



PALMDALE WATER DISTRICT

A CENTURY OF SERVICE

BOARD OF DIRECTORS

W. SCOTT KELLERMAN
Division 1

DON WILSON
Division 2

GLORIA DIZMANG
Division 3

KATHY MAC LAREN-GOMEZ
Division 4

VINCENT DINO
Division 5

November 22, 2022

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

FOR THE PUBLIC: VIA TELECONFERENCE ONLY

DIAL-IN NUMBER: 571-748-4021 ATTENDEE PIN: 943-572-971#

Submit Public Comments at: <https://www.gomeet.com/943-572-971>

MONDAY, NOVEMBER 28, 2022

6:00 p.m.

DENNIS D. LaMOREAUX
General Manager

ALESHIRE & WYNDER LLP
Attorneys

NOTES: To comply with the Americans with Disabilities Act, to participate in any Board meeting please contact Dawn Deans at 661-947-4111 x1003 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 Dawn Deans at 661-947-4111 x1003 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 Dawn Deans al 661-947-4111 x1003 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 (Government Code Section 54957.5). Please call Dawn Deans at 661-947-4111 x1003 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 carry out its meeting will not be permitted, and offenders will be requested to leave the meeting. (PWD Rules and Regulations, Appendix DD, Sec. IV.A.)

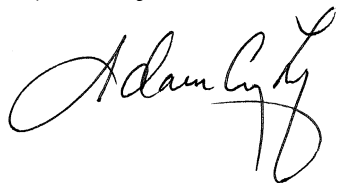
Each item on the agenda shall be deemed to include any appropriate motion, resolution, or ordinance to take action on any item.

- 1) Pledge of Allegiance/Moment of Silence.
- 2) Roll Call.
- 3) Adoption of Agenda.



- 4) Public comments for non-agenda items.
- 5) Presentations:
 - 5.1) None at this time.
- 6) Action Items - Consent Calendar (The public shall have an opportunity to comment on any action item on the Consent Calendar as the Consent Calendar is considered collectively by the Board of Directors prior to action being taken.)
 - 6.1) Approval of minutes of Regular Board Meeting held November 14, 2022.
 - 6.2) Payment of bills for November 28, 2022.
 - 6.3) Approval of Resolution No. 22-28 being a Resolution of the Board of Directors of the Palmdale Water District Establishing its Investment Policy. (No Budget Impact – Finance Manager Hoffmeyer / Financial Advisor Egan / Finance Committee)
 - 6.4) Approval of Resolution No. 22-29 being a Resolution of the Board of Directors of the Palmdale Water District Proclaiming a Local Emergency Persists, Ratifying the Proclamation of a State of Emergency by the Governor Issued March 4, 2020, and Re-Authorizing Remote Teleconference Meetings of the Legislative Bodies of the Palmdale Water District for the Period Beginning December 1, 2022 and Ending December 30, 2022 Pursuant to Brown Act Provisions. (No Budget Impact – Assistant General Manager Ly)
- 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 Resolution No. 22-30 being a Resolution of the Board of Directors of the Palmdale Water District Authorizing the District’s Application for Funding from the State of California’s 2022 Urban Community Drought Relief Grant Program. (\$42,029,881.00 – Potential Revenue– Engineering Manager Rogers)
 - 7.2) Consideration and possible action on approval of Resolution No. 22-31 being a Resolution of the Board of Directors of the Palmdale Water District Approving a Waiver of the District’s Procurement and Purchasing Policy. (No Budget Impact – Engineering Manager Rogers)
 - 7.3) Consideration and possible action on authorizing staff to negotiate and execute a services contract for engineering submittals for an ultraviolet light and advanced oxidation process system for the Pure Water AV Demonstration Facility and agree to the pricing terms for the purchase with a present cost amount. (\$247,211.74 – Budgeted – Engineering Manager Rogers)
 - 7.4) Consideration and possible action on authorizing staff to enter into a construction contract with Cedro Construction, Inc. for the water main replacement project in Avenue Q-6 at 12th Street East. (\$189,595.00 Not-to-Exceed – Budgeted – W.O. No. 20-609 – Engineering Manager Rogers)

- 7.5) Consideration and possible action on cancelling the second Regular Board Meeting in December, December 26, 2022, due to the District's scheduled office closure. (No Budget Impact – General Manager LaMoreaux)
- 7.6) 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 2022 Budget:
 - a) The 11th American Water Summit – Re-thinking Water to be held January 24 – 26, 2023 in Los Angeles.
- 8) Information Items:
 - 8.1) Reports of Directors:
 - a) Standing Committees; Organization Appointments; Agency Liaisons:
 - 1) Antelope Valley East Kern Water Agency (AVEK) – November 22. (Director Dino, Board Liaison/Director Mac Laren-Gomez, Alt.)
 - 2) Finance Committee Meeting – November 15. (Director Wilson, Chair/President Dizmang)
 - 3) Outreach Committee Meeting – November 16. (Director Mac Laren, Chair/Director Kellerman)
 - 4) Special District Association North Los Angeles County (SDANLAC) Board Meeting – November 16. (Director Dino, CSDA Chapter Chair/President Dizmang)
 - b) General Meetings Reports of Directors.
 - 8.2) Report of General Manager.
 - a) November 2022 written report of activities through October 2022.
 - b) Department Presentations:
 - 1) Engineering Department. (Engineering Manager Rogers)
 - 2) Operations Department. (Operations Manager Masaya)
 - 8.3) Report of General Counsel.
- 9) Board members' requests for future agenda items.
- 10) Adjournment.



ADAM C. LY,
Assistant General Manager

**PALMDALE WATER DISTRICT
BOARD MEMORANDUM**

DATE: November 21, 2022 **November 28, 2022**
TO: BOARD OF DIRECTORS **Board Meeting**
FROM: Mr. Dennis Hoffmeyer, Finance Manager
FROM: Mr. Dennis D. LaMoreaux, General Manager
RE: ***AGENDA ITEM NO. 6.3 – APPROVAL OF RESOLUTION NO. 22-28 BEING A RESOLUTION OF THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT ESTABLISHING ITS INVESTMENT POLICY. (NO BUDGET IMPACT – FINANCE MANAGER HOFFMEYER/FINANCIAL ADVISOR EGAN/FINANCE COMMITTEE)***

Recommendation:

Staff and the Finance Committee recommend approval of Resolution No. 22-28 Establishing the Palmdale Water District’s Investment Policy.

Alternative Options:

There is no alternative option.

Impact of Taking No Action:

The District will not have a current Investment Policy in effect.

Background:

It is required by law for the District to adopt an annual Investment Policy. The Policy is to invest funds in a manner which will provide the highest investment return with the maximum security while meeting the daily cash flow demands of the District and conforming to all statutes governing the investment of District funds with the primary objectives of the investment activities being safety, liquidity, and return on investments.

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 from this item.

Supporting Documents:

- Resolution No. 22-28 – A Resolution of the Board of Directors of the Palmdale Water District Establishing its Investment Policy

RESOLUTION NO. 22-28

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT ESTABLISHING ITS INVESTMENT POLICY

1.0 POLICY

WHEREAS; the Legislature of the State of California has declared that the deposit and investment of public funds by local officials and local agencies is an issue of statewide concern; and

WHEREAS; the legislative body of a local agency may invest monies not required for the immediate necessities of the local agency in accordance with the provisions of California Government Code Sections 5922 and 53601 et seq.; and

WHEREAS; the Deputy Treasurer of the Palmdale Water District ("District") shall annually prepare and submit a statement of investment policy and such policy, and any changes thereto, and report same to the Finance Committee, and it shall be considered by the Board of Directors at a public meeting;

NOW THEREFORE; it shall be the policy of the District to invest funds in a manner which will provide the highest investment return with the maximum security while meeting the daily cash flow demands of the District and conforming to all statutes governing the investment of District funds.

2.0 SCOPE

This investment policy applies to all investment activities and financial assets of the District. These funds are accounted for in the annual district audit.

3.0 PRUDENCE

The standard of prudence to be used by investment officers shall be the "prudent investor" standard, pursuant to California Government Code 53600.3, and shall be applied in the context of managing an overall portfolio. Persons authorized to make investment decisions on behalf of local agencies investing public funds are trustees and therefore fiduciaries subject to the prudent investor standard. Investments shall be made with judgment and care, under circumstances then prevailing, including, but not limited to, the general economic conditions and the anticipated needs of the District, which persons of prudence, discretion and intelligence exercise in the management of their own affairs; not for speculation, but for investment, considering the probable safety of their capital as well as the probable income to be derived. Investment officers acting in accordance with written procedures and the investment policy and exercising due diligence shall be relieved of personal responsibility for an individual security's credit risk or market price changes, provided deviations from expectations are reported in a timely fashion and appropriate action is taken to control adverse developments.

4.0 OBJECTIVES

When investing, reinvesting, purchasing, acquiring, exchanging, selling and managing public funds, the primary objectives, in priority order, of the investment activities shall be:

1. Safety: Safety of principal is the foremost objective of the investment program. Investments of the District shall be undertaken in a manner that seeks to ensure the preservation of capital in the overall portfolio. To attain this objective, the District will diversify its investments by investing funds among a variety of securities with independent returns.

2. Liquidity: The investment portfolio will remain sufficiently liquid to enable the District to meet all operating requirements which might be reasonably anticipated.

3. Return on Investments: The investment portfolio shall be designed with the objective of attaining a acceptable rate of return throughout budgetary and economic cycles, taking into account the District's investment risk constraints and the cash flow characteristics of the portfolio.

5.0 DELEGATION OF AUTHORITY

Pursuant to California Government Code 53607, the authority to invest public funds of the District is expressly delegated to the Board of Directors of the District (the "Board"). The Board re-delegates the investment function to the Board President or Vice President. The Board President or Vice President, with the concurrence of the Board Finance Committee, designate the District's Financial Advisor as the Deputy Treasurer who shall have the authority to act on behalf of the District and shall assume full responsibility for those transactions until the delegation is revoked or expires. The Board President or Vice President shall delegate the day-to-day operations of investing to the Deputy Treasurer, but not the responsibility for the overall investment program. All transactions will be reviewed by the Finance Committee on a monthly basis to assure compliance with this Investment Policy.

6.0 ETHICS AND CONFLICTS OF INTEREST

The Board, officers and employees of the District involved in the investment process shall refrain from personal business activity that could conflict with the proper execution and management of the investment program, or which could impair their ability to make impartial investment decisions.

7.0 AUTHORIZED FINANCIAL INSTITUTIONS AND DEALERS

The Deputy Treasurer will maintain a list of financial institutions, selected on the basis of credit worthiness, financial strength, experience and minimal capitalization, authorized to provide investment services to the District. In addition, a list will also be maintained of approved security broker/dealers selected by credit worthiness who are authorized to provide investment and financial advisory services in the State of California. No public deposit shall be made except in a qualified public depository as established by state laws.

For brokers/dealers of government securities and other investments, the District shall select only broker/dealers who are licensed and in good standing with the California Department of Business Oversight, the Securities and Exchange Commission, the Financial Industry Regulatory Authority or other applicable self-regulatory organizations.

Before engaging in investment transactions with a broker/dealer, the Deputy Treasurer shall have received from said firm a signed Certification Form. This form shall attest that the individual responsible for the District's account with that firm has reviewed the District's Investment Policy and that the firm understands this policy and intends to present investment recommendations and transactions to the District that are appropriate under the terms and conditions of this Investment Policy. A current audited financial statement is required to be on file for each financial institution and broker/dealer in which the District invests.

Further, all financial institutions and broker/dealers who desire to conduct investment transactions with the District must supply the Deputy Treasurer with a Certification Form and other documents as the Deputy Treasurer may reasonably deem necessary to make a determination that such financial institution or broker/dealer is reputable and trustworthy.

8.0 AUTHORIZED AND SUITABLE INVESTMENTS

The District is empowered by California Government Code 53601 et seq. to invest in the following:

- a. Bonds issued by the District.
- b. United States Treasury Bills, Notes and Bonds.
- c. Federal agency or United States government-sponsored enterprise obligations, participations, or other instruments, including those issued by, or fully guaranteed as to principal and interest by federal agencies or United States government-sponsored enterprises.
- d. Negotiable certificates of deposit issued by a nationally or state-chartered bank, a savings association or a federal association (as defined by Section 5102 of the Financial Code), or by a state-licensed branch of a foreign bank. Purchases of negotiable certificates of deposit may not exceed 60% of the District's money which may be invested pursuant to this policy.
- e. Monies held by a trustee or fiscal agent and pledged to the payment or security of bonds or other indebtedness, or obligations under a lease, installment sale, or other agreement of a local agency, or certificates of participation in those bonds, indebtedness, or lease installment sale, or other agreements, may be invested in accordance with the statutory provisions governing the issuance of those bonds, indebtedness, or lease installment sale, or other agreement, or to the extent not inconsistent therewith or if there are no specific statutory provisions, in accordance with the ordinance, resolution, indenture, or agreement of the local agency providing for the issuance.

- f. Bonds, notes, warrants or other evidence of debt issued by a local agency within the State of California, including pooled investment accounts sponsored by the State of California, County Treasurers, other local agencies or Joint Powers Agencies.

Such investments shall be limited to securities that at the time of the investment have a term remaining to maturity of five years or less, or as provided above.

The District shall not invest any funds covered by this Investment Policy in inverse floaters, range notes, interest-only strips derived from mortgage pools or any investment that may result in a zero interest accrual if held to maturity.

9.0 COLLATERALIZATION

All certificates of deposit must be collateralized by United States Treasury Obligations. Collateral must be held by a third party trustee and valued on a monthly basis. The percentage of collateralizations on repurchase and reverse agreements will adhere to the amount required under California Government Code 53601(j)(2).

10.0 SAFEKEEPING AND CUSTODY

All security transactions entered into by the District shall be conducted on delivery-versus-payment (DVP) basis. All securities purchased or acquired shall be delivered to the District by book entry, physical delivery or by third party custodial agreement evidence by safekeeping receipts.

11.0 DIVERSIFICATION

The District will diversify its investments by security type and institution. Assets shall be diversified to mitigate the risk of loss resulting from over concentration of assets in a specific maturity, a specific issuer or a specific class of securities.

Diversification strategies shall be reviewed and revised periodically. In establishing specific diversification strategies, the following general policies and constraints shall apply:

- a. Portfolio maturity dates shall be matched versus liabilities to avoid undue concentration in a specific maturity sector.
- b. Maturities selected shall provide for stability of income and liquidity.
- c. Disbursement and payroll dates shall be covered through maturities of investments, marketable United States Treasury bills or other cash equivalent instruments such as money market mutual funds.

12.0 REPORTING

The Deputy Treasurer, after review by the Finance Committee, shall submit to each member of the Board an investment report at least quarterly. Pursuant to California Government Code 53646, the report shall include a complete description of the portfolio, the type of investments, the issuers, maturity dates, par values and the current market values of each component of the portfolio, including funds managed for District by third party contracted managers. The report will also include the source of the portfolio valuation. For funds which are placed in LAIF, FDIC-insured accounts and/or in a county investment pool, the foregoing report elements may be replaced by copies of the latest statements from such institutions. The report must also include a certification that (1) all investment actions executed since the last report have been made in full compliance with the Investment Policy, and (2) the District will meet its expenditure obligations for the next six months. The Deputy Treasurer shall maintain a complete and timely record of all investment transactions.

13.0 INVESTMENT POLICY ADOPTION

This Investment Policy shall be adopted by resolution of the District. Moreover, the Policy shall be reviewed on an annual basis, and modifications must be approved by the Board.

PASSED, APPROVED, AND ADOPTED at a Regular Meeting of the Board of Directors of Palmdale Water District held on November 28, 2022. Resolution No. 22-28 was adopted by the following vote:

AYES:

NOES:

ABSTAIN:

President, Board of Directors
Palmdale Water District

ATTEST:

Vice President of the Board of Directors

APPROVED AS TO FORM:

Aleshire & Wynder, General Counsel

STATE OF CALIFORNIA)
)
COUNTY OF LOS ANGELES) ss.

I, Vincent Dino, Vice President of the Palmdale Water District, DO HEREBY CERTIFY that the foregoing is a full, true and correct copy of Resolution No. 22-28 of the Board of Directors of Palmdale Water District adopted at a Regular Meeting held on November 28, 2022 and that the same has not been amended or repealed.

Vice President, Board of Directors
Palmdale Water District

DATED: November 28, 2022

(S E A L)



UBS Financial Services Inc.
515 S. Flower St Suite 50
Los Angeles, CA 90071
Tel: 213-253-5235
Email: ruby.mardueno@ubs.com

<http://www.ubs.com/team/giordano>


Finance Committee
Palmdale Water District
2029 East Ave Q
Palmdale, CA 93550

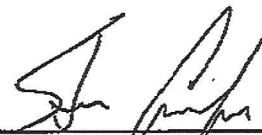
November 08, 2022


Dear Sirs:

This letter certifiers that I have read and understand the Palmdale Water District Investment Policy. I will present investment recommendations and transactions that are appropriate under its terms and conditions.

Sincerely,



James Giordano, CFP®, CRPS®
Senior Vice President- Wealth Mgmnt

Steve Crawford, CRPS®
First Vice President - Wealth Mgmnt

Ruby Mardueno, CFP®, CRPS®
Team Administrator

**PALMDALE WATER DISTRICT
BOARD MEMORANDUM**

DATE: November 22, 2022 **November 28, 2022**
TO: BOARD OF DIRECTORS **Board Meeting**
FROM: Mr. Adam Ly, Assistant General Manager
VIA: Mr. Dennis D. LaMoreaux, General Manager
RE: ***AGENDA ITEM NO. 6.4 – APPROVAL OF RESOLUTION NO. 22-29 BEING A RESOLUTION OF THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT PROCLAIMING A LOCAL EMERGENCY PERSISTS, RATIFYING THE PROCLAMATION OF A STATE OF EMERGENCY BY THE GOVERNOR ISSUED MARCH 4, 2020, AND RE-AUTHORIZING REMOTE TELECONFERENCE MEETINGS OF THE LEGISLATIVE BODIES OF THE PALMDALE WATER DISTRICT FOR THE PERIOD BEGINNING DECEMBER 1, 2022 AND ENDING DECEMBER 30, 2022 PURSUANT TO BROWN ACT PROVISIONS. (NO BUDGET IMPACT – ASSISTANT GENERAL MANAGER LY)***

Recommendation:

Staff recommends the Board approve Resolution No. 22-29 being a Resolution of the Board of Directors of the Palmdale Water District Proclaiming a Local Emergency Persists, Ratifying the Proclamation of a State of Emergency by the Governor Issued March 4, 2020, and Re-Authorizing Remote Teleconference Meetings of the Legislative Bodies of the Palmdale Water District for the Period Beginning December 1, 2022 and Ending December 30, 2022 Pursuant to Brown Act Provisions.

Alternative Options:

The Board can choose not to approve Resolution No. 22-29.

Impact of Taking No Action:

Teleconference options for the District’s publicly noticed meetings will end.

Background:

With the issuance of the Governor’s State of Emergency Executive Order due to the COVID-19 pandemic, the Brown Act was modified regarding agenda postings, Board member attendance from remote locations via teleconference, public attendance, and participation at publicly noticed meetings via teleconference. These modifications were rescinded by the Governor effective September 30, 2021; however, agencies and special districts have the option to continue remote teleconferencing options under the provisions of newly enacted AB 361. AB 361 provides agencies the ability to meet remotely during proclaimed state emergencies under modified Brown Act requirements beyond September 30, 2021.

November 21, 2022

The criteria to rely on the provisions of AB 361 are as follows:

- 1) The local agency is holding a meeting during a proclaimed state of emergency, and state or local officials have imposed or recommended measures to promote social distancing; or
- 2) The local agency is holding a meeting during a proclaimed state of emergency for the purpose of determining, by majority vote, whether as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees; or
- 3) The local agency is holding a meeting during a proclaimed state of emergency and has determined, by majority vote, that, as a result of the emergency, meeting in person would present imminent risks to the health or safety of attendees.

Resolution No. 22-29 addresses these criteria and will remain in effect for a period of 30 days. If the District wishes to continue meeting under modified Brown Act requirements under AB 361 after 30 days, the resolution must be renewed.

Strategic Plan Initiative/Mission Statement:

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

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

Budget:

There is no budget impact.

Supporting Documents:

- Resolution No. 22-29 being a Resolution of the Board of Directors of the Palmdale Water District Proclaiming A Local Emergency Persists, Ratifying the Proclamation of a State of Emergency by the Governor Issued March 4, 2020, and Re-Authorizing Remote Teleconference Meetings of the Legislative Bodies of the Palmdale Water District for the Period Beginning December 1, 2022 and Ending December 30, 2022 Pursuant to Brown Act Provisions

RESOLUTION NO. 22-29

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT PROCLAIMING A LOCAL EMERGENCY PERSISTS, RATIFYING THE PROCLAMATION OF A STATE OF EMERGENCY BY THE GOVERNOR ISSUED MARCH 4, 2020, AND RE-AUTHORIZING REMOTE TELECONFERENCE MEETINGS OF THE LEGISLATIVE BODIES OF THE PALMDALE WATER DISTRICT FOR THE PERIOD BEGINNING DECEMBER 1, 2022 AND ENDING DECEMBER 30, 2022 PURSUANT TO BROWN ACT PROVISIONS

WHEREAS, the Palmdale Water District is committed to preserving and nurturing public access and participation in meetings of the Board of Directors; and

WHEREAS, all meetings of Palmdale Water District's ("District") legislative bodies are open and public, as required by the Ralph M. Brown Act (Cal. Gov. Code 54950 – 54963), so that any member of the public may attend, participate, and watch the District's legislative bodies conduct their business; and

WHEREAS, the Brown Act, Government Code section 54953(e), makes provisions for remote teleconferencing participation in meetings by members of a legislative body, without compliance with the requirements of Government Code section 54953(b)(3), subject to the existence of certain conditions; and

WHEREAS, a required condition is that a state of emergency is declared by the Governor pursuant to Government Code section 8625, proclaiming the existence of conditions of disaster or of extreme peril to the safety of persons and property within the state caused by conditions as described in Government Code section 8558; and

WHEREAS, a proclamation is made when there is an actual incident, threat of disaster, or extreme peril to the safety of persons and property within the jurisdictions that are within the District's boundaries, caused by natural, technological, or human-caused disasters; and

WHEREAS, it is further required that state or local officials have imposed or recommended measures to promote social distancing, or, the legislative body meeting in person would present imminent risks to the health and safety of attendees; and

WHEREAS, such conditions now exist in the District, specifically, a State of Emergency has been proclaimed by the Governor of the State of California on March 4, 2020 in response to the global outbreak of the novel Coronavirus disease ("COVID-19"); and

WHEREAS, meeting in person would present an imminent risk to the health and safety of attendees due to the continued impact of the COVID-19 pandemic; and

WHEREAS, the Board of Directors does hereby find that a State of Emergency has been proclaimed as a result of the threat of COVID-19 and the contagious nature of COVID-19 have caused, and will continue to cause, conditions of peril to the safety of persons within the District that are likely to be beyond the control of services, personnel, equipment, and facilities of the District, and desires to proclaim a local emergency and ratify the proclamation of state of emergency by the Governor of the State of California; and

WHEREAS, as a consequence of the local emergency, the Board of Directors does hereby find that the legislative bodies of the Palmdale Water District shall conduct their meetings without compliance with paragraph (3) of subdivision (b) of Government Code section 54953, as authorized by subdivision (e) of section 54953, and that such legislative bodies shall comply with the requirements to provide the public with access to the meetings as prescribed in paragraph (2) of subdivision (e) of section 54953; and

WHEREAS, the Palmdale Water District offers the option of teleconferencing to ensure access for the public to attend meetings.

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT DOES HEREBY RESOLVE AS FOLLOWS:

Section 1. Recitals. The Recitals set forth above are true and correct and are incorporated into this Resolution by this reference.

Section 2. Proclamation of Local Emergency. The Board hereby proclaims that a local emergency now exists throughout the District, and meeting in person would present imminent risks to the health and safety of attendees due to the serious and contagious nature of COVID-19.

Section 3. Ratification of Governor's Proclamation of a State of Emergency. The Board hereby ratifies the Governor of the State of California's Proclamation of a State of Emergency, effective as of its issuance date of March 4, 2020.

Section 4. Remote Teleconference Meetings. The staff, General Manager, and legislative bodies of the Palmdale Water District are hereby authorized and directed to take all actions necessary to carry out the intent and purpose of this Resolution including conducting open and public meetings in accordance with Government Code section 54953(e) and other applicable provisions of the Brown Act.

Section 5. Effective Date of Resolution. This Resolution shall take effect on December 1, 2022 and shall be effective until the earlier of (i) December 30, 2022, which is 30 days from the adoption of this Resolution, or (ii) such time the Board of Directors adopts a subsequent resolution in accordance with Government Code section 54953(e)(3) to extend the time during which the legislative bodies of the Palmdale Water District may continue to teleconference without compliance with paragraph (3) of subdivision (b) of section 54953.

PASSED AND ADOPTED by the Board of Directors of the Palmdale Water District this 28th day of November, 2022, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

President, Board of Directors

ATTEST:

Vice President, Board of Directors

APPROVED AS TO FORM:

Aleshire & Wynder, LLP, General Counsel

**PALMDALE WATER DISTRICT
BOARD MEMORANDUM**

DATE: November 21, 2022 **November 28, 2022**
TO: BOARD OF DIRECTORS **Board Meeting**
FROM: Scott Rogers, Engineering Manager
VIA: Mr. Adam Ly, Assistant General Manager
Mr. Dennis D. LaMoreaux, General Manager
RE: ***AGENDA ITEM NO. 7.1 – CONSIDERATION AND POSSIBLE ACTION ON APPROVAL OF RESOLUTION NO. 22-30 BEING A RESOLUTION OF THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT AUTHORIZING THE DISTRICT’S APPLICATION FOR FUNDING FROM THE STATE OF CALIFORNIA’S 2022 URBAN COMMUNITY DROUGHT RELIEF GRANT PROGRAM. (\$42,029,881 POTENTIAL REVENUE – ENGINEERING MANAGER ROGERS)***

Recommendation:

Staff recommends the Board:

1. Approve a resolution for submitting a grant application to the State of California’s 2022 Urban Community Drought Relief Grant Program;
2. Approve the grant application requesting \$42,029,881 in grant funds to complete projects that will meet the eligibility requirements of the grant program; and
3. Authorize the General Manager to sign and transmit the grant application to the State of California Department of Water Resources (DWR).

Alternative Options:

The Board can choose not to apply for the grant funding.

Impact of Taking No Action:

There will be no potential to receive this grant funding.

Background:

The State of California allocated an additional \$545 million to DWR to deliver grants for interim and immediate drought relief to urban communities for drought relief projects. The Program strategy is intended to award all available Urban Community Drought Relief funding (approximately \$190 million), which are projects benefitting areas

BOARD OF DIRECTORS
PALMDALE WATER DISTRICT

VIA: Mr. Adam Ly, Assistant General Manager
Mr. Dennis D. LaMoreaux, General Manager

November 21, 2022

covered by an Urban Water Management Plan. The other half of the available Urban Community Drought Relief Project funding (approximately \$190 million) are projects that address water shortages (Stage 4 or higher based on the Water Shortage Contingency Plan), contribute to resiliency by reducing local climate change vulnerabilities, and contribute to the goals of California's Water Supply Strategy (August 2022). Projects must be completed by December 31, 2026.

The staff has identified five projects that would benefit the District, qualify under the eligibility requirements of the funding, and can be completed by the end of March 2026. Staff is recommending the following projects be submitted for funding:

- Well 36 Drilling and Equipping – The District is currently soliciting bids for the drilling and within four to three months will solicit bids for the installation of the equipment on the well.
- Well 37 Drilling and Equipping – The District currently has Well 37 budgeted for 2023 and can easily meet the project completion deadline.
- Pure Water Antelope Valley Demonstration/Learning Facility – The groundwater augmentation project will require a demonstration facility to validate the treatment systems proposed for the advanced treatment system. Based on the current schedule, the facility can be constructed, and testing can be completed within the funding deadline. The facility has a multi-benefit because the District intends to transition the facility into a learning center for educating the public on long-term benefits of a pure water facility.
- Avenue Q Recycled Water Line – The Avenue Q recycled water pipeline from 30th Street to 20th Street. Approximately 4,430 linear feet of a 12-inch pipeline is estimated to provide the necessary water. The pipeline will provide recycled water to the water augmentation demonstration facility, recycled water fill station, and the District.
- Turf Reduction Program. The turf reduction program would expand the program to include public spaces where non-essential turf is located including parks, schools, and commercial landscaping.

BOARD OF DIRECTORS
 PALMDALE WATER DISTRICT
 VIA: Mr. Adam Ly, Assistant General Manager
 Mr. Dennis D. LaMoreaux, General Manager

November 21, 2022

Project	Total Project Cost	Grant Request	Other state funding	PWD cost share (25% non-state share)	Potable water saved or produced (AFY)
Ditch Conversion	\$22,600,000	\$16,950,000	\$0	\$5,650,000	1,531
Turf Reduction	\$4,000,000	\$3,000,000	\$0	\$1,000,000	
Avenue Q Recycled Pipeline	\$2,155,000	\$1,028,672	\$587,578	\$538,750	5,235
Demonstration Facility	\$15,000,000	\$11,250,000	\$0	\$3,750,000	32
Wells 36 & 37	\$13,068,278	\$9,801,209	\$0	\$3,267,070	4,800
TOTAL	\$56,823,278	\$42,029,881	\$587,578	\$14,205,820	11,598

The grant application requires that the Board of Directors approve a resolution that the District make a good faith effort to enter into a cooperative agreement with the State for the receipt and administration of said grant funds.

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 impact on the budget for preparing the resolution, and the District has the potential to receive grant funding.

Supporting Documents:

- Resolution Number 22-30

RESOLUTION 22-30

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT AUTHORIZING THE DISTRICT'S APPLICATION FOR FUNDING FROM THE 2022 URBAN COMMUNITY DROUGHT RELIEF GRANT PROGRAM FOR VARIOUS DISTRICT PROJECTS ELIGIBLE FOR THE FUNDING, INCLUDING, BUT NOT LIMITED TO, DRILLING AND EQUIPPING OF WELLS 36 AND 37, PURE WATER ANTELOPE VALLEY DEMONSTRATION/LEARNING FACILITY, AVENUE Q RECYCLED WATER PIPELINE, AND TURF REDUCTION PROGRAM

WHEREAS, Palmdale Water District is an irrigation district established pursuant to Section 20500 et seq. of the California Water Code.

WHEREAS, water supply in the Palmdale area is facing a growing list of challenges associated with regulatory cutbacks on State Water Project deliveries due to the declining storage levels, Bay-Delta instability, climate change, and aging infrastructure; and

WHEREAS, the State of California Budget Act of 2021 has made available \$200 million for funding for projects that provide immediate drought relief to urban communities and for multi-benefit projects; and

WHEREAS, the State of California legislature amended the Budget Act of 2021 to allocate an additional \$545 million to the Department of Water Resources for drought relief; and

WHEREAS, the Board of Directors of the Palmdale Water District has identified several projects that exemplify the objectives of the 2022 Urban Community Drought Relief Grant Program; and

WHEREAS, Palmdale Water District agrees to the administration as required in the Budget Act of 2021.

NOW, THEREFORE, LET IT BE RESOLVED by the Board of Directors of the Palmdale Water District as follows:

SECTION 1. That pursuant and subject to all of the terms and provisions of the Budget Act of 2021 (Stats. 2021, ch. 240, § 80), the Palmdale Water District General Manager, or designee, is hereby authorized and directed to prepare and file an application for funding with the Department of Water Resources and take such other actions necessary or appropriate to obtain grant funding.

SECTION 2. The Palmdale Water District General Manager, or designee, is hereby authorized and directed to execute the funding agreement with the Department of Water Resources and any amendments thereto.

SECTION 3. The Palmdale Water District General Manager, or designee, is hereby authorized and directed to submit any required documents, invoices, and reports required to obtain grant funding.

SECTION 6. This Resolution shall be effective as of the date of adoption.

CERTIFICATION

PASSED, APPROVED and ADOPTED this 128th day of November 2022.

Gloria Dizmang, President
Board of Directors
Palmdale Water District

Vincent Dino, Vice President
Board of Directors
Palmdale Water District

Approved as to form:

Aleshire & Wynder, LLP
District Legal Counsel

**PALMDALE WATER DISTRICT
BOARD MEMORANDUM**

DATE: November 22, 2022 **November 28, 2022**
TO: BOARD OF DIRECTORS **Board Meeting**
FROM: Scott Rogers, Engineering Manager
VIA: Mr. Adam Ly, Assistant General Manager
Mr. Dennis D. LaMoreaux, General Manager
RE: ***AGENDA ITEM NO. 7.2 – CONSIDERATION AND POSSIBLE ACTION ON APPROVAL OF RESOLUTION NO. 22-31 BEING A RESOLUTION OF THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT APPROVING A WAIVER OF THE DISTRICT’S PROCUREMENT AND PURCHASING POLICY. (NO BUDGET IMPACT – ENGINEERING MANAGER ROGERS)***

Recommendation:

Staff recommends the Board approve Resolution No. 22-31 being a Resolution of the Board of Directors of the Palmdale Water District Approving a Waiver of the District’s Procurement and Purchasing Policy related to the purchase of the treatment systems (microfiltration, primary reverse osmosis, secondary reverse osmosis, and the ultraviolet light/advanced oxidation process) for the Pure Water AV Demonstration Facility.

Alternative Options:

The Board can choose not to approve Resolution No. 22-31 and rebid the project.

Impact of Taking No Action:

Delay of regulatory approval.

Background:

The District advertised a Request for Proposals from equipment manufacturers for the advanced treatment systems, which includes the following:

- Microfiltration (MF)
- Primary reserve osmosis (RO)
- Secondary reverse osmosis (CCRO and PFRO)
- Ultraviolet light/advanced oxidation process systems (UV-AOP)

Each manufacturer presented in their proposals the advantages of their equipment specifically addressing the following criteria - cost, schedule, warranty, and impacts to site layout. Other criteria identified in the proposals were considered that benefits the District.

BOARD OF DIRECTORS
PALMDALE WATER DISTRICT

VIA: Mr. Adam Ly, Assistant General Manager
Mr. Dennis D. LaMoreaux, General Manager

November 22, 2022

Stantec reviewed the proposals based on the criteria and selected the manufacturer's proposal that met or exceeded the criteria identified.

Strategic Plan Initiative/Mission Statement:

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

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

Budget:

There is no budget impact.

Supporting Documents:

- Resolution No. 22-31 being a Resolution of the Board of Directors of the Palmdale Water District Approving a Waiver of District Procurement and Purchasing Policy.

RESOLUTION NO. 22-31
A RESOLUTION OF THE BOARD OF DIRECTORS
OF THE PALMDALE WATER DISTRICT APPROVING
WAIVER OF DISTRICT PROCUREMENT AND PURCHASING POLICY

WHEREAS, the Board of Directors of the Palmdale Water District ("District") has previously adopted a Procurement and Purchasing Policy, as fully set forth in Appendix M of the District's Rules and Regulations; and

WHEREAS, the District's Procurement and Purchasing Policy generally requires solicitation of bids for any construction project the District undertakes which has an estimated cost in excess of \$50,000, and the subsequent letting of any contract for such a project to the lowest responsible bidder; and

WHEREAS, Section I of the District's Procurement and Purchasing Policy provides that notwithstanding that policy, all contracts for projects the District undertakes may be made or entered into upon such terms and conditions and in such manner as the Board of Directors determines is in the best interest of the District; and

WHEREAS, the advanced water treatment equipment for the Pure Water AV Demonstration Facility, which includes microfiltration, reverse osmosis, and ultraviolet light with advanced oxidation, is specialized and requires evaluation beyond costs, and the District requested proposals from manufacturers to meet specific criteria in order to evaluate the equipment that provides the best value for the money; and

WHEREAS, the District has received proposals from potential manufacturers to provide the equipment to meet the regulatory requirements for advanced treatment of recycled water for indirect potable reuse, schedule, warranty, and impacts to site layout; and

WHEREAS, the District now desires to waive the requirement for solicitation of bids and authorize District staff to negotiate a fair and reasonable price for the purchase of the equipment based on the proposals received.

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT DOES HEREBY RESOLVE that it is in the District's best interest to authorize the General Manager, or his designee, to negotiate a price for the purchase of the advanced treatment equipment and related work without further compliance with the District's Procurement and Purchasing Policy requirement for solicitation of multiple bids as set forth under Section IV of that policy, and waives such requirement as to the Pure Water AV Demonstration Facility project.

PASSED AND ADOPTED by the Board of Directors of the Palmdale Water District this 28th day of November, 2022, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

President, Board of Directors

ATTEST:

Vice President, Board of Directors

APPROVED AS TO FORM:

Aleshire & Wynder, LLP, General Counsel

**PALMDALE WATER DISTRICT
BOARD MEMORANDUM**

DATE: November 21, 2022 **November 28, 2022**
TO: BOARD OF DIRECTORS **Board Meeting**
FROM: Mr. Scott Rogers, Engineering Manager
VIA: Mr. Adam Ly, Assistant General Manager
Mr. Dennis D. LaMoreaux, General Manager
RE: ***AGENDA ITEM NO. 7.3 – CONSIDERATION AND POSSIBLE ACTION ON AUTHORIZING STAFF TO NEGOTIATE AND EXECUTE A SERVICES CONTRACT FOR ENGINEERING SUBMITTALS FOR AN ULTRAVIOLET LIGHT AND ADVANCED OXIDATION PROCESS SYSTEM FOR THE PURE WATER AV DEMONSTRATION FACILITY AND AGREE TO THE PRICING TERMS FOR THE PURCHASE WITH A PRESENT COST AMOUNT. (\$247,211.74 – NOT-TO-EXCEED – BUDGETED – ENGINEERING MANAGER ROGERS)***

Recommendation:

Staff recommends that the Board authorize staff to negotiate and execute a services contract to Trojan Technologies for two phases. The first phase is to provide the engineering submittals to obtain early review and approval for equipment to be manufactured. The second phase is the approval of the pricing terms for the purchase of the ultraviolet light and advanced oxidation process system equipment for the Pure Water AV Demonstration Facility. The equipment purchase will be assigned to the demonstration facility contractor when it bids next year. The present pricing of \$247,211.74 will be adjusted by the California Construction Cost Index as produced by Engineering News Record and brought forward to the Board for approval of the Demonstration Facility contract.

Alternative Options:

Reject all proposals and rebid the project.

Impact of Taking No Action:

Delay the Pure Water AV Demonstration Facility project that includes demonstration testing for permitting approval and design criteria development for the full-scale.

Background:

Staff and the District's program manager, Stantec, have been pursuing the implementation of Pure Water Antelope Valley (Pure Water AV), which will be a regional recycled water program to address and improve water supply resiliency and groundwater aquifer management. Pure Water AV is planned to be an indirect potable reuse (IPR) project to be permitted under Title 22 Code of California Regulations for groundwater augmentation via direct injection. The District has plans to construct an Advanced Water Treatment Demonstration Facility (Demonstration Facility) to provide a place for public education, training and tours, demonstration testing for permitting approval, and full-scale design criteria development.

BOARD OF DIRECTORS
PALMDALE WATER DISTRICT

VIA: Mr. Adam Ly, Assistant General Manager
Mr. Dennis D. LaMoreaux, General Manager

November 21, 2022

Staff prepared a solicitation and collected proposals from vendors that meet the technical specifications for the ultraviolet light and advanced oxidation process system (UV-AOP). The proposals collected provide treatment technology that is required for demonstration testing and regulatory approval. Ultimately, the treatment systems from demonstration testing will be incorporated into the full-scale design.

Staff received two proposals from vendors and plan to negotiate with the first and second proposers. Staff plans to preselect a vendor and execute a contract for the design submittal production and establish a guaranteed price for the equipment, construction, and startup support services. The services contract for Phase 1 will require the Phase 2 price to be a guaranteed not-to-exceed amount with an adjustment factor based on the contract terms.

When the District requests bids for the Demonstration Facility (in Summer 2023), the approved design submittal package from the selected vendor is intended to be included in the general construction contract. At that time, the selected vendor would be required to supply the Phase 2 equipment and services at the guaranteed price under a subcontract or purchase order to the selected contractor that will construct the Demonstration Facility.

The vendor's experience related to the Pure Water AV project has been utilized to evaluate the general competency of the vendor for the equipment needed to meet technical specifications, purchasing costs, and life cycle costs. Trojan Technologies is the qualified bidder by meeting the criterion set forth in the solicitation with a proposal cost of \$247,211.74.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiative No. 3 – Systems Efficiency. This item directly relates to the District's Mission Statement.

Budget:

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

Supporting Documents:

- Stantec Review Summary
- Proposal Package from Trojan Technologies



**AWT Demo Facility
UV AOP System**

Vendor Proposals

FIRM	Trojan	Xylem Wedeco
Contact	Andrew Daley	Pedro Gochicoa
Phone	(519) 457-3400	(442) 303-3245
Email	adaley@trojantechnologies.com	pedro.gochicoa@xylem.com
Criteria	Value	Value
Meets the Design Criteria (Y/N)	Yes	Yes
Phase 1 Schedule (weeks)	6 to 8	10 to 12
Phase 2 Schedule (weeks)	16 to 20	32 to 34
Warranty Provisions (months)	12-months from start-up 18-months from shipment	12-months from start-up
Required Skid Dimensions (L x W x H)	7' x 5'	7' x 5'
Proposed Skid Dimensions (L x W x H)	7' x 5'	~7' x 5'
Base Fee Proposal	\$264,811.58	\$267,982.00
Value Engineering (VE) Options Cost Savings	(\$10,000.00)	\$0.00
Potential Cost Adders	(see notes below)	(see notes below)
Total Fee Proposal with VE Savings	\$254,811.58	\$267,982.00
	Notable Exceptions/Clarifications	Notable Exceptions/Clarifications
	<p>1. Proposal is missing the chemical dosing skid. Trojan indicated via email the chemical dosing pump skid will be provided and the cost is \$25,000. The base fee has been updated to capture the \$25,000 fee.</p> <p>2. Conflict in proposal documents. The narrative summary indicates a skid dimension of 5-ft by 7-ft. The included layout drawing indicates a skid dimension of 2.5-ft x ~13-ft. Trojan indicated via email the proposed skid dimensions will be within the allotted footprint per the design criteria.</p> <p>3. Proposal indicates the SCC panel is to be wall mounted. The design approach is for all vendor panels to be skid mounted. This may impact the facility layout. Trojan indicated via email the SCC panel can be mounted on the skid.</p> <p>4. Trojan providing standard temperature switch, not the specified switch.</p> <p>5. Trojan prefers free chlorine detection using DPD colorimetric method (Hach CL17). This needs to be negotiated during Phase 1. The proposed Hach CL17 has an upper ambient temperature operating limit of 104 deg F. The design approach for the process room may allow the temperature to exceed this limit during extreme heat of summer months.</p> <p>6. Several contract language exceptions.</p> <p>7. Proposal indicates 12-month operational period support is remote only.</p> <p>8. Trojan will discount the total fee by \$10,000 if the Phase 2 WORK begins within three months after approved submittals.</p> <p>9. Discuss with vendors impact of sensors operating outside the recommended range and whether it will still function and potential decrease in functionality or reduced lifespan.</p>	<p>1. Scope delivery times do not match the RFP. Xylem indicated via email the 10-12 weeks for engineered shop drawings is what they expect to need for this project. The indicated timeframe can be reduced if some items are approved early (at the time of executing the PO). Xylem further indicated the 160 days for delivery after approved submittals is unreasonable given market conditions. They indicated they can meet the proposed 32-34 weeks. They also indicated the time can be reduced if electrical components for the design are released early.</p> <p>2. Proposal indicates \$0 for 12-month operation support. Xylem indicated via email the proposal is for remote support only. No assistance/service trips are considered beyond the field services required for start-up and commissioning. In-person support is available for negotiation on per diem basis.</p> <p>3. Need to discuss about the sensors operating outside the recommended range and whether it will still function and potential decrease in functionality or reduced lifespan.</p> <p>4. Proposal says that the isothermal enclosure (if needed) is the responsibility of the contractor. Due to the complexity and requirement of skid size, this should fall within the Suppliers scope.</p> <p>5. Unclear if proposal is saying the pH sensor with the mounting are both additional costs, or just the mounting. pH sensor should not incur additional cost.</p>



November 3, 2022

Pure Water AV-Demonstration Facility UV-AOP System
Palmdale Water District
2029 E Avenue Q
Palmdale, CA 93550

Attention: Palmdale Team

We are very pleased to provide you this proposal outlining our qualifications as it relates to our ability to design, manufacture, and package a UV AOP system for the Pure Water AV – Demonstration Facility UV-AOP System, Palmdale Water District.

We are very proud of the fact that we are the UV-Oxidation System manufacturer of choice for industrial and municipal customers around the world for both medium-pressure and low-pressure high output lamp-based UV systems. Over the last twenty years, we have secured UV-Oxidation projects in municipal drinking water and indirect potable reuse that have a cumulative flow rate in excess of 600 million gallons per day (MGD).

Additionally, we are honored by the fact that we are one of the only companies that has operating UV-Oxidation systems for municipal indirect potable reuse and VOC removal applications in the world. For example, the 100 MGD Groundwater Replenishment System at the Orange County Water District (California) treating 1,4 dioxane, received Notice of Substantial Completion in February 2008.

A significant part of our strength is understanding the kinetics of the process, the efficiency of our UV treatment chambers and understanding the impacts of the water quality for each specific project. Examples of our experience is plentiful, and customers continue to trust Trojan Technologies. We have also included a short list of similar pilot scale installation references most of which were completed during COVID-19 lockdowns. For full scale product offerings, we do have several new systems that will be installed locally with the TrojanUVFlex™ product treating over 53MGD for LADWP. More recently, we have been approved at Pure Water Oceanside with the TrojanUVFlex™200, UV chlorine and our active controls approach to water treatment. Pure Water Oceanside is the first in San Diego County to clean wastewater to drinkable standards. The

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facility is just opening with Ribbon cutting occurring in March of 2022. Pure Water Oceanside is using our Active Controls approach to water treatment as it is the safest and most efficient approach to advanced oxidation treatment in the market today. This approach has specific measurable savings over conventional RED or EED setpoint methods where oxidant and UV and fixed.

Trojan recommends for the Pure Water AV-Demonstration Facility UV-AOP System the TrojanUVFit™ Reactor. The reactor is comprised of a stainless-steel chamber that each houses 4 x 250 watt low pressure lamps that emit UV light at 253.7nm and are dimmable to 60% lamp ballast power level.

Based on the information that has been presented Trojan should be considered in the forefront as the equipment provider of choice. We believe in fully understanding your water quality needs up front in a pilot-based setting greatly assists in full scale system sizing. Trojan has the right people on staff that can assist in understanding the kinetics of your water and can provide great insight into your future full-scale needs.

I sincerely thank you for the opportunity to participate in this important water treatment project and we are excited to work with the team. Should you have any questions or comments please feel free to contact me at any time.

Sincerely,

A handwritten signature in black ink, appearing to read 'Andrew Daley'.

ANDREW DALEY | BUSINESS DEVELOPMENT
AOP & SALSNES NA

TROJANUV | SALSNES
(519) 457-3400 *office* | (226) 688-7430 *mobile*
adaley@trojantechnologies.com

BRIAN VILLACORTA | P.E., BCEE

Coombs Hopkins Company
(925) 989-6041 *Cell* | (760) 931-0555 *Office*
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INTRODUCTION TO TROJAN

Trojan, founded in 1977, is the world's largest water treatment company specializing in UV technologies. As a result of this singular dedication, Trojan has over 10,000 municipal installations and hundreds of thousands of industrial and residential installations worldwide. Together these systems are currently treating over 60 billion gallons of water per day in applications such as drinking water, groundwater remediation and water reuse. Trojan is part of the Danaher Corporation in its water quality group. This group includes such well-established brands as Hach and Chemtreat. Trojan brings 43+ years of UV technology experience to its projects. To supplement this UV equipment experience, Trojan has, over the past decade plus, refined and optimized the use of UV light for the treatment of environmental contaminants such as nitrosamines (e.g. NDMA), 1,4-dioxane, volatile organic compounds such as TCE, pesticides and fuel additives (such as MTBE). Trojan offers a variety of UV-oxidation solutions including pressurized medium-pressure lamp-based systems (the TrojanUVSwift™ECT) and pressurized and un-pressurized low-pressure high-output lamp-based UV-oxidation systems (e.g. the TrojanUVPhox™, TrojanUVFlex™). The TrojanUVPhox operational at the Orange County Water District Based on the site-specific water quality parameters, economic parameters and application, Trojan can determine the most cost-effective UV solution for a given project. Trojan uses computational models, bench-scale testing and other full-scale UV water treatment system experience to ensure a properly designed UV treatment system. Trojan's systems are backed by our extensive performance guarantees and manufacturer equipment warranties.

TROJAN'S EXPERIENCE AND PRESENCE IN POTABLE REUSE

In potable reuse and contaminant treatment applications, Trojan is honored to have supplied UV-oxidation systems for the largest potable reuse projects in the world, several of which have been successfully operating for over ten years (e.g. Orange County GWRS, West Southern Water Reuse Scheme Trojan-Pall Water Reuse Collaboration Rev: 0 83/90 Basin MWD, Water Replenishment District Leo J. Vander Lans). The TrojanUVPhox™ system is a proven system that has performed excellently in dozens of installations in a variety of applications. Additionally, to the TrojanUVPhox™ system Trojan also has a popular TrojanUVFlex™ product line and details of both installations can be found in the **Installation / reference List** outlining some UV AOP installations that have been designed, packaged and commissioned by Trojan.

Trojan's UVAOP Design and Manufacturing Team Trojan maintains a dedicated team to address Ultraviolet Advanced Oxidation (UVAOP) projects. This team is responsible for

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addressing design of UV-oxidation treatment systems, project support, and delivery of required technical data. This team handles many ECT/AOP projects per year and will quickly and competently address these requirements for the project. With respect to system delivery and manufacturing, Trojan maintains an ISO-9001-approved manufacturing facility. From its factory headquarters, Trojan ships an average of one large municipal UV system per day. Trojan's track record of customer service and timely delivery has enabled it to prosper in the UV solutions marketplace for over 43+ years.

Trojan's head office including manufacturing, and engineering staff are in London Ontario Canada. Trojan's authorized sales representative in state of California with The Coombs-Hopkins Company with offices located in Carlsbad and Walnut Creek, CA, Phoenix AZ, Salt Lake City UT, and Denver CO.

TROJAN TECHNOLOGIES MANUFACTURING FACILITY

Trojan Technologies manufacturing facility is located at 3020 Gore Road, London, Ontario Canada. There are two facilities located on approx. 11 acres of lush forested land. The primary manufacturing facility [Trillium Building] is 90,000 square feet and the secondary facility [Woodlands building] is 35,000 square feet. Approximately 400 people are employed at Trojan 50 of these dedicated to production requirements and support staff.

The Trillium building is the heart of the manufacturing operations. It is home to closed vessel [primary drinking water], and open channel product lines [primary waste water treatment]. We also have a lab dedicated to lamp life validation and testing as well as new product development in the prototype lab.

We can maneuver products within the facility having a 10, 5 and 2 tonnage cranes.

The Woodlands building is the heart to the organization. It offers a machine shop to fully support the manufacturing operations for the development and maintenance of jigs / fixtures and research development of prototype products. All closed vessel product lines are validated and tested within the building. We also have a training center,

sensor lab and long-term testing of smaller product offerings.

Both facilities are climate controlled in the winter and summer months. This is required for testing and validation of existing, new and future products. They home all staff and



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production personnel. Both facilities offer card swipe access and monitored 24hrs / day with 1 on call personnel.

The manufacturing process functions in a systematic way offering standard work practices that drive one-piece flow throughout the manufacturing process. Our internal system is referred to as DBS [Danaher Business System] that is very similar to the Toyota production system. Work cell designs provide flexibility in increased or decreased volumes. Every product manufactured has manufacturing check points prior to final packaging for final product validation.

As part of our Environmental policy we are continually working to minimize the carbon footprint and waste streams within manufacturing operations as Trojan views continuous improvement of our environmental impact a key measure of business success.

TROJAN'S LOCAL CERTIFIED SERVICE & SUPPORT

Trojan stands behind every UV system that we design, and manufacture and part of our support package is a 1-800 number with qualified Technicians available 24-hours / 7 days a week for emergency support as well as a network of over 60 factory - trained and certified technicians located in North America.



Trojan maintains a staff of highly trained Service Technicians to provide installation support, start-up assistance, operator training, and routine and emergency service. Trojan's service team includes technicians who are deployed from Trojan's head office in London, Ontario, and numerous Trojan-employed technicians based throughout the world. The bulk of Trojan's resources for local service and support are provided through our international network of Manufacturer's Representatives and service contractors.

To be eligible to offer Trojan Certified Service, all Trojan service representatives must undergo a comprehensive certification process that involves classroom training at Trojan's head office and extensive field training, led by Trojan's experienced technicians.

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24/7 TELEPHONE SUPPORT AND REMOTE TROUBLESHOOTING

Trojan provides over-the-phone assistance from our Technical Assistance Center (TAC) in London, Ontario. Trojan Service Technicians staff our call center Monday to Friday, 8:00 am to 5:00 pm (EST). After hours emergency support is available 24 hours a day, seven days a week through a toll-free number. All Service Technicians within the Call Center have field experience and are thoroughly trained to provide installation support, start-up assistance, and equipment troubleshooting. The Technical Assistance Team consists of seven (7) Product Specialists and three (3) Control's Specialists. The specialists in this team have over forty (40) years of experience on UV systems.



The Trojan Technical Assistance Center is also equipped with sophisticated capabilities to connect with the PLCs of our installations in order to monitor, upload programs, and troubleshoot systems remotely. This access allows faster response in diagnosing system irregularities and can expedite service times. It's quick, convenient and, in many instances, can save the expense of a service call.

DEDICATED SERVICE SUPPORT IN CALIFORNIA

Trojan Technologies has a total of 25 Technicians that can support the UV-AOP System installations. Six (6) are in Ontario and 19 are in the US. Two certified technicians are in California, one in San Jose and the other in San Diego. In addition to the certified technicians we have a Regional Sales Account Manager located in San Diego as well.

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UV AOP SUMMARY OF EXPERIENCE / INSTALLATIONS

Item		
Number of Years Manufacturing		
- Ultraviolet Disinfection Systems	44 Years	
- Ultraviolet Advanced Oxidation Process	20 Years	
Total Number of Systems (Install + Ordered)	USA	International
- Ultraviolet Disinfection Systems DW & WW	5988	5750
- Ultraviolet Advanced Oxidation Process	146	29
Total Number of UVD/UV AOP (Ordered)		
- Ultraviolet Disinfection Systems DW & WW	326	427
- Ultraviolet Advanced Oxidation Process	49	13
Number of Systems Currently in Service		
- Ultraviolet Disinfection Systems	5720	3438
- Ultraviolet Advanced Oxidation Process	146	29

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ATTACHMENTS:

SCOPE OF SUPPLY

DRAWING

INSTALLATION LIST PILOT SYSTEMS OVER THE PAST FEW YEARS

INSTALLATION LIST FULL SCALE SYSTEMS LOCALLY

ISO 14001 CERTIFICATE

ISO 9001 CERTIFICATE

TROJANS STANDARD TERMS AND CONDITIONS OF SALE

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SCOPE OF SUPPLY FOR PALMDALE PUREWATER AWTF - DEMONSTRATION FACILITY, CA
ULTRAVIOLET EQUIPMENT – TROJANUVFIT™

Prepared for: Palmdale Water District

Project Name: Palmdale - Demonstration Facility

Submitted By: Andrew J. Daley

Trojan Quote: MW-234206

Design Criteria:

Peak Design Flow:	20 gpm (US)
UV Transmission:	96%, minimum
Total Suspended Solids:	ND mg/l,
Contaminant Treatment #1	≥ 0.5 Log Reduction of 1,4-Dioxane
Contaminant Treatment #2	≥ 2.0 Log Reduction of NDMA
Design Criteria as per Design Criteria in 46 66 17-2.3.A	

We are pleased to submit the following scope of supply for TrojanUVFit™ equipment based on the above criteria. The TrojanUVFit™ described herein is named as the basis for design.

The purchaser is responsible for reading all information contained in this Supply Contract. Trojan will not be held accountable for the supply of equipment not specifically detailed in this document. Supplemental Terms and Conditions are attached to this document. Detailed installation instructions are provided with the shop drawings and are available earlier upon request. Changes to this Scope of Supply that affect selling price will be handled through a change order.

Please refer inquiries to Trojan Manufacturer's Representative:

Brian Villacorta, P.E., BCEE
Coombs Hopkins Company | Carlsbad, CA
925-989-6041
brian@chcwater.com

This proposal has been respectfully submitted by,
Trojan Technologies

Andrew J. Daley
Business Development Manager AOP
Trojan Technologies

UV Disinfection System Scope of Supply

Unless otherwise indicated in this proposal all conduit, conductors, local disconnects and transformers (if required) are the responsibility of the CONTRACTOR and are not included in this Scope of Supply.

ULTRAVIOLET REACTOR(S)

Trojan's Responsibility:

The Ultraviolet Reactor(s) shall be supplied with all necessary internal equipment such as UV lamps, quartz sleeves, intensity sensor, and high temperature switch.

Quantity:	1 TrojanUVFit™ 04AL20
Material of Construction:	SS316L reactor chamber
Inlet/Outlet Connection:	6" (150 mm) ANSI 150 lb
Maximum Operating Pressure:	150 psi (10 bar)
UV Lamps:	4 per reactor
UV Intensity Sensor:	1 per reactor
Automatic Wiping System:	none
Dry Reactor Weight (approx.):	115 pounds (52 kg) per reactor
Wet Reactor Weight (approx.):	230 pounds (105 kg) per reactor

Installation Contractor's Responsibility:

The Installation Contractor to be responsible for the indoor installation and support of the UV reactor(s) within the process piping as indicated on the drawings. The UV reactor shall be installed such that it remains full of water at all times and is provided with a means to automatically vent air to prevent a buildup within the reactor. The UV reactor shall be installed with a means of isolating and draining the reactor when required for servicing.

Associated Equipment to be supplied and installed by others:
Downstream and Upstream Isolation Valves - as required
All pipe spools, elbows, reducers, etc.
Drain valves - as required
Automatic pressure relief valves and vents - as required
Bolts and gaskets as required for mounting and installation

POWER DISTRIBUTION CENTERS

Trojan's Responsibility:

The Power Distribution Center (PDC) houses the electronic ballasts and distributes power to each UV reactor. The PDC shall consist of the following:

Quantity Supplied:	1 PDC(s) will be supplied
Material of Construction:	304 Stainless Steel
Enclosure Rating:	Type 4X
Approximate Weight:	100 pounds (45 Kg) each

Installation Contractor's Responsibility:

The Installation Contractor to be responsible for the indoor installation of the Power Distribution Center(s) as indicated on the drawings. The Installation Contractor to be responsible for the supply, installation and connection of the following at the PDC(s):

1. One (1) 240V, 1-phase, 2W+GND, 50/60 Hz, 1.3 kVA power feed with local disconnect to each PDC.
2. Connection of communication, power cables and hydraulic lines from the UV reactor.

UV Disinfection System Scope of Supply

SYSTEM CONTROL CENTER

Trojan's Responsibility:

One (1) System Control Center (SCC) shall be supplied to monitor and control the complete UV system. The SCC shall consist of the following:

Quantity Supplied:	1 SCC Panel will be supplied
Controller Type	Allen-Bradley Compact Logix Series Controller
Panel Dimensions (approx.)	36" x 36" x 12" (915 mm x 915 mm x 310 mm) (Wall Mounted by others)
HMI	Trojan OIT 7" Display
Communication to SCADA:	Ethernet/IP
Material of Construction:	316 Stainless Steel
Enclosure Rating:	Type 4X
Approximate Weight:	100 pounds (45 Kg) each
UPS	Not Included

Installation Contractor's Responsibility:

The Installation Contractor to be responsible for indoor installation of the SCC as indicated on the drawings. The Installation Contractor to be responsible for the supply, installation and connection of the following at the SCC:

1. One (1) 120V, 1 phase, 2 wire + GND, 60 Hz, 20 Amp electrical supply
2. Three (3) 4-20 mA analog input from the SC200 Controller on the Analyzer Panel
3. One (1) 4-20mA analog shielded twisted pair from the Pilot Flow Meter
4. One (1) 4-20 mA analog input from the M4050 UV transmittance monitor on the Analyzer Panel
5. One (1) Twisted Sheilded Pair (RS485 Modbus) to the PDC.
6. One (1) Ethernet connection (CAT 5e) to the plant SCADA
7. Discrete I/O as required to the analyzer panel

- **All conductors, conduit and local disconnects are the responsibility of the CONTRACTOR unless explicitly stated otherwise.**
- **SCC does not provide power to valves**

OXIDANT DOSING SYSTEM

Trojan's Responsibility:

Oxidant dosing equipment is not in Trojan's scope of supply. Oxidant dosing equipment to be supplied by others.

PILOT MOUNTING FRAME

The UV System and associated water quality analyzers will be mounted on a 304 Stainless Steel mounting frame and poly backplate with an approximate footprint of 7 feet by 5 feet. Open space of approximately 5 feet adjacent to the pilot skid frame will be require for lamp removal clearance.

UV Disinfection System Scope of Supply

ANALYZER PANEL/ INSTRUMENTATION

Trojan's Responsibility:

The following influent instrument analyzer instrumentation will be supplied. Instruments will be mounted on a Unistrut mounting frames:

- **One (1) Controller – Hach sc200 (for communication with monitors below)**
- **One (1) Online pH Monitor** Hach Digital pH Sensor (Ryton, Convertible), mounting kit and the following pH reagents and spare parts:
 - a) Ryton Salt Bridge, Kynar
 - b) EQUITRANSFERRANT PH7 BUFFER, 500ML
 - c) KTO: PH BUFFER SOLUTION KIT 500mL
- **One (1) Online Total Chlorine Monitor** Hach CL17sc Colorimetric Chlorine Analyzer with Standpipe Installation Kit and Reagents for Total Chlorine and the following spare parts:
 - a) CL17sc Tubing Kit (pre-assembled)
 - b) CL17sc Cell Cleaning Kit
 - c) CL17sc Calibration Verification Kit
- **One (1) Online Free Chlorine Monitor** Hach CL17sc Colorimetric Chlorine Analyzer with Standpipe Installation Kit and Reagents for Free Chlorine and the following spare parts:
 - a) CL17sc Tubing Kit (pre-assembled)
 - b) CL17sc Cell Cleaning Kit
 - c) CL17sc Calibration Verification Kit
- **On-Line UV Transmission Unit Monitor – Trojan Optiview**
Trojan Technologies will supply a UVT sensor/sampler to monitor influent transmission.
 - a) One (1) UVT monitors will be supplied.

Installation Contractor's Responsibility:

The Installation Contractor to be responsible for setting in place and mounting the Analyzer Panel enclosure indoors. The Installation Contractor shall also be responsible for the supply, installation and connection of the following:

1. One 120 Volt, 1 phase, 2 wire + ground, 15-amp power supply to the power distribution outlet on the analyzer panel.
2. Three (3) 4-20 mA DC Analog Outputs from the SC200 Controller to the UV SCC
3. One (1) 4-20 mA DC Analog Output from the Optiview Controller to the UV SCC.
4. Three Discrete signals from the Analyzer Panel / SC200 Controller to the UV SCC

SPARE PARTS AND SAFETY EQUIPMENT

Trojan's Responsibility:

The following spare parts and safety equipment will be supplied with the UV system:

- 2 UV lamps
- 1 Set of sleeve o-ring seals
- 1 Quartz sleeves
- 1 Ballasts
- 1 UV intensity sensor
- 4 Operators Kit (including face shield, gloves, and warning signs)

UV Disinfection System Scope of Supply

NOTES AND CLARIFICATIONS TO SPECIFICATION - UV AOP Pilot System RFP

Trojan has included a spare UV Intensity Sensor, but the UV unit controls do not include a reference check procedure. The proposed TrojanUVFit™ does not have reference sensors and the specified three reference sensor's are not included in this proposal. If required additional spare sensors (3) could be provided at additional cost.

In our drawing we are showing both the CL17 instrument and ATI for reference. Only one or the other would be required and to be determined at submittal phase.

46 66 16 1.3.C.3 3. Access to the control logic program before or at time of system installation." Trojan will provide the PLC program for back-up purposes, however portions of the program with Trojan's sensitive Intellectual Property will be protected.

1.3.C.4 Programming to develop SCADA controls and screens for the UV/AOP System HMI. SUPPLIER shall coordinate with CONTRACTOR to integrate the UV/AOP system into the plant control system. Trojan will provide addresses for the SCADA to read/write from, but Trojan will not develop tagged SCADA files/screens for the SCADA system.

2.2.Q The CONTRACTOR shall be responsible for field-routing the sample line to the total chlorine analyzer before SHC addition. Sample line HRT will need to be coordinated with UV system controls.

2.10.B Provide in accordance with the requirements of Section 40 91 10. Trojan will provide our standard high temperature switch mounted on the UV Reactor chamber

2.11.A.5 5. Calculate pathogen log removal value (LRV). Trojan may not be able to calculate a pathogen removal greater than 4 Log (or to max validation)

2.13.B.2.d The analyzer shall detect free chlorine concentrations with an amperometric. Trojan prefers a Free Chlorine analyzer based on the DPD method. i.e. CL17

DOCUMENTATION (SHOP DRAWINGS AND O & M MANUALS)

Trojan's Responsibility:

The following documentation will be supplied to the contractor by Trojan per the following schedule:
1 Electronic (pdf) copy of submittal shop drawings 6-8 weeks after receipt of written purchase order.
1 Electronic (pdf) copy of Trojan Standard O&M manuals at time of equipment delivery. Three hard copies available upon request

DELIVERY, START-UP AND TRAINING

Equipment shipped 16 – 20 weeks after approval of Shop Drawings.

The following start-up services will be provided by Trojan-certified technicians:

1. Start-up Services: 4 person-day
2. Instrumentation Calibration and Commissioning – 2 days
3. Training Services: 1 person-day
4. Operation and Testing Support – 5 days.

UV Disinfection System Scope of Supply

WARRANTY

Trojan's Responsibility:

Trojan Technologies will warrant the equipment and parts for 12 months after start-up or 18 months after shipment, whichever comes first. Refer to attached Terms and Conditions for additional warranty details.

Items considered consumable such as UV lamps, drivers, quarts sleeves, O-rings are not covered under the standard equipment warranty. During equipment warranty, labor is not included for procedures deemed to be routine maintenance such as UV lamp, quartz sleeve, sensor.

UV lamps are warranted for 12,000 hours of operation (prorated after 9,000 hours) or 36 months after shipment, whichever occurs first. Ballasts are warranted for 5 years, prorated after 1 year.

SELLING PRICE

\$219,998.00 USD as per schedule below

Phase 1 Work

Engineering Submittals - **\$17,599.84**

Phase 2 Work

UVAOP System as described - **\$193,264.16**. Trojan will offer a **\$10,000.00** discount if the phase 2 work is kicked off 3 months after engineering submittals.

Shipping - **\$4,825.00**

Equipment Installation Assistance – Remote / phone support

Control System Testing – Remote / phone support

O&M Manuals and Operator Training – Training to be done at time of start-up.

Start-up and testing assistance - **\$4,309.00**

12 months operations support – Remote / online 24hr support

**Upon successful award of the project, Trojan is willing to provide sample analysis on the reverse osmosis permeate (ROP) at its advanced water purification facility on a quarterly basis to evaluate water quality parameters that may impact the treatment efficiency of the UV AOP process. An additional objective is to generate a database of those parameters and, ultimately, to ensure that the UV system is operated under proper conditions with respect to ROP water quality.

Trojan Technologies has developed proprietary methods for the characterization of ROP samples at our laboratory in London, ON, Canada. The parameters to be determined include the background hydroxyl radical scavenging term, the pH, total alkalinity, free ammonia, nitrate and nitrite ion concentrations, and TOC.

Trojan is pleased to offer this valuable service at no charge to the City for the first 24 months of operation. The City would be responsible for all shipping charges.

UV Disinfection System Scope of Supply

PAYMENT TERMS

Phase 1 Work - \$17,599.84, 100% at time of submittal

Phase 2 Work - \$193,264.16, as per schedule below

Upon Approval of Phase 2	40%
Upon Delivery of Equipment/Materials DAP/DDP Jobsite (Incoterms 2020)	50%
Upon Purchaser's approval of Final Operation and Maintenance Manuals	5%
Upon successful startup of Supplier's equipment including UVAOP challenge test	5%

If Phase 2 order is placed within 3 months of completion of Phase 1 Trojan will provide a \$10,000.00 discount to the Phase 2 amount.

Payment Terms are Net 30 days

Selling price does not include any duties or taxes which may be applicable.
Freight paid to job site (In North America).

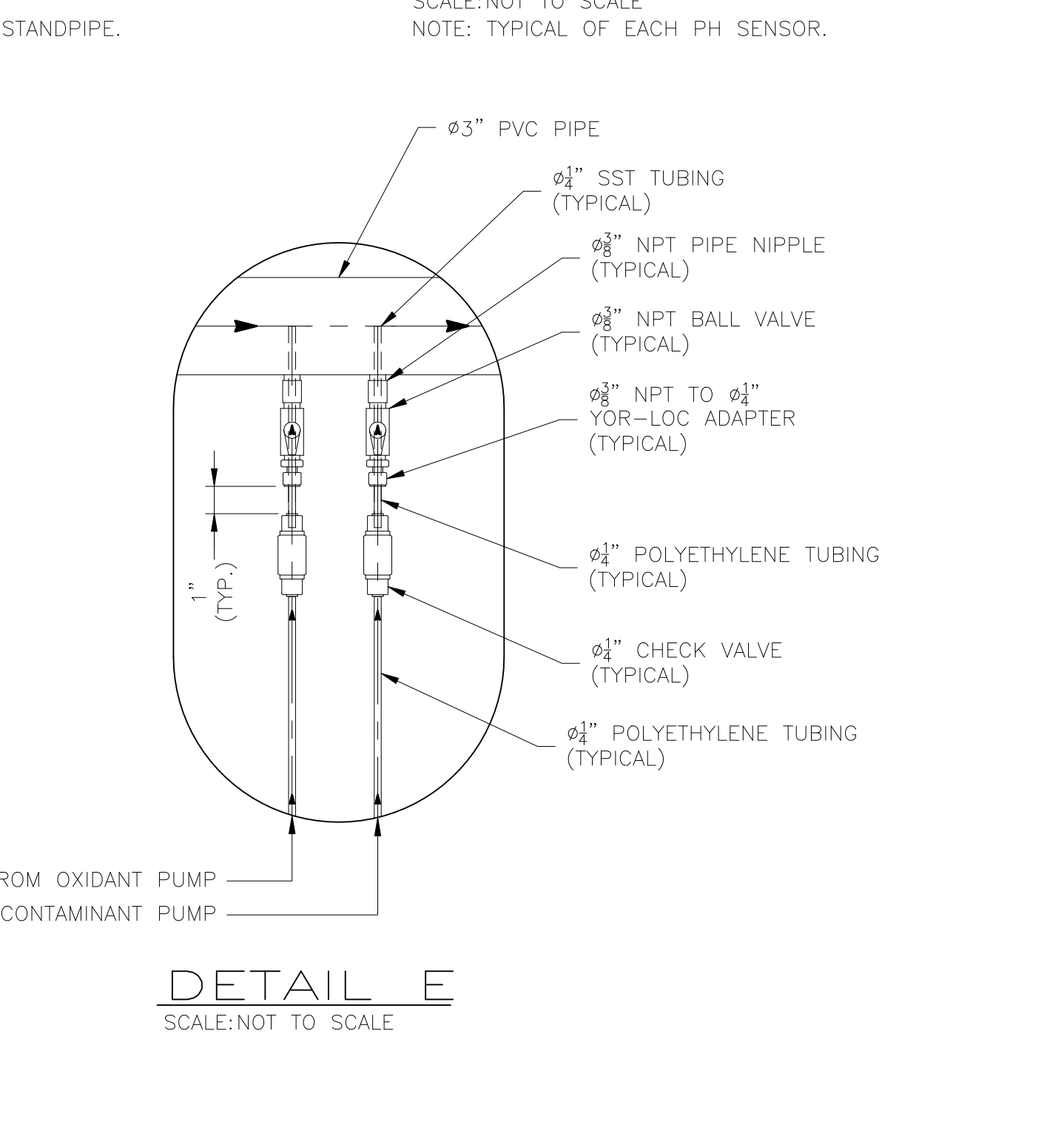
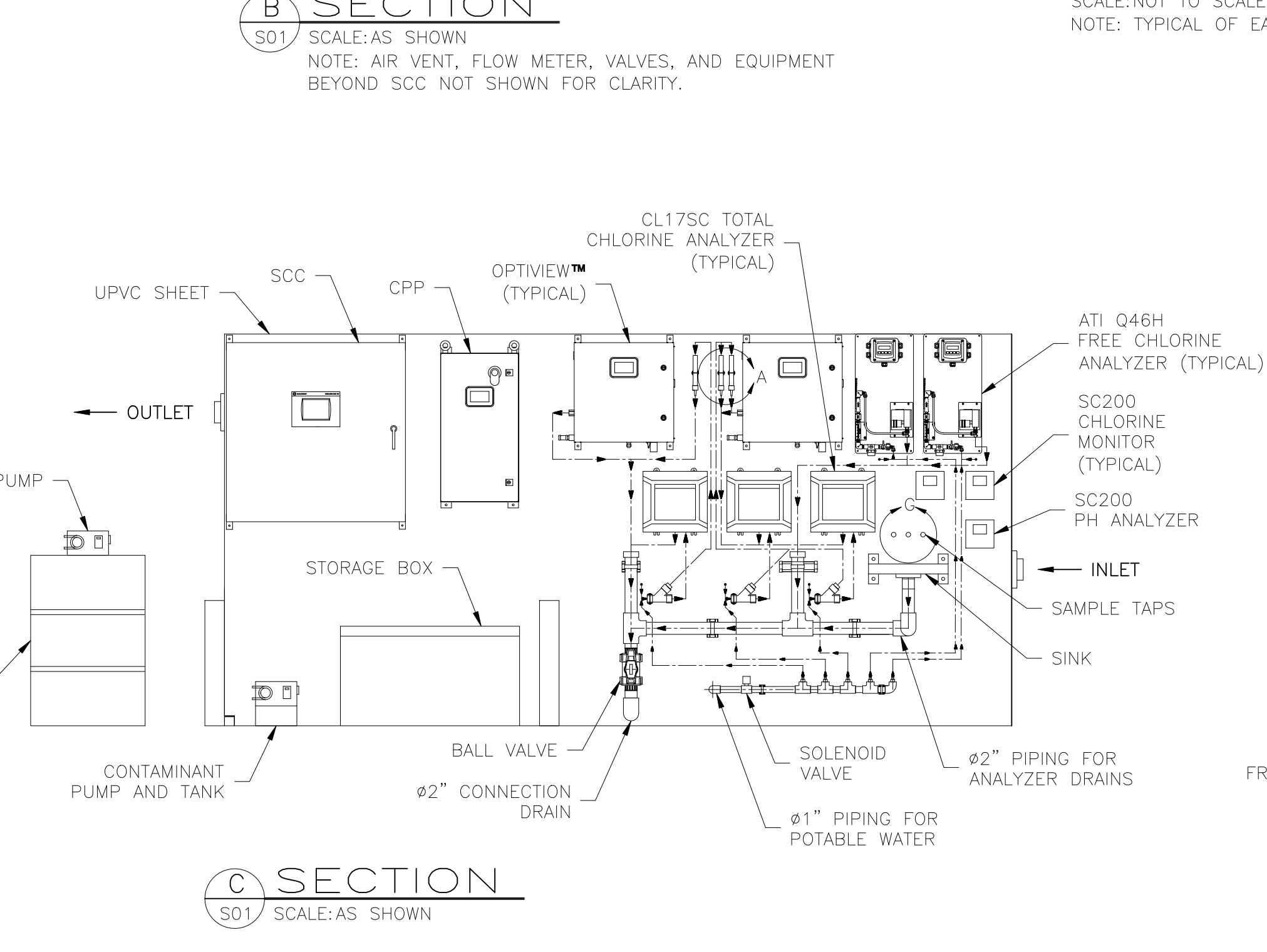
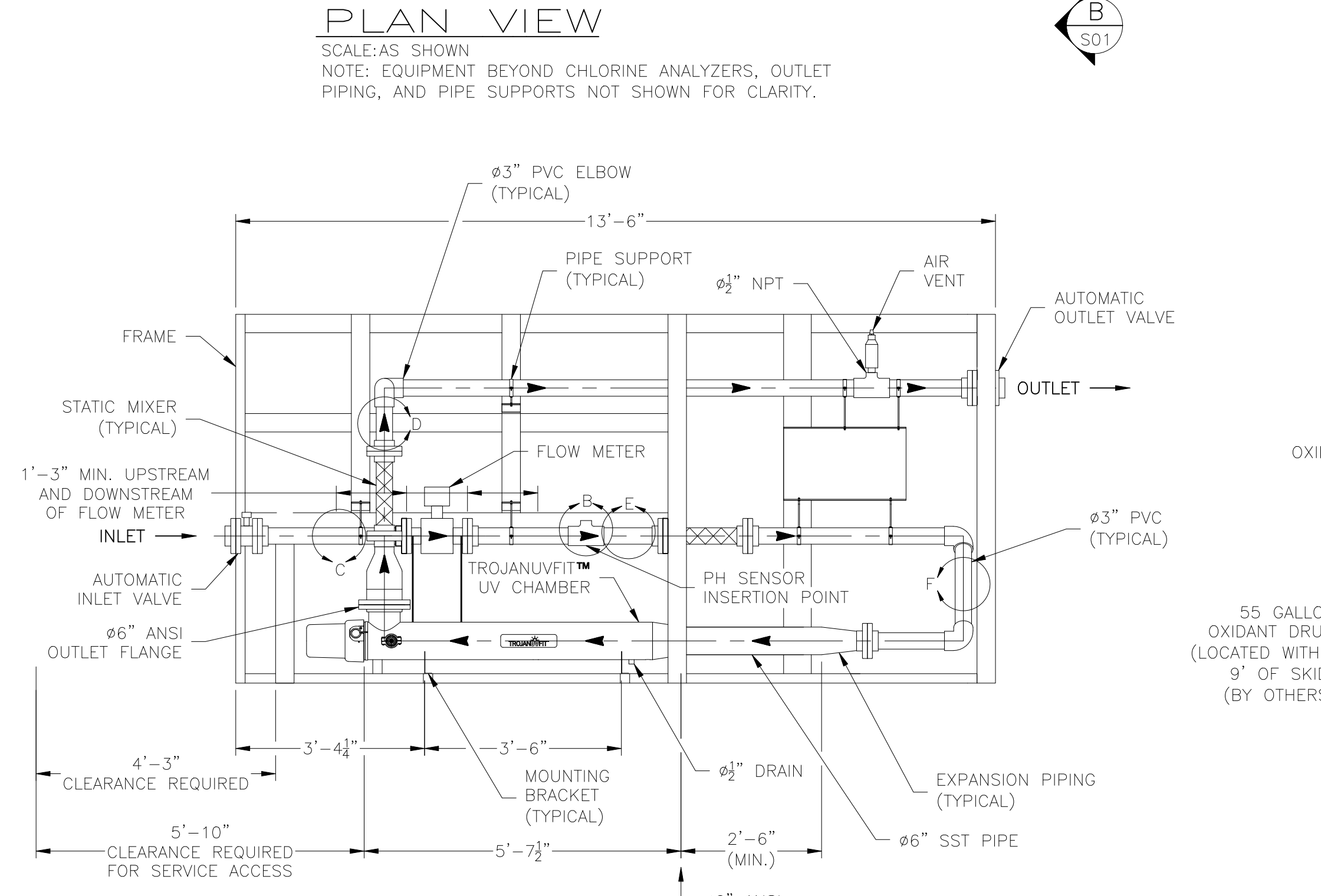
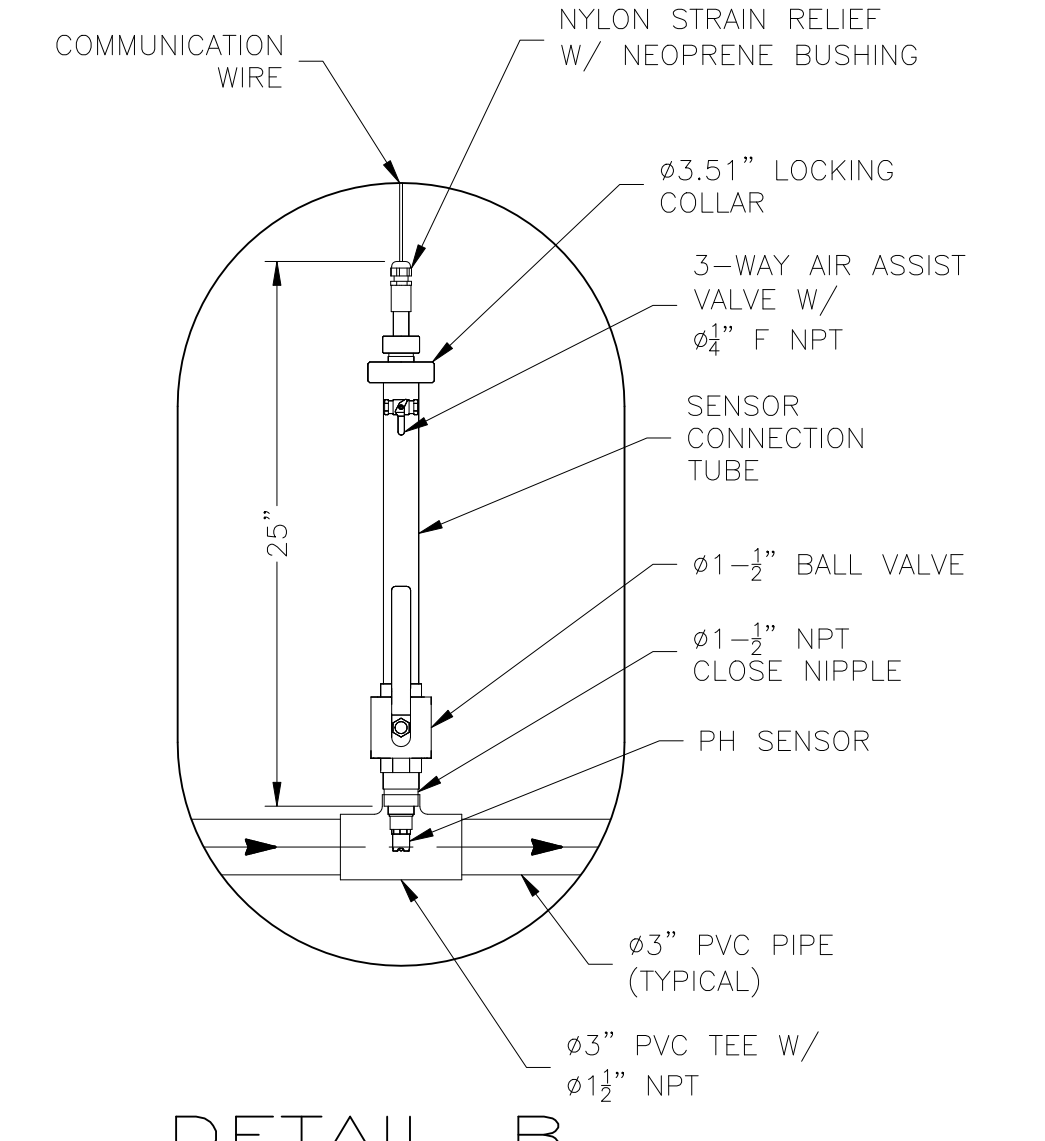
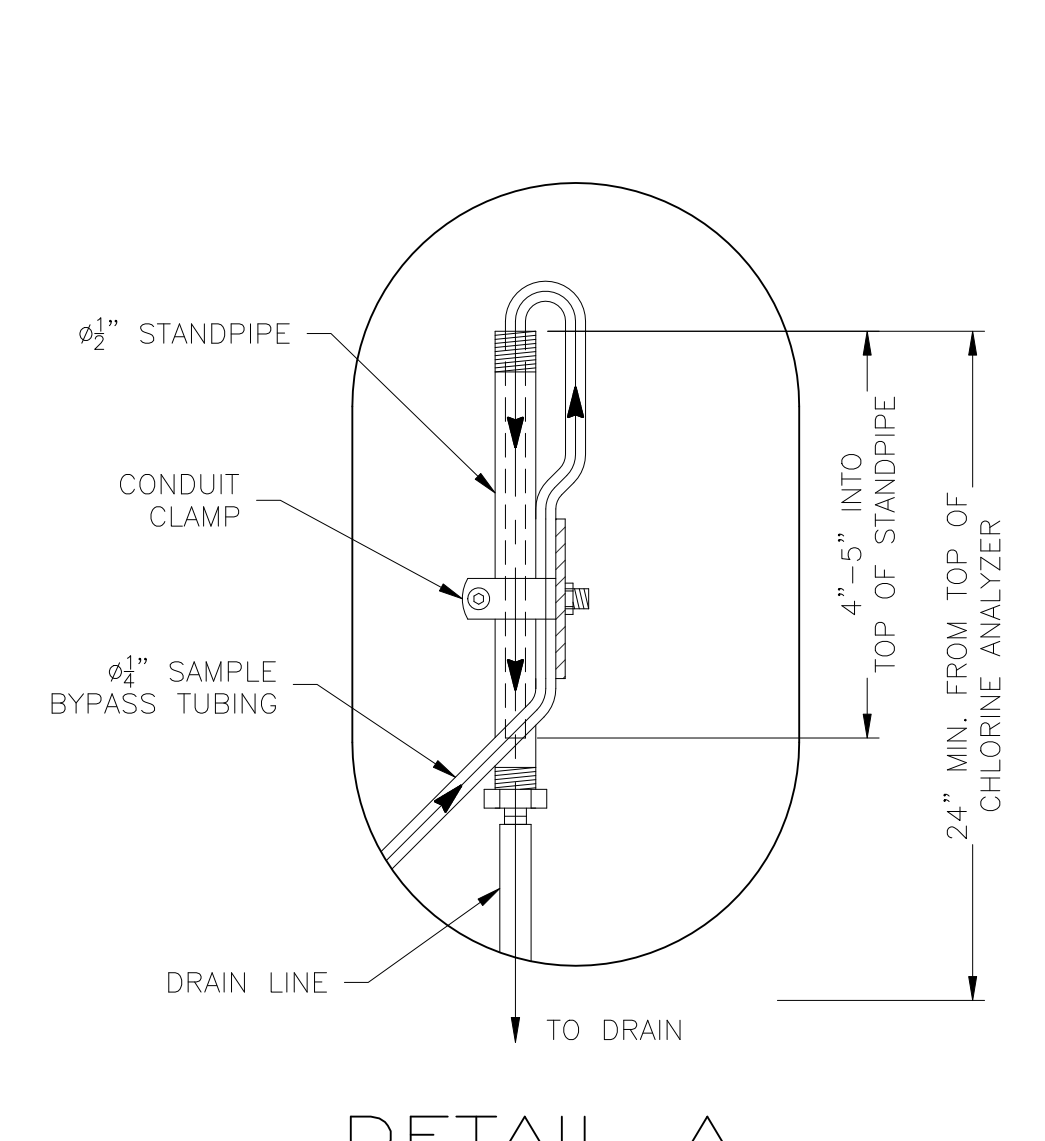
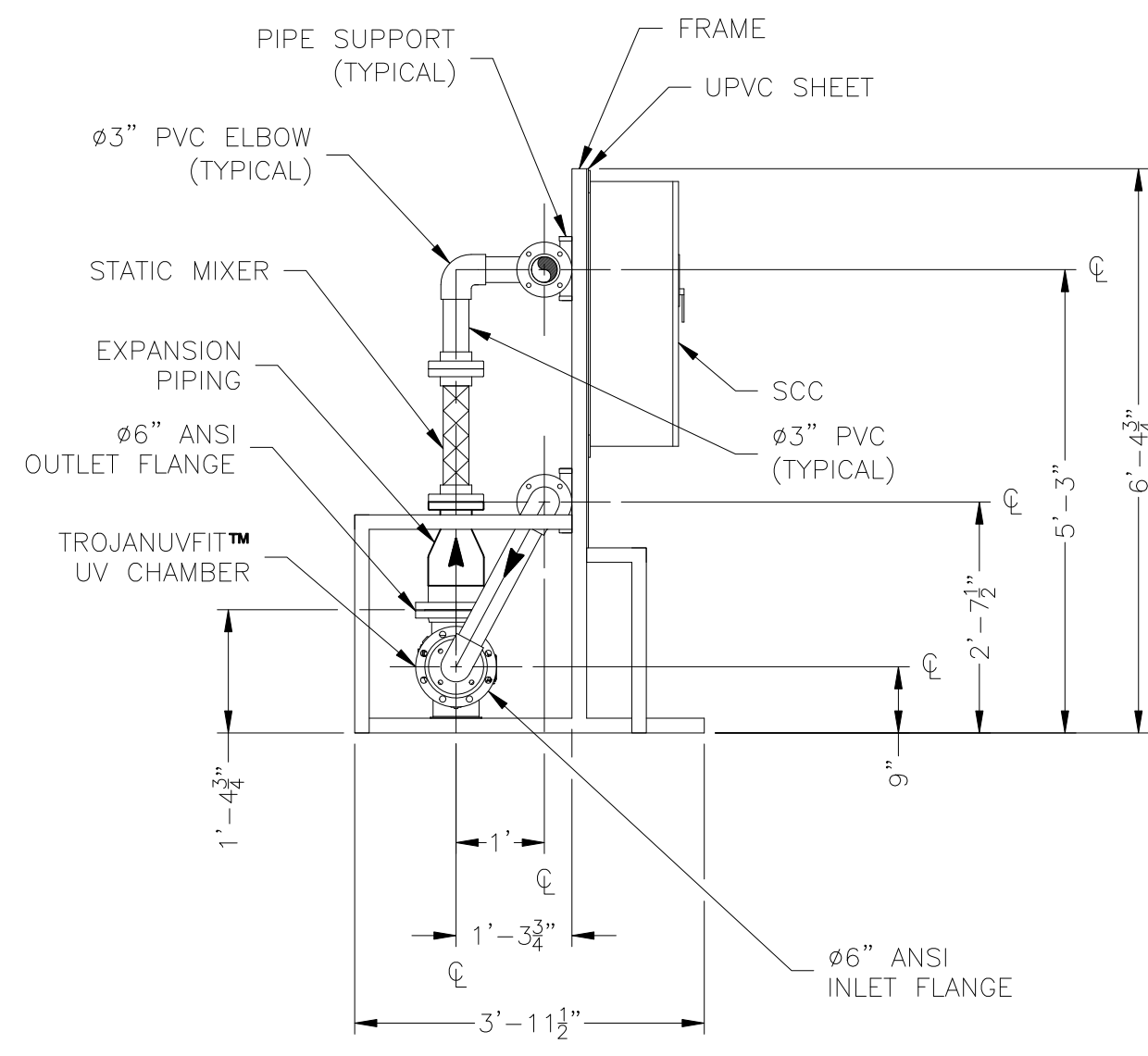
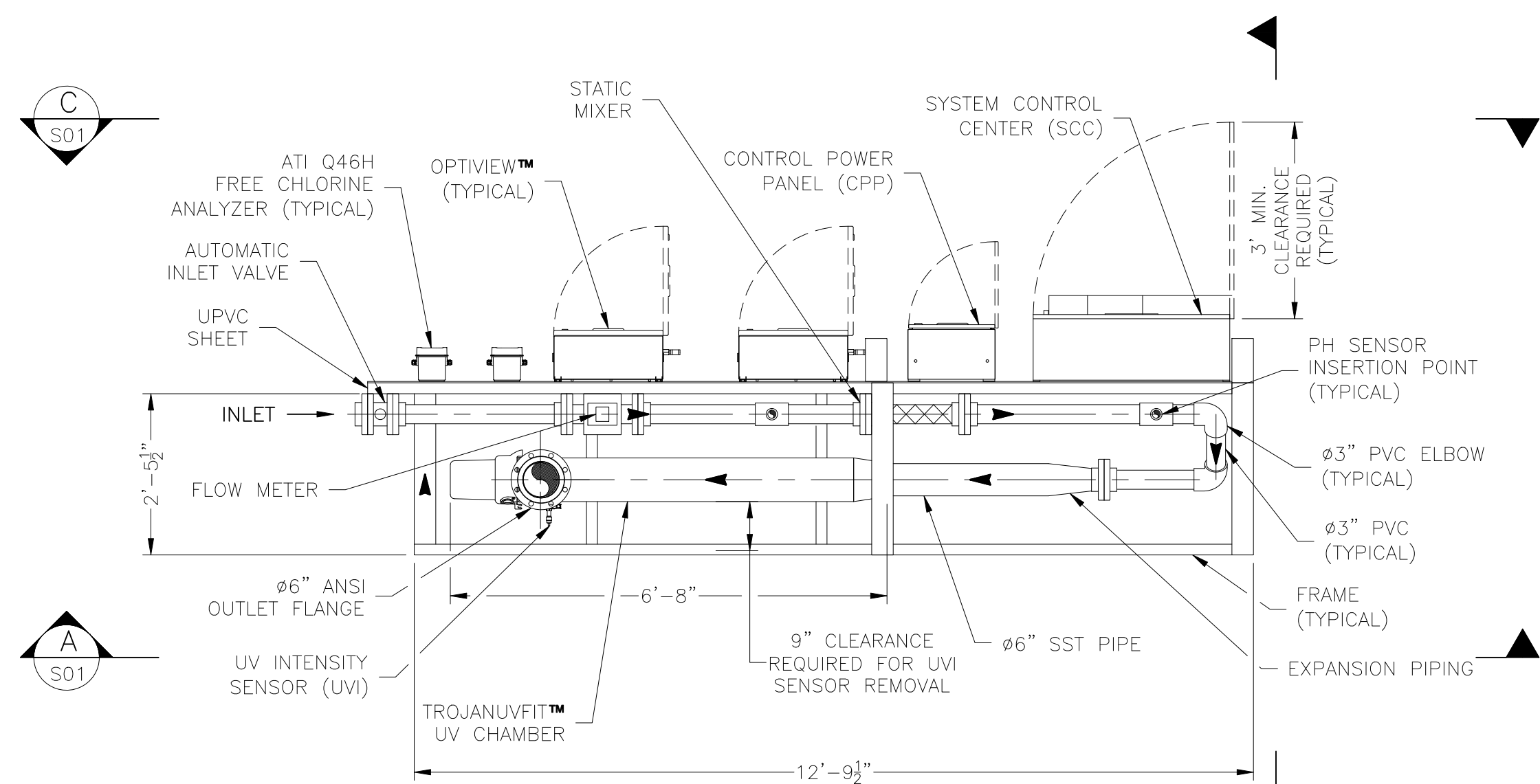
Trojan Technologies appreciates the opportunity to submit this scope of supply. Our scope of supply is submitted subject to and based on Trojan's standard terms and conditions, which we have attached as part of our offer. We believe these terms and conditions are customary in the trade and respectfully reserve the opportunity to negotiate, fair and reasonable contract terms acceptable to both parties, if Trojan is selected for this project.

Please know Trojan Technologies will take on the liability customary to the suppliers of goods and services, but it will not take on Construction-type liability.

Please advise if any questions or concerns with using this approach.

TERMS AND CONDITIONS

Please see attached

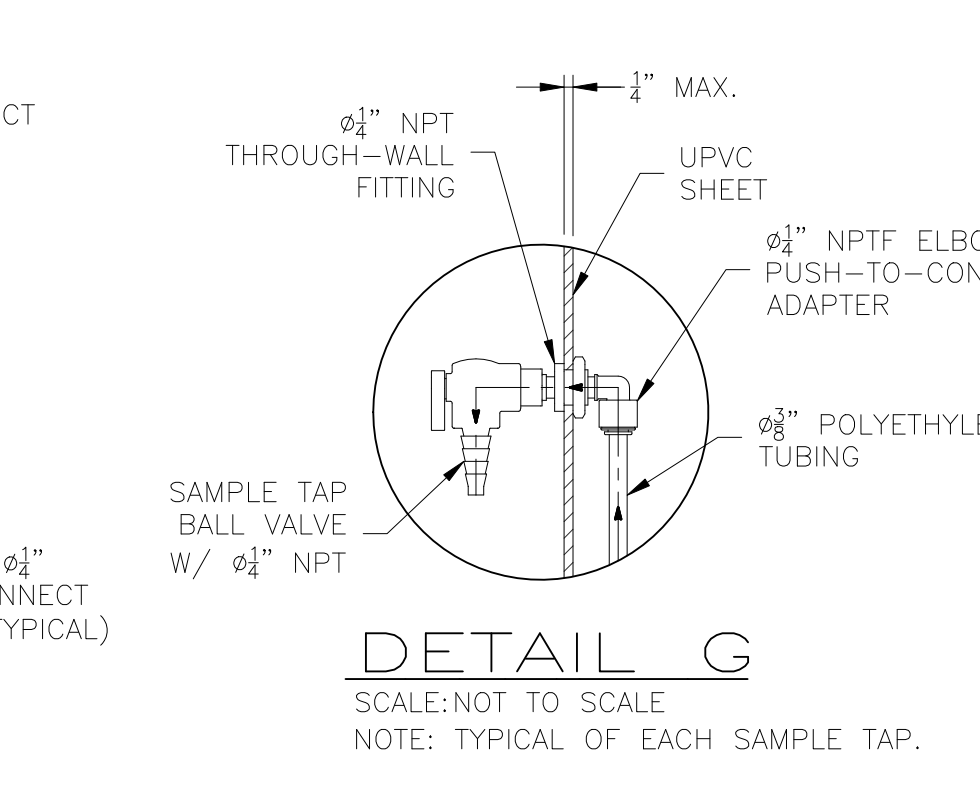
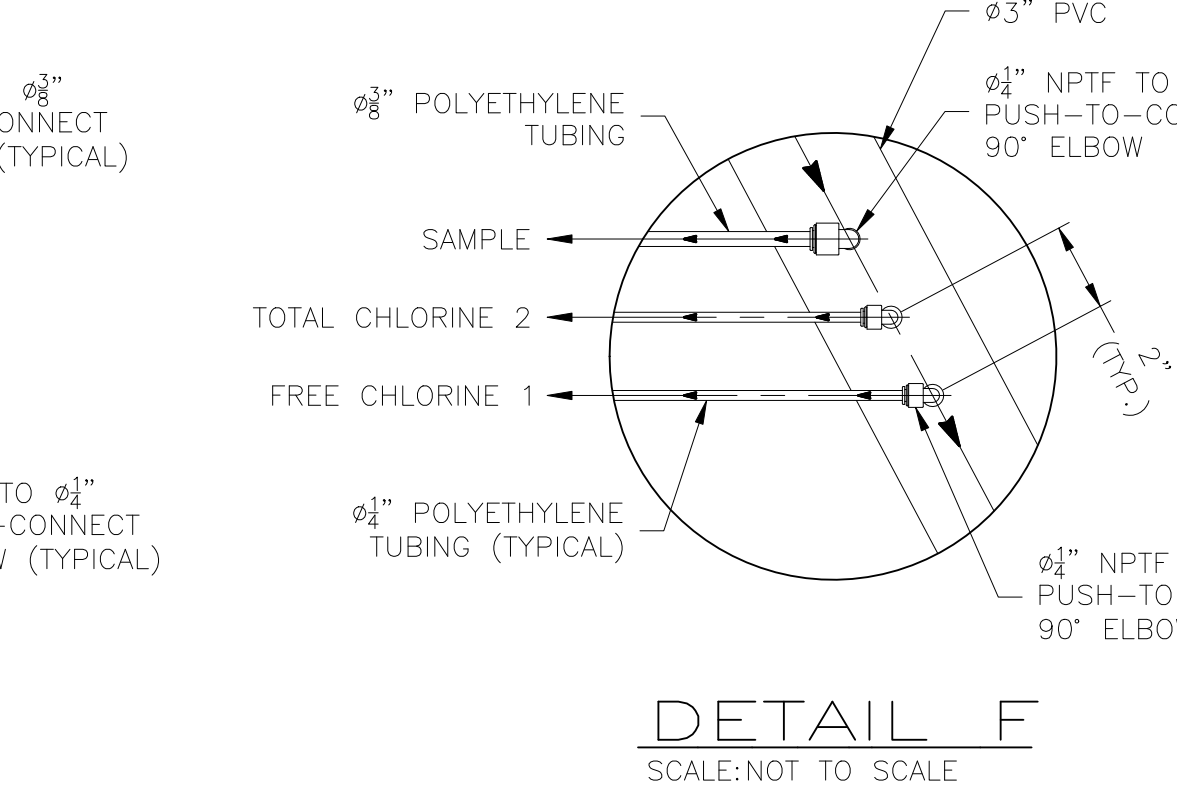
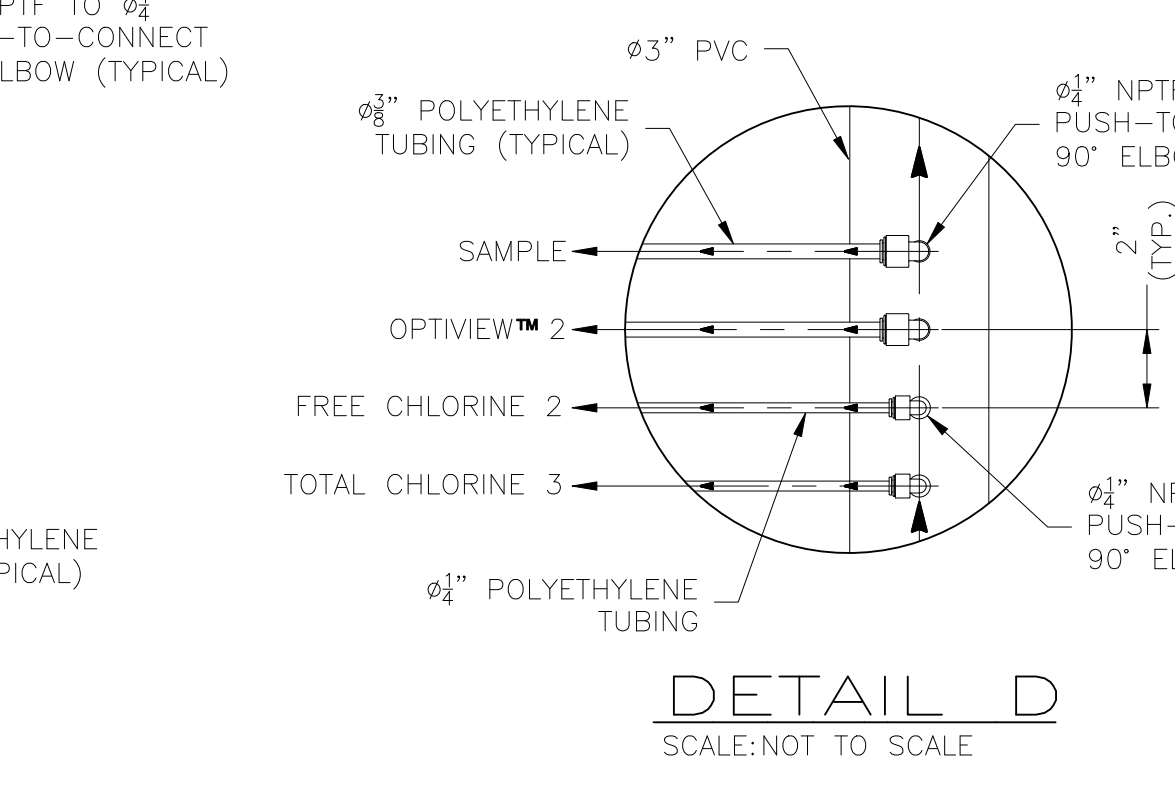
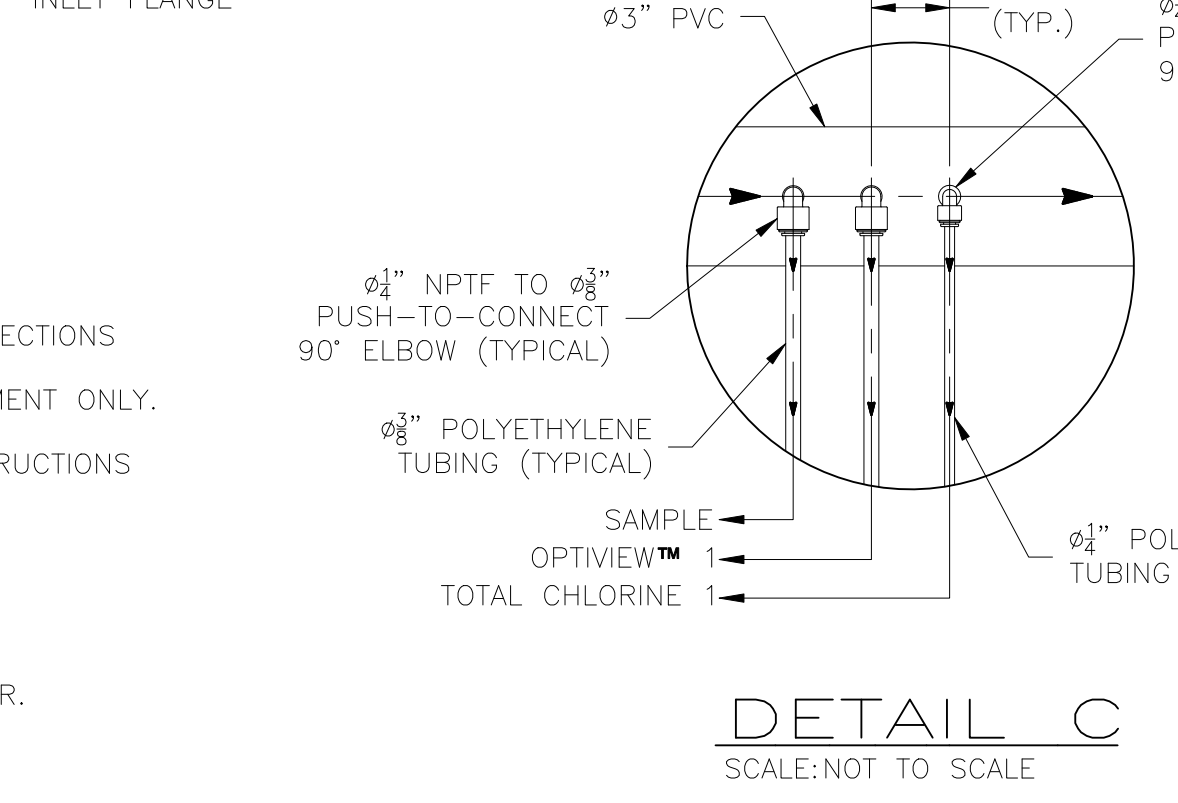


NOTES:

- : SYSTEM CONDUIT, WIRING, CABLES, DISTRIBUTION PANELS & INTERCONNECTIONS BY OTHERS UNLESS OTHERWISE NOTED.
- : ELECTRICAL REQUIREMENTS SHOWN ARE TO SUPPLY TROJAN UV EQUIPMENT ONLY. ELECTRICAL INRUSH FACTOR TO BE ADDED AS PER LOCAL CODE.
- : CONTRACTOR TO REVIEW ALL TROJAN TECHNOLOGIES INSTALLATION INSTRUCTIONS PRIOR TO EQUIPMENT INSTALLATION.

EQUIPMENT NOTES:

- : MAXIMUM OPERATING PRESSURE TO BE 150 PSI.
- : CONNECTION SEALS AND HARDWARE TO BE SUPPLIED BY CUSTOMER.
- : INLET/OUTLET GASKETS AND HARDWARE TO BE SUPPLIED BY CUSTOMER.
- : 04AL20 UV CHAMBER WEIGHT DRY 107 LBS. / WET 232 LBS.
- : 04AL20 CPP WEIGHT 50 LBS.
- : UV CHAMBER MATERIAL TO BE 316 STAINLESS STEEL.
- : CPP MATERIAL TO BE PAINTED MILD STEEL.
- : ALL WETTED PARTS COMPATIBLE WITH 35% H₂O₂ AND 12% NaClO.



PRELIMINARY, NOT FOR CONSTRUCTION
VERIFY DIMENSIONS BEFORE COMMENCING CIVIL OR DESIGN WORK

DESIGN CRITERIA	PEAK FLOW	20 GPM
	UV TRANSMITTANCE AT 253.7 nm	98 %
	DOSE	100 mJ / cm ²
	DISINFECTION STANDARD	200 FC / 100mL (30 DAY GEO MEAN)

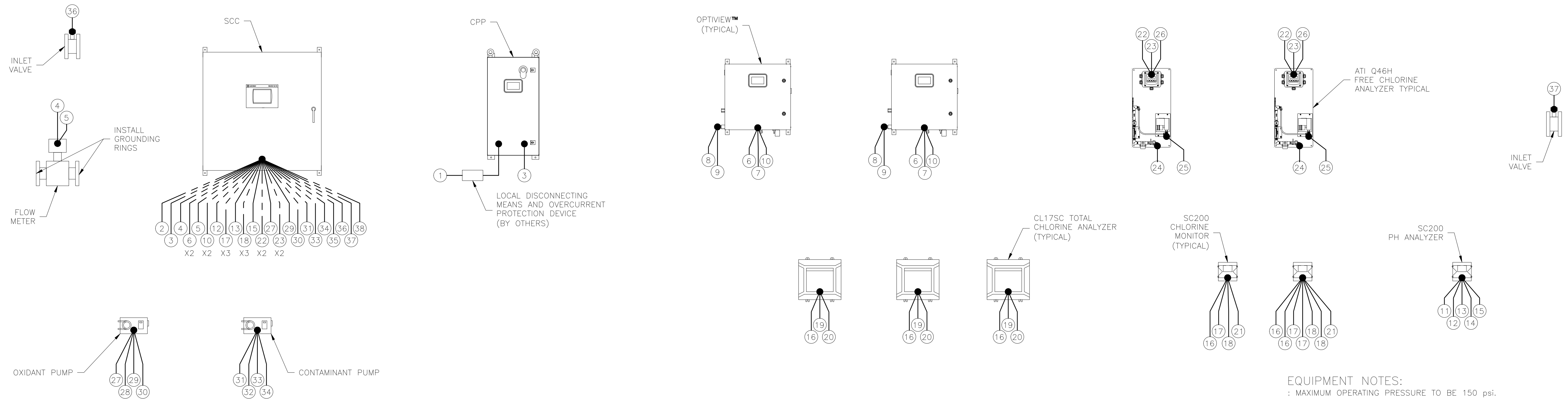
TROJANUV
A TROJAN TECHNOLOGIES BUSINESS

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DESCRIPTION: LAYOUT, TROJANUVFIT 04AL20 PALMDALE WATER DISTRICT DEMONSTRATION FACILITY CA		QUOTE NO. 235931
DRAWN BY: MAN	DATE: 22AU04	PROJECT NO. N/A
CHECKED BY: SPM	DATE: 22AU04	
APPROVED BY: NDB	DATE: 22AU10	DWG NO. S01
SCALE (11x17): 1/4"=1'-0"	LOG NUMBER: N/A	

TROJAN UVFIT™ EQUIPMENT INTERCONNECTIONS

No.	DESCRIPTION	FROM	TO	No.	DESCRIPTION	FROM	TO	No.	DESCRIPTION	FROM	TO
1	CONTROL POWER PANEL (CPP) POWER SUPPLY 240V, 1 PHASE, 3 WIRE + GROUND, 1.2 kVA, 6 AMPS	DISTRIBUTION PANEL (DP) (NOT SHOWN) (BY OTHERS)	CPP	16	TOTAL CHLORINE ANALYZER COMMUNICATION WIRE	TOTAL CHLORINE ANALYZER	CHLORINE MONITOR	31	CONTAMINANT PUMP SPEED 4-20mA ANALOG OUTPUT	SCC	CONTAMINANT PUMP
2	SYSTEM CONTROL CENTER (SCC) POWER SUPPLY 120V, 1 PHASE, 2 WIRE + GROUND	DP (NOT SHOWN) (BY OTHERS)	SCC	17	TOTAL CHLORINE CONCENTRATION 4-20mA ANALOG INPUT	CHLORINE MONITOR	SCC	32	CONTAMINANT PUMP POWER SUPPLY 120V, 1 PHASE, 2 WIRE + GROUND	DP (NOT SHOWN) (BY OTHERS)	CONTAMINANT PUMP
3	ETHERNET/IP PROTOCOL COMMUNICATION	SCC	CPP	18	TOTAL CHLORINE ANALYZER ALARM DISCRETE INPUT	CHLORINE MONITOR	SCC	33	CONTAMINANT PUMP RUN MODE DISCRETE INPUT	CONTAMINANT PUMP	SCC
4	FLOW METER 4-20mA DC ANALOG INPUT (ISOLATED) 1 SHIELDED TWISTED PAIR	FLOW METER	SCC	19	WATER SUPPLY TO TOTAL CHLORINE ANALYZER (INLET) (SEE SPECS ON UNIT FOR REQUIRED FLOW RATE AND LINE SIZE)	WATER SUPPLY (NOT SHOWN)	TOTAL CHLORINE ANALYZER INLET	34	CONTAMINANT PUMP ALARM DISCRETE INPUT	CONTAMINANT PUMP	SCC
5	FLOW METER POWER SUPPLY 24VDC + GROUND	SCC	FLOW METER	20	TOTAL CHLORINE ANALYZER TO DRAIN (OUTLET) (SEE SPECS ON UNIT FOR REQUIRED DRAIN SIZE)	TOTAL CHLORINE ANALYZER OUTLET	DRAIN (NOT SHOWN)	35	DISCRETE POTABLE WATER INLET VALVE OPEN CONTROL OUTPUT - 2 CONDUCTORS	SCC	POTABLE WATER INLET VALVE (BY OTHERS) (NOT SHOWN)
6	OPTIVIEW™ 4-20mA ANALOG INPUT	OPTIVIEW™	CPP (TOP OF PANEL)	21	TOTAL CHLORINE MONITOR POWER SUPPLY 120V, 1 PHASE, 2 WIRE + GROUND	DP (NOT SHOWN) (BY OTHERS)	CHLORINE MONITOR	36	DISCRETE INLET VALVE OPEN CONTROL OUTPUT - 2 CONDUCTORS DISCRETE INLET VALVE CLOSE CONTROL OUTPUT - 2 CONDUCTORS DISCRETE INLET VALVE OPEN STATUS INPUT - 2 CONDUCTORS DISCRETE INLET VALVE CLOSE STATUS INPUT - 2 CONDUCTORS DISCRETE INLET VALVE REMOTE INPUT - 2 CONDUCTORS	SCC	INLET VALVE (BY OTHERS) INLET VALVE (BY OTHERS) SCC
7	OPTIVIEW™ POWER SUPPLY 120V, 1 PHASE, 2 WIRE+ GROUND, 0.1 kVA, 0.8 AMPS	DP (NOT SHOWN) (BY OTHERS)	OPTIVIEW™	22	FREE CHLORINE CONCENTRATION 4-20mA ANALOG INPUT	FREE CHLORINE ANALYZER	SCC	37	DISCRETE OUTLET VALVE OPEN CONTROL OUTPUT - 2 CONDUCTORS DISCRETE OUTLET VALVE CLOSE CONTROL OUTPUT - 2 CONDUCTORS DISCRETE OUTLET VALVE OPEN STATUS INPUT - 2 CONDUCTORS DISCRETE OUTLET VALVE CLOSE STATUS INPUT - 2 CONDUCTORS DISCRETE OUTLET VALVE REMOTE INPUT - 2 CONDUCTORS	SCC	OUTLET VALVE (BY OTHERS) OUTLET VALVE (BY OTHERS) SCC
8	WATER SUPPLY TO OPTIVIEW™ (INLET) (SEE SPECS ON UNIT FOR REQUIRED FLOW RATE AND LINE SIZE)	WATER SUPPLY (NOT SHOWN)	OPTIVIEW™ INLET	23	FREE CHLORINE ANALYZER ALARM DISCRETE INPUT	FREE CHLORINE ANALYZER	SCC				
9	OPTIVIEW™ TO DRAIN (OUTLET) (SEE SPECS ON UNIT FOR REQUIRED DRAIN SIZE)	OPTIVIEW™ OUTLET	DRAIN (NOT SHOWN)	24	WATER SUPPLY TO FREE CHLORINE ANALYZER (INLET) (SEE SPECS ON UNIT FOR REQUIRED FLOW RATE AND LINE SIZE)	WATER SUPPLY (NOT SHOWN)	FREE CHLORINE ANALYZER INLET	38	MODBUS PROTOCOL COMMUNICATION (SCADA)	SCC	SCADA (NOT SHOWN) (BY OTHERS)
10	UV TRANSMITTANCE METER ALARM DISCRETE INPUT	OPTIVIEW™	CPP (TOP OF PANEL)	25	FREE CHLORINE ANALYZER TO DRAIN (OUTLET) (SEE SPECS ON UNIT FOR REQUIRED DRAIN SIZE)	FREE CHLORINE ANALYZER OUTLET	DRAIN (NOT SHOWN)				
11	PH SENSOR COMMUNICATION WIRE	PH SENSOR (NOT SHOWN)	PH ANALYZER	26	FREE CHLORINE ANALYZER POWER SUPPLY 120V, 1 PHASE, 2 WIRE + GROUND	DP (NOT SHOWN) (BY OTHERS)	FREE CHLORINE ANALYZER				
12	PH ANALYZER 4-20mA ANALOG INPUT	PH ANALYZER	SCC	27	OXIDANT PUMP SPEED 4-20mA ANALOG OUTPUT	SCC	OXIDANT PUMP				
13	TEMPERATURE SENSOR 4-20mA ANALOG INPUT	PH ANALYZER	SCC	28	OXIDANT PUMP POWER SUPPLY 120V, 1 PHASE, 2 WIRE + GROUND	DP (NOT SHOWN) (BY OTHERS)	OXIDANT PUMP				
14	PH ANALYZER POWER SUPPLY 120V, 1 PHASE, 2 WIRE + GROUND	DP (NOT SHOWN) (BY OTHERS)	PH ANALYZER	29	OXIDANT PUMP RUN MODE DISCRETE INPUT	OXIDANT PUMP	SCC				
15	PH ANALYZER ALARM DISCRETE INPUT	PH ANALYZER	SCC	30	OXIDANT PUMP ALARM DISCRETE INPUT	OXIDANT PUMP	SCC				



- EQUIPMENT NOTES:**
- : MAXIMUM OPERATING PRESSURE TO BE 150 psi.
 - : CONNECTION SEALS AND HARDWARE TO BE SUPPLIED BY CUSTOMER.
 - : INLET/OUTLET GASKETS AND HARDWARE TO BE SUPPLIED BY CUSTOMER.
 - : 04AL20 UV CHAMBER WEIGHT DRY 107 lbs. / WET 232 lbs.
 - : 04AL20 CPP WEIGHT 50 lbs.
 - : UV CHAMBER MATERIAL TO BE 316 STAINLESS STEEL.
 - : CPP MATERIAL TO BE PAINTED MILD STEEL.
 - : ALL WETTED PARTS COMPATIBLE WITH 35% H₂O₂ AND 12% NaClO.

- NOTES:**
- : SYSTEM CONDUIT, WIRING, CABLES, DISTRIBUTION PANELS & INTERCONNECTIONS SUPPLIED UNLESS OTHERWISE NOTED.
 - : ELECTRICAL REQUIREMENTS SHOWN ARE TO SUPPLY TROJAN UV EQUIPMENT ONLY. ELECTRICAL INRUSH FACTOR TO BE ADDED AS PER LOCAL CODE.
 - : CONTRACTOR TO REVIEW ALL TROJAN TECHNOLOGIES INSTALLATION INSTRUCTIONS PRIOR TO EQUIPMENT INSTALLATION.

INTERCONNECT PLAN VIEW
SCALE: AS SHOWN
NOTE: EQUIPMENT SPACING NOT TO SCALE.

UV CHAMBER CONDUIT USAGE	
CONDUIT 1 (0.75")	CONDUIT 2 (1.25")
UV SENSOR TEMPERATURE SENSOR END CAP ATTACHED GROUND	LAMP 01-04 CABLES GROUND

PRELIMINARY, NOT FOR CONSTRUCTION
VERIFY DIMENSIONS BEFORE COMMENCING CIVIL OR DESIGN WORK

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A TROJAN TECHNOLOGIES BUSINESS

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DESCRIPTION:		QUOTE NO.
LAYOUT, TROJANUVFIT 04AL20 PALMDALE WATER DISTRICT DEMONSTRATION FACILITY CA		235931
DRAWN BY: MAN	DATE: 22AU04	PROJECT NO. N/A
CHECKED BY: SPM	DATE: 22AU04	DWG. NO. S02
APPROVED BY: NDB	DATE: 22AU10	REV. A
SCALE (11x17): 3/8"=1'-0"	LOG NUMBER: N/A	

Operational AOP Installations Last 5 Years



Project Name	City/State/Country	Treatment Description (Primary)	Target Contaminant(s)	Flowrate (gpm)	Flowrate (MGD)	Oxidant?	Design Log Removal	Date Operational	Type of Reactor
Bistone MWSD	Bistone, Texas, USA	Drinking Water Treatment	Geosmin and Adenovirus	2250	3.24	H2O2	2-Log Virus and 1-Log Geosmin	Oct-17	TrojanUVSwift™ ECT 8L24
El Monte - CDM	California, USA	Drinking Water Treatment	1,4-Dioxane	20	0.03	H2O2	1.4-Log 1,4-Dioxane		TrojanUVPhox™ 12AL30
Suffolk County Water Authority	Suffolk County, New York, USA	Drinking Water Treatment	1,4-Dioxane	1100	1.58	H2O2	1.7-Log 1,4-Dioxane	Jul-17	TrojanUVPhox™ 72AL75
Wellborne	Wellborne, Texas, USA	Drinking Water Treatment	MIB and Geosmin	1389	2.00	H2O2	1-Log MIB; 1-Log Geosmin; 2-Log Virus	Oct-17	TrojanUVSwift™ ECT 8L24
Franklin	Franklin, Tennessee, USA	Drinking Water Treatment	MIB and Geosmin	2778	4.00	H2O2	1.0-Log MIB and 1.3-Log Geosmin	Jun-18	TrojanUVSwift™ ECT 8L24
Anheuser Busch	Missouri, USA	Non-Drinking Water Remediation	1,4-Dioxane	875	1.26	H2O2	0.5-Log 1,4-Dioxane	Jan-18	TrojanUVPhox™ 30AL50
Boeing SSFL Hargis	California, USA	Non-Drinking Water Remediation	TCE, 1,4-Dioxane, DCE	100	0.14	H2O2	3.6-Log TCE, 3.4-Log 1,4-Dioxane, 7.6-Log DCE	Oct-18	TrojanUVPhox™ 30AL50
Monterey Park - GWR	California, USA	Drinking Water Treatment	PCE	7400	10.66	H2O2	3.04-Log PCE	Jan-19	TrojanUVPhox™ D72AL75
St. Anthony	Minnesota, USA	Drinking Water Treatment	1,4-Dioxane	3000	4.32	H2O2	2-Log 1,4-D	Aug-17	TrojanUVPhox™ D72AL75
Ellwood T&O	Ellwood, PA, USA	Drinking Water Treatment	Geosmin	11111	16.00	H2O2	1-Log Geosmin	Aug-19	TrojanUVSwift™ ECT 16L30
Keystone Trailer - American Water New Jersey	New Jersey, USA	Drinking Water Treatment	1,4-Dioxane	500	0.72	H2O2	1.3-Log 1,4-Dioxane	Jan-18	TrojanUVPhox™ D72AL75
Univar Albuquerque GWR	Albuquerque, New Mexico	Non-Drinking Water Remediation	1,4-Dioxane	65	0.09	H2O2	2-Log 1,4-Dioxane	Apr-18	TrojanUVPhox™ 18AL50
Water Replenishment District - Groundwater Reliability Improvement Project (GRIP)	LA County, California, USA	Indirect Potable Reuse	NDMA, 1,4-Dioxane	10347	14.90	Sodium Hypochlorite	1.67-Log NDMA, 0.5-Log 1,4-Dioxane	Sep-20	TrojanUVPhox™ D72AL75
Daytona Beach IPR - Demonstration System	Daytona Beach, Florida, USA	Indirect Potable Reuse	NDMA, 1,4-Dioxane	139	0.20	H2O2	1.2-Log NDMA, 0.5-Log 1,4-Dioxane	May-18	TrojanUVPhox™ 18AL50
Hoopa Valley	California, USA	Drinking Water Treatment	Anatoxin	417	0.60	H2O2	0.5-Log Anatoxin	May-18	TrojanUVPhox™ 18AL50
Bethpage Water District (Phase 1)	New York, USA	Drinking Water Treatment	1,4-Dioxane	1400	2.02	H2O2	2.5-Log 1,4-Dioxane	May-18	TrojanUVPhox™ D72AL75
Royal Adhesives GWR Site	South Carolina, USA	Non-Drinking Water Remediation	1,4-Dioxane	56	0.08	H2O2	1.4-Log 1,4-Dioxane	Nov-18	TrojanUVPhox™ 18AL50
Middle Potrero Creek (Lockheed)	Beaumont, California, USA	Non-Drinking Water Remediation	1,4-Dioxane	65	0.09	H2O2	1.4-Log 1,4-Dioxane	Sep-19	TrojanUVPhox™ 30AL50
Picillo Farm	Rhode Island, USA	Non-Drinking Water Remediation	1,4-Dioxane	10	0.01	H2O2	2.0-Log 1,4-Dioxane	Apr-19	TrojanUVPhox™ 18AL50
Hewitt Landfill	California, USA	Non-Drinking Water Remediation	1,4-Dioxane	460	0.66	H2O2	2.77-Log 1,4-Dioxane	Sep-21	TrojanUVFlex™ AOP 200
Long Beach (Boeing Clean-Up)	California, USA	Non-Drinking Water Remediation	1,4-Dioxane	40	0.06	H2O2	2.82-Log 1,4-Dioxane	Feb-21	TrojanUVPhox™ 30AL50
Arcadis Hughes Baker Centrilift	Texas, USA	Non-Drinking Water Remediation	1,4-Dioxane	60	0.09	H2O2	1.6-Log 1,4-Dioxane	Nov-20	TrojanUVPhox™ 30AL50
Pahiatua WTP	New Zealand	Drinking Water Treatment	Geosmin	367	0.53	H2O2	1-Log Geosmin	Feb-22	TrojanUVPhox™ 72AL75
Barnstable Maher Filtration Plant	Massachusetts, United States	Drinking Water Treatment	1,4-Dioxane	1500	2.16	H2O2	0.5-Log 1,4-Dioxane	Oct-20	TrojanUVPhox™ 30AL50
Lake Mary WTP	Florida, United States	Drinking Water Treatment	1,4-Dioxane	7500	10.80	H2O2	1.21-Log removal 1,4-Dioxane	Sep-21	TrojanUVFlex™ AOP 200
Plainview WD (Long Island) - Plant 2	Long Island, NY	Drinking Water Treatment	1,4-Dioxane	1400	2.02	H2O2	2-Log Removal	Nov-20	TrojanUVFlex™ AOP 100
Plainview WD (Long Island) - Plant 7 W1	Long Island, NY	Drinking Water Treatment	1,4-Dioxane	1200	1.73	H2O2	2-Log Removal		TrojanUVFlex™ AOP 100
Plainview WD (Long Island) - Plant 7 W2	Long Island, NY	Drinking Water Treatment	1,4-Dioxane	1400	2.02	H2O2	2-Log Removal	Sep-21	TrojanUVFlex™ AOP 100
Hicksville WD (Long Island) - Plant 4	Long Island, NY	Drinking Water Treatment	1,4-Dioxane	1400	2.02	H2O2	2-Log Removal	Nov-20	TrojanUVFlex™ AOP 100
Garden City Park - Plant 9	Long Island, NY	Drinking Water Treatment	1,4-Dioxane	1400	2.02	H2O2	2-Log Removal	Sep-21	TrojanUVFlex™ AOP 100
Bethpage WD (Long Island) - Plant 5	Long Island, NY	Drinking Water Treatment	1,4-Dioxane	1400	2.02	H2O2	2-Log Removal	Oct-20	TrojanUVFlex™ AOP 100
Bethpage WD (Long Island) - BGD	Long Island, NY	Drinking Water Treatment	1,4-Dioxane	1400	2.02	H2O2	2-Log Removal	Nov-20	TrojanUVFlex™ AOP 100

Hicksville WD (Long Island) - Plant 1 Chamber 1	Long Island, NY	Drinking Water Treatment	1,4-Dioxane	1400	2.02	H2O2	2-Log Removal	Nov-20	TrojanUVFlex™ AOP 100
Hicksville WD (Long Island) - Plant 1 Chamber 2	Long Island, NY	Drinking Water Treatment	1,4-Dioxane	1400	2.02	H2O2	2-Log Removal	Nov-20	TrojanUVFlex™ AOP 100
Garden City Park WD (Long Island) - Plant 6	Long Island, NY	Drinking Water Treatment	1,4-Dioxane	1400	2.02	H2O2	2-Log Removal	Sep-21	TrojanUVFlex™ AOP 100
Village of Garden City (Long Island) - Well 10	Long Island, NY	Drinking Water Treatment	1,4-Dioxane	1389	2.00	H2O2	2-Log Removal	Sep-21	TrojanUVFlex™ AOP 100
Village of Garden City (Long Island) - Well 7	Long Island, NY	Drinking Water Treatment	1,4-Dioxane	1389	2.00	H2O2	2-Log Removal	Sep-21	TrojanUVFlex™ AOP 100
Plainview Water District (Long Island) - Plant 3	Long Island, NY	Drinking Water Treatment	1,4-Dioxane	1389	2.00	H2O2	2-Log Removal	Sep-21	TrojanUVFlex™ AOP 100
Plainview Water District (Long Island) - Plant 1 Well 1	Long Island, NY	Drinking Water Treatment	1,4-Dioxane	1389	2.00	H2O2	2-Log Removal	Sep-21	TrojanUVFlex™ AOP 100
Village of Garden City (Long Island) - Well 14	Long Island, NY	Drinking Water Treatment	1,4-Dioxane	1389	2.00	H2O2	2-Log Removal	Sep-21	TrojanUVFlex™ AOP 100
Village of Garden City (Long Island) - Well 13	Long Island, NY	Drinking Water Treatment	1,4-Dioxane	1389	2.00	H2O2	2-Log Removal	Sep-21	TrojanUVFlex™ AOP 100
Village of Garden City (Long Island) - Well 11	Long Island, NY	Drinking Water Treatment	1,4-Dioxane	1389	2.00	H2O2	2-Log Removal	Sep-21	TrojanUVFlex™ AOP 100
Plainview WD (Long Island) - Plant 1 Well 2	Long Island, NY	Drinking Water Treatment	1,4-Dioxane	1389	2.00	H2O2	2-Log Removal	Feb-20	TrojanUVFlex™ AOP 100
Marana - Picture Rocks Continental	Tucson, AZ, USA	Drinking Water Treatment	1,4-Dioxane	1400	2.02	H2O2	1-Log Removal	Apr-21	TrojanUVPhox™ D72AL75
Marana - Airline-Lambert-Saguaro	Tucson, AZ, USA	Drinking Water Treatment	1,4-Dioxane	1000	1.44	H2O2	1-Log Removal	Apr-21	TrojanUVPhox™ D72AL75
Bethpage Water District (Long Island) - Navy Site	Long Island, NY	Drinking Water Treatment	1,4-Dioxane	1000	1.44	H2O2	2-Log Removal	Jun-21	TrojanUVPhox™ D72AL75
Pure Water Oceanside	California, USA	Indirect Potable Reuse	NDMA and 1,4-Dioxane	4167	6.00	Sodium Hypochlorite	1.2-Log NDMA, 0.5-Log 1,4-Dioxane	1-Dec	TrojanUVFlex™ AOP 200
Bedford Navy GETS	Massachusetts, United States	Drinking Water Treatment	1,4-Dioxane	20	0.03	H2O2	1-Log Removal	Aug-21	TrojanUVPhox™ 12AL30
American Water - Hopewell Virginia	Hopewell, Virginia	Drinking Water Treatment	MIB	12500	18.00	H2O2	1 - Log MIB	Oct-21	TrojanUVSwift™ ECT 16L30

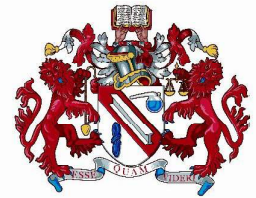


Some of Trojan Technologies Pilot Projects over the last few years.

Project	Location	Application	Contaminant Targets	Flow Rate	Treatment Objectives	UV System
Green Cay Palm Beach County	Florida, USA	Indirect Potable Reuse	NDMA, 1,4-Dioxane	32	1.2 log NDMA/0.5 log 1,4-Dioxane	Trojan UV Fit 8AL20
Albertson Water District	Long Island, NY, USA	Groundwater for Drinking Water	1,4-Dioxane	20	2 log 1,4-Dioxane	Telos pilot (2x500W Solo)
Bethpage Water District (multiple sites)	Long Island, NY, USA	Groundwater for Drinking Water	1,4-Dioxane	20	1.6-2.1 log 1,4-Dioxane	Telos pilot (2x500W Solo)
Carle Place Water District	Long Island, NY, USA	Groundwater for Drinking Water	1,4-Dioxane	20	2 log 1,4-Dioxane	Telos pilot (2x500W Solo)
Franklin Square Water District	Long Island, NY, USA	Groundwater for Drinking Water	1,4-Dioxane	20	1.8 log 1,4-Dioxane	Telos pilot (2x500W Solo)
Garden City Park Water District (multiple sites)	Long Island, NY, USA	Groundwater for Drinking Water	1,4-Dioxane	20	1.5-1.9 log 1,4-Dioxane	Telos pilot (2x500W Solo)
Hicksville Water District (multiple sites)	Long Island, NY, USA	Groundwater for Drinking Water	1,4-Dioxane	20	1.9-2.7 log 1,4-Dioxane	Telos pilot (2x500W Solo)
Jericho Water District (multiple sites)	Long Island, NY, USA	Groundwater for Drinking Water	1,4-Dioxane	20	2.0 log 1,4-Dioxane	Telos pilot (2x500W Solo)
Village of Mineola	Long Island, NY, USA	Groundwater for Drinking Water	1,4-Dioxane	20	2.0 log 1,4-Dioxane	Telos pilot (2x500W Solo)
Port Washington Water District (multiple sites)	Long Island, NY, USA	Groundwater for Drinking Water	1,4-Dioxane	20	2.4 log 1,4-Dioxane	Telos pilot (2x500W Solo)
Roslyn Water District	Long Island, NY, USA	Groundwater for Drinking Water	1,4-Dioxane	20	1.4-2.0 log 1,4-Dioxane	Telos pilot (2x500W Solo)
South Farmingdale Water District	Long Island, NY, USA	Groundwater for Drinking Water	1,4-Dioxane	20	2.2 log 1,4-Dioxane	Telos pilot (2x500W Solo)
South Huntington Water District	Long Island, NY, USA	Groundwater for Drinking Water	1,4-Dioxane	20	2.0 log 1,4-Dioxane	Telos pilot (2x500W Solo)
Town of Hempstead (multiple sites)	Long Island, NY, USA	Groundwater for Drinking Water	1,4-Dioxane	20	2.4 log 1,4-Dioxane	Telos pilot (2x500W Solo)
Village of Farmingdale	Long Island, NY, USA	Groundwater for Drinking Water	1,4-Dioxane	20	2.4 log 1,4-Dioxane	Telos pilot (2x500W Solo)
Village of Garden City (multiple sites)	Long Island, NY, USA	Groundwater for Drinking Water	1,4-Dioxane	20	1.7-1.9 log 1,4-Dioxane	Telos pilot (2x500W Solo)
Western Nassau County (multiple sites)	Long Island, NY, USA	Groundwater for Drinking Water	1,4-Dioxane	20	1.5-2.0 log 1,4-Dioxane	Telos pilot (2x500W Solo)



Water Authority of Great Neck North (multiple sites)	Long Island, NY, USA	Groundwater for Drinking Water	1,4-Dioxane	20	1.4-2.0 log 1,4-Dioxane	Telos pilot (2x500W Solo)
West Hempstead Water District (multiple sites)	Long Island, NY, USA	Groundwater for Drinking Water	1,4-Dioxane	20	2.0 log 1,4-Dioxane	Telos pilot (2x500W Solo)
Westbury Water District (multiple sites)	Long Island, NY, USA	Groundwater for Drinking Water	1,4-Dioxane	20	1.5-2.4 log 1,4-Dioxane	Telos pilot (2x500W Solo)



Certificate of Registration

ENVIRONMENTAL MANAGEMENT SYSTEM - ISO 14001:2015

This is to certify that:

Trojan Technologies
3020 Gore Road
London
Ontario
N5V 4T7
Canada


Holds Certificate No:

EMS 633149

and operates an Environmental Management System which complies with the requirements of ISO 14001:2015 for the following scope:

The environmental management system for the control of risks associated with the engineering and assembly of ultraviolet (UV) light technologies for wastewater, industrial, and drinking water disinfection applications, and for the destruction of pollutants in liquid streams.

For and on behalf of BSI:


Carlos Pitanga, Chief Operating Officer Assurance – Americas

Original Registration Date: 2016-03-08

Effective Date: 2019-03-06

Latest Revision Date: 2019-02-14

Expiry Date: 2022-03-07

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Certificate of Registration

QUALITY MANAGEMENT SYSTEM - ISO 9001:2015

This is to certify that:

Trojan Technologies
3020 Gore Road
London
Ontario
N5V 4T7
Canada


Holds Certificate No:

FM 63961

and operates a Quality Management System which complies with the requirements of ISO 9001:2015 for the following scope:

Research, design, engineering, manufacturing, sales and service of ultraviolet (UV) water treatment solutions for municipal, industrial, light commercial and residential applications.

For and on behalf of BSI:



Carlos Pitanga, Chief Operating Officer Assurance – Americas

Original Registration Date: 1998-03-27

Effective Date: 2021-07-11

Latest Revision Date: 2021-07-06

Expiry Date: 2024-07-10

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Terms and Conditions of Sale

This document sets forth the Terms & Conditions of Sale for goods manufactured and/or supplied, and services provided, by the seller entity identified on the purchase order ("SELLER") and sold to the original purchaser thereof ("BUYER"). The term "SELLER" includes only SELLER, and none of its affiliates. Unless otherwise specifically stated in a previously-executed written purchase agreement signed by authorized representatives of SELLER and BUYER, these Terms & Conditions of Sale establish the rights, obligations and remedies of SELLER and BUYER which apply to this offer and any resulting order or contract for the sale of SELLER's goods and/or services ("Products").

1. APPLICABLE TERMS & CONDITIONS: These Terms & Conditions of Sale are contained directly and/or by reference in SELLER's proposal, offer, order acknowledgment, packing slip, and/or invoice documents. The first of the following acts constitutes an acceptance of SELLER's offer and not a counteroffer and creates a contract of sale ("Contract") in accordance with these Terms & Conditions of Sale: (i) BUYER's issuance of a purchase order document against SELLER's offer; (ii) acknowledgement of BUYER's order by SELLER; or (iii) commencement of any performance by SELLER pursuant to BUYER's order. Provisions contained in BUYER's purchase documents (including electronic commerce interfaces) that materially alter, add to, or subtract from the provisions of these Terms & Conditions of Sale are not a part of the Contract.

2. CANCELLATION AND RETURN: The whole or any part of this order may be cancelled only with the prior written consent of SELLER. If SELLER does consent to a cancellation, such consent will be given only upon payment of reasonable cancellation charges in an amount determined by SELLER. In addition, with respect to any Products returned on cancellation, BUYER will pay SELLER's cost of placing the returned Products in a saleable condition, sales expenses incurred by SELLER in connection with such returned Products, a reasonable restocking charge and freight costs incurred in connection with the original shipment and in connection with returning such Products to SELLER, all in such amounts as are advised to the BUYER by SELLER.

3. DELIVERY: Delivery will be accomplished EXW or CIP at the point of shipment (Incoterms 2020), unless otherwise expressly agreed between the parties. Legal title and risk of loss or damage pass to BUYER upon transfer to the first carrier, regardless of final destination and mode of transit. SELLER will use commercially reasonable efforts to deliver the Products ordered herein within SELLER's normal lead-time necessary for SELLER to deliver the Products sold hereunder. Products will be boxed or crated as determined appropriate by SELLER for protection against normal handling and there will be an extra charge to the BUYER for additional packaging required by the BUYER with respect to waterproofing or other added protection. BUYER has sole responsibility for off-loading, storage and handling of the Products at the site. Where Buyer is responsible for any delay in the delivery date or installation date, the earlier of the date of delivery or the date on which the Products are ready for shipment by SELLER may be treated as the delivery date for purposes of determining the time of payment of the purchase price. Moreover, BUYER will be responsible for reasonable storage and insurance expenses with respect to such Products. Should BUYER fail to effect pick-up of Product as previously agreed in a timely manner, SELLER may, at its discretion, assess reasonable storage charges to the account of BUYER.

4. INSPECTION: BUYER will promptly inspect and accept any Products delivered pursuant to this Contract after receipt of such Products. In the event the Products do not conform to any applicable specifications, BUYER will promptly notify SELLER of such nonconformance in writing. SELLER will have a reasonable opportunity to repair or replace the nonconforming Product at its option. BUYER will be deemed to have accepted any Products delivered hereunder and to have waived any such nonconformance for such Products unless a written notification pursuant to this paragraph is received by SELLER within thirty (30) days of delivery to BUYER destination on order.

5. PRICES & ORDER SIZES: Prices do not include any charges for services such as insurance; brokerage fees; sales, use, inventory, or excise taxes; import or export duties; special financing fees; value added tax, income, or royalty taxes imposed outside the U.S. or Canada; consular fees; special permits or licenses; or other charges imposed upon the production, sale, distribution, or delivery of Products. BUYER will either pay any and all such charges or provide SELLER with acceptable exemption certificates, which obligation survives performance under this Contract. Installation, maintenance and any other services which relate to the Products are not included unless specifically set forth in the quotation. SELLER reserves the right to establish minimum order sizes and will advise BUYER accordingly. Any orders below the minimum order size are subject to a fee as set out by SELLER. If SELLER's delivery of Products surpasses one (1) year in length, then at least on an annual basis, or if changes to the Products are requested or needed, the parties shall conduct good faith discussions regarding changes to the prices for the Products, to reflect SELLER's increased costs for which SELLER shall be entitled to additional fair and appropriate compensation.

6. PAYMENTS: All payments must be made in agreed-to currency, normally Canadian or U.S. Dollars. Unless other payment terms are expressly set forth in the purchase order or otherwise required by the Seller, invoices are due and payable NET 30 DAYS from date of the invoice, without regard to delays for inspection or transportation, with payments to be made by check to SELLER at the address listed in the purchase order or by bank transfer to the account obtainable from SELLER's Accounts Receivable Manager. In the event payments are not made or not made in a timely manner, SELLER may, in addition to all other remedies provided at law, either: (a) declare BUYER's performance in breach and terminate this Contract for default; (b) withhold future shipments until delinquent payments are made; (c) deliver future shipments on a cash-with-order or cash-in-advance basis even after the delinquency is cured; (d) charge interest on the outstanding balance at a rate of 1.5% per month or the maximum rate permitted by law, if lower, for each month or part thereof that there is an outstanding balance plus applicable storage charges and/or inventory carrying charges; (e) repossess the Products for which payment has not been made; (f) pursue other collection efforts and recover all associated costs including reasonable attorney's fees; or (g) combine any of the above rights and remedies as is practicable and permitted by law. BUYER is prohibited from setting off any and all monies owed under this Contract from any other sums, whether liquidated or not, that are or may be due to the BUYER, which arise out of a different transaction with SELLER or any of its affiliates. Should BUYER's financial condition become unsatisfactory to SELLER in its discretion, SELLER may require payment in advance or other security. If BUYER fails to meet these requirements, SELLER may treat such failure as reasonable grounds for repudiation of this Contract, in which case reasonable cancellation charges shall be due to SELLER. BUYER hereby grants SELLER a security interest in the Products, wherever located, and whether now existing or hereafter arising or acquired from time to time, and in all accessions thereto and replacements or modifications thereof, as well as all proceeds of the foregoing, to secure payment in full of all amounts to Seller, which payment releases the security interest but only if such payment could not be considered an avoidable transfer under applicable laws. The security interest granted hereby constitutes a purchase money security interest under the applicable Uniform Commercial Code or Personal Property Security Act or other applicable law, and SELLER is authorized to make whatever registration or notification or take such other action as SELLER deems necessary or desirable to perfect such security interest. BUYER's insolvency, bankruptcy, assignment for the benefit of creditors, or dissolution or termination of the existence of BUYER, constitutes a default under this Contract and affords SELLER all of the remedies of a secured creditor under applicable law, as well as the remedies stated above for late payment or non-payment.

7. LIMITED WARRANTY: Unless specifically provided otherwise in SELLER's quotation, SELLER provides the following Limited Warranty. SELLER warrants that Products sold hereunder will be free from defects in material and workmanship and will, when used in accordance with the manufacturer's operating and maintenance instructions, conform to any express written warranty pertaining to the specific goods purchased, which for Products is for a period of twelve (12) months from delivery. SELLER warrants that services furnished hereunder will be free from defects in workmanship for a period of ninety (90) days from the completion of the services. Products repaired or replaced are not covered by any warranty except to the extent repaired or replaced by SELLER, an authorized representative of SELLER, or under specific instructions by SELLER, in which cases, the Products will be covered under warranty up to the end of the warranty period applicable to the original Products. The above warranties do not include the cost of shipping and handling of returned items. Parts provided by SELLER in the performance of services may be new or refurbished parts functioning equivalent to new parts. Any non-functioning parts that are repaired by SELLER shall become the property of SELLER. No warranties are extended to consumable items such as, without limitation, light bulbs, and for normal wear and tear. All other guarantees, warranties, conditions and representations, either express or implied, whether arising under any statute, law, commercial usage or otherwise, including implied warranties of merchantability and fitness for a particular purpose, are hereby excluded. The sole remedy for Products not meeting this Limited Warranty is replacement, credit or refund of the purchase price, as determined by SELLER in its sole discretion. This remedy will not be deemed to have failed of its essential purpose so long as SELLER is willing to provide such replacement, credit or refund. To make a warranty claim, BUYER must notify SELLER in writing within 5 days of discovery of the defect in question. This notification must include a description of the problem, a copy of the applicable operator's log, a copy of BUYER's maintenance record and any analytical results detailing the problem. Any warranty hereunder or performance guarantees shall only be enforceable if (a) all equipment is properly installed, inspected regularly, and is in good working order, (b) all operations are consistent with SELLER recommendations, (c) operating conditions at the installation site have not materially changed and remain within anticipated specifications, and (d) no reasonably unforeseeable circumstances exist or arise.

8. INDEMNIFICATION: Indemnification applies to a party and to such party's successors-in-interest, assignees, affiliates, directors, officers, and employees ("Indemnified Parties"). SELLER is responsible for and will defend, indemnify and hold harmless the BUYER Indemnified Parties against all losses, claims, expenses or damages which may result from accident, injury, damage, or death due to SELLER's breach of the Limited Warranty. BUYER is responsible for and will defend, indemnify and hold harmless SELLER Indemnified Parties against all losses, claims, expenses, or damages which may result from accident, injury, damage, or death due to the negligence or misuse or misapplication of any Products or the breach of any provision of this Contract by the BUYER or any third party affiliated or in privity with BUYER.

9. PATENT PROTECTION: Subject to all limitations of liability provided herein, SELLER will, with respect to any Products of SELLER's design or manufacture, indemnify BUYER from any and all damages and costs as finally determined by a court of competent jurisdiction in any suit for infringement of any U.S. or Canadian patent (or European patent for Products that SELLER sells to BUYER for end use in a member state of the E.U. or the U.K.) that has issued as of the delivery date, solely by reason of the sale or normal use of any Products sold to BUYER hereunder and from reasonable expenses incurred by BUYER in defense of such suit if SELLER does not undertake the defense thereof, provided that BUYER promptly notifies SELLER of such suit and offers SELLER either (i) full and exclusive control of the defense of such suit when Products of SELLER only are involved, or (ii) the right to participate in the defense of such suit when products other than those of SELLER are also involved. SELLER's warranty as to use patents only applies to infringement arising solely out of the inherent operation of the Products according to their applications as envisioned by SELLER's specifications. In case the Products are in such suit held to constitute infringement and the use of the Products is enjoined, SELLER will, at its own expense and at its option, either procure for BUYER the right to continue using such Products or replace them with non-infringing products, or modify them so they become non-infringing, or remove the Products and refund the purchase price (prorated for depreciation) and the transportation costs thereof. The foregoing states the entire liability of SELLER for patent

infringement by the Products. Further, to the same extent as set forth in SELLER's above obligation to BUYER, BUYER agrees to defend, indemnify and hold harmless SELLER for patent infringement related to (x) any goods manufactured to the BUYER's design, (y) services provided in accordance with the BUYER's instructions, or (z) SELLER's Products when used in combination with any other devices, parts or software not provided by SELLER hereunder.

10. TRADEMARKS AND OTHER LABELS: BUYER agrees not to remove or alter any indicia of manufacturing origin or patent numbers contained on or within the Products, including without limitation the serial numbers or trademarks on nameplates or cast, molded or machined components.

11. SOFTWARE AND INTELLECTUAL PROPERTY: All licenses to SELLER's separately provided software products are subject to the separate software license agreement(s) accompanying the software media. In the absence of such express licenses and for all other software, SELLER grants BUYER only a personal, non-exclusive license to access and use the software provided by SELLER with Products purchased hereunder solely as necessary for BUYER to enjoy the benefit of the Products. A portion of the software may contain or consist of open source software, which BUYER may use under the terms and conditions of the specific license under which the open source software is distributed. BUYER agrees that it will be bound by all such license agreements. Title to software remains with the applicable licensor(s). All SELLER contributions to the Products, the results of the services, and any other work designed or provided by SELLER hereunder may contain or result in statutory and non-statutory Intellectual Property, including but not limited to patentable subject matter or trade secrets; and all such Intellectual Property remains the sole property of SELLER; and BUYER shall not disclose (except to the extent inherently necessary during any resale of Product sold hereunder), disassemble, decompile, or any results of the Services, or any Products, or otherwise attempt to learn the underlying processes, source code, structure, algorithms, or ideas.

12. PROPRIETARY INFORMATION AND PRIVACY: "Proprietary Information" means any information, technical data, or know-how in whatever form, whether documented, contained in machine readable or physical components, mask works or artwork, or otherwise, which SELLER considers proprietary, including but not limited to service and maintenance manuals. BUYER and its customers, employees, and agents will keep confidential all such Proprietary Information obtained directly or indirectly from SELLER and will not transfer or disclose it without SELLER's prior written consent, or use it for the manufacture, procurement, servicing, or calibration of Products or any similar products, or cause such products to be manufactured, serviced, or calibrated by or procured from any other source, or reproduce or otherwise appropriate it. All such Proprietary Information remains SELLER's property. No right or license is granted to BUYER or its customers, employees or agents, expressly or by implication, with respect to the Proprietary Information or any patent right or other proprietary right of SELLER, except for the limited use licenses implied by law. In respect of personal data supplied by BUYER to SELLER, BUYER warrants that is duly authorized to submit and disclose these data, including but not limited to obtaining data subjects' informed consent. SELLER will manage BUYER's information and personal data in accordance with its Privacy Policy, a copy of which is available to Buyer upon request. In respect of other data and information that SELLER may receive in connection with BUYER's use of the Products including without limitation data that are captured by the Products and transmitted to SELLER, BUYER hereby grants SELLER a non-exclusive, worldwide, royalty-free, perpetual, non-revocable license to use, compile, distribute, display, store, process, reproduce, or create derivative works of such data as needed for Product operation and maintenance, and to aggregate such data for use in an anonymous manner, solely to facilitate marketing, sales and R&D activities of SELLER and its affiliates.

13. SPECIAL TOOLS, DIES, JIGS, FIXTURES AND PATTERNS: Any tools, dies, jigs, fixtures, patterns and similar items which are included or required in connection with the manufacture and/or supply of the Products will remain the property of SELLER without credit to the BUYER. SELLER assumes the cost for maintenance and replacement of such items and shall have the right to discard and scrap any such item after it has been inactive for a minimum of one year, without credit to the BUYER.

14. CHANGES AND ADDITIONAL CHARGES: SELLER reserves the right to make design changes or improvements to any products of the same general class as Products being delivered hereunder without liability or obligation to incorporate such changes or improvements to Products ordered by BUYER unless agreed upon in writing before the Products' delivery date.

15. SITE ACCESS / PREPARATION / WORKER SAFETY / ENVIRONMENTAL COMPLIANCE: In connection with services provided by SELLER, BUYER agrees to permit prompt access to equipment. BUYER assumes full responsibility to back-up or otherwise protect its data against loss, damage or destruction before services are performed. BUYER is the operator and in full control of its premises, including those areas where SELLER employees or contractors are performing service, repair, and maintenance activities. BUYER will ensure that all necessary measures are taken for safety and security of working conditions, sites, and installations during the performance of any services. BUYER is the generator of any resulting wastes, including without limitation hazardous wastes. BUYER is solely responsible to arrange for the disposal of any wastes at its own expense. BUYER will, at its own expense, provide SELLER employees and contractors working on BUYER's premises with all information and training required under applicable safety compliance regulations and BUYER's policies. SELLER has no responsibility for the supervision or actions of BUYER's employees or contractors or for non-SELLER items (e.g., chemicals, equipment) and disclaims all liability and responsibility for any loss or damage that may be suffered as a result of such actions or items, or any other actions or items not under SELLER's control.

16. LIMITATIONS ON USE: BUYER will not use any Products for any purpose other than those identified in SELLER's catalogs and literature as intended uses. Unless SELLER has advised the BUYER in writing, in no event will BUYER use any Products in drugs, food additives, food, or cosmetics, or medical applications for humans or animals. In no event will BUYER use in any application any Product that requires FDA 510(k) clearance unless and only to the extent the Product has such clearance. BUYER will not sell, transfer, export, or re-export any SELLER Products or technology for use in activities which involve the design, development, production, use, or stockpiling of nuclear, chemical, or biological weapons or missiles, nor use SELLER Products or technology in any facility which engages in activities relating to such weapons. Unless the "ship-to" address is in California, U.S.A., the Products are not intended for sale in California and may lack markings required by California Proposition 65; accordingly, unless BUYER has ordered Products specifying a California ship-to address, BUYER will not sell or deliver any SELLER Products for use in California. Any warranty granted by SELLER is void if any goods covered by such warranty are used for any purpose not permitted hereunder.

17. EXPORT AND IMPORT LICENSES AND COMPLIANCE WITH LAWS: Unless otherwise expressly agreed, BUYER is responsible for obtaining any required export or import licenses necessary for Product delivery. BUYER will comply with all laws and regulations applicable to the installation or use of all Product, including applicable import and export control laws and regulations of the U.S., E.U., and any other country having proper jurisdiction, and will obtain all necessary export or import licenses in connection with any subsequent export, re-export, transfer, and use of all Product and technology delivered hereunder. BUYER will not sell, transfer, export, or re-export any SELLER Product or technology for use in activities which involve the design, development, production, use or stockpiling of nuclear, chemical, or biological weapons or missiles, nor use SELLER Product or technology in any facility which engages in activities relating to such weapons. BUYER will comply with all local, national, and other laws of all jurisdictions globally relating to anti-corruption, bribery, extortion, kickbacks, or similar matters which are applicable to BUYER's business activities in connection with this Contract, including but not limited to the U.S. Foreign Corrupt Practices Act of 1977, as amended (the "FCPA"). BUYER agrees that no payment of money or provision of anything of value will be offered, promised, paid, or transferred, directly or indirectly, by any person or entity, to any government official, government employee, or employee of any company owned in part by a government, political party, political party official, or candidate for any government office or political party office to induce such organizations or persons to use their authority or influence to obtain or retain an improper business advantage for BUYER or for SELLER, or which otherwise constitute or have the purpose or effect of public or commercial bribery, acceptance of or acquiescence in extortion, kickbacks, or other unlawful or improper means of

obtaining business or any improper advantage, with respect to any of BUYER's activities related to this Contract. SELLER asks BUYER to "Speak Up!" if aware of any violation of law, regulation, or our Code of Conduct ("CoC") in relation to this Contract. See www.danaherintegrity.com and www.danaher.com/how-we-work/integrity-and-compliance for a copy of the CoC and for access to our Helpline portal.

18. RELATIONSHIP OF PARTIES: BUYER is not an agent or representative of SELLER and will not present itself as such under any circumstances, unless and to the extent it has been formally screened by SELLER's compliance department and received a separate duly-authorized letter from SELLER setting forth the scope and limitations of such authorization.

19. FORCE MAJEURE: SELLER is excused from performance of its obligations under this Contract to the extent caused by acts or omissions that are beyond its control, including but not limited to Government embargoes, blockages, seizures or freezing of assets, delays, or refusals to grant an export or import license, or the suspension or revocation thereof, or any other acts of any Government; fires, floods, severe weather conditions, or any other acts of God; quarantines; epidemics and pandemics; labor strikes or lockouts; riots; strife; insurrections; civil disobedience or acts of criminals or terrorists; war; material shortages or delays in deliveries to SELLER by third parties. In the event of the existence of any force majeure circumstances, the period of time for delivery, payment terms, and payments under any letters of credit will be extended for a period of time equal to the period of delay. If the force majeure circumstances extend for six months, SELLER may, at its option, terminate this Contract without penalty and without being deemed in default or in breach thereof.

20. NON-ASSIGNMENT AND WAIVER: BUYER will not transfer or assign this Contract or any rights or interests hereunder without SELLER's prior written consent. Failure of either party to insist upon strict performance of any provision of this Contract, or to exercise any right or privilege contained herein, or the waiver of any breach of the terms or conditions of this Contract, will not be construed as thereafter waiving any such terms, conditions, rights, or privileges, and the same will continue and remain in force and effect as if no waiver had occurred.

21. FUNDS TRANSFERS: BUYER and SELLER both recognize that there is a risk of banking fraud when individuals impersonating a business demand payment under new mailing or banking transfer instructions. To avoid this risk, BUYER must verbally confirm any new or changed mailing or banking transfer instructions by calling SELLER and speaking with SELLER's Accounts Receivable Manager before transferring any monies using the new instructions. Both parties agree that they will not institute mailing or banking transfer instruction changes and require immediate payment under the new instructions, but will instead provide a ten (10) day grace period to verify any mailing or banking transfer instruction changes before any new or outstanding payments are due using the new instructions.

22. LIMITATION OF LIABILITY: None of SELLER, its successors-in-interest, assignees, affiliates, directors, officers, and employees will be liable to any BUYER Indemnified Parties under any circumstances for any special, treble, incidental, or consequential damages, including without limitation, damage to or loss of property other than for the Products purchased hereunder; damages incurred in installation, repair, or replacement; lost profits, revenue, or opportunity; loss of use; losses resulting from or related to downtime of the Products or inaccurate measurements or reporting; the cost of substitute products; or claims of any BUYER's Indemnified Parties' customers for such damages, howsoever caused, and whether based on warranty, contract, and/or tort (including negligence, strict liability or otherwise). The total liability of SELLER, its successors-in-interest, assignees, affiliates, directors, officers, and employees arising out of the performance or nonperformance hereunder, or SELLER's obligations in connection with the design, manufacture, sale, delivery, and/or use of Products, will in no circumstance exceed the amount actually paid to SELLER for Products delivered hereunder.

23. APPLICABLE LAW AND DISPUTE RESOLUTION: All issues relating to the construction, validity, interpretation, enforcement, and performance of this agreement and the rights and obligations of SELLER and the BUYER hereunder shall be governed by the laws of the Province of Ontario and the federal laws of Canada applicable therein. Any provisions of the International Sale of Goods Act or any convention on contracts for the international sale of goods shall not be applicable to this agreement. The parties submit to and consent to the non-exclusive jurisdiction of courts located in the Province of Ontario.

24. ENTIRE AGREEMENT, TERM & MODIFICATION: These Terms & Conditions of Sale constitute the entire agreement between the parties and supersede any prior agreements or representations, whether oral or written. Upon thirty (30) days prior written notice, SELLER may, in its sole discretion, elect to terminate any order for the sale of Products and provide a pro-rated refund for any pre-payment of undelivered Products. No change to or modification of these Terms & Conditions shall be binding upon SELLER unless in a written instrument specifically referencing that it is amending these Terms & Conditions of Sale and signed by an authorized representative of SELLER. SELLER rejects any additional or inconsistent Terms & Conditions of Sale offered by BUYER at any time, whether or not such terms or conditions materially alter the Terms & Conditions herein and irrespective of SELLER's acceptance of BUYER's order for the described goods and services.

Terms and Conditions Covering Sales of Configured-to-Order Projects and Systems

In addition to all terms and conditions above, the following sections apply to sales of Configured-to-Order Projects, Systems, and the like:

101. PAYMENT.

101.1 Payments will be made per the schedule of payment events set forth in Seller's Quotation; provided that if the Start-Up Date (as defined below) is less than 30 days after the Acceptance Date, 90% of the purchase price is due on or before the Start-Up Date.

101.2. In the event that achievement of a scheduled payment event is delayed or suspended due to the Buyer's convenience or other reasons for which the Buyer or its representatives is responsible, such payment event will be deemed to have occurred and Seller shall be entitled to invoice Buyer as if achievement of such payment event had been achieved. In such circumstances, Buyer must notify Seller in writing of the reasons for the delay and anticipated duration of the delay. Seller will mark the Products (or parts thereof) as the Buyer's property and shall store the Products (or parts thereof) in a segregated area until actual delivery.

102. DELIVERY

102.1 SELLER will request the BUYER to provide a firm date for delivery of the Products to the project site (the "Delivery Date") which SELLER will then use to establish the production schedule for the Products. The Delivery Date will then be binding on the BUYER except for any changes made in accordance with the provisions below.

102.2 The BUYER can request a rescheduling of the Delivery Date on one occasion only by notifying SELLER in writing not less than four weeks prior to the scheduled Delivery Date. The BUYER may request that the Delivery Date be extended by a period up to six weeks, without penalty, but may not request that the Delivery Date be moved forward. The BUYER may also request that the Delivery Date be extended beyond a six-week period but, SELLER may not agree to such extension, beyond the maximum six-week extension period

102.3 SELLER may, in its sole discretion, agree to change the Delivery Date on more than one occasion or if less than four weeks' prior notice is provided of a requested change, but is under no obligation to do so.

102.4 SELLER reserves the right to reschedule the Delivery Date to a date prior to or subsequent to the scheduled Delivery Date in order to accommodate its shipping, production or other requirements. This right to reschedule will be applicable unless otherwise agreed in writing by an authorized officer of SELLER. SELLER will provide the BUYER or its representative with a minimum of 24 hours' notice of any such rescheduling.

102.5 Where any change to the Delivery Date is made at BUYER's request, for all purposes with respect to the warranty and payment provided by SELLER in connection with the Products, the initial Delivery Date will be considered to be the Delivery Date regardless of any change later made to the Delivery Date.

103. ACCEPTANCE

103.1 During the period between the Delivery Date and the Start-up Date, the BUYER shall prepare the Products and the project site for installation and start-up and, unless otherwise agreed in writing by an authorized representative of SELLER, shall complete acceptance testing with respect to the Products. The Products shall be deemed to be accepted on the earliest to occur of the following dates (the "Acceptance Date"): (a) that date on which the Products can function in either manual or automatic operation and provide disinfection in accordance with criteria specified in the Quotation, or (b) 60 days after the Delivery Date.

103.2 All amounts which remain owing by the BUYER for the Products, including any amount which is specified to be payable on the Acceptance Date, will be paid by the BUYER to SELLER within 30 days after the Acceptance Date, unless otherwise agreed in writing by an authorized representative of SELLER.

103.3 Written notification must be given by the BUYER to SELLER within seven days after the Acceptance Date listing any outstanding deficiencies with respect to the Products and SELLER will use all reasonable efforts to correct such deficiencies promptly.

104. START-UP

104.1 SELLER will request a firm date for start-up of the Equipment (the "Start-Up Date"). Trojan will then schedule its technician to be on-site for the Start-up Date. The Start-up Date is binding except for any changes made in accordance with the provisions below.

104.2 On the Start-up Date, BUYER must have the Equipment and site ready as provided in the Installation Preparation Checklist contained in the Contractor Installation Package sent to BUYER and must have paid all amounts then due and payable to SELLER.

104.3 BUYER can request a rescheduling of the Start-up Date by notifying SELLER in writing not less than three weeks prior to the Start-up Date. BUYER may request that the Start-up Date be extended but may not request that the Start-up Date be moved forward. SELLER requires a minimum extension period of two weeks between the existing Start-up Date and the requested new Start-up Date in order to reschedule its technician.

104.4 SELLER may, in its sole discretion, agree to reschedule the Start-up Date where a BUYER requests less than a two-week extension but is under no obligation to do so. In the event that SELLER does agree to less than a two-week extension or that BUYER requests more than two changes to the Start-up Date, BUYER will be charged an administration fee in an amount determined by SELLER.

104.5 SELLER reserves the right to reschedule the Start-up Date to a date which is prior to or subsequent to the scheduled Start-up Date in order to accommodate its resource availability. This right to reschedule will be applicable unless otherwise agreed in writing by an authorized officer of SELLER. SELLER will provide BUYER or its representative with a minimum of 72 hours' notice of any such change to the Start-up Date.

104.6 In the event that SELLER'S technician arrives at the project site and finds that the Equipment or the project site is not ready for start-up as defined in the Contractor Installation Package, or any amounts then due and payable to SELLER remain unpaid, BUYER may either:

(a) provided all amounts then due and payable to SELLER have been paid, issue a purchase order for all costs involved in having SELLER correct the deficiencies, or

(b) have SELLER'S technician leave the site and then reschedule the Start-up Date to a date when all deficiencies will be corrected, and the Equipment will be ready for start-up as defined in the Contractor Installation Package. If BUYER selects this option, the cost of rescheduling will be not less than a minimum amount specified by SELLER, with the final cost being determined by SELLER based on its costs and expenses incurred in connection with the rescheduling.

**PALMDALE WATER DISTRICT
BOARD MEMORANDUM**

DATE: November 21, 2022 **November 28, 2022**
TO: BOARD OF DIRECTORS **Board Meeting**
FROM: Mr. Scott Rogers, Engineering Manager
VIA: Mr. Adam Ly, Assistant General Manager
Mr. Dennis D. LaMoreaux, General Manager
RE: ***AGENDA ITEM NO. 7.4 – CONSIDERATION AND POSSIBLE ACTION ON AUTHORIZING STAFF TO ENTER INTO A CONSTRUCTION CONTRACT WITH CEDRO CONSTRUCTION, INC. FOR THE WATER MAIN REPLACEMENT PROJECT IN AVENUE Q-6 AT 12TH STREET EAST. (\$189,595.00 NOT-TO-EXCEED – BUDGETED – W.O. NO. 20-609 – ENGINEERING MANAGER ROGERS)***

Recommendation:

Staff recommends that the Board award a contract to Cedro Construction, Inc. in the not-to-exceed amount of \$189,595.00 for the Avenue Q-6 at 12th Street East Water Main Replacement.

Alternative Options:

Reject all bids and rebid the project.

Impact of Taking No Action:

Increased water leakage.

Background:

The water main replacement is at 12th Street East on Avenue Q-6. The project consists of replacing approximately 424 linear feet of 6" asbestos cement pipe (AC pipe) and all appurtenances. The existing water mains will be replaced with 4" C900 PVC pipe.

Staff collected bids to include 4" ductile iron pipe, and a deduction pricing table for 4-inch C900 pipe. Due to material delays and the short run of 424 linear feet, C900 pipe is more readily available and cost effective for the proposed project. The total bid price in the bid proposal submitted with ductile iron pipe by Cedro Construction, Inc. was \$201,043.00 with a deduction value of \$11,448.00 for C900 pipe. The total bid price including the deduction is \$189,595.00. A bidder's bond in the amount of 10 percent of the total bid price was submitted with the bid proposal. The surety company providing the bid bond is Old Republic Surety Company.

BOARD OF DIRECTORS
PALMDALE WATER DISTRICT

VIA: Mr. Adam Ly, Assistant General Manager
Mr. Dennis D. LaMoreaux, General Manager

November 21, 2022

The criterion for responsibility pertains to whether the bidder is regularly engaged in this type of work and whether they can perform the work satisfactorily as promised. The contractor is required to provide payment and performance bonds to protect the District's interest.

Cedro Construction, Inc., as the lowest responsive, responsible bidder, holds a valid worker's compensation insurance policy (Policy number: 9207992) with State Compensation Insurance Fund effective from April 1, 2020 to April 1, 2023.)

The contractor's past performance record has been utilized to evaluate the general competency of the contractor for the performance of the work. To demonstrate the bidder's capability and experience of having completed similar projects successfully, the bid documents require that the contractor submit a list of all projects completed by the contractor during the last three years involving work of similar type and complexity and comparable value.

It is required that no less than 60 percent of the work be performed by the contractor's own forces without subcontracting. It appears that Cedro Construction, Inc. will perform 100 percent of the work and meets the limitations on the subcontracting work.

Responsiveness of the bid pertaining to compliance with the material terms of the bid documents has been reviewed and deemed acceptable.

Cedro Construction, Inc., as the lowest responsible bidder, has met the criterion of providing the lowest bid price of qualified firms at \$189,595.00. The lowest qualified bid price is \$8,753.00, or 4.5 percent, lower than the next lowest bidder.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiative No. 3 – Systems Efficiency.
This item directly relates to the District's Mission Statement.

Budget:

This item is budgeted will be covered as part of Work Order No. 20-609.

Supporting Documents:

- Bid Results Summary
- Proposal Package from Lowest Responsible Bidder

20-609 Bid Results Summary

				Cedro Construction, Inc.		TORO ENTERPRISES, INC.		J Vega Engineering Inc.	
Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total
1	Mobilization, Demolition, and Site Restoration	1	LS	\$23,927.00	\$23,927.00	\$40,000.00	\$40,000.00	\$32,000.00	\$32,000.00
2	Construction Staking Survey	1	LS	\$8,884.00	\$8,884.00	\$5,750.00	\$5,750.00	\$6,250.00	\$6,250.00
3	Sheeting, Shoring, and Bracing for all other work indicated	1	LS	\$2,369.00	\$2,369.00	\$3,000.00	\$3,000.00	\$9,500.00	\$9,500.00
4	Construct new 4" DIP water pipeline including bedding, backfill, and appurtenances	424	LF	\$251.00	\$106,424.00	\$215.00	\$91,160.00	\$256.00	\$108,544.00
5	Basing paving, Finish Paving, and Striping	1	LS	\$13,875.00	\$13,875.00	\$20,000.00	\$20,000.00	\$12,600.00	\$12,600.00
6	Traffic Control	1	LS	\$5,330.00	\$5,330.00	\$10,000.00	\$10,000.00	\$10,107.00	\$10,107.00
7	All materials and labor necessary for testing, disinfection, and chlorination	1	LS	\$7,143.00	\$7,143.00	\$6,600.00	\$6,600.00	\$5,800.00	\$5,800.00
8	Furnish and install 3/4" Metered Service, per PWD Std. W-1	4	EA	\$7,029.00	\$28,116.00	\$5,500.00	\$22,000.00	\$4,200.00	\$16,800.00
9	Furnish and install 2" Blow-Off Assembly per PWD Std. W-6	1	EA	\$4,975.00	\$4,975.00	\$9,590.00	\$9,590.00	\$9,510.00	\$9,510.00
Total					\$201,043.00		\$208,100.00		\$211,111.00
Deduction				Cedro Construction, Inc.		TORO ENTERPRISES, INC.		J Vega Engineering Inc.	
Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total	Unit Cost	Total	Unit Cost	Total
1	Add/Deduct: Construct new 4" C900 water pipeline,	424	LF	(\$27.00)	(\$11,448.00)	(\$23.00)	(\$9,752.00)	(\$10.00)	(\$4,240.00)
Total					(\$11,448.00)		(\$9,752.00)		(\$4,240.00)
				BID TOTAL:	\$ 189,595.00		198,348.0000		206,871.0000

PROPOSAL

BIDDER'S DECLARATION SPECIFICATION NO. 20-609

Gentlepersons:

The undersigned hereby proposes to perform all work for which a contract may be awarded them and to furnish any and all plant, labor, services, material, tools, equipment, supplies, transportation, utilities, and all other items and facilities necessary therefor as provided in the Contract Documents, and to do everything required therein for the construction of the interior building improvements as specifically set forth in documents entitled **Specification No. 20-609 - AVENUE Q6 AT 12 STREET EAST WAT** together with addenda thereto, all as set forth on the drawings and in the specifications and other Contract Documents (hereinafter the "Work"); and they further propose and agree that, if this Proposal is accepted, they will contract in the form and manner stipulated to perform all the Work called for by drawings, specifications, and other Contract Documents, and to complete all such Work in strict conformity therewith within the time limits set forth therein, and that they will accept as full payment therefor the prices set forth in the Bid Sheet(s) forming a part hereof.

(check one)

- Cash
- Cashier's check
- Certified check
- Bid Bond

properly made payable to Palmdale Water District, hereinafter designated as the Owner, for the sum of \$40,000.00 which amount is not less than ten percent (10%) of the total amount of this bid, is attached hereto and is given as a guarantee that the undersigned will execute the Agreement and furnish the required bonds and insurance if awarded the contract and, in case of failure to do so within the time provided, the

(check one)

- cash shall be retained as liquidated damages by the Owner
- proceeds of said check shall be retained as liquidated damages by the Owner
- Surety's liability to the Owner for the face amount of the Bond shall be considered as established.

It is understood and agreed that:

1. The undersigned has carefully examined all the Contract Documents, as defined in

the CONTRACT DOCUMENTS subsection of the Notice Inviting Bids, including, but not limited to, the bid quantities, any specifications regarding materials to be used, the contract provisions relating to payment for extra work and the procedures for seeking extensions of time.

2. The undersigned, by investigation at the site of the work, by review of any records available for inspection at the offices of utilities in the area affected by the Work, at any applicable public works departments, and otherwise, is satisfied as to the nature and location of the work and is fully informed as to all conditions and matters which can in any way affect the work or the cost thereof, including the location of all underground facilities in the area affected by the Work.

3. The undersigned fully understands the scope of the Work and has carefully checked all words and figures inserted in this Proposal and further understands that the Owner will in no way be responsible for any errors or omissions in the preparation of this Proposal.

4. The undersigned will execute the Agreement and furnish the required Performance and Payment Bonds and proof of insurance coverage within ten (10) days (not including Sundays and holidays) after Owner's notice of acceptance of this Proposal; and further, that, unless otherwise specified in the Special provisions, this Proposal may not be withdrawn for a period of forty-five (45) days after the date set for the opening thereof, notwithstanding the award of contract to another bidder. If the undersigned bidder withdraws this Proposal within said period, said bidder shall be liable under the provisions of the Bid Security, or said bidder and their surety shall be liable under the Bid Bond, as the case may be.

5. The undersigned hereby certifies that this Proposal is genuine and not sham or collusive or made in the interest or in behalf of any person not herein named, and the undersigned has not directly or indirectly induced or solicited any other bidder to put in a sham bid, or any other person, firm, or corporation to refrain from bidding; the undersigned has not in any manner sought by collusion to secure for themselves an advantage over any other bidder.

6. In conformance with current statutory requirement of the Labor Code of the State of California, the undersigned certifies as follows:

I am aware of the provisions of Section 3700 of the Labor Code which require 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.

NOW, in compliance with the Notice Inviting Bids and all the provisions hereinbefore stipulated, the undersigned, with full cognizance thereof, hereby proposes to perform the


entire work for the prices set forth in the attached Bid Sheet(s) upon which award of contract will be made.

The undersigned bidder declares that the license held by them is theirs, is current and valid, and is in a classification appropriate to the work to be undertaken.

The undersigned declares under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed at SANTA PAULA, California.

Dated NOVEMBER 14 2022

Bidder: CEDRO CONSTRUCTION INC.

By: 

Title: PRESIDENT/ CEO

Bidder's post-office address:

120 EAST SANTA MARIA STREET
SANTA PAULA, CA 93060

Telephone No.: 805-525-0599

Facsimile No.: 805-525-0509

Corporation organized under the laws of the State of CALIFORNIA

Contractor's License(s): 775943

Expiration Dates: 03-31-2024

Surety or sureties:

OLD REPUBLIC SURETY COMPANY

RS BONDING & INSURANCE AGENCY

CONTRACTORS ARE REQUIRED BY LAW TO BE LICENSED AND REGULATED BY THE CONTRACTORS' STATE LICENSE BOARD WHICH HAS JURISDICTION TO INVESTIGATE COMPLAINTS AGAINST CONTRACTORS IF A COMPLAINT IS FILED WITHIN THREE YEARS OF THE DATE OF THE ALLEGED VIOLATION. ANY QUESTIONS CONCERNING A CONTRACTOR MAY BE REFERRED TO THE REGISTRAR, CONTRACTORS' STATE LICENSE BOARD, P.O. BOX 26000, SACRAMENTO, CALIFORNIA 95826.



INFORMATION REQUIRED OF BIDDER

SITE INSPECTION REVIEW -- Describe when, by whom, and in what manner (a) the site for this proposed work was inspected on behalf of the bidder (NOTE: Failure to demonstrate diligent effort in ascertaining site conditions which may affect the Work will render this Proposal informal or nonresponsive and may result in its rejection):

ANDREW CEDRO INSPECTED AND WALKED THE SITE AND REVIEWED PLANS AND SPECS

ON NOVEMBER 3, 2022 ON BEHALF OF CEDRO CONSTRUCTION FOR SPEC NO 20-609 AVENUE

Q6 AT 12TH STREET EAST WATER MAIN REPLACEMENT PROJECT FOR PALMDALE

WATER DISTRICT.

COMPARABLE PROJECT EXPERIENCE -- In accordance with the REGISTRATION OF CONTRACTORS subsection of the Instructions to Bidders, describe at least five (5) comparable projects completed by bidder within past thirty-six (36) month period, including dates completed, location of work, size of project in dollars, names, addresses, and phone numbers of persons in charge of project construction, and the name and address of the public agency or firm for whom the project was constructed (NOTE: Failure to include at least five (5) jobs similar in size and scope to that contemplated under the Contract Documents will render this Proposal informal or non-responsive and may result in its rejection):

1. SCV WATER AGENCY - 6521 SUMMIT CIRCLE SANTA CLARITA, CA 91350

WESTRIDGE PARKWAY WATER MAIN EXTENSION - WILLIAM SEITZ 949-300-9132

\$3,112,332.00 COMPLETED 05-25-2021 STEVENSON RANCH

2. CITY OF ARCADIA - 240 HUNTINGTON DRIVE, ARCADIA CA 91007

CAMINO REAL AVENUE BETWEEN 6TH & 8TH AVE - REPLACE WATER MAIN

TIFFANY LEE 626-626-2721 \$558,434.00 COMPLETED 10-17-2020 ARCADIA

SEE ATTACHED FORM FOR PROJECT EXPERIENCE CONTINUED

INFORMATION REQUIRED OF BIDDER

PROJECT EXPERIENCE

CONTINUED - PAGE 2

CITY OF VERNON
4305 S SANTA FE AVENUE
VERNON, CA 90058
MARK AUMENTADO/JOANNA MORENO
323-583-8811

50TH STREET WATER MAIN CONSTRUCTION - \$964,976.00 11-05-2021

CITY OF SAN BUENAVENTURA
501 POLI STREET
VENTURA, CA 93001
ERNIE FERRER
805-677-3905

YNEZ STREET AREA STORM DRAIN TRANSMISSION LINE –\$433,759.40 12-27-2019

MONTECITO WATER DISTRICT
583 SAN YSIDRO ROAD
MONTECITO, CA 93108
DAVID WONG
805-969-2271

WATER MAIN REPLACEMENT – P49 - \$1,044,215.04 11/01/ 2021

CONTRACTOR'S LICENSING STATEMENT

The undersigned is licensed in accordance with the laws of the State of California providing for the registration of Contractors.

Contractor's License Number(s), Type(s) and Expiration Date(s): 775943 GENERAL
"A" ENGINEERING

Expiration Date: 03-31-2024

Name of Individual Contractor (print or type): _____

Signature of Owner: _____

Business Address: _____

or

Name of Partnership or Firm: _____

Business Address: _____

Signature, name, title and address of partners signing on behalf of the partnership:

Signed: _____ Name: _____

Title: _____ Address: _____

Signed: _____ Name: _____

Title: _____ Address: _____

Signed: _____ Name: _____

Title: _____ Address: _____

or

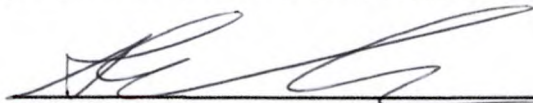
Name of Corporation: CEDRO CONSTRUCTION, INC.

Business Address: 120 EAST SANTA MARIA STREET, SANTA PAULA, CA 93060

Corporation organized under the laws of the State of CALIFORNIA

CEDRO CONSTRUCTION, INC.

SEAL



Signature of Secretary of Corporation

NOTE: CURRENT COPIES OF ALL APPLICABLE LICENSES MUST BE DOWNLOADED TO THE PROCUREMENT WEBSITE.

MANDATORY FORM

(NOTE: THE FOLLOWING FORM SHALL BE USED WHERE THE BIDDER DESIRES TO FURNISH A BOND INSTEAD OR CHECK OR CASH.)

BID SECURITY FORM

BID BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, Cedro Construction, Inc. as principal and Old Republic Surety Company as surety, are held and firmly bound unto Palmdale Water District (hereinafter "Owner,") in the sum of \$^{Forty Thousand and 00/100}Dollars (\$40,000.00), to be paid to the Owner, its successors, and assigns, for which payment, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if the certain Proposal of the above Principal for construction of the Avenue Q-6 At 12th Street East Water Main Replacement as specifically set forth in documents entitled Specification No. 20-609

all in accordance with the Contract Documents, including specifications and drawings on file at the offices of the Owner, is not withdrawn within the period of forty-five (45) days after the date set for the opening of bids or as otherwise provided in the Special Provisions, notwithstanding the award of the contract to another bidder, and that if said Proposal is accepted by the Owner through action of its legally constituted contracting authorities and if the above bound principal, its heirs, executors, administrators, successors and assigns, shall duly enter into and execute a contract for such construction and shall execute and deliver

MANDATORY FORM

the required Performance and Payment Bonds and proof of insurance coverage within ten (10) days (not including Sundays and holidays) after the date of notifications by and from said Owner, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

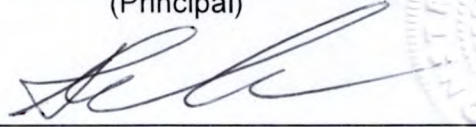
IN WITNESS WHEREOF, we hereunto set our hands and seals this 7th day of November, 20 22

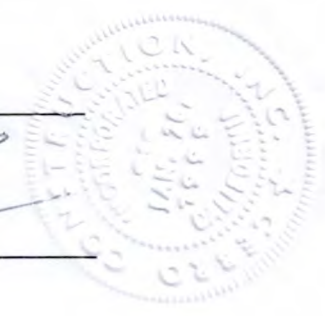
(SEAL)

Cedro Construction, Inc.

(Principal)

By



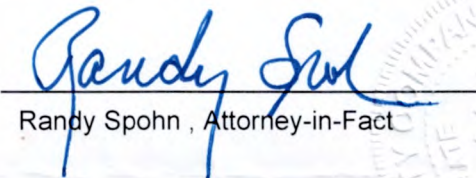


(SEAL)

Old Republic Surety Company

(Surety)

By


Randy Spohn, Attorney-in-Fact



NOTE:

- (1) This bid bond form is a **mandatory form**.
- (2) The bid bond form should specify an exact number of dollars which shall not be less than ten percent (10%) of the total amount of the bid.
- (3) The bid bond form must be acknowledged before notary publics, and a legally sufficient power of attorney must be attached to the bid bond to verify the authority of the party signing on behalf of the surety.



OLD REPUBLIC SURETY COMPANY

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That OLD REPUBLIC SURETY COMPANY, a Wisconsin stock insurance corporation, does make, constitute and appoint:

Randy Spohn, Matthew R. Dobyns, Hamilton Kenney, Ashley M. Spohn of Santa Ana, CA

its true and lawful Attorney(s)-in-Fact, with full power and authority for and on behalf of the company as surety, to execute and deliver and affix the seal of the company thereto (if a seal is required), bonds, undertakings, recognizances or other written obligations in the nature thereof, **(other than bail bonds, bank depository bonds, mortgage deficiency bonds, mortgage guaranty bonds, guarantees of installment paper and note guaranty bonds, self-insurance workers compensation bonds guaranteeing payment of benefits, or black lung bonds)**, as follows:

ALL WRITTEN INSTRUMENTS

and to bind OLD REPUBLIC SURETY COMPANY thereby, and all of the acts of said Attorneys-in-Fact, pursuant to these presents, are ratified and confirmed. This appointment is made under and by authority of the board of directors at a special meeting held on February 18, 1982.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following resolutions adopted by the board of directors of the OLD REPUBLIC SURETY COMPANY on February 18, 1982.

RESOLVED that, the president, any vice-president or assistant vice president, in conjunction with the secretary or any assistant secretary, may appoint attorneys-in-fact or agents with authority as defined or limited in the instrument evidencing the appointment in each case, for and on behalf of the company to execute and deliver and affix the seal of the company to bonds, undertakings, recognizances, and suretyship obligations of all kinds; and said officers may remove any such attorney-in-fact or agent and revoke any Power of Attorney previously granted to such person.

RESOLVED FURTHER, that any bond, undertaking, recognizance, or suretyship obligation shall be valid and binding upon the Company

- (i) when signed by the president, any vice president or assistant vice president, and attested and sealed (if a seal be required) by any secretary or assistant secretary; or
- (ii) when signed by the president, any vice president or assistant vice president, secretary or assistant secretary, and countersigned and sealed (if a seal be required) by a duly authorized attorney-in-fact or agent; or
- (iii) when duly executed and sealed (if a seal be required) by one or more attorneys-in-fact or agents pursuant to and within the limits of the authority evidenced by the Power of Attorney issued by the company to such person or persons.

RESOLVED FURTHER that the signature of any authorized officer and the seal of the company may be affixed by facsimile to any Power of Attorney or certification thereof authorizing the execution and delivery of any bond, undertaking, recognizance, or other suretyship obligations of the company; and such signature and seal when so used shall have the same force and effect as though manually affixed.

IN WITNESS WHEREOF, OLD REPUBLIC SURETY COMPANY has caused these presents to be signed by its proper officer, and its corporate seal to be affixed this 11th day of August, 2022.

Karen J. Haffner
Assistant Secretary



Alan Pavlic
President

STATE OF WISCONSIN, COUNTY OF WAUKESHA - SS

On this 11th day of August, 2022, personally came before me, Alan Pavlic and Karen J Haffner, to me known to be the individuals and officers of the OLD REPUBLIC SURETY COMPANY who executed the above instrument, and they each acknowledged the execution of the same, and being by me duly sworn, did severally depose and say: that they are the said officers of the corporation aforesaid, and that the seal affixed to the above instrument is the seal of the corporation, and that said corporate seal and their signatures as such officers were duly affixed and subscribed to the said instrument by the authority of the board of directors of said corporation.



Kathryn R. Pearson
Notary Public

My Commission Expires: September 28, 2026
(Expiration of notary's commission does not invalidate this instrument)

CERTIFICATE

I, the undersigned, assistant secretary of the OLD REPUBLIC SURETY COMPANY, a Wisconsin corporation, CERTIFY that the foregoing and attached Power of Attorney remains in full force and has not been revoked; and furthermore, that the Resolutions of the board of directors set forth in the Power of Attorney, are now in force.

74 7097



Signed and sealed at the City of Brookfield, WI this 7th day of November, 2022.

Karen J. Haffner
Assistant Secretary

ORSC 22262 (3-06)

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of CALIFORNIA

County of ORANGE

On November 7th, 2022 before me, ERIKA G. MORGAN, NOTARY PUBLIC,

personally appeared RANDY SPOHN,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity (ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature of Notary

OPTIONAL

Though the data below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent reattachment of this form.

CAPACITY CLAIMED BY SIGNER	DESCRIPTION OF ATTACHED DOCUMENT
<input type="checkbox"/> INDIVIDUAL	_____
<input type="checkbox"/> CORPORATE OFFICER	_____
<input type="checkbox"/> PARTNER(S) <input type="checkbox"/> LIMITED	_____
<input checked="" type="checkbox"/> ATTORNEY-IN-FACT	_____
<input type="checkbox"/> TRUSTEE(S)	_____
<input type="checkbox"/> GUARDIAN/CONSERVATOR	_____
<input type="checkbox"/> OTHER: _____	_____
SIGNER IS REPRESENTING:	_____
NAME OF PERSON(S) OR ENTITY(IES)	_____

TO BE EXECUTED BY EACH BIDDER

NON-COLLUSION AFFIDAVIT

STATE OF CALIFORNIA)
)SS
COUNTY OF VENTURA)

ANDREW CEDRO, being first duly sworn, declares that he/she is
[NAME]
PRESIDENT/SECRETARY of CEDRO CONSTRUCTION, INC.
(SOLE OWNER, A PARTNER, PRESIDENT, SECRETARY, ETC.) (IDENTITY OF BIDDER)

the party submitting a bid for a contract covering Specification No. 20-609

AVENUE Q-6@12 STREET EAST WATER MAIN REPLACEMENT PROJECT
(DESCRIBE NATURE OF CONTRACT)

that such a bid is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization, or corporation; that such bid is genuine and not collusive or sham; that said bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, nor that anyone shall refrain from bidding; that said bidder has not in any manner, directly or indirectly, sought by agreement, communications or conference with anyone to fix the bid price of said bidder or any other bidder, nor to fix any overhead, profit, or cost element of such bid price, nor of that of any other bidder, nor to secure any advantage against the public body awarding the contract or anyone interested in the proposed contract; that all statements contained in such bid are true; and, further, that said bidder has not, directly or indirectly, submitted their bid price or any breakdown thereof, nor the contents thereof, nor divulged information or data relative thereto, nor paid and will not pay any fee in connection therewith to any corporation, partnership, company, association, organization, bid depository, nor to any member or agent thereof, nor to any other individual except to such person or persons as have a partnership or other financial interest with said bidder in their general business.

The provisions of this affidavit shall not be held as disqualifying a person, firm or corporation who has submitted a sub-proposal to one bidder from submitting separate sub-proposals or quoting prices for materials or work to other bidders.

Dated: 11-14-22

Signed: [Signature]

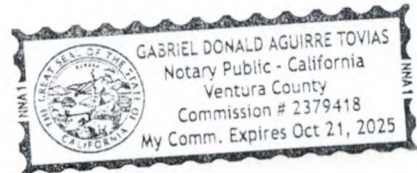
PRESIDENT/SECRETARY
[TITLE]

Subscribed and sworn to before me this 14th day of November, 20 22, by

Andrzej Cedro, proved to me on the basis of satisfactory evidence to be the person who appeared before me.

[Signature]
Notary Public

SEAL



INFORMATION REQUIRED OF BIDDER

EQUIPMENT/MATERIAL SOURCE INFORMATION

The bidder shall indicate opposite each item of equipment or material listed below, the name of the manufacturer or supplier of the equipment or material proposed to be furnished under the bid.

Failure to comply with this requirement will render the proposal informal and may cause its rejection.

Awarding of a contract under this bid will not imply approval by the Owner of the manufacturers or suppliers listed by the bidder. No substitution will be permitted after award of contract unless equipment or material of the listed manufacturer or supplier cannot meet the specifications.

Specification No.	Equipment/Material	Manufacturer/Supplier	Delivery Time (weeks)
2-04	Ductile Iron Pipe and Fittings	US PIPE/SIP FITTINGS	24-30/18-20 WKS
3-05	Blow-Off Assemblies	FORD METER BOX	28-30 WEEKS
4-21(b)	Tapping for DI Pipe (Sleeve, Valve, etc)	MUELLER COMPANY	8 WEEKS
5-0	Service Connection Materials	FORD METER BOX	28-30 WEEKS

LIST OF PROPOSED SUBSTITUTIONS

The bidder may name a proposed substitute manufacturer and/or equipment/material with an add or deduct amount which will be considered after award. The Contract award, if any, will be on Base Bid amounts.

<u>Spec Section</u>	<u>Equipment/Manufacturer</u>	<u>Add</u> (\$)	<u>Deduct</u> (\$)
<u>2-04</u>	<u>DUCTILE IRON PIPE AND FITTINGS</u>	<u>-0-</u>	<u>-0-</u>
<u>3-05</u>	<u>BLOW OFF ASSEMBLIES</u>	<u>-0-</u>	<u>-0-</u>
<u>4-21 (B)</u>	<u>TAPPING FOR DI PIP (SLEEVE, VALVE, ETC)</u>	<u>-0-</u>	<u>-0-</u>
<u>5-0</u>	<u>SERVICE CONNECTION MATERIALS</u>	<u>-0-</u>	<u>-0-</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>

**PALMDALE WATER DISTRICT
BOARD MEMORANDUM**

DATE: November 21, 2022 **November 28, 2022**
TO: BOARD OF DIRECTORS **Board Meeting**
FROM: Mr. Dennis D. LaMoreaux, General Manager
RE: *AGENDA ITEM NO. 7.5 – CONSIDERATION AND POSSIBLE ACTION ON CANCELLING THE SECOND REGULAR BOARD MEETING IN DECEMBER, DECEMBER 26, 2022, DUE TO THE DISTRICT’S SCHEDULED OFFICE CLOSURE. (NO BUDGET IMPACT – GENERAL MANAGER LaMOREAUX)*

Recommendation:

Staff recommends that the second Regular Board Meeting in December, December 26, 2022, be cancelled due to the scheduled office closure.

Alternative Options:

The second Regular Board Meeting in December could be rescheduled to an earlier time in December.

Impact of Taking No Action:

The second Regular Board Meeting in December will not be held.

Background:

For the past several years, the District has closed from Christmas through New Year’s as a cost saving measure with the Board of Directors cancelling the second Regular Board Meeting in December due to this closure. This year's closure begins December 26, 2022 with the office reopening January 2, 2022.

Strategic Plan Initiative:

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

Budget:

Cancelling the second Regular Board Meeting in December will not affect the budget.



Conference/Training Request

Event Name/Date(s):

The 11th American Water Summit-Re-thinking Water/January 24 - 26, 2023

REQUESTED BY:

First Name

Last Name

Date

ACCOMMODATION INFORMATION (If applicable)

Rooms and rates are subject to availability. Complete and submit this form as soon as possible as reservation blocks at host hotels book quickly. In the event that the host hotel is full, every effort will be made to secure a room at the nearest hotel within comparable rates.

Arrival Date

Departure Date

No. of
Guests

Room Type

Dietary Restrictions?

If yes, please provide specifics in additional info. box

Yes No

Smoking Room?

Yes No

Flight Needed?

If yes, please provide DL# and D.O.B. in additional info. box

Yes No

Flight Numbers

Departure/Return
Times

**ADDITIONAL INFORMATION/
REQUESTS**

Supervisor Approval
(If applicable)

Processed By:



The 11th American Water Summit - Re-thinking Water

January 24th - 26th 2023

Los Angeles Airport Marriott
5855 W Century Blvd
Los Angeles , CA 90045
United States

Contact us: +44 (0) 1865204208 [!\[\]\(9dfdaff1d86ba3c1f8353b4d1b61b8c5_img.jpg\) Email Us \(/events/the-11th-american-water-summit-re-thinking-water/877397aa7e5590ce92fbae7fd2c8fa10/customer_inquiries/new\)](mailto:Email Us (/events/the-11th-american-water-summit-re-thinking-water/877397aa7e5590ce92fbae7fd2c8fa10/customer_inquiries/new))

Are you purchasing for yourself or someone else?

- I am personally attending the conference
- I am purchasing for someone else and not personally attending the conference

Start your registration

*** (required) Delegate's Email**

*** (required) Email confirmation**

*** (required) Attendee type**

- Delegate: \$2275.00

Discount code

You can also register a group. [Learn More](#)
Register 5 for 4. Lowest priced delegate for free.



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CONTINUE

Description

It's time to change the way we think about water.

Water and climate change are on a deadly collision course in the western United States. Three hard years of drought have brought a new urgency to the way we think about carbon, the environment and water. Now is the moment for challenging sector norms, for developing new ideas and resetting our goals. It is the moment for **Rethinking Water**.

Taking place in Los Angeles, a city pioneering innovative water reuse strategies, the American Water Summit will explore key drivers that are fuelling transformative change across the continent. Increasing demands on infrastructure, dwindling resource pools and an ever-changing regulatory landscape all require water systems that work better for us, as well as our planet. With insights from the policy-makers, the regulatory and investment communities, as well as the water leaders of America, the 2023 American Water Summit will tackle the key questions that are vital to channeling action in the water industry.

- How do we reimagine our water systems to be both climate resilient and zero carbon?
- How do we fund new regulatory requirements while keeping charges equitable and affordable?
- How do we harness the momentum to scale up reuse and sludge management breakthroughs?

Join us as we explore the technologies, shape the policies, and challenge the mindsets that will help us change the way we think about water.

Track filters:

ACCOMMODATION

CONTACT

REGISTER

Industrial

Money

Municipal

Day 1 - 25th January

07:30-08:45

Registration and One-to-One Networking

Sponsored by:



Your facility to book key meetings during the American Water Summit. More information about the AWS app will be released shortly.

09:00-10:30

Opening Plenary: Re-Thinking Water

We are bringing together some of the leading thinkers in our industry to outline their vision of America's water future at this time of extraordinary change. Drought, inflation, climate change, new funding flows, new technologies: everything is in play.

Speakers:

- **Marty Adams**, General Manager & Chief Engineer, Los Angeles Department of Water & Power (LADWP)
- **Adel Hagekhalil**, General Manager & CEO, The Metropolitan Water District of South California (MWDSC)
- **Brenda Burman**, General Manager, Central Arizona Project (CAP)

10:30-11:00 **Coffee Break**

One-to-One Networking

Sponsored by:



Your facility to book key meetings during the American Water Summit. More information about the AWS app will be released shortly.

11:00-12:30 **Roundtables: 30 Crucial Questions for Water in 2023**

Sponsored by:



GW's ever popular roundtable format returns to address the 30 most important issues shaping America's water industry in 2023.

12:30-14:00

One-to-One Networking

Sponsored by:



Your facility to book key meetings during the American Water Summit. More information about the AWS app will be released shortly.

Lunch

14:00-15:30

Re-Thinking Industrial Water

How are corporate water strategies evolving to meet the needs of industrial end-users today? Industry is facing pressures from all sides – intensifying climate events, tightening pollutant regulations and a growing global focus on environmental sustainability. Especially in the severely drought-stricken southwestern US, water-reliant industrial end-users have no choice but to set aggressive targets and implement reuse practices in order to ensure operational continuity. Corporate sustainability leaders will discuss how these challenges are influencing their 2030 objectives, the value of reuse to business resilience, and how they will execute water strategies in a world where capital and operating costs are rising.

Moderator:

- **Rob Simm**, Senior Vice President, Water, Stantec

Speakers:

- **Sandy Fabritz**, Director of Water Strategy, Freeport McMoRan
- **Kim Dirks**, Senior Director, EHS Operations, Tyson Foods
- **Zac Rosenbaum**, Facilities Director, Samsung Austin Semiconductor

The Big Squeeze

The American water sector is facing a big squeeze. Input prices are rising quickly, public resistance to tariff increases is growing, and interest rates are ratchetting upwards month on month. How are the treasurers and finance directors planning to manage the crisis?

Moderators:

- **Debra Coy**, Principal of Svanda & Coy Consulting and an advisor to XPV Water Partners
- **Heike Doerr**, Principal Analyst, U.S. Water Utilities, Regulatory & Financial, S&P Global Market Intelligence

Speakers:

- **Fidelis Malembeka, Jr.**, CFO, City of Jackson, MS
- **Karen Pallansch**, CEO, Alexandria Renew Enterprises

LUOW Inauguration: What do the best do

differently?

Sponsored by:

Jacobs

61 Gold Standard utilities have already been inaugurated into the LUOW Network. Join both old and new members as they share their outstanding achievements and find out what they plan to do differently over the next 5 years.

Moderator(s):

- **Howard Neukrug**, Deputy Chair, Leading Utilities of the World

Speakers:

- **Kevin Shafer**, Executive Director, Milwaukee Metropolitan Sewerage District (MMSD)
- **Chuck Carden**, General Manager, Tampa Bay Water

15:30-16:00

Coffee Break

One-to-One Networking

Sponsored by:



Your facility to book key meetings during the American Water Summit. More information about the AWS app will be released shortly.

16:00-17:30

Water and the Climate Imperative

The loudest message from this year's drought was the need to take climate change seriously and utilities are taking it upon themselves to be part of the solution. It is imperative for them to take a holistic view of their emissions, from energy emissions to methane and nitrous oxide to achieve their ambitions for themselves, their cities and the planet. How are utilities rising to the challenge?

Moderator:

- **Art Umble**, Senior Vice President, Water Institute Technology & Policy, Stantec

Speakers:

- **Mami Hara**, CEO, U.S. Water Alliance
- **Bill Barber**, Technical Director, Cambi
- **Elizabeth Crosson**, Chief Sustainability, Resiliency and Innovation Officer, Metropolitan Water District of Southern California
- **Mark Knight**, Global Sustainability & ESG Leader, Veolia Water Technologies & Solutions
- **Per Holm**, CEO, BlueKolding

Averting a Supply Chain Meltdown

For the last 20 years America's water infrastructure has been built on fixed-price contracts, long payment terms, and global

built on fixed-price contracts, long payment terms, and global equipment supply networks. These are becoming impossible to sustain. Here we bring together some of the most important players from across the supply chain to discuss the challenges and avert a crisis.

Moderator:

- **David Rose**, Partner, Thales Water Advisors

Speakers:

- **Mirka Wilderer**, CEO, De Nora Water
- **Jill Hudkins**, President, Resilient & Sustainable Infrastructure, Tetra Tech

Are we ready for Water-Positive?

Water-Positive is the new standard for corporate water stewardship, but there is currently no universally accepted framework or definition associated with this ambition. The session will make sense of how different industries view Water-Positive and whether an agreed framework applicable across industry is needed in order to maximize its impact. Corporate water pioneers will discuss the merits and pitfalls of such a framework.

Speakers:

- **Paul Reig**, Founder, Bluerisk
- **Hishmi Jamil Husain**, Head of Corporate Sustainability & Biodiversity, Tata Steel

17:30-18:00

One-to-One Networking

Sponsored by:



Your facility to book key meetings during the American Water Summit. More information about the AWS app will be released shortly.

18:00-22:00 Drinks Reception and Gala Dinner

Day 2 – Thursday 26th

Social Media

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Track filters:

ACCOMMODATION

CONTACT

REGISTER

Industrial

Money

Municipal

Day 2 - 26th January

07:30-08:15

Registration and One-to-One Networking

Sponsored by:



Your facility to book key meetings during the American Water Summit. More information about the AWS app will be released shortly.

08:30-09:30

Opening Plenary: Water Leadership Panel

It is a pivotal moment for water in America; an extreme drought coinciding with an economic crisis. Leadership matters more than ever. We've brought together some of the most influential CEOs in the industry to discuss the imperatives and the opportunities in the current environment.

Moderator:

- Andy Seidel, CEO, UGSI Solutions

Speakers:

- **Ryan Roberts**, Executive Vice President and Business Operating Unit Leader, Stantec
- Karine Rougé, CEO - Municipal Water, Veolia North America
- **Patrick Decker**, President and CEO, Xylem

10:00-10:30

One-to-One Networking

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Coffee Break

10:00-11:30

Roundtables: Big Plans and Urgent Technologies

This second session of roundtable discussions focuses on major projects and key innovations around the Re-Thinking Water theme. There will be \$5 billion of business opportunity under discussion alongside the innovations that will shape

the US water sector over the next decade.

Roundtables:

Operation NEXT LA, CA
Rafael Villegas- *Managing
Water Utility Engineer, Los
Angeles Department of
Water and Power*

**LA Advanced Water
Purification Facility, CA**
Jesus Gonzalez- *Manager
of Recycled Water
Program, Los Angeles
Department of Water and
Power*

**PureWater San
Francisco**

Manisha Kothari- San
Francisco PUC

WRD saline plume, CA
Rob Beste- *Assistant
General Manager, Water
Replenishment District of
Southe Califoia*

**Pure Water Southern
California, CA**
Rajen Budhia- *Water
Resource Engineer II,
MWDSC*

**El Paso BWRO
expansion and direct
potable reuse, TX.**
Scott Reinert- *Water
Resources Manager, El
Paso Water Utilities*

**Cave Creek Water
Reclamation Plant
Expansion**
Nazario Prieto- *Assistant
Water Services Director,
City of Phoenix*

**Tampa Bay surface
water expansion, FL**
Adrienne Arceri- *Project
Manager, Tampa Bay
Water*

Watershed Connect, CA
Adekunle Ojo- *Water
Resource Manager, San*

**Eastern Municipal
Water District brine
reduction, CA**

*Beardino Valley Municipal
Water District*

**Joe Mouawad- General
Manager, Eastern
Municipal Water District**

11:45-13:00

Monetizing the Circular Economy

If we are rethinking water, let's start bold. Can wastewater treatment pay for itself? It is not such a crazy proposition when you consider all the different ways to recover value from it. As water utilities embrace the cutting edge of circular economy, how can revenue streams from reuse and resource recovery be secured?

Speakers:

- **Mike Markus**, General Manager, Orange Country Water District
- **Pascual Fernandez-Martinez**, CEO, Canal des Isabel II
- **Rik Thijssen**, Director Business Development & Innovation, Vitens
- **Juan Carlos Guerreiro**, Director of Public Utilities, City of San Diego
- Yaniv Scherson, COO, Anaergia
- Harry Seely, Principal, WestWater Research

The Productivity Imperative

Rising wages, static tariffs and increased consumable costs leave utility operators with one imperative: to improve productivity. How are those at the sharp end of operations thinking about this challenge? Does it add up to a big opportunity for digital technologies?

What do ESG investors want from water?

How do ESG investors see the opportunity in getting water right? Do they see beyond the box ticking exercise to the value that water represents? If so, what do they look out for, and what would they like to see more of?

Moderator:

- **Amanda Brock**, CEO Aris Water Solutions

Speakers:

- **Aymen Karoui**, Director, Methodology & Portfolio Research, Sustainalytics
- **Evan Kaufman**, Principal, Global Impact, KKR
- **Kirsten James**, Senior Program Director, Water, Ceres

13:00-14:00

One-to-One Networking

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Lunch

14:00-15:15

Confronting the Brine Crisis

Salt has been building up in the water systems of the

Western United States for decades. Now as we look to take water efficiency and unconventional resource development to new high levels, radical solutions are needed. What are they?

Moderator

- Dr Amy Childeress, Professor and Director of Environmental Engineering Program, University of Southern California Viterbi School of Engineering

Speakers

- **Peter Fiske**, Director, National Alliance for Water Innovation (NAWI)
- **Jeff Mosher**, General Manager, Santa Ana Watershed Project Authority (SAWPA)
- Greg Woodside, Executive Director of Planning and Natural Resources, Orange County Water District (OCWD)
- **Scott Reinert**- Chairman of the Multi State Salinity Coalition and Water Resources Manager, El Paso Water

The New Landscape for Financing

The federal government has made big commitments to investment in water infrastructure. The amounts are enough to transform the outlook for the sector at this crucial moment, but there are still challenges and obstacles to deployment. How does the sector move forward, and what does this mean for other sources of funding?

Moderator:

- Francesca McCann, Business Development Director -
InfraManagement Group, Black & Veatch

Speakers:

- **Michael Deane**, Chief, Clean Water State Revolving Fund, EPA
- **Chris Shaffner**, Senior VP, Water & Community Facilities, CoBank

12 Crucial Technologies for Accelerating Reuse in Industry

Which technologies will have the biggest impact on expanding the scope of industrial water reuse? A wealth of innovative solutions from brine concentration to digital optimization will be critical to maintaining business continuity while prioritizing water quality and cost-effectiveness.

Whether your focus is microelectronics or mining, food &

beverage or pharmaceuticals, this session will provide the solutions you need to close the loop and safeguard your operations against water scarcity.

Moderators:

- **Tom Pankratz**, Editor, Water Desalination Report (WDR)
- **Charlotte Oakes**, Technology Editor, Global Water Intelligence (GWI)

Speakers:

- **Orianna Bretschger**, CEO, Aquacyl
- **Greg Newbloom**, CEO, Membrion
- **Alex Rappaport**, CEO, ZwitterCo
- **Craig Beckman**, CEO, Aqua Membranes
- **Maher Damak**, Co-Founder and CEO, Infinite Cooling
- **Micahel Carlson**, CTO & Co-Founder, CarboNet

15:30-16:30

The Great PFAS Debate: Parts per quadrillion regulation, sense or non-sense?

Per-and-polyfluoroalkyl substances are undoubtedly hazardous to human health even in small quantities, but are they so dangerous that they need regulating down to the parts per quadrillion level? Does the science justify such limits? Would America be safer if the same money was spent on other measures to protect public health? You be the judge. Listen to both sides of the argument and then vote for the winner in what is sure to be a historic debate.

Moderator:

- **Howard Neukrug**, Deputy Chair, Leading Utilities of the World

Speakers:

- **Erin Brockovich**, President, Brockovich Research & Consulting
- **Joseph Cotruvo**, President, Joseph Cotruvo & Associates LLC

Day 1 – Wednesday 25th

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COMPANIES ▾

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Contact [Haley Oryell](#) if you have any questions.

Los Angeles Airport Marriott

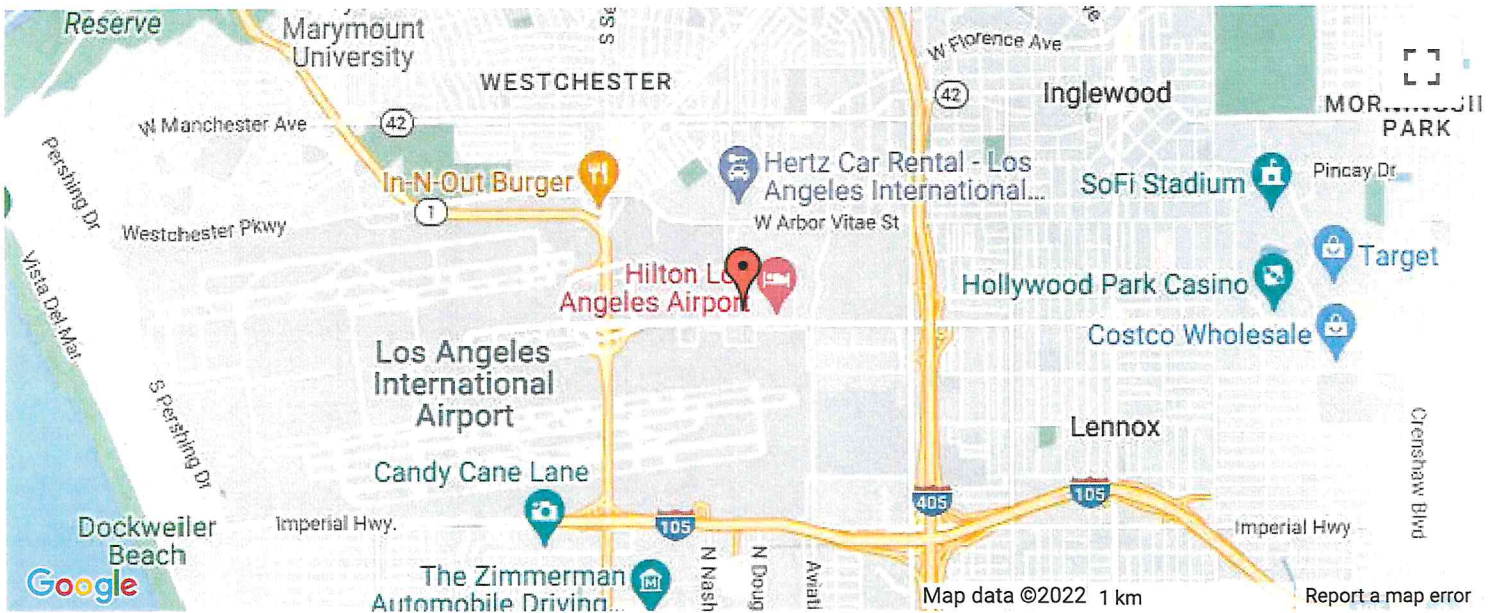
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MINUTES OF MEETING OF THE FINANCE COMMITTEE OF THE PALMDALE WATER DISTRICT, OCTOBER 18, 2022:

A meeting of the Finance Committee of the Palmdale Water District was held Tuesday, October 18, 2022, at 2029 East Avenue Q, Palmdale, CA 93550 and via teleconference. Chair Wilson called the meeting to order at 1:30 p.m.

1) Roll Call.

Attendance:

Committee:

Don Wilson, Chair

Gloria Dizmang, Committee Member

Others Present:

Dennis LaMoreaux, General Manager

Adam Ly, Assistant General Manager

Dennis Hoffmeyer, Finance Manager

Judy Shay, Public Affairs Director

Diana Gunn, Accounting Supervisor

Tara Rosati, Customer Care Supervisor

Bob Egan, Financial Advisor

Dawn Deans, Executive Assistant

0 members of the public

2) Adoption of Agenda.

It was moved by Committee Member Dizmang, seconded by Chair Wilson, 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 September 21, 2022.

It was moved by Committee Member Dizmang, seconded by Chair Wilson, and unanimously carried by all members of the Committee present at the meeting to approve the minutes of the Finance Committee meeting held September 21, 2022, as written.

4.2) Discussion and Overview of Cash Flow Statement and Current Cash Balances as of September 2022. (Financial Advisor Egan)

Financial Advisor Egan provided an overview of the monthly Major Account Activity Report, the quarterly Major Account Activity Report, Investment Funds Report, and Cash Flow Statement through September 2022, including scheduled bond payments, interest, transfers, capital improvement fees received, increases to the Rate Stabilization Fund, the increased cost for the Littlerock Sediment Removal Project, and the projected year-end balance.

4.3) Discussion and Overview of Financial Statements, Revenue, and Expense and Departmental Budget Reports for September 2022. (Finance Manager Hoffmeyer)

Finance Manager Hoffmeyer reviewed in detail the balance sheet, profit and loss statement, quarterly comparison report, departmental budgets versus actual, and individual departmental budgets for the period ending September 2022 and stated that most departments are operating at or near the historical trend average of 75.9% for revenues, the historical trend average of 75.3% for expenses, and the traditional budgetary percentage of 75%.

4.4) Discussion and Overview of Committed Contracts Issued. (Finance Manager Hoffmeyer)

Finance Manager Hoffmeyer provided an overview of the Contractual Commitments and Needs Report for new and replacement capital projects, consulting and engineering support projects, new and replacement equipment, water quality fee funded projects, committed and projected capital expenditures, and projects paid out through the 2018A Series and 2021A Series Water Revenue Bonds through September 2022.

4.5) Discussion of a Contract for a Human Resources/Payroll System Program. (\$50,000.00 Not-to-Exceed – Budgeted 2023 – Finance Manager Hoffmeyer)

Finance Manager Hoffmeyer stated that clarification continues on the selection of a firm for a Human Resources/Payroll System Program; that staff anticipates presenting this item to the full Board for consideration at the November 14, 2022 Regular Board

Meeting; and then reviewed the functions of this Program followed by discussion of the practices of other agencies.

4.6) Discussion of Draft 2023 Budget. (Finance Manager Hoffmeyer)

Finance Manager Hoffmeyer provided an overview of the operating side of the proposed 2023 Budget, including projected water sales, department expenditures, CPI and health benefits, and 2022 projected year-end expenses followed by discussion of the 2019 Water Rate Study and scheduling a Special Finance Committee meeting to further consider the 2023 Budget.

4.7) Consideration and Possible Action on a Recommendation on Funding of 2023 Rate Assistance Program. (\$170,000.00 – Budgeted 2023 – Finance Manager Hoffmeyer)

Finance Manager Hoffmeyer provided an overview of staff's recommendation to increase funding for the 2023 Rate Assistance Program, and after a brief discussion of the amount of customers receiving assistance, it was moved by Committee Member Dizmang, seconded by Chair Wilson, and unanimously carried by all members of the Committee present at the meeting that the Committee concurs with staff's recommendation to increase funding for the 2023 Rate Assistance Program to \$170,000.00 and to cap assistance at \$20 per customer and that this item be presented to the full Board for consideration at the October 24, 2022 Regular Board Meeting.

5) Reports.

5.1) Finance Manager Hoffmeyer:

a) Accounts Receivable Overview.

Finance Manager Hoffmeyer stated that as of September 2022, there are approximately 1,000 residential accounts with a balance of \$50 or more and over sixty days past due with a total past due amount of \$358,008; that the amount of \$37,559 is over ninety days past due; that there are a total of 19 commercial/industrial/multi-family residential accounts with a balance of \$50 or more and over sixty days past due with a total past due amount of \$15,486; that the amount of \$1,375 is over ninety days past due; and that staff continues to offer payment arrangements encouraging the payment of outstanding balances.

b) Revenue Projections.

He then stated that based on selling 17,000 AF of water, 2022 revenue is behind projections by approximately \$586,000 as of September 2022.

c) Payment Transactions by Type.

He then stated that electronic payments continue to increase.

d) Billing and Collection Statistics.

He then stated that 11% - 12% of customer accounts are delinquent and have been issued shut-off notices.

5.2) Financial Advisor Egan:

a) Debt Service Coverage Status.

Financial Advisor Egan stated that the Debt Service Coverage for October 2021 to September 2022 is 2.09 and remains strong.

5.3) Other.

Finance Manager Hoffmeyer stated that postage costs have increased; that this has increased the District's expenses for the remainder of 2022; that this increase will be accounted for in the 2023 Budget; and that InfoSend, who mails the District's bills, is now requiring a postage deposit.

There were no other items to report.

6) Board Members' Requests for Future Agenda Items.

Chair Wilson inquired about the funding process for the Pure Water AV Project and the Littlerock Sediment Removal Project after which General Manager LaMoreaux recommended Stantec, the District's consultant, present information to the full Board in 2023 on the grant strategy for these projects.

There were no requests for future agenda items.

7) **Date of Next Committee Meeting.**

It was determined that a Special Finance Committee meeting will be held November 2, 2022 at 1:30 p.m. and that the next Finance Committee meeting will be held November 15, 2022 at 1:30 p.m.

8) **Adjournment.**

There being no further business to come before the Finance Committee, the meeting was adjourned at 2:55 p.m.


Chair

MINUTES OF MEETING OF THE OUTREACH COMMITTEE OF THE PALMDALE WATER DISTRICT, OCTOBER 19, 2022:

A meeting of the Outreach Committee of the Palmdale Water District was held Wednesday, October 19, 2022, at 2029 East Avenue Q, Palmdale, CA 93550 and via teleconference. Chair Mac Laren-Gomez called the meeting to order at 4:03 p.m.

1) Roll Call.

Attendance:

Committee:

Kathy Mac Laren-Gomez, Chair

Don Wilson, Committee Member

Others Present:

Adam Ly, Assistant General Manager

Dennis Hoffmeyer, Finance Manager

Judy Shay, Public Affairs Director

Claudia Bolanos, Resource and Analytics Spvsr.

Dawn Deans, Executive Assistant

0 members of the public

2) Adoption of Agenda.

It was moved by Committee Member Wilson, seconded by Chair Mac Laren-Gomez, 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 September 15, 2022.

It was moved by Committee Member Wilson, seconded by Chair Mac Laren-Gomez, and unanimously carried by all members of the Committee present at the meeting to approve the minutes of the Outreach Committee meeting held September 15, 2022, as written.

4.2) Discussion of the District's Response to the Drought. (Public Affairs Director Shay/Resource & Analytics Supervisor Bolanos)

Public Affairs Director Shay stated that all publicity continues regarding the drought and that the drought message on envelope snipes has been changed to a winter message.

Resource and Analytics Supervisor Bolanos then stated that as of October 18, Water Use Efficiency staff have issued 1,309 water waste warning door-tags; that 31 resulted in a fine; that policing for water waste will continue on Tuesdays and Thursdays; that customers have achieved close to a 20% reduction in water use; and that the City of Palmdale has done well on reducing water use, and their logo has been added to conservation lawn signs after which Chair Mac Laren-Gomez recommended awards for the highest water use reduction.

4.3) Discussion of 2022 Outreach Activities. (Public Affairs Director Shay)

a) Outreach Report.

Public Affairs Director Shay stated that the District received one of the top PRism awards from the Public Relations Society of America Los Angeles Chapter for the Luv Our H2O campaign and then provided an overview of the written Outreach Report of current events through October 19 including press releases, A.V. Press articles, a story in the Palmdale Magazine, a feature in the ACWA News for Water Professionals Week, attendance at the AVEDGE quarterly luncheon, manned a water conservation booth at the Antelope Valley Fair with Los Angeles County, donated water for a community event, participating in ACWA/JPIA Leadership Essentials for the Water Industry Training Program, attended a Café con Leche radio interview, attended a CSDA Chapter meeting, conducted an Imagine-a-Day-Without-Water essay contest with the winner anticipated to share their essay at a future Board meeting, and social media highlights.

b) Upcoming Events/2022 Plans.

She then stated that upcoming events include the Junior Water Ambassador's Academy on November 9 with fifteen students expected to participate and a Water-Wise Workshop also on November 9 regarding healthy trees and plants in the winter

followed by discussion of customer participation with the District's Water Waste Hotline.

5) Reports.

5.1) Lobbying Activities. (Assistant General Manager Ly)

Assistant General Manager Ly stated that he has no report this month as the Legislature was not in session; that the District's Lobbyist, Reeb Government Relations, has agreed to call in to the next Outreach Committee meeting and provide a report on expectations for 2023; and that their year-end written summary report will be provided to all Directors.

Providing identification signs for plants at the Antelope Valley Fair's conservation area was discussed.

6) Board Members' Requests for Future Agenda Items.

There were no requests for future agenda items.

7) Date of Next Committee Meeting.

After a brief discussion, it was determined that the next Outreach Committee meeting will be held November 16, 2022 at 10:00 a.m.

8) Adjournment.

There being no further business to come before the Outreach Committee, the meeting was adjourned at 4:22 p.m.


Chair

MINUTES OF SPECIAL MEETING OF THE FINANCE COMMITTEE OF THE PALMDALE WATER DISTRICT, NOVEMBER 2, 2022:

A special meeting of the Finance Committee of the Palmdale Water District was held Wednesday, November 2, 2022, at 2029 East Avenue Q, Palmdale, CA 93550 and via teleconference. Chair Wilson called the meeting to order at 1:36 p.m.

1) Roll Call.

Attendance:

Committee:

Don Wilson, Chair

Gloria Dizmang, Committee Member

Others Present:

Dennis LaMoreaux, General Manager

Adam Ly, Assistant General Manager

Dennis Hoffmeyer, Finance Manager

Judy Shay, Public Affairs Director

Diana Gunn, Accounting Supervisor

Bob Egan, Financial Advisor

Dawn Deans, Executive Assistant

0 members of the public

2) Adoption of Agenda.

It was moved by Committee Member Dizmang, seconded by Chair Wilson, 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 a Recommendation on the 2023 Budget. (Finance Manager Hoffmeyer)

Finance Manager Hoffmeyer provided a detailed overview of the 2023 Budget, including the effects of inflation, the development of the budget, projected water sales and assessments, mandatory water conservation, personnel expenses, projected operating revenue and expenses, and revisions to the 2019 Water Rate Study model

indicating a lower than expected year-end balance followed by discussion of increased costs in the Facilities and Finance Departments.

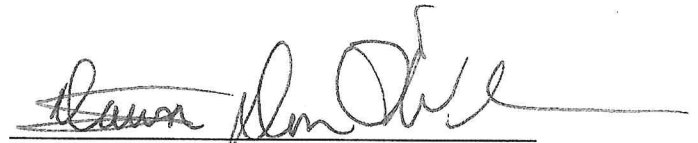
After a brief discussion of inflation costs and of adjustments to the 2023 Budget based on economic and drought factors, it was moved by Committee Member Dizmang, seconded by Chair Wilson, and unanimously carried by all members of the Committee present at the meeting that the Committee concurs with staff's recommendation to approve the 2023 Budget and that this item be presented to the full Board for consideration at the November 14, 2022 Regular Board Meeting.

5) Board Members' Requests for Future Agenda Items.

There were no requests for future agenda items.

6) Adjournment.

There being no further business to come before the Finance Committee, the special meeting was adjourned at 2:38 p.m.

A handwritten signature in cursive script, appearing to read "Dawn Wilson", written over a horizontal line.

Chair

PALMDALE WATER DISTRICT
BOARD MEMORANDUM

DATE: November 21, 2022 November 28, 2022
TO: BOARD OF DIRECTORS Board Meeting
FROM: Mr. Dennis D. LaMoreaux, General Manager
RE: **AGENDA ITEM NO. 8.2.a – NOVEMBER 2022 GENERAL MANAGER REPORT**

The following is the November 2022 report to the Board of activities through October 2022. It is organized to follow the District’s 2022 Strategic Plan approved in October 2022 and composed of six strategic initiatives. The initiatives follow for reference with **additions or rephrased items, as compared to the 2020 Strategic Plan, shown in red**. It is intended to provide a general framework to update the month’s activities.

PWD 2022 STRATEGIC PLAN SUMMARY



Water Resource Reliability: *Resilience, Development, Partnership*

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

Maximize state and federal funding opportunities for Pure Water AV

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

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

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



Organizational Excellence: *Train, Perform, Reward*

Offer competitive compensation and benefits package for employee recruitment and retention

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

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

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

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

Improve safety for Directors, employees, and customers

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

Cultivate a positive culture and increase employee engagement



Systems Efficiency: *Independence, Technology, Research*

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

Incorporate more energy efficient technologies into the District’s infrastructure

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

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

Improve Palmdale Ditch to reduce water loss



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

Pursue grant funding for District projects and operations

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

Conduct and adopt a 2024 five-year Water Rate Plan

Build adequate reserve levels and achieve high-level bond rating

Seek potential revenue sources from vacant District properties

Monitor finances, operations, and projects affected by emergencies

Digitize and document departmental workflows



Regional Leadership: *Engage, Lead, Progress*

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

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

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

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

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

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



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

Enhance customers' experience through communication and feedback

Expand and market additional payment options

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

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

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

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

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

Overview

This report also includes charts that show the effects of the District's efforts in several areas. They are organized within each strategic initiative and include status of the State Water Resources Control Board's (SWRCB) former long-term conservation orders (20 x 2020), the District's total per capita water use trends, 2022 actual water production and customer use graph, mainline leaks, and the water loss trends for both 12- and 24-month running averages.



Water Resource Reliability *Resilience, Development, Partnership*

This initiative includes conservation efforts, water supply projects, and water planning.

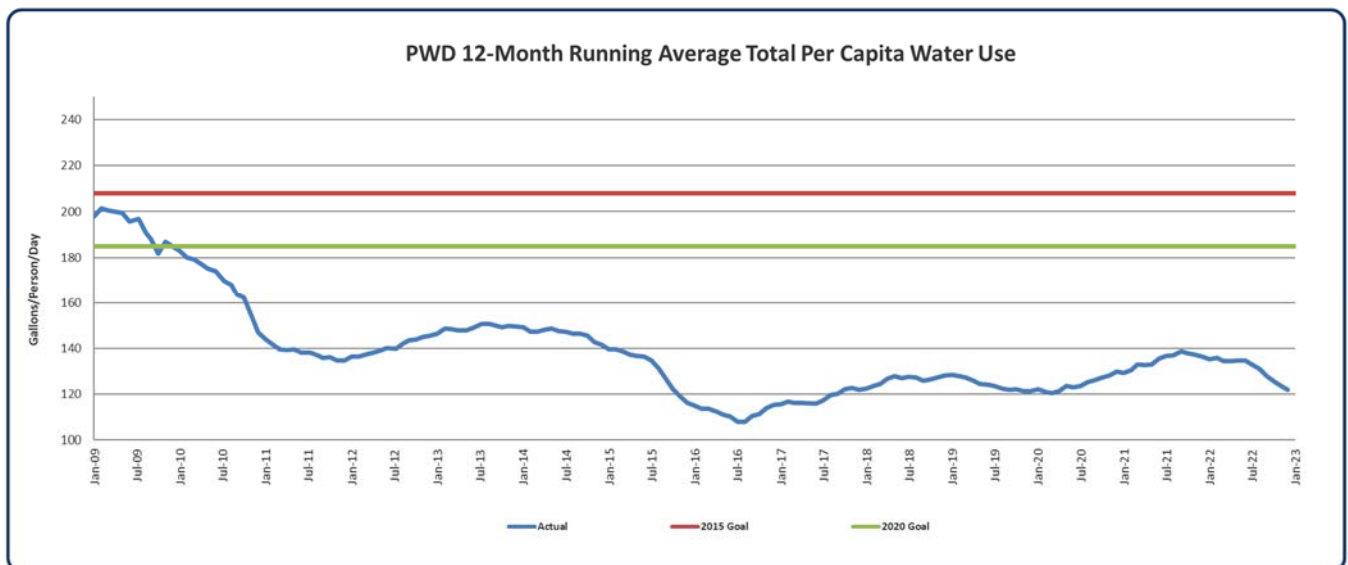
Recent highlights are as follows:

Overall Water Use Goals and Compliance

The 20 x 2020 per capita reduction goals passed by the legislature in 2009 with new long-term water budgeting requirements were replaced with new requirements and water agency water budgets. These follow through on the “Making Water Conservation a California Way of Life” plan. The District expects to easily comply with the new requirements as they are based on the same philosophy as the District’s water budget rate structure.

The 2020 Urban Water Management Plan was adopted by the District in June 2021. It does not relate the District’s water use to the upcoming agency water budget. Until these criteria are finalized, the customers’ performance is shown in this report using the 20 x 2020 requirements.

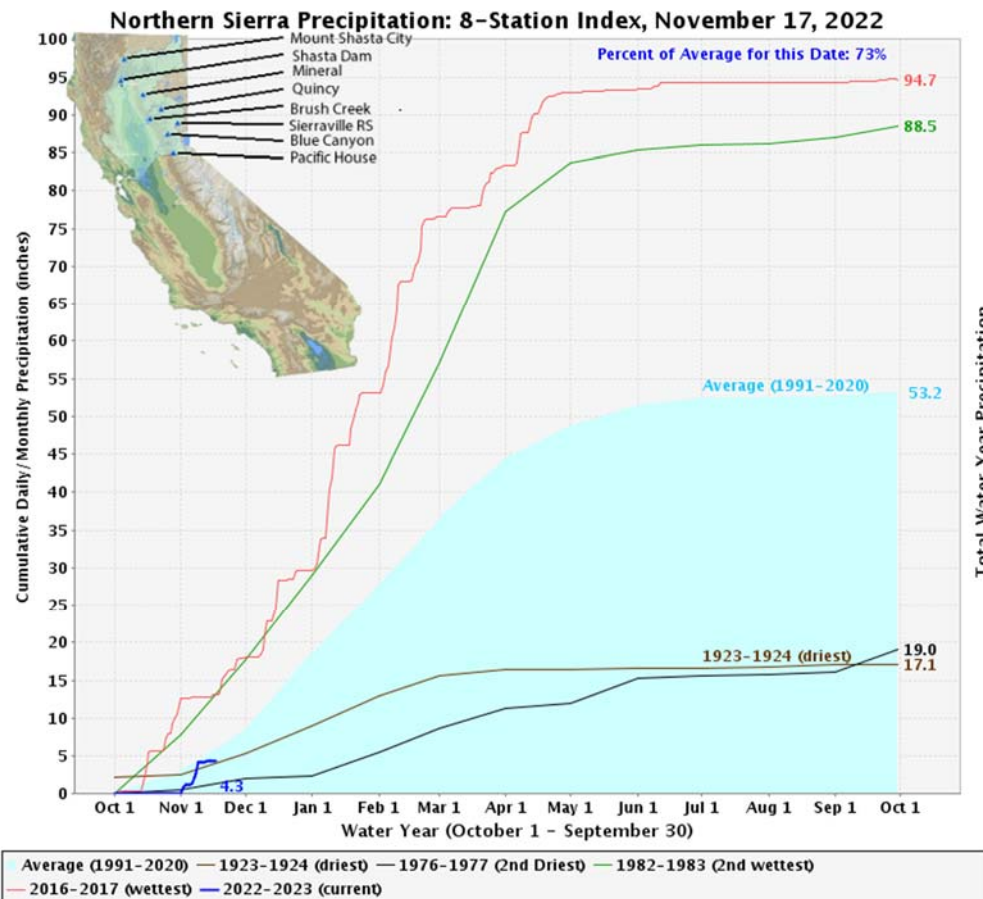
The District’s compliance with the former 20 x 2020 law is evident from the chart titled “PWD 12-Month Running Average Total Per Capita Water Use:”



The District’s customers have cut their water use by **47.2%** from the baseline number of 231 re-established in the 2020 Urban Water Management Plan and met the 2020 Goal in early 2010. The current Metered-GPCD is 122 showing our customers’ reduced usage.

2022 Water Supply Information – Extremely Dry Year

- The AV Adjudication is now entering its seventh year, and the reduction to the native safe yield is in its fifth year. The District’s native groundwater right is 2,769.63 AF. The District’s 2022 groundwater rights are 8,097.26 AF with 8,775.65 AF of Carryover production rights from prior years for a total of 16,872.91 AF. This is more than the District’s existing wellfields can pump.
- The 2022 Water Resources Plan is set at this point. Precipitation in the area that contributes to the State Water Project is at 73% of average for the 2022-2023 Water Year (October through September). The 2021-2022 Water Year ended in September at 81% of average. The SWP allocation was finalized to 5% in March 2022. This is the first time the SWP has had two consecutive years of a 5% allocation. The District secured other water sources as needed for 2022 including the SWC Dry Year Program, Yuba Accord Water, third-party water, and exchanges. The current precipitation and state reservoir storage as of Thursday, November 17, 2022, are as follows:

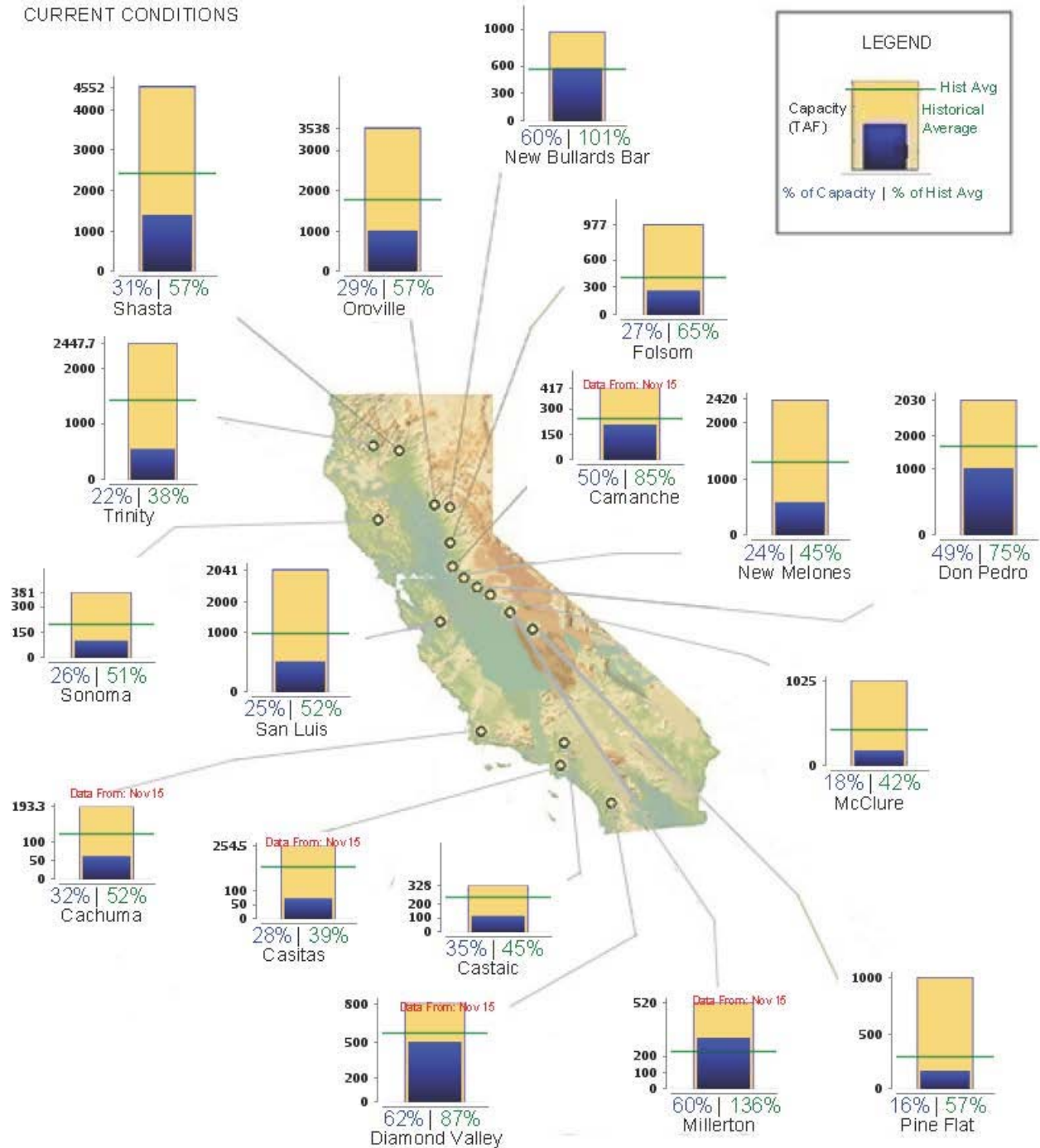




CALIFORNIA MAJOR WATER SUPPLY RESERVOIRS

Midnight - November 16, 2022

CURRENT CONDITIONS

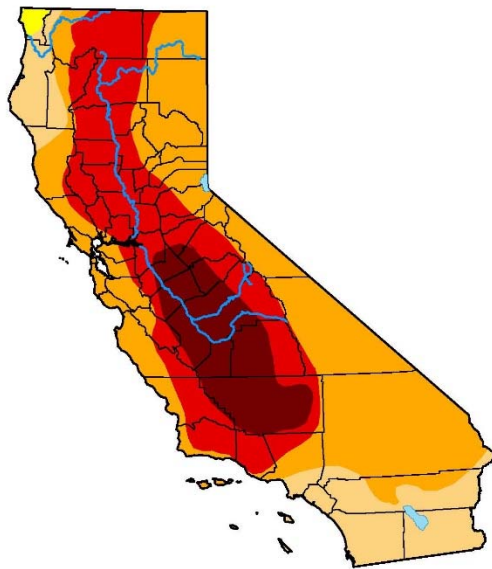


Updated 11/17/2022 07:18 AM

2021-2022 Drought and District Response

- It is easy to see this year’s conditions are getting worse. The following map of California shows the levels of drought in the state as of October 11, 2022 and November 15, 2022. There has been little change in the last month. This map is updated on a weekly basis and provides information that can help the District’s drought planning.

**U.S. Drought Monitor
California**



November 15, 2022
(Released Thursday, Nov. 17, 2022)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	99.48	84.97	40.92	12.73
Last Week 11-09-2022	0.00	100.00	99.51	88.09	41.39	16.57
3 Months Ago 08-16-2022	0.00	100.00	99.76	97.53	43.16	16.57
Start of Calendar Year 01-04-2022	0.00	100.00	99.30	67.62	16.60	0.84
Start of Water Year 09-27-2022	0.00	100.00	99.76	94.01	40.91	16.57
One Year Ago 11-16-2021	0.00	100.00	100.00	92.43	80.28	37.62

Intensity:



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

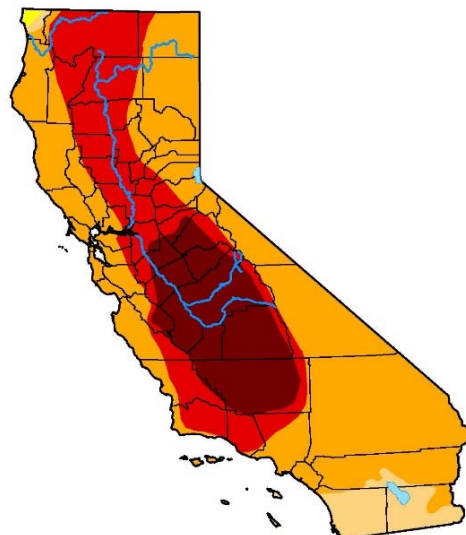
Author:

Brad Rippey
U.S. Department of Agriculture



droughtmonitor.unl.edu

**U.S. Drought Monitor
California**



October 11, 2022

(Released Thursday, Oct. 13, 2022)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	99.77	93.99	40.91	16.57
Last Week 10-04-2022	0.00	100.00	99.77	94.02	40.91	16.57
3 Months Ago 07-19-2022	0.00	100.00	99.80	97.48	59.81	12.74
Start of Calendar Year 01-04-2022	0.00	100.00	99.30	67.62	16.60	0.84
Start of Water Year 09-27-2022	0.00	100.00	99.76	94.01	40.91	16.57
One Year Ago 10-12-2021	0.00	100.00	100.00	93.93	87.18	45.66

Intensity:



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Author:

Brad Pugh
CPC/NOAA

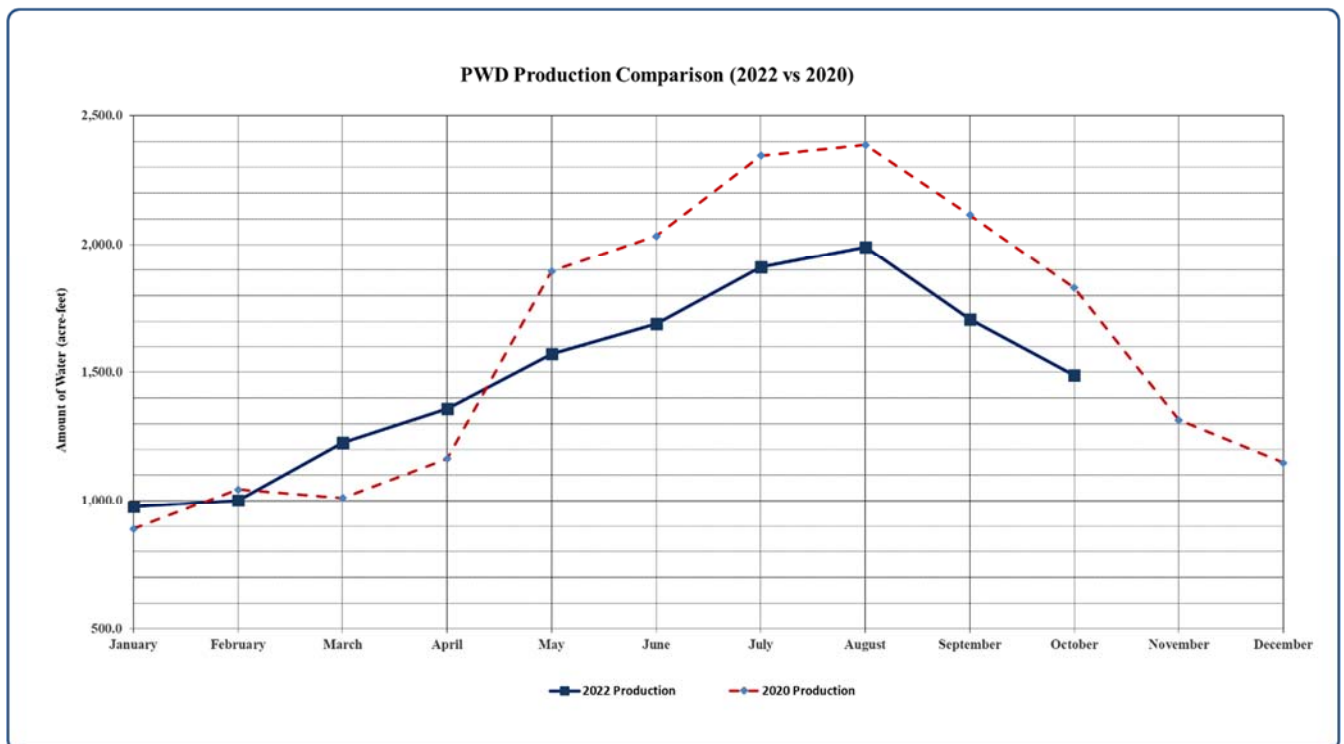


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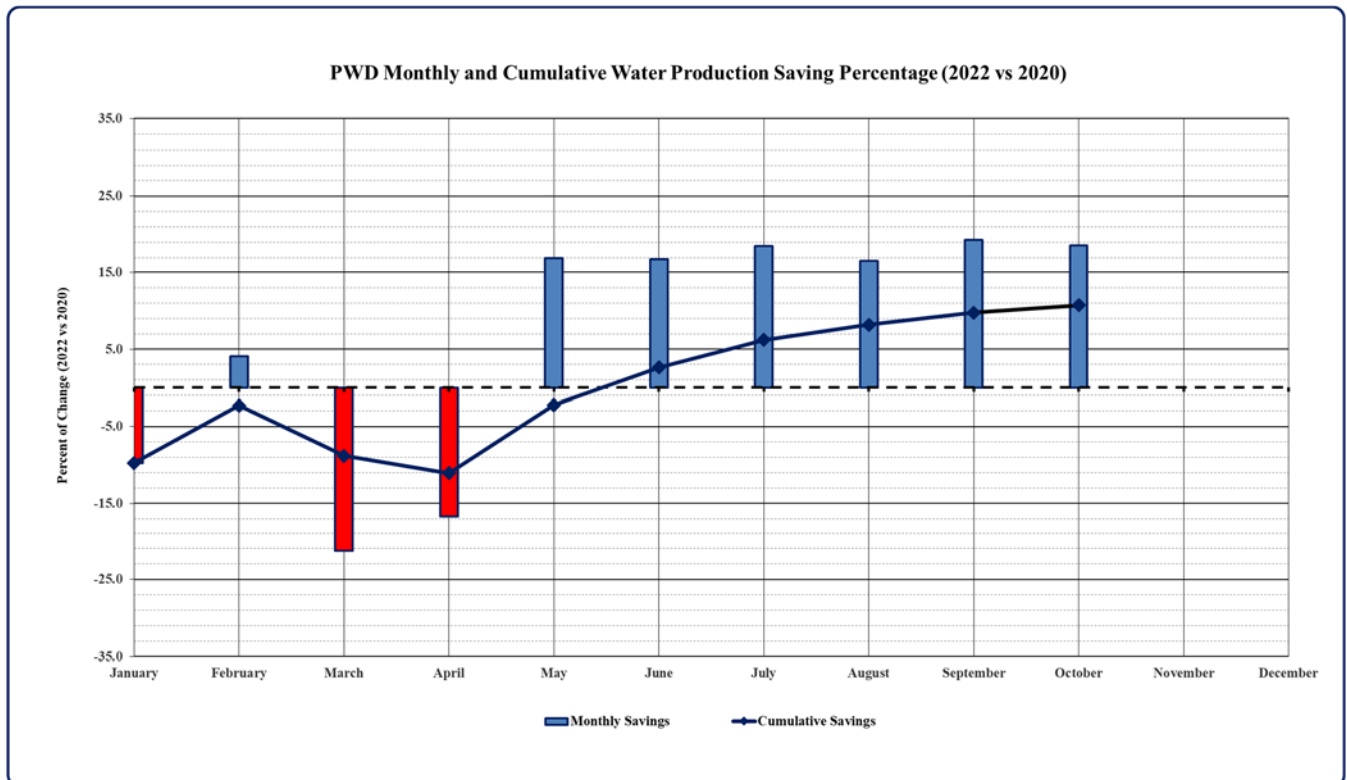
- The Board approved moving into mandatory conservation on April 11, 2022 by enacting Stage 2 at 20% reduction compared to 2020 water use. The goal of this action was to try to reduce water use by 3,000 AF from May to the end of the year. 2,245.3 AF have been saved from May through October. The following table summarizes the full year of water use through October 31, 2022 as compared to the same period in 2020. 2022 water production is currently 10.7% below the same time in 2020.

Year to Date Comparisons								
Year to Date Through:	Total Prod. (ac.-ft.)	Total Billed (ac.-ft.)	Water Loss			Aver. Active Connections	Aver. Gallons per Conn./month	Aver. Per Cap. Use (gal/day/per.)
			(ac.-ft.)	(%)	(12 mo %)			
October 31, '20	16,716.1	14,740.1	1,976.0	11.8	9.9	26,782	17,928	134.0
October 31, '22	14,924.7	13,732.3	1,192.4	8.0	7.4	26,993	16,575	124.3
Increase	-1,791.4	-1,007.8	-783.6	-3.8	-2.5	211	-1,353	-9.7
% Increase	-10.7	-6.8	-39.7	-32.4	-25.2	0.8	-7.5	-7.3
5 yr. Average ('17-'21)	16,104.9	14,369.1	1,735.8	10.8	8.9	26,740	17,505	131

One thing the “Year to Date Comparison” table does not do is show a comparison of individual months in 2022 versus 2020. The following graphs help to show that comparison. The first graph, “PWD Production Comparison (2022 vs 2020)”, shows the monthly water production in both 2022 and 2020. It should be noted that rain in early 2020 reduced water production in March and April. Water production in 2022 followed a more typical pattern.



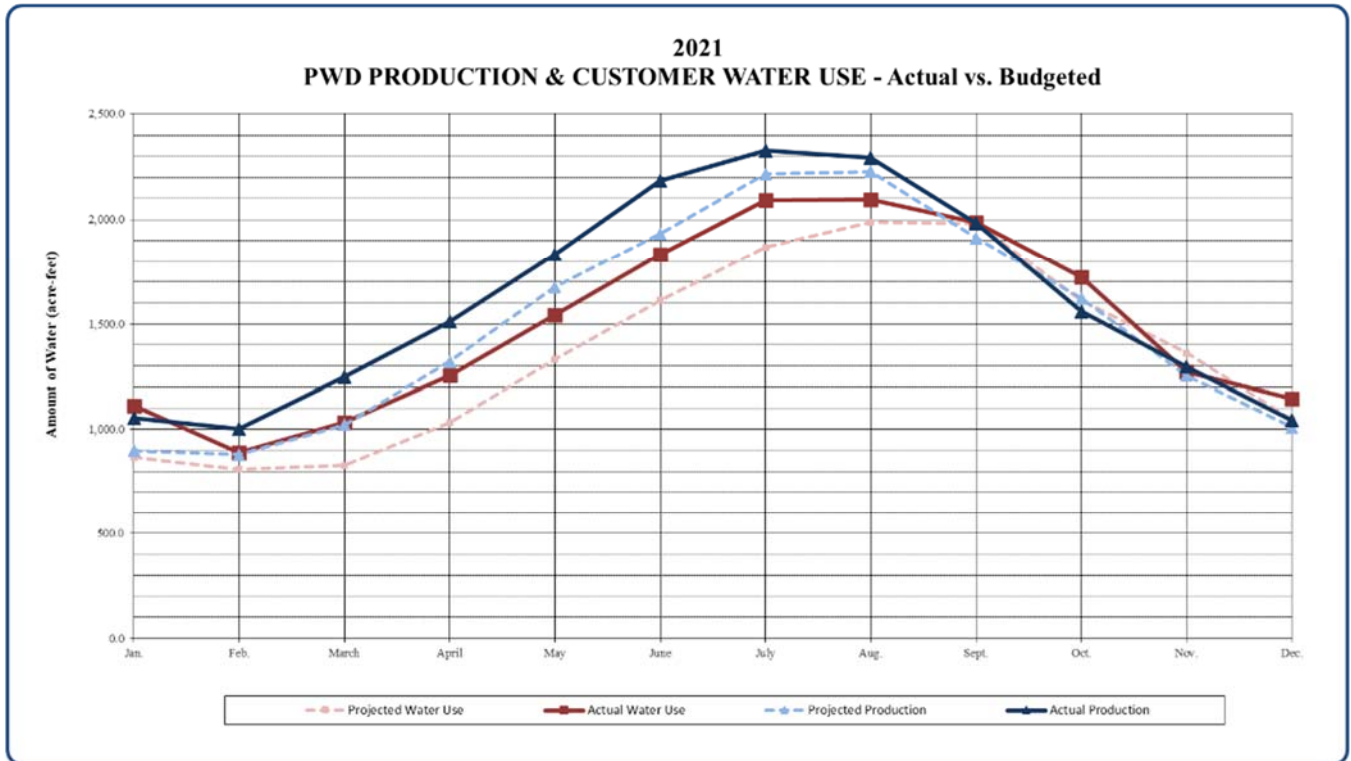
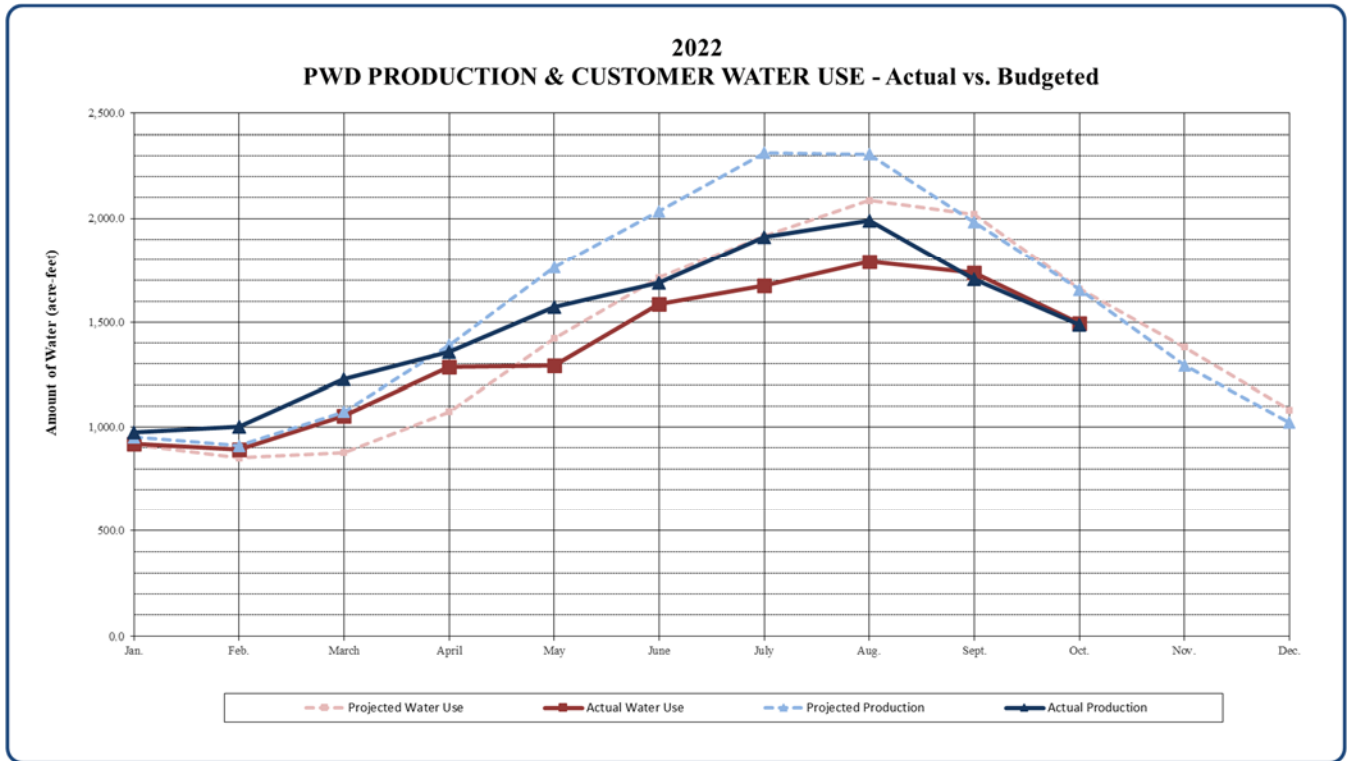
The second graph, “PWD Monthly and Cumulative Water Production Saving Percentage (2022 vs. 2020), illustrates the difference between each month in 2022 and 2020. Less production, or **savings**, in 2022 is shown in **blue** and more production is shown in **red**. This shows that customers are responding to the drought from May to September with **18.6%** in savings in October. It also shows the cumulative savings from January 1 through October 31. It is moving in the right direction at **10.7%** less water production in January through October 2022 than the same period in 2020 and **17.8%** from May through October when mandatory conservation measures were in place.



2022 Water Use Information

- The following graph is the projected monthly water consumption and production for 2022 based on the prior five years of actual monthly information. The projected total consumption is based on the 2022 Budget amount of 17,000 AF, a 5.5% reduction from 2021 actual water use. The new estimated consumption amount due to the drought conservation measures is 15,800 AF or 1,200 AF less. This is a projected reduction of 12.1% from 2021.

Actual amounts are shown through October. The 2021 graph shows the projected and actual water use last year. Customer water use was 17,983.6 AF in 2021. This is the most water used by customers since 18,127 AF in 2014, before the 2015-2017 drought.



Other Items

- The Littlerock Reservoir Sediment Removal Project (Project) Environmental Impact Report/Environmental Impact Statement (EIR/EIS) was fully approved in 2017. The Project consists of three phases. The Grade Control Structure is Phase 1 and was completed in January 2020.

Phase II is the removal of 1.2 million cubic yards (CY) of sediment from the reservoir. Staff worked with Aspen Environmental to secure all the necessary permits for this year from Labor Day through December. The project was advertised, and bids were opened for the full first year of sediment removal. However, the bids were rejected due to the high costs. Staff negotiated with interested contractors on a smaller project for 2022, and the Board approved a contract with ICS. Work began the week of September 12, 2022 with mobilization and site preparation. The first sediment was removed the following week.

- The focus of using recycled water for a stable potable water supply has shifted to advanced water treatment and groundwater augmentation. The program management firm assisting the District with the project is Stantec. Current activities include evaluating delivery methods, branding, developing a funding strategy, and the preliminary demonstration facility design.
- The Upper Amargosa Creek Recharge Project construction is complete. The project partners, City of Palmdale, LA County Waterworks, and AVEK are now finalizing the operation and maintenance agreement.

The City of Palmdale recently notified the project partners about the mitigation requirements and costs. The two stages, 11.28 acres and 38.72 acres, of mitigation are being finalized with the regulatory agencies. The estimated construction costs are \$1,715,662 and \$3,567,595, respectively, and will be built several years apart. The City received \$1,000,000 in grant funding toward the first phase costs. The District's anticipated share for the first phase is approximately \$75,000.

- Delta Conveyance Design and Construction Authority (DCA): This joint power authority is responsible for the environmental, design, and engineering of the project and works with the Department of Water Resources (DWR) on the project. The Board is now reorganized with more representation from smaller agencies. This includes adding two seats for the East Branch, Class 8, of the California Aqueduct. The agencies are AVEK, PWD, Littlerock Creek Irrigation District (LCID), Mojave Water Agency (MWA), Crestline-Lake Arrowhead Water Agency, San Gabriel Valley Municipal Water District, San Bernardino Valley Municipal Water District (SBVMWD), San Gorgonio Pass Water Agency, Desert Water Agency, and Coachella Valley Water District (CVWD).

The Delta Conveyance Project (DCP) is moving to the next step of a Draft EIR/EIS (Draft) for the public's review. The Department of Water Resources released the Draft

on July 27, 2022. The public review period was extended and now ends December 16, 2022.



Organizational Excellence *Train, Perform, Reward*

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

- Nearly 80 percent of the District's staff is required to have certifications or licenses issued by the State of California. Many of these have continuing education requirements which must be met by technical training. The District provides for this in several ways including hosting classes given by the California Rural Water Association, having a training budget for staff to attend conferences, and providing an education tuition allowance for each employee.

- COVID-19 Pandemic Response: District staff initiated a draft Pandemic Response Plan on March 4, 2020 as the State of California and County of Los Angeles issued declarations of emergency. The other options to conduct business with the District, including using the website, calling Customer Care, using the automated phone system, and using remote payment sites, were promoted on social media, the website, and radio spots.

The District also continued to comply with social distancing regulations by updating the Pandemic Response Plan, rotating staff to work from home, staggering work hours, and providing face coverings for staff. The lobby was reopened Monday, July 12, 2021. Most of the staff is back to working normally. Some office staff are continuing to rotate between working from home and the office.

All Board meetings continue to be held with remote access. This is likely to continue through the projected lifting of the State COVID-19 emergency order on February 28, 2023.

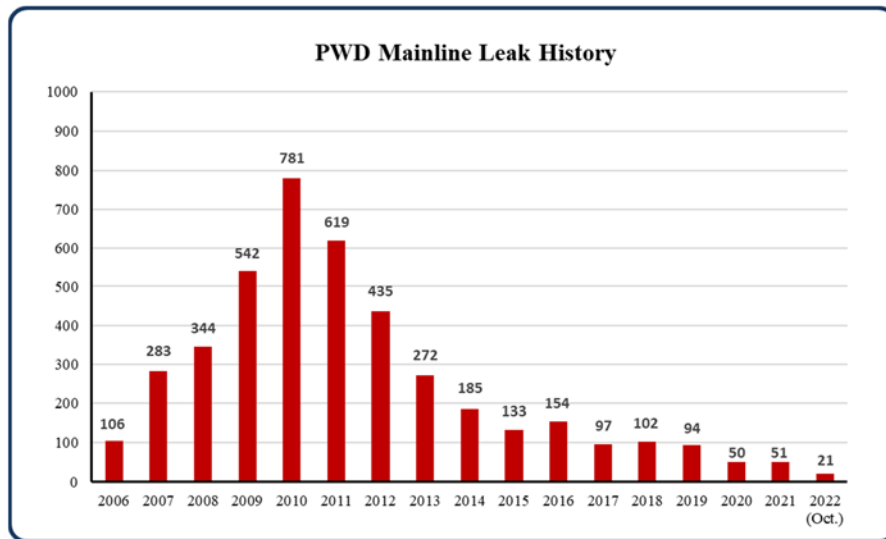
- Despite the pandemic, the District has continued to find ways for internships and training opportunities for college and high school students who are interested in the water industry. The Board authorized paid internships for the remainder of this year. Two interns are currently working with District staff in the Customer Care and Resource and Analytics areas.
- A salary survey with comparable water agencies is nearly complete, potential changes incorporated into the 2023 Budget, and results will be presented to the Board.



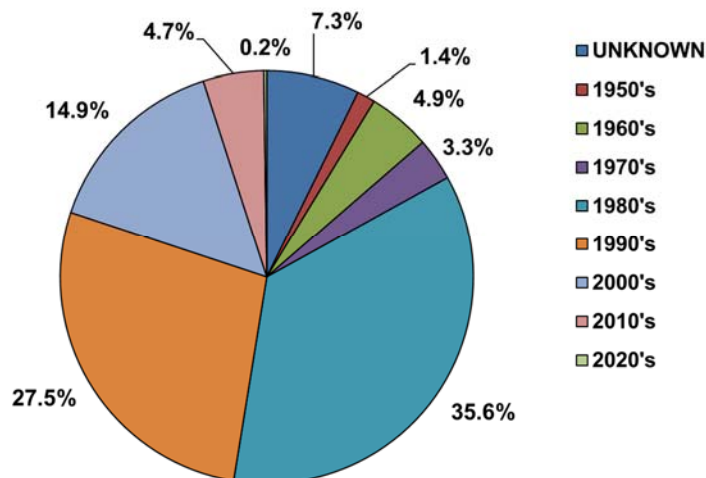
Systems Efficiency *Independence, Technology, Research*

This initiative largely focuses on the state of the District’s infrastructure. Recent highlights are as follows:

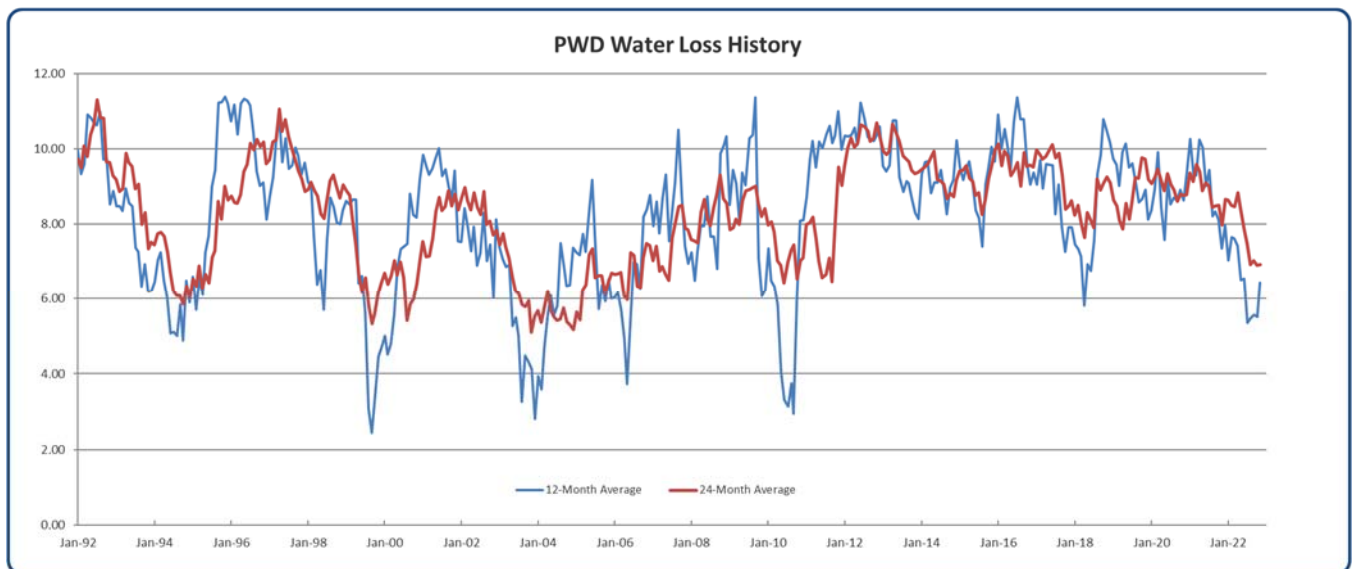
- The effects of the District’s past efforts in replacing failing water mains and meters can be seen in the reduced number of mainline leaks. This is illustrated in the chart titled “Mainline Leak History.” The mainline leaks through October 2022 total 21 with 75 service line leaks. The following chart titled “Active Water Main Ages” also shows the progress made by the District in updating the water distribution system.



Active Water Main Ages



- Additional water main replacement projects are being designed for construction as planned in the 2019 Water Rate Plan. Completed 2022 projects include the neighborhood replacement project bounded by Desert Sands Park, Avenue Q, Division Street, and 3rd Street East and in 10th Street East north of Avenue P. Several smaller projects off of 5th Street East, Avenue Q-10, and Avenue R and 12th Street East are in process.
- The positive effect of both water main and water meter replacement programs is also shown on the chart titled “PWD Water Loss History.” The running average for water losses is running less than 8%.



- District staff is working on two energy technologies that will benefit our customers. One is the use of batteries for backup power at four booster facilities. The other is a demonstration project for the generation and storage of hydrogen from wind energy.
These programs are grant funded and managed by the California Public Utilities Commission and California Energy Commission, respectfully. The grant funds go directly to the technology providers, Tesla and Dash2Energy. Both projects involve the installation of pre-designed and assembled equipment at District facilities with minimal construction work at the sites.
- The District is working with Terra Verde on potential solar PV projects to provide energy for wells, the clearwell booster, and the Leslie O. Carter Water Treatment Plant. The proposals have been evaluated, and the final two are being assessed for viability. This project may affect the existing wind and hydro turbines’ use.
- The wind turbine has been inoperable due to a bad anemometer and related parts. Staff is working on a couple fronts to resolve this. It has been in operation for eighteen years as of August 2022, and parts are difficult to find. The main considerations moving forward

are maximizing the generation, the availability of repair parts, and adequate competition for maintenance contracts. Staff is also looking at the potential replacement, refurbishment, or abandonment of the wind turbine.



Financial Health and Stability *Strength, Consistency, Balance*

- The Littlerock Sediment Removal Project was awarded \$1,100,000 through the AVIRWMP Grant Program in the current round of funding due to Phase II being suspended. This grant is part of \$2.8M the District is using for the sediment removal this year.
- The 2019 Water Rate Study and Proposition 218 was completed when the Board unanimously approved Resolution No. 19-15. This set the water rate structure and water rates for 2020-2024 and includes criteria to evaluate the District's financial condition each year. It gives the Board the ability to reduce the water rates if the District's financial position meets four (4) of the criteria in an annual review while preparing the following year's budget. These will be reviewed as part of the 2023 Budget preparation.
- Fitch Ratings reviewed the District's bond rating in December 2021. The review affirmed the District's rating with them of "A+" with a stable outlook. This is a good result considering the uncertainty of operating in the COVID-19 pandemic.
- The District is seeking State and/or Federal assistance to provide water service to the Alpine Springs Mobile Home Park on Sierra Highway. It has poor water quality from its well, has several health violations, and now relies on hauled water. Maria Kennedy, Kennedy Communications, is experienced with these programs and is contracted with the District to accomplish it.
An agreement with the State is now in place to fund water hauling until the connection to the District is designed, constructed, and operational.
- The COVID-19 shutoff moratorium ended in January 2022. Staff has started providing dated notices to delinquent customers. Shutoffs begin in March. The District only focused on customers who were behind in February 2020 and current amounts over \$600. They have moved forward with lower amounts of outstanding bills. Shutoffs are now nearly back to pre-pandemic levels. Staff is also assisting customers with any available State or Federal programs and payment arrangements to help customers address unpaid balances.



Regional Leadership *Engage, Lead, Progress*

This initiative includes efforts to involve the community, be involved in regional activities, and be a resource for other agencies in the area. Recent highlights are as follows:

- Activities of the Palmdale Recycled Water Authority (PRWA), AV Integrated Regional Water Management Plan (IRWMP), and Antelope Valley State Water Contractors Association have continued. The District has leadership positions in these organizations. District staff is active in the local chambers, AV EDGE, regional human resources, and public information organizations.
- The PWRA Board consists of two Palmdale City Councilmembers, two PWD Board members, and a public director Zakeya Anson. Activities with PRWA are on hold as the District works on the Pure Water AV Project. The City has expressed interest in some level of participation on the Project to meet the long-term goal of drought-proofing parks and landscaped areas.
- The District staff continues to share the administration of the Antelope Valley Watermaster Board (AVWB) with AVEK and related meetings. The AVWB has decided to hire Hallmark as the new Watermaster administrator, and the District will transition the work to Hallmark over the next year.
- The “PWD Water Ambassador Academy” (WAA) was completed in April 2022. A one-day Junior WAA is scheduled for November 9, 2022. This is specifically designed for interested high school students.
- The District and other members of the Public Water Agencies Group (PWAG) share the services of an Emergency Preparedness Coordinator. This approach also helped the District successfully comply with the America’s Water Infrastructure Act (AWIA) of 2018 and respond to the COVID-19 event.
- Staff has taken a lead role in developing and implementing a valley-wide mutual aid agreement for agencies and mutual water companies.

United Water Conservation District Memorandum of Understanding

The District and United Water Conservation District (United) approved a memorandum of understanding (MOU) to work cooperatively on projects where our interests overlap. These include internships and cooperation with community colleges, combined recreational funding for Piru and Littlerock Reservoir recreational improvements, and assistance and funding of advanced treatment of recycled or brackish water for potable use projects.

This MOU and our joint activities were the subject of a presentation given at the 2022 CSDA Annual Conference by United General Manager and me. The presentation and associated article were well received and generated positive interest and a number of questions.

There have been several meetings between District staff and United Human Resources staff to discuss apprenticeship programs, intern programs, and work with three community college districts to support water-related curriculum. The first action item from these meetings was the funding of PWD interns for 2022. Participation in interview panels and the development of a mutual aid agreement are also being done.

Recreation staff from United met with District staff and visited the Littlerock Recreation Area in March. They provided good advice and input on a rough plan for helping the Area open in 2024. Staff worked with the Angeles National Forest (ANF) as the first step in clearing the prior recreational concessionaire's property in the recreational area. All the property now belongs to the ANF. A hazardous material survey is being funded to begin the process of clearing the site.

Several other meetings have been held regarding the use of available State Water Project (SWP) supplies. District and United staffs are working with other East Branch SWP contractors on ways to recategorize water and avoid having water go unused. This is expected to make additional water available for United and the District. A draft term sheet will be drafted and presented to both Boards in early 2023 for SWP exchanges.

Additional coordination will also be focused on both agency's advanced water treatment projects. The United project will treat brackish groundwater for a potable use by the military. The PWD project, Pure Water AV, will treat tertiary water for potable use by our customers. Once Pure Water AV is more established, joint meetings with state and federal representatives will be held to get funding assistance.

Lastly, I have proposed regular meetings of both Boards' liaisons and general managers. These will help us stay coordinated and make sure our efforts are productive. Staff will also visit United's desilting basin in November to observe United's sediment removal process.



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

This initiative includes efforts to better serve our customers. Recent highlights are as follows:

- The Board approved moving forward with a new supplier, meter brand, and reading system to replace the systems approved in September 2020. This transition is well underway.
- The ability to make payments at 7-Eleven and Family Dollar Store as well as all electronic forms of payment critical for customers during the COVID-19 event. Despite the open lobby, some customers have stayed with alternate payment methods.
- The Rate Assistance Program reached capacity by February. Staff continually monitors it for openings and will begin taking applications for 2023 in November 2022. The Board approved changes to the program to increase the funds, standardize the monthly assistance, and provide assistance to 700 customer accounts in 2023.
- Staff successfully conducted virtual coffee meetings with Directors and their constituents, online “Let’s Talk H2O” meetings, issued regular internal and public newsletters, coordinated drive-through giveaways for customers, an in-person customer appreciation day, monitored and maintained the District’s social media, and assisted with information for the current drought. In-person workshops have also been held.
- Staff has finished updating the public website and is working on a contract to complete the intranet for staff.



PALMDALE WATER DISTRICT
A CENTURY OF SERVICE

Engineering Department

Scott Rogers, P.E.
Engineering Manager

Board Meeting
Nov. 28, 2022



Great Team with a Big Mission



Inspectors



Engineering Technicians



Management Analyst



Engineers

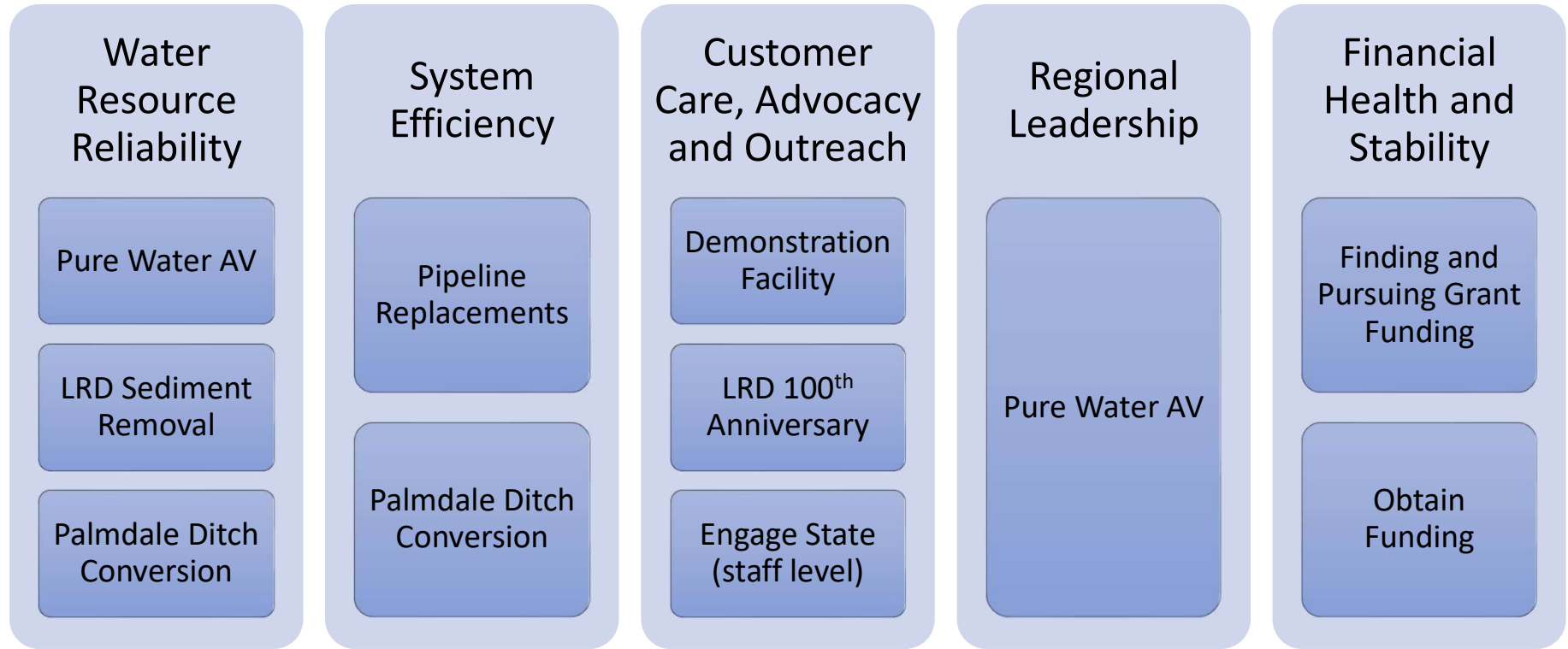


Cross Connection



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Strategic Initiative Implementers



The Engineering Projects

5-year Capital
Improvement
Plan

Littlerock Dam
Sediment
Removal

Pure Water AV

Palmdale
Ditch
Conversion



Pipeline Replacements



5th Street and Ave Q-4



Ave P and 10th Street
Connection at Well 15



Ave P-12 and 3rd Street



Ave Q and Carolside



Littlerock Dam Sediment Removal



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Standard, Guidelines and Enforcement

- Establish the standard requirements and guidelines for District facilities
- Ensure compliance with the standards and plans
- Ensure cross-connection requirements
- Planning for the future



Engineering Technicians



DESIGN PIPELINE AND OTHER PROJECTS



REVIEWS CITY PROJECT AND DEVELOPMENT PLANS



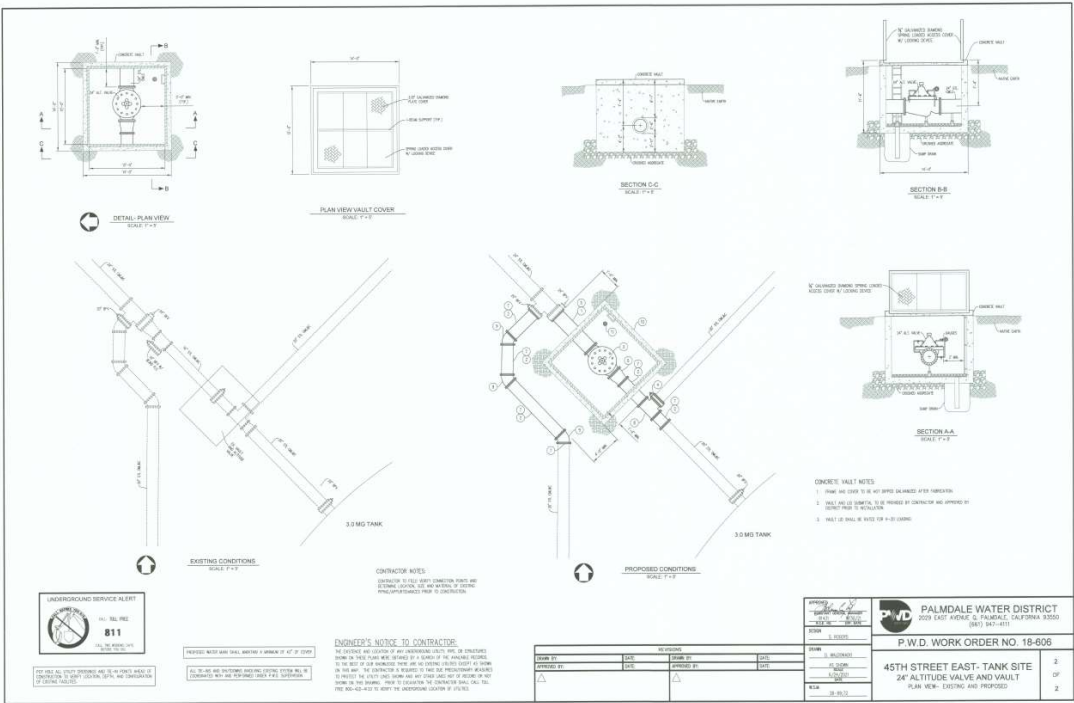
COORDINATES WITH CITY STAFF ON NEW DEVELOPMENT PROJECTS



CALCULATION OF DEVELOPMENT FEES



PREPARES DAM REPORTS



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Inspectors



Observes and enforce construction work meets the standard specifications and plans



Coordinates District work with City, County, and CalTrans



Coordinates work with other Departments



Dam Inspections



PALMDALE WATER DISTRICT
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Analysts - Engineering

Assists, and coordinates contracts with outside companies

PRWA billings

Prevailing wage compliance

Assists with dam data collection

Backflow Testing and Cross Connections

Palmdale Recycled Water Authority
2029 East Avenue Q
Palmdale, CA 93550
R9000003191244400606693

2060 Aldergrove Ave
Escondido, CA 92029

PALMDALE WATER DISTRICT
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PO BOX 904070
PALMDALE, CA 93590-4070

Device ID: 00000000-1
Service Address: 2029 E. Avenue Q
John Example
2029 E. Avenue Q
Palmdale, CA 93550

Device Location: By Meter
MANUFACTURER: Febco
MODEL: 825 YA SERIAL #: 123456
METER #: 1234567
Results Due: 05-10-21

Service Address: Edison Work/ Angeles Forest
Account Name: Account Number: Location #: Customer # Bill Date Billing Period: 10
R9000003-1912444 R9000003 7912444 11/10/22 3/1/2022
Meter: Meter Size: Previous Read: Current Read Usage Usage 3/1/2022 Location C1
212800743 2" 90 90 12 12 UOM ERTN Recycling IV

Your Account
Current Consumption Charges:
Monthly Service Charge
Commodity Rate
- 4.04 per CCF + 75.00 CCF = \$303.00
Total Current Consum Total C

Previous Balance
Payments/Credits:
10/31/22 - Payment Received - Check
Total

Usage History
Nov 2021
Nov 2022
Nov 2023
1 CCF = 748 Gallons

FIELD TESTING & MAINTENANCE REPORT FORM
Backflow Prevention Assemblies
2029 East Avenue Q • Palmdale, California 93550
Telephone (661) 947-4111 • Fax (661) 264-8706

RETURN TO: **PALMDALE WATER DISTRICT**
2029 EAST AVENUE Q
PALMDALE, CALIFORNIA 93550
(661) 456-1054

SEE REVERSE

Assistant Engineer



Assists, coordinates and manages consultants and contractors



Prepares bid solicitations



Assists Facilities and Operations with projects



Coordinates project work with outside agencies



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Thank you!





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AGENDA ITEM NO. 8.2.b.2

2023 Winter Maintenance @ Leslie O Carter Treatment Plant

Mynor V. Masaya
Operations Manager
Board Presentation
November 28, 2022



Timeline

- January 16th : Prepare water system for plant shutdown
- January 17th : Shutdown plant and drain
- January 21st : Empty and Inspect 6M
- February 11th : Startup plant
- February 11th : Disinfect 6M Clearwell
- Return to service on February 15th



6M Clearwell



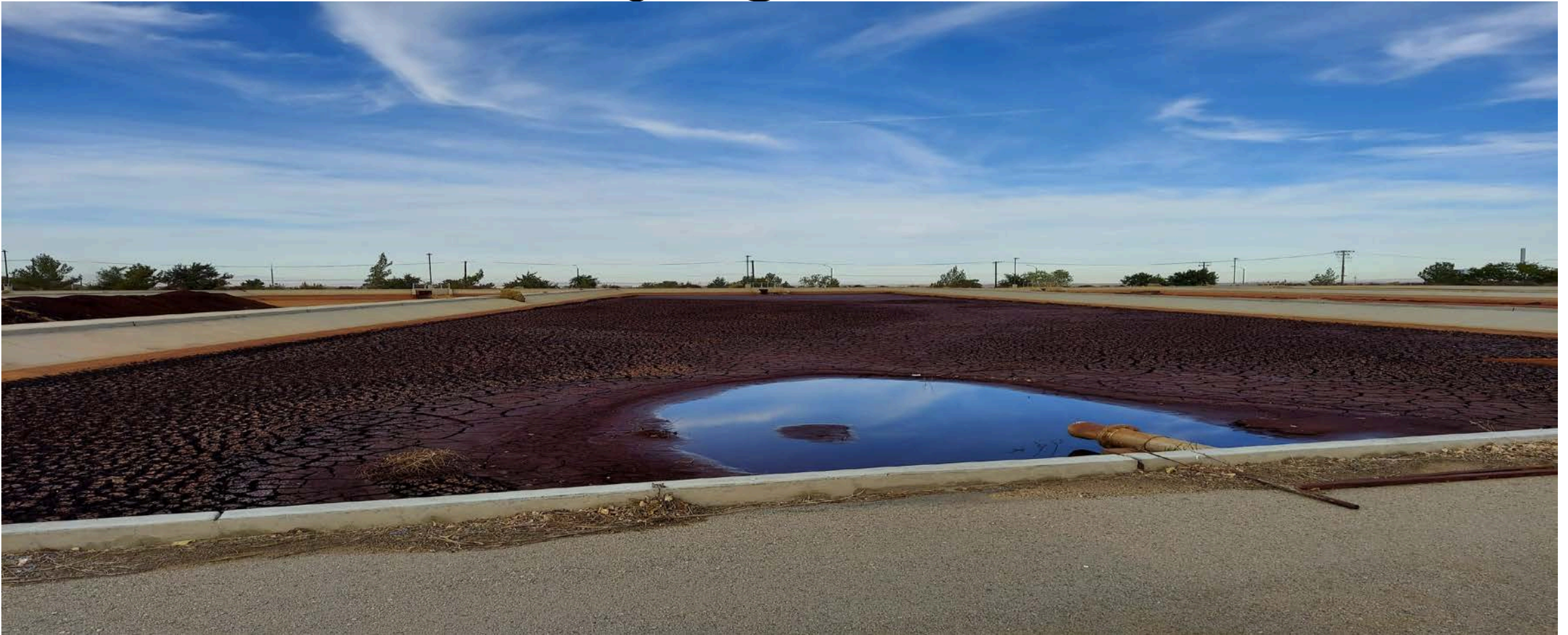
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Drying Beds



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Drying Beds



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Drying Beds



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Wash Water Return Basin



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Maintenance List

- Equipment Maintenance
- Sedimentation Basin Cleaning and inspections
- Vaults, underground channels, tank inspections & cleaning
- Chemical Diffusers inspections
- Chemical feed lines inspection and repair
- Major repairs or replacement
- New Installations or improvements

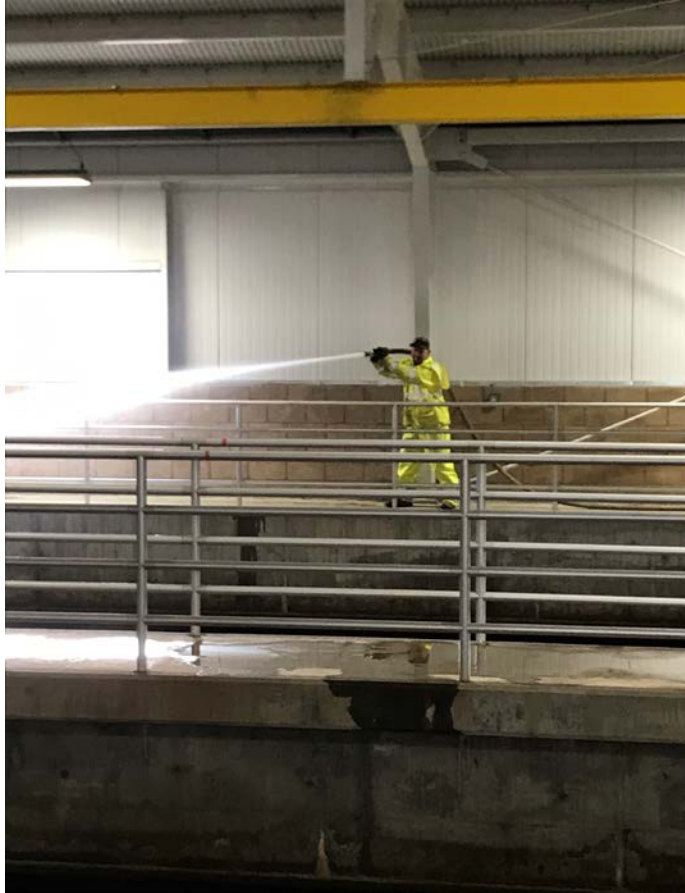


Equipment Maintenance



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Sedimentation basins & channels Cleaning



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Vault Inspections

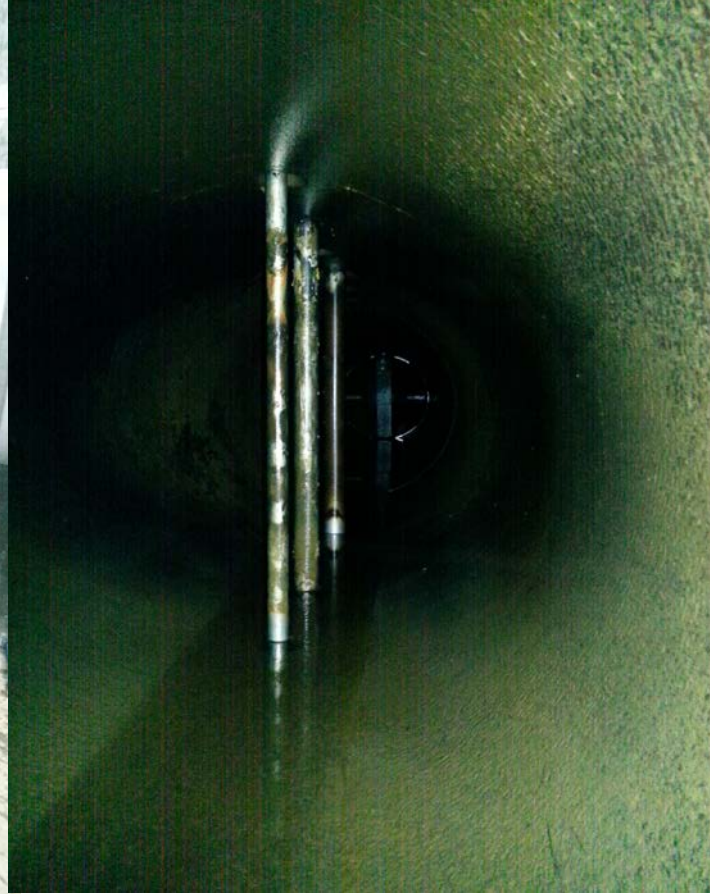


Chemical Tank Inspection & Cleaning



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Pipelines, chemical diffusers, Inspections & Cleaning



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Major Repairs



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New Improved Installations



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Hypochlorite Generation System in 2023



Staffing

- Six State Certified Treatment Plant Operators
Operations is 24/7 responsible for quantity and quality of water.
- Three State Certified Laboratory Technicians and
- 1- Lab Supervisor.
Lab Staff are responsible for sampling, analyzing and reporting to State Regulators.





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Thank you!

