



# PALMDALE WATER DISTRICT

A CENTURY OF SERVICE

April 6, 2022

## BOARD OF DIRECTORS

AMBERROSE MERINO

Division 1

DON WILSON

Division 2

GLORIA DIZMANG

Division 3

KATHY MAC LAREN-GOMEZ

Division 4

VINCENT DINO

Division 5

## 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: 906-030-341#**

**Submit Public Comments at: <https://www.gomeet.com/906-030-341>**

**MONDAY, APRIL 11, 2022**

**6:00 p.m.**

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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 March 28, 2022.
  - 6.2) Payment of bills for April 11, 2022.
  - 6.3) Approval of District 2022 membership in the Water Research Foundation. (\$11,360.00 – Budgeted – Budget Item No. 1-02-4165-000 – Operations Manager Masaya)
- 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. 22-8 being a Resolution of the Board of Directors of the Palmdale Water District Implementing Stage 2 of the Water Shortage Contingency Plan. (No Budget Impact – Resource and Analytics Director Thompson II)
  - 7.2) Consideration and possible action on award of contract for main office stucco repair and weatherization with Angelus Waterproofing & Restoration, Inc. (\$375,713.00 – Budgeted – Work Order No. 21-703 – Engineering Manager Rogers)
  - 7.3) Consideration and possible action on authorizing the General Manager to execute an Agreement with TerraVerde Energy, LLC to investigate the development of solar energy projects. (No Initial Budget Impact – Assistant General Manager Ly)
  - 7.4) Consideration and possible action on replacing the waiver stipend with a Medical Insurance Coverage Policy for Directors. (Budget Amount to be Determined – General Manager LaMoreaux/Personnel Committee)
  - 7.5) Consideration and possible action on an Agreement with OPSEC Specialized Protection to provide security at the Littlerock Dam Recreation Area. (Not-to-Exceed \$35,000.00 – Non-budgeted – Assistant General Manager Ly)
  - 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) None at this time.
- 8) Information Items:
  - 8.1) Reports of Directors:

- a) Standing Committees; Organization Appointments; Agency Liaisons:
  - 1) Finance Committee Meeting – March 29. (Director Wilson, Chair/  
President Dizmang)
  - 2) Personnel Committee Meeting – March 29. (Director Mac Laren-  
Gomez, Chair/Director Dino)
- b) General Meetings Reports of Directors.
  - 8.2) Report of General Manager.
  - 8.3) Report of General Counsel.
- 9) Board members' requests for future agenda items.
- 10) Adjournment.



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DENNIS D. LaMOREAUX,  
General Manager

DDL/dd

**P A L M D A L E   W A T E R   D I S T R I C T**  
**B O A R D   M E M O R A N D U M**

**DATE:** April 4, 2022 **April 11, 2022**  
**TO:** BOARD OF DIRECTORS **Board Meeting**  
**FROM:** Mynor V. Masaya, Operations Manager  
**VIA:** Mr. Adam Ly, Assistant General Manager  
Mr. Dennis D. LaMoreaux, General Manager  
**RE:** ***AGENDA ITEM NO. 6.3 – APPROVAL OF DISTRICT 2022 MEMBERSHIP IN THE WATER RESEARCH FOUNDATION. (\$11,360.00 – BUDGETED – BUDGET ITEM NO. 1-02-4165-000 – OPERATIONS MANAGER MASAYA)***

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**Recommendation:**

Staff recommends that the Board approve renewing the District’s membership in the Water Research Foundation for May 2022 to April 2023.

**Alternative Options:**

The District can cancel the membership.

**Impact of Taking No Action:**

The District will have no access to Water Research Foundation scientific studies.

**Background:**

The District has been an American Water Works Association Research Foundation/Water Research Foundation (AwwaRF/WRF) subscriber for many years. In 2004, the District was able to receive \$100,000.00 in funds to conduct an AwwaRF Tailored Collaboration Study entitled “DBP Control in High Bromide Water While Using Free Chlorine During Distribution” (Project No. 3075). The project was completed by Carollo Engineering in March of 2005, was reviewed by PWD and AwwaRF staff, and the final report became available in August of 2006. The total cost of the project was \$375,392.00.

Information gathered from this study was instrumental to District staff in the decision-making process regarding which technologies would provide the greatest benefit and should be included in upgrades to the District’s water treatment plant.

In 2013, the District was a co-funding and participating member in a study to determine the most effective technologies for removing or reducing Chromium VI. The results of this study are helping the water community assess the best available options for treatment in light of the new Chromium VI regulation passed by the California Department of Public Health.

BOARD OF DIRECTORS  
PALMDALE WATER DISTRICT

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

April 4, 2022

Additionally, between March 2013 and March 2014, District staff utilized a report from WRF to provide guidance resilient business models for water utilities. The research value of this report was \$564,088.00.

In 2022-2023, staff plans to request and utilize reports and studies from the following areas: The Water Research Foundation is developing a framework and testing protocol for assessing poly- and perfluoroalkyl PFAS substance treatment techniques in groundwater, latest research to the virus that causes COVID-19, evaluation and restoration of water supply wells for water augmentation projects, membrane filtration, methods, uses, and principles of advanced oxidation and groundwater recharge projects, cyanotoxins in drinking water caused by algal blooms in surface waters, the impact of pre-chlorination and GAC treatment on DBP formation and overall toxicity in drinking water, quagga mussel treatment and control practices, maximizing recovery of recycled water for ground recharge and Chromium VI.

It is through the combined support of membership agencies like Palmdale Water District that research on the most important and emerging water issues can be carried out. In addition to contributing to the research effort, membership provides the District with the opportunity to influence the direction of research projects and full access to all reports from past and current studies.

**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:**

The Annual Commitment based on total million gallons delivered and population served in 2021 is \$11,360.00. This item is budgeted under Administration, Memberships and Subscriptions, 1-02-4165-000.

**Supporting Documents:**

- Water Research Foundation Invoice



6666 W Quincy Avenue Denver, CO 80235-3098  
 P 303.347.6128 F 303.734.0196  
 pschrader@waterrf.org

	<b>Date</b> February 22, 2022
<b>Subscriber Number</b> 0003981	<b>Foundation Tax ID</b> 13-6211384
<b>Subscriber Since</b> 1988	<b>Invoice Number</b> 0003981-2022-1

Palmdale Water District  
 Dennis LaMoreaux  
 General Manager  
 2029 East Ave Q  
 Palmdale, CA 93550-4038

Order No.	Description	Total Commitment
7000172940	WRFMBR - Utility Membership 01-May-2022 to 30-Apr-2023	\$11,360.00
	<b>Amount Due:</b>	<b>\$11,360.00</b>



6666 W Quincy Avenue Denver, CO 80235-3098  
 P 303.347.6128 F 303.734.0196  
 pschrader@waterrf.org

Palmdale Water District  
 Dennis LaMoreaux  
 General Manager  
 2029 East Ave Q  
 Palmdale, CA 93550-4038

*Detach and return with payment*  
 Please make check payable to: **The Water Research Foundation**

	<b>Date</b> February 22, 2022
<b>Subscriber Number</b> 0003981	<b>Invoice Number</b> 0003981-2022-1

Order No.	Description	Amount Due
7000172940	MBRUTILITY	\$11,360.00
<b>Revised Invoice Requested?</b> Yes                      No		<b>Amount Enclosed</b>



**P A L M D A L E   W A T E R   D I S T R I C T**  
**B O A R D   M E M O R A N D U M**

**DATE:** April 6, 2022 **April 11, 2022**  
**TO:** BOARD OF DIRECTORS **Board Meeting**  
**FROM:** Mr. Peter Thompson II, Resource and Analytics Director  
**VIA:** Mr. Dennis D. LaMoreaux, General Manager  
**RE:** ***AGENDA ITEM NO. 7.1 – CONSIDERATION AND POSSIBLE ACTION ON APPROVAL OF RESOLUTION NO. 22-8 BEING A RESOLUTION OF THE BOARD OF DIRECTORS OF THE PALMDALE WATER DISTRICT IMPLEMENTING STAGE 2 OF THE WATER SHORTAGE CONTINGENCY PLAN. (NO BUDGET IMPACT – RESOURCE AND ANALYTICS DIRECTOR THOMPSON II)***

**Recommendation:**

Staff recommends that the Board adopts Resolution No. 22-8 Implementing Mandatory Stage 2 of the 2020 Water Shortage Contingency Plan (WSCP) subject to General Counsel Trindle’s review and approval. Mandatory Stage 2 includes mandated restrictions as well as setting the drought factor to 0.8 to reflect a 20% reduction to the outdoor usage tier (Tier 2) and a drought surcharge of 40-cents per unit of usage applied to the non-essential usage tiers (Tiers 3-5).

<b>PWD Actions</b>	<b>Customer Actions</b>
Continue public information campaign	Comply with Water Waste Policy
Conduct focused outreach to large water users	Consider turf removal and conversion to water wise landscape
Increase awareness of conservation measures and programs	Consider PWD Water Use Efficiency Rebate Programs
Publish Water Shortage Contingency Plan Stages and Actions	Consider conversion to more efficient irrigation methods
Coordination of public outreach with the City, County, and other Districts	Mandatory 20% water use reduction
Add Drought Factor and Drought Surcharge	Reduce outdoor irrigation to three times a week between the hours of 6:00PM and 10:00AM.

April 6, 2022

**Background:**

On August 9, 2021, the Board adopted Voluntary Stage 2 of the 2020 Water Shortage Contingency Plan. The 2021/2022 water year has yielded the driest combined January and February on record and led to a State Water Project allocation reduction from 15% to 5%. Governor Newsom issued an Executive Order on March 28<sup>th</sup> recognizing the continued state of emergency generated by a third consecutive year of drought. This Executive Order called for the State Water Resources Control Board to consider adopting emergency regulations no later than May 25, 2022 that would require each urban water supplier who has a Water Shortage Contingency Plan to adopt Stage 2 of their plans.

Early analysis of the PWD's available water supply indicates a need to conserve 3,000 acre-feet along with its estimated 2,000 acre-feet of additional transfer water to close the supply gap that currently exists when forecasting supplies and demands for 2022. 3,000 acre-feet of conservation could be accomplished by a 20% demand reduction from May 2022 - December 2022. Consequently, staff recommends adopting the Mandatory Stage 2 of the 2020 Water Shortage Contingency Plan to take effect on May 1, 2022.

**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:**

No budget impact.

**Supporting Documents:**

- Resolution No. 22-8 being A Resolution of the Board of Directors of the Palmdale Water District Implementing Stage 2 of the Water Shortage Contingency Plan
- Section 3 of PWD 2020 Water Shortage Contingency Plan



**PALMDALE WATER DISTRICT  
RESOLUTION NO. 22-8  
A RESOLUTION OF THE BOARD OF DIRECTORS OF THE  
PALMDALE WATER DISTRICT IMPLEMENTING  
STAGE 2 OF THE WATER SHORTAGE CONTINGENCY PLAN**

**WHEREAS**, Palmdale Water District (“District”) is a water district empowered to provide water service within District boundaries; and

**WHEREAS**, California is experiencing a third consecutive dry year with 93% of the State classified as being in a severe drought; and

**WHEREAS**, due to inadequate precipitation and legal restrictions on the flow of State Water Project water to Southern California, California is experiencing shortages in water supplies; and

**WHEREAS**, the State Water Project allocation for 2022 has been established at a critically low 5% and deliveries have, therefore, been drastically curtailed in response to the inadequacy of water supplies; and

**WHEREAS**, groundwater supplies which provide a supplemental source of water to the District, are limited in nature and local aquifer levels have declined to the post 2013-2015 drought levels that occurred in 2016, when the District produced a limited supply of 8,473 acre feet of groundwater; and

**WHEREAS**, current available supplies are insufficient to meet projected customer demand in 2022; and

**WHEREAS**, conservation of water by all District customers that have not already conserved will help relieve the problems caused by the shortage in water supplies; and

**WHEREAS**, Palmdale Water District customers have responded effectively in previous droughts by conserving and preserving available water supplies.

**WHEREAS**, Palmdale Water District has made significant investments in local programs and projects to improve water supply reliability, including supplemental water supply contracts, local water storage projects, water conservation, water recycling and other strategies to stretch supplies, and will continue to do so; and

**WHEREAS**, on April 21, 2021, Governor Gavin Newsom issued a Proclamation of a State of Emergency due to drought for two counties in the state of California; and

**WHEREAS**, the District adopted Stage 1 of its 2015 Water Shortage Contingency Plan on April 26, 2021, and urged customers to voluntarily reduce their water use by 15%; and

**WHEREAS**, on May 21, 2021, Governor Gavin Newsom issued a Proclamation of a State of Emergency due to drought for forty-one counties in the state of California; and

**WHEREAS**, on July 8, 2021, Governor Gavin Newsom issued Executive Order N-10-21 recognizing the continued state of drought in California and called on all Californians to voluntarily reduce their water use by 15%; and

**WHEREAS**, the District adopted Voluntary Stage 2 of its 2020 Water Shortage Contingency Plan on August 9, 2021 and continued to urge rate payers to voluntarily reduce their water use by 15%; and

**WHEREAS**, on October 9, 2021, Governor Gavin Newsom further issued a Proclamation of a State of Emergency due to drought for the entire state of California, reaffirmed the call for all Californians to reduce their water use by 15%, and called on the State Water Resource Control Board to adopt emergency regulations prohibiting certain wasteful water practices; and

**WHEREAS**, on March 28, 2022, Governor Gavin Newsom further issued Executive Order N-7-22 that reaffirmed the April 21, 2021, May 10, 2021, and October 9, 2021 proclamations of State of Emergency due to drought and the provisions of Executive Order N-10-21 and called on the State Water Resource Control Board to adopt an emergency regulation that would require all urban water suppliers who have submitted a Water Shortage Contingency Plan to, at a minimum, adopt level 2 of their Plan; and

**WHEREAS**, Water Code Section 1058.5 grants the State Water Resources Control Board the authority to adopt emergency regulations in certain drought years in order to: “prevent the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion, of water, to promote water recycling or water conservation;” and

**WHEREAS**, following the making of findings as required by law, the District has the power and authority to adopt mandatory water conservation measures within its boundaries pursuant to Part 5 of the Irrigation District Law, codified at Division 11 of the California Water Code.

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

**Section 1: Findings:** The Board of Directors of the District hereby finds and declares as follows:

- 1) The State Water Project water available to the District is a critically low (5%) allocation.
- 2) Production of water from the PWD’s groundwater wells beyond the 2016 production of 8,473 acre-feet may have undesirable effects on the local aquifer levels and ground water production equipment.
- 3) Voluntary water conservation measures have not resulted in the recommended 15% reduction in consumption when compared to 2020.

4) At present, without supplemental supplies, the anticipated water available to the District is insufficient to meet anticipated demands.

5) Should existing drought conditions continue, or should the District lose its water production capacity, there may be insufficient water available for human consumption, sanitation and fire protection.

**Section 2: Declaration of Stage 2 Water Shortage Emergency:** The Board of Directors of the District, in accordance with the foregoing findings, hereby determines and declares the existence of an emergency condition of water shortage within its service area and further determines and declares that the regulations and restrictions on delivery of water and consumption of water within its service area as hereinafter set forth are necessary, in the sound discretion of the Board of Directors of the District, to conserve the water supply for the greatest public benefit with particular regard to domestic use, sanitation, and fire protection.

**Section 3: Authorization to Implement Restrictions on Water Consumption:** The Board of Directors of the District hereby authorizes the General Manager of the District to take specific steps to meet water conservation goals, regulations, and restrictions on water consumption as hereinafter set forth.

**Section 4: Conservation Goal and Authorized Actions.** The conservation goal of the District is a reduction in water use of twenty percent (20%) when compared against usage in 2020, which goal is mandatory through May 1, 2023. The General Manager is authorized to implement Action 1 of this Resolution to meet said conservation goal.

**Action 1. Mandatory Water Conservation Regulations.** The General Manager shall take all steps necessary to advise the District's customers of the following water waste prohibitions and mandatory regulations and to enforce them in accordance with the District's existing Waste of Water Policy:

1. Water Waste Prohibitions:
  - a. Application of potable water to outdoor landscapes in a manner that causes runoff.
  - b. Failure to repair water leaks or to adjust sprinkler overspray in a timely manner.
  - c. Hosing of hardscape surfaces, except where health and safety needs dictate.
  - d. The use of potable water in a fountain or other decorative water feature, except where the water is part of a recirculating system.
  - e. Irrigation with potable water of ornamental turf on public street medians.
  - f. Watering of outdoor landscapes within 48 hours of measurable rainfall.

- g. Car washing and outside cleaning activities except when performed with buckets and automatic hose shutoff devices.
- h. The serving of drinking water other than upon request in eating or drinking establishments.
- i. Failure of operators of hotels and motels to provide guests with the option of choosing not to have towels and linens laundered daily. (The hotel or motel shall prominently display notice of this option in each guestroom.)
- j. Inefficient use of water for construction purposes.
- k. Irrigation with potable water outside of newly constructed homes and buildings not delivered by drip or microspray is prohibited.

2. Mandatory Regulations:

- a. No lawn, landscape, or other turf area shall be watered more often than three (3) days per week nor during the hours between 10:00 a.m. and 6:00 p.m. Water days will be set as follows: Mondays, Wednesdays and Saturdays only.
  - i. Exemptions:
    - 1. Watering hour restrictions are lifted during the months of November, December, January, February, and March.
    - 2. Commercial nurseries, golf courses, parks, school yards, and other public open spaces may request approval of a modified watering schedule in the event that public use necessitates it.
    - 3. Watering schedules must be adhered to at all times. The District requires advance written notice of any maintenance activities requiring water use between the hours of 10:00 a.m. and 6:00 p.m.
- b. The issuance of potable water construction meters shall be suspended.

**Action 2: Mandatory Water Rationing:** Upon specific authorization by the Board of Directors, the General Manager shall implement a phased water rationing to protect the water supply of the District and to guarantee adequate supply for domestic use, sanitation, and fire protection as follows:

- 1. Stage 2: Water Rationing: A twenty percent (20%) reduction in water deliveries to all District customers.

**Action 3: Adoption of a 20% Drought Factor:** Upon specific authorization by the Board of Directors, the General Manager shall apply a phased drought factor to the outdoor allocation usage tier (Tier 2).

1. Stage 2: Drought Factor: A twenty percent (20%) reduction will be applied to the outdoor usage tier (Tier 2). This will be effective on water use as of June 1, 2022.

**Action 4: Adoption of Drought Surcharge:** Upon specific authorization by the Board of Directors, the General Manager shall implement a phased drought surcharge to cover costs due to lost revenue during mandatory water cutbacks.

1. Stage 2: Drought Surcharge: A 40-cent surcharge on all non-essential usage tiers (Tiers 3-5). This will be effective on water use as of June 1, 2022.

**Section 5: Duration of Water Emergency:** The regulations, restrictions, and actions set forth herein shall take full force and effect on May 1, 2022 and shall remain in full force and effect through May 1, 2023 or until otherwise changed or lifted by authorization of the Board of Directors.

**Section 6: Appeal:** Decisions made by the District under the regulations set forth in this Resolution may be appealed by customers in accordance with the procedure set forth in the District's Rules and Regulations.

**Section 7: Violation:** A violation of the regulations and restrictions set forth herein will result in progressive warnings, fines, or result in the discontinuance of service to customers willfully violating the conservation measures set forth herein or such other penalty or restriction as may be allowed by law. The Stage 2 fines and assessment period under the 2020 Water Shortage Contingency Plan will be set as follows:

1. First violation-The customer shall be notified in writing. The notice shall include a warning that further violations could result in stricter penalties.
2. A second violation is punishable by a fine of up to \$50.
3. A third violation is punishable by a fine of up to \$250.
4. A fourth violation is punishable by a fine of up to \$500.
5. A fifth violation may result in termination of service and a \$1,000 reconnection fee.
6. Any violations occurring within twelve months of each other will be considered consecutive and result in escalating penalties. The period for assessing consecutive penalties may be extended beyond 12 months by resolution of the Board.

**Section 8: Severability:** If any portion of this Resolution is found to be unconstitutional or invalid, the District hereby declares that it would have enacted the remainder of this Resolution regardless of the absence of any such valid part.

**Section 9: Effective Date:** May 1, 2022

**BE IT FURTHER RESOLVED,** that the Board of Directors finds that the provisions of this Resolution are exempt from the provisions of the California Environmental Quality Act as an action to mitigate emergency conditions and as a rate setting measure pursuant to Public Resources Code §21080(b)(4) and (8).

**PASSED AND ADOPTED** at a regular meeting of the Board of Directors of Palmdale Water District held on April 11, 2022.

\_\_\_\_\_  
Gloria Dizmang, President, Board of Directors

\_\_\_\_\_  
Kathy Mac Laren-Gomez, Secretary, Board of Directors

APPROVED AS TO FORM:

\_\_\_\_\_  
Aleshire & Wynder, LLP, District Legal Counsel

DRAFT

# **2020 Water Shortage Contingency Plan**

## Palmdale Water District



**PALMDALE WATER DISTRICT**  
A CENTURY OF SERVICE

## Section 3: Six Standard Water Shortage Levels

### 3.1 Stages of Action to Respond to Water Shortages

As required by California Water Code Section 10632(a)(3)(A), this WSCP is framed around six standard water shortage stages, which correspond to progressive ranges of percent supply reductions from zero to more than fifty percent. Table 3-1 presents a description of the six water supply shortage stages, defined as stages 1 to 6.

Each stage may be triggered by a declaration from federal or state authorities, or PWD to address events that result in a water shortage. The stages and applicable water supply conditions are summarized in Table 3-1 and Table 3-2.

**Table 3-1 Rationing and Reduction Goals**

Deficiency or State Mandated Reduction	Stage	Demand Reduction Goal	Type of Program	Water Shortage Condition
1-10%	1	10% reduction	Voluntary	Minor Shortage
11-20%	2	20% reduction	Voluntary/Mandatory	Moderate Shortage
21-30%	3	30% reduction	Mandatory	Severe Shortage
31-40%	4	40% reduction	Mandatory	Critical Shortage
41-50%	5	50% reduction	Mandatory	Emergency Shortage
>50%	6	>50% reduction	Mandatory	Catastrophic Failure

DWR Table 8-1

**Table 3-2 Stages of PWD Water Shortage Contingency Plan**

Stage	Percent Supply Reduction	Triggers
I	Up to 10%	<ul style="list-style-type: none"> <li>• Results of the Annual Assessment</li> <li>• Federal, state or local disaster declaration that may impact water supplies</li> <li>• State declaration due to drought or system maintenance</li> <li>• Unplanned PWD water system maintenance</li> </ul>
II	Up to 20%	<ul style="list-style-type: none"> <li>• Results of the Annual Assessment</li> <li>• Federal, state or local disaster declaration that may impact water supplies</li> <li>• State declaration due to drought or system maintenance</li> <li>• Unplanned PWD water system maintenance requiring more time to repair</li> </ul>



Stage	Percent Supply Reduction	Triggers
III	Up to 30%	<ul style="list-style-type: none"> <li>• Results of the Annual Assessment</li> <li>• Federal, state or local disaster declaration that may impact water supplies</li> <li>• State determination due to drought or significant system failure; and/or</li> <li>• Unplanned PWD water system failure or emergency</li> </ul>
IV	Up to 40%	<ul style="list-style-type: none"> <li>• Federal, state or local disaster declaration that may impact water supplies</li> <li>• State determination due to drought or significant system failure; and/or</li> <li>• Unplanned PWD water system failure or emergency</li> </ul>
V	Up to 50%	<ul style="list-style-type: none"> <li>• Results of the Annual Assessment</li> <li>• Federal, state or local disaster declaration that may impact water supplies</li> <li>• State determination due to drought or significant system failure; and/or</li> <li>• Advanced PWD water system failure or emergency</li> </ul>
Stage VI	50% or higher	<ul style="list-style-type: none"> <li>• Results of the Annual Assessment</li> <li>• Federal, state or local disaster declaration that may impact water supplies</li> <li>• State determination due to drought or significant system failure</li> <li>• Natural or human-caused catastrophe disrupting delivery of water to, or within the service area</li> <li>• Severe PWD water system failure</li> </ul>

### 3.1.1 Procedures for Water Shortage Level Determination

The results of the Annual Assessment will be used to determine the water shortage level. In case of emergencies, a special meeting may be called by a majority of the Board on less than twenty-four-hour notice and without an agenda to deal with the disruption of service. If an emergency arises which would ordinarily be brought to the attention of the Board, but insufficient time exists, the General Manager has administrative authority to take action as deemed appropriate and reasonable.

### 3.2 Water Shortage Response Actions

Once a shortage stage is declared, PWD may implement shortage response actions required by the customer and through operational changes, as listed in Table 3-3. These actions will be supported by communication protocols (discussed in Section 4.1.1), enforcement actions (discussed in Section 3.3.2) and monitoring and reporting efforts (discussed in Section 5.2) activities appropriate at each shortage stage level.

**Table 3-3: Customer and PWD Water Shortage Actions**

<b>Stage</b>	<b>District Actions</b>	<b>Customer Actions</b>
Stage I	<ul style="list-style-type: none"> <li>• Initiate public information campaign</li> <li>• Increase awareness of conservation measures and water use efficiency programs</li> <li>• Conduct focused outreach to large water users</li> <li>• Consider coordination of public outreach with the cities and County</li> <li>• Publish Water Shortage Event Contingency Plan stages and actions per stage</li> <li>• Consider implementation of drought factor for customer bill calculation</li> <li>• Consider enforcement of conservation measures</li> </ul>	<ul style="list-style-type: none"> <li>• Comply with PWD Water Waste Policy (see Table 3-3 and Appendix B)</li> <li>• Voluntary water conservation</li> <li>• Adhere to conservation measures</li> <li>• Consider conversion to more efficient irrigation methods</li> <li>• Consider turf removal and conversion to Water Wise Landscape</li> <li>• Patronize local carwashes that recycle their water</li> <li>• Consider PWD Water Use Efficiency Rebate Programs</li> </ul>
Stage II	<ul style="list-style-type: none"> <li>• Continue previous action</li> <li>• Expand public information campaign</li> <li>• Commence enforcement of conservation measures</li> <li>• Implement of drought factor for customer bill</li> <li>• Suspend issuance of potable construction meters.</li> </ul>	<ul style="list-style-type: none"> <li>• Comply with PWD Water Waste Policy (see Table 3-3 and Appendix B)</li> <li>• Comply with mandatory conservation regulations</li> <li>• Continue previous actions</li> </ul>
Stage III	<ul style="list-style-type: none"> <li>• Continue previous actions</li> <li>• Intensify public information campaign</li> <li>• Expand enforcement of conservation measures</li> <li>• Provide regular media public briefings</li> <li>• Activate emergency connections with mutual aid agencies</li> <li>• Evaluate size of monetary fines for water waste</li> <li>• Begin water waste patrols</li> </ul>	<ul style="list-style-type: none"> <li>• Comply with PWD Water Waste Policy (see Table 3-3 and Appendix B)</li> <li>• Continue previous actions</li> <li>• Limit washing of sidewalks, driveways, walkways, parking lots, or any other hard-surfaced area by hose or flooding unless otherwise necessary</li> <li>• Comply with prohibited outdoor irrigation of ornamental landscape or turf with potable water through an irrigation system between 10:00 am and 6:00 pm and limit system use to two days a week</li> </ul>
Stage IV	<ul style="list-style-type: none"> <li>• Continue previous actions</li> </ul>	<ul style="list-style-type: none"> <li>• Comply with PWD Water Waste Policy (see Table 3-3 and Appendix B)</li> <li>• Continue previous actions</li> <li>• Obligation to fix leaks, breaks, or malfunctions within 48 hours</li> </ul>
Stage V	<ul style="list-style-type: none"> <li>• Continue previous actions</li> <li>• Enforce mandatory water consumption goals and allocations for all customers and users</li> </ul>	<ul style="list-style-type: none"> <li>• Comply with PWD Water Waste Policy (see Table 3-3 and Appendix B)</li> <li>• Continue previous actions</li> </ul>
Stage VI	<ul style="list-style-type: none"> <li>• Continue previous actions</li> <li>• Implement crisis communication plan</li> <li>• Activate Emergency Operations Center</li> </ul>	<ul style="list-style-type: none"> <li>• Continue previous actions</li> <li>• Terminate outdoor water use for irrigation, pools and</li> </ul>

Stage	District Actions	Customer Actions
	<ul style="list-style-type: none"> <li>• Coordinate actions with regulatory agencies</li> <li>• Coordinate actions with public safety agencies to address enforcement and fire protection issues</li> <li>• Recall all temporary meters and activate water fill stations</li> <li>• Suspend issuance of new development approvals and new water connections other than those required to be processed by state law</li> </ul>	fountains <ul style="list-style-type: none"> <li>• Water may only be used outdoors for public health and safety purposes</li> <li>• Be on alert for Boil Water Orders if they become necessary</li> </ul>

### 3.2.1 Supply Augmentation

Any water shortage event should trigger a review of potential sources for supplemental water supply. Potential sources for supplemental water include increasing allocation of State Water Project water (infrastructure not currently available) or utilizing water from the Palmdale Regional Water Augmentation Project. Any supplemental water supply project or improvements to existing facilities to allow for entitled flows should be a priority for consideration in immediate capital projects if shortage (e.g., demands exceeding supplies) greater than ten percent is anticipated or when a Stage 3 Water Shortage Event continues for more than 18 months. Additional supply sources for consideration include replacement or rehabilitated wells increased use of reclaimed water, and other alternatives based on the actual circumstances at that time. Supply augmentation in near term is presented in Table 3-4 below.

**Table 3-4 Supply Augmentation Actions**

Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier (based on DWR's WUE database categories)	How much is this going to reduce the shortage gap?	Additional Explanation or Reference
3	Groundwater	2,000 AF	Pump Additional Groundwater
4	Groundwater	1,000 AF	Pump Additional Groundwater
5	Groundwater	1,000 AF	Pump Additional Groundwater
6	Groundwater	500 AF	Pump Additional Groundwater

Note: (DWR Table 8-3)

### 3.2.2 Operational Changes

PWD shall comply with the restrictions similar to those implemented for the public to the extent possible. Hydrant flushing shall be limited except as deemed necessary by the General Manager to enhance water quality or to conduct fire flow and large meter tests. Other actions include efficient water use practices identified in Table 3-5, such as minimizing waste of water in construction, following a modified outdoor landscape watering schedule for PWD facilities depending on shortage stage, and fixing any identified leaks in the distribution system or other related water infrastructure components.

### 3.2.3 Demand Reduction Actions

PWD permanently implements general water conservation measures and irrigation practices aimed at increasing everyday water use efficiency. Those measures, plus those to be enacted in the various stages, are presented in Table 3-5 and are also indicated in the District's Water Waste Policy.

**Table 3-5. Prohibitions During Different Shortage Stages**

Stage	Prohibition/Requirement
In Effect at All Times	<p>Water waste is prohibited at all times. Water waste includes but is not limited to:</p> <ul style="list-style-type: none"> <li>• Application of potable water to outdoor landscapes in a manner that causes runoff.</li> <li>• Water leaks shall be repaired in a timely manner and sprinklers shall be adjusted to eliminate over-spray.</li> <li>• Hosing of hardscape surfaces, except where health and safety needs dictate, is prohibited.</li> <li>• No watering of outdoor landscapes within 48 hours of measurable rainfall.</li> <li>• Car washing and outside cleaning activities prohibited except when performed with buckets and automatic hose shutoff devices.</li> <li>• The serving of drinking water other than upon request in eating or drinking establishments is prohibited.</li> <li>• Operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each guestroom.</li> </ul> <p>Other</p> <ul style="list-style-type: none"> <li>• Water for construction purposes, including but not limited to de-brushing of vacant land, compaction of fills and pads, trench backfill, and other construction uses shall be in an efficient manner.</li> </ul>
Stage I	<ul style="list-style-type: none"> <li>• Same as In Effect At All Times</li> </ul>
Stage II	<ul style="list-style-type: none"> <li>• All restrictions/prohibitions/initiatives from Stage I are in effect</li> <li>• Landscape watering between the hours of 1000 and 1800 hours is prohibited</li> <li>• Outdoor watering is limited to 3 days per week.</li> <li>• Irrigation with potable water outside of newly constructed homes and buildings not delivered by drip or microspray is prohibited.</li> <li>• Suspend issuance of potable water construction meters.</li> </ul>

Stage	Prohibition/Requirement
Stage III	<ul style="list-style-type: none"> <li>All restrictions/prohibitions/initiatives from Stage I and Stage II are in effect and are mandatory.</li> <li>Irrigation with potable water of ornamental turf on public street medians is prohibited.</li> <li>Outdoor watering is limited to 2 days per week.</li> <li>Potable water cannot be used to maintain fountains, reflection ponds and decorative water bodies for aesthetic or scenic purposes, except where necessary to support aquatic life.</li> </ul>
Stage IV	<ul style="list-style-type: none"> <li>All restrictions/prohibitions/initiatives from Stage I, Stage II, and Stage III are in effect and are mandatory.</li> <li>Outdoor watering is limited to 1 day per week.</li> <li>Filling of new swimming pools, spas, hot tubs, or the draining and refilling of existing pools, etc is prohibited. Topping off is allowed to the extent that the designated water allocation is not exceeded.</li> <li>Meters will only be installed for new accounts where the building permit was issued prior to the declaration of the water shortage.</li> </ul>
Stage V	<ul style="list-style-type: none"> <li>Filling of new swimming pools, spas, hot tubs, or the draining and refilling of existing pools, etc is prohibited. Topping off is allowed to the extent that the designated water allocation is not exceeded.</li> <li>Meters will only be installed for new accounts where the building permit was issued prior to the declaration of the water shortage</li> </ul>
Stage VI	<ul style="list-style-type: none"> <li>All restrictions/prohibitions/initiatives from previous Shortage Stages are in effect and are mandatory.</li> <li>No meters will be installed for new accounts.</li> <li>Outdoor irrigation is prohibited, with the exception of drip or hand watering to preserve established trees.</li> </ul>

As described in the table above, prohibitions and restrictions on water features that are artificially supplied with water, such as ornamental lakes, ponds and decorative fountains are treated differently from swimming pools and spas, as defined in Section 115921 of the California Health and Safety Code.

### 3.2.3.1 Emergency Response Plan

In order to prepare for catastrophic events, the PWD has prepared an Emergency Response Plan (ERP) in accordance with other state and federal regulations. The purpose of the ERP is to design actions necessary to minimize the impacts of supply interruptions due to catastrophic events.

The ERP includes PWD’s standardized response and recovery procedures to prevent, minimize, and mitigate injury and damage resulting from emergencies or disasters. The ERP includes, or is planned to include incident response procedures for the following incidents:

- Evacuation
- Earthquake
- Fire
- Wildfire
- Flood
- Power Outage
- Drought
- HazMat Release
- Security Incidents
- Bomb Threat
- Single-Employee Security Incident
- Personnel Injury
- Contamination
- Transmission/Main Break
- Distribution Line Break
- Pandemic

The plan considers the various aspects of the potential for malevolent threats or actual terrorism. The information contained in the ERP is intended to guide staff and inform other emergency responding agencies and includes plans, procedures, lists, and identification of equipment, emergency contacts, etc.

### **3.2.3.2 Seismic Risk Assessment and Mitigation Plan**

PWD owns and operates water storage and distribution, treatment, and groundwater pumping facilities. The water distribution system is comprised of two separate systems – one for potable water and the other for recycled water. In 2021, PWD performed the following to understand, plan, for and mitigate seismic risk:

- Evaluated seismic risk zone for the PWD service area
- Identified critical water facilities and seismic and building deficiencies
- Identified mitigation measures to reduce seismic risk at facilities.

This section summarizes the 2020 seismic risk assessment and provides an update of the seismic vulnerability of the drinking water supply, treatment, storage, and distribution facilities and mitigation plan for the water system (Kennedy Jenks 2021). The Seismic Evaluation Report is included in Appendix C.

#### **3.2.3.2.1 Seismic Evaluation and Mitigation for Steel Tanks**

Geotechnical work was conducted for PWD's above-ground potable water reservoirs located on 19 sites in the Palmdale area, to classify sites for repair and retrofit needs. Design level earthquake values were identified for each tank evaluation, corresponding to the appropriate American Society of Civil Engineers design level earthquake.

A seismic evaluation was performed to identify seismic deficiencies and recommend strengthening measures for each of the welded carbon steel tanks. Work included a written description for each tank summarizing the results of the interior and exterior inspections and condition assessments; and the findings of the desktop evaluation.

Several tanks were found to have deficiencies, due to one or more of the following:

- age of the tank
- code which was applicable at the time the tank was designed,
- dimensions of the tank diameter to height ratio,

- lack of anchorage to foundations

The tank structural and seismic evaluation investigated several mitigation concepts in order to bring the tanks within code compliance. These mitigation concepts included arranging for a civil or structural engineer to inspect PWD facilities, consulting with a geotechnical engineering firm to perform site investigations and provide a more detailed analysis, increasing freeboard height to accommodate wave action, and combinations of these.

PWD will prioritize tanks for repairs and replacement based on the likelihood and consequences of various types of damage associated with code compliance issues identified.

### **3.2.3.2 Seismic Evaluation and Mitigation for Pump Stations, Pressure Reducing Valves, Wells or Well Pump Stations**

Seismic assessments were performed for the booster pump stations, wells, and booster pump buildings. Work included documentation of facility descriptions, seismic deficiencies, and seismic mitigation measures. Many of these facilities had identified deficiencies associated with anchorage to foundations and walls, inadequate load path to transfer later loads, and thin slabs. Similar to the tank evaluation, additional analysis is recommended.

## **3.3 Benefit of Shortage Response Actions**

As discussed above, supply actions and actions within PWD operations will help reduce water shortage. Closing the “gap” between supplies and demands through customer actions, will include:

- Public Information
- Enforcement
- Restrictions on Non-Essential Water Uses
- Pricing

The water shortage response actions and their anticipated effect are summarized in Table 3-7.

### **3.3.1 Public Information**

Without exception, experience has shown that a well-informed public is generally more willing to heed requests to voluntarily conserve or alter water use patterns and will be more likely to comply if mandatory water use restrictions become necessary. DWR (2008) estimates that public information campaigns have alone reduced demand in the range of **5 to 20** percent, depending on the time, money, and effort spent. Public information supports voluntary and mandatory measures by educating and convincing the public that a critical water shortage exists and provides information on how water is used and how they can help. The DWR Drought Guidebook highlights that when the public perceives a drought to be severe, they change behaviors (such as flushing the toilet less often).

The information provided to the public should include a description of the conditions that will trigger implementation of shortage stages as well as a description of what the plan entails (restrictions, enforcement provisions, etc.). It is also advisable to provide practical “consumer” information that will help water users comply with the plan. For example, information about restrictions on lawn watering might be accompanied with information about proper lawn watering practices.

Based on past experience, with minimal public outreach, a water savings of 5 percent is assumed, with extensive public outreach a water savings of 7 percent is assumed, public information combined with enforcement (see section 3.3.2) is assumed to achieve a savings of up to 22 percent.

### 3.3.2 Enforcement

A study examining the effectiveness of drought management programs in reducing residential water-use (Virginia Polytechnic Institute 2006) showed considerable variation in the effectiveness of drought management programs and highlighted the importance of public information and enforcement. Results, shown in Table 3-6, indicate that overall reductions in residential water-use ranged from 0-7 percent for voluntary restrictions and from 0-22 percent for mandatory restrictions. The observed differences were statistically attributed to information efforts for voluntary restrictions and both information and enforcement efforts for mandatory restrictions.

**Table 3-6 Drought Program Management Variables Effect on Residential Water-Use**

<b>Classification</b>	<b>Estimated Change in Water-Use</b>	<b>Statistically Different than No Effect?</b>
<b>Voluntary Restrictions</b>		
Little or no information disseminated	-2%	No
Moderate level of information	-2%	No
Aggressive information dissemination	-7%	Yes
<b>Mandatory Restrictions</b>		
Low information and low enforcement	-5%	No
Moderate information and low enforcement	-6%	Yes
Aggressive information and low enforcement	-12%	Yes
Low information and moderate enforcement	-4%	No
Moderate information and enforcement	-9%	Yes
Aggressive information and moderate enforcement	-15%	Yes
Moderate information and aggressive enforcement	-20%	Yes
Aggressive information and enforcement	-22%	Yes

Source: Virginia Polytechnic Institute 2006

The analysis highlights the key role that public outreach and information plays in the success of drought response actions. Voluntary restriction programs with little to moderate levels of information dissemination had no appreciable effect on water-use. Voluntary restriction programs with active promotional efforts, however, reduced water-use by an estimated 7 percent from what would have otherwise occurred without any restriction program. Thus, for voluntary restrictions, only the most intense programs had even a moderate level of success in reducing water-use.



The analysis highlights the key role that public outreach and information plays in the success of drought response actions. Voluntary restriction programs with little to moderate levels of information dissemination had no appreciable effect on water-use. Voluntary restriction programs with active promotional efforts, however, reduced water-use by an estimated 7 percent from what would have otherwise occurred without any restriction program. Thus for voluntary restrictions, only the most intense programs had even a moderate level of success in reducing water-use.

Mandatory restriction programs without a significant enforcement component broadly mirrored the outcomes achieved by the voluntary programs. Programs with mandatory restrictions that invested minimal effort in information dissemination did not appreciably reduce residential water-use. Programs with no active enforcement efforts but with moderate to high levels of informational dissemination achieved 6 and 12 percent reductions in water-use, respectively. These estimated reductions are similar to those achieved by voluntary programs with aggressive informational campaigns.

The experience the City of Santa Cruz had implementing its Drought Contingency Plan and successfully reaching its reduction goals supports the importance of a strong public information program. Analysis of the implementation program identified the key ingredient to its success was "the public's understanding, awareness, and belief that the City was confronted with a true water shortage problem. Media coverage of water problems across California reinforced the situation. Without that sense of a real and imminent problem, it's likely the level of cooperation and willingness demonstrated by the community in making changes they did might have been considerably reduced." (Santa Cruz 2010)

Delivering accurate and timely information to water users, news media and local governments with updates on conditions, restrictions, and helpful contact information is key.

With aggressive information dissemination and enforcement its assumed PWD could achieve a 22 percent water savings.

### **3.3.3 Restrictions on Non-Essential Water Uses**

PWD's water waste policy focuses on curtailing water waste and non-essential water use. Outdoor water use, including washing sidewalks and watering ornamental landscapes is targeted. These uses are typically considered to be discretionary or nonessential, are highly visible, and therefore relatively easy to monitor, and often are a substantial component of water demand, particularly during the summer months when drought conditions are likely most severe.

Given the significance and visibility of lawn watering as the predominant component of seasonal use, best management practices in drought contingency plans typically prescribe time-of-use and other restrictions on lawn watering. This often involves placing water users on a schedule which allows for staggered lawn watering days, as well as restrictions on the times during the day when lawns can be watered. Additionally, this may include the suspension of potable water construction meters.

The American Waterworks Association estimates that voluntary outdoor water use limits can result in a water savings of **up to 10 percent** and mandatory outdoor water limits can achieve **up to a 56 percent** reduction in outdoor water use (AWWA 2008, AWWA 2011). Specifically, case studies found that:

- Restricting water use to every third day reduced water use by 22 percent

- Restricting water use to twice a week reduced water use by 33 percent
- Restricting water use to once a week saved 56 percent

PWD performed a detailed review of water use as part of its 2019 Financial Planning Study (PWD 2019). This analysis estimated that for residential customers, approximately 52% of water use was outdoors. Residential water demand makes up approximately 77% of PWD's overall demands Therefore:

- Voluntary outdoor water limits that saved 10% of outdoor residential demands would reduce overall water demand by 4% ( $0.1 \times 0.52 \times 0.77$ ).
- Restricting water use to twice a week could reduce outdoor water use by 33%, reducing overall water demand by 13% ( $0.33 \times 0.52 \times 0.77$ ).
- Restricting water use to once a week could reduce outdoor water use by 56%, reducing overall water demand by 22% ( $0.56 \times 0.52 \times 0.77$ ).

### 3.3.3.1 Additional Mandatory Restrictions

The State, through the State Water Board, adopted drought emergency conservation regulations in July 2014. The Board expanded, updated, extended, and readopted the emergency regulations several times and in the prohibitions on wasteful water use practices were in place until November 25th, 2017.

As directed by Executive Order B-40-17, the State Water Board is conducting a rulemaking to put in place permanent prohibitions on wasteful water use practices. This rulemaking is part of the broader legislation, *Making Water Conservation a California Way of Life*.

The specific outcome of the permanent prohibitions cannot be known at this time. The emergency conservation regulations in effect through November 2017 included the following prohibitions:

- Application of potable water to outdoor landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures;
- The use of a hose that dispenses potable water to wash a motor vehicle, except where the hose is fitted with a shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use
- The application of potable water to driveways and sidewalks
- The use of potable water in a fountain or other decorative water feature except where the water is part of a recirculating system
- The application of potable water to outdoor landscapes during and within 48 hours after measurable rainfall
- The serving of drinking water other than upon request in eating or drinking establishments
- Irrigation with potable water of ornamental turf on public street medians.

The emergency conservation regulations further required that:

- The irrigation with potable water of landscapes outside of newly constructed homes and buildings in a manner inconsistent with regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development
- Commercial, industrial, and institutional properties shall limit outdoor irrigation of ornamental landscapes or turf with potable water to no more than two days per week

PWD's water use restrictions are consistent with the State's prohibitions to prevent water waste. However, dependent on the declared drought stage, PWD may have restrictions and requirements in addition to those of the State such as:

- Limiting outdoor irrigation of ornamental landscape or turf with potable water to certain hours and to certain days of the week (all customer types, not just Commercial, Industrial, or Institutional properties)
- Prohibiting all outdoor irrigation with potable water
- Prohibiting filling of swimming pools, spas, and wading pools

### **3.3.4 Drought Surcharge Rates**

PWD has a drought rate structure to recover costs related to increased effort during drought. While not a specifically meant to reduce water demand, drought surcharge rates are expected to decrease water demands.

Past studies reveal that water use decreases when utilities install water meters and impose commodity charges. AWWA estimates that water use decreases between 15 to 40 percent when customers are charged a commodity rate rather than a flat rate (AWWA 2008). This indicates that customers are price sensitive and will adjust habits to reduce their cost of water. The actual extent that increasing rates during a drought can result in decreased water use is uncertain.

AWWA studies indicate that the effectiveness of pricing to reduce water use is very dependent on the affluence of the water utility customer base. As a rule of thumb, AWWA estimates that marginal price increases in water (up to 10 percent) reduce water use by 1.5 to 7 percent; price increases greater than 10 percent are necessary to achieve water use reductions greater than 10 percent (AWWA 2008).

Based on AWWA data its assumed that water use reductions of 10 to 15 percent will be achieved with drought rates.

**Table 3-7. Effectiveness Demand Reduction and Other Actions**

<b>Shortage Level</b>	<b>Demand Reduction Actions</b>	<b>Reduction in Shortage Gap</b>	<b>Explanation</b>	<b>Penalty, Charge, or Other Enforcement?</b>
1	Expand Public Information Campaign	7%	Based on AWWA 2008 assumes savings of 7%	No
2	Expand Public Information Campaign	22%	Based on AWWA 2008 assumes savings of 22% with enforcement	Yes
2	Implement or Modify Drought Rate Structure or Surcharge	10%	Based on AWWA 2011 assumes savings of 10%	Yes
3	Expand Public Information Campaign	22%	Based on AWWA 2008 assumes savings of 22% with enforcement	Yes
3	Implement or Modify Drought Rate Structure or Surcharge	10%	Based on AWWA 2011 assumes savings of 10%	Yes
3	Landscape - Other landscape restriction or prohibition	4%	Outdoor water limited to 3 days a week. Based on AWWA 2011.	Yes
4	Expand Public Information Campaign	22%	Based on AWWA 2008 assumes savings of 22% with enforcement	Yes
4	Implement or Modify Drought Rate Structure or Surcharge	15%	Based on AWWA 2011 assumes savings of 15%	Yes
4	Landscape - Other landscape restriction or prohibition	13%	Outdoor water limited to 2 days a week. Based on AWWA 2011.	Yes
5	Expand Public Information Campaign	22%	Based on AWWA 2008 assumes savings of 22% with enforcement	Yes
5	Implement or Modify Drought Rate Structure or Surcharge	15%	Based on AWWA 2011 assumes savings of 15%	Yes
5	Landscape - Other landscape restriction or prohibition	22%	Outdoor water limited to 1 day a week. Based on AWWA 2011.	Yes

**Table 3-7. cont.**

<b>Shortage Level</b>	<b>Demand Reduction Actions</b>	<b>Reduction in Shortage Gap</b>	<b>Explanation</b>	<b>Penalty, Charge, or Other Enforcement?</b>
6	Expand Public Information Campaign	22%	Based on AWWA 2008 assumes savings of 22% with enforcement	Yes
6	Implement or Modify Drought Rate Structure or Surcharge	15%	Based on AWWA 2011 assumes savings of 15%	Yes
6	Landscape - Other landscape restriction or prohibition	52%	Outdoor water use prohibited	Yes

DWR Table 8-2

**P A L M D A L E   W A T E R   D I S T R I C T**  
**B O A R D   M E M O R A N D U M**

**DATE:** April 4, 2022 **April 11, 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. 7.2 – CONSIDERATION AND POSSIBLE ACTION ON AWARD OF CONTRACT FOR MAIN OFFICE STUCCO REPAIR AND WEATHERIZATION WITH ANGELUS WATERPROOFING & RESTORATION, INC. (\$375,713.00 – BUDGETED – WORK ORDER NO. 21-703 – ENGINEERING MANAGER ROGERS)***

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**Recommendation:**

Staff recommends that the Board award a contract to Angelus Waterproofing & Restoration, Inc. from Huntington Beach, California in the not-to-exceed amount of \$375,713.00 for the Main Office Stucco Repair and Weatherization Project.

**Alternative Options:**

The Board can choose to not award the project.

**Background:**

The proposed Stucco Repair and Weatherization Project to be performed on the Palmdale Water District’s Main Office was created due to the hard coat stucco panel cladding exhibiting mechanical delamination and a lack of water management. Several stucco panels have begun to separate from the building due to the original construction and lack of water management since 1992.

Staff hired Terra Petra, through Hazen and Sawyer, to perform a preliminary stucco investigation and remediation recommendation prior to soliciting proposals from qualified contractors. Through that investigation, recommendations were presented, and a Request for Proposals was created.

With this in mind, staff received a proposal from Angelus Waterproofing & Restoration, Inc. Hazen and Sawyer reviewed the bid and recommends the District move forward with Angelus. Staff is recommending moving forward with Angelus Waterproofing & Restoration, Inc.

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

April 4, 2022

Bid Comparison:

<b>Contractor</b>	<b>Bid Amount</b>
Angelus Waterproofing & Restoration, Inc.	\$375,713.00

**Strategic Plan Initiative/Mission Statement:**

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

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

**Budget:**

This item is budgeted under Work Order No 21-703.

**Supporting Documents:**

- Angelus Waterproofing & Restoration Proposal
- Pricing Proposal
- Hazen Bid Award Recommendation



## **Proposal Format and Content**

1. Profile of Contractor - Angelus Waterproofing and Restoration, Inc., union contractor, employs over 50 skilled mechanics and annually bills over \$20 mil in roofing, facade waterproofing, caulking and sealants, concrete repair, specialty flooring and epoxy injection work throughout California. We have not been involved in any litigation, either directly or indirectly, with any public entity in the last 10 years.
2. Qualification of the Vendor - The following are facade repair project references where expansion joints were replaced, concrete or plaster repairs were performed, and an exterior, high-build elastomeric waterproof wall coating was installed.

### **Project Reference**

#### **Harbor Place Towers - \$1.8 million**

525 E. Seaside Way, Long Beach, CA 90802

Curtis Murel –(949) 548-9969 – [curtism@pcwservices.com](mailto:curtism@pcwservices.com)

Scope of Work – Exterior Waterproofing and Coating

100%

Time to Complete – 7 months

#### **Cook Auditorium Wall Repair - \$33,700**

811 W. Lincoln Ave., Anaheim, CA 92805

Todd Gangnath – 714) 999-3599 – [Gangnath\\_t@auhsd.us](mailto:Gangnath_t@auhsd.us)

Scope of Work – Wall Crack Repair

100%

Time to Complete – 1 month

#### **Kaiser Murrieta MOB - \$845,000**

18150 Keller Road, Murrieta, CA 92562

Isaac farcia – (626) 862-7927 – [isaac.m.garcia@kp.org](mailto:isaac.m.garcia@kp.org)

Scope of Work – Below Grade Waterproofing

100%

Time to Complete – 5 months

3. SOW - Angelus crews intend to perform all work per plans and specifications as detailed. We anticipate taking approximately 4 months to complete. All work will be done with our own crews; no subcontractors. We will perform all high work from boom and scissor lifts in a safe OSHA approved manner. AWR employees are CPR , OSHA 30(2 employees), fall protection certified and conduct regular tailgate safety meetings, all of which are documented and available for your perusal. Our superintendent, Mr. Matt Napier, will be running the project. Matt has over 20 years of experience in waterproofing, roofing and facade repair.
4. See 2. above.
5. Not applicable.



Main Office Stucco Repair and Weatherization  
Angelus Waterproofing & Restoration, Inc. Pricing Proposal

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total
	Mobilization, Demobilization and Site				
1	Clean Up	1	Lump Sum	\$10,740.00	\$10,740.00
2	Mock-up Section	1	Lump Sum	\$5,000.00	\$5,000.00
3	Stucco Panel Remediation	1	Lump Sum	\$196,565.00	\$196,565.00
4	Stucco Panel System Substrate	1	Lump Sum	\$92,708.00	\$92,708.00
	New Wall Coating Application over Stucco				
5	Cladding	1	Lump Sum	\$67,200.00	\$67,200.00
6	Wall System Accessory Components	1	Lump Sum	\$3,500.00	\$3,500.00
	<b>Total</b>				<b>\$375,713.00</b>



Hazen and Sawyer  
800 W. 6th Street, Suite 400  
Los Angeles, CA 90017 • 213.234.1080

March 28, 2022

Palmdale Water District  
Scott Rogers  
Engineering/Grants Manager  
2029 East Avenue Q  
Palmdale, CA 93550

**Re: Main Office Building Stucco Repair and Weatherization project – Recommendation for Bid Award**

Dear Scott,

In response to your request, Hazen has reviewed the bid information submitted by Angelus Waterproofing and Restoration, Inc. Our opinion is that the proposed bid cost is appropriate for the work. While individual bid line items seem high, the overall bid total is reasonable. We therefore recommend that Angelus be selected to be awarded the project.

Thank you for this opportunity to be of continued service to the District. Please contact me at DRJones@HazenandSawyer.com or (916) 769-8753 if you have any questions or require additional information.

Sincerely,

Dave Jones  
Vice President

**P A L M D A L E   W A T E R   D I S T R I C T**  
**B O A R D   M E M O R A N D U M**

**DATE:** April 4, 2022 **April 11, 2022**  
**TO:** BOARD OF DIRECTORS **Board Meeting**  
**FROM:** Mr. Adam Ly, Assistant General Manager  
**VIA:** Mr. Dennis LaMoreaux, General Manager  
**RE:** ***AGENDA ITEM NO. 7.3 – CONSIDERATION AND POSSIBLE ACTION ON AUTHORIZING THE GENERAL MANAGER TO EXECUTE AN AGREEMENT WITH TERRAVERDE ENERGY, LLC TO INVESTIGATE THE DEVELOPMENT OF SOLAR ENERGY PROJECTS. (NO INITIAL BUDGET IMPACT – ASSISTANT GENERAL MANAGER LY)***

---

**Recommendation:**

Staff recommends that the Board approve and authorize the General Manager to execute an Agreement with TerraVerde Energy, LLC to investigate the development of solar energy projects.

**Alternative Options:**

The alternative is not executing the Agreement.

**Impact of Taking No Action:**

The District would forgo investigating solar power as an alternative energy supply.

**Background:**

Since the 2000's, the District has invested in alternative energy supplies to help offset the cost of electricity. The Administration site has solar power, the treatment plant has a wind turbine, and Palmdale Lake provides hydropower. Some of these energy sources are reaching their end-of-life cycle, and the cost of maintenance and parts are harder to procure. The District wants to find cost-effective energy projects to supplement our electricity.

TerraVerde Energy is an ACWA preferred provider and has a no-risk process to help utilities find energy projects. Staff has communicated with TerraVerde Energy and has held several meetings to look at possible projects. The company presented to staff two possible projects, which are outlined in the proposal. Staff wants to enter into a No-Risk Agreement with TerraVerde to continue the feasibility assessment and project development process.

**Strategic Plan Initiative/Mission Statement:**

This item is under Strategic Initiative No. 1- Water Resource Reliability.  
This item directly relates to the District's Mission Statement.

**Budget:**

There is no budget impact.

**Supporting Documents:**

- Proposal Package from TerraVerde Energy, LLC
- Agreement with TerraVerde Energy, LLC

The background features a collage of images related to energy and technology. On the left, there's a dark area with a grid pattern and some faint text including '11126.98', '+13%', '+2.4%', and '478'. The central part shows a building facade with a grid of windows. On the right, there's a close-up of a white electric vehicle being charged by a charging station. The overall color palette is dominated by dark blues and greens.

# TerraVerde ENERGY

## ENERGY PROJECT SERVICES PROPOSAL

March 10, 2022

*prepared for*

Palmdale Water District

Adam C. Ly, Assistant General Manager

*presented by*

TerraVerde Energy

David Burdick, Executive Vice President



TerraVerde Energy ("TerraVerde") is pleased to present the following Energy Project Services Proposal to Palmdale Water District.

TerraVerde is a leading independent energy consulting firm proudly supporting water agencies with the design and deployment of energy projects and programs that reduce costs, increase resiliency (backup power), and enhance sustainability. Over the past 13 years, we have supported the successful implementation of over \$500 million worth of distributed solar PV and battery energy storage systems for which we provided independent technical and financial feasibility analyses, project development (competitive solicitation) support, project implementation management (overseeing design, interconnection, incentive applications, and construction), and continue to provide ongoing asset management services (performance monitoring, operations & maintenance, revenue program management, detailed energy & financial performance reporting) for a portfolio of nearly 400 solar PV & battery energy storage systems. To date, we have delivered over \$50 million in energy cost savings to our clients.

Under our unique risk-free project development model, TerraVerde provides project feasibility assessment, procurement administration (RFP development and management), and contract negotiation services at no cost, and is only compensated when our client decides to proceed with project implementation. We would be thrilled to leverage our project expertise in partnering with Palmdale Water District, and trust that you will find our industry leading experience, capabilities, and expertise to be an excellent fit for your needs.

Regards,

A handwritten signature in black ink, appearing to read "David Burdick".

David Burdick, Executive Vice President

TerraVerde Energy | david@terraverde.energy | 415.272.1014



ACWA Preferred Provider

TerraVerde Energy proudly serves as ACWA's Preferred Provider for Energy Consulting Services

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## THE DISTRICT'S ENERGY OPPORTUNITIES

### THE BENEFITS OF SOLAR PV & BATTERY ENERGY STORAGE SYSTEMS

Solar PV & battery energy storage systems are able to provide substantial financial benefits.



**Solar PV systems** generate clean, low-cost electricity and in many cases can deliver meaningful energy cost savings benefits by reducing electric utility bills. In addition, solar PV systems are able to generate revenue through the monetization of Renewable Energy Certificates.

**Battery energy storage systems** are also power resources for generating financial benefits. Similar to solar, batteries can lower electric utility bills by reducing a facility's peak demand, and shifting load to less expensive hours of the day. In addition, batteries can generate revenue by participating in emerging grid services and distributed energy resources programs.

### SUBSTANTIAL INCENTIVES ARE AVAILABLE & MOVING QUICKLY

The **Federal Investment Tax Credit (ITC)** provides an incentive for both stand-alone solar and solar + battery projects. This incentive currently provides a tax credit of 26% of the project costs. Third-party project owners can claim this benefit and share this value with site hosts through reduced agreement payments. This incentive will soon begin **stepping down in value annually at the end of 2022**.

**California's Self-Generation Incentive Program (SGIP)** is a rebate program that provides incentives for battery energy storage systems (along with other energy technologies). Based on the location of the project and the type of facility where the project will be deployed, SGIP rebates cover between ~30-50% of the cost of the battery. Given the rich incentive levels, and substantial battery project demand, funding for this incentive program is **expected to be fully subscribed in 2022**.



### NET ENERGY METERING IS CHANGING, AGAIN

The California Public Utilities Commission (CPUC) is proposing devastating changes to the State's Net Energy Metering (NEM) Program. The NEM Program has been wildly successful in empowering electricity customers in California to deploy solar PV and battery energy storage systems to save money, increase resiliency, and enhance sustainability. However, in their recent Proposed Decision, the CPUC is proposing changes that would undermine the value of existing solar projects, and render many potential projects as non-viable. The Proposed Decision includes several dramatic changes to NEM,

including a substantial discount to the value of credits for exported electricity and a shortened 15-year period for existing solar customers to enjoy their current NEM 1.0 or NEM 2.0 tariff. As of February 3, proceedings are currently hold “until further notice”. However, Districts that are exploring potential new projects should move swiftly to submit interconnection application and secure the current NEM tariff while it is still available.

For the latest on NEM and other market updates, visit: [TerraVerde.Energy/News-And-Insights](https://www.terraverde.energy/news-and-insights)

## PALMDALE WATER DISTRICT’S OPPORTUNITIES

Based on a preliminary review of the District’s SCE data (usage & billing) and potential project sites, TerraVerde Energy identified at least two project opportunities:

Project	Project 1	Project 2
Location	North of 641 E Ave S	North of Palmdale WD Headquarters
Solar Project Size	1.5 MW	3 MW
Tariff	NEM 2.0 Aggregation (NEM-A)	NEM 2.0 Aggregation (NEM-A) or RES-BCT
Related SCE Accounts	8002835629, 8003366592	8000465880, 8001204796, 8002629500, 8003502407

Under the NEM-A program, a single solar PV system generates credits that are applied against usage and billing from multiple (aggregated) accounts, owned by the same customer that are located on contiguous properties. There may be a challenge meeting the contiguous property requirement of NEM-A on Project 2. In the event TerraVerde is unsuccessful of getting approval from SCE for the project to qualify for NEM-A, this project could convert to the RES-BCT tariff which offsets only the generation charges of benefitting accounts.



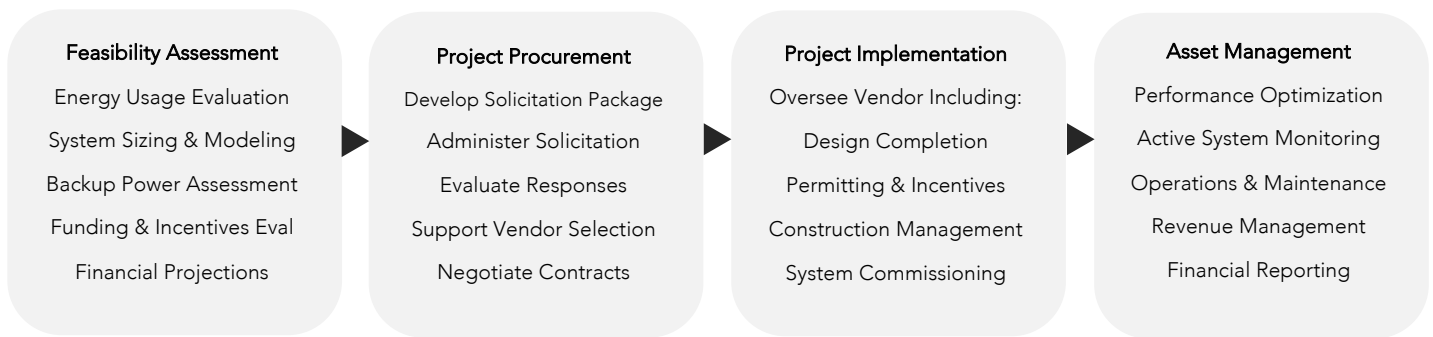
## ABOUT TERRAVERDE ENERGY

TerraVerde is a leading **independent energy consulting firm** proudly supporting clients with the design and deployment of energy projects and programs that reduce costs, increase resiliency (backup power), and enhance sustainability. Over the past 13 years, we have supported the successful implementation of over \$500 million worth of distributed solar PV and battery energy storage systems for which we provided independent technical and financial feasibility analyses, project development (competitive solicitation) support, project implementation management (overseeing design, interconnection, incentive applications, and construction), and continue to provide ongoing asset management services (performance monitoring, operations & maintenance, revenue program management, detailed energy & financial performance reporting) for a portfolio of nearly 400 solar PV & battery energy storage systems.

**TerraVerde Energy has delivered over \$50 million in energy cost savings to our clients to date.**

## TERRAVERDE'S TURN-KEY PROJECT SERVICES

TerraVerde Energy leverages objective expertise to support clients in designing and developing energy savings & resiliency projects. In addition, TerraVerde Energy provides on-going asset management services to ensure that projects deliver on pre-deployment expectations.



## THE TERRAVERDE ADVANTAGE

**Objective Expertise** | As independent energy advisors, TerraVerde operates as an extension of your team, leveraging financial, technical, and market expertise with your interests in mind.

**Extensive Experience** | Over the past 13 years, TerraVerde has developed \$500 million in energy projects, including more than 150 MWs of solar, battery energy storage, and energy resiliency projects.

**Risk-Free Development Model** | TerraVerde can provide project due diligence and solicitation administration services at no cost, and is only compensated when our client approves projects for implementation.

# TERRAVERDE ENERGY'S SERVICES

<p>Feasibility Assessment</p>	<p>Building on the initial evaluation already completed, TerraVerde will support the District with a detailed, objective, independent analysis of the opportunities for deploying solar PV and battery energy storage systems:</p> <ol style="list-style-type: none"> <li>1. Evaluate historical electricity usage &amp; costs</li> <li>2. Determine solar + battery energy storage sizing to achieve optimal financial benefits, and / or backup power requirements</li> <li>3. Determine optimal battery operating schedules based on demand reduction, energy arbitrage, and grid services opportunities</li> <li>4. Assess the added cost for hardware to install a microgrid for islanding capabilities and evaluate the resiliency benefits that could be provided by these systems</li> <li>5. Evaluate potential financial incentives and funding sources for the potential projects</li> <li>6. Present pro forma cash flow projections for these projects</li> <li>7. Provide guidance regarding next steps and assist with Board presentations as needed</li> </ol>
<p>Project Development</p>	<p>Leveraging highly refined contracts and solicitation materials, TerraVerde will manage a swift procurement process for these projects:</p> <ol style="list-style-type: none"> <li>1. Develop a procurement package in collaboration with District's legal counsel (including project contracts &amp; specifications)</li> <li>2. Solicit proposals from qualified vendors</li> <li>3. Manage Questions &amp; Answers with vendors</li> <li>4. Evaluate proposals and provide the District a qualitative &amp; quantitative assessment</li> <li>5. Assist with vendor shortlisting and interviews (as needed)</li> <li>6. Manage value engineering and contract negotiations (in collaboration with the District's legal counsel)</li> <li>7. Provide guidance regarding next steps and assist with Board presentations as needed</li> </ol>
<p>Project Implementation</p>	<p>Upon the District executing an agreement with a vendor for these projects, TerraVerde will provide owner's rep services through the project implementation phase:</p> <ol style="list-style-type: none"> <li>1. Oversee the provider's design process including iteratives design reviews</li> <li>2. Oversee the provider's utility interconnection, permitting, and incentive application processes</li> <li>3. Review provider's project schedule, assist in optimizing schedule to fit the District's requirements</li> <li>4. Manage the provider through the construction phase, ensuring that projects are delivered on-time, on-budget, and within agreed upon scope</li> <li>5. Manage project closeout and delivery of final project documentation per contract terms</li> <li>6. Confirm monitoring system operation and prepare handoff to Asset Management</li> </ol>
<p>Asset Management</p>	<p>Upon completion of the implementation of the systems, TerraVerde will provide the following Asset Management services. The initial term of these services shall be 3 years, with the option to renew thereafter, by mutual expressed consent.</p> <ol style="list-style-type: none"> <li>1. Active system performance monitoring</li> <li>2. Issue management: manage and enforce warranty claims, maintenance obligations, and performance guarantees</li> <li>3. Create &amp; maintain a Facility Operation Plan: a data room with current, relevant, source of truth documentation for these energy systems including contracts, contacts, drawings, and utility authorizations</li> <li>4. Oversee &amp; Manage Maintenance Protocols: managing provider's completion of preventive, corrective, and warranty maintenance work</li> <li>5. Revenue management through REC monetization and grid services program participation administration</li> <li>6. Quarterly reporting on actual vs. expected energy systems performance, and issues management</li> <li>7. Detailed annual financial reporting on actual vs. expected avoided costs, revenue, expenses, net savings</li> </ol>

## TERRAVERDE'S RISK-FREE PROGRAM DEVELOPMENT MODEL

Under this unique project delivery model, TerraVerde provides feasibility assessment and project development services at-risk, and is only compensated when the District approves the implementation of the projects.

Services	Fee	Due
Feasibility Assessment	No Charge (TerraVerde provides at-risk)	
Project Development Services	No Charge (TerraVerde provides at-risk)	
Program Implementation Services	Development Fee: 8% of Total Project Cost <sup>1</sup>	<ul style="list-style-type: none"> <li>• 50% due upon the District's execution of the contract with vendor</li> <li>• 20% due upon the District's issuance of notice to vendor to proceed with construction<sup>2</sup></li> <li>• 20% due upon the receipt of Permission to Operate from Utility<sup>2</sup></li> <li>• 10% due upon the District's confirmation of project completion<sup>2</sup></li> </ul>
Asset Management	Annual Fee as described in the following column	<ul style="list-style-type: none"> <li>• Annual Fee for Year 1 shall be equivalent                             <ul style="list-style-type: none"> <li>○ \$0.01 per kWh for third-party owned solar</li> <li>○ \$0.0225 per kWh for client owned solar</li> <li>○ \$1,000 per battery system</li> </ul> </li> <li>• This fee shall increase annually by 3%</li> <li>• This fee shall be due upon initiation of the Asset Management Services and annually thereafter<sup>2</sup></li> </ul>

<sup>1</sup> Total Project Cost: all costs and expenses incurred by District (and its counterparties in a project agreement) in designing, developing, purchasing, constructing, installing, and permitting battery energy storage systems

<sup>2</sup>Invoices for these fees may be invoiced on a pro rata basis as portions of the projects reach these milestones

## TERRAVERDE ENERGY'S PROPOSED PROJECT TEAM



### Jen Petherick

**Title:** Executive Vice President of Projects **Role:** Project Lead

TerraVerde Energy, San Francisco, CA *EVP, Projects, 2015 – Present*  
Leads the team responsible for the development and implementation of DER projects including solar & battery storage.

GCL Solar Energy, San Francisco, CA *Project Manager, 2013 – 2015*  
Managed two utility scale solar PV projects of 7.5MWAC and 7MWAC from permitting phase through COD in 5 months. Worked on a 57MWAC solar PV project with 18 MW battery storage. Applied technical expertise to review, resolve and manage risks throughout project implementation

Pacific Utility, Concord, CA *Manager, Engineering, 2011 – 2013*  
Responsible for the development and design of commercial through utility scale photovoltaic power projects.

Belectric, CA *Manager, Project Design and Performance, 2009 – 2010*  
Key member of original team of less than 10 people brought on board to start up the US division. Successfully secured contract and managed development through construction of the first US project. Steered much of the early strategic and technical direction of the US office.

**Years of Experience** 16

#### Education

BS, Elec. Engineering,  
2002  
MA, Elec. Engineering,  
2004

#### Certificates & Training

Licensed PE  
LEED AP Certified



### Clayton Pierce

**Title:** Project Developer **Role:** Project Developer

TerraVerde Energy, San Francisco, CA *Project Developer, 2021 – Present*  
Work with clients to understand needs and develop a solution that will address those needs in an efficient and financially beneficial manner. Responsible for the development solar PV, battery energy storage, and energy resiliency projects.

Enel X, Boston, MA *Program Manager, Energy Markets, 2017 – 2021*  
Managed \$20M/Yr P&L associated with Enel X's ISO-NE business. Managed all wholesale & retail market activity including capacity market strategy, business and market development, project finance, asset management. Informed regulatory advocacy efforts in New England to create reasonable policies that benefitted Enel X and its clients.

Enel X, Boston, MA *Program Manager, Energy Markets, 2017 – 2021*  
Managed network operations for 3GW behind-the-meter demand response portfolio in PJM's wholesale markets. Operational lead in product development to ensure that Enel X could dispatch demand response assets compliant with PJM's tariffs. Project-managed Enel X's back-up-generator retrofitting program by valuing potential opportunities and directing sales efforts to highest return projects.

**Years of Experience** 5

#### Education

BA, Economics,  
Environmental Studies,  
2014



## Ashley Hale

**Title:** Energy Engineering Manager **Role:** Project Analysis Lead

TerraVerde, San Francisco, CA *Energy Engineering Manager, 2018 – Present*  
Leads TerraVerde’s NOVA team, the engineering and analytics group responsible for evaluating energy use data, modeling various solar PV, battery energy storage, and energy resiliency project strategies, producing cash flow pro formas for these distributed energy resource projects.

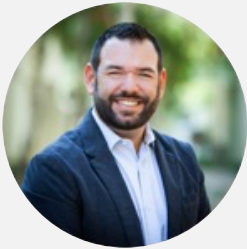
**Years of Experience** 5

### Education

BS, Engineering, 2016  
MS, Engineering, 2019

Able Grid Energy Solutions, CA *Data Analyst Intern, 2017 – 2018*  
Built an SQL database and then migrated data into the database for high output queries of energy market data. Analyzed the market trends for variations in pricing of capacity, energy and ancillary services across the state of California.

Katy’s Goodness, Chicago, IL *Project Manager, 2016 – 2017*  
Implemented green initiatives, focusing on the addition of sustainable energy and energy efficiency tactics to the manufacturing facility. Including running the cost analysis of implementing solar and/or a wind turbine. Organized community drives, interacted with customers, represented the company at tradeshow and other events, and maintained inventory records.



## David Burdick

**Title:** Executive Vice President of Business Development **Role:** Project Support

TerraVerde Energy, Larkspur, CA *EVP Business Development, 2019 – Present*  
Leads TerraVerde’s Business Development Group, focused on assessing and developing Distributed Energy Resource programs and projects

**Years of Experience** 6

TerraVerde Energy, Larkspur, CA *VP Asset Management, 2018 – 2019*  
Maximizing the energy and financial performance of distributed energy resources (solar energy systems, energy storage systems, energy efficiency projects) in their operational phase. Current Portfolio: \$400M in projects, 100 MWs of solar & battery systems

Kurios Energy, Manteca, CA *General Manager, 2015 – 2018*  
Commercial and residential solar and battery energy storage engineering, procurement, and construction; Lead development, installation, and administrative teams in the installation of 15 MW of solar and energy storage systems

## TERRAVERDE ENERGY'S CLIENTS & PROJECTS

Client Name	Project Description		
	Solar PV Size (kW)	Battery Size (kWh)	Project Value
<b>School Districts</b>			
Armona Union ESD	550		
Big Pine USD	198		\$792K
Burton ESD	1,537	360	\$6.2M
Calistoga JUSD	N/A		
Ceres USD	N/A		\$4.2M
Chawanakee USD	708		\$2.8M
Cinnabar SD	100		\$290K
Clovis USD	16,372	4,000	\$76.4M
Corcoran JUSD	1,327		\$3.4M
Coronado USD			
Delano UESD		4204	\$3.2M
Dos Palos USD	316		\$1.3M
Eureka USD	571	232	
Fillmore USD	N/A		\$938K
Firebaugh LDUSD	910		\$4.1M
Fontana USD	13,453	12,127	
Fowler USD	545		\$2.1M
Golden Plains USD	987		\$6.4M
Golden Valley USD	1,829		\$7.1M
Hemet USD	3,094	1,890	\$11.8M
Kerman USD	1,859		\$8.2M
Kingsburg JUHSD	564		\$1.5M
Lafayette ESD	500		\$576K
Lakeport USD	N/A		
Lakeside Union Elem	N/A		\$551K
Lancaster SD		2220	\$4.3M
Lemon Grove SD/SDCOE	380		\$925K
Lindsay SD	2,310	650	\$12.8M
Los Altos SD	1,408		\$5.2M
McSwain ESD	N/A		\$246K
Mendota USD	1,538		\$5.5M
Mendocino COE			
Merced City ESD	1,323		\$7.3M
Monterey Peninsula USD	761		\$7.2M
Orinda USD	572		\$3.0M
Pacific Union SD	N/A		\$270K
Palmdale SD	7737	5408	\$3.6M
Petaluma City Schools	1,060		\$5.3M
Petaluma JUH	673		\$5.5M
Pittsburg USD		3000	
Placentia Yorba Linda USD	N/A		\$5.4M
Pleasanton USD	3,028		\$11.6M
Ramona USD			
Riverdale JUSD	170		\$1.1M
Riverway ES	138		\$900K

Sanger USD	3,586	1,000	\$15.9M
San Ramon Valley USD			
Sierra USD	941		\$3.9M
Taft City SD	N/A		
Tulare City Schools	2,538	540	\$10.0M
Tulare JUHSD	3,406		\$13.2M
Turlock USD	N/A		\$3.1M
Twin Rivers USD	N/A		
Visalia USD	4,567	4,384	\$22.3M
Washington USD	1,191		\$4.8M
West Park ESD	136		\$935K
Westside ESD	136		\$757K
Windsor USD	1,564	548	\$7.6M
Wright ESD	530		\$3.4M
Yosemite USD	970		\$3.8M
Alameda COE			

#### Local Governments

City of Bishop	205		\$631K
City of Davis	N/A		\$9.0M
City of Lathrop	676		\$2.1M
City of Woodland	2,469		\$10.8M
City of Fairfield	1,100		
City of Torrance			
City of Riverside			
City of Indian Wells			
City of Gustine			
El Dorado County	2,404		\$7.1M
Inyo County	633		\$1.7M

#### Water Agencies

Rancho California WD	5,011		\$11.9M
Eastern MWD	15,911		\$41.3M
Las Virgenes MWD	4,051		\$8.7M
Santa Clarita Valley WA	5,459		\$13.8M
Vallecitos WD	2,235		\$4.9M
El Dorado ID	4,558		\$11.3M
Novato Sanitary District		3,016	\$2.1M
Valley Center MWD	1,320		
Fallbrook PUD	1,120		
Eastern Sierra CSD	110		\$319K
Joshua Basin WD			
South San Joaquin Irrigation District			
Ventura River WD			

#### Transit Agencies

Bay Area Rapid Transit	3,183		\$14.8M
CA High Speed Rail	100,000	400,000	
CalTrain			
SamTrans			

#### Community Choice Energy Agencies

Sonoma Clean Power	TBD	TBD	TBD
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Peninsula Clean Energy	TBD	TBD	TBD
Pico Rivera Innovative Municipal Energy	TBD	TBD	TBD
MCE	TBD	TBD	TBD
Baldwin Park Resident Owned Utility District	TBD	TBD	TBD
Pomona Choice Energy	TBD	TBD	TBD
Santa Barbara Choice Energy	TBD	TBD	TBD
San Jacinto Power	TBD	TBD	TBD
Apple Valley Choice Energy	TBD	TBD	TBD
Rancho Mirage Energy Authority	TBD	TBD	TBD



## CONSULTING SERVICES AGREEMENT

THIS CONSULTING SERVICES AGREEMENT ("Agreement"), is entered into as of \_\_\_\_\_ (the "Effective Date"), by and between **Palmdale Water District**, hereinafter referred to as ("**Client**") and **TerraVerde Energy, LLC**, hereinafter referred to as ("**Consultant**").

Client and Consultant are sometimes collectively referred to herein as the "Parties" or singularly by their individual names or as a "Party".

### RECITALS

A. Client desires to engage Consultant to perform the services described in this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants herein contained and for other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, the Parties agree as follows:

### AGREEMENT

1. **The Services.** Client hereby agrees to engage Consultant as an independent contractor to provide the services set forth in the scope of work attached hereto as Exhibit "A" and incorporated herein by this reference (collectively, the "Services").

2. **Compensation.** As consideration for the performance of the Services, Client shall pay Consultant a fee per the schedule in Exhibit A (the "Service Fees"). In addition, Client shall reimburse Consultant for reasonable expenses directly related to the performance of the Services (e.g., travel expenses, legal fees, etc.), and total reimbursement for such expenses shall not exceed five thousand dollars (\$5,000.00). The Services Fee and any additional expenses shall be paid by Client to Consultant within twenty one (21) days of receipt of an invoice for the same. Should any payment remain unpaid when due, a monthly service charge of 1.5% will be charged until the bill is paid in full and it shall constitute a material breach of this Agreement. Further, Consultant shall have the right to stop work if any payment is not made, when due, to Consultant, and Consultant may, after seven (7) calendar days written notice of non-payment, keep the job idle until all payments due are received. These remedies are in addition to any other right or remedy that the consultant may have. Client shall be responsible for any damage resulting from its failure to make timely payment hereunder or for any delay due to Consultant's exercise of the right to stop work pursuant hereto.

3. **Independent Contractor.** In the performance of the Services provided pursuant to this Agreement, the Parties agree and acknowledge that Consultant shall at all times be deemed to be an independent contractor of Client. No deductions shall be made from the payments made by Client to Consultant, including, but not limited to, withholding or other employment taxes, social security, state and federal unemployment contributions, or state or federal income tax or disability insurance contributions.

4. **Term and Termination.** This Agreement shall be effective as of the Effective Date, and shall continue in effect thereafter until Consultant has satisfactorily performed the Services in full in accordance with the terms of this Agreement but not exceeding six (6) years from the date hereof, except as otherwise provided in the "Project Schedule" in Exhibit "A" or unless earlier terminated pursuant to this Section 4 (the "Term"). Client may, in its discretion, extend the Term by two (2) one-year terms. Client may immediately terminate this Agreement if Consultant (i) is dissolved, (ii) fails to timely perform the Services in a commercially reasonable manner and such failure continues for a period of ten (10) business days after Consultant receives written notice of such failure, or (iii) materially breaches any provision of this Agreement, and fails to cure that breach within ten (10) business days of receiving written notice of such breach. Consultant may immediately terminate either this Agreement if Client (i) is dissolved, or (ii) materially breaches any provision of this Agreement, and fails to cure that breach within ten (10) business days of receiving written notice of such breach. Upon termination, all the services (as outlined in Exhibit A) rendered by Consultant shall promptly be delivered to Client. If any advance payments to Consultant have been made for which services have not been satisfactorily rendered to Client, Consultant shall promptly refund Client the amount of any overpayment. If the Parties cannot agree on the amount of overpayment, any such dispute shall be resolved in accordance with Section 7.

5. **Insurance.** Service Provider shall obtain and maintain in force during the term of this Agreement comprehensive general liability insurance against all claims of bodily injury, death, or property damage with coverage at least equivalent to a combined single limit of \$1,000,000 each occurrence and \$2,000,000 aggregate; and automobile liability insurance, if applicable, with coverage at least equivalent to \$1,000,000 each accident, \$1,000,000 each occurrence.

6. **Indemnification.** Each Party shall defend, indemnify and hold the other Party, its officers, directors, members, employees and agents harmless from and against any and all liability, loss, expense, cost, attorneys' fees or claims (collectively, "Claims") relating to, arising out of, of or incurred in connection with the negligence or willful misconduct of the Party or a material breach by the Party of this Agreement; provided, however, that a Party shall not be indemnified for Claims to the extent due to the negligence or willful misconduct of such Party or a material breach by such Party of this Agreement. Furthermore, except for third party claims seeking damages for injury to persons or property which are the responsibility of Consultant and any claims covered by Consultant's insurance, Consultant's total liability for contractual damages and this Agreement generally shall not exceed the total compensation for Services received by Consultant under this Agreement as provided in Exhibit A.

7. **Dispute Resolution.** Any dispute, claim or controversy arising out of or relating to this Agreement or the breach, termination, enforcement, interpretation or validity thereof, shall first be submitted to mediation. If the matter is not resolved through mediation, in addition to any other rights or remedies, either party may take legal action, in law or in equity, to cure, correct or remedy any default, to recover damages for any default, to compel specific performance of this Agreement, to obtain declaratory or injunctive relief, or to obtain any other remedy consistent with the purposes of this Agreement. Notwithstanding any contrary provision herein, Consultant shall file a statutory claim pursuant to Government Code Sections 905 *et. seq.* and 910 *et. seq.*, in order to pursue any legal action under this Agreement.

8. **Intellectual Property.** Any code or software used by Consultant and deemed to be proprietary by Consultant as part of delivering services under this Agreement shall remain the sole exclusive property of Consultant.

9. **Compliance with Laws.** Client and Consultant agree to comply with all applicable statutes and regulations, both state and federal, applicable to the operation and administration of this Agreement and the Services.

10. **Entire Agreement.** This Agreement and items incorporated herein contain all of the agreements of the Parties with respect to the matters contained herein, and no prior agreement or understanding pertaining to any such matter shall be effective for any purpose.

11. **Amendments.** No provisions of this Agreement may be amended or modified in any manner whatsoever except by an agreement in writing of the Parties.

12. **Successors.** The terms, covenants, and conditions of this Agreement shall be binding upon and shall inure to the benefit of the heirs, executors, administrators, and assignees of the respective Parties.

13. **Assignment.** With express written approval of Client, which shall not be unreasonably withheld or delayed, Consultant shall be permitted to assign this Agreement to either (a) one of its affiliates or subsidiaries or (b) any entity succeeding to substantially all the assets or business of Consultant whether by merger, consolidation, acquisition or otherwise.

14. **Governing Law; Venue.** This Agreement and all documents provided for herein and the rights and obligations of the Parties hereto shall be governed in all respects, including validity, interpretation, and effect, by the laws of the State of California. The Parties hereby irrevocably consent to the jurisdiction of the state courts located in Los Angeles County, California and federal courts located in the Central District of California, in Los Angeles County, California, in any action arising out of or relating to this Agreement, and waive any other venue to which either Party might be entitled by domicile or otherwise.

15. **Counterparts.** This Agreement may be signed by the Parties in different counterparts, which together shall constitute one agreement, even though all Parties may not have signed the same counterpart.

16. **Attorneys' Fees.** In the event that any action, including mediation or arbitration, is brought by either Party hereto to enforce or interpret the terms of this Agreement, the prevailing Party in such action shall be entitled to its costs and reasonable attorneys' fees and costs incurred therein from the non-prevailing Party in addition to such other relief as the court or arbitrator may deem appropriate.

17. **Waiver.** A waiver of any breach of this Agreement by any Party to this Agreement shall not constitute a continuing waiver, or of any subsequent breach of the same, or of any breach of another provision of this Agreement.

18. **Notices.** All notices and other communications required under this Agreement shall be in writing and shall be deemed to have been duly given (i) on the date of service, if served personally on the person to whom notice is to be given, (ii) on the date of receipt, if sent by facsimile to the person to whom notice is to be given at the facsimile number set forth below, or (iii) on the third day after mailing, if mailed to the Party to whom notice is to be given by first-class mail, registered or certified, postage prepaid, addressed as follows:

To Client: Palmdale Water District  
2029 E Ave Q  
Palmdale, CA 93550  
Attn: Adam C. Ly  
E-mail: aly@palmdalewater.org

To Consultant: TerraVerde Energy, LLC  
1300 22nd Street, Unit 401  
San Francisco, CA 94107  
Attn: Ali Chehrehsez  
E-mail: ali@terraverde.energy

A Party or other designated recipient may change its address by notifying the Parties and other designated recipients of its new address in accordance with the procedures set forth in this Section 18.

19. **Further Acts.** Each Party agrees to do all acts and things and to make, execute and deliver such written instruments as shall be reasonably necessary to carry out the terms and provisions of this Agreement and to complete the transactions contemplated herein.

IN WITNESS WHEREOF, the Parties have executed this Agreement to be effective as of the Effective Date.

**CONSULTANT: TerraVerde Energy, LLC.**

Name: Ali Chehrebsaz

Title: CEO

**Service Provider Signature:** *Ali Chehrebsaz* Ali Chehrebsaz (Apr 1, 2022 12:01 PDT) **Date:** Apr 1, 2022

**CLIENT: Palmdale Water District**

Name: \_\_\_\_\_

Title: \_\_\_\_\_

**Client Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

## Exhibit A

### Services

Feasibility Assessment	<p>TerraVerde will support the District with a detailed, objective, independent analysis of the opportunities for deploying solar PV and battery energy storage systems:</p> <ol style="list-style-type: none"><li>1. Evaluate historical electricity usage &amp; costs</li><li>2. Determine solar + battery energy storage sizing to achieve optimal financial benefits, and / or backup power requirements</li><li>3. Determine optimal battery operating schedules based on demand reduction, energy arbitrage, and grid services opportunities</li><li>4. Assess the added cost for hardware to install a microgrid for islanding capabilities and evaluate the resiliency benefits that could be provided by these systems</li><li>5. Evaluate potential financial incentives and funding sources for the potential projects</li><li>6. Present pro forma cash flow projections for these projects</li><li>7. Provide guidance regarding next steps and assist with Board presentations as needed</li></ol>
Project Development	<p>Leveraging highly refined contracts and solicitation materials, TerraVerde will manage a swift procurement process for these projects:</p> <ol style="list-style-type: none"><li>1. Develop a procurement package in collaboration with District's legal counsel (including project contracts &amp; specifications)</li><li>2. Solicit proposals from qualified vendors</li><li>3. Manage Questions &amp; Answers with vendors</li><li>4. Evaluate proposals and provide the District a qualitative &amp; quantitative assessment</li><li>5. Assist with vendor shortlisting and interviews (as needed)</li><li>6. Manage value engineering and contract negotiations (in collaboration with the District's legal counsel)</li><li>7. Provide guidance regarding next steps and assist with Board presentations as needed</li></ol>
Project Implementation	<p>Upon the District executing an agreement with a vendor for these projects, TerraVerde will provide owner's rep services through the project implementation phase:</p> <ol style="list-style-type: none"><li>1. Oversee the provider's design process including iteratives design reviews</li><li>2. Oversee the provider's utility interconnection, permitting, and incentive application processes</li><li>3. Review provider's project schedule, assist in optimizing schedule to fit the District's requirements</li><li>4. Manage the provider through the construction phase, ensuring that projects are delivered on-time, on-budget, and within agreed upon scope</li><li>5. Manage project closeout and delivery of final project documentation per contract terms</li><li>6. Confirm monitoring system operation and prepare handoff to Asset Management</li></ol>
Asset Management	<p>Upon completion of the implementation of the systems, TerraVerde will provide the following Asset Management services. The initial term of these services shall be 3 years, with the option to renew thereafter, by mutual expressed consent.</p> <ol style="list-style-type: none"><li>1. Active system performance monitoring</li><li>2. Issue management: manage and enforce warranty claims, maintenance obligations, and performance guarantees</li><li>3. Create &amp; maintain a Facility Operation Plan: a data room with current, relevant, source of truth documentation for these energy systems including contracts, contacts, drawings, and utility authorizations</li><li>4. Oversee &amp; Manage Maintenance Protocols: managing provider's completion of preventive, corrective, and warranty maintenance work</li><li>5. Revenue management through REC monetization and grid services program participation administration</li><li>6. Quarterly reporting on actual vs. expected energy systems performance, and issues management</li><li>7. Detailed annual financial reporting on actual vs. expected avoided costs, revenue, expenses, net savings</li></ol>

## Project Schedule

Phase	Duration	Start (month number)	End (month number)
Feasibility Assessment	2 months	1	2
Project Development	6 months	3	8
Project Implementation	16 months	9	24
Initial Asset Management Services Term	36 months	25	60

Note: This schedule represents the target time-line for the project. However, given that the actual timeline will be dependent upon several variables outside the control of Consultant and Client, this target-timeline is a tentative schedule.

## Service Fees

TerraVerde Energy provides the Feasibility Assessment and Project Development services at-risk, and is only compensated for Project Implementation Services and Asset Management in accordance with the description below if the Client approves the implementation of the projects and executes a contract with a vendor.

Services	Fee	Due
Feasibility Assessment	No Charge	
Project Development Services	No Charge	
Program Implementation Services	Development Fee: 8% of Total Project Cost <sup>1</sup>	<ul style="list-style-type: none"> <li>• 50% due upon the District's execution of the contract with vendor</li> <li>• 20% due upon the District's issuance of notice to vendor to proceed with construction<sup>2</sup></li> <li>• 20% due upon the receipt of Permission to Operate from Utility<sup>2</sup></li> <li>• 10% due upon the District's confirmation of project completion<sup>2</sup></li> </ul>

Asset Management	Annual Fee as described in the following column	<ul style="list-style-type: none"> <li>• Annual Fee for Year 1 shall be equivalent             <ul style="list-style-type: none"> <li>○ \$0.01 per kWh for third-party owned solar</li> <li>○ \$0.0225 per kWh for client owned solar</li> <li>○ \$1,000 per battery system</li> </ul> </li> <li>• This fee shall increase annually by 3%</li> <li>• This fee shall be due upon initiation of the Asset Management Services and annually thereafter<sup>2</sup></li> </ul>
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<sup>1</sup>Total Project Cost: all costs and expenses incurred by District (and its counterparties in a project agreement) in designing, developing, purchasing, constructing, installing, and permitting battery energy storage systems

<sup>2</sup>Invoices for these fees may be invoiced on a pro rata basis as portions of the projects reach these milestones



# TerraVerde Consulting Services Agreement - Palmdale Water District 22.03.31

Final Audit Report

2022-04-01

Created:	2022-04-01
By:	David Burdick (david@terraverde.energy)
Status:	Signed
Transaction ID:	CBJCHBCAABAApQ1HXcZeJRwZfKz8FVfpDj7XCLZotqOu

## "TerraVerde Consulting Services Agreement - Palmdale Water District 22.03.31" History

-  Document created by David Burdick (david@terraverde.energy)  
2022-04-01 - 6:39:12 PM GMT - IP address: 67.174.36.171
-  Document emailed to Ali Chehrebsaz (ali@terraverde.energy) for signature  
2022-04-01 - 6:40:17 PM GMT
-  Email viewed by Ali Chehrebsaz (ali@terraverde.energy)  
2022-04-01 - 7:00:52 PM GMT
-  Document e-signed by Ali Chehrebsaz (ali@terraverde.energy)  
Signature Date: 2022-04-01 - 7:01:15 PM GMT - Time Source: server
-  Agreement completed.  
2022-04-01 - 7:01:15 PM GMT



BOARD OF DIRECTORS  
PALMDALE WATER DISTRICT

From: Mr. Dennis D. LaMoreaux, General Manager

April 4, 2022

coverage will be implemented based on the Director's application and carrier's procedures and will be funded by the District up to the monthly maximum contributed for full-time employees. The premiums will be funded from the Board of Directors' Health Insurance budget.

Directors with independent medical insurance coverage will be reimbursed for the monthly premium cost to the Director up to the monthly maximum contributed for full-time employees. The Director must submit official documentation, such as paid invoices, for the medical insurance coverage and the premium costs. If medical insurance coverage is through a spouse's employer, or from other active or former employment, the Director may submit monthly proof of any premium not paid by the other provider for reimbursement up to the District's monthly maximum contribution. The reimbursement will be funded from the Board of Directors' Health Insurance budget.

**Background:**

A few months ago, Director Dino correctly raised the issue of Directors with independent medical insurance being treated differently than Directors with medical coverage through the District's carrier. Directors receiving coverage through the District's carrier have no out-of-pocket premium costs while Directors with independent coverage are paying the premium cost. At the regular meeting held on February 28, 2022, the Board of Directors approved using the same waiver stipend that is made available to full-time employees for not using medical coverage from the District's carrier to address that difference. This was a split decision of the Board.

The use of the waiver stipend as a solution to the difference in providing medical insurance coverage has been more closely reviewed since February 28, 2022. The review found the following information:

1. The waiver stipend represents a cost savings to the District when used for a full-time employee. This is because the District's medical insurance carrier requires the District to provide medical insurance to all full-time employees. With proof of other medical insurance coverage, a limited number of employees can instead receive the waiver stipend. This represents a cost-saving for the District.
2. Medical insurance coverage for Directors is not required by the District's carrier. Choosing this coverage is voluntary for Directors. Therefore, paying a waiver stipend does not represent a cost savings for the District.
3. The amount of the waiver stipend is based on surveying other similar agencies. It is not based on independent medical insurance coverage premium costs.

BOARD OF DIRECTORS  
PALMDALE WATER DISTRICT

From: Mr. Dennis D. LaMoreaux, General Manager

April 4, 2022

4. The waiver stipend can only be sought during the annual open enrollment period.
5. The waiver stipend agreement strictly prohibits any retroactive payments.

**Discussion:**

Using the waiver stipend available to full-time employees for not using medical insurance coverage from the District's carrier is a step toward addressing the issue raised by Director Dino. However, there are several concerns about that approach as shown above. Staff recommends the draft policy as a more thorough approach to addressing the difference in how Directors obtain medical insurance coverage for the following reasons:

1. The draft policy focuses on having medical insurance coverage available for Directors while serving on the Board of Directors. This focus has not been clearly made in the past.
2. A Director will be able to choose how to obtain medical insurance coverage, through the District's carrier or through an independent carrier, with no out-of-pocket premium cost to the Director up to the monthly maximum contributed for full-time employees.
3. As stated above, the employee waiver stipend amount is the result of an industry practice and is not associated with actual medical insurance coverage premium costs. The draft policy will allow a Director to be reimbursed for the actual premium cost of independent medical insurance coverage. This amount is very likely either more or less than the waiver stipend amount used for employees.
4. As a reimbursement, the independent medical insurance premium amount available to a Director will be funded through the Directors' Health Insurance budget and will not count against the monthly compensation limit for meetings.
5. Reimbursements, with proper documentation, can begin as soon as the policy is approved by the Board of Directors.
6. This approach is successfully used by Eastern Municipal Water District rather than a set waiver stipend amount.

**Strategic Plan Initiative/Mission Statement:**

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

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

**Budget:**

The budget impact for this item remains to be determined.

**Supporting Documents:**

- On the next page is a Comparison Chart of water agencies’ practice regarding a medical waiver stipend and the eligibility for the Board of Directors to be able to receive the stipend. Out of twelve (12) water agencies, seven (7) offer a stipend in lieu of opting out of medical coverage, and of those seven (7) agencies, two (2) extend a form of this option to the Board of Directors.
- Draft Director Medical Insurance Coverage Policy

<b>Water Agency</b>	<b>Offer Medical Waiver Stipend</b>	<b>Board of Director eligible</b>
<b>Palmdale Water District</b>	Yes	No
<b>Cucamonga Valley Water District</b>	Yes	No
<b>Las Virgenes Municipal Water District</b>	No	N/A
<b>Yorba Linda Water District</b>	No	N/A
<b>Olivenhain Municipal Water District</b>	No	N/A
<b>Western Municipal Water District</b>	Yes	N/A
<b>Santa Clarita Valley Water Agency</b>	Yes	
<b>Desert Water Agency</b>	No	N/A
<b>Eastern Municipal Water District</b>	Yes	Yes
<b>Mesa Consolidated Water District</b>	Yes	No
<b>Rancho California Water District</b>	Yes	No
<b>Walnut Valley Water District</b>	No	N/A
<b>Padre Dam Municipal Water District</b>	Yes	Yes

## PWD Rules and Regulations

### Article 4.07.6 - Director Medical Insurance Coverage

The District desires to provide resources to Directors for access to medical insurance coverage while serving on the Board of Directors. A Director may either obtain coverage through the District's medical insurance carrier or obtain medical insurance coverage independently. The District's medical insurance coverage is defined as medical, dental, and vision coverage. The Directors may elect dental and vision coverage independently of the coverage chosen for medical insurance.

Directors choosing medical insurance coverage for themselves and their dependents through the District's carrier are subject to the eligibility requirements of the carrier. The coverage will be implemented based on the Director's application and carrier's procedures and will be funded by the District up to the monthly maximum contributed for full-time employees. The premiums will be funded from the Board of Directors' Health Insurance budget.

Directors with independent medical insurance coverage will be reimbursed for the monthly premium cost to the Director up to the monthly maximum contributed for full-time employees. The Director must submit official documentation, such as paid invoices, for the medical insurance coverage and the premium costs. If medical insurance coverage is through a spouse's employer, or from other active or former employment, the Director may submit monthly proof of any premium not paid by the other provider for reimbursement up to the District's monthly maximum contribution. The reimbursement will be funded from the Board of Directors' Health Insurance budget.

**PALMDALE WATER DISTRICT  
BOARD MEMORANDUM**

**DATE:** April 5, 2022 April 11, 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. 7.5 – CONSIDERATION AND POSSIBLE ACTION ON AN AGREEMENT WITH OPSEC SPECIALIZED PROTECTION TO PROVIDE SECURITY AT THE LITTLEROCK DAM RECREATION AREA. (NOT TO EXCEED \$35,000.00 – NON-BUDGETED – ASSISTANT GENERAL MANAGER LY)*

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**Recommendation:**

Staff recommends the Board approve an Agreement with OPSEC Specialized Protection from Lancaster, California to provide security at the Littlerock Dam Recreation Area.

**Alternative Options:**

The Board of Directors can choose to not approve the Agreement.

**Impact of Taking No Action:**

The cleanup process at Littlerock Dam might be delayed causing coordination issues with sediment removal.

**Background:**

The District has been working with the U.S. Forestry to get the Littlerock Dam Recreation Area back open to support local recreation and to store valuable local surface water. One step in the process is removing the old buildings and helping with the clean-up of the concession stand. Federal regulation requires the U.S. Forestry to give the owner a 90-day period to remove any belongings before the government can proceed with clean-up and demolition. Starting the 90-day period in April 2022 will help to avoid a conflict with sediment removal work in September 2022.

Staff has looked at a couple security firms to help patrol our work sites. OPSEC has been the lowest cost and has been flexible with our requirements. Staff has specifically talked with OPSEC about patrolling Littlerock Dam during the 90-day period. The cost will cover a 12-hour period for 7 days/week over three months.



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

April 5, 2022

**Strategic Plan Initiative/Mission Statement:**

This item is under Strategic Initiative No. 5 – Regional Leadership and Strategic Initiative No. 6 – Customer Care, Advocacy and Outreach.

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

**Budget:**

This item is not budgeted and will be charged to Budget Item No. 1-02-5070-007 - \$35,000.00.

**Supporting Documents:**

- None.

**MINUTES OF MEETING OF THE PERSONNEL COMMITTEE OF THE PALMDALE WATER DISTRICT, FEBRUARY 8, 2022:**

*A meeting of the Personnel Committee of the Palmdale Water District was held Tuesday, February 8, 2022, at 2029 East Avenue Q, Palmdale, CA 93550 and via teleconference. Chair Mac Laren-Gomez called the meeting to order at 9:00 a.m.*

**1) Roll Call.**

**Attendance:**

Committee:

Kathy Mac Laren-Gomez, Chair  
Amberrose Merino,  
Committee Member

**Others Present:**

Dennis LaMoreaux, General Manager  
Adam Ly, Assistant General Manager  
Angelica Barragan-Garcia, Human Resources Director  
Judy Shay, Public Affairs Director  
Vincent Dino, PWD Director  
Danielle Henry, Management Analyst  
0 members of the public

**2) Adoption of Agenda.**

It was moved by Committee Member Merino, 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 January 11, 2022.**

It was moved by Committee Member Merino, 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 Personnel Committee meeting held January 11, 2022, as written.

**4.2) Consideration and Possible Action on a Recommendation for an Additional Stipend for Directors Opting Out of the District's Medical Insurance Plan. (Budget Impact – To Be Determined – Director Dino/Human Resources Director Barragan-Garcia)**

Human Resources Director Barragan-Garcia provided an overview of the proposed additional stipend for Directors opting out of the District's medical insurance plan and of the Directors' eligibility to participate in the District's 457 deferred compensation plan as income, and after a brief discussion of the use of the 457 plan and of the maximum amount of Directors' compensated meetings per month, it was moved by Committee Member Merino, seconded by Chair Mac Laren-Gomez, and unanimously carried by all members of the Committee present at the meeting that the Committee recommends this item be forwarded to the full Board for consideration.

Human Resources Director Barragan-Garcia then clarified that the District does not currently contribute towards employee deferred compensation accounts.

**4.3) Consideration and Possible Action on a Recommendation for Approval of Updated COVID-19 Prevention Program. (No Budget Impact – Human Resources Director Barragan-Garcia)**

Human Resources Director Barragan-Garcia provided an overview of the revisions to the District's COVID-19 Prevention Program, and after a brief discussion of the specific updates, it was moved by Committee Member Merino, seconded by Chair Mac Laren-Gomez, and unanimously carried by all members of the Committee present at the meeting that the Committee recommends this item be forwarded to the full Board for consideration.

**5) Reports:**

**5.1) Human Resources Director Barragan-Garcia:**

**a) Personnel Policy Effects of COVID-19 Event.**

Human Resources Director Barragan-Garcia stated that the District is providing masks to all employees in compliance with current requirements and that employees have done a great job following COVID-19 required guidelines.

**6) Board Members' Requests for Future Agenda Items.**

Chair Mac Laren-Gomez requested a future agenda item for "Consideration and possible action on succession planning."

There were no further requests for future agenda items.

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

It was stated that the next Personnel Committee meeting will be scheduled at a later date.

**8) Adjournment.**

There being no further business to come before the Personnel Committee, the meeting was adjourned at 9:21 a.m.

  
Chair

**MINUTES OF MEETING OF THE FINANCE COMMITTEE OF THE PALMDALE WATER DISTRICT, FEBRUARY 22, 2022:**

*A meeting of the Finance Committee of the Palmdale Water District was held Tuesday, February 22, 2022, at 2029 East Avenue Q, Palmdale, CA 93550 and via teleconference. Chair Wilson called the meeting to order at 2:00 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

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 January 25, 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 January 25, 2022, as written.

**4.2) Discussion and Overview of Cash Flow Statement and Current Cash Balances as of December 2021. (Financial Advisor Egan)**

Financial Advisor Egan provided an overview of the monthly Major Account Activity Report, Investment Funds Report, and Cash Flow Statement through December 2021, including transfers to investment accounts and the Rate Stabilization Fund, assessments received, Mojave water costs, capital improvement funds, anticipated pay-outs, and the projected year-end balance.

**4.3) Discussion and Overview of Financial Statements, Revenue, and Expense and Departmental Budget Reports for December 2021. (Finance Manager Hoffmeyer)**

Finance Manager Hoffmeyer reviewed in detail the balance sheet, profit and loss statement and trends, quarter to quarter comparisons, and revenue and expense analysis reports for the period ending December 2021 and stated that departments are operating at or near the targeted expenditure percentage of 100% followed by discussion of state arrearages applied, the increased cost of electricity, and Director meetings and expenses.

**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 the payout summary for the 2018A Series and 2021A Series Water Revenue Bonds through December 2021.

**5) Reports.**

**5.1) Finance Manager Hoffmeyer:**

**a) The Effect of COVID-19 Event.**

Finance Manager Hoffmeyer stated that due to COVID-19 events, as of December 31, 2021, there were 2,172 single family accounts with a balance of \$50 or more and over sixty days past due with a total past due amount of \$871,057, which includes state arrearage funding, compared to 2,047 accounts at November 30, 2021 with an outstanding

balance of \$1,333,999 and 1,644 accounts at December 31, 2021 with an outstanding balance of \$764,227.

**b) Revenue Projections.**

He then stated that 2021 revenue is ahead of projections by approximately \$668,000 as of December 31, 2021.

**c) Rate Assistance Program Status:**

He then stated that as an update, there are now 584 accounts qualified for the Rate Assistance Program with one opening remaining in the Program.

**d) Billing & Collection Statistics:**

He then stated that the billing and collection cycle through December 2021 shows a slight increase in bills issued and notices mailed compared to December 2020 and that the District began issuing shut-off notices last month in accordance with SB 998 with larger account delinquencies being shut off first.

**e) Payment Transaction Statistics:**

He then stated that electronic payments continue to increase and that a large amount of customers continue to pay with cash.

**5.2) Financial Advisor Egan:**

**a) Debt Service Coverage Status.**

Financial Advisor Egan stated that the Debt Service Coverage for January 2021 to December 2021 is 2.00 and remains strong.

**5.3) Other.**

General Manager LaMoreaux provided an update on the ongoing fraudulent claim with the Employment Development Department and the District's efforts to recoup monies required to be paid on the fraudulent claim.

6) **Board Members' Requests for Future Agenda Items.**

There were no requests for future agenda items.

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

It was determined that the next Finance Committee meeting will be held March 29, 2022 at 2:00 p.m.

8) **Adjournment.**

There being no further business to come before the Finance Committee, the meeting was adjourned at 3:02 p.m.



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Chair