legal form and sufficiency:	STATE OF CALIFORNIA DEPARTMENT OF WATER RESOURCES
Ann Carroll General Counsel	Karla Nemeth Director
Date	Date
Approved as to legal form and sufficiency:	PALMDALE WATER DISTRICT
Name Counsel	Dennis D. LaMoreaux General Manager
Date	Date

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ATTACHMENTS:

Attachment A: Amendment 8 to the Agreement for the Long-Term Purchase of Water from Yuba County Water Agency by the Department of Water Resources

Attachment B: DWR Standard Clauses

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ATTACHMENT A

AMENDMENT 8 TO THE AGREEMENT FOR THE LONG-TERM PURCHASE OF WATER FROM YUBA COUNTY WATER AGENCY BY THE DEPARTMENT OF WATER RESOURCES

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ATTACHMENT B

**DEPARTMENT OF WATER RESOURCES STANDARD CLAUSES
FOR
AGREEMENT FOR THE SUPPLY AND CONVEYANCE OF WATER
BY THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF CALIFORNIA
TO THE AGENCY
UNDER
THE DRY YEAR WATER PURCHASE PROGRAM**

Worker's Compensation Clause. Contractor needs to be aware of the provisions which require every employer to be insured against liability for Worker's Compensation or to undertake self-insurance in accordance with the provisions, and Contractor affirms to comply with such provisions before commencing the performance of the work of this Agreement. (Labor Code Section 3700).

Nondiscrimination Clause. During the performance of this Agreement, Contractor and its subcontractors shall not deny the contract's benefits to any person on the basis of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status, nor shall they discriminate unlawfully against any employee or applicant for employment because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status. Contractor shall insure that the evaluation and treatment of employees and applicants for employment are free of such discrimination. Contractor and subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Gov. Code §12900 et seq.), the regulations promulgated thereunder (Cal. Code Regs., tit. 2, §11000 et seq.), the provisions of Article 9.5, Chapter 1, Part 1, Division 3, Title 2 of the Government Code (Gov. Code §§11135-11139.5), and the regulations or standards adopted by the awarding state agency to implement such article. Contractor shall permit access by representatives of the Department of Fair Employment and Housing and the awarding state agency upon reasonable notice at any time during the normal business hours, but in no case less than 24 hours' notice, to such of its books, records, accounts, and all other sources of information and its facilities as said Department or Agency shall require to ascertain compliance with this clause. Contractor and its subcontractors shall give written notice of their obligations under this clause to

labor organizations with which they have a collective bargaining or other agreement. (See Cal. Code Regs., tit. 2, §11105.)

Contractor shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under the Agreement.

Compliance with Laws, Regulations, Permit Requirements. Contractor shall at all times comply with, and require its contractors and subcontractors to comply with, all applicable federal and State laws, rules and regulations, permits and all applicable local ordinances, specifically including but not limited to environmental, procurement and safety laws, rules, regulations, permits and ordinances.

Availability of Funds. Work to be performed under this contract is subject to the availability of funds through the State's normal budget process.

Audit Clause. Contractor agrees that the awarding department, the Department of General Services, the Bureau of State Audits, or their designated representative shall have the right to review and to copy any records and supporting documentation pertaining to the performance of this Agreement. Contractor agrees to maintain such records for possible audit for a minimum of three (3) years after final payment, unless a longer period of records retention is stipulated. Contractor agrees to allow the auditor(s) access to such records during normal business hours and to allow interviews of any employees who might reasonably have information related to such records. Further, Contractor agrees to include a similar right of the State to audit records and interview staff in any subcontract related to performance of this Agreement. (Gov. Code §8546.7, Pub. Contract Code §10115 et seq., CCR Title 2, Section 1896).

Compensation. The consideration to be paid Contractor, as provided herein, shall be in compensation for all of Contractor's expenses incurred in the performance hereof, including travel, per diem, and taxes, unless otherwise expressly so provided.

Drug-Free Workplace Certification. Contractor will comply with the requirements of the Drug-Free Workplace Act of 1990 and will provide a drug-free workplace by taking the following actions:

a. Publish a statement notifying employees that unlawful manufacture, distribution, dispensation, possession or use of a controlled substance is prohibited and specifying actions to be taken against employees for violations.

b. Establish a Drug-Free Awareness Program to inform employees about:

1) the dangers of drug abuse in the workplace;

2) the person's or organization's policy of maintaining a drug-free workplace;

3) any available counseling, rehabilitation and employee assistance programs; and,

4) penalties that may be imposed upon employees for drug abuse violations.

c. Every employee who works on the proposed Agreement will:

1) receive a copy of the company's drug-free workplace policy statement; and,

2) agree to abide by the terms of the company's statement as a condition of employment on the Agreement.

Failure to comply with these requirements may result in suspension of payments under the Agreement or termination of the Agreement or both and Contractor may be ineligible for award of any future State agreements if the department determines that any of the following has occurred: the Contractor has made false certification, or violated the certification by failing to carry out the requirements as noted above. (Gov. Code §8350 et seq.)

Americans with Disabilities Act. Contractor assures the State that it complies with the Americans with Disabilities Act (ADA) of 1990, which prohibits discrimination on the basis of disability, as well as all applicable regulations and guidelines issued pursuant to the ADA. (42 U.S.C. 12101 et seq.)

Conflict of Interest. Contractor needs to be aware of the following provisions regarding current or former state employees. If Contractor has any questions on the status of any person rendering services or involved with the Agreement, the awarding agency must be contacted immediately for clarification.

Current State Employees (Pub. Contract Code §10410):

1) No officer or employee shall engage in any employment, activity or enterprise from which the officer or employee receives compensation or has a financial interest and which is sponsored or funded by any state agency, unless the

employment, activity or enterprise is required as a condition of regular state employment.

2) No officer or employee shall contract on his or her own behalf as an independent contractor with any state agency to provide goods or services.

Former State Employees (Pub. Contract Code §10411):

1) For the two-year period from the date he or she left state employment, no former state officer or employee may enter into a contract in which he or she engaged in any of the negotiations, transactions, planning, arrangements or any part of the decision-making process relevant to the contract while employed in any capacity by any state agency.

2) For the twelve-month period from the date he or she left state employment, no former state officer or employee may enter into a contract with any state agency if he or she was employed by that state agency in a policy-making position in the same general subject area as the proposed contract within the 12-month period prior to his or her leaving state service.

If Contractor violates any provisions of above paragraphs, such action by Contractor shall render this Agreement void. (Pub. Contract Code §10420)

Members of boards and commissions are exempt from this section if they do not receive payment other than payment of each meeting of the board or commission, payment for preparatory time and payment for per diem. (Pub. Contract Code §10430 (e))

Child Support Compliance Act. For any Agreement in excess of $100,000, the contractor acknowledges in accordance with Public Contract Code 7110, that:

a. The contractor recognizes the importance of child and family support obligations and shall fully comply with all applicable state and federal laws relating to child and family support enforcement, including, but not limited to, disclosure of information and compliance with earnings assignment orders, as provided in Chapter 8 (commencing with section 5200) of Part 5 of Division 9 of the Family Code; and

b. The contractor, to the best of its knowledge is fully complying with the earnings assignment orders of all employees and is providing the names of all new employees to the New Hire Registry maintained by the California Employment Development Department.

Air or Water Pollution Violation. Under the State laws, the Contractor shall not be: 1) in violation of any order or resolution not subject to review promulgated by the State Air Resources Board or an air pollution control district; 2) subject to cease and desist order not subject to review issued pursuant to Section 13301 of the Water Code for violation of waste discharge requirements or discharge prohibitions; or 3) finally determined to be in violation of federal law relating to air or water pollution.

Recycling Certification. The Contractor shall certify in writing under penalty of perjury, the minimum, if not exact, percentage of post-consumer material as defined in the Public Contract Code Section 12200, in products, materials, goods, or supplies offered or sold to the State regardless of whether the product meets the requirements of Public Contract Code Section 12209. With respect to printer or duplication cartridges that comply with the requirements of Section 12156(e), the certification required by this subdivision shall specify that the cartridges so comply (Pub. Contract Code §12205).

DRAFT

BOARD MEMORANDUM

DATE: December 15, 2025

TO: **BOARD OF DIRECTORS**

FROM: Mr. Scott Rogers, Assistant General Manager

VIA: Mr. Dennis D. LaMoreaux, General Manager

RE: ***CONSIDERATION AND POSSIBLE ACTION ON APPROVAL OF RESOLUTION NO. 25-12 BEING A RESOLUTION OF THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT TO APPROVE REIMBURSEMENT OF FUNDS FINANCED THROUGH THE STATE WATER RESOURCES CONTROL BOARD FOR THE DESIGN AND CONSTRUCTION OF THE PURE WATER ANTELOPE VALLEY PROJECT IN AN AMOUNT UP TO $207 MILLION. (NO BUDGET IMPACT – ASSISTANT GENERAL MANAGER ROGERS)***

Recommendation:

Staff recommends that the Board approve Resolution No. 25-12 to approve the reimbursement of funds financed through the State Water Resources Control Board (SWRCB) for the design and construction of the Pure Water Antelope Valley project in an amount up to $207 million.

Alternative Options:

The alternative is to fully fund the Project through Federal funding through Environmental Protection Agency's (EPA) Water Infrastructure Finance and Innovation Act (WIFIA).

Impact of Taking No Action:

The Clean Water State Revolving Fund (CWSRF) provides an opportunity for the District to potentially be eligible for loan forgiveness.

Background:

The Clean Water State Revolving Fund (CWSRF) is a federal-state partnership program created under the Clean Water Act and administered by the U.S. EPA and state agencies, such as the California State Water Resources Control Board. It provides low-interest loans and financial assistance for a wide range of water quality projects, including water reuse. Some of the key features of the program include:

- Low-cost financing for projects ranging from under $1 million to over $100 million
- Interest rates typically about half the most recent General Obligation Bond rate
- Repayment terms up to 30 years
- Grants or principal forgiveness may be available for small or disadvantaged communities

Pure Water Antelope Valley (Pure Water AV) is the District's long term water supply project providing 5 million gallons a day (MGD) of additional water supply by purifying recycled water to potable water standards and adding it to the groundwater. The CWSRF program offers low-interest loans to eligible entities for water infrastructure projects, including wastewater treatment, recycled water, and stormwater management initiatives.

District staff are working on an application requesting up to $207 million funding from CWSRF for the full-scale project. Unlike WIFIA funding, the entire project can be 100-percent funded through CWSRF. By applying for the CWSF loan, it allows District to select the financing with the most favorable terms. With the application, the resolution is required to show commitment to reimbursing the loan once award.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiative No. 4 – Financial Health and Stability.

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

Budget:

There is no budget impact.

Supporting Documents:

- Resolution No. 25-12

RESOLUTION NO. 25-12

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT TO APPROVE REIMBURSEMENT OF FUNDS FINANCED THROUGH THE STATE WATER RESOURCES CONTROL BOARD FOR THE DESIGN AND CONSTRUCTION OF THE PURE WATER ANTELOPE VALLEY PROJECT IN AN AMOUNT UP TO $207 MILLION

WHEREAS, the Palmdale Water District (the "Agency") desires to finance the costs of constructing and/or reconstructing certain public facilities and improvements relating to its water system, including certain treatment facilities, pipelines and other infrastructure (the "Project"); and

WHEREAS, the Agency intends to finance the construction and/or reconstruction of the Project or portions of the Project with moneys ("Project Funds") provided by the State of California, acting by and through the State Water Resources Control Board (State Water Board); and

WHEREAS, the State Water Board may fund the Project Funds with proceeds from the sale of obligations the interest upon which is excluded from gross income for federal income tax purposes (the "Obligations"), and

WHEREAS, prior to either the issuance of the Obligations or the approval by the State Water Board of the Project Funds the Agency desires to incur certain capital expenditures (the "Expenditures") with respect to the Project from available moneys of the Agency; and

WHEREAS, the Agency has determined that those moneys to be advanced on and after the date hereof to pay the Expenditures are available only for a temporary period and it is necessary to reimburse the Agency for the Expenditures from the proceeds of the Obligations.

NOW, THEREFORE, THE AGENCY DOES HEREBY RESOLVE, ORDER AND DETERMINE AS FOLLOWS:

SECTION 1. The Agency hereby states its intention and reasonably expects to reimburse Expenditures paid prior to the issuance of the Obligations or the approval by the State Water Board of the Project Funds.

SECTION 2. The reasonably expected maximum principal amount of the Project Funds is $207 Million.

SECTION 3. This resolution is being adopted no later than 60 days after the date on which the Agency will expend moneys for the construction portion of the Project costs to be reimbursed with Project Funds.

SECTION 4. Each Agency expenditure will be of a type properly chargeable to a capital account under general federal income tax principles.

SECTION 5. To the best of our knowledge, this Agency is not aware of the previous adoption of official intents by the Agency that have been made as a matter of course for the purpose of reimbursing expenditures and for which tax-exempt obligations have not been issued.

SECTION 6. This resolution is adopted as official intent of the Agency in order to comply with Treasury Regulation §1.150-2 and any other regulations of the Internal Revenue Service relating to the qualification for reimbursement of Project costs.

SECTION 7. All the recitals in this Resolution are true and correct and this Agency so finds, determines and represents.

CERTIFICATION

PASSED, APPROVED and ADOPTED by the Board of Directors of Palmdale Water District on this 15th day of December, 2025, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

_____
Kathy Mac Laren-Gomez, President
Board of Directors

ATTEST:

_____
Deborah Dino, Assistant Secretary
Board of Directors

APPROVED AS TO FORM:

_____
Aleshire & Wynder, LLP, General Counsel

BOARD MEMORANDUM

DATE: December 15, 2025

TO: **BOARD OF DIRECTORS**

FROM: Mr. Scott Rogers, Assistant General Manager

VIA: Mr. Dennis D. LaMoreaux, General Manager

RE: ***CONSIDERATION AND POSSIBLE ACTION ON APPROVING OF RESOLUTION NO. 25-13 BEING A RESOLUTION OF THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT AUTHORIZING THE GENERAL MANAGER OR HIS DESIGNEE TO SIGN AND FILE, FOR AND ON BEHALF OF THE DISTRICT, A FINANCIAL ASSSISTANCE APPLICATION FOR A FINANCING AGREEMENT WITH THE STATE WATER RESOURCES CONTROL BOARD FOR THE DESIGN AND CONSTRUCTION OF THE PURE WATER ANTELOPE VALLEY PROJECT. (NO BUDGET IMPACT – ASSISTANT GENERAL MANAGER ROGERS)***

Recommendation:

Staff recommends that the Board approve Resolution No. 25-13 authorizing the General Manager or his designee to sign and file, for and on behalf of the District, a financial assistance application for a financing agreement with the State Water Resources Control Board (SWRCB) for the design and construction of the Pure Water Antelope Valley project.

Alternative Options:

There is no alternative.

Impact of Taking No Action:

If no action is taken, an opportunity to obtain alternative financing terms that are more favorable to the District will be missed.

Background:

The Clean Water State Revolving Fund (CWSRF) is a federal-state partnership program created under the Clean Water Act and administered by the U.S. EPA and state agencies, such as the SWRCB. It provides low-interest loans and financial assistance for a wide range of water quality projects, including water reuse. Some of the key features of the program include:

- Low-cost financing for projects ranging from under $1 million to over $100 million
- Interest rates typically about half the most recent General Obligation Bond rate

- Repayment terms up to 30 years
- Grants or principal forgiveness may be available for small or disadvantaged communities

Pure Water Antelope Valley (Pure Water AV) is the District's long term water supply project providing 5 million gallons a day (MGD) of additional water supply by purifying recycled water to potable water standards and adding it to the groundwater. The CWSRF program offers low-interest loans to eligible entities for water infrastructure projects, including wastewater treatment, recycled water, and stormwater management initiatives.

District staff are working on an application requesting up to $207 million funding from CWSRF for the full-scale project. Unlike WIFIA funding, the entire project can be 100-percent funded through CWSRF. By applying for the loan, it allows financing with the most favorable terms. With the application, the resolution is required to show commitment to reimbursing the loan once awarded.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiative No. 4 – Financial Health and Stability.

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

Budget:

This item has no budget impact.

Supporting Documents:

- Resolution No. 25-13

RESOLUTION NO. 25-13

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT AUTHORIZING THE GENERAL MANAGER OR HIS DESIGNEE TO SIGN AND FILE, FOR AND ON BEHALF OF THE DISTRICT, A FINANCIAL ASSISTANCE APPLICATION FOR A FINANCING AGREEMENT WITH THE STATE WATER RESOURCES CONTROL BOARD FOR THE DESIGN AND CONSTRUCTION OF THE PURE WATER ANTELOPE VALLEY PROJECT

WHEREAS, the Palmdale Water District (the "Agency") desires to finance the costs of constructing and/or reconstructing certain public facilities and improvements relating to its water system, including certain treatment facilities, pipelines, and other infrastructure (the "Project"); and

WHEREAS, the Agency intends to finance the construction and/or reconstruction of the Project or portions of the Project with moneys ("Project Funds") provided by the State of California, acting by and through the State Water Resources Control Board (State Water Board); and

WHEREAS, the State Water Board may fund the Project Funds with proceeds from the sale of obligations the interest upon which is excluded from gross income for federal income tax purposes (the "Obligations"), and

RESOLVED BY THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT (THE "ENTITY"), AS FOLLOWS:

The General Manager (the "Authorized Representative") or designee is hereby authorized and directed to sign and file, for and on behalf of the Entity, a Financial Assistance Application for a financing agreement from the State Water Resources Control Board for the planning, design, and construction of Pure Water Antelope Valley (the "Project").

This Authorized Representative, or his/her designee, is designated to provide the assurances, certifications, and commitments required for the financial assistance application, including executing a financial assistance agreement from the State Water Resources Control Board and any amendments or changes thereto.

The Authorized Representative, or his/her designee, is designated to represent the Entity in carrying out the Entity's responsibilities under the financing agreement, including certifying disbursement requests on behalf of the Entity and compliance with applicable state and federal laws.

CERTIFICATION

PASSED, APPROVED and ADOPTED by the Board of Directors of Palmdale Water District on this 15th day of December, 2025, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Kathy Mac Laren-Gomez, President
Board of Directors

ATTEST:

Deborah Dino, Assistant Secretary
Board of Directors

APPROVED AS TO FORM:

Aleshire & Wynder, LLP, General Counsel

BOARD MEMORANDUM

DATE: December 15, 2025

TO: **BOARD OF DIRECTORS**

FROM: Scott Rogers, Assistant General Manager

VIA: Dennis D. LaMoreaux, General Manager

RE: ***CONSIDERATION AND POSSIBLE ACTION ADOPTING THE CATEGORICAL EXEMPTION FOR THE ALPINE SPRINGS MOBILE HOME PARK PROJECT. (NO BUDGET IMPACT – ASSISTANT GENERAL MANAGER ROGERS)***

Recommendation:

Staff recommend that the Board adopt the categorical exemption for the Alpine Springs Mobile Home Park (MHP) Project.

Alternative Options:

There are no alternatives.

Impact of Taking No Action:

Delay in the Project completion.

Background:

The District has been working with the State for nearly five years to help obtain funding assistance to connect the Alpine Springs MHP to the District's water distribution systems. The Alpine Springs MHP onsite well failed and has been receiving hauled water since. In June 2025, the District received grant funding to design and construct the selected alternative to connect the park to the District's system. An environmental survey was performed, and it determined the Project to be exempt because it involves the construction of small utility facilities, including a new water main, a master meter and backflow prevention device, two fire hydrants, one pressure reducing valve and associated valves and appurtenances, which qualify under the Class 3 exemption. The Project also includes the destruction and abandonment of the onsite well, which is covered under the Class 1 exemption.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiatives No. 3 System Efficiency, No. 4 Financial Health & Stability, and No. 5 Regional Leadership.

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

Budget:

There is no budget impact.

Supporting Documents:

- Notice of Exemption for Alpine Springs MHP

Print Form

Notice of Exemption

Appendix E

To: Office of Planning and Research
P.O. Box 3044, Room 113
Sacramento, CA 95812-3044

County Clerk
County of: Los Angeles
12400 Imperial Highway
Norwalk, CA 90650

From: (Public Agency): Palmdale Water District
2029 E. Avenue Q
Palmdale, CA 93550
(Address)

Project Title: Alpine Springs Mobile Home Park Project

Project Applicant: Palmdale Water District

Project Location - Specific:

Alpine Springs Mobile Home Park - 36223 Sierra Highway, Palmdale, CA 93550

Project Location - City: Palmdale Project Location - County: Los Angeles

Description of Nature, Purpose and Beneficiaries of Project:

The Project proposes to consolidate the Alpine Springs Mobile Home Park (ASMHP) into Palmdale Water District so they can receive an affordable and reliable water supply. Currently, ASMHP's well is out of production and they are relying on daily water deliveries. To remedy this, the Project components include: approximately 1,890 feet of 8-inch water main, one 2-inch master meter and backflow prevention device, a connection at North Aspern Street and Sierra Hills Lane, connections to a 20-inch transmission main across Sierra Highway on the northbound unpaved shoulder, connection to an onsite storage tank and distribution system, and installation of two fire hydrants along connection mains

Name of Public Agency Approving Project: Palmdale Water District

Name of Person or Agency Carrying Out Project: Palmdale Water District

Exempt Status: **(check one):**

- ☐ Ministerial (Sec. 21080(b)(1); 15268);
- ☐ Declared Emergency (Sec. 21080(b)(3); 15269(a));
- ☐ Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
- ☒ Categorical Exemption. State type and section number: Class 1 Existing Facilities, Class 3 New Construction or Conversion of Small Structures
- ☐ Statutory Exemptions. State code number: _____

Reasons why project is exempt:

The Project is exempt because it involves the construction of small utility facilities, including a new water main, a master meter and backflow prevention device, two fire hydrants, one pressure-reducing valve, and associated valves and appurtenances, which qualify under the Class 3 exemption. The Project also includes the destruction and abandonment of the onsite well, which is covered under the Class 1 exemption.

Lead Agency
Contact Person: _____ Area Code/Telephone/Extension: _____

If filed by applicant:

1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project? Yes No

Signature: _____ Date: _____ Title: _____

Signed by Lead Agency Signed by Applicant

Authority cited: Sections 21083 and 21110, Public Resources Code.
Reference: Sections 21108, 21152, and 21152.1, Public Resources Code.

Date Received for filing at OPR: _____

BOARD MEMORANDUM

DATE: December 15, 2025

TO: **BOARD OF DIRECTORS**

FROM: Mrs. Angelica Garcia, Human Resources Director

VIA: Mr. Dennis D. LaMoreaux, General Manager

RE: ***CONSIDERATION AND POSSIBLE ACTION TO APPROVE THE 2025 SALARY SURVEY ANALYSIS RECOMMENDATIONS. ($115,000.00 – NOT-TO-EXCEED – ANNUAL BUDGET IMPACT – HUMAN RESOURCES DIRECTOR GARCIA/PERSONNEL COMMITTEE)***

Recommendation:

Staff and the Personnel Committee recommends that the Board approve the proposed salary range adjustments based on the 2025 Salary Survey in the not-to-exceed amount of $115,000.00.

Alternative Options:

The Board may choose to keep the current salary ranges unchanged, approve only selected portions of the proposed adjustments, or suggest a different approach.

Impact of Taking No Action:

The District operates in a highly competitive labor market with increasing retirements and job changes. Without salary adjustments, we face:

- **Recruitment Challenges:** Non-competitive pay limits our ability to attract qualified candidates.
- **Retention Risks:** Employees may leave for higher-paying positions, increasing turnover and training costs.

Taking no action will negatively affect recruitment and retention. Aligning salaries with market trends helps reduce these risks.

Background:

The District conducts a market salary survey every three years to ensure competitiveness in the job market. For consistency and reliable data, twelve comparable water districts were selected for analysis.

This year's survey uses the same twelve districts, all located in Southern California and similar to our District in terms of facilities, organizational size, and number of connections. Additionally, the Los Angeles Department of Water and Power was included as a 13th benchmark source.

Unlike previous surveys, this analysis is based on the 75th percentile rather than the 50th percentile. These adjustments were made to strengthen our position in a competitive labor market during a period of rising costs and limited talent availability.

Strategic Plan Initiative/Mission Statement:

This work is part of Strategic Plan Initiative No. 2 – Organizational Excellence.

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

Budget:

The annual budget impact for the recommended changes is approximately $111,031.60 with a not-to-exceed amount of $115,000.00.

Supporting Documents:

- Salary Survey Data Results
- Department Salary Survey Analysis
- Salary Survey Budget Impact

Compensation Method_Summary

Comparison Items	Information
Method to Set I/II/III	Levels: 3 ranges between each level, based on the lowest-level tier (Level I). Engineers Positions: 2 ranges between each based on the lowest-level tier(Level 1). Training Positions: 2 ranges between training to level 1 Recommendations are capped at 3 range increase
Minimum Survey Goal	75th Percentile
Other Consideration	Los Angeles Water and Power was added to the analysis as a 13th source.
One Range Increases	22
Two Range Increases	20
Three Range Increases	14
Supervisor Range Band	37-41
Manager/ Dept. Head Range Band	43-45

Survey Analysis Results

Indicates a change

discretionary adjustment applied

Position	Current Range	Dept.	75%	Range Change	Recommendation
Assistant General Manager/COO	48	Administration	49	1	49
Executive Assistant	34	Administration	35	3	37
Management Analyst	31	Administration	31	No Change	31
Customer Care Representative I	20	Customer Care	22	2	22
Customer Care Representative II	23	Customer Care	25	2	25
Customer Care Representative III	29	Customer Care	28	No Change	29
Customer Care Supervisor	36	Customer Care	33	1	37
Field Customer Care Representative I	21	Customer Care	22	1	22
Field Customer Care Representative II	24	Customer Care	25	1	25
Field Customer Care Representative III	28	Customer Care	28	No Change	28
Assistant Engineer	33	Engineering	35	2	35
Associate Engineer	35	Engineering	37	2	37
Construction Inspector I	27	Engineering	28	1	28
Construction Inspector II	30	Engineering	31	1	31
Construction Inspector III	33	Engineering	34	1	34
Construction Inspector Trainee	25	Engineering	26	1	26
Engineering Analyst	33	Engineering	29	No Change	33
Engineering Manager	44	Engineering	44	1	45
Engineering Technician I	25	Engineering	26	1	26
Engineering Technician II	28	Engineering	29	1	29
Engineering Technician III	31	Engineering	32	1	32
Junior Engineer	31	Engineering	33	2	33
Principal Engineer	39	Engineering	41	2	41
Senior Engineer	37	Engineering	39	2	39
Electrician I	26	Facilities	27	1	27
Electrician II	29	Facilities	30	1	30
Electrician III	32	Facilities	33	1	33
Facilities Manager	41	Facilities	43	2	43
Fleet Equipment Mechanic I	25	Facilities	25	No Change	25
Fleet Equipment Mechanic II	28	Facilities	28	No Change	28
Fleet Equipment Mechanic III	31	Facilities	31	No Change	31
Maintenance Worker I	21	Facilities	22	1	22
Maintenance Worker II	24	Facilities	25	1	25
Operation Supervisor-Construction/Mechanical	35	Facilities	35	2	37
Operations Technician I	25	Facilities	25	No Change	25
Operations Technician II	28	Facilities	28	No Change	28
Operations Technician III	31	Facilities	31	No Change	31
Service Worker I	23	Facilities	23	No Change	23
Service Worker II	26	Facilities	26	No Change	26
Service Worker III	29	Facilities	29	No Change	29
Account Technician	23	Finance	24	1	24
Accounting Supervisor	36	Finance	37	1	37
Accounts Payable Technician	23	Finance	25	2	25
Customer Account Technician	24	Finance	25	1	25
Finance Manager/CFO	45	Finance	45	No Change	45
Purchasing Technician	27	Finance	28	1	28

Survey Analysis Results

Position	Current Range	Dept.	75%	Range Change	Recommendation
Human Resource Analyst	31	Human Resources	31	No Change	31
Human Resources & Safety Coordinator	27	Human Resources	29	2	29
Human Resources Director	41	Human Resources	43	2	43
Risk & Emergency Management Admin	32	Human Resources	35	3	35
Safety and Training Technician	29	Human Resources	29	No Change	29
GIS Coordinator	32	IT	35	3	35
Help Desk Assistant	24	IT	29	3	27
Information Technology Manager	41	IT	43	2	43
Network Administrator	34	IT	35	1	35
SCADA/Instrumentation Technician I	27	IT	32	3	30
SCADA/Instrumentation Technician II	30	IT	35	3	33
SCADA/Instrumentation Technician III	33	IT	38	3	36
Lab Analyst I	26	Operations	28	2	28
Lab Analyst II	29	Operations	31	2	31
Operations Manager	41	Operations	41	2	43
Operations Supervisor-Water Treatment Plant	35	Operations	36	2	37
Operator In Training	23	Operations	27	3	26
Plant Operator I	26	Operations	29	3	29
Plant Operator II	29	Operations	32	3	32
Water Quality/Regulatory Affairs Supervisor	35	Operations	38	3	38
Public Affairs Director	40	Public Affairs	40	3	43
Public Affairs Specialist I	27	Public Affairs	30	3	30
Public Affairs Specialist II	30	Public Affairs	33	3	33
Resource and Analytics Director	45	Resource & Analytics	45	No Change	45
Resource and Analytics Supervisor	36	Resource & Analytics	38	2	38
Water Use Efficiency Technician I	27	Resource & Analytics	29	2	29
Water Use Efficiency Technician II	30	Resource & Analytics	32	2	32

Dept Position Breakdown

Range Change Recommendation Department/Title	1	2	3
Administration			
Assistant General Manager/COO	✓		
Executive Assistant			✓
Customer Care			
Customer Care Representative I		✓	
Customer Care Representative II		✓	
Customer Care Supervisor	✓		
Field Customer Care Representative I	✓		
Field Customer Care Representative II	✓		
Engineering			
Assistant Engineer		✓	
Associate Engineer		✓	
Construction Inspector I	✓		
Construction Inspector II	✓		
Construction Inspector III	✓		
Construction Inspector Trainee	✓		
Engineering Manager	✓		
Engineering Technician I	✓		
Engineering Technician II	✓		
Engineering Technician III	✓		
Junior Engineer		✓	
Principal Engineer		✓	
Senior Engineer		✓	
Facilities			
Electrician I	✓		
Electrician II	✓		
Electrician III	✓		
Facilities Manager		✓	
Maintenance Worker I	✓		
Maintenance Worker II	✓		
Operation Supervisor-Construction/Mechanical		✓	
Finance			
Account Technician	✓		
Accounting Supervisor	✓		
Accounts Payable Technician		✓	
Customer Account Technician	✓		
Purchasing Technician	✓		
Human Resources			
Human Resources & Safety Coordinator		✓	
Human Resources Director		✓	

Dept Position Breakdown

Department/Title	1	2	3
Risk & Emergency Management Admin			✓
IT			
GIS Coordinator			✓
Help Desk Assistant			✓
Information Technology Manager		✓	
Network Administrator	✓		
SCADA/Instrumentation Technician I			✓
SCADA/Instrumentation Technician II			✓
SCADA/Instrumentation Technician III			✓
Operations			
Lab Analyst I		✓	
Lab Analyst II		✓	
Operations Manager		✓	
Operations Supervisor-Water Treatment Plant		✓	
Operator In Training			✓
Plant Operator I			✓
Plant Operator II			✓
Water Quality/Regulatory Affairs Supervisor			✓
Public Affairs			
Public Affairs Director			✓
Public Affairs Specialist I			✓
Public Affairs Specialist II			✓
Resource & Analytics			
Resource and Analytics Supervisor		✓	
Water Use Efficiency Technician I		✓	
Water Use Efficiency Technician II		✓	
Grand Total	**22**	**20**	**14**

Additional Analysis Information

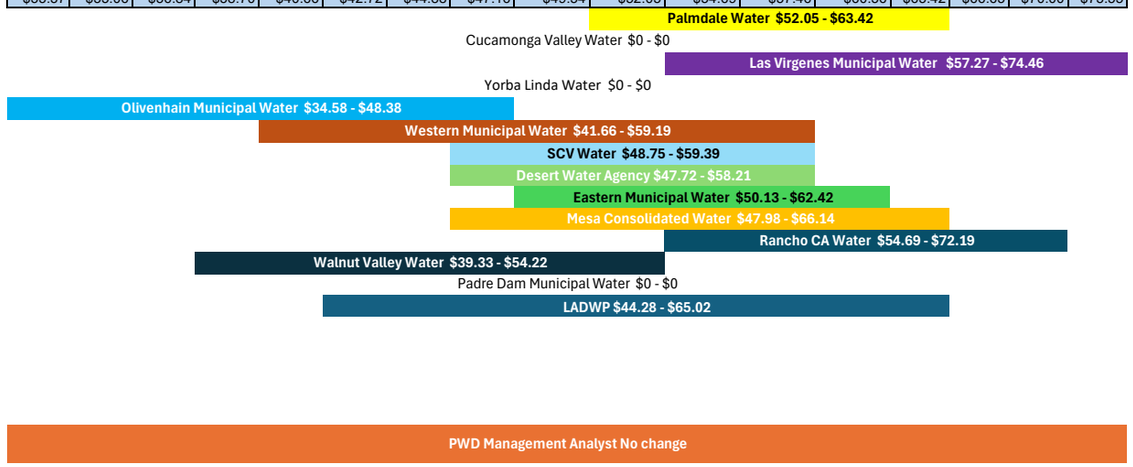
Department Summary Breakdown	1	2	3
Administration	1		1
Customer Care	3	2	
Engineering	8	5	
Facilities	5	2	
Finance	4	1	
Human Resources		2	1
IT	1	1	5
Operations		4	4
Public Affairs			3
Resource & Analytics		3	
Grand Total	22	20	14

Summary Management Range Spread	
Mgr./Dept. Head	43-45
Supervisor	37-41

Mgmt Level/Title	37	38	39	41	43	45
Dept Mgr/Director					5	3
Engineering Manager						✓
Facilities Manager					✓	
Finance Manager/CFO						✓
Human Resources Director					✓	
Information Technology Manager					✓	
Operations Manager					✓	
Public Affairs Director					✓	
Resource and Analytics Director						✓
Supervisor	5	2	1	1		
Accounting Supervisor	✓					
Customer Care Supervisor	✓					
Executive Assistant	✓					
Operation Supervisor-Construction/Mechanical	✓					
Plant	✓					
Principal Engineer				✓		
Resource and Analytics Supervisor		✓				
Senior Engineer			✓			
Water Quality/Regulatory Affairs Supervisor		✓				

Position	Range #		Min	Max	75%	Recommendation
Management Analyst	31	Palmdale Water	$ 52.05	$ 63.42		
No equivalent Position		Cucamonga Valley Water	$ -	$ -		
Management Analyst II		Las Virgenes Municipal Water	$ 57.27	$ 74.46		
No equivalent Position		Yorba Linda Water	$ -	$ -		
Financial Analyst I		Olivenhain Municipal Water	$ 34.58	$ 48.38		
Management Analyst I		Western Municipal Water	$ 41.66	$ 59.19		
Management Analyst		SCV Water	$ 48.75	$ 59.39		
Sr. Administrative Asst.(multiple dept)		Desert Water Agency	$ 47.72	$ 58.21		
Management Analyst II		Eastern Municipal Water	$ 50.13	$ 62.42		
Water Operations Coordinator		Mesa Consolidated Water	$ 47.98	$ 66.14		
Management Analyst		Rancho CA Water	$ 54.69	$ 72.19		
Senior Executive Assistant		Walnut Valley Water	$ 39.33	$ 54.22		
No equivalent Position		Padre Dam Municipal Water	$ -	$ -		
Management Analyst		LADWP	$ 44.28	$ 65.02		
		Agencies Comparison Results			$56.86	
		Min based on %			$ 51.27	
		Closest PWD Range			31	
					no	
		Range Difference 75%			change	
		PWD Management Analyst	No	change		

22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
$33.37	$35.06	$36.84	$38.70	$40.66	$42.72	$44.88	$47.16	$49.54	$52.05	$54.69	$57.46	$60.36	$63.42	$66.63	$70.00	$73.55



Position	Range #		Min	Max	75%	Recommendation
Executive Assistant	34	Palmdale Water	$ 10,463.04	$ 12,748.18		
Executive Services Administrator		Cucamonga Valley Water	$ 10,332.40	$ 13,431.60		
Excutive Assistant/Clerk of the Board		Las Virgenes Municipal Water	$ 11,804.00	$ 16,525.60		
Senior Executive Assistant-Board Secretary		Yorba Linda Water	$ 10,068.93	$ 12,889.07		
Executive Secretary		Olivenhain Municipal Water	$ 7,997.60	$ 11,193.87		
Executive Assistant		Western Municipal Water	$ 7,961.83	$ 11,849.17		
Board Secretary-Executive Assistant		SCV Water	$ 10,818.00	$ 13,180.00		
Exec. Secretary/Asst. Secretary to the Board		Desert Water Agency	$ 10,089.00	$ 12,264.00		
Board Secretary		Eastern Municipal Water	$ 10,561.20	$ 13,150.80		
Executive Asst. to GM		Mesa Consolidated Water	$ 8,956.13	$ 12,344.80		
District Secretary		Rancho CA Water	$ 9,954.36	$ 13,139.71		
Executive Services Administrator		Walnut Valley Water	$ 9,398.13	$ 12,954.93		
Executive Services Manager		Padre Dam Municipal Water	$ 9,351.33	$ 14,596.40		
Exec. Assist. To General Manager		LADWP	$ 17,506.14	$ 25,578.00		
		Agencies Comparison Results	$ 10,797.00	$ 13,150.74	$11,973.87	
		Min based on %			$ 10,797.00	
		Closest PWD Range			35	
		Range Difference 75%			1	
		PWD Executive Assistant Recommendation	$ 12,133.92	$ 14,783.98		37

28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
$7,779.86	$8,173.71	$8,587.51	$9,022.24	$9,478.99	$9,958.87	$10,463.04	$10,992.73	$11,549.23	$12,133.92	$12,748.20	$13,393.59	$14,071.65	$14,784.03	$15,532.47	$16,318.81	$17,144.95	$18,012.92	$18,924.83	$19,882.89	$20,889.46	$21,946.98	$23,058.05	$24,225.36	$25,451.76	$26,740.25

Palmdale Water $10463.04 - $12748.18

Cucamonga Valley Water $10332.4 - $13431.6

Las Virgenes Municipal Water $11804 - $16525.6

Yorba Linda Water $10068.93 - $12889.07

Olivenhain Municipal Water $7997.6 - $11193.87

Western Municipal Water $7961.83 - $11849.17

SCV Water $10818 - $13180

Desert Water Agency $10089 - $12264

Eastern Municipal Water $10561.2 - $13150.8

Mesa Consolidated Water $8956.13 - $12344.8

Rancho CA Water $9954.36 - $13139.71

Walnut Valley Water $9398.13 - $12954.93

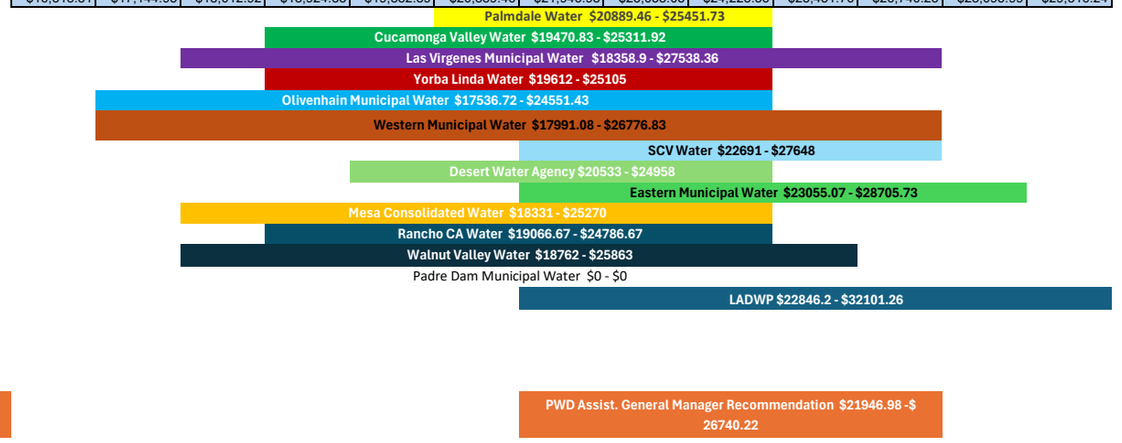
Padre Dam Municipal Water $9351.33 - $14596.4

LADWP $17506.14 - $25578

PWD Executive Assistant Recommendation $12133.92 - $14783.98

Position	Range #		Min	Max	75%	Recommendation
Assist. General Manager	48	Palmdale Water	$ 20,889.46	$ 25,451.73		
Asst. GM		Cucamonga Valley Water	$ 19,470.83	$ 25,311.92		
Asst. GM		Las Virgenes Municipal Water	$ 18,358.90	$ 27,538.36		
Asst. GM		Yorba Linda Water	$ 19,612.00	$ 25,105.00		
Asst. GM		Olivenhain Municipal Water	$ 17,536.72	$ 24,551.43		
AGM/CFO		Western Municipal Water	$ 17,991.08	$ 26,776.83		
Asst. GM		SCV Water	$ 22,691.00	$ 27,648.00		
Asst. GM		Desert Water Agency	$ 20,533.00	$ 24,958.00		
Asst. GM Ops & Maintenance		Eastern Municipal Water	$ 23,055.07	$ 28,705.73		
Asst. GM		Mesa Consolidated Water	$ 18,331.00	$ 25,270.00		
Asst. GM- Engineering and Operations		Rancho CA Water	$ 19,066.67	$ 24,786.67		
Asst. GM		Walnut Valley Water	$ 18,762.00	$ 25,863.00		
No Equivalent Position		Padre Dam Municipal Water	$ -	$ -		
Assist. General Manager		LADWP	$ 22,846.20	$ 32,101.26		
		Agencies Comparison Results	$ 21,193.73	$ 25,813.96	$23,503.85	
		Min based on %			$ 21,193.73	
		Closest PWD Range			49	
		Range Difference 75%			1	
		PWD Assist. General Manager Recommendation	$ 21,946.98	$ 26,740.22		49

43	44	45	46	47	48	49	50	51	52	53	54	55
$16,318.81	$17,144.95	$18,012.92	$18,924.83	$19,882.89	$20,889.46	$21,946.98	$23,058.05	$24,225.36	$25,451.76	$26,740.25	$28,093.99	$29,516.24



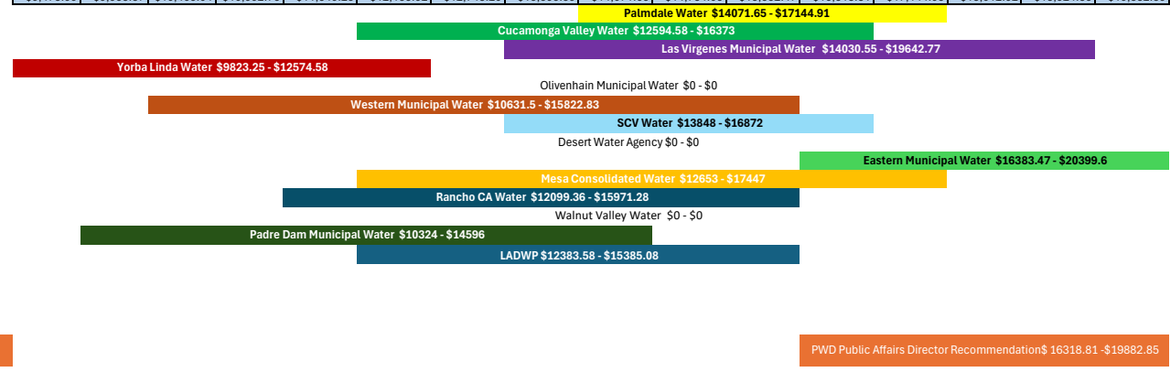
Position	Range #		Min	Max	75%	Recommendation
Public Affairs Specialist I	27	Palmdale Water	$ 42.72	$ 52.05		
Government and Public Affairs Rep I		Cucamonga Valley Water	$ 35.63	$ 46.31		
Public Affairs Associates I		Las Virgenes Municipal Water	$ 48.18	$ 62.64		
Public Affairs Specialist		Yorba Linda Water	$ 44.27	$ 56.67		
No Equivalent Position		Olivenhain Municipal Water				
Strategic Communications Representative I		Western Municipal Water	$ 35.98	$ 51.12		
Public Affairs Specialist I		SCV Water	$ 44.17	$ 53.80		
Public Affairs Specialist I		Desert Water Agency	$ 42.22	$ 51.43		
Public Affairs Officer I		Eastern Municipal Water	$ 39.26	$ 48.90		
Public Affairs Specialist		Mesa Consolidated Water	$ 41.38	$ 57.03		
Public Information Specialist I		Rancho CA Water	$ 47.25	$ 62.36		
No Equivalent Position		Walnut Valley Water				
Communications Coordinator		Padre Dam Municipal Water	$ 41.43	$ 58.66		
Public Relations Specialist		LADWP	$ 43.23	$ 67.10		
		Agencies Comparison Results			$52.64	
		Min based on %			$ 47.46	
		Closest PWD Range			30	
		Range Difference 75%			3	
		PWD Public Affairs Specialist I Recommendation	$ 49.54	$ 60.36		30
		NEXT ANALYSIS				
Public Affairs Specialist II	30	Palmdale Water	$ 49.54	$ 60.36		
		PWD Public Affairs Specialist II Recommendation	$ 57.46	$ 70.01		33

23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
$35.06	$36.84	$38.70	$40.66	$42.72	$44.88	$47.16	$49.54	$52.05	$54.69	$57.46	$60.36	$63.42	$66.63	$70.00	$73.55

Palmdale Water $42.72 - $52.05
Cucamonga Valley Water $35.63 - $46.31
Las Virgenes Municipal Water $48.18 - $62.64
Yorba Linda Water $44.27 - $56.67
Olivenhain Municipal Water $ - $
Western Municipal Water $35.98 - $51.12
SCV Water $44.17 - $53.8
Desert Water Agency $42.22 - $51.43
Eastern Municipal Water $39.26 - $48.9
Mesa Consolidated Water $41.38 - $57.03
Rancho CA Water $47.25 - $62.36
Walnut Valley Water $ - $
Padre Dam Municipal Water $41.43 - $58.66
LADWP $43.23 - $67.1
PWD Public Affairs Specialist I Recommendation $49.54 - $60.36
NEXT ANALYSIS
Palmdale Water $49.54 - $60.36
PWD Public Affairs Specialist II Recommendation $57.46 - $70.01

Position	Range #		Min	Max	75%	Recommendation
Public Affairs Director	40	Palmdale Water	$ 14,071.65	$ 17,144.91		
Government & Public Affairs Manager		Cucamonga Valley Water	$ 12,594.58	$ 16,373.00		
Public Affairs &Communications Mgr		Las Virgenes Municipal Water	$ 14,030.55	$ 19,642.77		
Public Affairs Officer		Yorba Linda Water	$ 9,823.25	$ 12,574.58		
No Equivalent Position		Olivenhain Municipal Water	$ -	$ -		
Strategic Communications Mgr		Western Municipal Water	$ 10,631.50	$ 15,822.83		
Communication Mgr		SCV Water	$ 13,848.00	$ 16,872.00		
No Equivalent Position		Desert Water Agency	$ -	$ -		
Director of Strategic Communication & Public Affairs		Eastern Municipal Water	$ 16,383.47	$ 20,399.60		
Public Affairs Mgr		Mesa Consolidated Water	$ 12,653.00	$ 17,447.00		
Public Affairs Mgr		Rancho CA Water	$ 12,099.36	$ 15,971.28		
No Equivalent Position		Walnut Valley Water	$ -	$ -		
Communication Mgr		Padre Dam Municipal Water	$ 10,324.00	$ 14,596.00		
Legislative Representative		LADWP	$ 12,383.58	$ 15,385.08		
		Agencies Comparison Results			$15,282.50	
		Min based on %			$ 13,780.43	
		Closest PWD Range			40	
		Range difference 75%			no change	
		PWD Public Affairs Director Recommendation	$ 16,318.81	$ 19,882.85		43

32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
$9,478.99	$9,958.87	$10,463.04	$10,992.73	$11,549.23	$12,133.92	$12,748.20	$13,393.59	$14,071.65	$14,784.03	$15,532.47	$16,318.81	$17,144.95	$18,012.92	$18,924.83	$19,882.89	$20,889.46



Position	Range #		Min	Max	75%	Recommendation
Water Use Efficiency Technician I	27	Palmdale Water	$ 42.72	$ 52.05		
No Equivalent Position		Cucamonga Valley Water	$ -	$ -		
Resource Conservation Specialist I		Las Virgenes Municipal Water	$ 45.78	$ 63.00		
No Equivalent Position		Yorba Linda Water	$ -	$ -		
No Equivalent Position		Olivenhain Municipal Water	$ -	$ -		
Water Resources Specialist I		Western Municipal Water	$ 35.98	$ 51.12		
Water Conservation Specialist I		SCV Water	$ 46.40	$ 56.53		
No Equivalent Position		Desert Water Agency	$ -	$ -		
Water Use Efficiency Specialist I		Eastern Municipal Water	$ 39.26	$ 48.90		
No Equivalent Position		Mesa Consolidated Water	$ -	$ -		
Water Use Efficiency Specialist		Rancho CA Water	$ 41.98	$ 50.38		
No Equivalent Position		Walnut Valley Water	$ -	$ -		
No Equivalent Position		Padre Dam Municipal Water	$ -	$ -		
No Equivalent Position		LADWP	$ -	$ -		
		Agencies Comparison Results			$51.47	
		Min based on %			$ 46.41	
		Closest PWD Range			29	
		Range Difference 75%			2	
		PWD Water Use Efficiency Technician I Recommendation	$ 47.16	$ 57.46		29
		NEXT ANALYSIS				
Water Use Efficiency Technician II	30	Palmdale Water	$ 49.54	$ 60.36		
		PWD Water Use Efficiency Technician II Recommendation	$ 54.69	$ 66.63		32

22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
$33.37	$35.06	$36.84	$38.70	$40.66	$42.72	$44.88	$47.16	$49.54	$52.05	$54.69	$57.46	$60.36	$63.42	$66.63	$70.00	$73.55

Palmdale Water $42.72 - $52.05

Cucamonga Valley Water $0 - $0

Las Virgenes Municipal Water $45.78 - $63

Yorba Linda Water $0 - $0

Olivenhain Municipal Water $0 - $0

Western Municipal Water $35.98 - $51.12

SCV Water $46.4 - $56.53

Desert Water Agency $0 - $0

Eastern Municipal Water $39.26 - $48.9

Mesa Consolidated Water $0 - $0

Rancho CA Water $41.98 - $50.38

Walnut Valley Water $0 - $0

Padre Dam Municipal Water $0 - $0

LADWP $0 - $0

PWD Water Use Efficiency Technician I Recommendation $47.16 - $57.46

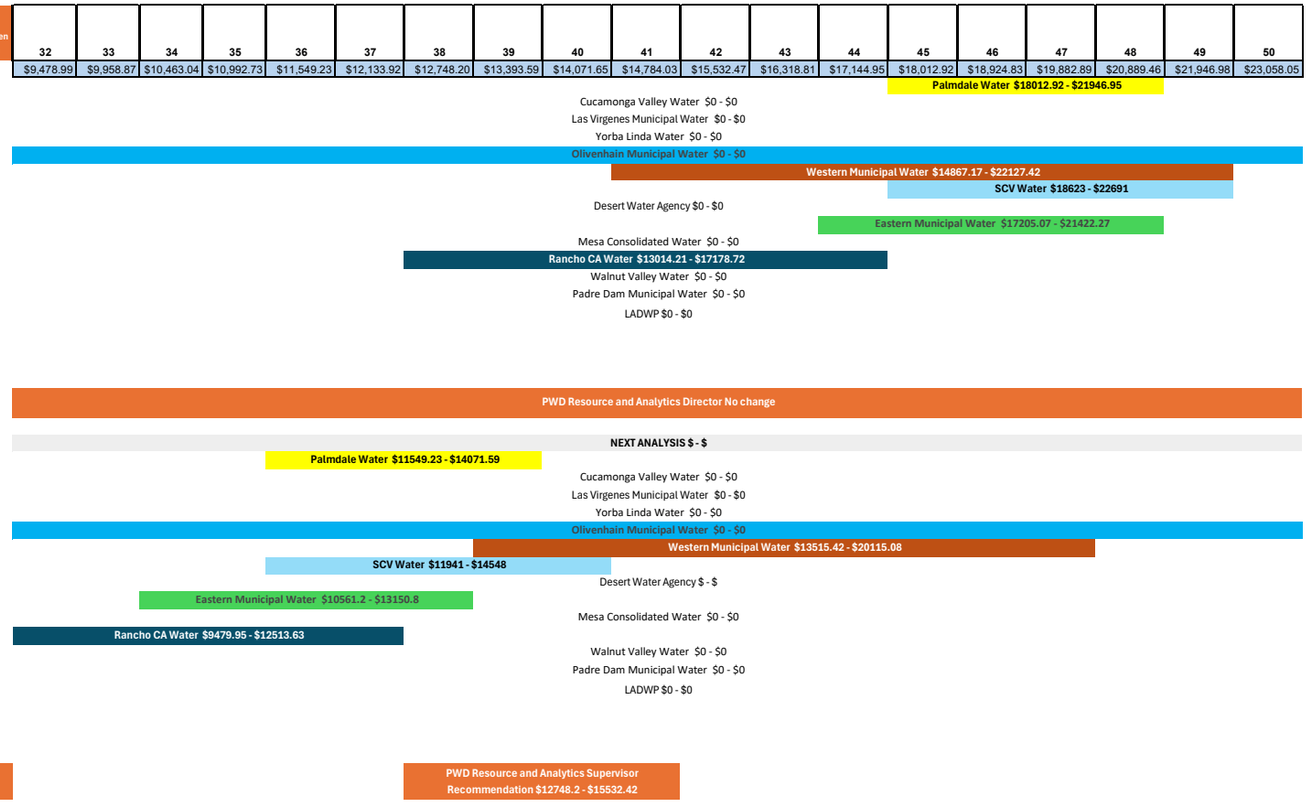
NEXT ANALYSIS

Palmdale Water $49.54 - $60.36

PWD Water Use Efficiency Technician II Recommendation $54.69 - $66.63

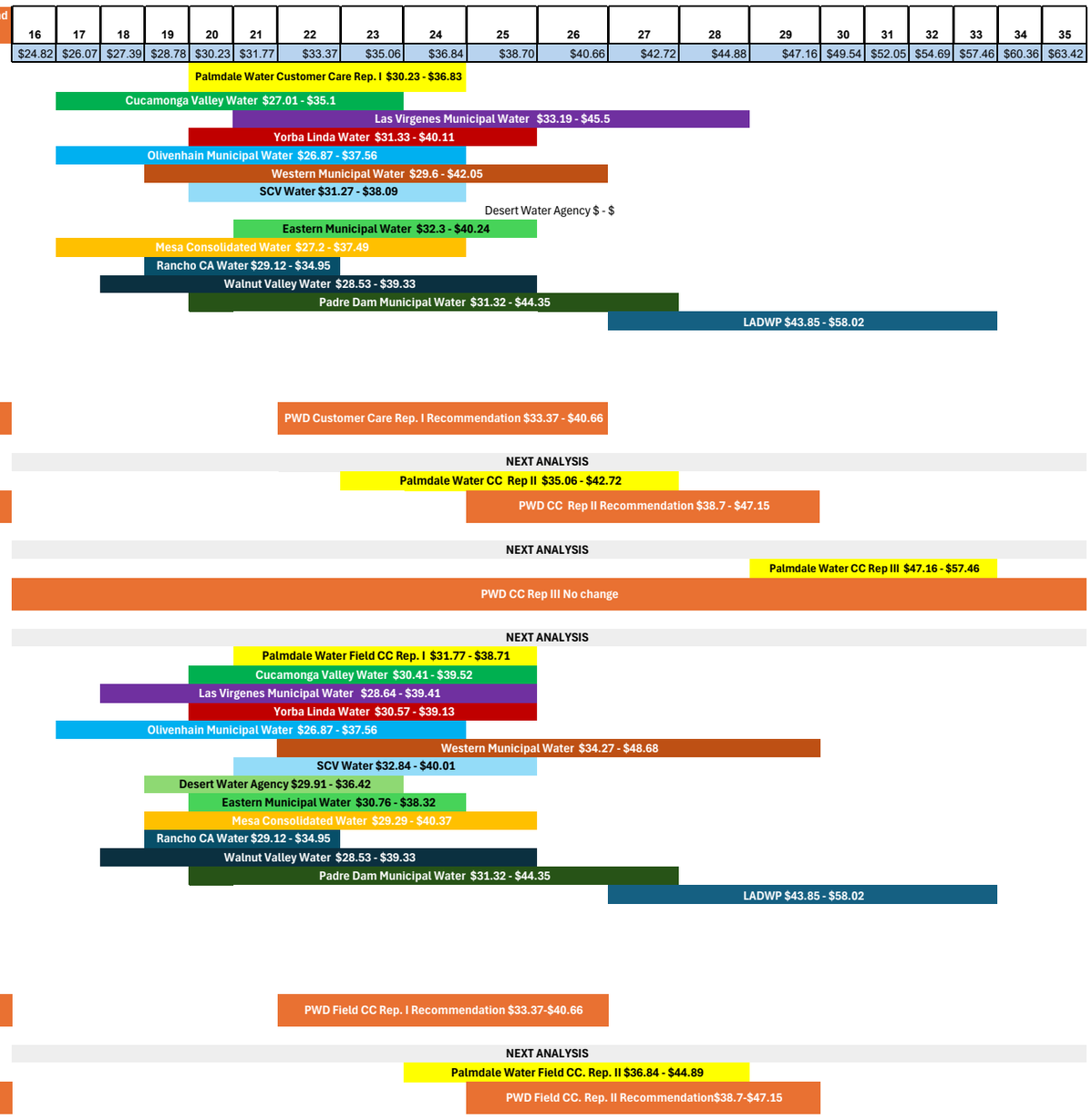
Position	Range #		Min	Max	75%	Recommendation
Resource and Analytics Director	45	Palmdale Water	$ 18,012.92	$ 21,946.95		
No Equivalent Position		Cucamonga Valley Water	$ -	$ -		
No Equivalent Position		Las Virgenes Municipal Water	$ -	$ -		
No Equivalent Position		Yorba Linda Water	$ -	$ -		
No Equivalent Position		Olivenhain Municipal Water	$ -	$ -		
Director of Water Resources		Western Municipal Water	$ 14,867.17	$ 22,127.42		
Director of Water Resources		SCV Water	$ 18,623.00	$ 22,691.00		
No Equivalent Position		Desert Water Agency	$ -	$ -		
Director of Water Resources/Facilities Planning		Eastern Municipal Water	$ 17,205.07	$ 21,422.27		
No Equivalent Position		Mesa Consolidated Water	$ -	$ -		
Water Use Efficiency and Grants Manager		Rancho CA Water	$ 13,014.21	$ 17,178.72		
No Equivalent Position		Walnut Valley Water	$ -	$ -		
No Equivalent Position		Padre Dam Municipal Water	$ -	$ -		
No Equivalent Position		LADWP	$ -	$ -		
		Agencies Comparison Results			$19,649.50	
		Min based on %			$ 17,718.22	
		Closest PWD Range			45	
		Range Difference 75%			no change	
		PWD Resource and Analytics Director	No	change		
		NEXT ANALYSIS				
Resource and Analytics Supervisor	36	Palmdale Water	$ 11,549.23	$ 14,071.59		
No Equivalent Position		Cucamonga Valley Water	$ -	$ -		
No Equivalent Position		Las Virgenes Municipal Water	$ -	$ -		
No Equivalent Position		Yorba Linda Water	$ -	$ -		
No Equivalent Position		Olivenhain Municipal Water	$ -	$ -		
Deputy Director of Water Resource		Western Municipal Water	$ 13,515.42	$ 20,115.08		
Water Conservation Supervisor		SCV Water	$ 11,941.00	$ 14,548.00		
No Equivalent Position		Desert Water Agency				
Conservation Program Mgr		Eastern Municipal Water	$ 10,561.20	$ 13,150.80		
No Equivalent Position		Mesa Consolidated Water	$ -	$ -		
Water Resources Planner		Rancho CA Water	$ 9,479.95	$ 12,513.63		
No Equivalent Position		Walnut Valley Water	$ -	$ -		
No Equivalent Position		Padre Dam Municipal Water	$ -	$ -		
No Equivalent Position		LADWP	$ -	$ -		
		Agencies Comparison Results			$14,137.19	
		Min based on %			$ 12,747.69	
		Closest PWD Range			38	
		Range Difference 75%			2	
		PWD Resource and Analytics Supervisor Recommendation	$ 12,748.20	$ 15,532.42		38

32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
$9,478.99	$9,958.87	$10,463.04	$10,992.73	$11,549.23	$12,133.92	$12,748.20	$13,393.59	$14,071.65	$14,784.03	$15,532.47	$16,318.81	$17,144.95	$18,012.92	$18,924.83	$19,882.89	$20,889.46	$21,946.98	$23,058.05



Position	Range #		Min	Max	75%	Recommendation
Customer Care Rep. I	20	Palmdale Water	$ 30.23	$ 36.83		
Customer Care Representative I		Cucamonga Valley Water	$ 27.01	$ 35.10		
Customer Service Representative		Las Virgenes Municipal Water	$ 33.19	$ 45.50		
Customer Service Representative I		Yorba Linda Water	$ 31.33	$ 40.11		
Customer Service Representative I		Olivenhain Municipal Water	$ 26.87	$ 37.56		
Customer Service Representative I		Western Municipal Water	$ 29.60	$ 42.05		
Customer Service Representative I		SCV Water	$ 31.27	$ 38.09		
No equivalent Position		Desert Water Agency				
Assistant Customer Service Advisor		Eastern Municipal Water	$ 32.30	$ 40.24		
Customer Service Representative I		Mesa Consolidated Water	$ 27.20	$ 37.49		
Customer Service Representative I – Office & Field		Rancho CA Water	$ 29.12	$ 34.95		
Customer Service Representative I		Walnut Valley Water	$ 28.53	$ 39.33		
Customer Service Specialist -17		Padre Dam Municipal Water	$ 31.32	$ 44.35		
Water service representative		LADWP	$ 43.85	$ 58.02		
		Agencies Comparison Results			$36.66	
		Min based on %			$ 33.06	
		Closest PWD Range			22	
		Range Difference 75%			2	
		PWD Customer Care Rep. I Recommendation	$ 33.37	$ 40.66		22
		NEXT ANALYSIS				
CC Rep II	23	Palmdale Water	$ 35.06	$ 42.72		
		PWD CC Rep II Recommendation	$ 38.70	$ 47.15		25
		NEXT ANALYSIS				
CC Rep III	29	Palmdale Water	$ 47.16	$ 57.46		
		PWD CC Rep III	No	change		
		NEXT ANALYSIS				
Field CC Rep. I	21	Palmdale Water	$ 31.77	$ 38.71		
Field Service Technician I		Cucamonga Valley Water	$ 30.41	$ 39.52		
Field Operations Technician I		Las Virgenes Municipal Water	$ 28.64	$ 39.41		
Meter Reader I		Yorba Linda Water	$ 30.57	$ 39.13		
Field Services Technician I		Olivenhain Municipal Water	$ 26.87	$ 37.56		
Customer Service Field Representative II		Western Municipal Water	$ 34.27	$ 48.68		
Field Services Worker I		SCV Water	$ 32.84	$ 40.01		
Field Services Technician I		Desert Water Agency	$ 29.91	$ 36.42		
Meter Services Technician I		Eastern Municipal Water	$ 30.76	$ 38.32		
Field Customer Care Representative I		Mesa Consolidated Water	$ 29.29	$ 40.37		
Customer Service Representative I – Office & Field		Rancho CA Water	$ 29.12	$ 34.95		
Customer Service Rep I		Walnut Valley Water	$ 28.53	$ 39.33		
Field Service Technician-17		Padre Dam Municipal Water	$ 31.32	$ 44.35		
Water service representative		LADWP	$ 43.85	$ 58.02		
		Agencies Comparison Results			$36.43	
		Min based on %			$ 32.84	
		Closest PWD Range			22	
		Range Difference 75%			1	
		PWD Field CC Rep. I Recommendation	$ 33.37	$ 40.66		22
		NEXT ANALYSIS				
Field CC. Rep. II	24	Palmdale Water	$ 36.84	$ 44.89		
		PWD Field CC. Rep. II Recommendation	$ 38.70	$ 47.15		25

16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
$24.82	$26.07	$27.39	$28.78	$30.23	$31.77	$33.37	$35.06	$36.84	$38.70	$40.66	$42.72	$44.88	$47.16	$49.54	$52.05	$54.69	$57.46	$60.36	$63.42



Position	Range #		Min	Max	75%	Recommendation
		NEXT ANALYSIS				
Field CC. Rep. III	28	Palmdale Water	$ 44.88	$ 54.68		
		PWD Field CC. Rep. III	No	change		

16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
$24.82	$26.07	$27.39	$28.78	$30.23	$31.77	$33.37	$35.06	$36.84	$38.70	$40.66	$42.72	$44.88	$47.16	$49.54	$52.05	$54.69	$57.46	$60.36	$63.42

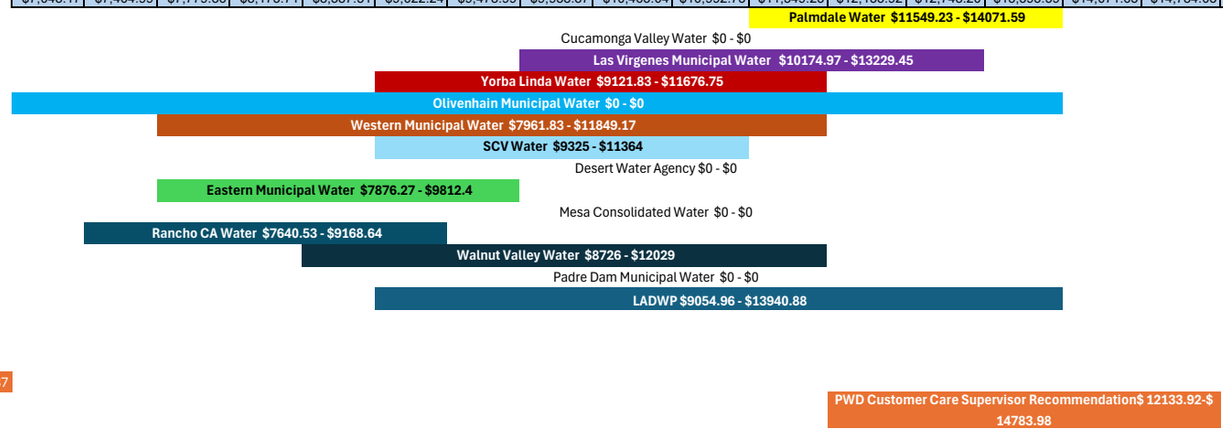
NEXT ANALYSIS

Palmdale Water Field CC. Rep. III $44.88 - $54.68

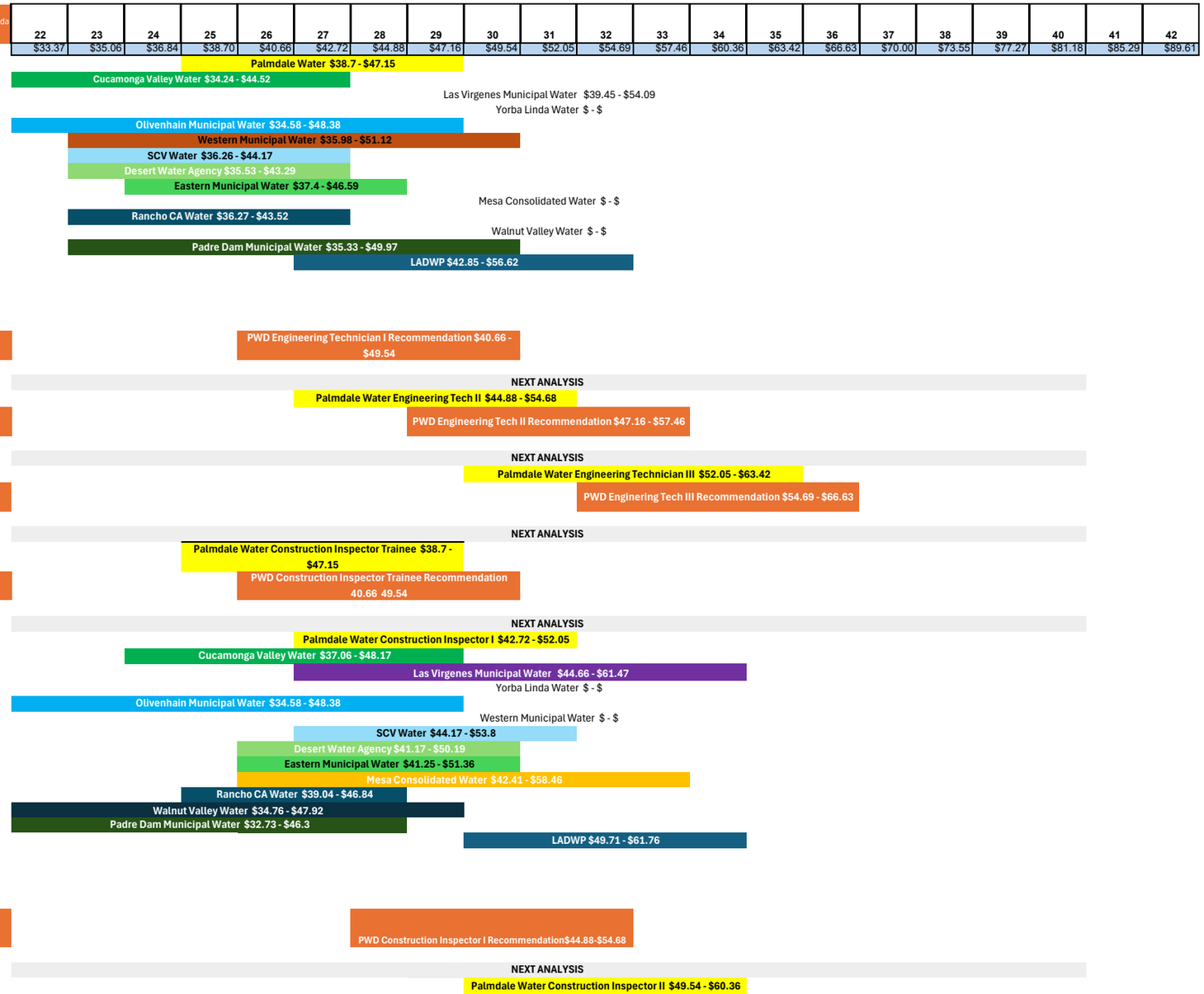
PWD Field CC. Rep. III No change

Position	Range #		Min	Max	75%	Recommendation
Customer Care Supervisor	36	Palmdale Water	$ 11,549.23	$ 14,071.59		
No equivalent position		Cucamonga Valley Water	$ -	$ -		
Customer Service Office Supervisor		Las Virgenes Municipal Water	$ 10,174.97	$ 13,229.45		
Customer Service Supervisor		Yorba Linda Water	$ 9,121.83	$ 11,676.75		
No equivalent position		Olivenhain Municipal Water	$ -	$ -		
Customer Service Supervisor		Western Municipal Water	$ 7,961.83	$ 11,849.17		
Customer Service Supervisor		SCV Water	$ 9,325.00	$ 11,364.00		
No equivalent position		Desert Water Agency	$ -	$ -		
Customer Service Supervisor		Eastern Municipal Water	$ 7,876.27	$ 9,812.40		
No equivalent position		Mesa Consolidated Water	$ -	$ -		
Customer Service Supervisor		Rancho CA Water	$ 7,640.53	$ 9,168.64		
Customer Service Supervisor		Walnut Valley Water	$ 8,726.00	$ 12,029.00		
No equivalent position		Padre Dam Municipal Water	$ -	$ -		
Supervising Water Service Representative		LADWP	$ 9,054.96	$ 13,940.88		
		Agencies Comparison Results			$10,673.95	
		Min based on %			$ 9,624.84	
		Closest PWD Range			33	
		Range Difference 75%			no change	37
		PWD Customer Care Supervisor Recommendation	$ 12,133.92	$ 14,783.98		

26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
$7,048.17	$7,404.99	$7,779.86	$8,173.71	$8,587.51	$9,022.24	$9,478.99	$9,958.87	$10,463.04	$10,992.73	$11,549.23	$12,133.92	$12,748.20	$13,393.59	$14,071.65	$14,784.03	$15,532.47

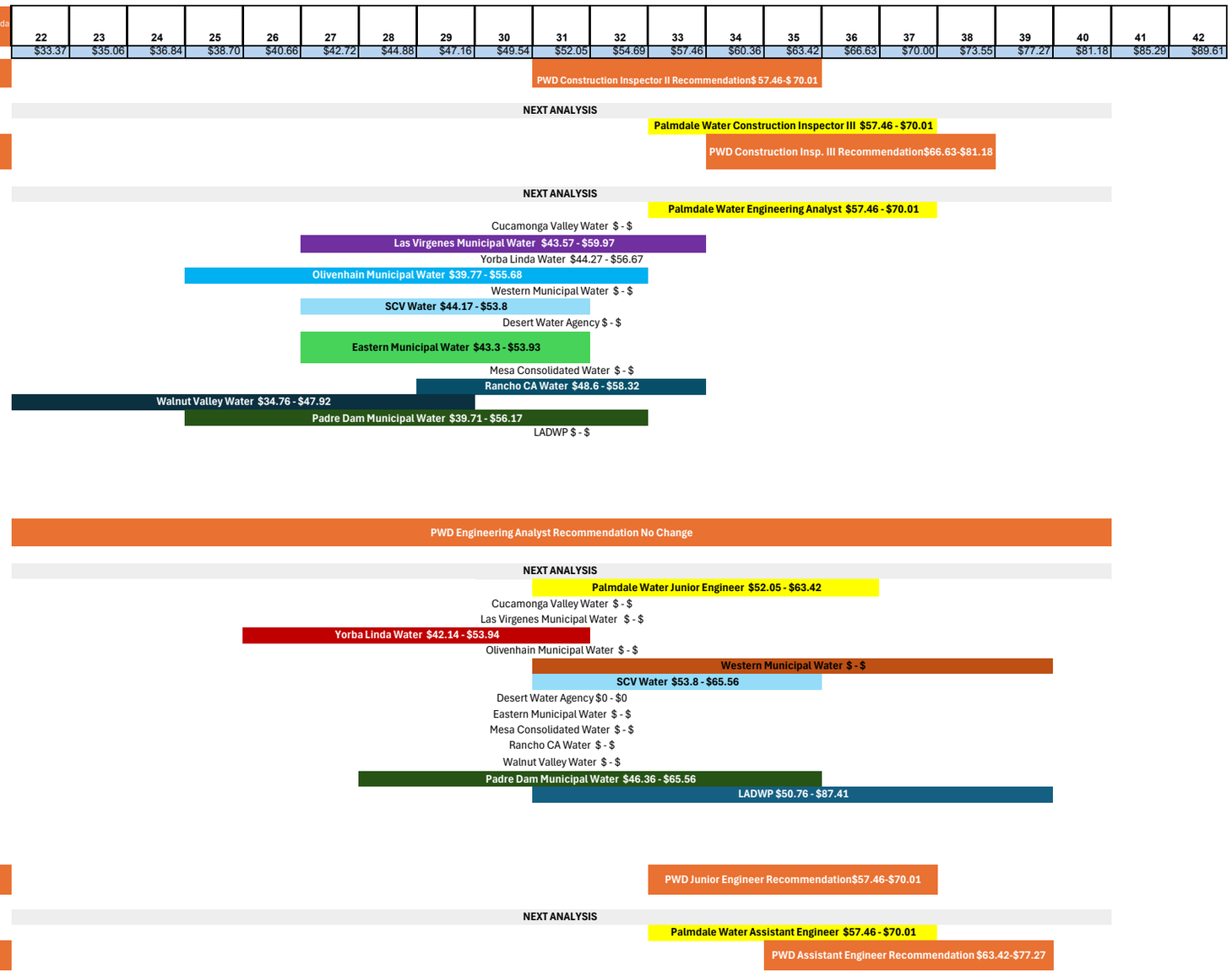


Position	Range #		Min	Max	75%	Recommendation
Engineering Technician I	25	Palmdale Water	$ 38.70	$ 47.15		
Engineering Technician 1		Cucamonga Valley Water	$ 34.24	$ 44.52		
Engineering Technician 1		Las Virgenes Municipal Water	$ 39.45	$ 54.09		
No Equivalent Position		Yorba Linda Water				
Engineering Technician I		Olivenhain Municipal Water	$ 34.58	$ 48.38		
Engineering Technician I		Western Municipal Water	$ 35.98	$ 51.12		
Engineering Technician I		SCV Water	$ 36.26	$ 44.17		
Engineering Technician I		Desert Water Agency	$ 35.53	$ 43.29		
Engineering Technician I		Eastern Municipal Water	$ 37.40	$ 46.59		
No Equivalent Position		Mesa Consolidated Water				
Engineering Technician I		Rancho CA Water	$ 36.27	$ 43.52		
No Equivalent Position		Walnut Valley Water				
Engineering Technician-20		Padre Dam Municipal Water	$ 35.33	$ 49.97		
Civil Eng. Drafting Tech		LADWP	$ 42.85	$ 56.62		
		Agencies Comparison Results			$43.33	
		Min based on %			$ 39.07	
		Closest PWD Range			26	
		Range Difference 75%			1	
		PWD Engineering Technician I Recommendation	$ 40.66	$ 49.54		26
		NEXT ANALYSIS				
Engineering Tech II	28	Palmdale Water	$ 44.88	$ 54.68		
		PWD Engineering Tech II Recommendation	$ 47.16	$ 57.46		29
		NEXT ANALYSIS				
Engineering Technician III	31	Palmdale Water	$ 52.05	$ 63.42		
		PWD Enginering Tech III Recommendation	$ 54.69	$ 66.63		32
		NEXT ANALYSIS				
Construction Inspector Trainee	25	Palmdale Water	$ 38.70	$ 47.15		
		PWD Construction Inspector Trainee Recommendation	$ 40.66	$ 49.54		26
		NEXT ANALYSIS				
Construction Inspector I	27	Palmdale Water	$ 42.72	$ 52.05		
Engineering Inspector I		Cucamonga Valley Water	$ 37.06	$ 48.17		
Facilities Inspector		Las Virgenes Municipal Water	$ 44.66	$ 61.47		
No Equivalent Position		Yorba Linda Water				
Inspector I		Olivenhain Municipal Water	$ 34.58	$ 48.38		
No Equivalent Position		Western Municipal Water				
Inspector I		SCV Water	$ 44.17	$ 53.80		
Construction Inspector I		Desert Water Agency	$ 41.17	$ 50.19		
Construction and Safety Inspector I		Eastern Municipal Water	$ 41.25	$ 51.36		
Construction Inspector		Mesa Consolidated Water	$ 42.41	$ 58.46		
Construction Inspector I		Rancho CA Water	$ 39.04	$ 46.84		
Construction Inspector 1		Walnut Valley Water	$ 34.76	$ 47.92		
Construction Inspector-18		Padre Dam Municipal Water	$ 32.73	$ 46.30		
Engineer Designer		LADWP	$ 49.71	$ 61.76		
		Agencies Comparison Results			$49.71	
		Min based on %			$ 44.82	
		Closest PWD Range			28	
		Range Difference 75%			1	
		PWD Construction Inspector I Recommendation	$ 44.88	$ 54.68		28
		NEXT ANALYSIS				
Construction Inspector II	30	Palmdale Water	$ 49.54	$ 60.36		



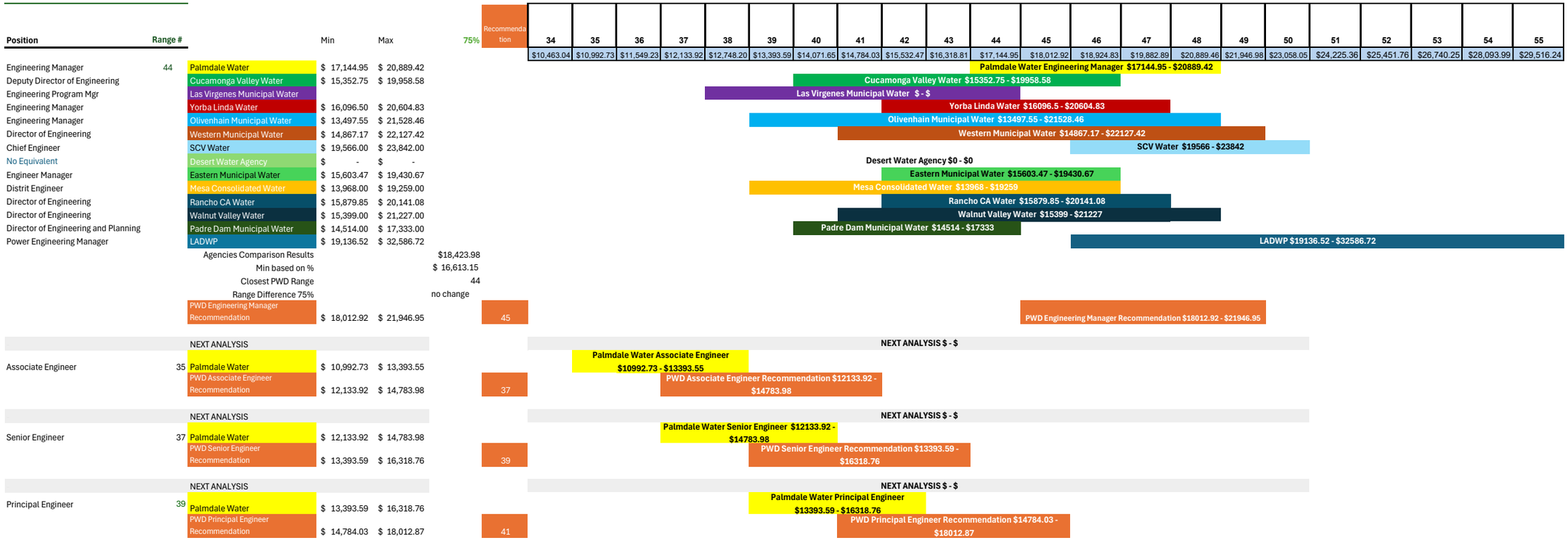
Position	Range #		Min	Max	75%	Recommendation
		PWD Construction Inspector II Recommendation	$ 57.46	$ 70.01		31
		NEXT ANALYSIS				
Construction Inspector III	33	Palmdale Water	$ 57.46	$ 70.01		
		PWD Construction Insp. III Recommendation	$ 66.63	$ 81.18		34
		NEXT ANALYSIS				
Engineering Analyst	33	Palmdale Water	$ 57.46	$ 70.01		
No Equivalent Position		Cucamonga Valley Water				
Cross Connection Inspector		Las Virgenes Municipal Water	$ 43.57	$ 59.97		
Water Quality Cross-Connection Speci		Yorba Linda Water	$ 44.27	$ 56.67		
Backflow Coordinator II		Olivenhain Municipal Water	$ 39.77	$ 55.68		
No Equivalent Position		Western Municipal Water				
Recycled Water Coordinator II		SCV Water	$ 44.17	$ 53.80		
No Equivalent Position		Desert Water Agency				
Backflow & Cross Connection Control Specialist II		Eastern Municipal Water	$ 43.30	$ 53.93		
No Equivalent Position		Mesa Consolidated Water				
Cross Connection Control Specialist		Rancho CA Water	$ 48.60	$ 58.32		
Cross Connection Specialist		Walnut Valley Water	$ 34.76	$ 47.92		
Compliance Specialist		Padre Dam Municipal Water	$ 39.71	$ 56.17		
No Comparison Available		LADWP				
		Agencies Comparison Results			$50.80	
		Min based on %			$ 45.80	
		Closest PWD Range			29	
					no	
		Range Difference 75%			change	
		PWD Engineering Analyst Recommendation	No	Change		
		NEXT ANALYSIS				
Junior Engineer	31	Palmdale Water	$ 52.05	$ 63.42		
No Equivalent Position		Cucamonga Valley Water				
No Equivalent Position		Las Virgenes Municipal Water				
Assistant Eng 1		Yorba Linda Water	$ 42.14	$ 53.94		
No Equivalent Position		Olivenhain Municipal Water				
No Equivalent Position		Western Municipal Water				
Assistant Engineer		SCV Water	$ 53.80	$ 65.56		
No Equivalent Position		Desert Water Agency	$ -	$ -		
No Equivalent Position		Eastern Municipal Water				
No Equivalent Position		Mesa Consolidated Water				
No Equivalent Position		Rancho CA Water				
No Equivalent Position		Walnut Valley Water				
Project manager		Padre Dam Municipal Water	$ 46.36	$ 65.56		
Civil Engineering Associate		LADWP	$ 50.76	$ 87.41		
		Agencies Comparison Results			$62.03	
		Min based on %			$ 55.93	
		Closest PWD Range	**33**		33	
		Range Difference 75%			2	
		PWD Junior Engineer Recommendation	$ 57.46	$ 70.01		33
		NEXT ANALYSIS				
Assistant Engineer	33	Palmdale Water	$ 57.46	$ 70.01		
		PWD Assistant Engineer Recommendation	$ 63.42	$ 77.27		35

22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
$33.37	$35.06	$36.84	$38.70	$40.66	$42.72	$44.88	$47.16	$49.54	$52.05	$54.69	$57.46	$60.36	$63.42	$66.63	$70.00	$73.55	$77.27	$81.18	$85.29	$89.61

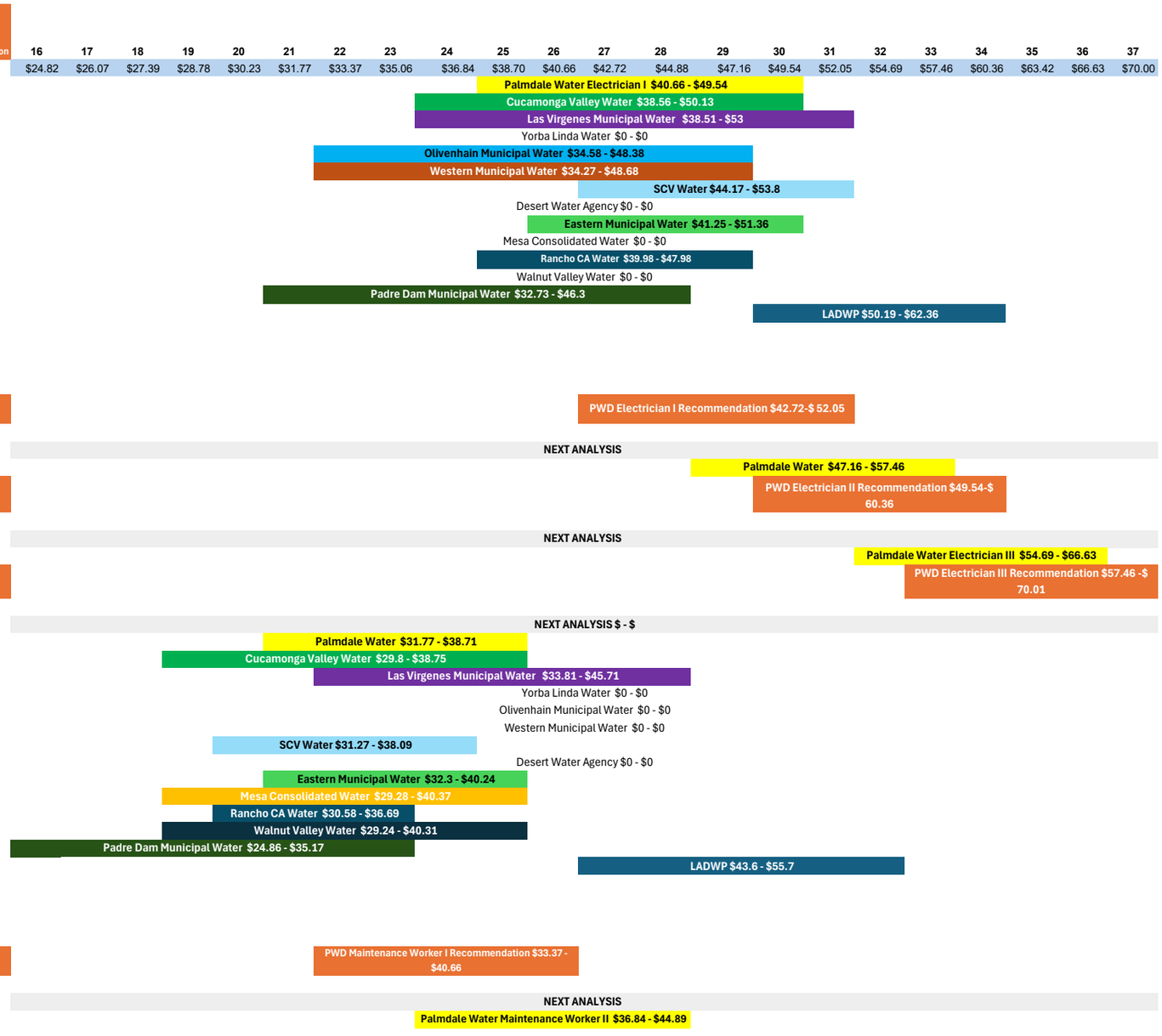


Position	Range #		Min	Max	75%	Recommendation
Engineering Manager	44	Palmdale Water	$ 17,144.95	$ 20,889.42		
Deputy Director of Engineering		Cucamonga Valley Water	$ 15,352.75	$ 19,958.58		
Engineering Program Mgr		Las Virgenes Municipal Water				
Engineering Manager		Yorba Linda Water	$ 16,096.50	$ 20,604.83		
Engineering Manager		Olivenhain Municipal Water	$ 13,497.55	$ 21,528.46		
Director of Engineering		Western Municipal Water	$ 14,867.17	$ 22,127.42		
Chief Engineer		SCV Water	$ 19,566.00	$ 23,842.00		
No Equivalent		Desert Water Agency	$ -	$ -		
Engineer Manager		Eastern Municipal Water	$ 15,603.47	$ 19,430.67		
Distrit Engineer		Mesa Consolidated Water	$ 13,968.00	$ 19,259.00		
Director of Engineering		Rancho CA Water	$ 15,879.85	$ 20,141.08		
Director of Engineering		Walnut Valley Water	$ 15,399.00	$ 21,227.00		
Director of Engineering and Planning		Padre Dam Municipal Water	$ 14,514.00	$ 17,333.00		
Power Engineering Manager		LADWP	$ 19,136.52	$ 32,586.72		
		Agencies Comparison Results			$18,423.98	
		Min based on %			$ 16,613.15	
		Closest PWD Range			44	
		Range Difference 75%			no change	
		PWD Engineering Manager Recommendation	$ 18,012.92	$ 21,946.95		45
		NEXT ANALYSIS				
Associate Engineer	35	Palmdale Water	$ 10,992.73	$ 13,393.55		
		PWD Associate Engineer Recommendation	$ 12,133.92	$ 14,783.98		37
		NEXT ANALYSIS				
Senior Engineer	37	Palmdale Water	$ 12,133.92	$ 14,783.98		
		PWD Senior Engineer Recommendation	$ 13,393.59	$ 16,318.76		39
		NEXT ANALYSIS				
Principal Engineer	39	Palmdale Water	$ 13,393.59	$ 16,318.76		
		PWD Principal Engineer Recommendation	$ 14,784.03	$ 18,012.87		41

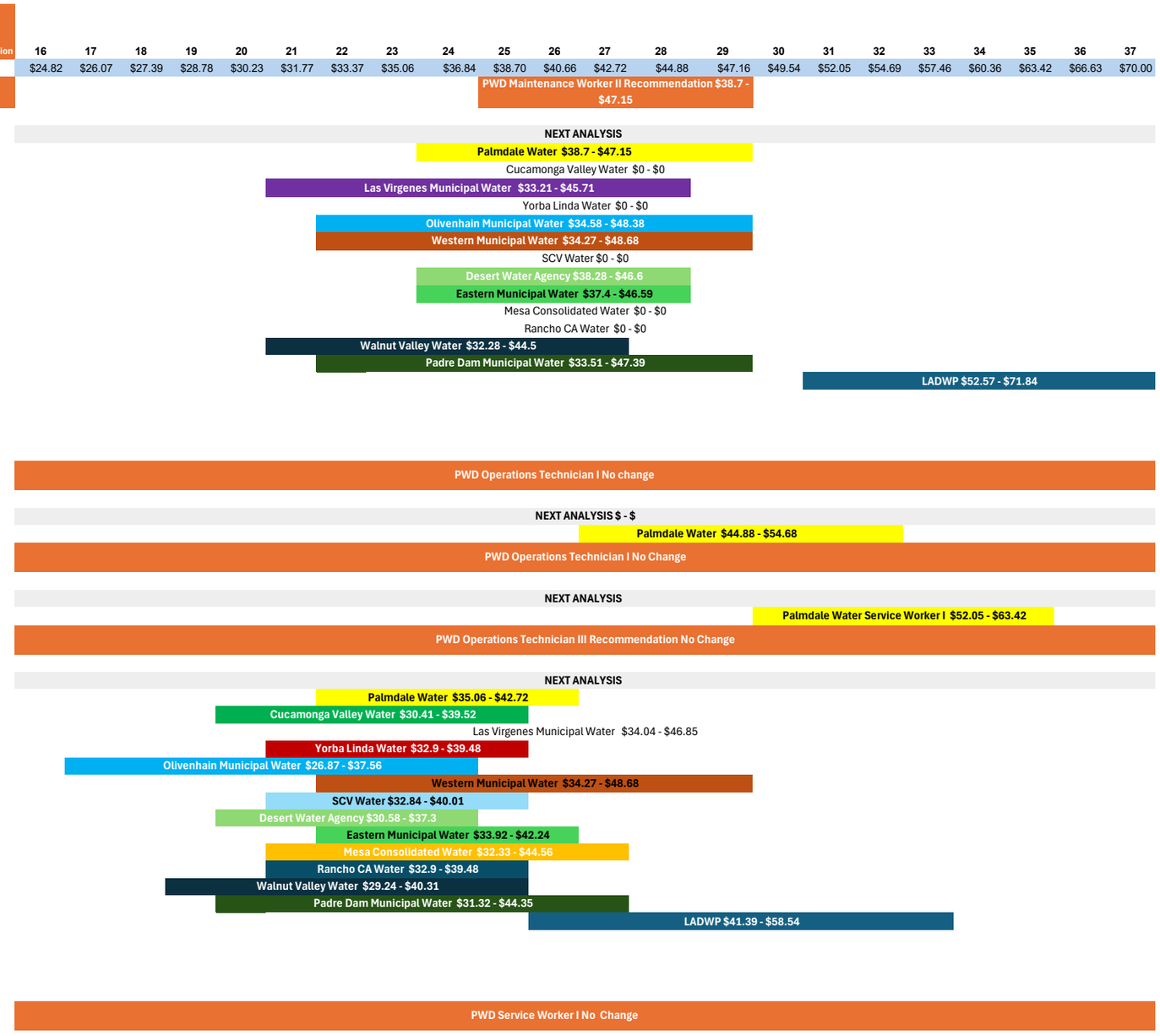
34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
$10,463.04	$10,992.73	$11,549.23	$12,133.92	$12,748.20	$13,393.59	$14,071.65	$14,784.03	$15,532.47	$16,318.81	$17,144.95	$18,012.92	$18,924.83	$19,882.89	$20,889.46	$21,946.98	$23,058.05	$24,225.36	$25,451.76	$26,740.25	$28,093.99	$29,516.24



Position	Range #		Min	Max	75%	Recommendation
Electrician I	26	Palmdale Water	$ 40.66	$ 49.54		
Electrical/Instrumentation I		Cucamonga Valley Water	$ 38.56	$ 50.13		
Electrical/Instrumentation I		Las Virgenes Municipal Water	$ 38.51	$ 53.00		
No equivalent position		Yorba Linda Water	$ -	$ -		
Instrument Control Tech I		Olivenhain Municipal Water	$ 34.58	$ 48.38		
Operations Technician- Electrical Services II		Western Municipal Water	$ 34.27	$ 48.68		
Electrical/Instrumentation		SCV Water	$ 44.17	$ 53.80		
No equivalent position		Desert Water Agency	$ -	$ -		
Electrician		Eastern Municipal Water	$ 41.25	$ 51.36		
No equivalent position		Mesa Consolidated Water	$ -	$ -		
Electrical Controls & Instrumentation Tech I		Rancho CA Water	$ 39.98	$ 47.98		
No equivalent position		Walnut Valley Water	$ -	$ -		
Electrician/Instrumentation & Control Tech-18		Padre Dam Municipal Water	$ 32.73	$ 46.30		
Electrician		LADWP	$ 50.19	$ 62.36		
		Agencies Comparison Results			$46.31	
		Min based on %			$ 41.75	
		Closest PWD Range			27	
		Range Difference 75%			1	
		PWD Electrician I Recommendation	$ 42.72	$ 52.05		27
		NEXT ANALYSIS				
Electrician II	29	Palmdale Water	$ 47.16	$ 57.46		
		PWD Electrician II Recommendation	$ 49.54	$ 60.36		30
		NEXT ANALYSIS				
Electrician III	32	Palmdale Water	$ 54.69	$ 66.63		
		PWD Electrician III Recommendation	$ 57.46	$ 70.01		33
		NEXT ANALYSIS				
Maintenance Worker I	21	Palmdale Water	$ 31.77	$ 38.71		
Facilities Maintenance Specialist I		Cucamonga Valley Water	$ 29.80	$ 38.75		
Facilities Maintenance Worker		Las Virgenes Municipal Water	$ 33.81	$ 45.71		
No Equivalent Position		Yorba Linda Water	$ -	$ -		
No equivalent position		Olivenhain Municipal Water	$ -	$ -		
No equivalent position		Western Municipal Water	$ -	$ -		
Facilities Maintenance Technician I		SCV Water	$ 31.27	$ 38.09		
No equivalent position		Desert Water Agency	$ -	$ -		
Building and Facilities Technician I		Eastern Municipal Water	$ 32.30	$ 40.24		
Facilities Maintenance Worker I		Mesa Consolidated Water	$ 29.28	$ 40.37		
Building and Grounds Worker I		Rancho CA Water	$ 30.58	$ 36.69		
Water Maintenance & Facility Worker I		Walnut Valley Water	$ 29.24	$ 40.31		
Facilities Maintenance Worker I-12		Padre Dam Municipal Water	$ 24.86	$ 35.17		
Building Repairer		LADWP	$ 43.60	$ 55.70		
		Agencies Comparison Results			$36.27	
		Min based on %			$ 32.71	
		Closest PWD Range			22	
		Range Difference 75%			1	
		PWD Maintenance Worker I Recommendation	$ 33.37	$ 40.66		22
		NEXT ANALYSIS				
Maintenance Worker II	24	Palmdale Water	$ 36.84	$ 44.89		

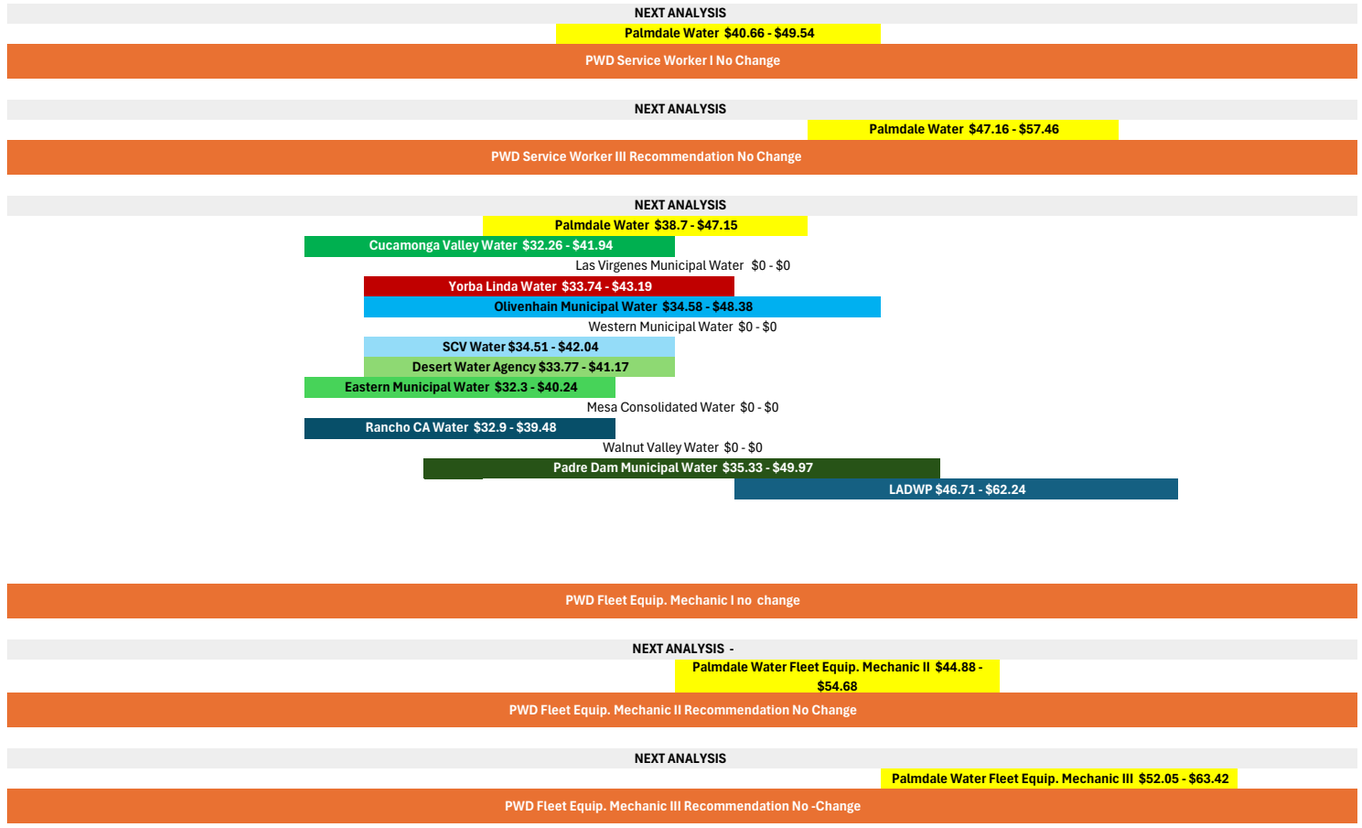


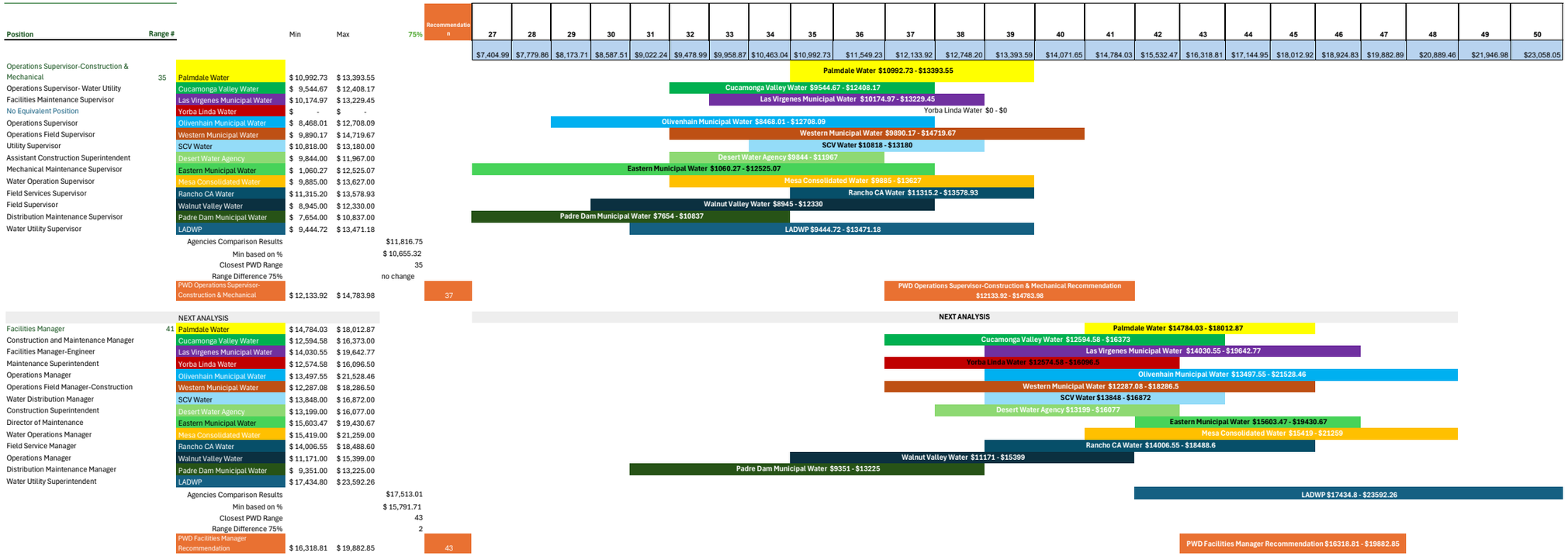
Position	Range #		Min	Max	75%	Recommendation
		PWD Maintenance Worker II Recommendation	$ 38.70	$ 47.15		25
		NEXT ANALYSIS				
Operations Technician I	25	Palmdale Water	$ 38.70	$ 47.15		
No equivalent position		Cucamonga Valley Water	$ -	$ -		
Maintenance Mechanic I		Las Virgenes Municipal Water	$ 33.21	$ 45.71		
No equivalent position		Yorba Linda Water	$ -	$ -		
Pump/Motor Tech I		Olivenhain Municipal Water	$ 34.58	$ 48.38		
Operations Technician -Mechanical II		Western Municipal Water	$ 34.27	$ 48.68		
No equivalent position		SCV Water	$ -	$ -		
Operations Technician I		Desert Water Agency	$ 38.28	$ 46.60		
Mechanical Maintenance Technician I		Eastern Municipal Water	$ 37.40	$ 46.59		
No Equivalent Position		Mesa Consolidated Water	$ -	$ -		
No equivalent position		Rancho CA Water	$ -	$ -		
Water Production Operator I		Walnut Valley Water	$ 32.28	$ 44.50		
System Operator/Technician I-19		Padre Dam Municipal Water	$ 33.51	$ 47.39		
Waterworks Mechanic		LADWP	$ 52.57	$ 71.84		
		Agencies Comparison Results			$42.11	
		Min based on %			$ 37.97	
		Closest PWD Range			25	
		Range Difference 75%			no change	
		PWD Operations Technician I	No	change		
		NEXT ANALYSIS				
Operations Technician II	28	Palmdale Water	$ 44.88	$ 54.68		
		PWD Operations Technician I	No	Change		
		NEXT ANALYSIS				
Operations Technician III	31	Palmdale Water	$ 52.05	$ 63.42		
		PWD Operations Technician III Recommendation	No	Change		
		NEXT ANALYSIS				
Service Worker I	23	Palmdale Water	$ 35.06	$ 42.72		
Water Utility Worker I		Cucamonga Valley Water	$ 30.41	$ 39.52		
Water Distribution Operator I		Las Virgenes Municipal Water	$ 34.04	$ 46.85		
Maintenance Worker I		Yorba Linda Water	$ 32.90	$ 39.48		
Utility I		Olivenhain Municipal Water	$ 26.87	$ 37.56		
Operations Technician -Construction II		Western Municipal Water	$ 34.27	$ 48.68		
Utility Worker I		SCV Water	$ 32.84	$ 40.01		
Water Service Worker I		Desert Water Agency	$ 30.58	$ 37.30		
Pipeline Construction Utility Worker I		Eastern Municipal Water	$ 33.92	$ 42.24		
Operator I-D1		Mesa Consolidated Water	$ 32.33	$ 44.56		
Field Distribution Operator I-Construction		Rancho CA Water	$ 32.90	$ 39.48		
Utility Service Worker I		Walnut Valley Water	$ 29.24	$ 40.31		
Utility Service Worker I		Padre Dam Municipal Water	$ 31.32	$ 44.35		
Water Utility Worker		LADWP	$ 41.39	$ 58.54		
		Agencies Comparison Results			$38.45	
		Min based on %			$ 34.67	
		Closest PWD Range			23	
		Range Difference 75%			no change	
		PWD Service Worker I	No	Change		



Position	Range #		Min	Max	75%	Recommendation
		NEXT ANALYSIS				
Service Worker II	26	Palmdale Water	$ 40.66	$ 49.54		
		PWD Service Worker I	No	Change		
		NEXT ANALYSIS				
Service Worker III	29	Palmdale Water	$ 47.16	$ 57.46		
		PWD Service Worker III Recommendation	No	Change		
		NEXT ANALYSIS				
Fleet Equip. Mechanic I	25	Palmdale Water	$ 38.70	$ 47.15		
Fleet and Equipment Mechanic I		Cucamonga Valley Water	$ 32.26	$ 41.94		
No equivalent position		Las Virgenes Municipal Water	$ -	$ -		
Mechanic I		Yorba Linda Water	$ 33.74	$ 43.19		
Equipment Technician		Olivenhain Municipal Water	$ 34.58	$ 48.38		
No equivalent position		Western Municipal Water	$ -	$ -		
Fleet Mechanic I		SCV Water	$ 34.51	$ 42.04		
Fleet Mechanic I		Desert Water Agency	$ 33.77	$ 41.17		
Fleet Service Technician I		Eastern Municipal Water	$ 32.30	$ 40.24		
No equivalent position		Mesa Consolidated Water	$ -	$ -		
Mechanic I		Rancho CA Water	$ 32.90	$ 39.48		
No equivalent position		Walnut Valley Water	$ -	$ -		
Equipment Mechanic-20		Padre Dam Municipal Water	$ 35.33	$ 49.97		
Heavy Duty Equipment Mechanic		LADWP	$ 46.71	$ 62.24		
		Agencies Comparison Results			$41.48	
		Min based on %			$ 37.40	
		Closest PWD Range			25	
		Range Difference 75%			no change	
		PWD Fleet Equip. Mechanic I	no	change		
		NEXT ANALYSIS				
Fleet Equip. Mechanic II	28	Palmdale Water	$ 44.88	$ 54.68		
		PWD Fleet Equip. Mechanic II Recommendation	No	Change		
		NEXT ANALYSIS				
Fleet Equip. Mechanic III	31	Palmdale Water	$ 52.05	$ 63.42		
		PWD Fleet Equip. Mechanic III Recommendation	No	Change		

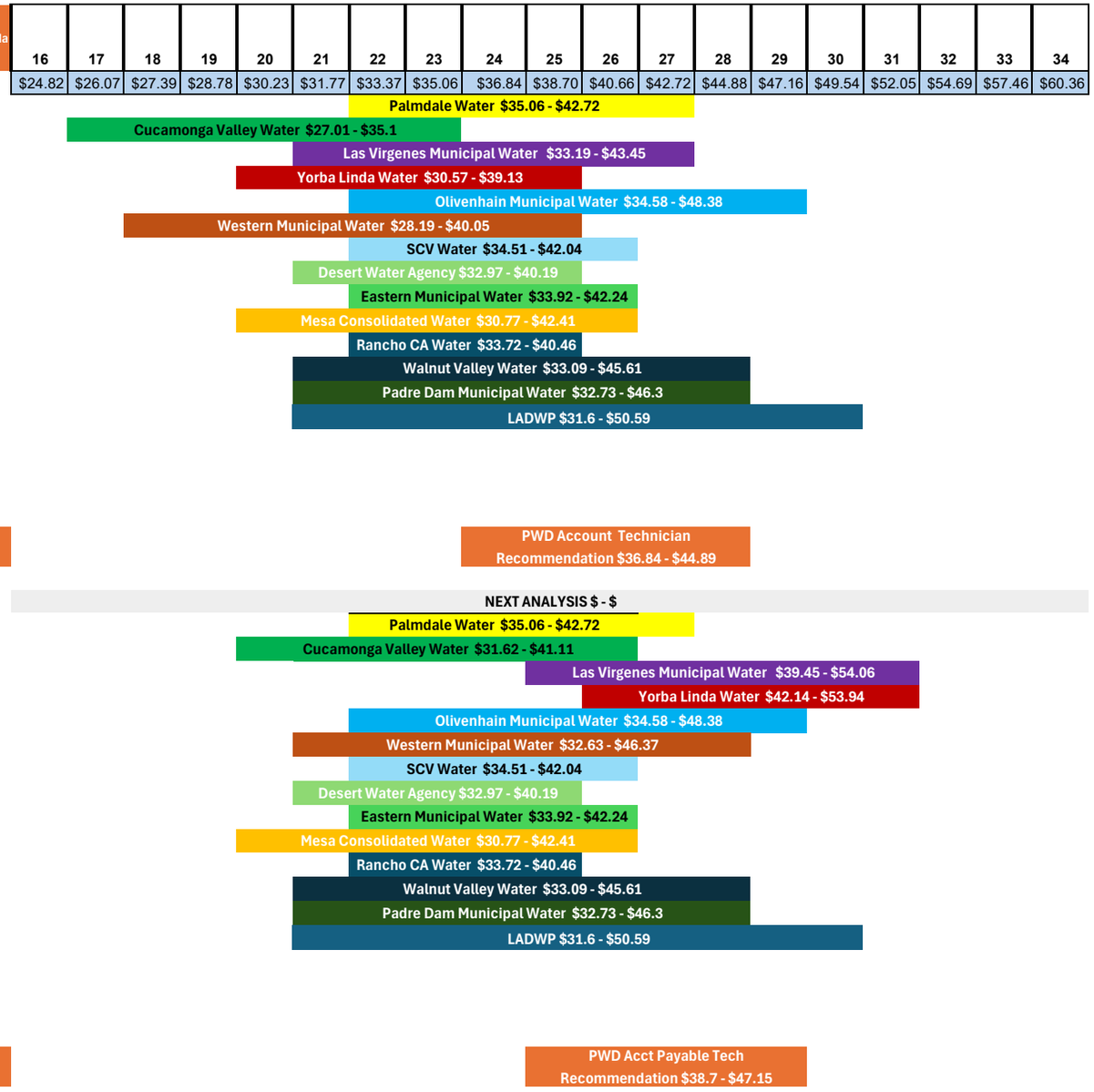
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
$24.82	$26.07	$27.39	$28.78	$30.23	$31.77	$33.37	$35.06	$36.84	$38.70	$40.66	$42.72	$44.88	$47.16	$49.54	$52.05	$54.69	$57.46	$60.36	$63.42	$66.63	$70.00




Position
Range #
Min
Max
75%
Recommendation
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
$7,404.99 $7,779.86 $8,173.71 $8,587.51 $9,022.24 $9,478.99 $9,958.87 $10,463.04 $10,992.73 $11,549.23 $12,133.92 $12,748.20 $13,393.59 $14,071.65 $14,784.03 $15,532.47 $16,318.81 $17,144.95 $18,012.92 $18,924.83 $19,882.89 $20,889.46 $21,946.98 $23,058.05
Operations Supervisor-Construction & Mechanical
35
Palmdale Water $ 10,992.73 $ 13,393.55
Operations Supervisor- Water Utility
Cucamonga Valley Water $ 9,544.67 $ 12,408.17
Facilities Maintenance Supervisor
Las Virgenes Municipal Water $ 10,174.97 $ 13,229.45
No Equivalent Position
Yorba Linda Water $ - $ -
Operations Supervisor
Olivenhain Municipal Water $ 8,468.01 $ 12,708.09
Operations Field Supervisor
Western Municipal Water $ 9,890.17 $ 14,719.67
Utility Supervisor
SCV Water $ 10,818.00 $ 13,180.00
Assistant Construction Superintendent
Desert Water Agency $ 9,844.00 $ 11,967.00
Mechanical Maintenance Supervisor
Eastern Municipal Water $ 1,060.27 $ 12,525.07
Water Operation Supervisor
Mesa Consolidated Water $ 9,885.00 $ 13,627.00
Field Services Supervisor
Rancho CA Water $ 11,315.20 $ 13,578.93
Field Supervisor
Walnut Valley Water $ 8,945.00 $ 12,330.00
Distribution Maintenance Supervisor
Padre Dam Municipal Water $ 7,654.00 $ 10,837.00
Water Utility Supervisor
LADWP $ 9,444.72 $ 13,471.18
Agencies Comparison Results $11,816.75
Min based on % $ 10,655.32
Closest PWD Range 35
Range Difference 75% no change
PWD Operations Supervisor-Construction & Mechanical
$ 12,133.92 $ 14,783.98
37
Palmdale Water $10992.73 - $13393.55
Cucamonga Valley Water $9544.67 - $12408.17
Las Virgenes Municipal Water $10174.97 - $13229.45
Yorba Linda Water $0 - $0
Olivenhain Municipal Water $8468.01 - $12708.09
Western Municipal Water $9890.17 - $14719.67
SCV Water $10818 - $13180
Desert Water Agency $9844 - $11967
Eastern Municipal Water $1060.27 - $12525.07
Mesa Consolidated Water $9885 - $13627
Rancho CA Water $11315.2 - $13578.93
Walnut Valley Water $8945 - $12330
Padre Dam Municipal Water $7654 - $10837
LADWP $9444.72 - $13471.18
PWD Operations Supervisor-Construction & Mechanical Recommendation $12133.92 - $14783.98
NEXT ANALYSIS
NEXT ANALYSIS
Facilities Manager
41
Palmdale Water $ 14,784.03 $ 18,012.87
Construction and Maintenance Manager
Cucamonga Valley Water $ 12,594.58 $ 16,373.00
Facilities Manager-Engineer
Las Virgenes Municipal Water $ 14,030.55 $ 19,642.77
Maintenance Superintendent
Yorba Linda Water $ 12,574.58 $ 16,096.50
Operations Manager
Olivenhain Municipal Water $ 13,497.55 $ 21,528.46
Operations Field Manager-Construction
Western Municipal Water $ 12,287.08 $ 18,286.50
Water Distribution Manager
SCV Water $ 13,848.00 $ 16,872.00
Construction Superintendent
Desert Water Agency $ 13,199.00 $ 16,077.00
Director of Maintenance
Eastern Municipal Water $ 15,603.47 $ 19,430.67
Water Operations Manager
Mesa Consolidated Water $ 15,419.00 $ 21,259.00
Field Service Manager
Rancho CA Water $ 14,006.55 $ 18,488.60
Operations Manager
Walnut Valley Water $ 11,171.00 $ 15,399.00
Distribution Maintenance Manager
Padre Dam Municipal Water $ 9,351.00 $ 13,225.00
Water Utility Superintendent
LADWP $ 17,434.80 $ 23,592.26
Agencies Comparison Results $17,513.01
Min based on % $ 15,791.71
Closest PWD Range 43
Range Difference 75% 2
PWD Facilities Manager Recommendation
$ 16,318.81 $ 19,882.85
43
Palmdale Water $14784.03 - $18012.87
Cucamonga Valley Water $12594.58 - $16373
Las Virgenes Municipal Water $14030.55 - $19642.77
Yorba Linda Water $12574.58 - $16096.5
Olivenhain Municipal Water $13497.55 - $21528.46
Western Municipal Water $12287.08 - $18286.5
SCV Water $13848 - $16872
Desert Water Agency $13199 - $16077
Eastern Municipal Water $15603.47 - $19430.67
Mesa Consolidated Water $15419 - $21259
Rancho CA Water $14006.55 - $18488.6
Walnut Valley Water $11171 - $15399
Padre Dam Municipal Water $9351 - $13225
LADWP $17434.8 - $23592.26
PWD Facilities Manager Recommendation $16318.81 - $19882.85

Position	Range #		Min	Max	75%	Recommendation
Account Technician	23	Palmdale Water	$ 35.06	$ 42.72		
Account Clerk I		Cucamonga Valley Water	$ 27.01	$ 35.10		
Accounting Technician		Las Virgenes Municipal Water	$ 33.19	$ 43.45		
Accounting Assistant I		Yorba Linda Water	$ 30.57	$ 39.13		
Accountant I		Olivenhain Municipal Water	$ 34.58	$ 48.38		
Accounting Technician I		Western Municipal Water	$ 28.19	$ 40.05		
Accounting Technician II		SCV Water	$ 34.51	$ 42.04		
Accounting Clerk II		Desert Water Agency	$ 32.97	$ 40.19		
Finance Tech II		Eastern Municipal Water	$ 33.92	$ 42.24		
Accounting Tech II		Mesa Consolidated Water	$ 30.77	$ 42.41		
Accounting Clerk II		Rancho CA Water	$ 33.72	$ 40.46		
Accounting Technician II		Walnut Valley Water	$ 33.09	$ 45.61		
Accounting Specialist-18		Padre Dam Municipal Water	$ 32.73	$ 46.30		
Management Aide		LADWP	$ 31.60	$ 50.59		
		Agencies Comparison Results			$39.35	
		Min based on %			$ 35.48	
		Closest PWD Range			24	
		Range Difference 75%			1	
		PWD Account Technician Recommendation	$ 36.84	$ 44.89		24

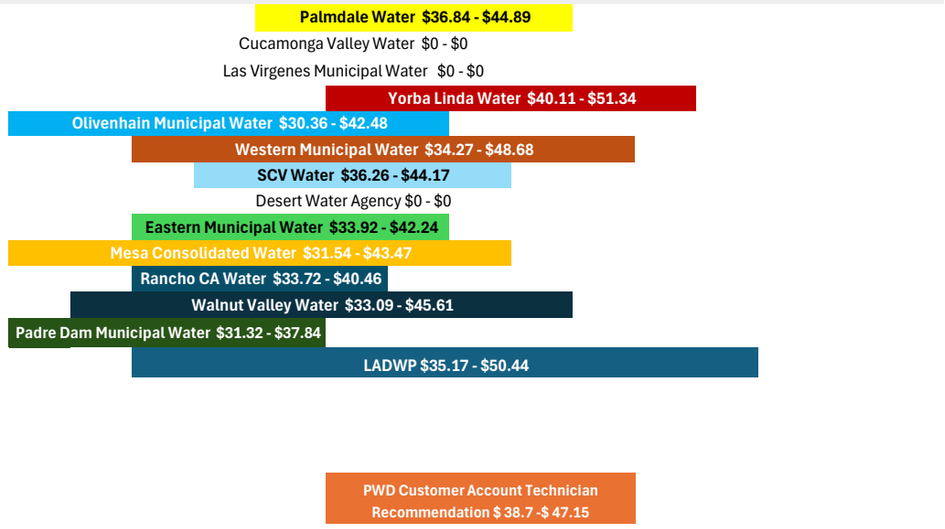
-		NEXT ANALYSIS				
Acct Payable Tech	23	Palmdale Water	$ 35.06	$ 42.72		
Account Clerk II		Cucamonga Valley Water	$ 31.62	$ 41.11		
Sr. Accounting Technician		Las Virgenes Municipal Water	$ 39.45	$ 54.06		
Accounting Assistant II		Yorba Linda Water	$ 42.14	$ 53.94		
Accountant I		Olivenhain Municipal Water	$ 34.58	$ 48.38		
Accounting Technician II		Western Municipal Water	$ 32.63	$ 46.37		
Accounting Technician II		SCV Water	$ 34.51	$ 42.04		
Accounting Clerk II		Desert Water Agency	$ 32.97	$ 40.19		
Finance Tech II		Eastern Municipal Water	$ 33.92	$ 42.24		
Accounting Tech II		Mesa Consolidated Water	$ 30.77	$ 42.41		
Accounting Clerk II		Rancho CA Water	$ 33.72	$ 40.46		
Accounting Technician II		Walnut Valley Water	$ 33.09	$ 45.61		
Accounting Specialist-18		Padre Dam Municipal Water	$ 32.73	$ 46.30		
Management Aide		LADWP	$ 31.60	$ 50.59		
		Agencies Comparison Results			$41.10	
		Min based on %			$ 37.06	
		Closest PWD Range			25	
		Range Difference 75%			2	
		PWD Acct Payable Tech Recommendation	$ 38.70	$ 47.15		25

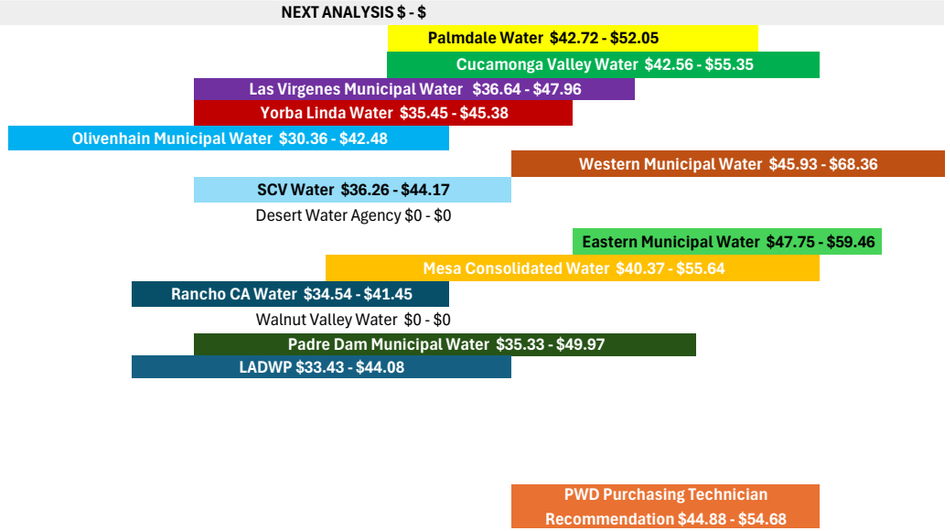


Position	Range #		Min	Max	75%	Recommendation
-		NEXT ANALYSIS				
Customer Account Technician	24	Palmdale Water	$ 36.84	$ 44.89		
No equivalent Position		Cucamonga Valley Water	$ -	$ -		
No equivalent Position		Las Virgenes Municipal Water	$ -	$ -		
Customer Service Representative III		Yorba Linda Water	$ 40.11	$ 51.34		
Customer Care Representative II		Olivenhain Municipal Water	$ 30.36	$ 42.48		
Customer Care Representative II		Western Municipal Water	$ 34.27	$ 48.68		
Customer Care Representative II		SCV Water	$ 36.26	$ 44.17		
No equivalent Position		Desert Water Agency	$ -	$ -		
Collections Representative I		Eastern Municipal Water	$ 33.92	$ 42.24		
Customer Service Representative II		Mesa Consolidated Water	$ 31.54	$ 43.47		
Accounting Clerk II		Rancho CA Water	$ 33.72	$ 40.46		
Accounting Technician II		Walnut Valley Water	$ 33.09	$ 45.61		
Customer Service Specialist		Padre Dam Municipal Water	$ 31.32	$ 37.84		
Customer Service Representative		LADWP	$ 35.17	$ 50.44		
		Agencies Comparison Results			$41.16	
		Min based on %			$ 37.11	
		Closest PWD Range			25	
		Range Difference 75%			1	
		PWD Customer Account Technician Recommendation	$ 38.70	$ 47.15		25

-		NEXT ANALYSIS				
Purchasing Technician	27	Palmdale Water	$ 42.72	$ 52.05		
Warehouse and Supply Coordinator		Cucamonga Valley Water	$ 42.56	$ 55.35		
Purchasing/Warehouse Specialist		Las Virgenes Municipal Water	$ 36.64	$ 47.96		
Operations Assistant		Yorba Linda Water	$ 35.45	$ 45.38		
Purchasing/Warehouse Clerk		Olivenhain Municipal Water	$ 30.36	$ 42.48		
Purchasing Specialist		Western Municipal Water	$ 45.93	$ 68.36		
Purchasing and Warehouse Technician		SCV Water	$ 36.26	$ 44.17		
No equivalent Position		Desert Water Agency	$ -	$ -		
Buyer		Eastern Municipal Water	$ 47.75	$ 59.46		
Buyer		Mesa Consolidated Water	$ 40.37	$ 55.64		
Warehouse Technician II		Rancho CA Water	$34.54	$ 41.45		
No equivalent Position		Walnut Valley Water	$ -	$ -		
Warehouse Specialist-20		Padre Dam Municipal Water	$ 35.33	$ 49.97		
Warehouse and toolroom worker		LADWP	$ 33.43	$ 44.08		
		Agencies Comparison Results			$48.48	
		Min based on %			$ 43.72	
		Closest PWD Range			28	
		Range Difference 75%			1	
		PWD Purchasing Technician Recommendation	$ 44.88	$ 54.68		28

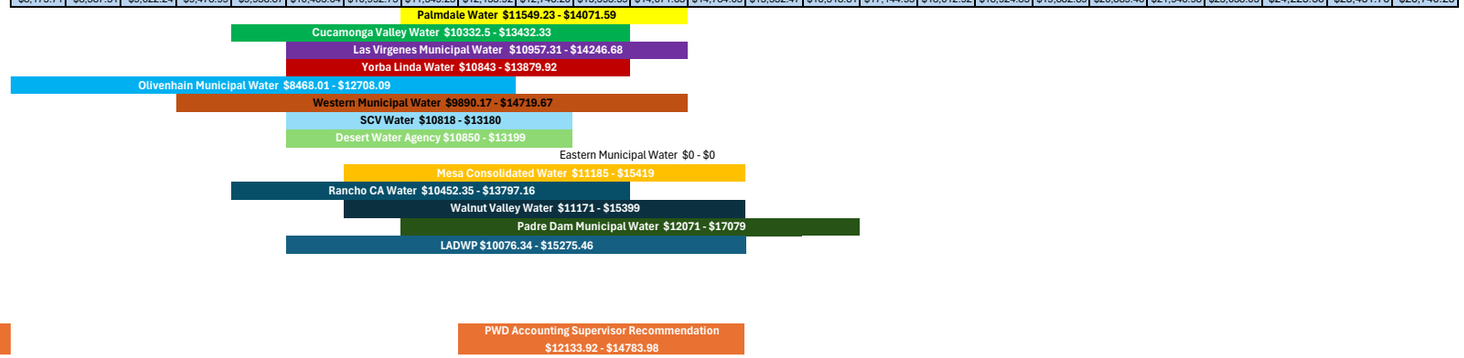
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
$24.82	$26.07	$27.39	$28.78	$30.23	$31.77	$33.37	$35.06	$36.84	$38.70	$40.66	$42.72	$44.88	$47.16	$49.54	$52.05	$54.69	$57.46	$60.36





Position	Range #		Min	Max	75%	Recommendation
Accounting Supervisor	36	Palmdale Water	$ 11,549.23	$ 14,071.59		
Senior Accountant		Cucamonga Valley Water	$ 10,332.50	$ 13,432.33		
Accounting Supervisor		Las Virgenes Municipal Water	$ 10,957.31	$ 14,246.68		
Accounting Supervisor		Yorba Linda Water	$ 10,843.00	$ 13,879.92		
Accounting Supervisor		Olivenhain Municipal Water	$ 8,468.01	$ 12,708.09		
Accounting Supervisor		Western Municipal Water	$ 9,890.17	$ 14,719.67		
Senior Financial Analyst		SCV Water	$ 10,818.00	$ 13,180.00		
Accounting Supervisor		Desert Water Agency	$ 10,850.00	$ 13,199.00		
No Equivalent Position		Eastern Municipal Water	$ -	$ -		
Controller		Mesa Consolidated Water	$ 11,185.00	$ 15,419.00		
Accounting Supervisor		Rancho CA Water	$ 10,452.35	$ 13,797.16		
Accounting Supervisor/mgr		Walnut Valley Water	$ 11,171.00	$ 15,399.00		
Accounting Manager		Padre Dam Municipal Water	$ 12,071.00	$ 17,079.00		
Senior Utility Accountant		LADWP	$ 10,076.34	$ 15,275.46		
		Agencies Comparison Results			$12,828.18	
		Min based on %			$ 11,567.34	
		Closest PWD Range			37	
		Range Difference 75%			1	
		PWD Accounting Supervisor Recommendation	$ 12,133.92	$ 14,783.98		37
		NEXT ANALYSIS				
Finance Manager/CFO	45	Palmdale Water	$ 18,012.92	$ 21,946.95		
Director of Finance		Cucamonga Valley Water	$ 17,635.50	$ 22,926.17		
Finance Manager		Las Virgenes Municipal Water	$ 14,030.55	$ 19,642.77		
Finance Manager		Yorba Linda Water	$ 16,096.50	$ 20,604.83		
Finance Manager		Olivenhain Municipal Water	$ 13,497.55	$ 21,528.46		
Director of Finance		Western Municipal Water	$ 14,867.17	$ 22,127.42		
Finance Manager		SCV Water	$ 13,848.00	$ 16,872.00		
Finance Director		Desert Water Agency	$ 19,559.00	$ 23,770.00		
Financial Manager		Eastern Municipal Water	$ 11,091.60	$ 13,804.17		
Chief Financial Officer		Mesa Consolidated Water	$ 15,804.00	$ 21,791.00		
Chief Financial Officer		Rancho CA Water	$ 16,992.04	$ 22,089.30		
Director of Finance		Walnut Valley Water	$ 15,399.00	$ 21,227.00		
CFO/Director of Finance		Padre Dam Municipal Water	$ 15,966.00	$ 22,168.00		
Principal Utility Accountant		LADWP	$ 15,489.48	$ 27,733.86		
		Agencies Comparison Results			$19,540.67	
		Min based on %			$ 17,620.08	
		Closest PWD Range			45	
		Range Difference 75%			no change	
		PWD Finance Manager/CFO	No	change		

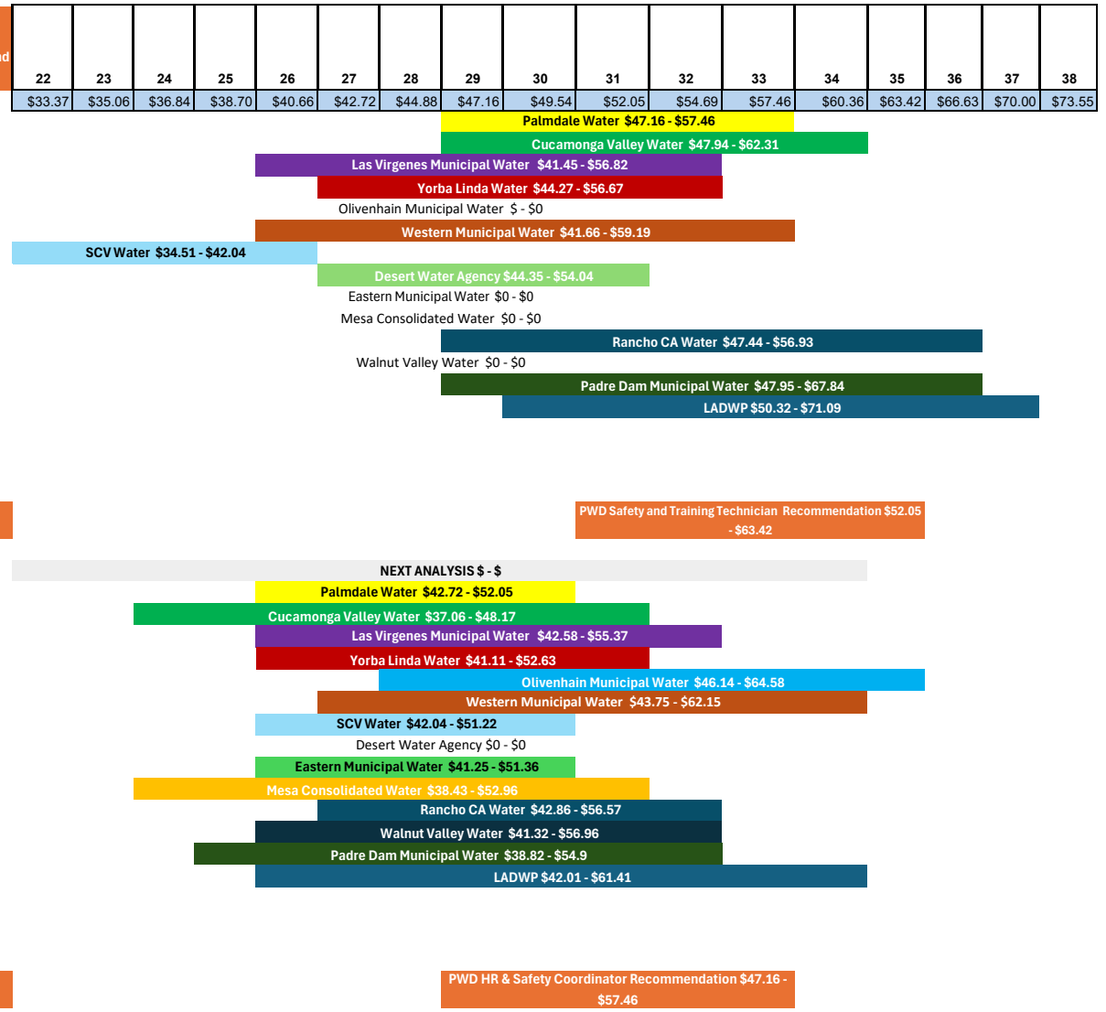
29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
$8,173.71	$8,587.51	$9,022.24	$9,478.99	$9,958.87	$10,463.04	$10,992.73	$11,549.23	$12,133.92	$12,748.20	$13,393.59	$14,071.65	$14,784.03	$15,532.47	$16,318.81	$17,144.95	$18,012.92	$18,924.83	$19,882.89	$20,889.46	$21,946.98	$23,058.05	$24,225.36	$25,451.76	$26,740.25



Position	Range #		Min	Max	75%	Recommendation
Safety and Training Technician	29	Palmdale Water	$ 47.16	$ 57.46		
Safety Analyst		Cucamonga Valley Water	$ 47.94	$ 62.31		
Adminstrative Specialist-Risk Mgmt		Las Virgenes Municipal Water	$ 41.45	$ 56.82		
Safety and Training Technician		Yorba Linda Water	$ 44.27	$ 56.67		
No Equivalent Position		Olivenhain Municipal Water		$ -		
Safety Compliance Coordinator		Western Municipal Water	$ 41.66	$ 59.19		
Safety Specialist I		SCV Water	$ 34.51	$ 42.04		
Facilities and Safety Technician		Desert Water Agency	$ 44.35	$ 54.04		
No Equivalent Position		Eastern Municipal Water	$ -	$ -		
No Equivalent Position		Mesa Consolidated Water	$ -	$ -		
Safety Technician		Rancho CA Water	$ 47.44	$ 56.93		
No Equivalent Position		Walnut Valley Water	$ -	$ -		
Occupational Health and Safety Specialist		Padre Dam Municipal Water	$ 47.95	$ 67.84		
Safety Engineering Associate		LADWP	$ 50.32	$ 71.09		
		Agencies Comparison Results			$55.13	
		Min based on %			$ 49.71	
		Closest PWD Range			31	
		Range Difference 75%			2	
		PWD Safety and Training Technician Recommendation	$ 52.05	$ 63.42		31

		NEXT ANALYSIS				
HR & Safety Coordinator	27	Palmdale Water	$ 42.72	$ 52.05		
Human Resources Specialist		Cucamonga Valley Water	$ 37.06	$ 48.17		
HR Coordinator		Las Virgenes Municipal Water	$ 42.58	$ 55.37		
Human Resources Technician		Yorba Linda Water	$ 41.11	$ 52.63		
HR Analyst		Olivenhain Municipal Water	$ 46.14	$ 64.58		
HR Analyst II		Western Municipal Water	$ 43.75	$ 62.15		
HR Specialist		SCV Water	$ 42.04	$ 51.22		
No Equivalent Position		Desert Water Agency	$ -	$ -		
HR Tech II		Eastern Municipal Water	$ 41.25	$ 51.36		
Human Resources Assistant		Mesa Consolidated Water	$ 38.43	$ 52.96		
HR Analyst I		Rancho CA Water	$ 42.86	$ 56.57		
HR Analyst		Walnut Valley Water	$ 41.32	$ 56.96		
Human Resources Specialist		Padre Dam Municipal Water	$ 38.82	$ 54.90		
Personnel Analyst		LADWP	$ 42.01	$ 61.41		
		Agencies Comparison Results			$50.21	
		Min based on %			$ 45.28	
		Closest PWD Range			29	
		Range Difference 75%			2	
		PWD HR & Safety Coordinator Recommendation	$ 47.16	$ 57.46		29

22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
$33.37	$35.06	$36.84	$38.70	$40.66	$42.72	$44.88	$47.16	$49.54	$52.05	$54.69	$57.46	$60.36	$63.42	$66.63	$70.00	$73.55

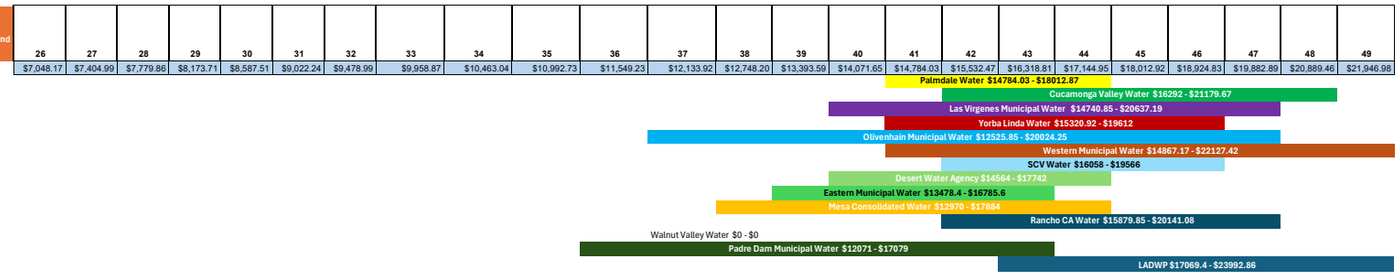


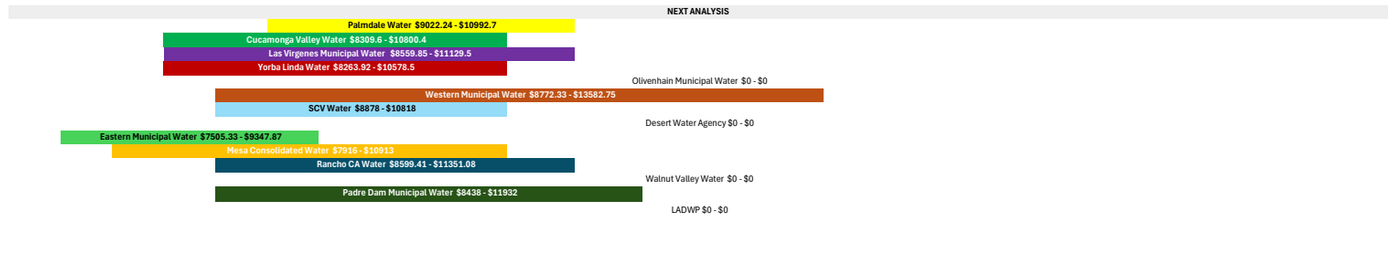
Position	Range #		Min	Max	75%	Recommendation
Human Resources Director	41	Palmdale Water	$ 14,784.03	$ 18,012.87		
Director of HR & Risk		Cucamonga Valley Water	$ 16,292.00	$ 21,179.67		
HR Mgr		Las Virgenes Municipal Water	$ 14,740.85	$ 20,637.19		
HR & Risk Mgr		Yorba Linda Water	$ 15,320.92	$ 19,612.00		
HR Mgr		Olivenhain Municipal Water	$ 12,525.85	$ 20,024.25		
Director of HR		Western Municipal Water	$ 14,867.17	$ 22,127.42		
HR Mgr		SCV Water	$ 16,058.00	$ 19,566.00		
HR Director		Desert Water Agency	$ 14,564.00	$ 17,742.00		
HR Mgr		Eastern Municipal Water	$ 13,478.40	$ 16,785.60		
HR Mgr		Mesa Consolidated Water	$ 12,970.00	$ 17,884.00		
HR DIrector		Rancho CA Water	$ 15,879.85	$ 20,141.08		
No Equivalent Position		Walnut Valley Water	$ -	$ -		
HR Director		Padre Dam Municipal Water	$ 12,071.00	$ 17,079.00		
HR Director		LADWP	$ 17,069.40	$ 23,992.86		
		Agencies Comparison Results			$18,010.47	
		Min based on %			$ 16,240.28	
		Closest PWD Range			43	
		Range Difference 75%			2	
		PWD Human Resources Director Recommendation	$ 16,318.81	$ 19,882.85		43

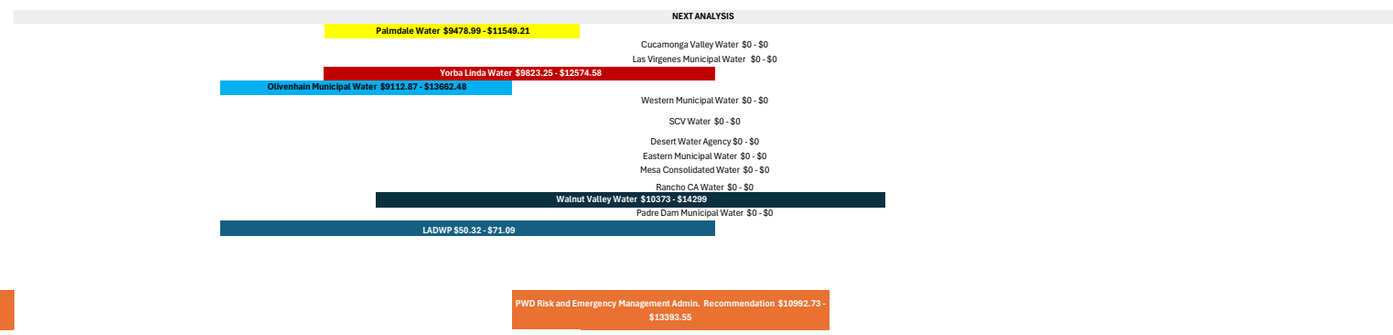
		NEXT ANALYSIS				
Human Resource Analyst	31	Palmdale Water	$ 9,022.24	$ 10,992.70		
Human Resource Analyst		Cucamonga Valley Water	$ 8,309.60	$ 10,800.40		
Human Resource Analyst I		Las Virgenes Municipal Water	$ 8,559.85	$ 11,129.50		
HR Analyst		Yorba Linda Water	$ 8,263.92	$ 10,578.50		
No Equivalent Position		Olivenhain Municipal Water	$ -	$ -		
Sr. HR Analyst		Western Municipal Water	$ 8,772.33	$ 13,582.75		
HR Analyst		SCV Water	$ 8,878.00	$ 10,818.00		
No Equivalent Position		Desert Water Agency	$ -	$ -		
HR Analyst		Eastern Municipal Water	$ 7,505.33	$ 9,347.87		
HR Analyst		Mesa Consolidated Water	$ 7,916.00	$ 10,913.00		
HR Analyst II		Rancho CA Water	$ 8,599.41	$ 11,351.08		
No Equivalent Position		Walnut Valley Water	$ -	$ -		
Human Resources Administrator		Padre Dam Municipal Water	$ 8,438.00	$ 11,932.00		
No Equivalent Position		LADWP	$ -	$ -		
		Agencies Comparison Results			$9,975.25	
		Min based on %			$ 8,994.81	
		Closest PWD Range			31	
		Range Difference 75%			no change	
		PWD Human Resource Analyst	No	change		

		NEXT ANALYSIS				
Risk and Emergency Management Admin.	32	Palmdale Water	$ 9,478.99	$ 11,549.21		
No Equivalent Position		Cucamonga Valley Water	$ -	$ -		
No Equivalent Position		Las Virgenes Municipal Water	$ -	$ -		
Safety Officer		Yorba Linda Water	$ 9,823.25	$ 12,574.58		
Safety/Risk Compliance Administrator		Olivenhain Municipal Water	$ 9,112.87	$ 13,662.48		
No Equivalent Position		Western Municipal Water	$ -	$ -		
No Equivalent Position		SCV Water	$ -	$ -		
No Equivalent Position		Desert Water Agency	$ -	$ -		
No Equivalent Position		Eastern Municipal Water	$ -	$ -		
No Equivalent Position		Mesa Consolidated Water	$ -	$ -		
No Equivalent position		Rancho CA Water	$ -	$ -		
Safety Officer		Walnut Valley Water	$ 10,373.00	$ 14,299.00		
No Equivalent Position		Padre Dam Municipal Water	$ -	$ -		
No Equivalent Position		LADWP	$ -	$ -		
		Agencies Comparison Results			$11,861.84	
		Min based on %			$ 10,695.98	
		Closest PWD Range			35	
		Range Difference 75%			3	
		PWD Risk and Emergency Management Admin. Recommendation	$ 10,992.73	$ 13,393.55		35

26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
$7,048.17	$7,404.99	$7,779.86	$8,173.71	$8,587.51	$9,022.24	$9,478.99	$9,958.87	$10,463.04	$10,992.73	$11,549.23	$12,133.92	$12,748.20	$13,393.59	$14,071.65	$14,784.03	$15,532.47	$16,318.81	$17,144.95	$18,012.92	$18,924.83	$19,882.89	$20,889.46	$21,946.98







Position	Range #		Min	Max	75%	Recommendation
						21
						$31.77
GIS Coordinator	32	Palmdale Water	$ 54.69	$ 66.63		
GIS Analyst		Cucamonga Valley Water	$ 46.99	$ 61.10		
GIS Coordinator		Las Virgenes Municipal Water	$ 51.77	$ 70.97		
GIS Technician II		Yorba Linda Water	$ 42.14	$ 53.94		
No Equivalent Position		Olivenhain Municipal Water				
No Equivalent Position		Western Municipal Water				
GIS Analyst		SCV Water	$ 51.22	$ 62.41		
GIS Specialist II		Desert Water Agency	$ 47.72	$ 58.21		
Applications Developer II		Eastern Municipal Water	$ 60.93	$ 75.87		
No Equivalent Position		Mesa Consolidated Water				
GIS Coordinator		Rancho CA Water	$ 64.86	$ 85.61		
Civil Engineer		Walnut Valley Water	$ 55.57	$ 76.61		
GIS Technical Specialist		Padre Dam Municipal Water	$ 51.52	$ 72.83		
Systems Programmer		LADWP	$ 63.00	$ 93.32		
		Agencies Comparison Results			$67.82	
		Min based on %			$ 61.16	
		Closest PWD Range			35	
		Range Difference 75%			3	
		PWD GIS Coordinator Recommendation	$ 63.42	$ 77.27		35

							NEXT ANALYSIS
Help Desk Assistant	24	Palmdale Water	$ 36.84	$ 44.89			
IT Specialist I		Cucamonga Valley Water	$ 40.92	$ 53.28			
Technolgy Support Specialist		Las Virgenes Municipal Water	$ 46.90	$ 64.29			
Information Systems Technician I		Yorba Linda Water	$ 37.24	$ 47.68			
Information Technology Coordinator		Olivenhain Municipal Water	$ 39.77	$ 55.68			
Information Service Specialist I		Western Municipal Water	$ 34.27	$ 48.68			
Informtion Technology Technician 1		SCV Water	$ 42.04	$ 51.22			
PC Support Technician I		Desert Water Agency	$ 38.28	$ 46.60			
Client Support Specialist I		Eastern Municipal Water	$ 37.40	$ 46.59			
No Equivalent Position		Mesa Consolidated Water					
System Administrator		Rancho CA Water	$ 49.81	$ 59.78			
No Equivalent Position		Walnut Valley Water					
Information Systems Technical Specialist		Padre Dam Municipal Water	$ 35.33	$ 71.23			
Computer Operator		LADWP	$ 38.23	$ 47.49			
		Agencies Comparison Results			$50.50		
		Min based on %			$ 45.54		
		Closest PWD Range			29		
		Range Difference 75%			5		
		PWD Help Desk Assistant Recommendation	$ 42.72	$ 52.05		27	

							NEXT ANALYSIS
Network Administrator	34	Palmdale Water	$ 60.36	$ 73.54			
Network Administrator		Cucamonga Valley Water	$ 56.17	$ 73.01			
Network and Security Engineer		Las Virgenes Municipal Water	$ 63.22	$ 82.19			
Sr. Information Systems Administrator		Yorba Linda Water	$ 70.78	$ 90.60			
Systems Administrator		Olivenhain Municipal Water	$ 45.45	$ 68.14			
Application Specialist III		Western Municipal Water	$ 45.93	$ 68.36			
IT Specialist		SCV Water	$ 53.80	$ 65.56			
Sr. Pc Support Technician		Desert Water Agency	$ 54.04	$ 65.71			
Information Systems Engineer II		Eastern Municipal Water	$ 60.93	$ 75.87			
No Equivalent Position		Mesa Consolidated Water					
Network Administrator		Rancho CA Water	$ 56.03	$ 73.96			
No Equivalent Position		Walnut Valley Water					
No Equivalent Position		Padre Dam Municipal Water					
Information Services Specialist		LADWP	$ 47.34	$ 58.82			
		Agencies Comparison Results			$67.55		
		Min based on %			$ 60.91		
		Closest PWD Range			35		

22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
$33.37	$35.06	$36.84	$38.70	$40.66	$42.72	$44.88	$47.16	$49.54	$52.05	$54.69	$57.46	$60.36	$63.42	$66.63	$70.00	$73.55	$77.27	$81.18	$85.29

Palmdale Water $54.69 - $66.63
Cucamonga Valley Water $46.99 - $61.1
Las Virgenes Municipal Water $51.77 - $70.97
Yorba Linda Water $42.14 - $53.94
Olivenhain Municipal Water $ - $
Western Municipal Water $ - $
SCV Water $51.22 - $62.41
Desert Water Agency $47.72 - $58.21
Eastern Municipal Water $60.93 - $75.87
Mesa Consolidated Water $ - $
Rancho CA Water $64.859 - $85.614
Walnut Valley Water $55.57 - $76.61
Padre Dam Municipal Water $51.52 - $72.83
LADWP $63 - $93.32
PWD GIS Coordinator Recommendation $63.42 - $77.27

NEXT ANALYSIS

Palmdale Water $36.84 - $44.89
Cucamonga Valley Water $40.92 - $53.28
Las Virgenes Municipal Water $46.9 - $64.29
Yorba Linda Water $37.24 - $47.68
Olivenhain Municipal Water $39.77 - $55.68
Western Municipal Water $34.27 - $48.68
SCV Water $42.04 - $51.22
Desert Water Agency $38.28 - $46.6
Eastern Municipal Water $37.4 - $46.59
Mesa Consolidated Water $ - $
Rancho CA Water $49.81 - $59.78
Walnut Valley Water $ - $
Padre Dam Municipal Water $35.33 - $71.23
LADWP $38.23 - $47.49
PWD Help Desk Assistant Recommendation $42.72 - $52.05

NEXT ANALYSIS

Palmdale Water $60.36 - $73.54
Cucamonga Valley Water $56.17 - $73.01
Las Virgenes Municipal Water $63.2152 - $82.1924
Yorba Linda Water $70.78 - $90.6
Olivenhain Municipal Water $45.45 - $68.14
Western Municipal Water $45.93 - $68.36
SCV Water $53.8 - $65.56
Desert Water Agency $54.04 - $65.71
Eastern Municipal Water $60.93 - $75.87
Mesa Consolidated Water $ - $
Rancho CA Water $56.03 - $73.96
Walnut Valley Water $ - $
Padre Dam Municipal Water $ - $
LADWP $47.34 - $58.82

Position	Range #		Min	Max	75%	Recommendation
		Range Difference 75%			1	
		PWD Network Administrator	$ 63.42	$ 77.27		35
		NEXT ANALYSIS				
SCADA/Instrumentation Tech. I	27	Palmdale Water	$ 42.72	$ 52.05		
Control Analyst		Cucamonga Valley Water	$ 52.94	$ 68.81		
No Equivalent Position		Las Virgenes Municipal Water	$ -	$ -		
No Equivalent Position		Yorba Linda Water	$ -	$ -		
Instrument Control Tech I		Olivenhain Municipal Water	$ 34.58	$ 48.38		
Operations Technician II-(SCADA Team)		Western Municipal Water	$ 34.27	$ 48.68		
No Equivalent Position		SCV Water	$ -	$ -		
No Equivalent Position		Desert Water Agency	$ -	$ -		
No Equivalent Position		Eastern Municipal Water	$ -	$ -		
No Equivalent Position		Mesa Consolidated Water	$ -	$ -		
Electrical Controls/Instrumentation Technician I		Rancho CA Water	$ 39.98	$ 47.98		
No Equivalent Position		Walnut Valley Water	$ -	$ -		
No Equivalent Position		Padre Dam Municipal Water	$ -	$ -		
Instrument Mechanic		LADWP	$ 52.42	$ 65.13		
		Agencies Comparison Results			$58.78	
		Min based on %			$ 53.00	
		Closest PWD Range			32	
		Range Difference 75%			5	
		PWD SCADA/Instrumentation Tech. I Recommendation	$ 49.54	$ 60.36		30
		NEXT ANALYSIS				
SCADA/Instrumentation Tech II	30	Palmdale Water	$ 49.54	$ 60.36		
		PWD SCADA/Instrumentation Tech II Recommendation	$ 57.46	$ 70.01		33
		NEXT ANALYSIS				
SCADA/Instrumentation Tech III	33	Palmdale Water	$ 57.46	$ 70.01		
		PWD SCADA/Instrumentation Tech III Recommendation	$ 66.63	$ 81.18		36

21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
$31.77	$33.37	$35.06	$36.84	$38.70	$40.66	$42.72	$44.88	$47.16	$49.54	$52.05	$54.69	$57.46	$60.36	$63.42	$66.63	$70.00	$73.55	$77.27	$81.18	$85.29

PWD Network Administrator $63.42 - $77.27

NEXT ANALYSIS

Palmdale Water $42.72 - $52.05

Cucamonga Valley Water $52.94 - $68.81

Las Virgenes Municipal Water $0 - $0

Yorba Linda Water $0 - $0

Olivenhain Municipal Water $34.58 - $48.38

Western Municipal Water $34.27 - $48.68

SCV Water $0 - $0

Desert Water Agency $0 - $0

Eastern Municipal Water $0 - $0

Mesa Consolidated Water $0 - $0

Rancho CA Water $39.98 - $47.98

Walnut Valley Water $0 - $0

Padre Dam Municipal Water $0 - $0

LADWP $52.42 - $65.13

PWD SCADA/Instrumentation Tech. I Recommendation $49.54 - $60.36

NEXT ANALYSIS

Palmdale Water $49.54 - $60.36

PWD SCADA/Instrumentation Tech II Recommendation $57.46 - $70.01

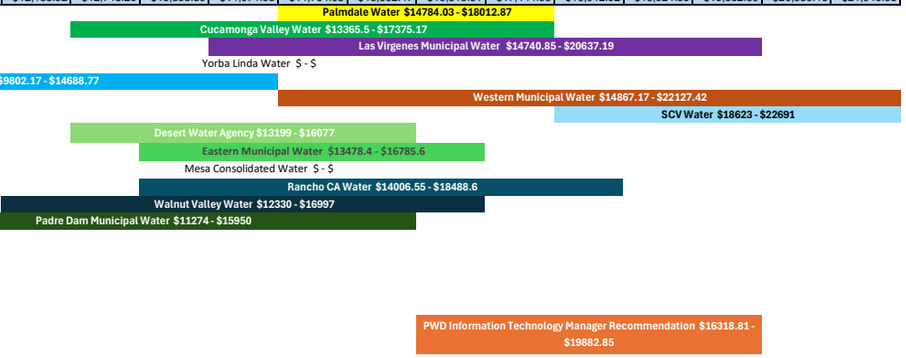
NEXT ANALYSIS

Palmdale Water $57.46 - $70.01

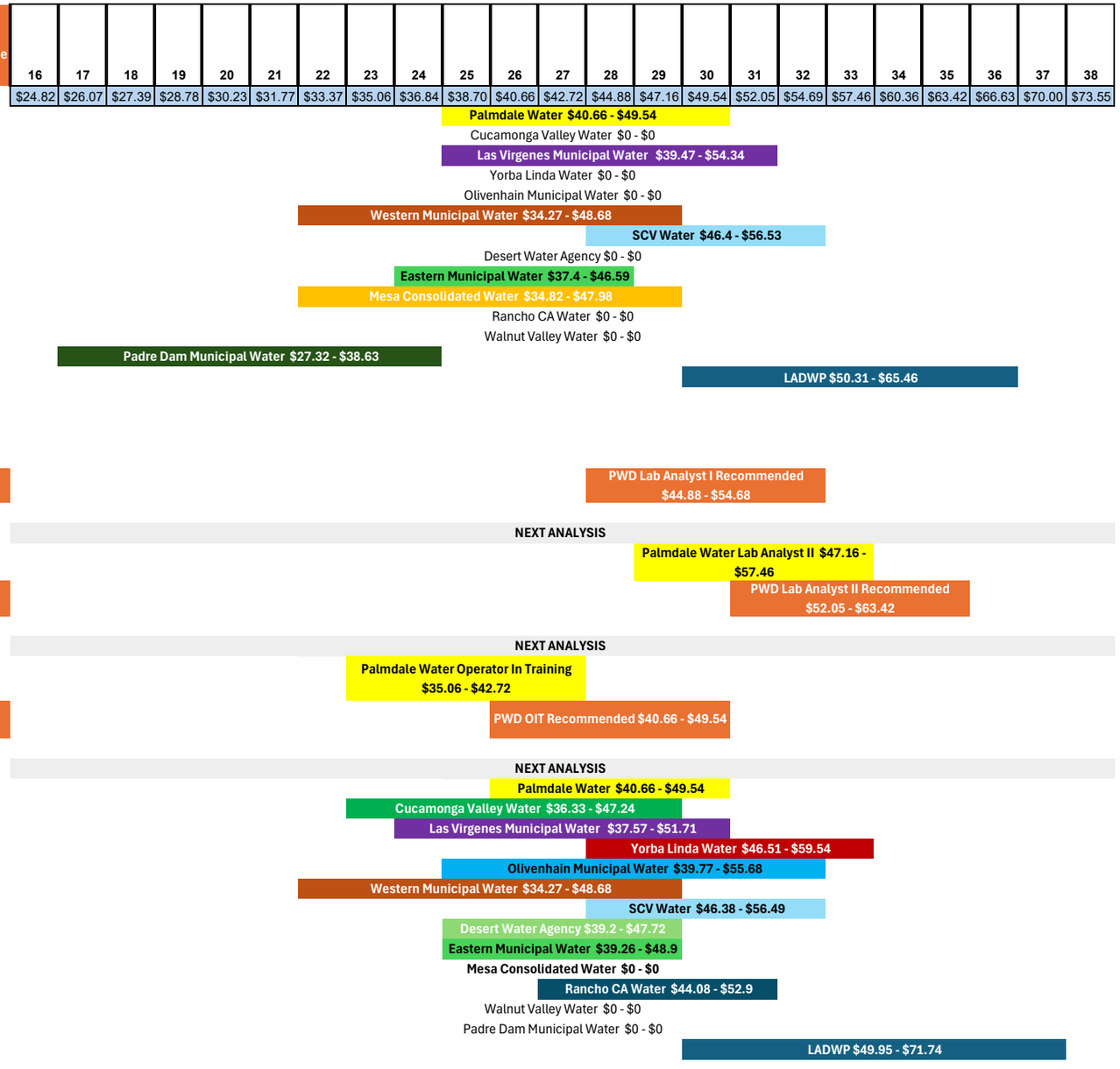
PWD SCADA/Instrumentation Tech III Recommendation $66.63 - $81.18

Position	Range #		Min	Max	75%	Recommendation
Information Technology Manager	41	Palmdale Water	$ 14,784.03	$ 18,012.87		
IT Manager		Cucamonga Valley Water	$ 13,365.50	$ 17,375.17		
Information Systems Manager		Las Virgenes Municipal Water	$ 14,740.85	$ 20,637.19		
No Equivalent Position		Yorba Linda Water				
IT Supervisor		Olivenhain Municipal Water	$ 9,802.17	$ 14,688.77		
Deputy Director of Information Sevices		Western Municipal Water	$ 14,867.17	$ 22,127.42		
Director Of Technology Services		SCV Water	$ 18,623.00	$ 22,691.00		
Information System Mgr		Desert Water Agency	$ 13,199.00	$ 16,077.00		
Information Technology/DevOps Manager		Eastern Municipal Water	$ 13,478.40	$ 16,785.60		
No Equivalent Position		Mesa Consolidated Water				
Infrastructure Assets Mgr		Rancho CA Water	$ 14,006.55	$ 18,488.60		
IT Mgr		Walnut Valley Water	$ 12,330.00	$ 16,997.00		
Information Systems Mgr		Padre Dam Municipal Water	$ 11,274.00	$ 15,950.00		
Information Systems Mgr		LADWP	$ 14,233.20	$ 20,164.86		
		Agencies Comparison Results			$17,444.03	
		Min based on %			$ 15,729.51	
		Closest PWD Range			43	
		Range Difference 75%			2	
		PWD Information Technology Manager Recommendation	$ 16,318.81	$ 19,882.85		43

31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
$9,022.24	$9,478.99	$9,958.87	$10,463.04	$10,992.73	$11,549.23	$12,133.92	$12,748.20	$13,393.59	$14,071.65	$14,784.03	$15,532.47	$16,318.81	$17,144.95	$18,012.92	$18,924.83	$19,882.89	$20,889.46	$21,946.98



Position	Range #		Min	Max	75%	Recommended
Lab Analyst I	26	Palmdale Water	$ 40.66	$ 49.54		
No Equivalent Position		Cucamonga Valley Water	$ -	$ -		
Laboratory Technician 1		Las Virgenes Municipal Water	$ 39.47	$ 54.34		
No Equivalent Position		Yorba Linda Water	$ -	$ -		
No Equivalent Position		Olivenhain Municipal Water	$ -	$ -		
Operations Technician II-Water Quality		Western Municipal Water	$ 34.27	$ 48.68		
Water Quality Scientist I		SCV Water	$ 46.40	$ 56.53		
No Equivalent Position		Desert Water Agency	$ -	$ -		
Scientist I		Eastern Municipal Water	$ 37.40	$ 46.59		
Water Quality Technician I		Mesa Consolidated Water	$ 34.82	$ 47.98		
No Equivalent Position		Rancho CA Water	$ -	$ -		
No Equivalent Position		Walnut Valley Water	$ -	$ -		
Laboratory Analyst 1		Padre Dam Municipal Water	$ 27.32	$ 38.63		
Chemist		LADWP	$ 50.31	$ 65.46		
		Agencies Comparison Results	$ 44.35	$ 54.02	$49.19	
		Min based on %			$ 44.35	
		Closest PWD Range			28	
		Range Difference 75%			2	
	28	PWD Lab Analyst I Recommended	$ 44.88	$ 54.68		28
		NEXT ANALYSIS				
Lab Analyst II	29	Palmdale Water	$ 47.16	$ 57.46		
		PWD Lab Analyst II Recommended	$ 52.05	$ 63.42		31
		NEXT ANALYSIS				
Operator In Training	23	Palmdale Water	$ 35.06	$ 42.72		
		PWD OIT Recommended	$ 40.66	$ 49.54		26
		NEXT ANALYSIS				
Plant Operator I	26	Palmdale Water	$ 40.66	$ 49.54		
Water Treatment Plant Operator I		Cucamonga Valley Water	$ 36.33	$ 47.24		
Water Treatment Plant Operator II		Las Virgenes Municipal Water	$ 37.57	$ 51.71		
Plant Operator II		Yorba Linda Water	$ 46.51	$ 59.54		
Water Treatment Plant Operator III		Olivenhain Municipal Water	$ 39.77	$ 55.68		
Operations Technician-Prd/Dist II		Western Municipal Water	$ 34.27	$ 48.68		
Treatment Plant Operator I-84hr		SCV Water	$ 46.38	$ 56.49		
System Operator II		Desert Water Agency	$ 39.20	$ 47.72		
Potable Water Treatment Operator II		Eastern Municipal Water	$ 39.26	$ 48.90		
No Equivalent Position		Mesa Consolidated Water	$ -	$ -		
Water system operator II-Treatment		Rancho CA Water	$ 44.08	$ 52.90		
No Equivalent Position		Walnut Valley Water	$ -	$ -		
No Equivalent Position		Padre Dam Municipal Water	$ -	$ -		
Water Treatment Operator		LADWP	$ 49.95	$ 71.74		
		Agencies Comparison Results	$ 45.72	$ 55.68	$50.70	



Position	Range #		Min	Max	75%	Recommended
		Min based on %			$ 45.72	
		Closest PWD Range			29	
		Range Difference 75%			3	
		PWD Plant Operator I Recommended	$ 47.16	$ 57.46		29
		NEXT ANALYSIS				
Plant Operator II	29	Palmdale Water	$ 47.16	$ 57.46		
		PWD Plant Operator II Recommended	$ 54.69	$ 66.63		32

16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
$24.82	$26.07	$27.39	$28.78	$30.23	$31.77	$33.37	$35.06	$36.84	$38.70	$40.66	$42.72	$44.88	$47.16	$49.54	$52.05	$54.69	$57.46	$60.36	$63.42	$66.63	$70.00	$73.55

PWD Plant Operator I Recommended
$47.16 - $57.46

NEXT ANALYSIS $ - $

Palmdale Water Plant Operator II
$47.16 - $57.46

PWD Plant Operator II Recommended
$54.69 - $66.63

Position	Range #		Min	Max	75%	Recommended
Operations Manager	41	Palmdale Water	$ 14,784.03	$ 18,012.87		
Operations Manager(WTP)		Cucamonga Valley Water	$ 13,365.50	$ 17,375.17		
No Equivalent Position		Las Virgenes Municipal Water	$ -	$ -		
Production Superintendent		Yorba Linda Water	$ 13,211.17	$ 16,911.42		
No Equivalent Position		Olivenhain Municipal Water	$ -	$ -		
No Equivalent Position		Western Municipal Water	$ -	$ -		
Water Treatment Manager		SCV Water	$ 13,848.00	$ 16,872.00		
Operations Manager		Desert Water Agency	$ 13,199.00	$ 16,077.00		
Water Operations Manager		Eastern Municipal Water	$ 13,478.40	$ 16,785.60		
Water Operations Manager		Mesa Consolidated Water	$ 15,419.00	$ 21,259.00		
Water Operations Manager		Rancho CA Water	$ 14,006.55	$ 18,488.60		
Production Manager		Walnut Valley Water	$ 10,373.00	$ 14,299.00		
No Equivalent Position		Padre Dam Municipal Water	$ -	$ -		
Water Utility Superintendent		LADWP	$ 17,434.80	$ 23,592.66		
		Agencies Comparison Results	$ 14,650.65	$ 17,844.50	$16,247.58	
		Min based on %			$ 14,650.65	
		Closest PWD Range			41	
		Range Difference 75%			no change	
		PWD Operations Manager Recommer	$ 16,318.81	$ 19,882.85		43

		NEXT ANALYSIS				
Water Quality/Regulatory Affairs Supervisor	35	Palmdale Water	$ 10,992.73	$ 13,393.55		
No Equivalent Position		Cucamonga Valley Water	$ -	$ -		
Water Quality Supervisor		Las Virgenes Municipal Water	$ 10,690.05	$ 13,899.21		
No Equivalent Position		Yorba Linda Water	$ -	$ -		
No Equivalent Position		Olivenhain Municipal Water	$ -	$ -		
No Equivalent Position		Western Municipal Water	$ -	$ -		
Water Quality Lab Supervisor		SCV Water	$ 11,364.00	$ 13,848.00		
Laboratory Director		Desert Water Agency	$ 11,967.00	$ 14,564.00		
Laboratory Manager		Eastern Municipal Water	$ 13,478.40	$ 16,785.60		
Water Quality and Compliance Supervisor		Mesa Consolidated Water	$ 9,408.00	$ 12,970.00		
Water Operations Supervisor-Water Quality		Rancho CA Water	$ 11,315.20	$ 13,578.93		
No Equivalent Position		Walnut Valley Water	$ -	$ -		
Laboratory supervisor		Padre Dam Municipal Water	$ 9,088.00	$ 12,854.00		
Water Quality Lab Mgr		LADWP	$ 13,279.68	$ 16,498.68		
		Agencies Comparison Results			$13,671.42	
		Min based on %			$ 12,327.70	
		Closest PWD Range			38	
		Range Difference 75%			3	
		PWD WA/Req Affairs Sup. Recommer	$ 12,748.20	$ 15,532.42		38

		NEXT ANALYSIS				
Operations Supervisor -WTP	35	Palmdale Water	$ 10,992.73	$ 13,393.55		
Operations Supervisor		Cucamonga Valley Water	$ 10,332.50	$ 13,432.33		
Water Treatment Supervisor		Las Virgenes Municipal Water	$ 10,174.97	$ 13,229.45		
Chief Water System Operator (exempt)		Yorba Linda Water	$ 11,391.92	$ 14,582.67		
Water Treatment Facilities Supervisor		Olivenhain Municipal Water	$ 9,802.17	$ 14,688.77		
Operations Field Supervisor		Western Municipal Water	$ 9,890.17	$ 14,719.67		
Treatment Plant Operations Supervisor		SCV Water	$ 11,364.00	$ 13,848.00		
Water Operations Supervisor		Desert Water Agency	$ 11,686.00	$ 14,200.00		
Water Operations Supervisor		Eastern Municipal Water	$ 10,060.27	$ 12,525.07		
No Equivalent Position		Mesa Consolidated Water	$ -	$ -		
Water Operations Supervisor-Production		Rancho CA Water	$ 11,315.20	$ 13,578.93		
Water Production supervisor		Walnut Valley Water	$ 9,873.00	$ 13,610.00		
No Equivalent Position		Padre Dam Municipal Water	$ -	$ -		
Water Treatment Supervisor		LADWP	$ 10,413.90	$ 15,078.07		
		Agencies Comparison Results			$12,675.99	
		Min based on %			$ 11,430.11	
		Closest PWD Range			36	
		Range Difference 75%			1	
		PWD Operations Supervisor -WTP Re	$ 12,133.92	$ 14,783.98		37

30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
$8,587.51	$9,022.24	$9,478.99	$9,958.87	$10,463.04	$10,992.73	$11,549.23	$12,133.92	$12,748.20	$13,393.59	$14,071.65	$14,784.03	$15,532.47	$16,318.81	$17,144.95	$18,012.92	$18,924.83	$19,882.89	$20,889.46	$21,946.98	$23,058.05

Palmdale Water $14784.03 - $18012.87
Cucamonga Valley Water $13365.5 - $17375.17
Las Virgenes Municipal Water $0 - $0
Yorba Linda Water $13211.17 - $16911.42
Olivenhain Municipal Water $0 - $0
Western Municipal Water $0 - $0
SCV Water $13848 - $16872
Desert Water Agency $13199 - $16077
Eastern Municipal Water $13478.4 - $16785.6
Mesa Consolidated Water $15419 - $21259
Rancho CA Water $14006.55 - $18488.6
Walnut Valley Water $10373 - $14299
Padre Dam Municipal Water $0 - $0
LADWP $17434.8 - $23592.66
PWD Operations Manager Recommended 16318.81 19882.85

NEXT ANALYSIS $ - $

Palmdale Water $10992.73 - $13393.55
Cucamonga Valley Water $0 - $0
Las Virgenes Municipal Water $10690.05 - $13899.21
Yorba Linda Water $0 - $0
Olivenhain Municipal Water $0 - $0
Western Municipal Water $0 - $0
SCV Water $11364 - $13848
Desert Water Agency $11967 - $14564
Eastern Municipal Water $13478.4 - $16785.6
Mesa Consolidated Water $9408 - $12970
Rancho CA Water $11315.2 - $13578.93
Walnut Valley Water $0 - $0
Padre Dam Municipal Water $9088 - $12854
LADWP $13279.68 - $16498.68
PWD WA/Req Affairs Sup. Recommended $12748.2 - $15532.42

NEXT ANALYSIS $ - $

Palmdale Water $10992.73 - $13393.55
Cucamonga Valley Water $10332.5 - $13432.33
Las Virgenes Municipal Water $10174.97 - $13229.45
Yorba Linda Water $11391.92 - $14582.67
Olivenhain Municipal Water $9802.17 - $14688.77
Western Municipal Water $9890.17 - $14719.67
SCV Water $11364 - $13848
Desert Water Agency $11686 - $14200
Eastern Municipal Water $10060.27 - $12525.07
Mesa Consolidated Water $0 - $0
Rancho CA Water $11315.2 - $13578.93
Walnut Valley Water $9873 - $13610
Padre Dam Municipal Water $0 - $0
LADWP $10413.9 - $15078.07
PWD Operations Supervisor -WTP Recommended $12133.92 - $14783.98

Departmental Salaries Budget Impact

	Current Salaries	Recommendation Impact
Administration	$ 1,698,460.84	$ 1,716,086.40
Engineering	1,405,801.72	$ 1,424,843.24
Facilities	2,540,563.80	$ 2,545,340.04
Operations	1,485,374.04	$ 1,512,351.64
Finance	1,055,527.40	$ 1,057,794.60
Water Conservation	216,528.00	$ 216,528.00
Human Resources	435,061.92	$ 446,160.60
Information Technology	793,895.88	$ 814,654.28
Customer Care	1,214,122.20	$ 1,222,608.60
	$ 10,845,335.80	$ 10,956,367.40

Current Employee Count: 90

Budget Impact $ 111,031.60

BOARD MEMORANDUM

DATE: December 15, 2025
TO: **BOARD OF DIRECTORS**
FROM: Mrs. Viri Iguaran, Finance Manager
VIA: Mr. Dennis D. LaMoreaux, General Manager
RE: ***CONSIDERATION AND POSSIBLE ACTION TO APPROVE THE 2026 OPERATING BUDGET. (FINANCE MANAGER IGUARAN/FINANCE COMMITTEE)***

Recommendation:

Staff and the Finance Committee recommends that the Board approve the 2026 Operating Budget as presented.

Alternative Options:

The Board can choose to further discuss the 2026 Budget.

Impact of Taking No Action:

The District will not have an approved Operating Budget for 2026.

Discussion:

Presented here is the draft 2026 Operating Budget in summary form (Page 1) as an overview for general discussion.

Revenue Assumptions:

Operating revenue estimates are based on the sale of **15,000 AF of water**, revised from the projections included in the 2024 Rate Study. Staff anticipates a water year similar to 2025, which closely aligns with prior projections.

- **Operating Revenue:**
  Total **operating** revenue for 2026 is preliminarily budgeted at **$44,095,278**, an increase of **$9,125,869** compared to the 2025 budget. The primary driver of the increase is the **11% rate adjustment**, with Pro Forma projections showing:

  – **Water Sales** up by **$4.9 million**
  – **Meter Fees** up by **$4.7 million**

  Additional revenue adjustments were made based on historical trends.

- **Other Non-Operating Revenue:**
  Total non-operating revenue totals $15,286,403, a slight decrease from the prior year. This change is largely due to the flow of State and Federal Grants.

- **Operating Expenses:**
  Total operating expenses for 2026 are preliminarily budgeted at **$36,856,639**, an increase of **$2,432,669** over the 2025 adopted budget.

- **Other Non-Operating Expenses:**
  Significant non-personnel expenses include State Water Project amortization costs, depreciation of District assets, interest related to debt service, water purchases, and utility expenses.

- **Personnel Cost:**
  Salaries and Benefits total **$20,740,363**. The personnel expense includes the COLA, merit increases, provision for vacation/sick sellback, and healthcare expenses. It also includes an amount of **$1,546,820** to fund our Unfunded Liability portion to CalPERS. The total FTE count for 2026 is **94**. (see attached salary schedule)

  Personnel costs include a 3% cola adjustment to employee salaries based on the CPI index from the Los Angeles area from August, which was at 3.3%.

- **Consolidated Profit & Loss (proposed)**
  An estimated year-end Profit & Loss Statement is attached, reflecting projected revenues and expenses. A separate capital analysis will be prepared to identify available funds for capital project requests.

Other items for review:

- Detailed proposed budgets by Department, along with full revenue and expenditure line-item reports, are included in the attached 2026 Draft Operating Budget.

- Attached for review is the District Calendar for 2026.

Strategic Plan Initiative/Mission Statement:

This work is part of Strategic Plan Initiative No. 4 – Financial Health and Stability.

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

Supporting Documents:

- 2026 Draft Operating Budget
- Budget Revenue Details
- Budget Expense Details
- 2026 District Calendar

PALMDALE WATER DISTRICT
2026 BUDGET (15,000 Acre Foot)

		FY 2022 Actuals	FY 2023 Actuals	FY 2024 Actuals	FY 2025 YTD Actuals	FY 2025 Budget	FY 2026 Proposed Budget	% Change
Operating Revenue								
	Wholesale Water (AVEK & LCID)	500,102	210,496	273,056	251,884	425,000	355,000	-16%
	Water Sales	11,701,601	10,840,169	12,956,661	14,294,098	12,346,328	17,316,021	40%
	Meter Fees	16,801,752	18,475,947	20,340,155	20,016,924	20,098,974	24,840,957	24%
	Water Quality Fees	623,061	511,918	416,112	315,255	600,000	250,000	-58%
	Elevation Fees	357,741	320,606	382,474	280,137	365,000	250,000	-32%
	Other	1,180,522	1,250,932	1,180,598	1,241,239	1,134,107	1,083,300	-4%
	Total Operating Revenue	31,164,780	31,610,067	35,549,057	36,399,537	34,969,409	44,095,278	26%
Operating Expenses								
	Directors	155,196	143,547	169,544	148,459	195,500	195,500	0%
	Administration	4,976,590	5,442,941	5,563,533	4,896,694	5,845,088	6,373,024	9%
	Engineering	1,619,282	1,968,615	1,964,943	1,943,210	2,157,042	2,298,059	7%
	Facilities	7,440,551	7,721,462	7,565,553	6,674,050	8,504,418	9,084,262	7%
	Operations	3,570,462	4,407,574	5,124,140	4,369,005	4,706,266	5,518,929	17%
	Finance	1,793,213	1,903,743	2,043,371	1,765,817	2,106,408	2,164,237	3%
	Water-Use Efficiency	274,845	307,402	287,595	329,911	356,240	363,015	2%
	Human Resources	470,815	656,662	748,518	679,822	798,232	828,257	4%
	Information Technology	1,654,693	1,964,358	2,240,149	2,013,325	2,180,496	2,381,400	9%
	Customer Care	1,437,440	1,735,449	1,960,613	1,806,458	1,844,280	1,999,956	8%
	Water Purchases	1,939,252	3,891,975	1,761,601	3,375,634	2,600,000	3,000,000	15%
	Water Purchased - Haul Water	119,130	116,040	157,240	129,040	-	150,000	
	OAP Chrg (Prior Year)	(645)	(24,609)	-	(5,093)	25,000	-	-100%
	Water Recovery	(25,594)	125,688	(32,384)	(57,390)	155,000	-	-100%
	Water Quality (GAC Media)	304,920	608,626	668,000	-	750,000	750,000	0%
	Littlerock Dam Sediment Removal Project	2,692,727	228,249	54,349	47,406	1,800,000	1,500,000	-17%
	Plant Expenditures	140,453	320,796	145,951	214,799	400,000	250,000	-38%
Cash Expenses	**Total Operating Expenses**	28,563,331	31,518,519	30,422,714	28,331,148	34,423,970	36,856,639	-173%
Non-Cash Expenses								
	Depreciation	5,223,047	5,594,181	5,595,267	4,819,940	5,800,000	5,700,000	-2%
	Right to Use Asset Amortization (GASB 87)	136,845	131,336	153,091	-	-	-	
	Post-Employment Benefit (GASB 75)	527,013	362,277	434,362	1,532,521	1,600,000	1,600,000	0%
	Bad Debts	16,690	2,908	42,061	71,976	25,000	80,000	220%
	Service Costs Construction	480,546	446,693	365,037	323,611	550,000	550,000	0%
	Capitalized Construction	(335,052)	(319,596)	(417,747)	(592,005)	(1,200,000)	(400,000)	-67%
	Overhead Recovered	(921,391)	(878,890)	(1,148,029)	(1,628,012)	-	(1,200,000)	
	Non-Cash Expenses	5,127,699	5,338,910	5,024,043	4,528,031	6,775,000	6,330,000	-7%
	Net Operating Income/(Loss)	(2,526,250)	(5,247,362)	102,300	3,540,359	(6,229,561)	908,639	-115%
Non-Operating Revenue								
	Assessments (Debt Service)	7,169,879	6,009,593	7,268,052	3,838,484	7,000,000	7,000,000	0%
	Assessments (1%)	2,640,066	2,909,289	3,528,364	1,914,458	2,593,355	2,500,000	-4%
	Successor Agency Component (Prop Tax)	836,598	998,755	980,220	1,023,448	884,327	912,980	3%
	DWR Fixed Charge Recovery	349,339	388,705	443,653	414,085	300,000	250,000	-17%
	Interest	137,917	266,676	714,384	940,716	285,000	250,000	-12%
	Market Adj. on Investments	(40,683)	306,968	273,356	183,497	-	-	
	Capital Improvement Fees	2,318,354	802,116	209,462	2,676,331	550,000	600,000	9%
	Grants - State & Federal	154,081	1,296,278	2,078,941	2,564,058	6,000,000	2,500,000	-58%
	State Water Project - Table A Water Exchange	-	2,901,699	1,662,500	1,800,000	-	1,000,000	
	Rental Revenue - Cellular Towers (GASB 87)	193,519	185,449	274,193	172,533	-	238,423	
	Service Cost Recovered	155,660	61,564	70,134	524,200	72,893	10,000	-86%
	Other	236,573	171,035	1,223,346	144,534	25,000	25,000	0%
	Non-Operating Revenue	14,151,302	16,298,126	18,726,605	16,196,343	17,710,575	15,286,403	-14%
Non-Operating Expenses								
	Interest Paid & Amortization on long-term debt	2,444,693	2,741,167	3,313,670	2,627,224	2,743,731	3,143,617	15%
	Deferred Charge - Cost of Issuance	7,500	327,759	292,810	-	-	-	
	Amortization of SWP	4,008,232	4,492,670	4,985,344	3,738,972	4,838,220	4,838,220	0%
	Capital Leasing							
	Capital Contributions	(3,089,833)	-	-	-	-	-	
	Legal Settlements							
	Change in Investments in PRWA	5,370	(26,692)	(6,930)	20,614	25,000	20,000	-20%
	Water-Use Efficiency	210,915	109,725	66,667	80,118	100,000	100,000	0%
	Rate Assistance Program (GASB 87)	304,009	171,546	200,320	-	-	190,000	
	Non-Operating Expenses	3,890,887	7,816,175	8,851,881	6,466,927	7,706,951	8,291,837	8%
	Net Non-operating Income/(Loss)	10,260,415	8,481,950	9,874,724	9,729,416	10,003,624	6,994,566	-30%
	Net Earnings(Loss)	**7,734,165**	**3,234,589**	**9,977,024**	**13,269,775**	**3,774,063**	**7,903,205**	

DRAFT

01-Directors

Dept Name	Category	Account Number	Account Description	FY 2022 Actuals	FY 2023 Actuals	FY 2024 Actuals	FY 2025 YTD Actuals	FY 2025 Budget	FY 2026 Proposed Budget
01 - Directors	Salaries	1-01-4000-000	Directors Pay	-	-	-			155,000
		1-01-4000-006	Directors Pay - G. Dizmang	26,170	14,940	220			
		1-01-4000-007	Directors Pay - R. Alverado	-	-	-			
		1-01-4000-008	Directors Pay - K. Mac Laren	19,270	17,380	20,680	22,760	31,000	
		1-01-4000-009	Directors Pay - J. Estes	-	-	-			
		1-01-4000-010	Directors Pay - V. Dino	23,880	23,760	25,960	16,720	31,000	
		1-01-4000-011	Directors Pay - M. Henriquez	-	-	-			
		1-01-4000-012	Directors Pay - D. Wilson	20,510	18,260	20,240	18,475	31,000	
		1-01-4000-013	Directors Pay - A. Merino	4,320	-	-			
		1-01-4000-014	Directors Pay - S. Kellerman	13,860	14,520	18,920	19,460	31,000	
		1-01-4000-015	Directors Pay - C. Sanchez	-	-	18,700	17,480	31,000	
		1-01-4000-016	Directors Pay - D. Dino	-	-	-	5,100		
	Salaries Total			**108,010**	**88,860**	**104,720**	**99,995**	**155,000**	**155,000**
	Benefits	1-01-4005-000	Payroll Taxes - Directors	7,961	7,387	8,011	7,650	9,500	9,500
		1-01-4010-000	Health Insurance - Directors	-	-	-		31,000	31,000
		1-01-4010-006	Health Ins. Directors - G. Dizmang	542	347	-			
		1-01-4010-007	Health Ins. Directors - R. Alvarado	-	-	-			
		1-01-4010-008	Health Ins. Directors - K. Mac Laren	17,264	17,934	19,670	9,693		
		1-01-4010-009	Health Ins. Directors - J. Estes	-	-	-			
		1-01-4010-010	Health Ins. Directors - V. Dino	4,903	6,617	7,129	4,284		
		1-01-4010-011	Health Ins. Directors - M. Henriquez	-	-	-			
		1-01-4010-012	Health Ins. Directors - D. Wilson	727	703	748	747		
		1-01-4010-013	Health Ins. Directors - A, Merino	3,980	-	-			
		1-01-4010-014	Health Ins. Directors - S. Kellerman	-	-	-			
		1-01-4010-015	Health Ins. Directors - C. Sanchez	-	-	-			
		1-01-4010-016	Health Ins. Directors - D. Dino	-	-	-	646		
	Benefits Total			**35,377**	**32,988**	**35,559**	**23,020**	**40,500**	**40,500**
	Operating Expense	1-01-4050-006	Director - Dizmang, Gloria	4,127	370	-			
		1-01-4050-007	Director - Alvarado, Robert	-	-	-			
		1-01-4050-008	Director - Mac Laren, Kathy	1,644	2,686	3,864	3,127		
		1-01-4050-009	Director - Estes, Joe	-	-	-			
		1-01-4050-010	Director - Dino, Vincent	1,817	7,272	4,901	4,071		
		1-01-4050-011	Director - Henriquez, Marco	-	-	-			
		1-01-4050-012	Director - Wilson, Don	2,185	7,526	7,805	7,544		
		1-01-4050-013	Director - Merino, Amber	(130)	-	-			
		1-01-4050-014	Director - S. Kellerman	2,166	3,845	5,199	4,303		
		1-01-4050-015	Director - C. Sanchez	-	-	7,496	4,780		
		1-01-4050-016	Director - D. Dino	-	-	-	1,619		
	Operating Expense Total			**11,810**	**21,699**	**29,265**	**25,444**		
01 - Directors Total				**155,196**	**143,547**	**169,544**	**148,459**	**195,500**	**195,500**
Grand Total				**155,196**	**143,547**	**169,544**	**148,459**	**195,500**	**195,500**

DRAFT

02-Administration

Dept Name	Category	Account Number	Account Description	FY 2022 Actuals	FY 2023 Actuals	FY 2024 Actuals	FY 2025 YTD Actuals	FY 2025 Budget	FY 2026 Proposed Budget
02 - Administration	Salaries	1-02-4000-000	Salaries - Administration	1,492,579	1,470,307	1,441,339	1,540,335	1,640,000	1,774,817
		1-02-4000-100	Salaries - Overtime	4,013	1,764	2,708	614	5,250	700
		1-02-4000-200	Salaries - On-Call/Stand-By Time	-	-	-			
		1-02-4000-500	Salaries - Temp Help	-	-	-			
		1-02-5070-001	Salaries-On-Call/Stand By Time	87,402	81,012	87,988	83,830	95,000	95,000
		1-02-5070-004	Vacation Benefit Expense	35,717	81,592	(39,424)	(77,842)	95,000	95,000
	Salaries Total			**1,619,711**	**1,634,676**	**1,492,610**	**1,546,936**	**1,835,250**	**1,965,517**
	Benefits	1-02-4005-000	Payroll Taxes - Administration	92,318	93,362	121,668	102,407	140,000	128,700
		1-02-4010-000	Health Insurance - Administration	176,226	157,110	160,936	167,468	190,000	176,320
		1-02-4015-000	PERS - Deferred (GASB 68)	42,919	-	-		195,000	
		1-02-4015-001	PERS - Deferred Auditor (GASB 68)	(95,642)	(120,671)	(127,083)			
		1-02-4015-100	PERS - Administration - Employer (Clas	81,426	307,298	328,191	56,512		63,155
		1-02-4015-200	PERS - Administration - Employee (Clas	-	-	-			
		1-02-4015-300	PERS - Administration - Employer (PEP	44,411	53,838	58,908	68,841		100,808
		1-02-4020-000	Worker's Comp	-	-	-			
		1-02-4030-000	Life Insurance/EAP Program	-	-	-			
		1-02-4085-000	Post Employment Benefits - Administrat	92,002	50,200	55,612	148,305		150,000
		1-02-4125-000	Insurance	-	-	-			
		1-02-5070-002	PERS-Unfunded Liability	938,763	940,423	1,039,041	1,035,261	1,264,466	1,546,820
		1-02-5070-003	Worker's Compensation	210,121	185,750	194,934	204,195	240,810	350,308
		1-02-5070-005	Life Insurance/EAP	6,424	6,351	6,186	6,185	7,250	7,390
		1-02-5070-008	Insurance	385,236	458,219	494,749	418,805	500,000	550,000
	Benefits Total			**1,974,203**	**2,131,880**	**2,333,142**	**2,207,979**	**2,537,526**	**3,073,501**
	Operating Expense	1-02-4025-000	Vacation Benefit Expense	-	-	-			
		1-02-4050-000	Staff Travel	12,421	27,888	9,799	11,884	19,216	19,000
		1-02-4050-100	General Manager Travel	5,119	5,268	7,111	3,966	5,713	5,700
		1-02-4060-000	Staff Conferences & Seminars	9,231	4,999	2,773	11,755	7,790	8,000
		1-02-4060-100	General Manager - Conferences and Se	1,735	1,550	1,850	4,275	4,155	4,500
		1-02-4060-300	Meeting Supplies/Expense	-					1,000
		1-02-4080-000	Other Operating	-	-	-			
		1-02-4110-000	Consultants	-	-	-			
		1-02-4110-100	Consultants-Emergency Preparedness	-	-	-			
		1-02-4130-000	Bank Charges	195,249	202,856	226,913	175,952	220,000	220,000
		1-02-4135-000	Groundwater Adjudication	-	-	-			
		1-02-4135-100	Groundwater Adjudication - Woods Clas	-	-	-			
		1-02-4140-000	Legal Services	-	-	-			
		1-02-4150-000	Accounting Services	25,251	34,875	28,496	30,055	35,000	50,000
		1-02-4155-205	Contracted Services - Landscape Servic	-	-	-			
		1-02-4155-210	Contracted Services - Janatorial Service	-	-	-			
		1-02-4155-215	Contracted Services - Elevator	-	-	-			
		1-02-4165-000	Memberships/Subscriptions	-	-	-			
		1-02-4175-000	Permits (Construction)	3,931	50	2,066	1,200	10,000	10,000
		1-02-4180-000	Postage	9,871	16,014	10,886	6,619	16,000	10,000
		1-02-4190-100	Public Relations - Publications	32,037	23,333	30,755	35,414	33,758	35,000
		1-02-4190-700	Public Affairs - Marketing/Outreach	27,543	24,399	37,633	28,336	41,548	40,000
		1-02-4190-705	Public Affairs - Drought Outreach	12,131	-	-			
		1-02-4190-710	Public Affairs - Advertising	250	550	1,400	1,445	4,155	5,000
		1-02-4190-720	Public Affairs - Equipment	-	3,556	-		1,039	1,000
		1-02-4190-730	Public Affairs - Conference/Seminar/Tra	3,086	600	675		4,155	4,000
		1-02-4190-740	Public Affairs - Consultants	1,200	-	-		2,077	2,100
		1-02-4190-750	Public Affairs - Membership	885	912	637		1,558	1,558
		1-02-4190-900	Public Relations - Other	-	-	-			
		1-02-4200-000	Advertising	945	610	399	1,622	1,000	2,000
		1-02-4205-000	Office Supplies	18,094	26,342	19,589	18,114	27,500	27,500
		1-02-4210-000	Office Furniture	-	-	-			
		1-02-4215-200	Natural Gas - Buildings	-	-	-			
		1-02-4220-200	Electricity - Buildings	-	-	-			
		1-02-5070-006	Other Operating	99,845	58,252	102,099	172,953	57,000	57,000
		1-02-5070-007	Consultants	692,184	839,899	849,696	455,293	500,000	500,000
		1-02-5070-009	Groundwater Adjudication - Legal	17,872	23,004	7,797	17,175	25,000	25,000
		1-02-5070-010	Legal Services	188,085	175,057	190,234	121,520	181,000	181,000
		1-02-5070-011	Memberships	76,354	163,818	153,342	117,318	165,000	165,000
		1-02-5070-012	Elections	-	41,084	-		58,000	58,000
		1-02-5070-013	Succession Planning	-	-	-			
		1-02-5070-014	Groundwater Adjudication - Pumping As	41,360	51,669	70,287	65,966	51,500	51,500
		1-02-5070-015	Computer Software - Info 360	-	-	-		148	148
		1-02-5070-099	District - 100th Anniversary Expense	-	-	38,957	9,224		
	Operating Expense Total			**1,474,678**	**1,726,585**	**1,793,393**	**1,290,084**	**1,472,312**	**1,484,006**
02 - Administration Total				**5,068,591**	**5,493,141**	**5,619,145**	**5,044,999**	**5,845,088**	**6,523,024**
Grand Total				**5,068,591**	**5,493,141**	**5,619,145**	**5,044,999**	**5,845,088**	**6,523,024**

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03-Engineering

Dept Name	Category	Account Number	Account Description	FY 2022 Actuals	FY 2023 Actuals	FY 2024 Actuals	FY 2025 YTD Actuals	FY 2025 Budget	FY 2026 Proposed Budget
03 - Engineering	Salaries	1-03-4000-000	Salaries - Engineering	1,214,879	1,372,346	1,325,050	1,403,854	1,560,000	1,638,844
		1-03-4000-100	Salaries - Overtime	22,736	14,656	18,902	17,910	16,000	18,000
		1-03-4000-500	Salaries - Temp Help	-	-	-			
	Salaries Total			**1,237,615**	**1,387,002**	**1,343,952**	**1,421,764**	**1,576,000**	**1,656,844**
	Benefits	1-03-4005-000	Payroll Taxes - Engineering	90,038	100,233	110,638	111,019	115,000	126,749
		1-03-4010-000	Health Insurance - Engineering	196,271	208,033	222,692	240,982	278,000	271,893
		1-03-4015-000	PERS - Deferred (GASB 68)	52,456	-	-		154,000	
		1-03-4015-001	PERS - Deferred Auditor (GASB 68)	(116,896)	(122,590)	(132,448)			
		1-03-4015-100	PERS - Engineering - Employer (Classic	48,261	308,416	346,198	105,299		111,231
		1-03-4015-200	PERS - Engineering - Employee (Classi	-	-	-			
		1-03-4015-300	PERS - Engineering - Employer (PEPR/	51,310	58,462	57,242	39,578		59,122
		1-03-4085-000	Post Employment Benefits - Engineering	68,887	42,476	55,612	197,745		200,000
	Benefits Total			**390,328**	**595,030**	**659,935**	**694,623**	**547,000**	**768,995**
	Operating Expense	1-03-4050-000	Staff Travel	3,182	1,819	2,447	806	4,155	12,000
		1-03-4060-000	Staff Conferences & Seminars	8,874	11,156	5,229	12,876	10,387	16,000
		1-03-4060-001	Staff Training - Auto CAD Civil 3D	-	-	-			
		1-03-4155-305	Contracted Services - GIS Services	-	-	-			
		1-03-4155-310	Contracted Services - Reproduction	3,100	-	-		3,000	5,000
		1-03-4155-320	Contracted Services - Plotter/Scanner	-	-	-			
		1-03-4165-000	Memberships/Subscriptions	5,647	5,116	7,320	7,993	8,000	10,000
		1-03-4250-000	General Material & Supplies	7,311	3,277	1,672	2,569	7,500	5,000
		1-03-4250-100	Supplies - Plotter Paper/Toner	112	-	-	324	1,000	1,000
		1-03-4250-150	Supplies - Surveying Total Station	-	-	-			
		1-03-4250-175	Supplies - GPS Plotting Tool	23,000	-	-			
		1-03-4250-200	Supplies - Miscellaneous	-	-	-			5,000
		1-03-6200-000	Uniforms	-					720
		1-03-8100-100	Computer Software - Maintenance and S	9,000	7,691	-			17,500
		1-03-8100-200	Computer Software - SCADAWatch	-	-	-			
	Operating Expense Total			**60,226**	**29,059**	**16,668**	**24,568**	**34,042**	**72,220**
03 - Engineering Total				**1,688,169**	**2,011,091**	**2,020,555**	**2,140,955**	**2,157,042**	**2,498,059**
Grand Total				**1,688,169**	**2,011,091**	**2,020,555**	**2,140,955**	**2,157,042**	**2,498,059**

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04-Facilites

Dept Name	Category	Account Number	Account Description	FY 2022 Actuals	FY 2023 Actuals	FY 2024 Actuals	FY 2025 YTD Actuals	FY 2025 Budget	FY 2026 Proposed Budget
04 - Facilities	Salaries	1-04-4000-000	Salaries - Facilities	2,224,953	2,435,220	2,128,132	2,331,130	2,685,000	2,682,230
		1-04-4000-100	Salaries - Overtime	166,452	189,278	166,545	160,420	165,000	170,000
		1-04-4000-500	Salaries - Temp Help	-	57,745	178,385			
	Salaries Total			**2,391,404**	**2,682,244**	**2,473,062**	**2,491,550**	**2,850,000**	**2,852,230**
	Benefits	1-04-4005-000	Payroll Taxes - Facilities	185,043	204,273	202,068	205,093	205,000	218,196
		1-04-4010-000	Health Insurance - Facilities	477,132	465,659	448,957	500,137	580,000	578,754
		1-04-4015-000	PERS - Deferred (GASB 68)	119,218	-	-		230,000	
		1-04-4015-001	PERS - Deferred Auditor (GASB 68)	(265,672)	(228,672)	(210,016)			
		1-04-4015-100	PERS - Facilities - Employer (Classic)	98,980	582,586	588,239	72,607		85,008
		1-04-4015-200	PERS - Facilities - Employee (Classic)	-	-	-			
		1-04-4015-300	PERS - Facilities - Employer (PEPRA)	99,731	101,766	110,231	132,297		158,788
		1-04-4085-000	Post Employment Benefits - Facilities	227,841	122,163	146,613	428,448		450,000
	Benefits Total			**942,273**	**1,247,775**	**1,286,093**	**1,338,581**	**1,015,000**	**1,490,746**
	Operating Expense	1-04-4050-000	Staff Travel	-	5,730	13,150	6,029	5,194	5,194
		1-04-4060-000	Staff Conferences & Seminars	275	4,575	14,717	3,636	7,790	9,000
		1-04-4155-405	Contracted Services - Landscape Svcs (All Sites)	12,259	13,840	13,109	10,021	13,362	13,362
		1-04-4155-410	Contracted Services - Landscape Svcs (Wells)	31,800	41,800	44,200	44,200	57,129	57,129
		1-04-4155-415	Contracted Services - Alarm Services	-	-	-			
		1-04-4155-420	Contracted Services - Janatorial Serv (All Sites)	39,624	43,406	64,318	66,301	49,858	80,000
		1-04-4155-425	Contracted Services - Pest Control Svcs (All Loc)	7,641	8,136	8,508	8,922	8,569	12,000
		1-04-4155-430	Contracted Services - Pest Control Svcs (Plm Dam)	4,639	6,271	1,721		6,492	6,492
		1-04-4155-435	Contracted Services - Elevator Services	2,965	3,069	7,645	3,646	3,376	5,000
		1-04-4155-440	Contracted Services - SCADA Software	-	-	-			
		1-04-4155-445	Contracted Services - SCADA Hardware	-	-	-			
		1-04-4155-450	Contracted Services - Seismic Valve Controllers	6,987	7,268	7,483	7,780	7,271	10,000
		1-04-4155-455	Contracted Services - Annual Tank Service	162,069	120,990	51,763		129,839	129,839
		1-04-4155-460	Contracted Services - Fire Extinguisher Servicing	3,308	-	-		3,635	4,500
		1-04-4155-466	Contracted Services - Clearscada	-	-	-			
		1-04-4155-468	Contracted Services - Fuel Serve	2,657	3,280	3,195	3,855	3,635	4,000
		1-04-4155-499	Contracted Services - Miscellaneous	-	-	-			
		1-04-4175-000	Permits (District Facilities including Dams)	65,543	62,449	69,183	66,949	72,710	75,000
		1-04-4215-100	Natural Gas - Wells & Boosters	483,086	348,126	252,179	111,382	384,226	280,000
		1-04-4215-200	Natural Gas - Buildings	13,531	13,118	9,234	6,890	16,716	16,716
		1-04-4220-100	Electricity - Wells & Boosters	2,221,783	2,000,495	2,242,252	1,530,881	2,306,902	2,537,594
		1-04-4220-200	Electricity - Buildings	98,531	101,338	116,776	107,344	115,195	120,000
		1-04-4225-000	Mtce & Rep - Vehicles	26,554	47,109	43,725	61,338	40,223	50,000
		1-04-4230-100	Mtce & Rep Operations - Office Building	6,339	4,513	13,389	22,677	13,231	23,000
		1-04-4230-110	Mtce & Rep Office - Equipment	-	-	-			
		1-04-4230-120	Maint. & Rep. Operations - Two-way Radios	660	990	721	661	1,500	6,000
		1-04-4235-110	Mtce & Rep Operations - Equipment	9,048	22,016	5,630	23,148	10,585	20,000
		1-04-4235-400	Mtce & Rep Operations - Wells	103,222	102,338	84,029	199,905	111,144	120,000
		1-04-4235-405	Mtce & Rep Operations - Boosters	101,617	39,342	62,718	60,550	89,973	200,000
		1-04-4235-410	Mtce & Rep Operations - Shop Buildings	1,596	5,705	5,141	1,361	5,293	80,000
		1-04-4235-415	Mtce & Rep Operations - Facilities	8,716	38,441	58,288	49,173	52,926	52,926
		1-04-4235-420	Mtce & Rep Operations - Water Lines	359,364	277,706	261,363	230,982	317,553	317,553
		1-04-4235-425	Mtce & Rep Operations - Littlerock Dam	23,410	18,193	9,862	39,768	26,295	50,000
		1-04-4235-430	Mtce & Rep Operations - Palmdale Dam	-	-	-			
		1-04-4235-435	Mtce & Rep Operations - Palmdale Canal	5,501	23,108	-		8,997	8,997
		1-04-4235-440	Mtce & Rep Operations - Large Meters	3,077	1,987	-		3,457	25,000
		1-04-4235-445	Mtce & Rep Operations - Telemetry	-	-	-			
		1-04-4235-450	Mtce & Rep Operations - Hypo Generators	4,488	8,090	45		10,585	10,585
		1-04-4235-455	Mtce & Rep Operations - Heavy Equipment	47,769	55,110	52,021	15,353	50,279	50,500
		1-04-4235-460	Mtce & Rep Operations - Storage Reservoirs	2,385	6,552	1,838	3,470	10,016	10,016
		1-04-4235-461	Maint. & Rep. Operations - Air Vacs	5,749	4,686	3,929	3,597	6,086	7,000
		1-04-4235-470	Mtce & Rep Operations - Meter Exchanges	29,966	25,875	30,770	54,745	37,048	50,000
		1-04-4250-100	General Material & Supplies - Hot Tapping Program	-	-	-			
		1-04-4270-300	Telecommunication - Other	-	-	-			
		1-04-4300-100	Testing - Regulatory Compliance	9,573	12,628	9,349	95	12,984	14,000
		1-04-4300-200	Testing - Large Meter Testing	16,160	10,535	2,940		14,542	15,000
		1-04-4300-300	Testing - Edison Testing	10,900	-	12,300		11,880	22,000
		1-04-5070-009	Groundwater Adjudication - Pumping Assessment	-	-	-			
		1-04-6000-000	Waste Disposal	15,706	20,160	26,816	26,058	18,873	25,000
		1-04-6100-100	Fuel - Gas and Diesel	197,656	172,315	144,167	127,415	219,820	220,000
		1-04-6100-200	Lubricates District Wide	23,704	32,640	35,158	25,521	29,680	29,680
		1-04-6200-000	Uniforms	26,076	31,411	29,981	24,752	35,316	38,600
		1-04-6300-100	Supplies - General	60,392	57,539	47,351	56,555	60,245	62,000
		1-04-6300-200	Supplies - Hypo Generators	-	-	-			
		1-04-6300-300	Supplies - Electrical	-	1,192	-		2,500	2,500
		1-04-6300-400	Supplies - Telemetry	-	-	-			
		1-04-6300-800	Supplies - Construction Materials	24,266	35,188	31,554	29,272	28,824	32,000
		1-04-6400-000	Tools	-	-	-			
		1-04-6400-100	Tools - Facilities	25,772	37,863	34,698	39,350	31,161	34,000
		1-04-6400-200	Tools - Vehicles	6,452	10,790	7,827	9,612	8,310	10,000
		1-04-6450-100	Equipment - Firetide Radios	-	-	-			
		1-04-6450-120	Equipment - SCADA Workstations	-	-	-			
		1-04-7000-100	Lease Expense - Equipment	10,399	11,340	11,538	9,362	12,000	15,000
		1-04-7000-200	Lease Expense - Fleet	11,500	14,359	6,431	179,811	166,194	224,103
		1-04-7001-200	Lease Interest Expense	7,501	7,499	6,224		500	500
	Operating Expense Total			**4,342,216**	**3,921,106**	**3,959,236**	**3,272,366**	**4,639,918**	**5,191,786**
04 - Facilities Total				**7,675,894**	**7,851,124**	**7,718,390**	**7,102,498**	**8,504,918**	**9,534,762**
Grand Total				**7,675,894**	**7,851,124**	**7,718,390**	**7,102,498**	**8,504,918**	**9,534,762**

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05-Operations

Dept Name	Category	Account Number	Account Description	FY 2022 Actuals	FY 2023 Actuals	FY 2024 Actuals	FY 2025 YTD Actuals	FY 2025 Budget	FY 2026 Proposed Budget
05 - Operations	Salaries	1-05-4000-000	Salaries - Operations	1,201,939	1,297,808	1,499,478	1,399,104	1,498,000	1,560,193
		1-05-4000-100	Salaries - Overtime	121,539	122,986	115,570	80,904	108,000	100,000
		1-05-4000-500	Salaries - Temp Help	111,733	-	39,718			
	Salaries Total			**1,435,211**	**1,420,794**	**1,654,766**	**1,480,008**	**1,606,000**	**1,660,193**
	Benefits	1-05-4005-000	Payroll Taxes - Operations	100,493	107,811	139,113	117,908	128,000	127,005
		1-05-4010-000	Health Insurance - Operations	174,978	187,563	226,171	244,822	276,000	310,539
		1-05-4015-000	PERS - Deferred (GASB 68)	52,456	-	-		155,000	
		1-05-4015-001	PERS - Deferred Auditor (GASB 68)	(116,896)	(139,198)	(152,498)			
		1-05-4015-100	PERS - Operations - Employer (Classic)	90,484	389,300	412,033	70,480		72,622
		1-05-4015-200	PERS - Operations - Employee (Classic)	-	-	-			
		1-05-4015-300	PERS - Operations - Employer (PEPRA)	26,027	27,281	52,480	57,435		75,726
		1-05-4085-000	Post Employment Benefits - Operations	51,067	42,125	50,556	197,745		200,000
	Benefits Total			**378,610**	**614,882**	**727,855**	**688,390**	**559,000**	**785,892**
	Operating Expense	1-05-4050-000	Staff Travel	1,615	2,409	3,474	955	3,428	3,428
		1-05-4060-000	Staff Conferences & Seminars	549	3,310	849	407	3,428	5,142
		1-05-4120-100	Training - Lab Equipment	-	-	-			
		1-05-4120-200	Training - SCADA Network	-	-	-			
		1-05-4155-505	Contracted Services - Landscape Services	1,620	1,725	1,620	2,372	3,700	62,700
		1-05-4155-510	Contracted Services - Alarm Services	-	-	-			
		1-05-4155-515	Contracted Services - Janatorial Services	-	-	-			
		1-05-4155-520	Contracted Services - Pest Control Services	-	-	-			
		1-05-4155-525	Contracted Services - Wind Turbine Services	12,220	-	-			
		1-05-4155-530	Contracted Services - CMMS Software	-	-	-			
		1-05-4155-535	Contracted Services - SCADA Software	-	-	-			
		1-05-4155-540	Contracted Services - Lab Software	7,569	7,560	19,680		8,250	10,500
		1-05-4155-545	Contracted Services - Lab Equipment Services	20,619	11,082	1,833	20,118	22,472	22,472
		1-05-4155-550	Contracted Services - Water Quality (Solar Bee)	37,600	48,880	48,880	50,772	50,772	50,772
		1-05-4155-555	Contracted Services - SCADA Hardware	-	-	-			
		1-05-4155-560	Contracted Services - Seismic Valve Controllers	-	-	-			
		1-05-4155-599	Contracted Services - Miscellaneous	40,400	-	-			
		1-05-4175-000	Permits (WTP Facilities Inclusive)	8,888	105,449	215,134	18,883	109,065	109,065
		1-05-4215-100	Natural Gas - Wells & Boosters	-	-	-			
		1-05-4215-200	Natural Gas - Water Treatment Plant	2,419	2,006	1,145	708	3,235	3,235
		1-05-4220-100	Electricity - Wells & Boosters	-	-	-			
		1-05-4220-200	Electricity - Water Treatment Plant	390,099	451,158	530,273	531,401	458,485	614,334
		1-05-4230-110	Mtce & Rep - Office Equipment	2,860	893	4,788		6,139	6,139
		1-05-4235-110	Mtce & Rep Operations - Equipment	19,352	38,669	32,718	40,781	42,340	42,340
		1-05-4235-410	Mtce & Rep Operations - Shop Buildings	5,426	6,184	719	3,366	7,410	7,410
		1-05-4235-415	Mtce & Rep Operations - Facilities	73,366	147,913	85,350	55,841	86,798	86,798
		1-05-4235-445	Mtce & Rep Operations - Telemetry	-	-	-			
		1-05-4235-450	Mtce & Rep Operations - Hypo Generators	-	-	-			
		1-05-4235-500	Mtce & Rep Operations - Wind Turbine	-	-	-			
		1-05-4236-000	Palmdale Lake Management	79,484	77,473	191,845	38,063	209,400	359,400
		1-05-4270-300	Telecommunication - Other	-	-	-			
		1-05-4300-300	Testing - Edison Testing	-	-	-			
		1-05-6000-000	Waste Disposal	25,150	3,212	3,452	79,195	53,923	163,923
		1-05-6200-000	Uniforms	15,335	16,029	12,455	9,937	16,199	20,919
		1-05-6300-100	Supplies - General	21,753	20,332	14,567	6,004	31,161	31,161
		1-05-6300-200	Supplies - Hypo Generators	-	-	-			
		1-05-6300-300	Supplies - Electrical	-	-	-			
		1-05-6300-400	Supplies - Telemetry	-	-	-			
		1-05-6300-600	Supplies - Lab	76,500	60,785	71,557	57,974	89,437	89,437
		1-05-6300-700	Outside Lab Work	75,920	56,489	68,730	50,367	88,760	88,760
		1-05-6400-000	Tools	6,291	3,032	1,706	1,860	6,646	6,646
		1-05-6500-000	Chemicals	882,675	1,348,699	1,481,301	1,429,348	1,240,219	1,488,263
		1-05-7000-100	Lease Expense - Equipment	-	734	-			
		3-05-4300-100	Filter Media Testing/Inspection	-	-	-			
	Operating Expense Total			**1,807,708**	**2,414,023**	**2,792,074**	**2,398,352**	**2,541,266**	**3,272,844**
05 - Operations Total				**3,621,529**	**4,449,698**	**5,174,695**	**4,566,750**	**4,706,266**	**5,718,929**
Grand Total				**3,621,529**	**4,449,698**	**5,174,695**	**4,566,750**	**4,706,266**	**5,718,929**

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06-Finance

Dept Name	Category	Account Number	Account Description	FY 2022 Actuals	FY 2023 Actuals	FY 2024 Actuals	FY 2025 YTD Actuals	FY 2025 Budget	FY 2026 Proposed Budget
06 - Finance	Salaries	1-06-4000-000	Salaries - Finance	1,017,797	959,986	1,023,799	998,651	1,192,000	1,233,711
		1-06-4000-100	Salaries - Overtime	7,955	4,631	8,331	7,565	6,000	7,500
		1-06-4000-500	Salaries - Temp Help	48,709	51,453	-			
	Salaries Total			**1,074,461**	**1,016,070**	**1,032,130**	**1,006,215**	**1,198,000**	**1,241,211**
	Benefits	1-06-4005-000	Payroll Taxes - Finance	75,512	71,546	86,813	76,619	87,500	94,953
		1-06-4010-000	Health Insurance - Finance	181,070	163,565	190,552	191,314	238,000	230,409
		1-06-4015-000	PERS - Deferred (GASB 68)	42,918	-	-		122,500	
		1-06-4015-001	PERS - Deferred Auditor (GASB 68)	(95,642)	(106,116)	(119,643)			
		1-06-4015-100	PERS - Finance - Employer (Classic)	94,032	303,156	344,900	70,487		54,730
		1-06-4015-200	PERS - Finance - Employee (Classic)	-	-	-			
		1-06-4015-300	PERS - Finance - Employer (PEPRA)	10,074	14,419	19,534	27,263		62,534
		1-06-4085-000	Post Employment Benefits - Finance	20,722	29,488	35,389	164,788		200,000
	Benefits Total			**328,686**	**476,058**	**557,546**	**530,471**	**448,000**	**642,626**
	Operating Expense	1-06-4050-000	Staff Travel	-	797	3,847	1,931	3,116	3,500
		1-06-4060-000	Staff Conferences & Seminars	-	200	2,092	624	2,597	2,500
		1-06-4155-100	Contracted Services - INFOSEND (Billing)	183,556	195,615	198,123	171,882	337,581	200,000
		1-06-4155-101	Contracted Services - INFOSEND (Collections)	85,964	97,225	105,795	106,609		95,000
		1-06-4155-102	Contracted Services - INFOSEND (EBPP)	30,305	28,321	31,786	27,112		22,000
		1-06-4155-200	Contracted Services - INFOSEND (Drought Related)	-	-	-			
		1-06-4155-300	Contracted Services - AdComp Sys	4,085	4,085	4,085		4,415	4,415
		1-06-4155-605	Contracted Services - Assessor Data (Realquest)	-	-	-			
		1-06-4155-610	Contracted Services - Credit Reporting Services	-	-	-			
		1-06-4155-615	Contracted Services - AMR Services (Itron)	-	-	-			
		1-06-4155-620	Contracted Services - Letter Extractor (OPEX)	3,170	3,425	3,565		3,635	3,635
		1-06-4155-625	Contracted Services - GASB Actuarial Reports	12,450	4,850	13,700	4,950	14,023	14,000
		1-06-4155-630	Contracted Services - Payroll/HR	-	4,225	-	5,623		
		1-06-4165-000	Memberships/Subscriptions	110	125	288	494	500	500
		1-06-4230-110	Mtce & Rep - Office Equipment	-	-	-	50		
		1-06-4235-440	Mtce & Rep Operations - Large Meters	-	-	-			
		1-06-4235-470	Mtce & Rep Operations - Meter Exchanges	-	-	-			
		1-06-4250-000	General Material & Supplies	267	-	-		1,558	
		1-06-4260-000	Business Forms	534	107	1,000	968	1,558	1,558
		1-06-4270-100	Telecommunication - Office	57,774	70,759	93,170	37,297	67,652	67,652
		1-06-4270-200	Telecommunication - Cellular Stipend	29,250	28,710	28,890	33,480	20,774	62,640
		1-06-4300-200	Testing - Large Meter Testing	-	-	-			
		1-06-7000-100	Lease Expense - Equipment (Mail Machine)	3,323	2,660	2,744	2,899	3,000	3,000
	Operating Expense Total			**410,788**	**441,103**	**489,084**	**393,919**	**460,408**	**480,400**
06 - Finance Total				**1,813,935**	**1,933,231**	**2,078,760**	**1,930,605**	**2,106,408**	**2,364,237**
Grand Total				**1,813,935**	**1,933,231**	**2,078,760**	**1,930,605**	**2,106,408**	**2,364,237**

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07-Water Conservation

Dept Name	Category	Account Number	Account Description	FY 2022 Actuals	FY 2023 Actuals	FY 2024 Actuals	FY 2025 YTD Actuals	FY 2025 Budget	FY 2026 Proposed Budget
07 - Water Conservation	Salaries	1-07-4000-000	Salaries - Water Conservation	184,572	192,639	211,880	215,158	223,000	226,366
		1-07-4000-100	Salaries - Overtime	13,098	4,136	4,212	2,994	8,000	5,000
		1-07-4000-500	Salaries - Temp Help	-	-	-			
	Salaries Total			**197,671**	**196,775**	**216,093**	**218,152**	**231,000**	**231,366**
	Benefits	1-07-4005-000	Payroll Taxes - Water Conservation	15,756	15,600	19,634	17,885	18,000	17,700
		1-07-4010-000	Health Insurance - Water Conservation	41,145	39,710	43,269	52,441	55,000	60,902
		1-07-4015-000	PERS - Deferred (GASB 68)	(11,716)	-	-		27,000	
		1-07-4015-001	PERS - Deferred Auditor (GASB 68)	-	(23,741)	(27,547)			
		1-07-4015-100	PERS - Water Conservation - Employer (Classic)	19,436	71,051	25,152	24,546		27,647
		1-07-4015-200	PERS - Water Conservation - Employee (Classic)	-	-	-			
		1-07-4015-300	PERS - Water Conservation - Employer (PEPRA)	-	-	-			
		1-07-4085-000	Post Employment Benefits - Water Conservation	12,525	8,425	10,112	32,958		30,000
	Benefits Total			**77,145**	**111,046**	**70,620**	**127,830**	**100,000**	**136,249**
	Operating Expense	1-07-4050-000	Staff Travel	1,047	1,263	1,070	501	2,077	2,077
		1-07-4060-000	Staff Conferences & Seminars	850	870	920	1,090	1,558	1,558
		1-07-4190-300	Public Relations - Landscape Workshop/Training	97	937	341		6,232	6,232
		1-07-4190-400	Public Relations - Contests	-	-	-		1,039	1,039
		1-07-4190-500	Public Relations - Education Programs	940	676	1,039	10,560	4,155	4,155
		1-07-4190-700	Public Relations - General Media	-	-	-			
		1-07-4190-900	Public Relations - Other	703	345	370	420	831	831
		1-07-4500-000	Drought Enforcement Expense	-	-	-			
		1-07-6200-000	Uniforms	-					160
		1-07-6300-100	Supplies - General	8,917	3,916	7,255	4,316	9,348	9,348
	Operating Expense Total			**12,554**	**8,007**	**10,995**	**16,887**	**25,240**	**25,400**
07 - Water Conservation Total				**287,370**	**315,828**	**297,707**	**362,868**	**356,240**	**393,015**
Grand Total				**287,370**	**315,828**	**297,707**	**362,868**	**356,240**	**393,015**

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08-Human Resources

Dept Name	Category	Account Number	Account Description	FY 2022 Actuals	FY 2023 Actuals	FY 2024 Actuals	FY 2025 YTD Actuals	FY 2025 Budget	FY 2026 Proposed Budget
08 - Human Resources	Salaries	1-08-4000-000	Salaries - Human Resources	262,035	355,578	403,986	398,732	435,000	460,448
		1-08-4000-100	Salaries - Overtime	6,236	1,470	1,254	3,184	5,000	3,500
		1-08-4000-200	Salaries - Intern Program	2,690	-	-		54,000	
		1-08-4000-500	Salaries - Temp Help	-	-	-			
		1-08-4085-000	Post Employment Benefits - Human Resources	(5,295)	4,213	4,634	49,436		50,000
	Salaries Total			**265,666**	**361,261**	**409,874**	**451,352**	**494,000**	**513,948**
	Benefits	1-08-4005-000	Payroll Taxes - Human Resources	20,397	26,308	32,804	30,855	35,000	35,493
		1-08-4010-000	Health Insurance - Human Resources	16,783	41,439	58,381	55,693	59,500	61,985
		1-08-4015-000	PERS - Deferred (GASB 68)	9,537	-	-		39,500	
		1-08-4015-001	PERS - Deferred Auditor (GASB 68)	(21,254)	(31,470)	(36,039)			
		1-08-4015-100	PERS - Human Resources - Employer (Classic)	11,667	78,481	91,797	14,410		16,676
		1-08-4015-200	PERS - Human Resources - Employee (Classic)	-	-	-			
		1-08-4015-300	PERS - Human Resources - Employer (PEPRA)	10,175	15,701	17,978	19,029		25,568
	Benefits Total			**47,306**	**130,459**	**164,921**	**119,987**	**134,000**	**139,722**
	Operating Expense	1-08-4050-000	Staff Travel	1,314	2,582	2,842	2,496	1,558	3,000
		1-08-4060-000	Staff Conferences & Seminars	635	6,017	2,574	2,519	5,194	6,000
		1-08-4070-000	Employee Expense	30,974	11,294	3,686	8,305	83,760	10,000
		1-08-4070-001	Employee Expense - Education Reimbursement	20,964	30,683	26,155	27,930		40,000
		1-08-4070-002	Employee Expense - Certifications	1,520	3,380	1,719	4,098		6,000
		1-08-4070-003	Employee Expense - Employment Exams	-	129	10,627	1,917		2,000
		1-08-4070-004	Employee Expense - Safety Work Boots	3,292	7,124	7,778	5,912		6,500
		1-08-4070-005	Employee Expense - Meeting Meals	7,834	20,177	10,577	11,331		12,000
		1-08-4070-006	Employee Expense - Coffee Supplies	5,095	6,000	5,074	5,436		6,000
		1-08-4070-007	Employee Expense - Company Shirts	3,504	(697)	8,768	6,519		7,000
		1-08-4070-008	Employee Expense - Year-End Recognition	1,021	239	3,923	1,118		1,200
		1-08-4070-009	Employee Expense - Holiday Recognition	-	10,649	15,125	12,399		16,000
		1-08-4070-010	Employee Expense - Summer Recognition	-	10,128	9,435	12,961		13,000
		1-08-4070-011	Employee Expense - Wellness Program	-	(2,000)	(91)	2,000		
		1-08-4070-012	Employee Expense - Employee Recognition	-	-	470	500		1,500
		1-08-4090-000	Temporary Staffing	-	-	-			
		1-08-4095-000	Employee Recruitment	11,169	11,210	15,369	6,676	10,387	10,387
		1-08-4100-000	Employee Retention	475	5,501	1,485	2,320	3,116	5,000
		1-08-4105-000	Employee Relations	-	-	-			
		1-08-4110-000	Consultants	-	-	-			
		1-08-4120-100	Training - Safety	14,514	10,252	14,502	18,116	16,619	20,000
		1-08-4120-200	Training - Specialty	-	3,468	6,141	184	10,387	10,387
		1-08-4121-000	Safety/HR Programs	-	-	-		1,039	1,039
		1-08-4165-000	Memberships/Subscriptions	1,034	2,268	1,508	1,663	1,298	1,500
		1-08-4165-100	HR/Safety Publications	78	39	45	292	1,039	1,039
		1-08-6300-500	Supplies - Safety	49,126	30,711	30,645	23,227	35,835	45,035
	Operating Expense Total			**152,548**	**169,155**	**178,357**	**157,919**	**170,232**	**224,587**
08 - Human Resources Total				**465,520**	**660,875**	**753,152**	**729,259**	**798,232**	**878,257**
Grand Total				**465,520**	**660,875**	**753,152**	**729,259**	**798,232**	**878,257**

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09-Information Technology

Dept Name	Category	Account Number	Account Description	FY 2022 Actuals	FY 2023 Actuals	FY 2024 Actuals	FY 2025 YTD Actuals	FY 2025 Budget	FY 2026 Proposed Budget
09 - Information Technology	Salaries	1-09-4000-000	Salaries - Information Technology	632,537	677,487	775,959	724,298	806,000	839,428
		1-09-4000-100	Salaries - Overtime	7,268	15,299	11,650	13,943	10,000	15,000
		1-09-4000-500	Salaries - Temp Help	-	-	-			
	Salaries Total			**639,805**	**692,786**	**787,610**	**738,241**	**816,000**	**854,428**
	Benefits	1-09-4005-000	Payroll Taxes - Information Technology	47,632	51,498	63,487	57,862	62,000	65,364
		1-09-4010-000	Health Insurance - Information Technology	94,123	102,017	113,432	120,055	135,000	136,369
		1-09-4015-000	PERS - Deferred (GASB 68)	23,844	-	-		87,500	
		1-09-4015-001	PERS - Deferred Auditor (GASB 68)	(53,134)	(78,111)	(93,365)			
		1-09-4015-100	PERS - Information Technology - Employer (Classic)	56,996	224,772	269,673	52,393		59,194
		1-09-4015-200	PERS - Information Technology - Employee (Classic)	-	-	-			
		1-09-4015-300	PERS - Information Technology - Employer (PEPRA)	8,689	8,993	14,718	23,739		28,746
		1-09-4085-000	Post Employment Benefits - Information Technology	(22,148)	8,415	10,111	98,873		100,000
	Benefits Total			**156,001**	**317,585**	**378,056**	**352,922**	**284,500**	**389,673**
	Debt Service & Capital	1-09-6450-100	Equipment - Firetide Radios	-	-	-			
		1-09-6450-110	Equipment - GF Signet Flow Meters	-	-	-			
		1-09-7000-100	Leases - Equipment (Printers)	54,872	57,716	63,497	38,264	58,687	58,000
	Debt Service & Capital Total			**54,872**	**57,716**	**63,497**	**38,264**	**58,687**	**58,000**
	Operating Expense	1-09-4050-000	Staff Travel	1,300	199	3,592	405	3,116	5,000
		1-09-4060-000	Staff Conferences & Seminars	3,748	2,305	5,360	1,982	7,790	5,000
		1-09-4155-801	Cloud Services-MS-Office 360	38,852	-	61,537	168,510	41,548	58,320
		1-09-4155-802	Cloud Services-MS-Project	-	-	-			6,480
		1-09-4155-803	Cloud Services-MS-Visio	-	-	-			1,260
		1-09-4155-804	Cloud Services-Adobe-Creative Suite	10,983	22,000	25,105	28,381	14,282	28,087
		1-09-4155-805	Cloud Services-SeamlessDocs	5,500	6,825	7,325	8,450	7,790	5,825
		1-09-4155-806	Cloud Services-IPSwitch-Moveit	10,027	15,967	6,375	5,940	10,906	5,940
		1-09-4155-807	Cloud Services-GFI Fax	2,052	1,896	1,903	1,361	2,337	2,508
		1-09-4155-808	Cloud Services-KnowBe4-Security Awareness	4,374	2,509	3,818	5,253	4,934	5,300
		1-09-4155-809	Cloud Services-Network Solutions DNS, Web Reg	1,751	3,510	1,477	1,346	3,635	3,500
		1-09-4155-810	Cloud Services-IBM-MaaS 360	5,709	6,321	5,979	5,052	6,492	2,700
		1-09-4155-811	Cloud Services-MSP Portal-Bit Defender	5,094	5,094	5,094	6,966	5,552	6,000
		1-09-4155-812	Cloud Services-Akins-WiFi	-	135	7,750			
		1-09-4155-813	Cloud Services-FleetMate	500	500	500		545	500
		1-09-4155-814	Cloud Services-Security Metrics-PCI Compliance	4,400	4,560	4,849	5,598	4,796	5,000
		1-09-4155-815	Cloud Services - Citrix	1,916	-	2,235		2,089	2,089
		1-09-4155-816	Cloud Services - -Azure Servic	39,119	35,511	52,323	79,034	41,548	125,000
		1-09-4155-905	Contracted Services - Offsite Services	6,925	1,050	840		7,531	1,000
		1-09-4155-910	Contracted Services - Printer Services	3,723	3,000	4,050	9,254	4,155	5,000
		1-09-4155-915	Contracted Services - Website Design Services	350	6,762	8,622	5,874	5,194	7,200
		1-09-4155-920	Contracted Services - Telephony Services	348	131	-	8,874	1,558	1,000
		1-09-4155-925	Contract Services - TDS (Network & Software Suppor	26,826	64,635	31,180	14,070	42,587	14,213
		1-09-4155-930	Contracted Services - Network Services	-	-	-			
		1-09-4155-935	Contracted Services - Hardware Warranties	-	-	-			
		1-09-4155-940	Contracted Services - Access Control & Fire Servic	70,162	81,949	78,778	111,710	88,290	100,000
		1-09-4155-945	Contracted Services - LA County Dataset	80	112	-		250	
		1-09-4155-950	Contracted Services - ESRI Customer Care	-	-	-			
		1-09-4155-955	Contracted Services - SCADA Software	17,743	-	24,348			
		1-09-4155-960	Contracted Services - SCADA Hardware	-	-	6,617			
		1-09-4155-965	Contracted Services - ClearSCADA	-	19,614	-	20,474	20,774	20,500
		1-09-4155-970	Contracted Services - Firetide Radio	-	-	-			
		1-09-4155-975	Contracted Services - AMR/AMI Systems	-	-	-			
		1-09-4165-000	Memberships/Subscriptions	1,369	200	494	2,930	2,597	3,000
		1-09-4235-445	Mtce & Rep - Telemetry	607	908	1,399		3,635	1,000
		1-09-4270-100	Telecommunication - Office Phone	19,816	18,275	20,758	12,449	21,813	24,000
		1-09-4270-125	Telecommunication - Office Backbone	20,580	20,580	20,580	17,150	22,852	22,852
		1-09-4270-150	Telecommunication - WTP Backbone	11,400	11,400	11,653	17,071	15,061	15,061
		1-09-4270-300	Telecommunication - Cellular (Data & On-Call)	59,773	67,364	59,031	59,930	75,306	75,000
		1-09-4270-350	Telecommunication - Other	21,120	20,309	25,407	9,136	20,774	15,000
		1-09-6200-000	Uniforms	-					160
		1-09-6300-400	Supplies - Telemetry	268	3,949	2,056	4,770	5,194	5,000
		1-09-8000-100	Computer Equipment - Computers	34,229	47,666	18,820	26,556	47,261	30,000
		1-09-8000-200	Computer Equipment - Mobility	42,403	31,365	50,833	22,643	46,742	30,000
		1-09-8000-300	Computer Equipment - Monitors	1,777	8,428	5,147	3,126	10,387	7,500
		1-09-8000-400	Computer Equipment - Printers	-	-	-			
		1-09-8000-500	Computer Equipment - Printer Supplies	-	4,392	3,211	449	2,597	2,500
		1-09-8000-550	Computer Equipment - Telephony	-	-	-		2,597	
		1-09-8000-600	Computer Equipment - Other	15,370	31,732	17,419	7,648	18,177	18,000
		1-09-8000-650	Computer Equiment - Warranty and Support	6,572	17,709	10,420	6,326	18,177	7,000
		1-09-8100-100	Software - Maintenance & Support	-	2,404	199	340		
		1-09-8100-101	Software M&S - Xtelesis-Phone	9,344	9,644	-	554	9,868	
		1-09-8100-102	Software M&S- Tredent-Veam	12,684	6,206	6,206	13,205	12,465	12,465
		1-09-8100-103	Software M&S- Condusive/V-locity-Diskeeper	6,242	5,872	6,137		6,752	
		1-09-8100-104	Software M&S- FWI	463	493	533	559	519	560
		1-09-8100-105	Software M&S- Strategy 7	-	-	-			
		1-09-8100-106	Software M&S- Astria Solutions-Docstar	13,275	14,337	15,197	16,109	15,581	15,500
		1-09-8100-107	Software M&S- NemoQ-Ticketing	-	-	-			3,500
		1-09-8100-108	Software M&S- FMT-Management Reporter	-	-	-			
		1-09-8100-109	Software M&S- Neogov	7,505	-	9,348	4,988	8,310	5,000
		1-09-8100-110	Software M&S- TruePoint	40,800	-	67,518	35,286	44,145	45,000
		1-09-8100-111	Software M&S- Technology Unlimited	1,880	6,530	2,007	4,200	5,194	2,000
		1-09-8100-112	Software M&S- Sierra Workforce-Timesheet	4,034	4,034	8,371	4,572	4,415	5,000
		1-09-8100-113	Software M&S- CIPO	-					35,000
		1-09-8100-114	Software M&S- Faranics-Powersaver	-	-	-			
		1-09-8100-115	Software M&S - Network Monitoring	45,140	57,383	58,166	67,671	62,323	70,000
		1-09-8100-116	Software M&S- VMWare-Virtualization	9,225	9,225	23,842	32,909	12,984	12,480
		1-09-8100-117	Software M&S- iPrism-Web Filter	-	-	-			
		1-09-8100-119	Software M&S - Palitto Consulting (IVR)	-	-	-			
		1-09-8100-120	Software M&S - ESRI GIS Software	26,150	56,750	150,665	8,955	28,574	105,665
		1-09-8100-121	Software M&S - ESRI Drone2Map	3,401	3,575	3,500		3,116	9,000
		1-09-8100-122	Software M&S - Info360 (SCADA Watch)	-	-	-			
		1-09-8100-123	Software M&S - InfoWatch (Innovyze)	14,064	8,183	-		17,658	17,658
		1-09-8100-124	Software M&S - Bamboo HR	1,229	11,875	11,872	10,049	12,465	12,465
		1-09-8100-125	Software M&S - Syncta Backflow	3,767	3,591	3,536		6,232	5,000
		1-09-8100-126	Software M&S - ProcureNow (OpenGov)	-	9,000	9,450	12,043	10,387	10,111
		1-09-8100-127	Software M&S - Autodesk	-	13,114	-		15,581	39,400
		1-09-8100-140	Software M&S - Starnik	-	-	-			
		1-09-8100-150	Software M&S- Dynamics GP	70,344	68,000	7,911	59,695	62,323	60,000
		1-09-8100-200	Computer Software - Software and Upgrades	15,553	45,611	39,753	32,917	41,548	40,000
	Operating Expense Total			**781,867**	**904,686**	**1,021,097**	**982,770**	**1,021,309**	**1,179,299**
09 - Information Technology Total				**1,632,545**	**1,972,773**	**2,250,260**	**2,112,198**	**2,180,496**	**2,481,400**
Grand Total				**1,632,545**	**1,972,773**	**2,250,260**	**2,112,198**	**2,180,496**	**2,481,400**

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10-Customer Care

Dept Name	Category	Account Number	Account Description	FY 2022 Actuals	FY 2023 Actuals	FY 2024 Actuals	FY 2025 YTD Actuals	FY 2025 Budget	FY 2026 Proposed Budget
10 - Customer Care	Salaries	1-10-4000-000	Salaries - Customer Care	1,016,593	1,048,803	1,193,502	1,154,105	1,268,000	1,288,110
		1-10-4000-100	Salaries - Overtime	7,869	12,633	45,770	40,336	30,000	50,000
		1-10-4000-500	Salaries - Temp Help	59,415	129,441	75,293	69,308		75,000
	Salaries Total			**1,083,877**	**1,190,877**	**1,314,565**	**1,263,749**	**1,298,000**	**1,413,110**
	Benefits	1-10-4005-000	Payroll Taxes - Customer Care	80,126	82,721	103,843	95,798	97,500	102,366
		1-10-4010-000	Health Insurance - Customer Care	228,717	214,751	235,685	264,326	263,000	273,933
		1-10-4015-000	PERS - Deferred (GASB 68)	61,993	-	-		130,000	
		1-10-4015-001	PERS - Deferred Auditor (GASB 68)	(138,149)	(113,923)	(135,296)			
		1-10-4015-100	PERS - Customer Care - Employer (Classic)	75,391	316,243	378,797	84,402		86,644
		1-10-4015-200	PERS - Customer Care - Employee (Classic)	-	-	-			
		1-10-4015-300	PERS - Customer Care - Employer (PEPRA)	24,571	24,692	33,315	34,189		45,669
		1-10-4085-000	Post Employment Benefits - Customer Care	81,412	54,772	65,722	214,224		220,000
	Benefits Total			**414,060**	**579,256**	**682,067**	**692,939**	**490,500**	**728,612**
	Operating Expense	1-10-4050-000	Staff Travel	-	1,033	-	504	2,077	2,000
		1-10-4060-000	Staff Conferences & Seminars	434	200	-	1,700	3,116	3,116
		1-10-4155-005	Contracted Services - Assessor Data (Realquest)	9,900	9,900	9,900	8,250	10,906	10,000
		1-10-4155-010	Contracted Services - Credit Reporting Services	3,673	2,997	2,800	2,256	5,194	3,000
		1-10-4155-015	Contracted Services - AMR Services (Itron)	2,287	-	-	45,550	24,930	
		1-10-4155-018	Contracted Services - AMR/AMI Services (Sensus)	-	-	13,890			50,000
		1-10-4155-020	Contracted Services - NEMO-Q System	2,003	2,063	2,125	2,401	3,324	3,324
		1-10-4230-110	Mtce & Rep Office - Equipment	-	-	-			
		1-10-4250-000	General Material & Supplies	2,618	3,896	346	2,685	5,194	5,194
		1-10-4260-000	Business Forms	-	-	642	647	1,039	1,200
		1-10-6200-000	Uniforms	-					400
	Operating Expense Total			**20,915**	**20,089**	**29,703**	**63,994**	**55,780**	**78,234**
10 - Customer Care Total				**1,518,852**	**1,790,221**	**2,026,335**	**2,020,682**	**1,844,280**	**2,219,956**
Grand Total				**1,518,852**	**1,790,221**	**2,026,335**	**2,020,682**	**1,844,280**	**2,219,956**

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2026 Budget
Personnel Summary

	FY 2026 BUDGET	FY 2025 BUDGET	FY 2024 BUDGET	FY 2023 BUDGET	FY 2022 BUDGET
ADMINISTRATION					
Managers/Supervisors	5	8	8	8	8
Staff		9	9	9	8
Staff - Part-time	4	1	1	-	-
TOTAL ADMINISTRATION	**9**	**18**	**18**	**17**	**16**
ENGINEERING					
Managers/Supervisors	3	3	3	2	2
Staff	9	9	9	9	9
TOTAL ENGINEERING	**12**	**12**	**12**	**11**	**11**
FACILITIES					
Managers/Supervisors	3	3	3	3	3
Staff	23	23	23	22	22
TOTAL FACILITIES	**26**	**26**	**26**	**25**	**25**
OPERATIONS					
Managers/Supervisors	3	2	2	2	2
Staff	10	9	9	9	9
TOTAL OPERATION AND PRODUCTION	**13**	**13**	**11**	**11**	**11**
FINANCE					
Managers/Supervisors	2	2	2	3	3
Staff	8	8	8	6	6
TOTAL FINANCE	**10**	**10**	**10**	**9**	**9**
WATER-USE EFFICIENCY					
Managers/Supervisors	-	-	-	-	-
Staff	2	2	2	2	2
TOTAL WATER-USE EFFICIENCY	**2**	**2**	**2**	**2**	**2**
HUMAN RESOURCES					
Managers/Supervisors	1	-	-	-	-
Clerical	2	-	-	-	-
TOTAL HUMAN RESOURCES	**3**	**-**	**-**	**-**	**-**
INFORMATION TECHNOLOGY					
Managers/Supervisors	1	-	-	-	-
Clerical	5	-	-	-	-
TOTAL INFORMATION TECHNOLOGY	**6**	**-**	**-**	**-**	**-**
CUSTOMER CARE					
Managers/Supervisors	1	1	1	1	1
Clerical	7	7	7	7	7
Field	5	5	5	5	5
TOTAL CUSTOMER CARE	**13**	**13**	**13**	**13**	**13**
TOTAL PERSONNEL	**94**	**94**	**92**	**88**	**87**

Notes:

The following represent the part-time interns (not included in above figures): - | 3 | - | - | -

- Human Resources, Information Technology were previously combined with Administration

Proposed FY 2026

Revenues - Full Detail

Dept Name	Category	Account Number	Account Description	FY 2022 Actuals	FY 2023 Actuals	FY 2024 Actuals	FY 2025 YTD Actuals	FY 2025 Budget	FY 2026 Proposed Budget
00 - General	(blank)	1-00-3000-000	Water Sales-General--	(11,398,925)	(10,780,465)	(12,956,621)	(14,294,098)	(12,346,328)	(17,316,021)
		1-00-3000-100	Water Sales - Drought Surcharge	(302,676)	(59,704)	(41)			
		1-00-3001-100	Wholesale Water - L.C.I.D.	(60,416)	(9,467)	(40,889)	(8,615)	(30,000)	(30,000)
		1-00-3001-200	Wholesale Water - AVEK	(439,686)	(201,028)	(232,167)	(243,269)	(395,000)	(325,000)
		1-00-3005-000	Meter Fees-General--	(16,801,752)	(18,475,947)	(20,340,155)	(20,016,924)	(20,098,974)	(24,840,957)
		1-00-3006-000	Elevation Fees-General--	(357,741)	(320,606)	(382,474)	(280,137)	(365,000)	(250,000)
		1-00-3007-000	Water Quality Fees-General--	-	-	-	(0)		
		1-00-3008-000	Account Activity-General--	(39,775)	(29,750)	(26,300)	(25,075)	(21,307)	(21,500)
		1-00-3008-100	Account Activity - Water Waste Fines	(5,060)	(2,125)	(2,265)	(1,875)	(1,800)	(1,800)
		1-00-3015-000	Reconnection Fees-General--	(905,231)	(954,171)	(1,045,774)	(1,059,277)	(900,000)	(900,000)
		1-00-3020-000	Inspection Fees-General--	(222,906)	(255,016)	(95,559)	(144,372)	(200,000)	(150,000)
		1-00-3025-000	Return Check Fee Recovered-General--	(7,550)	(9,870)	(10,700)	(10,640)	(11,000)	(10,000)
		1-00-3030-000	Service Cost Recovered-General--	(155,660)	(61,564)	(70,134)	(524,200)	(72,893)	(10,000)
		1-00-3035-100	Taxes & Assessments - Debt Service	(7,169,879)	(6,009,593)	(7,268,052)	(3,838,484)	(7,000,000)	(7,000,000)
		1-00-3035-200	Taxes & Assessments - 1% Allowance	(2,640,066)	(2,909,289)	(3,528,364)	(1,914,458)	(2,593,355)	(2,500,000)
		1-00-3035-300	Taxes & Assessments - Successor Agency Component	(836,598)	(998,755)	(980,220)	(1,023,448)	(884,327)	(912,980)
		1-00-3036-000	DWR Fixed Charge Recovery-General--	(349,339)	(388,705)	(443,653)	(414,085)	(300,000)	(250,000)
		1-00-3038-000	State Water Project - Table A Water Sale	-	(2,901,699)	(1,662,500)	(1,800,000)		(1,000,000)
		1-00-3040-000	Assessment Parity Charge-General--	(1,287)	(17,521)	(7,425)	(6,300)		
		1-00-3045-000	Interest on Investments-General--	(123,984)	(257,723)	(504,203)	(433,284)	(285,000)	(250,000)
		1-00-3050-000	Interest on Investments - Capital	(13,933)	(8,953)	(24,196)	(46,379)		
		1-00-3050-100	Interest on Investments - Capital (Bonds)	-	-	(185,985)	(461,053)		
		1-00-3055-000	Investment Market Adjustment-General--	40,683	(306,968)	(273,356)	(183,497)		
		1-00-3060-000	Capital Improvement - Infrastructure	(785,596)	(259,729)	(134,262)	(750,187)	(125,000)	(200,000)
		1-00-3062-000	Capital Contributions-General--	(3,089,833)	-	-			
		1-00-3065-000	Drainage Plan Fee-General--	(1,526)	(8,339)	(7,197)			
		1-00-3070-000	Sale of Real Property-General--	-	-	-			
		1-00-3075-000	Lease Revenue Residual-General--	-	-	-			
		1-00-3075-001	Lease Revenue Adjustment-General--	(11,791)	(3,818)	5,179			
		1-00-3075-002	Lease Interest Revenue-General--	(10,683)	(8,740)	(6,587)			
		1-00-3075-100	Leases - Cell Tower - 119 Ave. S	(42,638)	(46,175)	(46,475)	(41,028)		(44,376)
		1-00-3075-150	Leases - Cell Tower - Clearwell Tank Site	(16,883)	-	(110,547)	(26,159)		(45,603)
		1-00-3075-200	Leases - Cell Tower - 47th Street	(20,988)	(20,988)	(20,988)	(21,338)		(24,136)
		1-00-3075-250	Leases - Cell Tower - Lower El Camino	-	-	-	(5,600)		(33,600)
		1-00-3075-300	Leases - Cell Tower - 25th St & Cemetary Rd.	-	-	-			
		1-00-3075-350	Leases - Cell Tower - 3M Tank (850 Ave S)	(39,730)	(41,319)	(42,972)	(33,408)		(45,708)
		1-00-3075-400	Leases - Fin & Feather	(50,807)	(64,409)	(51,803)	(45,000)		(45,000)
		1-00-3085-000	Discount Earned-General--	-	-	-			
		1-00-3090-000	Cash - Over & Short	423	67	(54)	(232)		
		1-00-3095-000	Revenue - Other Activities	(34,586)	(23,720)	(39,999)	(26,218)	(25,000)	(25,000)
		1-00-3095-100	Revenue - Settlements/Rebates	(74,172)	(48,000)	(902)	(69,000)		
		1-00-3100-000	Revenue - Meters	(4,668)	(23,599)	(1,916)	(15,333)		
		1-00-3110-000	Gain on Sale of Equipment-General--	(120,758)	(25,198)	(15,853)	(16,025)		
		1-00-3115-000	State & Federal Grants-General--	(154,081)	(1,296,278)	(2,047,602)	(2,564,058)	(6,000,000)	(2,500,000)
		1-00-3119-000	Rate Stabilization Revenue-General--	-	-	-			
		1-00-3120-000	Energy Refunds-General--	-	(24,726)	(1,150,000)	(11,426)		
		2-00-3115-000	Conservation - State & Federal Grants	-	-	(31,339)			
		3-00-3007-000	Water Quality Fees-General--	(623,061)	(511,918)	(416,112)	(315,255)	(600,000)	(250,000)
		4-00-3060-000	Capital Improvement - Water Supply	(1,532,758)	(542,387)	(75,200)	(1,926,145)	(425,000)	(400,000)
	(blank) Total			**(48,405,915)**	**(47,908,193)**	**(54,275,662)**	**(52,595,880)**	**(52,679,984)**	**(59,381,681)**
00 - General Total				**(48,405,915)**	**(47,908,193)**	**(54,275,662)**	**(52,595,880)**	**(52,679,984)**	**(59,381,681)**
Grand Total				**(48,405,915)**	**(47,908,193)**	**(54,275,662)**	**(52,595,880)**	**(52,679,984)**	**(59,381,681)**

Expenses - Full Detail

Dept Name	Category	Account Number	Account Description	FY 2022 Actuals	FY 2023 Actuals	FY 2024 Actuals	FY 2025 YTD Actuals	FY 2025 Budget	FY 2026 Proposed Budget
00 - General	Salaries	7-00-4000-000	PRWA - Directors Pay	-	600	300	750		
		7-00-4005-000	PRWA - Payroll Taxes	-	46	23	57		
	Salaries Total			**-**	**646**	**323**	**807**		
	Benefits	1-00-4085-000	Post Employment Benefits - Administrative Expense	-	-	-		1,600,000	
	Benefits Total			**-**	**-**	**-**		**1,600,000**	
	Operating Expense	1-00-5021-000	Plant Expenditures-General--	140,453	320,796	145,951	214,799	400,000	250,000
		1-00-5022-000	Littlerock Dam Sediment Removal-General--	2,692,727	228,249	54,349	47,406	1,800,000	1,500,000
		1-00-5025-000	Provision for Bad Debt-General--	16,690	2,908	42,061	71,976	25,000	80,000
		1-00-5040-000	Change in Investment in PRWA-General--	-	-	-			
		1-00-5050-000	Water Purchased - Current Year	1,939,252	3,891,975	1,761,601	3,375,634	2,600,000	3,000,000
		1-00-5050-100	Water Purchases - Prior Year OAP Charges	(645)	(24,609)	-	(5,093)	25,000	
		1-00-5050-500	Water Purchased - Haul Water	119,130	116,040	157,240	129,040		150,000
		1-00-5055-000	Water Recovery-General--	(25,594)	125,688	(32,384)	(57,390)	155,000	
		1-00-5060-000	Water Quality Expense (GAC Media)-General--	304,920	608,626	668,000		750,000	750,000
		1-00-5070-000	Rate Assistance Program Expense-General--	304,009	171,546	200,320			190,000
		2-00-5100-000	Conservation-General--	-	-	-			
		2-00-5100-100	Conservation - Rebates	210,915	109,725	66,667	80,118	100,000	100,000
		7-00-4050-000	PRWA - Director Expenses	-	-	-			
		7-00-4235-420	PRWA - Mtce & Rep Operations - Water Lines	9,258	-	13,494	17,916		20,000
		7-00-5040-000	PRWA - Change in Investment	(4,300)	(27,632)	(20,933)		25,000	
		7-00-5045-000	PRWA - Contribution Expense	-	-	-			
		7-00-6300-100	PRWA - Supplies - General	412	294	187	1,891		
	Operating Expense Total			**5,707,228**	**5,523,606**	**3,056,551**	**3,876,297**	**5,880,000**	**6,040,000**
	Debt Service & Capital	1-00-5000-000	Depreciation Capital-General--	2,598,101	2,553,150	2,449,171	2,027,986	5,800,000	2,500,000
		1-00-5005-000	Depreciation-General--	2,624,947	3,041,031	3,146,096	2,791,954		3,200,000
		1-00-5006-000	Right-To-Use Asset Amortization Expense	136,845	131,336	153,091			
		1-00-5010-000	Service Costs Construction-General--	480,546	446,693	365,037	323,611	550,000	550,000
		1-00-5015-000	Overhead Recovered-General--	(921,391)	(878,890)	(1,148,029)	(1,628,012)		(1,200,000)
		1-00-5020-000	Capitalized Labor-General--	(335,052)	(319,596)	(417,747)	(592,005)	(1,200,000)	(400,000)
		1-00-5030-000	Interest Long Term Debt-General--	2,437,192	2,733,668	3,307,446	2,627,224	2,743,231	3,143,117
		1-00-5031-000	Deferred Charge - Cost of Issuance	7,500	327,759	292,810			
		1-00-5035-000	Amortization Participation SWP-General--	4,008,232	4,492,670	4,985,344	3,738,972	4,838,220	4,838,220
		3-00-5200-000	Project Expense-General--	-	-	-			
	Debt Service & Capital Total			**11,036,920**	**12,527,822**	**13,133,220**	**9,289,729**	**12,731,451**	**12,631,337**
00 - General Total				**16,744,148**	**18,052,074**	**16,190,094**	**13,166,833**	**20,211,451**	**18,671,337**
01 - Directors	Salaries	1-01-4000-000	Directors Pay	-	-	-			155,000
		1-01-4000-006	Directors Pay - G. Dizmang	26,170	14,940	220			
		1-01-4000-007	Directors Pay - R. Alverado	-	-	-			
		1-01-4000-008	Directors Pay - K. Mac Laren	19,270	17,380	20,680	22,760	31,000	
		1-01-4000-009	Directors Pay - J. Estes	-	-	-			
		1-01-4000-010	Directors Pay - V. Dino	23,880	23,760	25,960	16,720	31,000	
		1-01-4000-011	Directors Pay - M. Henriquez	-	-	-			
		1-01-4000-012	Directors Pay - D. Wilson	20,510	18,260	20,240	18,475	31,000	
		1-01-4000-013	Directors Pay - A. Merino	4,320	-	-			
		1-01-4000-014	Directors Pay - S. Kellerman	13,860	14,520	18,920	19,460	31,000	
		1-01-4000-015	Directors Pay - C. Sanchez	-	-	18,700	17,480	31,000	
		1-01-4000-016	Directors Pay - D. Dino	-	-	-	5,100		
	Salaries Total			**108,010**	**88,860**	**104,720**	**99,995**	**155,000**	**155,000**
	Benefits	1-01-4005-000	Payroll Taxes - Directors	7,961	7,387	8,011	7,650	9,500	9,500
		1-01-4010-000	Health Insurance - Directors	-	-	-		31,000	31,000
		1-01-4010-006	Health Ins. Directors - G. Dizmang	542	347	-			
		1-01-4010-007	Health Ins. Directors - R. Alvarado	-	-	-			
		1-01-4010-008	Health Ins. Directors - K. Mac Laren	17,264	17,934	19,670	9,693		
		1-01-4010-009	Health Ins. Directors - J. Estes	-	-	-			
		1-01-4010-010	Health Ins. Directors - V. Dino	4,903	6,617	7,129	4,284		
		1-01-4010-011	Health Ins. Directors - M. Henriquez	-	-	-			
		1-01-4010-012	Health Ins. Directors - D. Wilson	727	703	748	747		
		1-01-4010-013	Health Ins. Directors - A. Merino	3,980	-	-			
		1-01-4010-014	Health Ins. Directors - S. Kellerman	-	-	-			
		1-01-4010-015	Health Ins. Directors - C. Sanchez	-	-	-			
		1-01-4010-016	Health Ins. Directors - D. Dino	-	-	-	646		
	Benefits Total			**35,377**	**32,988**	**35,559**	**23,020**	**40,500**	**40,500**
	Operating Expense	1-01-4050-006	Director - Dizmang, Gloria	4,127	370	-			
		1-01-4050-007	Director - Alvarado, Robert	-	-	-			
		1-01-4050-008	Director - Mac Laren, Kathy	1,644	2,686	3,864	3,127		
		1-01-4050-009	Director - Estes, Joe	-	-	-			
		1-01-4050-010	Director - Dino, Vincent	1,817	7,272	4,901	4,071		
		1-01-4050-011	Director - Henriquez, Marco	-	-	-			
		1-01-4050-012	Director - Wilson, Don	2,185	7,526	7,805	7,544		
		1-01-4050-013	Director - Merino, Amber	(130)	-	-			
		1-01-4050-014	Director - S. Kellerman	2,166	3,845	5,199	4,303		
		1-01-4050-015	Director - C. Sanchez	-	-	7,496	4,780		
		1-01-4050-016	Director - D. Dino	-	-	-	1,619		
	Operating Expense Total			**11,810**	**21,699**	**29,265**	**25,444**		
01 - Directors Total				**155,196**	**143,547**	**169,544**	**148,459**	**195,500**	**195,500**
02 - Administration	Salaries	1-02-4000-000	Salaries - Administration	1,492,579	1,470,307	1,441,339	1,540,335	1,640,000	1,774,817
		1-02-4000-100	Salaries - Overtime	4,013	1,764	2,708	614	5,250	700
		1-02-4000-200	Salaries - On-Call/Stand-By Time	-	-	-			
		1-02-4000-500	Salaries - Temp Help	-	-	-			
		1-02-5070-001	Salaries-On-Call/Stand By Time	87,402	81,012	87,988	83,830	95,000	95,000
		1-02-5070-004	Vacation Benefit Expense	35,717	81,592	(39,424)	(77,842)	95,000	95,000
	Salaries Total			**1,619,711**	**1,634,676**	**1,492,610**	**1,546,936**	**1,835,250**	**1,965,517**
	Benefits	1-02-4005-000	Payroll Taxes - Administration	92,318	93,362	121,668	102,407	140,000	128,700
		1-02-4010-000	Health Insurance - Administration	176,226	157,110	160,936	167,468	190,000	176,320
		1-02-4015-000	PERS - Deferred (GASB 68)	42,919	-	-		195,000	
		1-02-4015-001	PERS - Deferred Auditor (GASB 68)	(95,642)	(120,671)	(127,083)			
		1-02-4015-100	PERS - Administration - Employer (Classic)	81,426	307,298	328,191	56,512		63,155
		1-02-4015-200	PERS - Administration - Employee (Classic)	-	-	-			
		1-02-4015-300	PERS - Administration - Employer (PEPRA)	44,411	53,838	58,908	68,841		100,808
		1-02-4020-000	Worker's Comp	-	-	-			
		1-02-4030-000	Life Insurance/EAP Program	-	-	-			
		1-02-4085-000	Post Employment Benefits - Administration	92,002	50,200	55,612	148,305		150,000
		1-02-4125-000	Insurance	-	-	-			
		1-02-5070-002	PERS-Unfunded Liability	938,763	940,423	1,039,041	1,035,261	1,264,466	1,546,820
		1-02-5070-003	Worker's Compensation	210,121	185,750	194,934	204,195	240,810	350,308
		1-02-5070-005	Life Insurance/EAP	6,424	6,351	6,186	6,185	7,250	7,390
		1-02-5070-008	Insurance	385,236	458,219	494,749	418,805	500,000	550,000
	Benefits Total			**1,974,203**	**2,131,880**	**2,333,142**	**2,207,979**	**2,537,526**	**3,073,501**
	Operating Expense	1-02-4025-000	Vacation Benefit Expense	-	-	-			
		1-02-4050-000	Staff Travel	12,421	27,888	9,799	11,884	19,216	19,000
		1-02-4050-100	General Manager Travel	5,119	5,268	7,111	3,966	5,713	5,700
		1-02-4060-000	Staff Conferences & Seminars	9,231	4,999	2,773	11,755	7,790	8,000
		1-02-4060-100	General Manager - Conferences and Seminars	1,735	1,550	1,850	4,275	4,155	4,500
		1-02-4060-300	Meeting Supplies/Expense	-					1,000
		1-02-4080-000	Other Operating	-	-	-			
		1-02-4110-000	Consultants	-	-	-			
		1-02-4110-100	Consultants-Emergency Preparedness	-	-	-			
		1-02-4130-000	Bank Charges	195,249	202,856	226,913	175,952	220,000	220,000
		1-02-4135-000	Groundwater Adjudication	-	-	-			
		1-02-4135-100	Groundwater Adjudication - Woods Class	-	-	-			
		1-02-4140-000	Legal Services	-	-	-			
		1-02-4150-000	Accounting Services	25,251	34,875	28,496	30,055	35,000	50,000
		1-02-4155-205	Contracted Services - Landscape Services	-	-	-			
		1-02-4155-210	Contracted Services - Janatorial Services	-	-	-			
		1-02-4155-215	Contracted Services - Elevator	-	-	-			
		1-02-4165-000	Memberships/Subscriptions	-	-	-			
		1-02-4175-000	Permits (Construction)	3,931	50	2,066	1,200	10,000	10,000
		1-02-4180-000	Postage	9,871	16,014	10,886	6,619	16,000	10,000
		1-02-4190-100	Public Relations - Publications	32,037	23,333	30,755	35,414	33,758	35,000
		1-02-4190-700	Public Affairs - Marketing/Outreach	27,543	24,399	37,633	28,336	41,548	40,000
		1-02-4190-705	Public Affairs - Drought Outreach	12,131	-	-			
		1-02-4190-710	Public Affairs - Advertising	250	550	1,400	1,445	4,155	5,000
		1-02-4190-720	Public Affairs - Equipment	-	3,556	-		1,039	1,000
		1-02-4190-730	Public Affairs - Conference/Seminar/Travel	3,086	600	675		4,155	4,000
		1-02-4190-740	Public Affairs - Consultants	1,200	-	-		2,077	2,100
		1-02-4190-750	Public Affairs - Membership	885	912	637		1,558	1,558
		1-02-4190-900	Public Relations - Other	-	-	-			
		1-02-4200-000	Advertising	945	610	399	1,622	1,000	2,000
		1-02-4205-000	Office Supplies	18,094	26,342	19,589	18,114	27,500	27,500
		1-02-4210-000	Office Furniture	-	-	-			
		1-02-4215-200	Natural Gas - Buildings	-	-	-			
		1-02-4220-200	Electricity - Buildings	-	-	-			
		1-02-5070-006	Other Operating	99,845	58,252	102,099	172,953	57,000	57,000
		1-02-5070-007	Consultants	692,184	839,899	849,696	455,293	500,000	500,000
		1-02-5070-009	Groundwater Adjudication - Legal	17,872	23,004	7,797	17,175	25,000	25,000
		1-02-5070-010	Legal Services	188,085	175,057	190,234	121,520	181,000	181,000
		1-02-5070-011	Memberships	76,354	163,818	153,342	117,318	165,000	165,000
		1-02-5070-012	Elections	-	41,084	-		58,000	58,000
		1-02-5070-013	Succession Planning	-	-	-			
		1-02-5070-014	Groundwater Adjudication - Pumping Assessment	41,360	51,669	70,287	65,966	51,500	51,500
		1-02-5070-015	Computer Software - Info 360	-	-	-		148	148
		1-02-5070-099	District - 100th Anniversary Expense	-	-	38,957	9,224		
	Operating Expense Total			**1,474,678**	**1,726,585**	**1,793,393**	**1,290,084**	**1,472,312**	**1,484,006**
02 - Administration Total				**5,068,591**	**5,493,141**	**5,619,145**	**5,044,999**	**5,845,088**	**6,523,024**
03 - Engineering	Salaries	1-03-4000-000	Salaries - Engineering	1,214,879	1,372,346	1,325,050	1,403,854	1,560,000	1,638,844
		1-03-4000-100	Salaries - Overtime	22,736	14,656	18,902	17,910	16,000	18,000
		1-03-4000-500	Salaries - Temp Help	-	-	-			
	Salaries Total			**1,237,615**	**1,387,002**	**1,343,952**	**1,421,764**	**1,576,000**	**1,656,844**
	Benefits	1-03-4005-000	Payroll Taxes - Engineering	90,038	100,233	110,638	111,019	115,000	126,749
		1-03-4010-000	Health Insurance - Engineering	196,271	208,033	222,692	240,982	278,000	271,893
		1-03-4015-000	PERS - Deferred (GASB 68)	52,456	-	-		154,000	
		1-03-4015-001	PERS - Deferred Auditor (GASB 68)	(116,896)	(122,590)	(132,448)			
		1-03-4015-100	PERS - Engineering - Employer (Classic)	48,261	308,416	346,198	105,299		111,231
		1-03-4015-200	PERS - Engineering - Employee (Classic)	-	-	-			
		1-03-4015-300	PERS - Engineering - Employer (PEPRA)	51,310	58,462	57,242	39,578		59,122
		1-03-4085-000	Post Employment Benefits - Engineering	68,887	42,476	55,612	197,745		200,000

Expenses - Full Detail

Dept Name	Category	Account Number	Account Description	FY 2022 Actuals	FY 2023 Actuals	FY 2024 Actuals	FY 2025 YTD Actuals	FY 2025 Budget	FY 2026 Proposed Budget
03 - Engineering	**Benefits Total**			**390,328**	**595,030**	**659,935**	**694,623**	**547,000**	**768,995**
	Operating Expense	1-03-4050-000	Staff Travel	3,182	1,819	2,447	806	4,155	12,000
		1-03-4060-000	Staff Conferences & Seminars	8,874	11,156	5,229	12,876	10,387	16,000
		1-03-4060-001	Staff Training - Auto CAD Civil 3D	-	-	-			
		1-03-4155-305	Contracted Services - GIS Services	-	-	-			
		1-03-4155-310	Contracted Services - Reproduction	3,100	-	-		3,000	5,000
		1-03-4155-320	Contracted Services - Plotter/Scanner	-	-	-			
		1-03-4165-000	Memberships/Subscriptions	5,647	5,116	7,320	7,993	8,000	10,000
		1-03-4250-000	General Material & Supplies	7,311	3,277	1,672	2,569	7,500	5,000
		1-03-4250-100	Supplies - Plotter Paper/Toner	112	-	-	324	1,000	1,000
		1-03-4250-150	Supplies - Surveying Total Station	-	-	-			
		1-03-4250-175	Supplies - GPS Plotting Tool	23,000	-	-			
		1-03-4250-200	Supplies - Miscellaneous	-	-	-			5,000
		1-03-6200-000	Uniforms	-					720
		1-03-8100-100	Computer Software - Maintenance and Support	9,000	7,691	-			17,500
		1-03-8100-200	Computer Software - SCADAWatch	-	-	-			
	Operating Expense Total			**60,226**	**29,059**	**16,668**	**24,568**	**34,042**	**72,220**
03 - Engineering Total				**1,688,169**	**2,011,091**	**2,020,555**	**2,140,955**	**2,157,042**	**2,498,059**
04 - Facilities	Salaries	1-04-4000-000	Salaries - Facilities	2,224,953	2,435,220	2,128,132	2,331,130	2,685,000	2,682,230
		1-04-4000-100	Salaries - Overtime	166,452	189,278	166,545	160,420	165,000	170,000
		1-04-4000-500	Salaries - Temp Help	-	57,745	178,385			
	Salaries Total			**2,391,404**	**2,682,244**	**2,473,062**	**2,491,550**	**2,850,000**	**2,852,230**
	Benefits	1-04-4005-000	Payroll Taxes - Facilities	185,043	204,273	202,068	205,093	205,000	218,196
		1-04-4010-000	Health Insurance - Facilities	477,132	465,659	448,957	500,137	580,000	578,754
		1-04-4015-000	PERS - Deferred (GASB 68)	119,218	-	-		230,000	
		1-04-4015-001	PERS - Deferred Auditor (GASB 68)	(265,672)	(228,672)	(210,016)			
		1-04-4015-100	PERS - Facilities - Employer (Classic)	98,980	582,586	588,239	72,607		85,008
		1-04-4015-200	PERS - Facilities - Employee (Classic)	-	-	-			
		1-04-4015-300	PERS - Facilities - Employer (PEPRA)	99,731	101,766	110,231	132,297		158,788
		1-04-4085-000	Post Employment Benefits - Facilities	227,841	122,163	146,613	428,448		450,000
	Benefits Total			**942,273**	**1,247,775**	**1,286,093**	**1,338,581**	**1,015,000**	**1,490,746**
	Operating Expense	1-04-4050-000	Staff Travel	-	5,730	13,150	6,029	5,194	5,194
		1-04-4060-000	Staff Conferences & Seminars	275	4,575	14,717	3,636	7,790	9,000
		1-04-4155-405	Contracted Services - Landscape Svcs (All Sites)	12,259	13,840	13,109	10,021	13,362	13,362
		1-04-4155-410	Contracted Services - Landscape Svcs (Wells)	31,800	41,800	44,200	44,200	57,129	57,129
		1-04-4155-415	Contracted Services - Alarm Services	-	-	-			
		1-04-4155-420	Contracted Services - Janatorial Serv (All Sites)	39,624	43,406	64,318	66,301	49,858	80,000
		1-04-4155-425	Contracted Services - Pest Control Svcs (All Loc)	7,641	8,136	8,508	8,922	8,569	12,000
		1-04-4155-430	Contracted Services - Pest Control Svcs (Plm Dam)	4,639	6,271	1,721		6,492	6,492
		1-04-4155-435	Contracted Services - Elevator Services	2,965	3,069	7,645	3,646	3,376	5,000
		1-04-4155-440	Contracted Services - SCADA Software	-	-	-			
		1-04-4155-445	Contracted Services - SCADA Hardware	-	-	-			
		1-04-4155-450	Contracted Services - Seismic Valve Controllers	6,987	7,268	7,483	7,780	7,271	10,000
		1-04-4155-455	Contracted Services - Annual Tank Service	162,069	120,990	51,763		129,839	129,839
		1-04-4155-460	Contracted Services - Fire Extinguisher Servicing	3,308	-	-		3,635	4,500
		1-04-4155-466	Contracted Services - Clearscada	-	-	-			
		1-04-4155-468	Contracted Services - Fuel Serve	2,657	3,280	3,195	3,855	3,635	4,000
		1-04-4155-499	Contracted Services - Miscellaneous	-	-	-			
		1-04-4175-000	Permits (District Facilities including Dams)	65,543	62,449	69,183	66,949	72,710	75,000
		1-04-4215-100	Natural Gas - Wells & Boosters	483,086	348,126	252,179	111,382	384,226	280,000
		1-04-4215-200	Natural Gas - Buildings	13,531	13,118	9,234	6,890	16,716	16,716
		1-04-4220-100	Electricity - Wells & Boosters	2,221,783	2,000,495	2,242,252	1,530,881	2,306,902	2,537,594
		1-04-4220-200	Electricity - Buildings	98,531	101,338	116,776	107,344	115,195	120,000
		1-04-4225-000	Mtce & Rep - Vehicles	26,554	47,109	43,725	61,338	40,223	50,000
		1-04-4230-100	Mtce & Rep Operations - Office Building	6,339	4,513	13,389	22,677	13,231	23,000
		1-04-4230-110	Mtce & Rep Office - Equipment	-	-	-			
		1-04-4230-120	Maint. & Rep. Operations - Two-way Radios	660	990	721	661	1,500	6,000
		1-04-4235-110	Mtce & Rep Operations - Equipment	9,048	22,016	5,630	23,148	10,585	20,000
		1-04-4235-400	Mtce & Rep Operations - Wells	103,222	102,338	84,029	199,905	111,144	120,000
		1-04-4235-405	Mtce & Rep Operations - Boosters	101,617	39,342	62,718	60,550	89,973	200,000
		1-04-4235-410	Mtce & Rep Operations - Shop Buildings	1,596	5,705	5,141	1,361	5,293	80,000
		1-04-4235-415	Mtce & Rep Operations - Facilities	8,716	38,441	58,288	49,173	52,926	52,926
		1-04-4235-420	Mtce & Rep Operations - Water Lines	359,364	277,706	261,363	230,982	317,553	317,553
		1-04-4235-425	Mtce & Rep Operations - Littlerock Dam	23,410	18,193	9,862	39,768	26,295	50,000
		1-04-4235-430	Mtce & Rep Operations - Palmdale Dam	-	-	-			
		1-04-4235-435	Mtce & Rep Operations - Palmdale Canal	5,501	23,108	-		8,997	8,997
		1-04-4235-440	Mtce & Rep Operations - Large Meters	3,077	1,987	-		3,457	25,000
		1-04-4235-445	Mtce & Rep Operations - Telemetry	-	-	-			
		1-04-4235-450	Mtce & Rep Operations - Hypo Generators	4,488	8,090	45		10,585	10,585
		1-04-4235-455	Mtce & Rep Operations - Heavy Equipment	47,769	55,110	52,021	15,353	50,279	50,500
		1-04-4235-460	Mtce & Rep Operations - Storage Reservoirs	2,385	6,552	1,838	3,470	10,016	10,016
		1-04-4235-461	Maint. & Rep. Operations - Air Vacs	5,749	4,686	3,929	3,597	6,086	7,000
		1-04-4235-470	Mtce & Rep Operations - Meter Exchanges	29,966	25,875	30,770	54,745	37,048	50,000
		1-04-4250-100	General Material & Supplies - Hot Tapping Program	-	-	-			
		1-04-4270-300	Telecommunication - Other	-	-	-			
		1-04-4300-100	Testing - Regulatory Compliance	9,573	12,628	9,349	95	12,984	14,000
		1-04-4300-200	Testing - Large Meter Testing	16,160	10,535	2,940		14,542	15,000
		1-04-4300-300	Testing - Edison Testing	10,900	-	12,300		11,880	22,000
		1-04-5070-009	Groundwater Adjudication - Pumping Assessment	-	-	-			
		1-04-6000-000	Waste Disposal	15,706	20,160	26,816	26,058	18,873	25,000
		1-04-6100-100	Fuel - Gas and Diesel	197,656	172,315	144,167	127,415	219,820	220,000
		1-04-6100-200	Lubricates District Wide	23,704	32,640	35,158	25,521	29,680	29,680
		1-04-6200-000	Uniforms	26,076	31,411	29,981	24,752	35,316	38,600
		1-04-6300-100	Supplies - General	60,392	57,539	47,351	56,555	60,245	62,000
		1-04-6300-200	Supplies - Hypo Generators	-	-	-			
		1-04-6300-300	Supplies - Electrical	-	1,192	-		2,500	2,500
		1-04-6300-400	Supplies - Telemetry	-	-	-			
		1-04-6300-800	Supplies - Construction Materials	24,266	35,188	31,554	29,272	28,824	32,000
		1-04-6400-000	Tools	-	-	-			
		1-04-6400-100	Tools - Facilities	25,772	37,863	34,698	39,350	31,161	34,000
		1-04-6400-200	Tools - Vehicles	6,452	10,790	7,827	9,612	8,310	10,000
		1-04-6450-100	Equipment - Firetide Radios	-	-	-			
		1-04-6450-120	Equipment - SCADA Workstations	-	-	-			
		1-04-7000-100	Lease Expense - Equipment	10,399	11,340	11,538	9,362	12,000	15,000
		1-04-7000-200	Lease Expense - Fleet	11,500	14,359	6,431	179,811	166,194	224,103
		1-04-7001-200	Lease Interest Expense	7,501	7,499	6,224		500	500
	Operating Expense Total			**4,342,216**	**3,921,106**	**3,959,236**	**3,272,366**	**4,639,918**	**5,191,786**
04 - Facilities Total				**7,675,894**	**7,851,124**	**7,718,390**	**7,102,498**	**8,504,918**	**9,534,762**
05 - Operations	Salaries	1-05-4000-000	Salaries - Operations	1,201,939	1,297,808	1,499,478	1,399,104	1,498,000	1,560,193
		1-05-4000-100	Salaries - Overtime	121,539	122,986	115,570	80,904	108,000	100,000
		1-05-4000-500	Salaries - Temp Help	111,733	-	39,718			
	Salaries Total			**1,435,211**	**1,420,794**	**1,654,766**	**1,480,008**	**1,606,000**	**1,660,193**
	Benefits	1-05-4005-000	Payroll Taxes - Operations	100,493	107,811	139,113	117,908	128,000	127,005
		1-05-4010-000	Health Insurance - Operations	174,978	187,563	226,171	244,822	276,000	310,539
		1-05-4015-000	PERS - Deferred (GASB 68)	52,456	-	-		155,000	
		1-05-4015-001	PERS - Deferred Auditor (GASB 68)	(116,896)	(139,198)	(152,498)			
		1-05-4015-100	PERS - Operations - Employer (Classic)	90,484	389,300	412,033	70,480		72,622
		1-05-4015-200	PERS - Operations - Employee (Classic)	-	-	-			
		1-05-4015-300	PERS - Operations - Employer (PEPRA)	26,027	27,281	52,480	57,435		75,726
		1-05-4085-000	Post Employment Benefits - Operations	51,067	42,125	50,556	197,745		200,000
	Benefits Total			**378,610**	**614,882**	**727,855**	**688,390**	**559,000**	**785,892**
	Operating Expense	1-05-4050-000	Staff Travel	1,615	2,409	3,474	955	3,428	3,428
		1-05-4060-000	Staff Conferences & Seminars	549	3,310	849	407	3,428	5,142
		1-05-4120-100	Training - Lab Equipment	-	-	-			
		1-05-4120-200	Training - SCADA Network	-	-	-			
		1-05-4155-505	Contracted Services - Landscape Services	1,620	1,725	1,620	2,372	3,700	62,700
		1-05-4155-510	Contracted Services - Alarm Services	-	-	-			
		1-05-4155-515	Contracted Services - Janatorial Services	-	-	-			
		1-05-4155-520	Contracted Services - Pest Control Services	-	-	-			
		1-05-4155-525	Contracted Services - Wind Turbine Services	12,220	-	-			
		1-05-4155-530	Contracted Services - CMMS Software	-	-	-			
		1-05-4155-535	Contracted Services - SCADA Software	-	-	-			
		1-05-4155-540	Contracted Services - Lab Software	7,569	7,560	19,680		8,250	10,500
		1-05-4155-545	Contracted Services - Lab Equipment Services	20,619	11,082	1,833	20,118	22,472	22,472
		1-05-4155-550	Contracted Services - Water Quality (Solar Bee)	37,600	48,880	48,880	50,772	50,772	50,772
		1-05-4155-555	Contracted Services - SCADA Hardware	-	-	-			
		1-05-4155-560	Contracted Services - Seismic Valve Controllers	-	-	-			
		1-05-4155-599	Contracted Services - Miscellaneous	40,400	-	-			
		1-05-4175-000	Permits (WTP Facilities Inclusive)	8,888	105,449	215,134	18,883	109,065	109,065
		1-05-4215-100	Natural Gas - Wells & Boosters	-	-	-			
		1-05-4215-200	Natural Gas - Water Treatment Plant	2,419	2,006	1,145	708	3,235	3,235
		1-05-4220-100	Electricity - Wells & Boosters	-	-	-			
		1-05-4220-200	Electricity - Water Treatment Plant	390,099	451,158	530,273	531,401	458,485	614,334
		1-05-4230-110	Mtce & Rep - Office Equipment	2,860	893	4,788		6,139	6,139
		1-05-4235-110	Mtce & Rep Operations - Equipment	19,352	38,669	32,718	40,781	42,340	42,340
		1-05-4235-410	Mtce & Rep Operations - Shop Buildings	5,426	6,184	719	3,366	7,410	7,410
		1-05-4235-415	Mtce & Rep Operations - Facilities	73,366	147,913	85,350	55,841	86,798	86,798
		1-05-4235-445	Mtce & Rep Operations - Telemetry	-	-	-			
		1-05-4235-450	Mtce & Rep Operations - Hypo Generators	-	-	-			
		1-05-4235-500	Mtce & Rep Operations - Wind Turbine	-	-	-			
		1-05-4236-000	Palmdale Lake Management	79,484	77,473	191,845	38,063	209,400	359,400
		1-05-4270-300	Telecommunication - Other	-	-	-			
		1-05-4300-300	Testing - Edison Testing	-	-	-			
		1-05-6000-000	Waste Disposal	25,150	3,212	3,452	79,195	53,923	163,923
		1-05-6200-000	Uniforms	15,335	16,029	12,455	9,937	16,199	20,919
		1-05-6300-100	Supplies - General	21,753	20,332	14,567	6,004	31,161	31,161
		1-05-6300-200	Supplies - Hypo Generators	-	-	-			
		1-05-6300-300	Supplies - Electrical	-	-	-			
		1-05-6300-400	Supplies - Telemetry	-	-	-			
		1-05-6300-600	Supplies - Lab	76,500	60,785	71,557	57,974	89,437	89,437
		1-05-6300-700	Outside Lab Work	75,920	56,489	68,730	50,367	88,760	88,760
		1-05-6400-000	Tools	6,291	3,032	1,706	1,860	6,646	6,646
		1-05-6500-000	Chemicals	882,675	1,348,699	1,481,301	1,429,348	1,240,219	1,488,263
		1-05-7000-100	Lease Expense - Equipment	-	734	-			
		3-05-4300-100	Filter Media Testing/Inspection	-	-	-			
	Operating Expense Total			**1,807,708**	**2,414,023**	**2,792,074**	**2,398,352**	**2,541,266**	**3,272,844**

Expenses - Full Detail

Dept Name	Category	Account Number	Account Description	FY 2022 Actuals	FY 2023 Actuals	FY 2024 Actuals	FY 2025 YTD Actuals	FY 2025 Budget	FY 2026 Proposed Budget
05 - Operations Total				**3,621,529**	**4,449,698**	**5,174,695**	**4,566,750**	**4,706,266**	**5,718,929**
06 - Finance	Salaries	1-06-4000-000	Salaries - Finance	1,017,797	959,986	1,023,799	998,651	1,192,000	1,233,711
		1-06-4000-100	Salaries - Overtime	7,955	4,631	8,331	7,565	6,000	7,500
		1-06-4000-500	Salaries - Temp Help	48,709	51,453	-			
	Salaries Total			**1,074,461**	**1,016,070**	**1,032,130**	**1,006,215**	**1,198,000**	**1,241,211**
	Benefits	1-06-4005-000	Payroll Taxes - Finance	75,512	71,546	86,813	76,619	87,500	94,953
		1-06-4010-000	Health Insurance - Finance	181,070	163,565	190,552	191,314	238,000	230,409
		1-06-4015-000	PERS - Deferred (GASB 68)	42,918	-	-		122,500	
		1-06-4015-001	PERS - Deferred Auditor (GASB 68)	(95,642)	(106,116)	(119,643)			
		1-06-4015-100	PERS - Finance - Employer (Classic)	94,032	303,156	344,900	70,487		54,730
		1-06-4015-200	PERS - Finance - Employee (Classic)	-	-	-			
		1-06-4015-300	PERS - Finance - Employer (PEPRA)	10,074	14,419	19,534	27,263		62,534
		1-06-4085-000	Post Employment Benefits - Finance	20,722	29,488	35,389	164,788		200,000
	Benefits Total			**328,686**	**476,058**	**557,546**	**530,471**	**448,000**	**642,626**
	Operating Expense	1-06-4050-000	Staff Travel	-	797	3,847	1,931	3,116	3,500
		1-06-4060-000	Staff Conferences & Seminars	-	200	2,092	624	2,597	2,500
		1-06-4155-100	Contracted Services - INFOSEND (Billing)	183,556	195,615	198,123	171,882	337,581	200,000
		1-06-4155-101	Contracted Services - INFOSEND (Collections)	85,964	97,225	105,795	106,609		95,000
		1-06-4155-102	Contracted Services - INFOSEND (EBPP)	30,305	28,321	31,786	27,112		22,000
		1-06-4155-200	Contracted Services - INFOSEND (Drought Related)	-	-	-			
		1-06-4155-300	Contracted Services - AdComp Sys	4,085	4,085	4,085		4,415	4,415
		1-06-4155-605	Contracted Services - Assessor Data (Realquest)	-	-	-			
		1-06-4155-610	Contracted Services - Credit Reporting Services	-	-	-			
		1-06-4155-615	Contracted Services - AMR Services (Itron)	-	-	-			
		1-06-4155-620	Contracted Services - Letter Extractor (OPEX)	3,170	3,425	3,565		3,635	3,635
		1-06-4155-625	Contracted Services - GASB Actuarial Reports	12,450	4,850	13,700	4,950	14,023	14,000
		1-06-4155-630	Contracted Services - Payroll/HR	-	4,225	-	5,623		
		1-06-4165-000	Memberships/Subscriptions	110	125	288	494	500	500
		1-06-4230-110	Mtce & Rep - Office Equipment	-	-	-	50		
		1-06-4235-440	Mtce & Rep Operations - Large Meters	-	-	-			
		1-06-4235-470	Mtce & Rep Operations - Meter Exchanges	-	-	-			
		1-06-4250-000	General Material & Supplies	267	-	-		1,558	
		1-06-4260-000	Business Forms	534	107	1,000	968	1,558	1,558
		1-06-4270-100	Telecommunication - Office	57,774	70,759	93,170	37,297	67,652	67,652
		1-06-4270-200	Telecommunication - Cellular Stipend	29,250	28,710	28,890	33,480	20,774	62,640
		1-06-4300-200	Testing - Large Meter Testing	-	-	-			
		1-06-7000-100	Lease Expense - Equipment (Mail Machine)	3,323	2,660	2,744	2,899	3,000	3,000
	Operating Expense Total			**410,788**	**441,103**	**489,084**	**393,919**	**460,408**	**480,400**
06 - Finance Total				**1,813,935**	**1,933,231**	**2,078,760**	**1,930,605**	**2,106,408**	**2,364,237**
07 - Water Conservation	Salaries	1-07-4000-000	Salaries - Water Conservation	184,572	192,639	211,880	215,158	223,000	226,366
		1-07-4000-100	Salaries - Overtime	13,098	4,136	4,212	2,994	8,000	5,000
		1-07-4000-500	Salaries - Temp Help	-	-	-			
	Salaries Total			**197,671**	**196,775**	**216,093**	**218,152**	**231,000**	**231,366**
	Benefits	1-07-4005-000	Payroll Taxes - Water Conservation	15,756	15,600	19,634	17,885	18,000	17,700
		1-07-4010-000	Health Insurance - Water Conservation	41,145	39,710	43,269	52,441	55,000	60,902
		1-07-4015-000	PERS - Deferred (GASB 68)	(11,716)	-	-		27,000	
		1-07-4015-001	PERS - Deferred Auditor (GASB 68)	-	(23,741)	(27,547)			
		1-07-4015-100	PERS - Water Conservation - Employer (Classic)	19,436	71,051	25,152	24,546		27,647
		1-07-4015-200	PERS - Water Conservation - Employee (Classic)	-	-	-			
		1-07-4015-300	PERS - Water Conservation - Employer (PEPRA)	-	-	-			
		1-07-4085-000	Post Employment Benefits - Water Conservation	12,525	8,425	10,112	32,958		30,000
	Benefits Total			**77,145**	**111,046**	**70,620**	**127,830**	**100,000**	**136,249**
	Operating Expense	1-07-4050-000	Staff Travel	1,047	1,263	1,070	501	2,077	2,077
		1-07-4060-000	Staff Conferences & Seminars	850	870	920	1,090	1,558	1,558
		1-07-4190-300	Public Relations - Landscape Workshop/Training	97	937	341		6,232	6,232
		1-07-4190-400	Public Relations - Contests	-	-	-		1,039	1,039
		1-07-4190-500	Public Relations - Education Programs	940	676	1,039	10,560	4,155	4,155
		1-07-4190-700	Public Relations - General Media	-	-	-			
		1-07-4190-900	Public Relations - Other	703	345	370	420	831	831
		1-07-4500-000	Drought Enforcement Expense	-	-	-			
		1-07-6200-000	Uniforms	-					160
		1-07-6300-100	Supplies - General	8,917	3,916	7,255	4,316	9,348	9,348
	Operating Expense Total			**12,554**	**8,007**	**10,995**	**16,887**	**25,240**	**25,400**
07 - Water Conservation Total				**287,370**	**315,828**	**297,707**	**362,868**	**356,240**	**393,015**
08 - Human Resources	Salaries	1-08-4000-000	Salaries - Human Resources	262,035	355,578	403,986	398,732	435,000	460,448
		1-08-4000-100	Salaries - Overtime	6,236	1,470	1,254	3,184	5,000	3,500
		1-08-4000-200	Salaries - Intern Program	2,690	-	-		54,000	
		1-08-4000-500	Salaries - Temp Help	-	-	-			
		1-08-4085-000	Post Employment Benefits - Human Resources	(5,295)	4,213	4,634	49,436		50,000
	Salaries Total			**265,666**	**361,261**	**409,874**	**451,352**	**494,000**	**513,948**
	Benefits	1-08-4005-000	Payroll Taxes - Human Resources	20,397	26,308	32,804	30,855	35,000	35,493
		1-08-4010-000	Health Insurance - Human Resources	16,783	41,439	58,381	55,693	59,500	61,985
		1-08-4015-000	PERS - Deferred (GASB 68)	9,537	-	-		39,500	
		1-08-4015-001	PERS - Deferred Auditor (GASB 68)	(21,254)	(31,470)	(36,039)			
		1-08-4015-100	PERS - Human Resources - Employer (Classic)	11,667	78,481	91,797	14,410		16,676
		1-08-4015-200	PERS - Human Resources - Employee (Classic)	-	-	-			
		1-08-4015-300	PERS - Human Resources - Employer (PEPRA)	10,175	15,701	17,978	19,029		25,568
	Benefits Total			**47,306**	**130,459**	**164,921**	**119,987**	**134,000**	**139,722**
	Operating Expense	1-08-4050-000	Staff Travel	1,314	2,582	2,842	2,496	1,558	3,000
		1-08-4060-000	Staff Conferences & Seminars	635	6,017	2,574	2,519	5,194	6,000
		1-08-4070-000	Employee Expense	30,974	11,294	3,686	8,305	83,760	10,000
		1-08-4070-001	Employee Expense - Education Reimbursement	20,964	30,683	26,155	27,930		40,000
		1-08-4070-002	Employee Expense - Certifications	1,520	3,380	1,719	4,098		6,000
		1-08-4070-003	Employee Expense - Employment Exams	-	129	10,627	1,917		2,000
		1-08-4070-004	Employee Expense - Safety Work Boots	3,292	7,124	7,778	5,912		6,500
		1-08-4070-005	Employee Expense - Meeting Meals	7,834	20,177	10,577	11,331		12,000
		1-08-4070-006	Employee Expense - Coffee Supplies	5,095	6,000	5,074	5,436		6,000
		1-08-4070-007	Employee Expense - Company Shirts	3,504	(697)	8,768	6,519		7,000
		1-08-4070-008	Employee Expense - Year-End Recognition	1,021	239	3,923	1,118		1,200
		1-08-4070-009	Employee Expense - Holiday Recognition	-	10,649	15,125	12,399		16,000
		1-08-4070-010	Employee Expense - Summer Recognition	-	10,128	9,435	12,961		13,000
		1-08-4070-011	Employee Expense - Wellness Program	-	(2,000)	(91)	2,000		
		1-08-4070-012	Employee Expense - Employee Recognition	-	-	470	500		1,500
		1-08-4090-000	Temporary Staffing	-	-	-			
		1-08-4095-000	Employee Recruitment	11,169	11,210	15,369	6,676	10,387	10,387
		1-08-4100-000	Employee Retention	475	5,501	1,485	2,320	3,116	5,000
		1-08-4105-000	Employee Relations	-	-	-			
		1-08-4110-000	Consultants	-	-	-			
		1-08-4120-100	Training - Safety	14,514	10,252	14,502	18,116	16,619	20,000
		1-08-4120-200	Training - Specialty	-	3,468	6,141	184	10,387	10,387
		1-08-4121-000	Safety/HR Programs	-	-	-		1,039	1,039
		1-08-4165-000	Memberships/Subscriptions	1,034	2,268	1,508	1,663	1,298	1,500
		1-08-4165-100	HR/Safety Publications	78	39	45	292	1,039	1,039
		1-08-6300-500	Supplies - Safety	49,126	30,711	30,645	23,227	35,835	45,035
	Operating Expense Total			**152,548**	**169,155**	**178,357**	**157,919**	**170,232**	**224,587**
08 - Human Resources Total				**465,520**	**660,875**	**753,152**	**729,259**	**798,232**	**878,257**
09 - Information Technology	Salaries	1-09-4000-000	Salaries - Information Technology	632,537	677,487	775,959	724,298	806,000	839,428
		1-09-4000-100	Salaries - Overtime	7,268	15,299	11,650	13,943	10,000	15,000
		1-09-4000-500	Salaries - Temp Help	-	-	-			
	Salaries Total			**639,805**	**692,786**	**787,610**	**738,241**	**816,000**	**854,428**
	Benefits	1-09-4005-000	Payroll Taxes - Information Technology	47,632	51,498	63,487	57,862	62,000	65,364
		1-09-4010-000	Health Insurance - Information Technology	94,123	102,017	113,432	120,055	135,000	136,369
		1-09-4015-000	PERS - Deferred (GASB 68)	23,844	-	-		87,500	
		1-09-4015-001	PERS - Deferred Auditor (GASB 68)	(53,134)	(78,111)	(93,365)			
		1-09-4015-100	PERS - Information Technology - Employer (Classic)	56,996	224,772	269,673	52,393		59,194
		1-09-4015-200	PERS - Information Technology - Employee (Classic)	-	-	-			
		1-09-4015-300	PERS - Information Technology - Employer (PEPRA)	8,689	8,993	14,718	23,739		28,746
		1-09-4085-000	Post Employment Benefits - Information Technology	(22,148)	8,415	10,111	98,873		100,000
	Benefits Total			**156,001**	**317,585**	**378,056**	**352,922**	**284,500**	**389,673**
	Operating Expense	1-09-4050-000	Staff Travel	1,300	199	3,592	405	3,116	5,000
		1-09-4060-000	Staff Conferences & Seminars	3,748	2,305	5,360	1,982	7,790	5,000
		1-09-4155-801	Cloud Services-MS-Office 360	38,852	-	61,537	168,510	41,548	58,320
		1-09-4155-802	Cloud Services-MS-Project	-	-	-			6,480
		1-09-4155-803	Cloud Services-MS-Visio	-	-	-			1,260
		1-09-4155-804	Cloud Services-Adobe-Creative Suite	10,983	22,000	25,105	28,381	14,282	28,087
		1-09-4155-805	Cloud Services-SeamlessDocs	5,500	6,825	7,325	8,450	7,790	5,825
		1-09-4155-806	Cloud Services-IPSwitch-Moveit	10,027	15,967	6,375	5,940	10,906	5,940
		1-09-4155-807	Cloud Services-GFI Fax	2,052	1,896	1,903	1,361	2,337	2,508
		1-09-4155-808	Cloud Services-KnowBe4-Security Awareness	4,374	2,509	3,818	5,253	4,934	5,300
		1-09-4155-809	Cloud Services-Network Solutions DNS, Web Reg	1,751	3,510	1,477	1,346	3,635	3,500
		1-09-4155-810	Cloud Services-IBM-MaaS 360	5,709	6,321	5,979	5,052	6,492	2,700
		1-09-4155-811	Cloud Services-MSP Portal-Bit Defender	5,094	5,094	5,094	6,966	5,552	6,000
		1-09-4155-812	Cloud Services-Akins-WiFi	-	135	7,750			
		1-09-4155-813	Cloud Services-FleetMate	500	500	500		545	500
		1-09-4155-814	Cloud Services-Security Metrics-PCI Compliance	4,400	4,560	4,849	5,598	4,796	5,000
		1-09-4155-815	Cloud Services - Citrix	1,916	-	2,235		2,089	2,089
		1-09-4155-816	Cloud Services - -Azure Servic	39,119	35,511	52,323	79,034	41,548	125,000
		1-09-4155-905	Contracted Services - Offsite Services	6,925	1,050	840		7,531	1,000
		1-09-4155-910	Contracted Services - Printer Services	3,723	3,000	4,050	9,254	4,155	5,000
		1-09-4155-915	Contracted Services - Website Design Services	350	6,762	8,622	5,874	5,194	7,200
		1-09-4155-920	Contracted Services - Telephony Services	348	131	-	8,874	1,558	1,000
		1-09-4155-925	Contract Services - TDS (Network & Software Suppor	26,826	64,635	31,180	14,070	42,587	14,213
		1-09-4155-930	Contracted Services - Network Services	-	-	-			
		1-09-4155-935	Contracted Services - Hardware Warranties	-	-	-			
		1-09-4155-940	Contracted Services - Access Control & Fire Servic	70,162	81,949	78,778	111,710	88,290	100,000
		1-09-4155-945	Contracted Services - LA County Dataset	80	112	-		250	
		1-09-4155-950	Contracted Services - ESRI Customer Care	-	-	-			
		1-09-4155-955	Contracted Services - SCADA Software	17,743	-	24,348			
		1-09-4155-960	Contracted Services - SCADA Hardware	-	-	6,617			
		1-09-4155-965	Contracted Services - ClearSCADA	-	19,614	-	20,474	20,774	20,500
		1-09-4155-970	Contracted Services - Firetide Radio	-	-	-			
		1-09-4155-975	Contracted Services - AMR/AMI Systems	-	-	-			
		1-09-4165-000	Memberships/Subscriptions	1,369	200	494	2,930	2,597	3,000
		1-09-4235-445	Mtce & Rep - Telemetry	607	908	1,399		3,635	1,000
		1-09-4270-100	Telecommunication - Office Phone	19,816	18,275	20,758	12,449	21,813	24,000
		1-09-4270-125	Telecommunication - Office Backbone	20,580	20,580	20,580	17,150	22,852	22,852

Expenses - Full Detail

Dept Name	Category	Account Number	Account Description	FY 2022 Actuals	FY 2023 Actuals	FY 2024 Actuals	FY 2025 YTD Actuals	FY 2025 Budget	FY 2026 Proposed Budget
09 - Information Technology	Operating Expense	1-09-4270-150	Telecommunication - WTP Backbone	11,400	11,400	11,653	17,071	15,061	15,061
		1-09-4270-300	Telecommunication - Cellular (Data & On-Call)	59,773	67,364	59,031	59,930	75,306	75,000
		1-09-4270-350	Telecommunication - Other	21,120	20,309	25,407	9,136	20,774	15,000
		1-09-6200-000	Uniforms	-					160
		1-09-6300-400	Supplies - Telemetry	268	3,949	2,056	4,770	5,194	5,000
		1-09-8000-100	Computer Equipment - Computers	34,229	47,666	18,820	26,556	47,261	30,000
		1-09-8000-200	Computer Equipment - Mobility	42,403	31,365	50,833	22,643	46,742	30,000
		1-09-8000-300	Computer Equipment - Monitors	1,777	8,428	5,147	3,126	10,387	7,500
		1-09-8000-400	Computer Equipment - Printers	-	-	-			
		1-09-8000-500	Computer Equipment - Printer Supplies	-	4,392	3,211	449	2,597	2,500
		1-09-8000-550	Computer Equipment - Telephony	-	-	-		2,597	
		1-09-8000-600	Computer Equipment - Other	15,370	31,732	17,419	7,648	18,177	18,000
		1-09-8000-650	Computer Equiment - Warranty and Support	6,572	17,709	10,420	6,326	18,177	7,000
		1-09-8100-100	Software - Maintenance & Support	-	2,404	199	340		
		1-09-8100-101	Software M&S - Xtelesis-Phone	9,344	9,644	-	554	9,868	
		1-09-8100-102	Software M&S- Tredent-Veam	12,684	6,206	6,206	13,205	12,465	12,465
		1-09-8100-103	Software M&S- Condusive/V-locity-Diskeeper	6,242	5,872	6,137		6,752	
		1-09-8100-104	Software M&S- FWI	463	493	533	559	519	560
		1-09-8100-105	Software M&S- Strategy 7	-	-	-			
		1-09-8100-106	Software M&S- Astria Solutions-Docstar	13,275	14,337	15,197	16,109	15,581	15,500
		1-09-8100-107	Software M&S- NemoQ-Ticketing	-	-	-			3,500
		1-09-8100-108	Software M&S- FMT-Management Reporter	-	-	-			
		1-09-8100-109	Software M&S- Neogov	7,505	-	9,348	4,988	8,310	5,000
		1-09-8100-110	Software M&S- TruePoint	40,800	-	67,518	35,286	44,145	45,000
		1-09-8100-111	Software M&S- Technology Unlimited	1,880	6,530	2,007	4,200	5,194	2,000
		1-09-8100-112	Software M&S- Sierra Workforce-Timesheet	4,034	4,034	8,371	4,572	4,415	5,000
		1-09-8100-113	Software M&S- CIPO	-					35,000
		1-09-8100-114	Software M&S- Faranics-Powersaver	-	-	-			
		1-09-8100-115	Software M&S - Network Monitoring	45,140	57,383	58,166	67,671	62,323	70,000
		1-09-8100-116	Software M&S- VMWare-Virtualization	9,225	9,225	23,842	32,909	12,984	12,480
		1-09-8100-117	Software M&S- iPrism-Web Filter	-	-	-			
		1-09-8100-119	Software M&S - Palitto Consulting (IVR)	-	-	-			
		1-09-8100-120	Software M&S - ESRI GIS Software	26,150	56,750	150,665	8,955	28,574	105,665
		1-09-8100-121	Software M&S - ESRI Drone2Map	3,401	3,575	3,500		3,116	9,000
		1-09-8100-122	Software M&S - Info360 (SCADA Watch)	-	-	-			
		1-09-8100-123	Software M&S - InfoWatch (Innovyze)	14,064	8,183	-		17,658	17,658
		1-09-8100-124	Software M&S - Bamboo HR	1,229	11,875	11,872	10,049	12,465	12,465
		1-09-8100-125	Software M&S - Syncta Backflow	3,767	3,591	3,536		6,232	5,000
		1-09-8100-126	Software M&S - ProcureNow (OpenGov)	-	9,000	9,450	12,043	10,387	10,111
		1-09-8100-127	Software M&S - Autodesk	-	13,114	-		15,581	39,400
		1-09-8100-140	Software M&S - Starnik	-	-	-			
		1-09-8100-150	Software M&S- Dynamics GP	70,344	68,000	7,911	59,695	62,323	60,000
		1-09-8100-200	Computer Software - Software and Upgrades	15,553	45,611	39,753	32,917	41,548	40,000
	Operating Expense Total			**781,867**	**904,686**	**1,021,097**	**982,770**	**1,021,309**	**1,179,299**
	Debt Service & Capital	1-09-6450-100	Equipment - Firetide Radios	-	-	-			
		1-09-6450-110	Equipment - GF Signet Flow Meters	-	-	-			
		1-09-7000-100	Leases - Equipment (Printers)	54,872	57,716	63,497	38,264	58,687	58,000
	Debt Service & Capital Total			**54,872**	**57,716**	**63,497**	**38,264**	**58,687**	**58,000**
09 - Information Technology Total				**1,632,545**	**1,972,773**	**2,250,260**	**2,112,198**	**2,180,496**	**2,481,400**
10 - Customer Care	Salaries	1-10-4000-000	Salaries - Customer Care	1,016,593	1,048,803	1,193,502	1,154,105	1,268,000	1,288,110
		1-10-4000-100	Salaries - Overtime	7,869	12,633	45,770	40,336	30,000	50,000
		1-10-4000-500	Salaries - Temp Help	59,415	129,441	75,293	69,308		75,000
	Salaries Total			**1,083,877**	**1,190,877**	**1,314,565**	**1,263,749**	**1,298,000**	**1,413,110**
	Benefits	1-10-4005-000	Payroll Taxes - Customer Care	80,126	82,721	103,843	95,798	97,500	102,366
		1-10-4010-000	Health Insurance - Customer Care	228,717	214,751	235,685	264,326	263,000	273,933
		1-10-4015-000	PERS - Deferred (GASB 68)	61,993	-	-		130,000	
		1-10-4015-001	PERS - Deferred Auditor (GASB 68)	(138,149)	(113,923)	(135,296)			
		1-10-4015-100	PERS - Customer Care - Employer (Classic)	75,391	316,243	378,797	84,402		86,644
		1-10-4015-200	PERS - Customer Care - Employee (Classic)	-	-	-			
		1-10-4015-300	PERS - Customer Care - Employer (PEPRA)	24,571	24,692	33,315	34,189		45,669
		1-10-4085-000	Post Employment Benefits - Customer Care	81,412	54,772	65,722	214,224		220,000
	Benefits Total			**414,060**	**579,256**	**682,067**	**692,939**	**490,500**	**728,612**
	Operating Expense	1-10-4050-000	Staff Travel	-	1,033	-	504	2,077	2,000
		1-10-4060-000	Staff Conferences & Seminars	434	200	-	1,700	3,116	3,116
		1-10-4155-005	Contracted Services - Assessor Data (Realquest)	9,900	9,900	9,900	8,250	10,906	10,000
		1-10-4155-010	Contracted Services - Credit Reporting Services	3,673	2,997	2,800	2,256	5,194	3,000
		1-10-4155-015	Contracted Services - AMR Services (Itron)	2,287	-	-	45,550	24,930	
		1-10-4155-018	Contracted Services - AMR/AMI Services (Sensus)	-	-	13,890			50,000
		1-10-4155-020	Contracted Services - NEMO-Q System	2,003	2,063	2,125	2,401	3,324	3,324
		1-10-4230-110	Mtce & Rep Office - Equipment	-	-	-			
		1-10-4250-000	General Material & Supplies	2,618	3,896	346	2,685	5,194	5,194
		1-10-4260-000	Business Forms	-	-	642	647	1,039	1,200
		1-10-6200-000	Uniforms	-					400
	Operating Expense Total			**20,915**	**20,089**	**29,703**	**63,994**	**55,780**	**78,234**
10 - Customer Care Total				**1,518,852**	**1,790,221**	**2,026,335**	**2,020,682**	**1,844,280**	**2,219,956**
Grand Total				**40,671,749**	**44,673,604**	**44,298,638**	**39,326,105**	**48,905,921**	**51,478,476**

2026

January

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

February

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

March

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

April

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

May

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

June

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

July

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

August

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

September

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

October

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

November

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

December

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	2

Payroll

Board Meeting

*Dates subject to change

PWD Observed Holiday

PWD Observed Holiday (Dates Subject to Change)

PWD Scheduled Office Closure (Dates Subject to Change)

MINUTES OF MEETING OF THE PERSONNEL COMMITTEE OF THE PALMDALE WATER DISTRICT, SEPTEMBER 30, 2025:

A meeting of the Personnel Committee of the Palmdale Water District was held Tuesday, September 30, 2025, at 2029 East Avenue Q, Palmdale, CA 93550. Chair Kellerman called the meeting to order at 2:30 p.m.

1) Roll Call.

Attendance:	**Others Present:**
Committee:	Dennis LaMoreaux, General Manager
Scott Kellerman, Chair	Scott Rogers, Assistant General Manager
Kathy Mac Laren-Gomez,	Angelica Garcia, Human Resources Director
Committee Member	Debbie Dino, Alt. Committee Member
	Judy Shay, Public Affairs Director
	Trisha Guerrero, Management Analyst
	0 members of the public

2) Adoption of Agenda.

It was moved by Committee Member Mac Laren-Gomez, seconded by Chair Kellerman, and unanimously carried by all members of the Committee present at the meeting to adopt the agenda, as written.

3) Public Comments for Non-Agenda Items.

There were no public comments for non-agenda items.

4) Action Items: (The Public Shall Have an Opportunity to Comment on Any Action Item as Each Item is Considered by the Committee Prior to Action Being Taken.)

4.1) Consideration and Possible Action on Approval of Minutes of Meeting Held October 16, 2024.

It was moved by Committee Member Mac Laren-Gomez, seconded by Chair Kellerman, and unanimously carried by all members of the Committee present at the meeting to approve the minutes of the Personnel Committee meeting held October 16, 2024, as written.

4.2) Consideration on a Recommendation to Approve Update to Compensation Scale Structure. (No Budget Impact – Human Resources Director Garcia)

Human Resources Director Garcia provided an overview of the current and proposed Compensation Scale Structures and stated that the District is in the process of transitioning to Paylocity for payroll services which would require an update to the Structure to eliminate the manual compensation increase process, and after a brief discussion of the past and current step increases, of performance reviews and promotions, and of the 2025 Budget impact being within the General Manager's spending authority, it was moved by Committee Member Mac Laren-Gomez, seconded by Chair Kellerman, and unanimously carried by all members of the Committee present at the meeting to approve the update to the Compensation Scale Structure effective immediately and that this item be presented to the full Board for ratification at the October 13, 2025 Regular Board Meeting.

4.3) Consideration on a Recommendation to Approve Artificial Intelligence (AI) Policy. (No Budget Impact – Human Resources Director Garcia)

Human Resources Director Garcia provided an overview of the proposed Artificial Intelligence (AI) Policy, and after a discussion of the advancement in technology, of the significant increase in AI usage, of the extent of its potential application in the workplace including sensitive matters and official records, and of staff training, it was moved by Committee Member Mac Laren-Gomez, seconded by Chair Kellerman, and unanimously carried by all members of the Committee present at the meeting to approve the recommendation to approve the Artificial Intelligence (AI) Policy and that this item be presented to the full Board for consideration at the October 13, 2025 Regular Board Meeting.

5) Reports:

5.1) Human Resources Director Garcia:

a) Summary of Changes for 2026 Benefit Plan Year.

Human Resources Director Garcia provided a detailed overview of changes for the 2026 benefit plan year, including out-of-pocket maximums, the average increase of 7.26% in medical plan costs, the addition of infertility benefits in compliance with

Senate Bill 729 for the Anthem and Kaiser HMO plans, and a change in the distribution of the District's Health Savings Account (HSA) contributions for CDHP plans to be evenly divided across the annual payroll cycle followed by a brief discussion of HSA accounts.

b) Update on Employee Events.

Human Resources Director Garcia provided an update on employee events including Water Professionals Week activities from October 6-9 and the AV ALTA Soccer Game on October 17, Open Enrollment from October 13-30, the District's Holiday Party on December 6, and the employee pumpkin decorating contest to be held in October and stated that staff suggested displaying the pumpkins in the Customer Care lobby to allow customers to participate in the voting.

She then provided an update on hearing aid coverage and discounts, as well as the Employee Engagement Survey results regarding employee satisfaction with the process, followed by a brief discussion of the recent and future surveys.

General Manager LaMoreaux then reported that the Antelope Valley Chambers Christmas Parade will be held on December 6, which is the same day as the District's Holiday Party, and that this year's theme is Hope and Renewal.

c) Other.

There were no other reports.

6) Board Members' Requests for Future Agenda Items.

General Manager LaMoreaux stated that job description updates will be presented at the next Personnel Committee Meeting.

There were no further requests for future agenda items.

7) Date of Next Committee Meeting.

It was determined that the next Personnel Committee Meeting will be held November 12, 2025 at 10 a.m.

8) Adjournment.

There being no further business to come before the Personnel Committee, the meeting was adjourned at 3:18 p.m.

Chair