

# **WaterSMART Grants: Water and Energy Efficiency**

## **Project Name:**

Orange County Sustainable Landscapes Program Phase II

## **Project Location:**

Orange County, California

## **Applicant Name:**

Municipal Water District of Orange County



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## **Date:**

July 28, 2022

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# Technical Proposal

## Executive Summary

**Date:** July 28, 2022

**Applicant Name:** Municipal Water District of Orange County (MWDOC), Category A applicant

**City, County, State:** Fountain Valley, Orange County, California

**Project Name:** Orange County Sustainable Landscapes Program Phase II

**Funding Group:** This Proposal is seeking funding under Funding Group III.

**Project Summary:** MWDOC proposes the implementation of the Orange County Sustainable Landscapes Program Phase II (Program), which continues MWDOC's decades' long effort to facilitate comprehensive and sustainable landscape improvements across residential, public, and commercial properties throughout Orange County, California. Via incentive format, this Program will promote water conservation through the transformation from high-water-use landscaping and irrigation to California Native/Friendly landscapes, high efficiency irrigation, and alternatives to potable irrigation supply. This Program will result in the transformation of up to 1.9 million square feet of turfgrass to CA Friendly landscapes incorporated with watershed approach designs and high efficiency irrigation; the creation of up to 375 water efficient landscape designs to assist with turf conversions; the upgrade of approximately 5,360 antiquated irrigation timers to smart irrigation controllers; the conversion from spray to drip irrigation over 700,000 square feet; and the conversion of approximately 10 potable dedicated irrigation to an alternative sustainable source (rainwater capture, recycled water). These measures will result in reductions of approximately 1,197 acre-feet per year (AFY) of potable water and 12,769 acre-feet (AF) over the life of the improvements, increasing water supply reliability and drought resiliency in the region. Additionally, this Program will reduce energy consumption by up to 2.38 million kilowatt hours per year, reduce carbon dioxide emissions by approximately 1,684 metric tons per year, increase urban biomass by up to 239,400 pounds, and sequester approximately 119,700 pounds of carbon. Participants in the Program will serve as examples for others to follow, thereby fostering a California Friendly landscape transformation, promoting water conservation, and further increasing water reliability and drought resiliency in Orange County.

**Program Term:** The length of time to complete the proposed Program is up three years, with an expected start date of June 2023 and completion date of May 2026. This project is shovel ready and can begin sooner, once an agreement is signed. If the project is able to begin before June 2023, the completion date would be no more than three years following that date.

**Implementation Location:** The Program will be implemented throughout Orange County, California on existing residential, commercial, and public landscapes. These sites are located on Federal facilities; however, a federal property is welcome to participate in the Program.

## Project Location

A map showing the geographic location where the proposed Program will be implemented is provided as Figure 1, below. The MWDOC service area serves approximately 2.3 million people and is comprised of the 28 retail water agencies (districts and cities) of Orange County. Comprehensive Orange County has a population of 3.2 million with a 948 square-mile area and is located on the California coast between Los Angeles and San Diego Counties. The Pacific Ocean is immediately south-west, and San Bernardino and Riverside Counties are immediately north-east. This Program will be implemented within all of Orange County (including Anaheim, Santa Ana, and Fullerton). MWDOC, as the county's wholesale water agency, will act as lead agency for Program implementation.



## Technical Project Description

The objective of this project is to implement the Orange County Sustainable Landscapes Program Phase II, which includes turf landscape conversions utilizing water efficient landscape design, irrigation device improvements, and the implementation of sustainable (recycled or other) irrigation sources for dedicated irrigation meters. The proposed Program will foster a drought resilient comprehensive landscape transformation water conservation program designed to continue the paradigm shift from turf intensive landscapes utilizing potable water supplies and antiquated equipment to California Native or Friendly landscapes incorporating Watershed Approach designs. This will emphasize CA Friendly/native plantings and runoff retention and utilize natural resources such as stormwater and the benefits of living soils. To do so, the project will encourage the transformation of approximately 1.9 million square feet of turfgrass and the creation of 375 water efficient landscape designs; the upgrade of up to 5,360 antiquated irrigation timers to smart irrigation controllers (weather-based irrigation timers and soil moisture sensors); the conversion from spray to drip irrigation covering 700,000 square feet of landscape; the conversion from utilizing a potable source to an alternative sustainable source (rainwater capture, stormwater runoff, municipally supplied recycled water) at up to 10 sites.

*Turfgrass Conversion:* Turfgrass, which on average requires more than four feet of supplementary irrigation water each year, will be removed and replaced with low-water-using Native or California Friendly plantings that require less than half the water needed by turfgrass. Additionally, the new landscape will incorporate a Watershed Approach design that focuses on utilizing natural resources such as rainwater and living soils to promote landscape health and the reduction of stormwater runoff through low impact development (LID) and green infrastructure techniques, which promote rainwater retention and infiltration. These include, but are not limited to, infiltration strips, bioswales, rain gardens, and rain barrels. Additionally, the entire project site must be 100% permeable to air and water, and bare soil must be covered by 3-4" inches of mulch to reduce sediment runoff, maximize water savings, and promote healthy soils. Irrigation must also be converted to a low-flow system, such as drip irrigation or rotating nozzles, or be capped off to utilize hand watering. Project sites will be required to install a minimum of three plants per one hundred square feet, which will increase urban biomass, increase carbon sequestration, and help to mitigate urban heat island effects. To assist customers with designing a new landscape, MWDOC offers Landscape Design Assistance, which provides water efficient landscape design templates and/or a personalized design free of charge for qualifying participants.

*Smart Timers:* This Program will promote the installation of EPA WaterSense labeled smart irrigation controllers (weather or soil based sensors). Smart timers are irrigation controller devices that regulate irrigation water use automatically by adjusting to site conditions via either real time weather data or soil moisture conditions and determine how much irrigation to apply based on factors such as temperature and humidity, with weather data supplied as either signal-based or sensor-based. Soil moisture irrigation controllers offer the opportunity to

optimize irrigation based on measured plant demand in the irrigated system. The sensor system can result in the bypass of scheduled irrigation events based on soil moisture content. Smart timers are an effective tool to automate efficient irrigation scheduling management, and are a significant water conservation tool. MWDOC is a leader in smart timer programs, having implemented a rebate program since 2004. MWDOC has also worked closely with the United States Environmental Protection Agency to promote WaterSense labeled devices to end-users, installers, and distribution venues, encouraging market transformation. Much of the success of MWDOC's smart timer installation rate can be attributed to enhanced rebates for such devices, which has been made available through grant funding.

*Spray-to-Drip Irrigation:* Drip irrigation in bedded areas results in more efficient water application because it targets the root zone of the plants and irrigates 50 percent or less of the area, yet still results in a significant increase in system efficiency. Typically, drip irrigation does not wet the entire root zone; therefore, the application rate concept does not apply. These emitters have various emission rates ranging from 0.3 to 2 GPH, but most commonly flow at 1 GPH or less. Drip irrigation conserves water while generally increasing the health of the landscape, and essentially eliminates irrigation runoff. In a customer satisfaction survey completed by customers who participated in MWDOC's drip conversion program, approximately 80% of participants noted that they noticed a positive change to their landscape (healthier looking plants) and a decrease in consumption on their water bill (water savings).

*Sustainable Water Source Conversion:* Selecting a sustainable water source is a component of responsible irrigation management and, in many cases, a source alternative to municipally supplied potable water can be utilized for irrigation purposes. These sources may include on-site collection, rainwater capture, treated stormwater runoff, or municipally supplied recycled water. Converting a dedicated meter point of connection to a source alternative to potable water will result in long-term 100% potable water savings, helping to diversify the region's water supply, and increase sustainability and reliability especially in times of drought. As part of this Program, sites will convert dedicated irrigation meters to sustainable water sources. Eligible properties will be large landscape commercial and public space sites (e.g. homeowner association public areas, street medians, business parks).

The Program will utilize a rebate program platform to incentivize the implementation of the previously mentioned landscape measures. Program participation begins with the submission of an on-line application (paper application available by request) by a residential property owner, commercial property owner/manager, or designated contractor (Participant). For databasing and measure verification purposes, the Participant will be required to include the following information, as applicable: conversion area measurement, existing irrigation equipment, new irrigation equipment, site plan, meter/account information, water source (including modification), landscape material, and site photographs depicting conversion area and existing irrigation equipment. Additionally, upon implementation of the measure, MWDOC may perform an onsite installation confirmation inspection.

Substantiation of project benefits will be measured through a statistical water savings evaluation. This evaluation will include a robust, regression-based, statistical evaluation of water use before and after the landscape improvements and include considerations for weather impacts. Working with local water districts, MWDOC will obtain water use information for participating sites for inclusion in the evaluation. One of the primary goals of this analysis will be to quantify water savings at sites which incorporate the measures described above.

This Program will include six tasks, as described below:

### **Task 1 - Program Administration**

Program Administration, Task 1, is the total staff hours needed for the day to day operation of the Program and constitutes the salaries/wages and fringe benefits associated with the comprehensive Program administration. As part of the Program Reporting (Task 5), MWDOC will supply a data table with the actual hours per reporting period and related salary and fringe benefit rates for each staff personnel.

### **Task 2 – Site Inspections**

All turf removal landscape and spray-to-drip conversion sites (100%) will be provided with installation verifications to determine eligibility for Program rebate funds. Additionally, 100% of smart irrigation timers will have the purchase receipt confirmed and a representative sample of sites will receive an additional in-person inspection. At a minimum, the landscape pre-installation verification process will include databasing of the following: site contact information, measure, sector, device cost, rebates paid, installation date, make/model information (if applicable), conversion square footage (if applicable), and run-off retention method (if applicable). Additional collected information may include the following, as applicable: existing irrigation equipment, new irrigation equipment, site plan, water source (including modification, if applicable), conversion area measurement, landscape material (including modification, if applicable), and site photographs depicting conversion area and existing irrigation equipment. Furthermore, post inspection verification will be completed at 100% of sustainable water source conversion sites to confirm the site is functioning and operating correctly. These on-site post-inspections will serve as a quality control check to verify the reliability of the installation verification process.

MWDOC currently has Mission Resource Conservation District (Mission) under contract until December 31, 2022, and will go out to bid according my MWDOC's Administrative Code at the end of 2022, to provide landscape survey services for MWDOC's various landscape Programs. Mission, as a Non-Profit Special District and an arm of the Natural Resource Conservation Service, is uniquely qualified to perform irrigation surveys. They have many years of experience in both the urban and agricultural setting and provide MWDOC with highly competitive rates.

During on-site post inspections executed by MWDOC, Mission, or the retail water agency, the following will be performed, as applicable:

- Walk the site with the property owner or person designated by the property owner (due to the COVID-19 pandemic, federal, state, and local safety orders will be followed);
- Verify specific aspects of conversion meet Program terms (e.g. mulch applied, irrigation converted, 100% permeable, runoff retention element installed, plant density installed)
- Measure the conversion area;
- Turn on each valve/station to evaluate the condition of the irrigation system;
- Perform a catch-can test to measure actual distribution uniformity for the Conversion area (as applicable);
- Place irrigation system repair flags to bring needed repairs to the attention of the property owner (as applicable);
- Verify installation of drip/micro-irrigation or other efficient irrigation;
- Verify smart irrigation timer is installed and functioning correctly;
- Verify the number of active and inactive valves per irrigation timers; and
- Verify potable to recycled (or other source) conversion is completed and functioning properly.

### **Task 3 – Rebate Incentive**

Over the 36-month period of the potential grant award, MWDOC proposes to facilitate the implementation of approximately 6,905 landscape and irrigation improvements. To achieve this, the Program anticipates the conversion of approximately 1.9 million square feet of turfgrass to CA Friendly landscapes along with 375 created landscape designs; the upgrade of up to 5,360 antiquated irrigation timers to smart irrigation controllers (weather-based irrigation timers); the conversion of up to 700,000 square feet of irrigated landscape from spray to drip irrigation; and at approximately 10 landscaped sites, the conversion from utilizing a potable source to an alternative sustainable source (rainwater capture, stormwater runoff, recycled water). MWDOC proposes to provide incentives through a rebate-style format to residential property owners and commercial property owners/managers for qualifying conversions. The following proposed rebate amounts will be available for each participant site; these rebate levels may vary due to market transformation during the implementation-phase:

- **Turfgrass Conversion**  
Up to \$3 or more per square foot; Up to \$1,200 or more per customized landscape design to assist with Turfgrass conversion
- **Smart Timers**  
Up to \$35 or more per station (commercial); Up to \$180 or more per timer (residential)
- **Spray-to-drip conversion**  
Up to \$0.50 or more per square foot
- **Sustainable Water Source conversion**  
Up to \$2,275 or more per AF of potable water saved



Rebate incentives shall be based on the square footage, device/material costs, or actual water savings. To receive the Program rebate funds, the Participant's completed site conversion and irrigation system are required to be consistent with the intent of the Program and ensure efficient landscape water use by implementing LID measures. Additionally, conversion areas must remain in compliance with the conversion requirements for a period of at least five years. If this requirement is violated, the Participant may be required to refund all or a portion of rebate funds. This requirement is void upon transfer of ownership.

Turf Conversion area qualification criteria include:

- Site must utilize at least one Watershed Approach design measure to retain runoff (e.g. bioswales, infiltration strip, rain garden, rain barrel).
- A minimum of 3 plants per 100 square feet must be planted in the project area.
- Bare soil must be covered by mulch and/or groundcover.
- Site may not include any California invasive species.
- Conversion area must include the entirety of the irrigation zone(s), and must be converted to a low-flow irrigation system (e.g. drip, high efficiency nozzles, etc.) or be capped off. Deviations will be considered on a case-by-case basis.
- Conversions must comply with all applicable laws, codes, policies, covenants, conditions, and restrictions.

Smart Timers must be EPA WaterSense labeled and installed and functioning properly.

Spray-to-Drip are qualification criteria include:

- Drip irrigation must be installed and functioning properly.
- Products installed must be found on the eligible products list ([Rebate Elig Product List 2022](#)).
- The entire irrigation zone must be converted.

Sustainable water meter conversions must meet all guidelines and regulations regarding meter conversions and non-potable irrigation and be operating and functioning properly.

#### **Task 4 - Marketing and Promotion**

MWDOC will design and produce marketing and promotional material that will be distributed to property owners and posted on social media. Promotional pieces will encourage property owners to participate in the Program by logging onto the MWDOC Water Use Efficiency site. The Program webpages contain information regarding Program rules and regulations, access to the Program application, information about rebate levels through the Program, and contains resources to assist customers with their water conservation project.

Marketing will primarily consist of bill inserts, social media campaigns, water bill messages, newsletter articles, and/or posts on water agency websites. Over the 20+ years MWDOC has marketed water use efficiency programs, marketing surveys conducted by MWDOC have rated bill inserts as the most effective forms of marketing to encourage participation. MWDOC has

also increased its social media presence and can reach up to 345,000 people per month with Facebook posts, and the MWDOC website receives over 10,000 views per month. All Program promotional materials will acknowledge Reclamation's funding.

Stakeholders will be actively involved in the Project to further educate and promote participation. Stakeholders include retail water agencies, county and city municipal storm water permit holders, landscape maintenance contractors, facilities/property managers, homeowner association board members, and business owners.

### **Task 5 – Program Reporting**

Following the reporting schedule set forth in the Program agreement, MWDOC will submit semi-annual and final reports that will include all required SF forms, a written Program progress narrative, tabular data tables, and all required back up to support the requested reimbursement.

### **Task 6 – Program Evaluation**

MWDOC staff will initiate a Program process and statistical water savings impact evaluation to quantify Program benefits. The Program process evaluation will assess the Program's goals, format, and effectiveness, including how the Program was developed, how success was measured, who the target audience was and how they were reached, and the Program successes and challenges.

The impact evaluation will use robust statistical methods, including regression analysis, to measure the change in water use of Program sites before and after Program conversion. This will give the water industry another opportunity to quantify actual water savings associated with comprehensive landscape/irrigation improvements occurring at sites. This analysis will include a statistically significant population of Program participants, will maintain 95% confidence, and utilize methodologies that consider and factor weather conditions in the analysis. A written report describing the statistical methods and evaluation results will be submitted as the final report for the Program. Results from this Program will be shared with Reclamation, other applicable Program Stakeholders, and MWDOC retail water agencies.

MWDOC will conduct the analysis using qualified staff, process the Program's data, liaise with the involved retail water agencies to obtain water consumption data, and develop the draft and final report. If a consultant is hired to aid in the any component of the evaluation, MWDOC will develop and release a request for proposals to several qualified water use evaluation consulting firms, review submitted proposals, and select the most qualified submission per the terms of MWDOC's Administration Code.

## Evaluation Criteria

### Evaluation Criterion A: Quantifiable Water Savings

#### *Water Savings*

The following provides the methodology and technical justification for the **1,197 AFY** water savings associated with the implementation of this Program.

#### *Current Losses*

This conserved water (1,197 AFY) would otherwise be consumed by inefficient urban irrigation use, water-thirsty grass, or be used in place of a sustainable source, like recycled water.

Because of the Program, the conserved water will be left in storage to be used later such as in periods of drought, or left in its natural state such as local groundwater aquifers, the Colorado River, or in the Bay-Delta. Conserved water will remain in storage until needed in the future.

There are no known benefits associated with where currently losses are going.

#### *Documentation of estimated water savings*

##### *Turf Removal*

Water Savings: 0.121 gallons per day per ft<sup>2</sup> converted; 1.9 million ft<sup>2</sup> converted; 257 AFY savings

The average annual water savings was initially calculated utilizing the theoretical irrigation requirement (TIR) water need, taking local evapotranspiration (ET<sub>o</sub>) and rainfall (P<sub>e</sub>) into consideration. As part of this analysis, the crop coefficients (K<sub>c</sub>) vary from turfgrass (0.8) versus a California Friendly landscape comprised of low water need plants (0.3).

$$TIR = (ET_o \times K_c - P_e) / IE$$
$$WS = (TIR_{final} - TIR_{initial}) / TIR_{final}$$

where,

WS = Water Savings (%)

IE = Irrigation Efficiency (%)

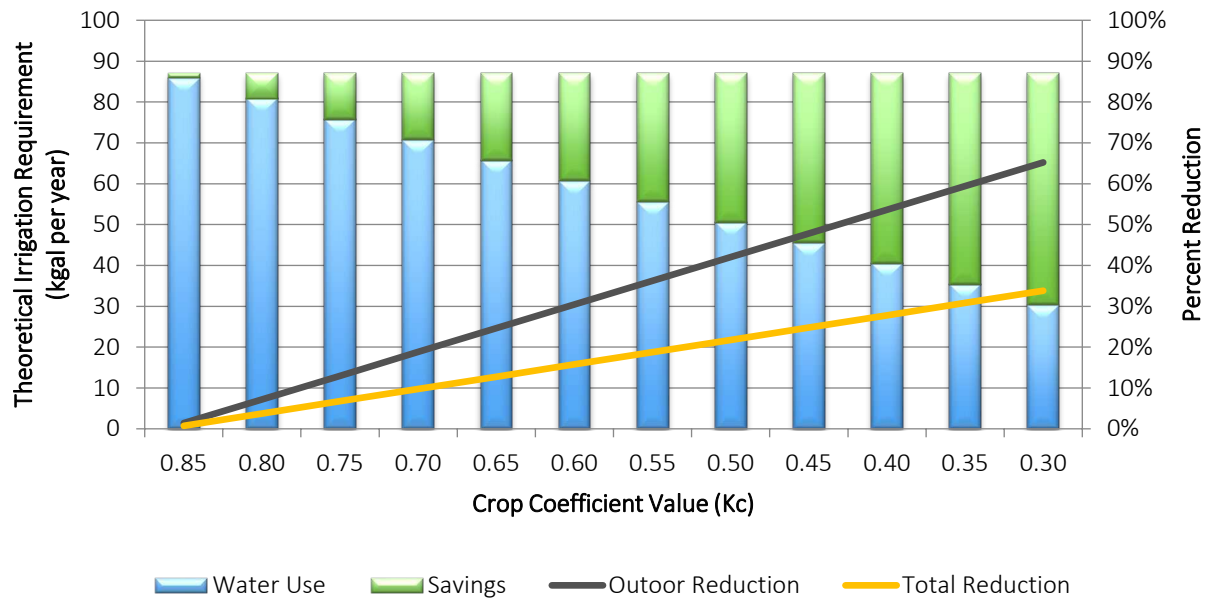
Figure 2 depicts the general relationship between the theoretical irrigation requirement and potential reduction of water for various K<sub>c</sub> values<sup>1</sup>.

The daily evapotranspiration and precipitation measurements were collected from the California Irrigation Management Information System (CIMIS) weather station number 75 located in Irvine in Orange County, California. Spatially interpolated or “Spatial ET<sub>o</sub>” values were collected for additional areas on the basis of zip code. The weather normalization

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<sup>1</sup> Baum-Haley, M. (2013). Evaluation of Potential Best Management Practices- Turf Removal. Prepared for The California Urban Water Conservation Council.

technique used the actual weather corresponding to the date of interest rather than a historic average. For the Orange County area, the results are listed in Table 1.



**Figure 2. Theoretical depiction of how water savings may increase as turfgrass is replaced.**

**Table 1. Orange County Potential Savings**

Annual Average		Assumptions		Theoretical Irrigation Requirement TIR (gallons per ft <sup>2</sup> per year)		Potential Savings based on TIR	
P (in/yr)	ETo (in/yr)	Pe (in/yr)	IE (%)	Turfgrass Landscape Kc = 0.8	CA Friendly Plantings Kc = 0.3	Gallons per ft <sup>2</sup> per year	Percent
12	47	3.8	60-70	56	14	42	75%

From the data previously collected from onsite inspections at Turf Removal sites within Orange County, the average removal area is 2,000 square feet (residential and commercial sectors combined). This would result in a reduction in annual use from 112,000 gallons per year prior to the conversion to 28,000 gallons per year post conversion, a savings of 84,000 gallons per year. On a per square foot basis, this is a savings of approximately 42 gallons per year per square foot or 0.115 gallons per day (gpd) per square foot. This analysis also concurs with the water savings observed using actual meter data.

Following the theoretical analysis, actual water use at sites was evaluated utilizing historic water use data, as well as the water use data following the turf removal landscape conversion, with weather adjustment considerations. Metropolitan Water District of Southern California looked at their regional turf removal program and found water savings of approximately 44 gpd

per square foot, or 0.121 gallons per day per square foot. Turf Conversion projects are required switch to low-flow/high efficiency irrigation; it is assumed that the results of Metropolitan's study of actual water use captures the increased irrigation efficiencies, resulting in a slightly higher savings volume than the theoretical calculation. The Program maximizes water savings through turf conversions by increasing irrigation efficiencies as well as reducing the landscape's plant material water requirement. The landscape designs that are available to program participants assist the customer with picking beautiful but water efficient plant pallets and irrigation designs. There are no additional water savings associated with sites that participate in the design assistance portion, the intent of this is to break down barriers of participation to allow more people to participate.

The proposed Program anticipates 1,900,000 square feet (approximately 44 acres) of turfgrass conversions. This would in turn result in over 228,989 gpd or approximately 257 AFY savings. Turfgrass removal is given a ten-year lifetime for water savings purposes, therefore contributing to approximately 2,565 lifetime acre-feet of water conserved. An estimated 375 landscape designs will be produced for these participants.

One hundred percent of Turf Conversion sites will receive a pre-project and post-project inspection. The pre-project inspection will verify there is currently turf on the proposed site and the square footage of turf eligible for the project. The post-project inspection verifies that the total project area was converted to meet program rule and requirements, such as being 100% permeable and installing low-flow irrigation. A statistical water savings evaluation will be conducted upon completion of the program (Task 6) to verify actual water savings.

#### Smart Timers

Water Savings: Residential: 49.8 gallons per day per timer; 4,500 timers; 251 AFY savings;  
Commercial: 15.66 gallons per day per station; 30,000 stations; 526 AFY savings;  
Total: 777 AFY savings

MWDOC consistently conducts evaluations at the completion of program terms. As a means to continuously track the long-term success of this type of rebate program, these results are compared. Table 2 summarizes the previous irrigation timer evaluation results.

The primary objective of impact evaluations such as these was to measure the amount of water saved throughout the course of the program. A statistical analysis of the collected data was performed in order to provide insight into the characteristics of sites that participated in the program and determine if a reduction of water use was due to device installation.

Monthly meter read data was requested for each site from the retail water agency. Historical water use was requested for a least three years prior to the intervention point and one year following. The intervention point is designated as the point in time when the device was purchased/installed. Water savings was determined by comparing the gpd water use prior to and following the intervention point. This methodology allowed for direct comparison of water

use based on comparable irrigation need and system consistency when utilizing weather normalization (see Table 2). This specifically allows for the ability to compare not just the net water savings for the sample as a whole but, additionally, to pairwise the analysis for each site, resulting in the categorical water use. Additionally, the water use at intervention sites was compared to a control group, exposing all samples to the same confounding factors such as weather, conservation campaigns, etc.

The average residential savings across the four applicable studies listed below is 49.8 gpd per site. The average commercial savings across the four applicable studies is 548 gpd per site or 15.66 gpd per station.

**Table 2. MWDOC Smart Timer Efficiency Research**

Study Title	Author	Sector	GPD Savings	Percent of Total Water Use	Percent of Outdoor Water Use
<b>Residential Runoff Reduction Study, 2004</b>	A&N Technical Services, T. Chesnutt, Ph.D.	Res.	41	10%	-
		Comm.	545		21%
<b>Commercial ET-Based Irrigation Controller Water Savings Study, 2006</b>	A&N Technical Services, T. Chesnutt, Ph.D.	Comm.	601	-	22%
<b>MWDOC SmartTimer Rebate Program Evaluation, 2011</b>	A&N Technical Services, T. Chesnutt, Ph.D.	Res.	49	9%	-
		Comm.	727		28%
<b>OC Smart Irrigation Timer Rebate Program, 2014</b>	M. Baum-Haley, Ph.D.	Res.	59	11%	18%
		Comm.	320	-	10%
<b>Evaluation of CLWUE Rebate Program, 2018</b>	R. Waite	Res.	50	11%	-

The proposed Program will facilitate the installation of approximately 4,500 residential timers and up to 30,000 commercial timer stations which, at a historic average of 35 stations per commercial timer is approximately 860 commercial timers, for a combined total of up to 5,360 timers. Based on a water savings of 49.8 gpd per residential timer, this will conserve approximately 223,875 gpd or 251 AFY. Commercial timers, based on a water savings rate of 15.66 gpd per station, will save up to 469,929 gpd, or 526 AFY savings. Combined, residential and commercial timers are anticipated to save approximately 777 AFY. Smart timers are given a ten-year lifetime for water savings purposes, therefore contributing to 7,772 lifetime acre-feet of water savings.

Only those models with EPA WaterSense labeling will be eligible under the Rebate Program guidelines, which will be checked through receipt verification. Physical inspections will also take place to verify installation. A statistical water savings evaluation will be conducted upon completion of the program (Task 6) to verify actual water savings.

[Spray to Drip Conversions](#)

**Water Savings:** Residential: 0.121 gallons per day per ft<sup>2</sup>; 300,000 ft<sup>2</sup>; 41 AFY savings;  
 Commercial 0.095 gallons per day per ft<sup>2</sup>; 400,000 ft<sup>2</sup>; 43 AFY savings;  
 Total: 83 AFY savings

Most drip irrigation water savings research is focused on water savings without causing stress or reduced quality to the landscape. A notable study was conducted at residential sites with more than 30-months of post installation single-family water use monitoring<sup>2</sup>. The conclusions showed that the homes with drip irrigated areas required less water than if those areas were sprinkler irrigated. The treatment homes with both the adjusted controller run time settings and the incorporation of drip irrigation in the bedding areas used 41% less irrigation water than the control group. This yielded a weekly water savings of 200 to 250 gpd.

Irrigation system efficiency varies based on irrigation method, equipment, and design. Applied water can be lost primarily from evaporation, runoff, or drainage. Evaporation can result from water droplets irrigated into the air, from wet leaves, or from the soil surface. A major source of lost water results in runoff from the surface of the landscape. Additionally, water can be lost by deep percolation through the soil profile. Basic system efficiencies are listed below in Table 3.

**Table 3. Irrigation Efficiency Percent**

<b>Irrigation System Type</b>	<b>Efficiency<sup>[2]</sup></b>
<b>Drip/Micro-Irrigation</b>	80 to 95
<b>Landscape Spray Systems</b>	40 to 65
<b>Landscape Rotor Systems</b>	50 to 75
<b>Brass Rotor Systems</b>	60 to 85

Source: Irrigation Association (2007)

Micro-irrigation has less opportunity for losses through transmission. It is applied directly to the root zone and has small wetted soil surface areas, reducing evaporative losses. Applying water at a slower rate will reduce ponding and the subsequent flow from the landscape area, thereby

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<sup>2</sup> Baum, M. C., Dukes, M. D., and Miller, G. L. (2005). "Analysis of residential irrigation distribution uniformity." J. Irr. Drain. Eng., 131(4), 336-341.; Haley, M., Dukes, M., and Miller, G. (2007). "Residential Irrigation Water Use in Central Florida." J. Irrig. Drain Eng., 133(5), 427-434.

minimizing runoff and eliminating overspray. Deep percolation (water loss) can be minimized through proper scheduling.

Increasing system efficiency will result in water savings by reducing the excess water needed to achieve adequate water within the root zone. The common practice to compensate for system inefficiencies is to apply more water. As system efficiency decreases, the amount of water need for irrigation use increases. Water savings due to an increase in irrigation efficiency can then be calculated. As the efficiency decreases, the volume of water applied increases, resulting in a negative exponential curve.

The percentage of water lost, or superfluous application, as a result of inefficiency can be calculated for any Irrigation Efficiency with the resulting equation:

$$WL = -1.854 \ln (IE) - 0.2168$$

where,

WL = Water Lost (%)

IE = Irrigation Efficiency (%)

Here, the givens (area, etc.) will not affect the water savings. Therefore, this can be universal within the truncated 35% to 85% irrigation efficiency range. Below 35% efficiency, it is recommended to fix major issues requiring potential redesign/installation. Beyond the 85% efficiency, the impact potential savings are not significant (Dukes et al., 2006). For example, assume an irrigation zone with stationary spray heads has an initial irrigation efficiency of 40%. If the irrigation efficiency can be increased to 85% by replacing the spray heads with more efficient irrigation equipment, such as drip-irrigation, this would result in a 53% water savings.

In 2017, MWDOC conducted an evaluation of its Spray-to-Drip Pilot conversion program, and results showed residential savings occurred at 0.121 gpd/ ft<sup>2</sup> and commercial savings at 0.095 gpd/ ft<sup>2</sup>. This analysis compared pre-intervention historical water consumption data to post-intervention usage and included considerations of the impacts of weather, coastal proximity, and peak or minimal irrigation seasons. Additional water savings information is as follows in Table 4:

**Table 4. MWDOC Spray-to-Drip Evaluation Water Savings Results**

Sector	GPD/ ft <sup>2</sup>	GPD/site	% Reduction
<b>Residential Drip Conversion</b>	0.121	85	24%
<b>Commercial Drip Conversion</b>	0.095	1,007	23%

The proposed Program will retrofit of up to 300,000 square feet of residential and 400,000 square feet of commercial landscape with spray to drip irrigation conversions. Based on savings of 0.121 gallons per day to square foot for residential and 0.095 gallons per day per square foot



for commercial, this would yield 74,300 gpd or 83 acre-feet per year. Drip is given a ten-year lifetime for water savings purposes, therefore contributing to 832 lifetime acre-feet of water savings.

Receipts will be requested to ensure equipment meeting program requirements is purchased. Additionally, 100% of project sites will be inspected upon completion to ensure the site meets program guidelines. A statistical water savings evaluation will be conducted upon completion of the program (Task 6) to verify actual water savings.

#### Sustainable Water Source Conversion

Water Savings: 7,142 gallons per site per day; 10 sites; 80 AFY savings

Sustainable Water Source Conversions switch potable dedicated irrigation meters to a sustainable alternative source, such as municipally supplied recycled water, rainwater, or stormwater capture, creating 100% potable water savings. Based on historic data in Orange County, the average irrigated project size is approximately 95,000 square foot, with an average savings of 8 AFY or 7,142 gpd per site. Water savings for each project are established through each converted meter's historic water usage. Sites will be verified to ensure they have successfully switched to non-potable irrigation. This Program anticipates 10 different project sites converting approximately 20 dedicated irrigation meters to a sustainable source. This will save 71,419 gpd, or 80 AFY. Over the 20-year project life, these conversions will save 1,600 AF.

Sites are required to adhere to local, state, and federal requirements regarding alternative water sources, such as municipally supplied recycled water, and will be inspected to ensure completion and quality. Because the incentive for Sustainable Water Source Conversions is based upon actual water savings, 3 years of the most recent historical water usage available will be analyzed and averaged to produce the water savings for the site. This 3-year average potable water savings translates directly to potable water saved as the conversion results in 100% potable water savings.

#### Comprehensive Program

Overall, the installation and conversion of the previously mentioned measures translates to 1,197 AFY saved or 12,769 AF over the project life.

Quality control measures are in place to ensure participants correctly convert their landscape or irrigation according to the terms and conditions of the Program. At the close of the Program, a statistical evaluation based on participant consumption history will be conducted. The Program will be in a rebate incentive format, and will be built on a variety of existing water use efficiency programs that MWDOC currently implements, such as the Turf Removal Program, SmarTimer Rebate Program, Spray-to-Drip Program, and the On-Site Retrofit Program (potable to recycled water conversions) and other various landscape programs. These programs are complementary and work collaboratively to achieve maximum water conservation results.

**Table 5. Water Savings per Device**

Measure	GPD Savings	Qty	Unit	Total GPD Savings	AFY Savings	AF Life Savings
Turf Conversion (Res and CII)	0.121/ft <sup>2</sup>	1,900,000	ft <sup>2</sup>	228,989	257	2,565
Smart Timers (Res)	49.8/ timer	4,500	timers	223,875	251	2,508
Smart Timers (CII)	15.66/ station	30,000	stations	469,929	526	5264
Drip (Res)	0.121/ft <sup>2</sup>	300,000	ft <sup>2</sup>	36,300	41	407
Drip (CII)	0.095/ft <sup>2</sup>	400,000	ft <sup>2</sup>	38,000	43	426
Sustainable Meter Conversions (CII)	7,142/site	10	sites	85,703	80	1,600
<b>Totals</b>				<b>1,068,512</b>	<b>1,197</b>	<b>12,769</b>

Evaluation Criterion B: Renewable Energy

*B.2 Increasing Energy Efficiency in Water Management*

The Project is estimated to reduce energy use by 2,375,821 kilowatt hours (kWh) per year used to convey and treat water from the State Water Project (SWP) and the Colorado River Aqueduct (CRA) to Orange County.

According to Metropolitan Water District of Southern California, the water importer for Southern California, 1,928 kWh/AF is the recent six-year average rate of energy used for water conveyance and treatment through the SWP and CRA. Because the Project will save 1,197 AFY, this directly translates to energy savings of approximately 2.38 million kWh per year (shown in the equation below). Energy savings are calculated from point of diversion and do include energy used for water treatment.

$$1,197AFY \times 1,928 \frac{Kwh}{AF} = 2,375,821 kWh$$

The reduction of 2.38 million kWh per year will result in the avoidance of 1,684 metric tons of carbon dioxide emissions, helping to combat climate change. This is based on the EPA’s standard emission factor updated 2019 (<https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references>), shown in the equation below.

$$2,375,821 kWh \times 7.09 \times 10^{-4} \frac{metric\ tons\ CO_2}{kWh} = 1,768 metric\ tons\ CO_2$$

In addition, the project will increase urban biomass through the plant density requirements of the Turf Removal program. The increase in biomass will sequester carbon out of the atmosphere and increases in urban biomass help to combat the urban heat island affect, which commonly has more intense impacts on disadvantaged communities.

The Turf Removal program requires at least 3 plants per 100 square feet of the conversion area. It is estimated that the above ground biomass (AGB) of grass is 0.138 pounds per square foot and the average AGB of drought tolerant (DT) plants commonly used in Turf Conversion projects, planted at 3 per 100 square feet, is 0.264. This is a net increase of 0.126 pounds per square foot of biomass, as shown in the equation below.

$$AGB_{Turf} \frac{0.138 \text{ lbs.}}{ft^2} - AGB_{DT} \frac{0.264 \text{ lbs.}}{ft^2} = \frac{0.126 \text{ lbs.}}{ft^2}$$

The Program will convert 1.9 million square feet of turfgrass to drought tolerant plants, resulting in an increase of 239,400 pounds of biomass, as shown in the equation below.

$$\frac{0.126 \text{ lbs.}}{ft^2} \times 1,900,000 ft^2 = 239,400 \text{ lbs.}$$

It is standard to assess that biomass is 50% carbon, which means that the increase in biomass will sequester 119,700 pounds of carbon from the atmosphere, as shown in the equation below.

$$239,400 \text{ lbs.} \times 50\% \text{ carbon} = 119,700 \text{ lbs. of carbon}$$

#### Evaluation Criterion C: Sustainability Benefits

**Enhancing Drought Resiliency:** The Program will address several water reliability concerns including population growth and uncertainties in supply and demand due to climate change. As the population in Orange County has increased over time, water conservation efforts have been reducing the gallons per capita per day (GPCD) water use in Orange County. Water conservation efforts, such as this proposed Program, will help to offset increasing population to curb demand and strengthen water supply reliability to support a growing population. Additionally, as the West deals with climate change and more frequent, more intense periods of drought, the Program will improve ecological resiliency to climate change and help the region cope with warming temperatures and more infrequent, but more intense periods of rainfall. By switching to native or CA Friendly plantings, which are more tolerant of warm, dry climates, even less water will be needed for irrigation during times of peak heat or dryness. As intensities of storms increase, the stormwater capture features that are included in every turf conversion project will help to infiltrate stormwater into the ground, increasing the water efficiency of the project site, increasing groundwater, and reducing polluted stormwater runoff.

The Program will help to provide reliable water supply, reduce dependency on imported water, meet water demands during all hydrologic conditions (drought resiliency), and maximize potable/recycled water use efficiency. As a result, less water will be pumped from the groundwater basin, aiding in refilling the basin more rapidly, and less imported water will be used, allowing unused water to be retained in regional water storage reservoirs for use at a future date. Additionally, water will also remain in-stream for environmental benefit. Statewide

benefits include off-sets to Bay-Delta and Colorado River Aqueduct (CRA) pumping, and local benefits include off-sets to local sources such as groundwater and surface water.

This proposed Program will benefit several federally-listed threatened and endangered species in the San Francisco Bay and San Joaquin Delta ecosystem. These species include the Delta Smelt, Steelhead Trout, and Spring and Winter-Run Chinook Salmon. The relationship of these species to a Reclamation Program centers on the federal Central Valley Program in California and the impacts the Central Valley Program and State Water Program have on the San Francisco Bay and San Joaquin Delta ecosystem. Due to the listing of these species and recent court rulings, southern California's ability to access imported water from the Bay/Delta has already been restricted. This court action is designed to retain water in the ecosystem for the benefit of and to accelerate the recovery of these listed species. The proposed Program is designed to aid Orange County in reducing its dependence on imported water from the Bay/Delta watershed. Additionally, the promotion and installation of CA Native landscapes help to create habitat that supports endangered species such as the California Gnatcatcher and numerous species of endangered butterflies including the Monarch Butterfly, Callippe Silverspot Butterfly, and the San Bruno Elfin Butterfly. These species are not directly affected by a Reclamation project; these species are subject to a recovery plan under the Endangered Species Act (ESA) and planting native flora is a supportive action for these species.

**Specific Sustainability Concerns:** Rolling blackouts occur in CA due to energy grid intensity. This typically happens when it is very hot outside, which will continue to increase in frequency and intensity due to climate change. When temperatures are very warm people also increase water use to irrigate their landscapes to help keep their lawns alive. With the transition to drought tolerant plants, these plantings are better suited to survive under intense heat and require less water. Reducing water consumption reduces energy consumption and helps to keep California's energy grid up and running during heatwaves. Additionally, decreasing demands on the SWP helps to prevent water shortages due to drought, most importantly for water systems in California that are SWP dependent

The Program will result in 1,197 AFY water savings, which means 1,197 AF of water will avoid diversions each year from the Delta and CRA, or be kept in local storage (groundwater, surface water) for use at a future date. Due to the arid climate and hot summers in southern California, the greatest savings will be achieved in the summer months through irrigation efficiency. Since supplies from the CRA and State Water Project are considered an imperative MWDQC supply source, we assume that saved water could stay in-stream, resulting in increased in-stream flows. The Program's largest and most important impact on the Bay-Delta and CRA will be reducing dependency and the amount of water received by Orange County from the Bay-Delta through the State Water Project and the CRA.

**Other Project Benefits:** The Project combats the climate crisis and considers how impacts such as changes to temperature, precipitation, and the timing and quantity of snowpack pose

significant challenges to the protection and use of water resources. The Project addresses the impacts of climate change through the installation of drought tolerant and native landscapes that can survive a warming, drying climate while using less water. The Project will strengthen water supply sustainability to increase resilience to climate change by increasing landscape efficiencies and promoting sustainable water source conversions, such as irrigating with municipally supplied recycled water as opposed to potable water.

The project will result in lower greenhouse gas emissions in two ways. One, carbon dioxide emissions will be reduced through reductions in energy consumption through the water-energy nexus (water savings result in energy savings). Secondly, the Project will transform water-thirsty grass to CA friendly landscapes that are required to use high-density vegetation schematics. This will increase urban biomass, which will sequester carbon from the atmosphere. Furthermore, increased vegetation helps to reduce the urban heat island effect, which often disproportionately affects disadvantaged communities.

Additionally, through stormwater capture features installed in turf conversion projects and the installation of high efficiency irrigation, both storm and dry-weather runoff will be reduced. This non-point source pollution is one of the largest threats to ocean water quality in Orange County.

**Disadvantaged or Underserved Communities:** The Project is available throughout the entire county, which includes but is not limited to all disadvantaged or underserved communities in Orange County.

**Tribal Benefits:** There are no Tribal Benefits included in this project, as there is no federally recognized Tribal Land in Orange County.

**Other Benefits:** The Program will benefit larger initiatives to address water reliability, including the California's Governor's initiative to make Conservation a California Way of Life. This includes California legislation AB 1168 and SB 606, which create water use objectives for urban water suppliers based on population, irrigated area, ETo, and other factors. Increasing irrigation efficiencies, which will lower water use in Orange County, through this grant opportunity, will directly support this effort. Reducing Orange County demand will lessen the stress on the complex water system in California and Colorado River Basin. Through conservation, the Program will lessen demand on imported water systems, such as the SWP and CRA, which are used to provide water to southern California. Additionally, this Program is consistent with IRWM planning and promotes cohesive water planning strategies throughout the State of California.

The Program will serve as an example of efficiency that can be replicated, not only from user to user, but also by water agency to water agency, thereby increasing the capability of future water conservation and efficiency efforts beyond Orange County. By promoting the conversion

of dedicated irrigation meters to a sustainable source, such as municipally supplied recycled water, the recycled water grid will expand, providing more opportunities for future conversions, which help diversify Orange County's water supply portfolio. A significant portion of customers who participate in MWDOC's water savings rebate programs will participate in other in the programs in the future. Metropolitan Water District of Southern California has demonstrated that turf conversions sites induce a multiplier effect, meaning people not participating in the rebate program will convert their lawns themselves, enhancing the opportunities for future water efficiency and conservation. The measures and devices installed/converted in this Program create long-term water efficient practices, which will save water during and between times of drought, and provide infrastructure for Orange County residents to further conserve water during times of drought. The Program also provides specific tools to help sites reduce their water use, eliminate runoff, and utilize stormwater.

#### Evaluation Criterion D: Complementing On-Farm Irrigation Improvements

This Program will not be completing On-Farm Irrigation Improvements.

#### Evaluation Criterion E: Planning and Implementation

##### *E.1 Project Planning:*

The water efficient/conservation components included in this Program are identified in MWDOC's 2013 Water Use Efficiency Master Plan as a high priority implementation program. Program design work is complete and includes a standard consumer rebate implementation framework. All aspects of program implementation are operational with the rebate process, device identification, and marketing ready to implement. An updated MWDOC Water Use Efficiency Master Plan is paused pending regulations to be set by the State of California through SB 606 and AB 1668; however, it is slated to directly support water use efficiency/conservation programs such as the Orange County Sustainable Landscapes Program Phase II.

Countywide planning has been done to support the proposed Program. Water use efficiency programs, such as the Program described in this proposal, are included in local Integrated Regional Watershed Management Plans (IRWMP) as a multi-benefit program. Benefits include water conservation, stormwater and dry-weather runoff reduction, non-point source pollution prevention, and greenhouse gas reductions. Comprehensive landscape irrigation water use efficiency programs and smart irrigation timer programs have been consistently ranked in the top five (5) programs against dozens of other water supply, water reliability, and watershed management programs in these IRWMP efforts.

The Program is consistent with the water use efficiency and watershed management goals contained in the California Water Plan, TMDLs, CALFED Bay-Delta objectives, AB 32, local land use planning, and conforms to California's Water Resilience Portfolio and legislature SB 606 and AB 1668, which require urban water suppliers to meet water use objective budgets based on population, landscape area, ETo, and other factors. Increasing irrigation efficiencies through this Program will directly support Orange County in meeting water use objectives. Lastly, the

Program is consistent with Metropolitan’s Integrated Resources Plan, and MWDOC’s 2020 Urban Water Management Plan, submitted to the State of California. Overall, this Program represents a key strategy, landscape water use efficiency, which will assist Orange County water agencies to meet and maintain their reduction goals.

*E.2 Readiness to Proceed*

The Program is ready to begin as soon as an agreement may be executed between MWDOC and BOR. There are no permits, including for environmental review, required for this Project. The project is 100% designed and ready, no additional engineering or design work is required. There are no new policies or administrative actions are required to implement the project.

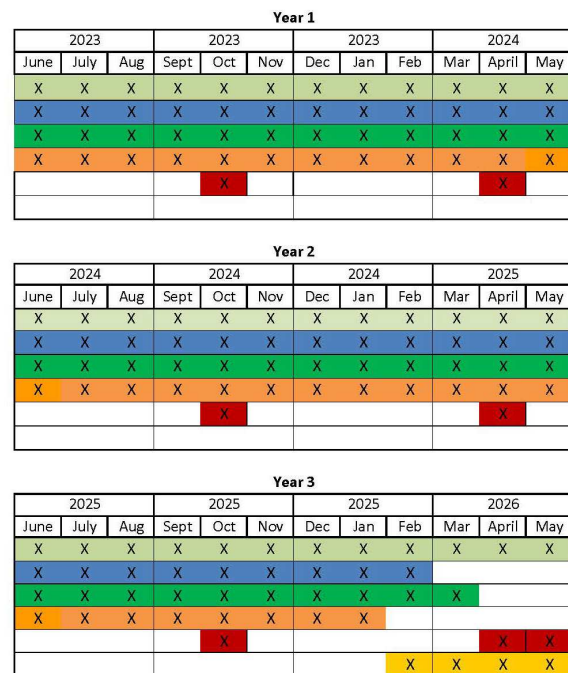
The FOA states that the anticipated award date is May 31, 2023; therefore the estimated schedule is based on a start date of June 1, 2023. If the project is able to begin earlier, the schedule will be moved up accordingly; if the project is funded but is not cleared to start in June 2023, no work will begin until given the go-ahead and the schedule will be pushed back accordingly.

Task 1 Administration will be ongoing over the course of the Project until the potential grant award is closed out. Task 2 Inspections will begin as soon as conservation activity begins to flow through the program and will continue until there are no longer active sites to inspect. Task 3 Rebate Incentives will begin as soon as a participating site has been cleared for payment and will continue until all rebate funding has been paid out to participants. Task 4 Marketing will begin to

Task 1 - Program Administration  
 Task 2 - Inspections  
 Task 3 - Rebate Incentives  
 Task 4 - Program Marketing  
 Task 5 - Program Reporting  
 Task 6 - Program Evaluation

Task 1 - Program Administration  
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Task 1 - Program Administration  
 Task 2 - Inspections  
 Task 3 - Rebate Incentives  
 Task 4 - Program Marketing  
 Task 5 - Program Reporting  
 Task 6 - Program Evaluation



**Figure 3. Project schedule and milestones.**

advertise the Program immediately and will cease when program funds are all allocated. Task 5 reporting is anticipated to take place semi-annually during the months of April and October; however, whatever reporting schedule is provided by BOR will be used. Task 6 Evaluation will take place at the end of the Program and will be completed by the date specified by BOR. A detailed Project schedule is shown in Figure 3Error! Reference source not found..



## Evaluation Criterion F: Collaboration

**Widespread support for and significance of the project:** The proposed Program promotes and encourages collaboration among all water agencies in Orange County, which helps to increase the reliability of the regional water supply and increase drought resiliency. MWDOC will implement the proposed Program throughout the county in partnership with all 29 retail water agencies in the County: City of Anaheim, City of Brea, City of Buena Park, East Orange County Water District, El Toro Water District, City of Fountain Valley, City of Fullerton, City of Garden Grove, Golden State Water Company, City of Huntington Beach, Irvine Ranch Water District, City of La Habra, City of La Palma, Laguna Beach County Water District, Mesa Water District, Moulton Niguel Water District, City of Newport Beach, City of Orange, City of San Clemente, City of Santa Ana, Santa Margarita Water District, City of Seal Beach, Serrano Water District, South Coast Water District, Trabuco Canyon Water District, City of Tustin, City of Westminster, and Yorba Linda Water District.

Widespread support for this Program is demonstrated by the 18 letters of support from Orange County retailers, California State Senators and Assemblymembers, and US Representatives starting on page 40. This partnership is significant as regional approach reduces administrative burdens and increases administrative efficiencies by having one centralized water efficiency rebate program for the entire county. Additionally, water agencies in the county will have a united message of promoting efficient landscape water use to water users and a send clear regional message to customers regarding drought and what water users can do to get involved and participation in the Program.

The Program will significantly increase the awareness of water conservation in Orange County. The Program will be promoted through water bill stuffers (bill inserts), water bill messages, newsletters, websites, and social media channels. The collaboration and support among MWDOC, Orange County retail agencies, State legislatures, US Representatives, and the Bureau of Reclamation is extremely important and significant because the whole of all efforts to increase water supply reliability and drought resiliency in the region is greater than the sum of its individual parts.

**Enhanced future conservation:** The Program will serve as an example of efficiency that can be replicated, not only from user to user, but also by water agency to water agency, thereby increasing the capability of future water conservation and efficiency efforts beyond Orange County. By promoting the conversion of dedicated irrigation meters to a sustainable source, such as municipally supplied recycled water, the recycled water grid will expand, providing more opportunities for future conversions, which help diversify Orange County's water supply portfolio. A significant portion of customers who participate in MWDOC's water savings rebate programs will participate in other in the programs in the future. Metropolitan Water District of Southern California has demonstrated that turf conversions sites induce a multiplier effect, meaning people not participating in the rebate program will convert their lawns themselves, enhancing the opportunities for future water efficiency and conservation. The measures and



devices installed/converted in this Program create long-term water efficient practices, which will save water during and between times of drought, and provide infrastructure for Orange County residents to further conserve water during times of drought.

#### Evaluation Criterion G: Additional Non-Federal Funding

The total project cost is \$7,627,197.70. Of this, the non-federal funding will total \$4,627,197.70, 61% of total costs. This exceeds 50% of the project costs. See Table 7 for detailed information.

$$\frac{\$4,627,197.70}{\$7,627,197.70} \times 100 = 61\%$$

#### Evaluation Criterion H: Nexus to Reclamation Project Activities

The proposed Program is connected to Reclamation Project activities through its water supplies. MWDOC obtains its imported water supplies from the Metropolitan Water District of Southern California via the Colorado River Aqueduct (CRA) and State Water Project (SWP). Metropolitan accesses Colorado River water via an entitlement, and obtains State Water Project water from Northern California. This state system is operated in parallel with Reclamation's Central Valley Program. Through water conservation, MWDOC reduces the amount of water imported to Orange County through the SWP and CRA, reducing stress on the Bay Delta and Colorado River. Additionally, the Program will be implemented throughout Orange County, including the Irvine Ranch and Orange County Water District service areas. These agencies have Title 16 contracts with Reclamation.

The proposed Program will not be implemented on Reclamation lands or facilities to our knowledge. However, the Program will be implemented within the Lower Colorado Region and, more specifically, within the Southern California Area Office activity area. The Program will curb water demand, therefore allowing more water to remain in storage. This Program will not directly benefit any Indigenous Tribes, as there is no federally recognized tribal land in the MWDOC service area.

#### Performance Measures

Task 6 focuses on performance measure used to quantify actual water savings upon completion of the project. MWDOC staff will initiate a Program process and statistical water savings impact evaluation to quantify Program benefits. The Program process evaluation will assess the Program's goals, format, and effectiveness, including how the Program was developed, how success was measured, who the target audience was and how they were reached, and the Program successes and challenges. The impact evaluation will use robust statistical methods, including regression analysis, to measure the change in water use of Program sites before and after Program conversion. This analysis will include a statistically significant population of Program participants, will maintain 95% confidence, and utilize methodologies that consider and factor weather conditions in the analysis. A written report describing the statistical methods and evaluation results will be submitted as the final report for the Program. Results

from this Program will be shared with Reclamation, other applicable Program Stakeholders, and MWDOC retail water agencies.

## Project Budget

### Funding Plan and Letters of Commitment

The non-Reclamation funding amount assigned to this Program is \$4,627,197.70. MWDOC will contribute all necessary non-Reclamation funding for the Program. No other source of funding is required. MWDOC’s funding is sourced from budgeted funds for Salaries and Wages and funding allocated from MWDOC’s Water Use Efficiency programmatic funds for Rebate Programs. A letter of funding commitment signed by the MWDOC Assistant General Manager is attached, see page 26.

### Non-Federal Entity: Municipal Water District of Orange County (MWDOC)

The funding amount MWDOC will provide is \$4,627,197.70, or 61% of the overall Program’s cost. This amount is made up of both in-kind contributions in the form of salaries and benefits (\$126,197.70) and direct payments to Program participants as incentive funding (\$4,501,000.00) provided during the course of the Program, see Table 6.

The in-kind contribution MWDOC will provide, totaling \$126,197.70, is a combination of both salaries and fringe benefits. It is proposed MWDOC will commit 4,719 hours over the three-year term of the Program. This averages to approximately 30.25 hours per week and will be spread across seven (7) of MWDOC’s water use efficiency staff. Table 9 details the breakdown by staff member and their corresponding salary/benefit unit rate, the total three-year term hours, and the associated cost. MWDOC will contribute \$4,501,000.00 in direct payments to Program Participants, in the form of rebate incentives.

**Table 6. Summary of Non-Federal and Federal Funding Sources**

<b>FUNDING SOURCES</b>	<b>AMOUNT</b>
<b>Non Federal Entities</b>	
1. Municipal Water District of Orange County Direct Contribution	\$4,501,000.00
2. Municipal Water District of Orange County In-kind Staff Time*	\$126,197.70
Non-Federal Subtotal	<b>\$4,627,197.70</b>
<b>Other Federal Entities</b>	
1. None	\$0.00
Other Federal Subtotal	\$0.00
<b>REQUESTED RECLAMATION FUNDING</b>	<b>\$3,000,000.00</b>

The federal funding requested by Reclamation for staff time, rebate incentives, and quality control inspections totals \$3,000,000.00. Of the Program total staff time costs—\$186,197.70—MWDOC is requesting \$60,000.00 to be funded by Reclamation over the three year period; for quality control inspections MWDOC is requesting \$125,250.00; of the total rebate incentives—\$6,528,600.00—MWDOC is requesting \$2,814,750.00 from Reclamation.

Table 7, below, lists the total Program costs broken down by source and percent of total cost.

**Table 7. Funding Sources**

<b>Funding Sources</b>	<b>Percent of Total Program Cost</b>	<b>Total Cost by Source</b>
Recipient Funding	61%	\$4,627,197.70
Reclamation Funding:	39%	\$3,000,000.00
Other Funding	0%	\$0.00
<b>Totals</b>	<b>100%</b>	<b>\$7,627,197.70</b>

**Additional information:** No other funding source will be required; there is no needed external funding; a Letter of Commitment from MWDOC is included.

MWDOC does not expect costs, including in-kind costs, incurred before the Program start date.

No other Federal partners will be providing funding to this Program.

This expenditure benefits the project by allowing the Program to reach a greater amount of Orange County water users, including the hardest to reach and/or incentivize. This funding will help incentivize participants who otherwise would not complete a landscape water savings action (Turf conversions, high efficiency irrigation, and sustainable water sources). By increasing participation in water savings activities, this funding will increase water saved in Orange County due to landscape improvements, therefore increasing water supply reliability and drought resiliency in the region.



July 26, 2022

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MEMBER AGENCIES

City of Brea  
City of Buena Park  
East Orange County Water District  
El Toro Water District  
Emerald Bay Service District  
City of Fountain Valley  
City of Garden Grove  
Golden State Water Co.  
City of Huntington Beach  
Irvine Ranch Water District  
Laguna Beach County Water District  
City of La Habra  
City of La Palma  
Mesa Water District  
Moulton Niguel Water District  
City of Newport Beach  
City of Orange  
Orange County Water District  
City of San Clemente  
Santa Margarita Water District  
City of Seal Beach  
Serrano Water District  
South Coast Water District  
Trabuco Canyon Water District  
City of Tustin  
City of Westminster  
Yorba Linda Water District

Bureau of Reclamation  
Financial Assistance Operations  
Attn: Mr. Josh German  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Re: Municipal Water District of Orange County's WaterSMART: Water and Energy Efficiency for Fiscal Year 2023 Grant Application

Dear Mr. German:

The Municipal Water District of Orange County (MWDOC) is submitting a proposal in response to the Bureau of Reclamation's 2023 WaterSMART Water and Energy Efficiency Grant, Funding Opportunity R23AS00008. MWDOC's proposed project, Orange County Sustainable Landscapes Program Phase II, will result in water and energy savings, yielding enhanced drought resiliency and water supply reliability. The project will provide incentive funding to promote irrigation retrofits, landscape transformations, and sustainable water source conversions for residential, commercial customers throughout Orange County.

The purpose of this letter is to provide assurances, as stated in the attached Board Resolution, that MWDOC has the ability to and will provide the proposed cost share \$4,627,197.70 for implementation of the program.

Should you need additional information, please contact Joe Berg at (714) 593-5008.

Sincerely,

*Harvey De La Torre*

Harvey De La Torre  
Assistant General Manager

## Budget Proposal

The Total Project Cost equals \$7,627,197.70. Costs requested to be reimbursed with Federal funding totals \$3,000,000.00; costs to be paid by the applicant totals \$4,627,197.70. There are no third-party contributions for this project. See Table 8 for the breakdown of total project costs.

**Table 8. Total Project Cost Table**

<b>SOURCE</b>	<b>AMOUNT</b>
Costs to be reimbursed with the requested Federal funding	\$3,000,000.00
Costs to be paid by the applicant	\$4,627,197.70
Value of third-party contributions	\$0.00
<b>TOTAL PROJECT COST</b>	<b>\$7,627,197.70</b>

Table 9 outlines the budget proposal and breaks down budget items by MWDOC's assigned tasks and their corresponding federal category.

*This space is intentionally left blank to allow the Budget Proposal table to fit onto one full page and keeping the Proposal in order.*

**Table 9. Budget Proposal**

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity Type	TOTAL COST
	\$/Unit	Quantity		
<b>1. Salaries and Wages (Task 1)</b>				
Program Administrator (Joe Berg)	\$96.17/hr	39	hours	\$3,750.63
Program Manager (Rachel Waite)	\$52.86/hr	468	hours	\$24,738.48
Program Support (Beth Fahl)	\$54.77/hr	312	hours	\$17,088.24
Program Support (Sam Fetter)	\$40.09/hr	624	hours	\$25,016.16
Program Support (Tina Fann)	\$39.00/hr	936	hours	\$36,504.00
Program Assistant (Cristal Castro)	\$22.40/hr	780	hours	\$17,472.00
Project Staff (Intern)	\$17.81/hr	1,560	hours	\$27,783.60
<b>2. Fringe Benefits (Task 1)</b>				
Program Administrator (Joe Berg)	\$28.73/hr	39	hours	\$1,120.47
Program Manager (Rachel Waite)	\$13.06/hr	468	hours	\$6,112.08
Program Support (Beth Fahl)	\$19.32/hr	312	hours	\$6,027.84
Program Support (Sam Fetter)	\$10.58/hr	624	hours	\$6,601.92
Program Support (Tina Fann)	\$10.58/hr	936	hours	\$9,902.88
Program Assistant (Cristal Castro)	\$1.71/hr	780	hours	\$1,333.80
Project Staff (Intern)	\$1.76/hr	1,560	hours	\$2,745.60
<b>3. Travel</b>				
Does not apply to this program				\$0.00
<b>4. Equipment</b>				
Does not apply to this program				\$0.00
<b>5. Supplies and Materials</b>				
Does not apply to this program				\$0.00
<b>6. Contractual/Construction (Tasks 2 &amp; 3)</b>				
Quality Control Inspections (Task 2)	\$110/insp.	1,139	inspections	\$125,250.00
Rebate – Turf Removal Res & CII (Task 3)	\$3/ ft <sup>2</sup>	\$1,500,000	ft <sup>2</sup>	\$4,500,000.00
Landscape Design Assistance (Task 3)	\$1,130/design	375	designs	\$423,750.00
Rebate – Smart Timers CII (Task 3)	\$45/station	35,000	stations	\$1,050,000.00
Rebate – Smart Timers Res (Task 3)	\$80/timer	4,500	timers	\$810,000.00
Rebate – Drip Res & CII (Task 3)	\$0.50/ ft <sup>2</sup>	700,000	ft <sup>2</sup>	\$350,000.00
Rebate – Sustainable Water Source Conversion (Task 3)	\$2,275/AFY saved	80 AFY (10 sites; 8 AFY/site)	AFY	\$182,000.00
<b>7. Environmental and Regulatory Compliance Costs</b>				
Does not apply to this Program.				\$0.00
<b>8. Other</b>				
Program Marking (Task 4)	Costs included in Task 1 (Admin)			\$0.00
Program Reporting (Task 5)	Costs included in Task 1 (Admin)			\$0.00
Program Evaluation (Task 6)	Costs included in Task 1 (Admin)			\$0.00
<b>TOTAL DIRECT COSTS</b>				<b>\$7,627,197.70</b>
<b>Indirect Costs</b>				
Does not apply to this Program				\$0.00
<b>TOTAL ESTIMATED PROJECT COSTS</b>				<b>\$7,627,197.70</b>

## Budget Narrative

The Project will be funded through a combination of federal and non-federal funds, including In-Kind services and Direct Funding provided by the Municipal Water District of Orange County (MWDOC). The tasks below are listed as they are detailed in the Budget Proposal Worksheet. The items that pertain to this Project are listed below by task number.

- Task 1 – Project Administration is in the Salaries/Wages and Fringe Benefits category.
- Task 2 – Inspections is considered as Contractual.
- Task 3 – Rebate Incentive is considered as Contractual.
- Task 4 – Marketing/Promotions is considered as Other.
- Task 5 – Project Reporting considered as Other.
- Task 6 – Project Evaluation considered as Other.

Those items requested to be commented on, but not applicable to this Project, are Travel, Equipment, Supplies, Environmental and Regulatory Compliance, and Indirect Costs.

Table 10, below, distinguishes the Reclamation and applicant contributions detailed in Table 9.

**Table 10. Budget by task and funding source**

Task No.	Task Name	MWDOC Project Funds	Reclamation Project Funds	Total Project Budget
1	Admin	\$126,197.70	\$60,000.00	\$186,197.70
2	Inspections*	\$0.00	\$125,250.00	\$125,250.00
3	Device Rebates*	\$4,501,000.00	\$2,814,750.00	\$7,315,750.00
4	Marketing*	\$0.00	\$0.00	\$0.00
5	Project Reporting*	\$0.00	\$0.00	\$0.00
6	Project Evaluation*	\$0.00	\$0.00	\$0.00
<b>Total</b>		<b>\$4,627,197.70</b>	<b>\$3,000,000.00</b>	<b>\$7,627,197.70</b>

\*Staffing costs will be incurred, cost included in Program Admin (Task 1)

## (1 & 2) Salaries/Wages and Fringe Benefits

### Task 1 – Project Administration

**Staff Funding - Reclamation \$60,000.00; Recipient \$126,197.70; Total \$186,197.70**

Task 1 constitutes the salaries/wages and fringe benefits associated with the comprehensive Project administration. In order to properly manage the proposed Project, MWDOC will provide, in total, approximately 30.25 hours per week across seven (7) MWDOC Staff, with an average (weighted) rate of \$39.46/hr for salaries/wages and fringe benefits combined. Across the three-year term of the Project, this equates to 4,719 hours and a total of \$186,197.70 for both salaries/wages and fringe benefits (S&B). These hours include estimated hours that will be



spent on Program administration, Program marketing, Program reporting, and the final Project Evaluation.

Based on an average hourly salary/wage rate across all Staff members of \$32.29 for salaries across 4,719 total Project hours, the total salaries/wages us \$152,353.11. For fringe benefits, the average hourly rate is \$7.17 and totals \$33,844.59 (fringe benefits). Together the salaries and benefits total \$186,197.70, of which MWDOC will provide \$126,197.70, with a request of \$60,000.00 from Reclamation. Table 11 lists each proposed MWDOC staff member, their salaries and, separately, their benefits, the 36-month proposed hours, and the salary and benefit totals.

**Table 11. Staff Title, Salary, and Benefits**

MWDOC Staff Personnel	Hours (hr/36 mth)	Salary Rate <sup>[1]</sup> (\$/hr)	Benefit Rate <sup>[2]</sup> (\$/hr)	Salary (\$/36 mth)	Benefit (\$/36 mth)	Salary & Benefits (\$/36 mth)
Project Administrator (Joe Berg)	39	\$96.17	\$28.73	\$3,750.63	\$1,120.47	\$4,871.10
Project Manager (Rachel Waite)	468	\$52.86	\$13.06	\$24,738.48	\$6,112.08	\$30,850.56
Project Support (Beth Fahl)	312	\$54.77	\$19.32	\$17,088.24	\$6,027.84	\$23,116.08
Project Support (Sam Fetter)	624	\$40.09	\$10.58	\$25,016.16	\$6,601.92	\$31,618.08
Project Support (Tina Fann)	936	\$39.00	\$10.58	\$36,504.00	\$9,902.88	\$46,406.88
Project Assistant (Cristal Castro)	780	\$22.40	\$1.71	\$17,472.00	\$1,333.80	\$18,805.80
Project Staff (Intern)	1,560	\$17.81	\$1.76	\$27,783.60	\$2,745.60	\$30,529.20
<b>Total</b>	<b>4,719</b>	<b>\$32.28 (Wavg)</b>	<b>\$7.17 (Wavg)</b>	<b>\$152,353.11</b>	<b>\$33,844.59</b>	<b>\$186,197.70</b>

<sup>[1]</sup> As of July 2022.

<sup>[2]</sup> Fringe Benefits are comprised of State Unemployment Tax (5.25%), CA State Disability Insurance (1.15%), Dental Coverage (variable), District Paid Life Insurance (.52%), Medicare (1.43%), Pers EE (7%), Pers ER (8.98%), Survivor ER Total (.03%), Vision Coverage (variable), Medicare Total (variable), Disability Total (.52%). Fringe benefit rates are for billing purposes.

While each staff member will bring their own experience to the Project, collectively the MWDOC team has 60 years of experience managing similar water use efficiency projects. Mr. Berg, as the Director of Water Use Efficiency (WUE) with more than 30 years' experience, will be responsible for overseeing the Project, reviewing quarterly reports, and purchase requisitions prior to submittal and providing the overall guidance for the Project, designating an estimated 39 hours to this Project.

Ms. Waite, Senior Water Use Efficiency Analyst, has nearly 9 years' experience with Grant Management at the District and will act as Project Manager, overseeing the management



operations of the Project, handling financial aspects for the Project; and reviewing written reports. She will provide technical assistance and, due to her experience with program process and impact evaluations, will also oversee the Project evaluation, the statistical analysis for program benefits and water savings, and provide support with Project administration. Ms. Waite, will contribute an estimated 468 hours over 36-months to oversee implementation of the Project.

Ms. Fahl, Senior Water Use Efficiency Analyst with 18 years' experience with the District, will provide comprehensive program support by assisting with program operations, facilitating interaction among MWDOC and Program stakeholders, and assuring day-to-day responsibilities are running smoothly. Ms. Fahl will contribute an estimated 312 hours to this Project over 36-months.

Mr. Fetter, Water Use Efficiency Analyst I with 4 years' experience with the District, will assist with carrying out Project day-to-day responsibilities. Mr. Fetter will spend 624 hours on the Project, helping to facilitate the daily operations along with preparation of the written reports and management of the Project database.

Ms. Fann, Water Use Efficiency Analyst I with more than 2 years' experience running WUE programs, will assist with running the day-to-day offered WUE programs. Ms. Fann will work closely with Ms. Cristal Castro, WUE Programs Assistant, a department intern to assist with daily tasks and processes needed to run the Program. Ms. Fann will spend 936 hours, Ms. Castro will spend 780 hours, and an intern(s) will spend an additional 1,560 hours over the 36-month period.

Salary increases for the Project staff would occur at the beginning of each fiscal year (July to June) and have averaged at least 3.6% over the last five years for merit. It is anticipated over the term of this Project agreement this average will remain. As part of the Project reporting, MWDOC will supply a data table with the actual hours per reporting period and related salary and fringe benefit rates for each staff personnel as certified accurate by MWDOC's Accounting Manager, Hilary Chumpitazi.

Please see the following page (32) for certified MWDOC staff salary and benefits.

**Municipal Water District of Orange County  
Salary and Benefits Rates**

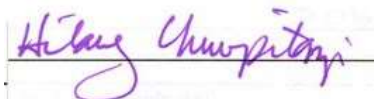
Weekly Staffing for Comprehensive Indoor and Outdoor  
Water Use Efficiency Program

3 year program (weeks) 156

Name	Weekly Hours	Amount	Hourly Rate S & B	Total Hours	Total S&B
<b>Project Administrator (Joe Berg)</b>					
Salary	0.25	\$ 24.04	\$96.17		\$ 3,750.63
Benefits		\$ 7.18	\$28.73		\$ 1,120.47
<b>Total Salary &amp; Benefits</b>	<b>0.25</b>	<b>\$ 31.23</b>	<b>\$124.90</b>	<b>39</b>	<b>\$ 4,871.10</b>
<b>Project Manager (Rachel Waite)</b>					
Salary	3.00	\$ 158.58	\$52.86		\$ 24,738.48
Benefits		\$ 39.18	\$13.06		\$ 6,112.08
<b>Total Salary &amp; Benefits</b>	<b>3.00</b>	<b>\$ 197.76</b>	<b>\$65.92</b>	<b>468</b>	<b>\$ 30,850.56</b>
<b>Project Support (Beth Fahl)</b>					
Salary	2.00	\$ 109.54	\$54.77		\$ 17,088.24
Benefits		\$ 38.64	\$19.32		\$ 6,027.84
<b>Total Salary &amp; Benefits</b>	<b>2.00</b>	<b>\$ 148.18</b>	<b>\$74.09</b>	<b>312</b>	<b>\$ 23,116.08</b>
<b>Project Support (Sam Fetter)</b>					
Salary	4.00	\$ 160.36	\$40.09		\$ 25,016.16
Benefits		\$ 42.32	\$10.58		\$ 6,601.92
<b>Total Salary &amp; Benefits</b>	<b>4.00</b>	<b>\$ 202.68</b>	<b>\$50.67</b>	<b>624</b>	<b>\$ 31,618.08</b>
<b>Project Support (Tina Fann)</b>					
Salary	6.00	\$ 234.00	\$39.00		\$ 36,504.00
Benefits		\$ 63.48	\$10.58		\$ 9,902.88
<b>Total Salary &amp; Benefits</b>	<b>6.00</b>	<b>\$ 297.48</b>	<b>\$49.58</b>	<b>936</b>	<b>\$ 46,406.88</b>
<b>Project Assistant (Cristal Castro)</b>					
Salary	5.00	\$ 112.00	\$22.40		\$ 17,472.00
Benefits		\$ 8.55	\$1.71		\$ 1,333.80
<b>Total Salary &amp; Benefits</b>	<b>5.00</b>	<b>\$ 120.55</b>	<b>\$24.11</b>	<b>780</b>	<b>\$ 18,805.80</b>
<b>Project Staff (Intern)</b>					
Salary	10.00	\$ 178.10	\$17.81		\$ 27,783.60
Benefits		\$ 17.60	\$1.76		\$ 2,745.60
<b>Total Salary &amp; Benefits</b>	<b>10.00</b>	<b>\$ 195.70</b>	<b>\$19.57</b>	<b>1,560</b>	<b>\$ 30,529.20</b>
<b>Totals</b>					
Salary	30.25	\$ 976.62	\$32.28		\$ 152,353.11
Benefits		\$ 216.95	\$7.17		\$ 33,844.59
<b>Total Salary &amp; Benefits</b>	<b>30.25</b>	<b>\$ 1,193.58</b>	<b>\$39.46</b>	<b>4,719</b>	<b>\$ 186,197.70</b>
		<b>1,573.00</b>			

<b>Totals</b>			
hours	4,719	over 36 months	Average Salary \$32.29
payroll	\$ 186,197.70	over 36 months	Average Benefit \$7.17
			<b>\$39.46</b>

I have reviewed this document and certify the salary and fringe benefit rates to be true.



Hilary Chumpitazi  
Accounting Manager, Municipal Water District of Orange County

July 26, 2022

Date

### (3) Travel

There are no travel costs, such as mileage, airfare, per diem, lodging, or other miscellaneous travel expenses, associated with this Project.

### (4) Equipment

There are no equipment costs over \$500 associated with this Project.

### (5) Materials and Supplies

There are no materials and supplies costs associated with this Project.

### (6) Contractual and Construction

#### Task 2 – Inspections

*Task Funding - Reclamation \$125,250.00; Recipient \$0.00; Total \$125,250.00*

All Turf Removal and Spray-to-Drip Conversion sites will receive a pre and post installation verification inspection to determine eligibility for Program rebate funds. Sustainable Meter Conversions will be verified by retail water agency staff to ensure that the meter is converted, operating, and functioning properly. For Smart Timers, 100% of applicants will receive product verification via submitted receipts and, in addition, a minimum of 25% of the devices will be inspected in the field. This work will be performed by Mission Resource Conservation District (Mission), is under contract with MWDOC until December 31, 2022; when this contract is nearing sunset, MWDOC will undergo a new competitive bid process consistent with MWDOC's administrative code and CFR §200.320. Mission, as a Non-Profit Special District and an arm of the Natural Resource Conservation Service, is uniquely qualified to perform irrigation audits. They have many years' experience in both the urban and agricultural settings and provide MWDOC with highly competitive rates. A copy of a recent invoice submitted to MWDOC is included on page 34. Over the term of the agreement, it is estimated MWDOC will direct Mission to perform approximately 1,139 installation verification inspections. At a minimum, the installation verification will include databasing of the following (if applicable): site contact information, intervention type, sector, device cost, installation date, make/model information, conversion square footage. Additional collected information may include: existing irrigation equipment, new irrigation equipment, water source (including modification if applicable to device type), conversion area measurement, landscape material (including modification if applicable), and site photographs depicting conversion area and existing irrigation equipment.

The total direct cost for the inspections requested from Reclamation for these commercial and residential installation verification inspections is \$125,250. Per the invoice below, Mission charges an average of \$110 per residential turf/timer site visit types including their administrative costs. For commercial installation verifications, Mission charges on a time and materials basis at a rate of \$59/hour, plus \$28/hour administration. MWDOC is requesting \$125,250 from Reclamation for this effort. The staff time associated with Task 3 is accounted for in Task 1.



130 E. Alvarado St.  
 Fallbrook, CA 92028  
 760.728.1332

Invoice No. **3224**

# INVOICE

**Customer**

Name	Municipal Water District of Orange County	Date	07/05/2022
Address	P.O. Box 20895	Order No.	
City	Fountain Valley State CA ZIP 92728	Rep	
Phone		FOB	

Hours	Description	Unit Price	TOTAL
<b>06/01/2022 - 06/30/2022</b>			
<b>COMMERCIAL</b>			
5.50	Joel Menard - on site + paperwork	\$59.00	\$324.50
3.50	Tyler Eckermann- on site + paperwork	\$59.00	\$206.50
81.00	Ani Vartanians - appointments and data entry	\$28.00	\$2,268.00
<b>RESIDENTIAL</b>			
<b>Timers</b>			
17.00	Single Timer Verifications	\$95.00	\$1,615.00
0.00	Double work orders	\$143.00	\$0.00
0.00	Double controllers	\$190.00	\$0.00
0.00	Double controllers + RN	\$238.00	\$0.00
0.00	Triple Controller	\$267.00	\$0.00
54.00	Turf Removal	\$95.00	\$5,130.00
18.00	Spray to Drip	\$95.00	\$1,710.00
0.00	No Show	\$65.00	\$0.00
0.00	MATERIALS		\$0.00
<b>Miles</b>			
457.0	Mileage for HOA's/COMM	\$0.585	\$267.35

SubTotal \$11,521.35

**Payment Details**

Cash  
 Check

Comment: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**TOTAL \$11,521.35**

Office Use Only

Save What We Have - Restore What We Had

### Task 3- Rebate Incentives

*Task Funding - Reclamation \$2,814,750.00; Recipient \$4,501,000.00; Total \$7,315,750.00*

Over the 36-month period of the potential grant award, MWDOC proposes to facilitate sustainable landscape improvements across approximately 45 million square feet (1,042 acres) of landscaped area. To achieve this, the Program anticipates to rebate the conversion of up to 1.9 million square feet (44 acres) of turfgrass to a CA Friendly landscape, along with up to 375 customized water efficient landscape designs; the upgrade of approximately 4,500 residential and 860 commercial (30,000 stations) antiquated irrigation timers to smart-water-application irrigation controllers (weather-based irrigation timers) collectively irrigating approximately 947 acres; the conversion of approximately 700,000 square feet (16 acres) of inefficiently irrigated landscape to drip irrigation; and the conversion of approximately 10 commercial sites from utilizing a potable source to an alternative sustainable source (rainwater capture, stormwater runoff, recycled water) covering 35 acres of irrigated area. MWDOC proposes to provide incentives through a rebate-style format to residential property owners or commercial property owners/managers for qualifying conversions. Table 12 lists rebate amounts that will be available for each participant; these rebate levels may vary due to market transformation during the implementation-phase.

**Table 12. Detailed Rebate Incentives by Funding Sources**

Rebate Incentive	Incentive Rate	MWDOC	USBR	Quantity	MWDOC Funding	USBR Funding	Total Funding
<b>Turf Removal (Res)</b>	\$3/ ft <sup>2</sup>	\$2	\$1	7000,000 ft <sup>2</sup>	\$1,400,000	\$700,000	\$2,100,000
<b>Turf Removal (CII)</b>	\$2/ ft <sup>2</sup>	\$1	\$1	1,2000,000 ft <sup>2</sup>	\$1,200,000	\$1,200,00	\$2,400,000
<b>Landscape Designs</b>	\$1,130	\$480	\$650	375 designs	\$180,000	\$243,750	\$423,750
<b>Smart Timers (CII)</b>	\$35/ station	\$35	\$0	30,000 stations	\$1,050,000	\$0	\$1,050,000
<b>Smart Timers (Res)</b>	\$180/ timer	\$80	\$100	4,500 timers	\$360,000	\$450,000	\$810,000
<b>Spray-to-Drip (CII)</b>	\$.50/ ft <sup>2</sup>	\$.020	\$0.30	400,000 ft <sup>2</sup>	\$80,000	\$120,000	\$200,000
<b>Spray-to-Drip (Res)</b>	\$.50/ ft <sup>2</sup>	\$0.25	\$0.25	300,000 ft <sup>2</sup>	\$75,000	\$75,000	\$150,000
<b>Sustainable Source (CII)</b>	\$975/ AFY	\$975	\$0	12 Sites (8 AFY/site)	\$156,000	\$26,000	\$182,000
<b>TOTALS</b>					<b>\$4,501,000</b>	<b>\$2,814,750</b>	<b>\$7,315,750</b>

Rebate incentives shall be based on the square footage, device/material costs, or actual water savings. To receive the rebate funds, the Participant’s completed site conversion and irrigation system is required to be consistent with the intent of the Program. Additionally, the conversion

area must remain in compliance with the conversion requirements for a minimum period of five years.

MWDOC will provide \$4,501,000.00, and the remaining \$2,814,750.00 is requested from Reclamation. The staff time and associated funding for Task 3 is accounted for in Task 1.

#### (7) Environmental and Regulatory Compliance Costs

There are no anticipated environmental compliance costs associated with this Project.

#### (8) Other

#### **Task 4 – Marketing and Promotion**

##### ***Task Funding - Reclamation \$0.00; Recipient \$0.00; Total \$0.00***

To promote the Program, MWDOC will develop, print, and distribute at least 30,000 marketing materials necessary to meet project goals. MWDOC has found, through a customer satisfaction survey, that the most effective means for potential participants to find out about water related rebate programs is through the extra promotional collateral they find in their water bills. To entice these participants to participate in this Program and replace inefficient equipment with advanced technology, Program information will be disseminated through their water bill inserts and promoted on social media using advertising campaigns through Facebook. Additionally, in 2017 MWDOC launched a new website that promotes available rebate programs in a user-friendly format, visit [www.mwdoc.com](http://www.mwdoc.com).

Most, if not all, Program marketing is expected to take place digitally, online or through e-bill inserts, which is marketing material included in online water bill pay. Because marketing has transitioned to digital mediums, there are no costs associated with this task. The staff time and associated funding for Task 2 is accounted for in Task 1 and there is no funding requested for this task.

#### **Task 5 – Project Reporting**

##### ***Task Funding - Reclamation \$0; Recipient \$0; Total \$0***

Following the reporting schedule set forth in the agreement, MWDOC will submit semiannual reports and a comprehensive final report that will include all required SF forms, a written Project progress narrative, tabular data tables, and all required back-up to support the requested reimbursement. The funding for Task 5, semi-annual Project Reporting, is captured within Task 1 Program Administration.

#### **Task 6 – Project Evaluation**

##### ***Task Funding - Reclamation \$0; Recipient \$0; Total \$0***

Evaluation of the Project is critical to maintaining the integrity and longevity of sustained use and the associated water savings to be achieved. To ensure that the Project is operating with the maximum integrity, 100% of the turf removal and drip participants will receive pre- and post-installation inspections, with a minimum of 25% of the smart timer receiving in-person

post installation verification inspections; all projects are 100% verified through receipt collection.

At the Project’s conclusion, a robust statistical examination using regression analysis and methods for considering weather impacts will be performed to evaluate associated water savings, giving the water industry an opportunity to quantify water savings associated with this Project. This analysis will include a statistically significant population of participants and maintain 95% confidence. Staff time associated with this task is included in Task 1, Program Administration.

#### Indirect Costs

There are no indirect costs associated with this Project proposal.

#### Total Costs

The total project costs are \$7,315,750.00. MWDOC will provide funding in the amount of \$4,627,197.70, with \$3,000,000.00 requested from Reclamation. Table 13 summarizes the proposed contribution by Program Budget Category.

**Table 13. Budget by Source**

Budget Category	Task No.	Task Description	Recipient Funds	Reclamation Funds	Total
<b>Salaries and Benefits</b>			<b>\$126,197.70</b>	<b>\$60,000.00</b>	<b>\$186,197.70</b>
<i>Task 1</i>		<i>Program Administration</i>	\$126,197.70	\$60,000.00	\$186,197.70
<b>Contractual/Construction</b>			<b>\$4,501,000.00</b>	<b>\$2,940,000.00</b>	<b>\$7,441,000.00</b>
<i>Task 2</i>		<i>Inspections</i>	\$0.00	\$125,250.00	\$125,250.00
<i>Task 3</i>		<i>Rebate Incentive</i>	\$4,501,000.00	\$2,814,750.00	\$7,315,750.00
<b>Other</b>			<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>
<i>Task 4</i>		<i>Program Marketing</i>	\$0.00	\$0.00	\$0.00
<i>Task 5</i>		<i>Project Reporting</i>	\$0.00	\$0.00	\$0.00
<i>Task 6</i>		<i>Project Evaluation</i>	\$0.00	\$0.00	\$0.00
<b>Total</b>			<b>\$4,627,197.70</b>	<b>\$3,000,000.00</b>	<b>\$7,627,197.70</b>

#### Pre Award Costs

There are no pre award costs associated with this Project.

#### Environmental and Cultural Resources Compliance

The proposed Program will not have effects on environmental and cultural resources. The Program includes retrofits to existing landscapes and no other construction activities. All landscape and irrigation equipment installations will not take place until Reclamation has instructed to begin. The following includes more detail on environmental and culture resources compliance.

**Impacts to surrounding environment:** The proposed Program will not negatively impact the surrounding environment. Under NEPA, this Program should qualify for a categorical exemption. The Program focuses on landscape and irrigation system improvements to existing urban landscape. It is anticipated that these improvements will result in water conservation and reduced dry-weather runoff and non-point source pollution leaving the Program area and entering the natural environment, including local streams and creeks leading to the Pacific Ocean.

**Threatened or endangered species and habitat.** There are no known endangered or threatened species or wetlands that will be negatively impacted by the Program or directly impacted within the area. This Program looks to increase watershed health through reductions in runoff and non-point source pollution, benefiting both terrestrial and aquatic threatened and/or endangered species and habitat.

**Clean Water Act:** Orange County has several water bodies that fall and/or potentially fall under CWA jurisdiction, such as the Santa Ana River, San Diego Creek, and their tributaries; the Bolsa Chica, Los Cerritos, and Huntington Beach Wetlands; and Newport Back Bay. This Program will have no negative impacts on these water bodies. The Program will have a positive impact by reducing urban runoff, specifically increasing onsite stormwater retention, while reducing stormwater runoff and non-point source pollution.

**Water delivery system:** The major regional components of the water delivery system in Orange County were constructed between the 1940s and 1960s. These facilities include the Diemer Filtration Plant, the Orange County Feeder, the East OC Feeder, and the West OC Feeder. The most recent major facilities added include the Allen-McColloch and South County Pipelines, which were constructed in the 1980s. Retail water agency delivery systems were built during this same timeframe, with the majority of expansion starting in the 1950s when there was a population more than 200,000. Today's population totals more than 3 million.

**Modification of irrigation system:** The Program will not result in modifications of or changes to individual features of an irrigation system such as headgates, canals, or flumes.

**National Register of Historic Places:** Orange County has 131 sites listed under the National Register of Historic Places. Any site requesting to participate in a MWDOC program must receive necessary permits and permissions before submitting an application, including City, County and/or NRHP approvals, and agree to this condition by signing the terms and conditions of the Program to be eligible for participation.

**Archeological sites:** There are no known archeological sites that will be impacted by the proposed Program.

**Low income or minority populations:** The proposed Program will not have a disproportionately high or adverse effect on low income or minority populations. The Program will be offered equally to all residents in Orange County and, for residential customers, can cover up to the full



cost of participation, therefore maximizing the opportunity for low income or minority participation.

**Indian sacred sites and tribal lands:** The proposed Program will not limit access to or ceremonial use of Indian sacred sites or result in other impacts to tribal lands.

**Invasive species:** The proposed Program will not contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known in Orange County. Within the landscape conversion (turf removal) component of the Program, evidence of invasive species at the site post implementation will deem the project ineligible for rebate. Information regarding invasive species and how to identify them is provided to customers participating in the landscape conversion component.

### Required Permits or Approvals

The Municipal Water District of Orange County is not aware of any required permits or approvals to implement the proposed Program. Program Participants, however, may be required to obtain a plumbing permit from their local city if modifications to the irrigation system point of connection are made as a result of participation. Because the Program will primarily focus on irrigation control components downstream of the point of connection, the need for a plumbing permit will be rare. Customers may also be required to obtain City, Homeowner Association, or other approvals and are required to obtain any required permits or approvals before applying for a MWDOC program and are required to conform to any City ordinance. The rebate program participant agreement that is required to participate contains language placing the permit requirements on the Participant, should a permit be required.

### Overlap or Duplication of Effort Statement

The proposed project, Orange County Sustainable Landscapes Program Phase II, will be the second phase of a current MWDOC BOR-funded project- Orange County Sustainable Landscapes Program (OCSLP), R21AP10377. Despite beginning in September 2021, OCSLP has nearly all funding allocated to water efficiency programs, and has been extremely successful in its first year. There has been much media attention in California regarding the drought including watering restrictions and emergency executive orders and calls for conservation from Governor Newsom. This has spurred many Orange County water users to sign up for Turf Removal and other water efficiency and conservation programs.

It is anticipated that funding for OCSLP will be expended before the proposed project—Orange County Sustainable Landscapes Program Phase II (OCSLP II)—will be able to begin, if funded. The intent is for Phase II to pick up where Phase I left off and to continue to build upon the water conservation work that has been done in Orange County to encourage change to increase drought resiliency. Under no circumstances would a rebate be issued with funding from both OCSLP and OCSLP II or would funding be mixed across the two programs; funding for each Project will be kept completely separate, and Phase I will be completed before Phase II

begins. MWDOC has an extensive history of working with BOR grants and has the staff knowledge, capability, and office infrastructure/platforms to operate these projects in line with OMB guidance.

## Letters of Support

Attached are 18 letters of support for the Orange County Sustainable Landscapes Program Phase II from the following:

- California Assemblymember Petrie-Norris
- California Assemblymember Chen
- California Assemblymember Davies
- California Assemblymember Quirk-Silva
- California State Senator Newman
- City of Fountain Valley
- City of Garden Grove
- City of Huntington Beach
- City of Seal Beach
- East Orange County Water District
- El Toro Water District
- South Coast Water District
- Santa Margarita Water District
- Trabuco Canyon Water District
- US Representative Correa
- US Representative Levin
- US Representative Porter
- Yorba Linda Water District

STATE CAPITOL  
P.O. BOX 942849  
SACRAMENTO, CA 94249-0074  
(916) 319-2074  
FAX (916) 319-2174

DISTRICT OFFICE  
19712 MACARTHUR BOULEVARD, SUITE 150  
IRVINE, CA 92612  
(949) 251-0074  
FAX (949) 251-0974

E-MAIL  
Assemblymember.Petrie-Norris@assembly.ca.gov



COMMITTEES  
CHAIR: ACCOUNTABILITY AND  
ADMINISTRATIVE REVIEW  
BANKING AND FINANCE  
JOBS, ECONOMIC DEVELOPMENT,  
AND THE ECONOMY  
MILITARY AND VETERANS AFFAIRS  
REVENUE AND TAXATION  
SELECT COMMITTEES  
CHAIR: SMALL BUSINESS AND  
ENTREPRENEURSHIP

July 25, 2022

U.S. Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Josh German  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

**SUBJECT: Support for Municipal Water District of Orange County's FY 2023  
WaterSMART: Water and Energy Efficiency Grant Application**

Dear Mr. German:

I am writing in support of the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program Phase II (Program).

The objective of the Program is to continue offering and promoting sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes.

The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to sustainable sources such as recycled water and stormwater/runoff capture.

These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

For these reasons, I urge the U.S. Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings. Thank you for your consideration.

Sincerely,

A handwritten signature in black ink that reads "C Petrie-Norris". The signature is written in a cursive style.

Cottie Petrie-Norris  
Assemblymember, 74<sup>th</sup> District

STATE CAPITOL  
P.O. BOX 942849  
SACRAMENTO, CA 94249-0055  
(916) 319-2055  
FAX (916) 319-2155

DISTRICT OFFICE  
3 POINTE DRIVE, SUITE 313  
BREA, CA 92821  
(714) 529-5502  
FAX (714) 529-5548



COMMITTEES  
VICE CHAIR: BANKING AND FINANCE  
VICE CHAIR: ENVIRONMENTAL  
SAFETY AND TOXIC MATERIALS  
INSURANCE  
UTILITIES AND ENERGY

July 21, 2022

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Josh German  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Subject: Support for Municipal Water District of Orange County's FY 2023 WaterSMART:  
Water and Energy Efficiency Grant Application

Dear Mr. German

I, Assemblymember Phillip Chen, am pleased to support the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program Phase II (Program). The objective of the Program is to continue offering and promoting sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes.

The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable source such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

For these reasons, I strongly encourage the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

A handwritten signature in blue ink that reads "Phillip Chen".

Phillip Chen, Ed.D  
Assemblyman, 55<sup>th</sup> District

STATE CAPITOL  
P.O. BOX 942849  
SACRAMENTO, CA 94249-0073  
(916) 319-2073  
FAX (916) 319-2173

DISTRICT OFFICE  
31473 RANCHO VIEJO ROAD, SUITE 104  
SAN JUAN CAPISTRANO, CA 92675  
(949) 240-7300  
FAX (949) 240-7313

E-MAIL  
Assemblymember.Davies@assembly.ca.gov

# Assembly California Legislature



**LAURIE DAVIES**  
ASSEMBLYMEMBER, SEVENTY-THIRD DISTRICT

COMMITTEES  
VICE CHAIR: HUMAN SERVICES  
APPROPRIATIONS  
COMMUNICATIONS AND CONVEYANCE  
GOVERNMENTAL ORGANIZATION  
JUDICIARY  
TRANSPORTATION

July 22, 2022

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Josh German  
Mail Code: 84-27814/ P.O. Box 25007  
Denver, CO 80225

Subject: Support for Municipal Water District of Orange County's FY 2023 WaterSMART:  
Water and Energy Efficiency Grant Application

Dear Mr. German,

I would like to send my strong support for the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program Phase II (Program). The objective of the Program is to continue offering and promoting sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes.

The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

I strongly encourage the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

A handwritten signature in cursive script that reads "Laurie Davies".

Laurie Davies  
California State Assemblymember  
73<sup>rd</sup> Assembly District

STATE CAPITOL  
P.O. BOX 942849  
SACRAMENTO, CA 94249-0065  
(916) 319-2065  
FAX (916) 319-2165  
**DISTRICT OFFICE**  
1440 N. HARBOR BOULEVARD, SUITE 270  
FULLERTON, CA 92835  
(714) 525-6515  
FAX (714) 525-6521

Assembly  
California Legislature



**SHARON QUIRK-SILVA**  
CHAIR: ARTS, ENTERTAINMENT, SPORTS, TOURISM, AND INTERNET MEDIA  
ASSEMBLYMEMBER, SIXTY-FIFTH DISTRICT

**COMMITTEES**  
COMMUNICATIONS AND CONVEYANCE  
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EARLY CHILDHOOD DEVELOPMENT  
FOOD SYSTEMS  
LOS ANGELES COUNTY  
HOMELESSNESS  
SOCIAL HOUSING

**JOINT COMMITTEES**  
VICE CHAIR OF THE JOINT COMMITTEE  
ON ARTS

July 27, 2022  
Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Josh German  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Subject: Support for Municipal Water District of Orange County's FY 2023 WaterSMART:  
Water and Energy Efficiency Grant Application

Dear Mr. German

I am writing you to support the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program Phase II (Program). The objective of the Program is to continue offering and promoting sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes.

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I strongly encourage the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

*Sharon Quirk-Silva*

Sharon Quirk-Silva,  
Assemblymember, 65<sup>th</sup> District



CAPITOL OFFICE  
1021 O STREET  
SUITE 6520  
SACRAMENTO, CA 95814  
(916) 651-4029

DISTRICT OFFICE  
203 N. HARBOR BLVD.  
FULLERTON, CA 92832  
(714) 525-2342

# California State Senate

SENATOR  
JOSH NEWMAN

TWENTY-NINTH SENATE DISTRICT



## COMMITTEES

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JOINT LEGISLATIVE COMMITTEE  
ON EMERGENCY MANAGEMENT

July 26, 2022

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Josh German  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

RE: **Support for Municipal Water District of Orange County's FY 2023 WaterSMART: Water and Energy Efficiency Grant Application**

Dear Mr. German

I am pleased to express my strong support for the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program Phase II (Program). The objective of the Program is to continue offering and promoting sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes.

The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high-efficiency irrigation, such as drip; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to other sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings with reductions in stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases in urban biomass and carbon sequestration. A rebate-style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

I strongly encourage the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits by promoting water conservation and efficient usage of water, and supports water supply reliability and energy savings.

Sincerely,

A handwritten signature in blue ink, appearing to read "Josh Newman".

Josh Newman  
State Senator, 29th District

July 26, 2022

**BOARD OF DIRECTORS**

Douglass S. Davert  
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David A. Youngblood, P.E.  
**General Manager**

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Josh German  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

**Subject: Support for Municipal Water District of Orange County's FY 2023 WaterSMART: Water and Energy Efficiency Grant Application**

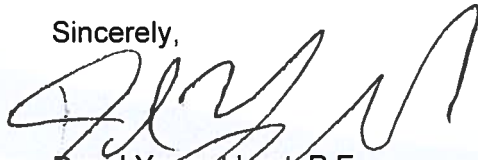
Dear Mr. German:

East Orange County Water District supports the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program Phase II (Program). The objective of the Program is to continue offering and promoting sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes.

The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

East Orange County Water District strongly encourages the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,



David Youngblood, P.E.  
General Manager  
East Orange County Water District





# El Toro Water District

*"A District of Distinction"*

Serving the Public – Respecting the Environment

July 26, 2022

## Board of Directors

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*President*

Kay Havens  
*Vice President*

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*Director*

Mark L. Monin  
*Director*

Jose F. Vergara  
*Director*

## General Manager

Dennis P. Cafferty

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Josh German  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Subject: Support for Municipal Water District of Orange County's FY 2023  
WaterSMART: Water and Energy Efficiency Grant Application

Dear Mr. German

El Toro Water District supports the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program Phase II (Program). The objective of the Program is to continue offering and promoting sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes.

The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

El Toro Water District strongly encourages the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

EL TORO WATER DISTRICT

Dennis P. Cafferty  
General Manager



## CITY OF FOUNTAIN VALLEY

10200 SLATER AVENUE • FOUNTAIN VALLEY, CA 92708-4736 • (714) 593-4400, FAX: (714) 593-4498

July 21, 2022

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Josh German  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Subject: Support for Municipal Water District of Orange County's FY 2023 WaterSMART:  
Water and Energy Efficiency Grant Application

Dear Mr. German,

The City of Fountain Valley supports the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program Phase II (Program). The objective of the Program is to continue offering and promoting sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes.

The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

The City of Fountain Valley strongly encourages the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

Hye Jin Lee, P.E.  
Director of Public Works





# CITY OF GARDEN GROVE PUBLIC WORKS

July 25, 2022

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Josh German  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Subject: Support for Municipal Water District of Orange County's FY 2023 WaterSMART:  
Water and Energy Efficiency Grant Application

**Steve Jones**  
Mayor

**Diedre Thu-Ha Nguyen**  
Mayor Pro Tem - District 3

**George S. Brietigam**  
Council Member - District 1

**John R. O'Neill**  
Council Member - District 2

**Patrick Phat Bui**  
Council Member - District 4

**Stephanie Klopfenstein**  
Council Member - District 5

**Kim Bernice Nguyen**  
Council Member - District 6

Dear Mr. German

City of Garden Grove supports the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program Phase II (Program). The objective of the Program is to continue offering and promoting sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes.

The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

City of Garden Grove strongly encourages the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

SAMUEL K. KIM, P.E.  
Water Services Manager

13802 Newhope St. • P.O. Box 3070 • Garden Grove, CA 92843  
[ggcity.org](http://ggcity.org)



# CITY OF HUNTINGTON BEACH

## Public Works Department

Sean Crumby, PE  
Director of Public Works

July 22, 2022

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Josh German  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Subject: Support for Municipal Water District of Orange County's FY 2023 WaterSMART:  
Water and Energy Efficiency Grant Application

Dear Mr. German

The City of Huntington Beach supports the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program Phase II (Program). The objective of the Program is to continue offering and promoting sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes.

The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

The City of Huntington Beach strongly encourages the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

Alvin Papa, PE  
Deputy Director – Utilities  
City of Huntington Beach

# SOUTH COAST WATER DISTRICT

*Partnering With The Community*



## Board of Directors

July 25, 2022

Rick Erkeneff  
*President*

Bureau of Reclamation  
Financial Assistance Management Branch

Doug Erdman  
*Vice President*

Attn: Mr. Josh German  
Mail Code: 84-27814

Bill Green  
*Director*

P.O. Box 25007  
Denver, CO 80225

Scott Goldman  
*Director*

Subject: Support for Municipal Water District of Orange County's FY 2023 WaterSMART:  
Water and Energy Efficiency Grant Application

Wayne Rayfield  
*Director*

Dear Mr. German,

South Coast Water District supports the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program Phase II (Program). The objective of the Program is to continue offering and promoting sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes.

The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

South Coast Water District strongly encourages the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

Rick Shintaku  
General Manager



July 22, 2022

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Josh German  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Subject: Support for Municipal Water District of Orange County's FY 2023 WaterSMART: Water and Energy Efficiency Grant Application

Dear Mr. German

The City of Seal Beach supports the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program Phase II (Program). The objective of the Program is to continue offering and promoting sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes.

The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

The City of Seal Beach strongly encourages the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

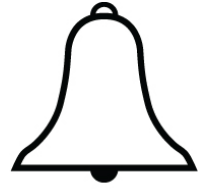
Sean Sabo  
Management Analyst  
City of Seal Beach



**BOARD OF DIRECTORS**

CHARLES T. GIBSON  
SAUNDRA F. JACOBS  
JUSTIN McCUSKER  
BETTY H. OLSON, PH.D  
FRANK URY

DANIEL R. FERONS  
GENERAL MANAGER



**Santa Margarita Water District**

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Josh German  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Subject: Support for Municipal Water District of Orange County’s FY 2023 WaterSMART: Water and Energy Efficiency Grant Application

July 22, 2022

Dear Mr. German,

Santa Margarita Water District (“District”) supports the Municipal Water District of Orange County’s (“MWDOC”) grant application for an Orange County Sustainable Landscapes Program Phase II (“Program”). The objective of the Program is to continue offering and promoting sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes.

The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation timers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used upon successful landscape water use efficiency programs implemented in Orange County.

The District strongly encourages the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

A handwritten signature in black ink, appearing to read 'Nathan Adams', located below the word 'Sincerely'.

Nathan Adams  
Director Water Resiliency – Customer Relations  
949-459-6533

STAFF MEMBERS

Fernando Paludi, General Manager  
Michael Perea, District Secretary  
Cindy Byerrum, District Treasurer  
Hanson Bridgett, LLP – Legal Counsel



BOARD OF DIRECTORS

Don Chadd, President  
Stephen Dopudja, Vice President  
Glenn Acosta, Director  
Edward Mandich, Director  
Michael Safranski, Director

July 21, 2022

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Josh German  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

**Subject: Support for Municipal Water District of Orange County’s FY 2023 WaterSMART:  
Water and Energy Efficiency Grant Application**

Dear Mr. German:

Trabuco Canyon Water District (TCWD) supports the Municipal Water District of Orange County’s (MWDOC) grant application for an Orange County Sustainable Landscapes Program Phase II (Program). The objective of the Program is to continue offering and promoting sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes.

The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to sustainable sources such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

TCWD strongly encourages the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Sincerely,

Fernando Paludi, General Manager  
Trabuco Canyon Water District



KATIE PORTER  
45TH DISTRICT, CALIFORNIA

NATURAL RESOURCES COMMITTEE  
CHAIR, SUBCOMMITTEE ON OVERSIGHT  
AND INVESTIGATIONS

OVERSIGHT AND REFORM COMMITTEE  
VICE CHAIR, SUBCOMMITTEE ON GOVERNMENT  
OPERATIONS

Congress of the United States  
House of Representatives  
Washington, DC 20515-0545

WASHINGTON OFFICE:  
1117 LONGWORTH HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515  
(202) 225-5611

DISTRICT OFFICE:  
2151 MICHELSON DRIVE  
SUITE #195  
IRVINE, CA 92612  
(949) 668-6600

porter.house.gov

July 25, 2022

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Josh German  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Dear Mr. German

I write to offer my support for the Municipal Water District of Orange County's (MWDOC) application for funding through WaterSMART's Water and Energy Efficiency grants. This grant will support MWDOC's Orange County Sustainable Landscapes Program Phase II (Program). The Program aims to continue offering and promoting water sustainability practices including turf replacement, irrigation device improvements, and alternatives to potable irrigation for residential, commercial, and public landscapes.

The Program will encourage the conversion of turfgrass to a California-friendly landscape incorporated with stormwater capture features and high efficiency irrigation. Grant funds will also help replace antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors. Finally, the Program will convert dedicated irrigation meters from potable water to sustainable sources such as recycled water and stormwater/runoff capture, which will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.

MWDOC has 27 member water agencies serving over 3.2 million people, including many Orange County families that I am proud to represent. I am confident that funding for this Program would be an excellent investment to improve our water sustainability, encourage conservation and more efficient water usage, support water supply reliability, and save energy.

I look forward to seeing the progress that the Bureau of Reclamation's WaterSMART: Water and Energy Efficiency grants will make throughout Orange County should this proposal be selected for funding. If you have any questions, please feel free to contact my District Office at (949) 668-6600.

Very truly yours,

A handwritten signature in blue ink that reads "Katie Porter". The signature is written in a cursive, flowing style.

Katie Porter  
Member of Congress



Congress of the United States  
House of Representatives  
Washington, DC 20515

July 27, 2022

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Josh German  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

Dear Mr. German,

I write to request full consideration of the WaterSMART: Water and Energy Efficiency Grant Application submitted by the Municipal Water District of Orange County (MWDOC) to help fund the Orange County Sustainable Landscapes Program Phase II. The goal of this project is to promote sustainable landscape projects like turf replacement, irrigation device improvements, and alternatives to potable irrigation, which would greatly benefit the constituents of my district.

The Program encourages the conversion of turfgrass to a California friendly landscape, incorporating stormwater capture features and a highly efficient irrigation system. The measures are aimed at reducing energy consumption and carbon dioxide outputs, resulting in an increase in water savings and a decrease in stormwater and dry-weather runoff.

I appreciate the Bureau of Reclamation's attention to this grant submission. Please contact my office if you have any questions or if we can be of assistance.

Sincerely,

A handwritten signature in black ink that reads "Mike Levin".

MIKE LEVIN  
Member of Congress

**J. LUIS CORREA**

46TH DISTRICT, CALIFORNIA

**WASHINGTON OFFICE**

2301 RAYBURN HOUSE OFFICE BUILDING  
WASHINGTON, D.C. 20515  
(202) 225-2965

**SANTA ANA DISTRICT OFFICE**

2323 N. BROADWAY, SUITE 319  
SANTA ANA, CA 92706  
(714) 559-6190



**Congress of the United States**  
**House of Representatives**  
**Washington, DC 20515**

**HOUSE COMMITTEE ON HOMELAND SECURITY**

SUBCOMMITTEE ON OVERSIGHT,  
MANAGEMENT, AND ACCOUNTABILITY  
**CHAIR**

SUBCOMMITTEE ON BORDER SECURITY,  
FACILITATION, AND OPERATIONS

**HOUSE COMMITTEE ON THE JUDICIARY**

SUBCOMMITTEE ON IMMIGRATION  
AND CITIZENSHIP

SUBCOMMITTEE ON CRIME, TERRORISM,  
AND HOMELAND SECURITY

**HOUSE COMMITTEE ON AGRICULTURE**

SUBCOMMITTEE ON LIVESTOCK  
AND FOREIGN AGRICULTURE

SUBCOMMITTEE ON CONSERVATION AND FORESTRY

SUBCOMMITTEE ON BIOTECHNOLOGY,  
HORTICULTURE, AND RESEARCH

BLUE DOG COALITION  
NEW DEMOCRAT COALITION  
CONGRESSIONAL HISPANIC CAUCUS

July 25, 2022

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Josh German  
Mail Code: 84-27814  
P.O. Box 25007  
Denver, CO 80225

**Subject: Support for Municipal Water District of Orange County's FY 2023 WaterSMART:  
Water and Energy Efficiency Grant Application**

Dear Mr. German,

I am writing in request for my support for the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program Phase II (Program). The objective of the Program is to continue offering and promoting sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes.

The Program will encourage the conversion of turfgrass to a California Friendly landscape incorporated with stormwater capture features and high efficiency irrigation, such as drip; the upgrade of antiquated irrigation timers to WaterSense labeled weather-based irrigation controllers or soil moisture sensors; and the conversion of dedicated irrigation meters from potable water to a sustainable source such as recycled water and stormwater/runoff capture. These measures will result in water savings, reductions of stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases of urban biomass and carbon sequestration. A rebate style format will be used to build upon successful landscape water use efficiency programs implemented in Orange County.



I strongly encourage the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiency, and supports water supply reliability and energy savings.

Respectfully,

A handwritten signature in black ink, appearing to read "J. Luis Correa". The signature is fluid and cursive, with a long horizontal stroke at the end.

J. LUIS CORREA

Member of Congress

U.S. House of Representatives

July 21, 2022

Bureau of Reclamation  
Financial Assistance Management Branch  
Attn: Mr. Josh German  
Mail Code: 84-27814  
PO Box 25007  
Denver, CO 80225

Subject: Support for Municipal Water District of Orange County's FY 2023 WaterSMART:  
Water and Energy Efficiency Grant Application

Dear Mr. German

Yorba Linda Water District supports the Municipal Water District of Orange County's (MWDOC) grant application for an Orange County Sustainable Landscapes Program Phase II (Program). The Program offers and promotes sustainable practices such as turf replacement, irrigation device improvements, and alternatives to potable irrigation to residential, commercial, and public landscapes.

The measures in this Program will result in water savings, reductions in stormwater and dry-weather runoff and associated non-point source pollution, reductions in energy consumption and carbon dioxide outputs, and increases in urban biomass and carbon sequestration. High-efficiency irrigation and stormwater capture features will be integrated into landscapes through turfgrass conversion to California Friendly landscapes. Irrigation timers will be upgraded to WaterSense labeled weather-based irrigation controllers or utilize soil moisture sensors. Sustainable water sources, such as recycled water and stormwater/runoff capture, will replace potable water for dedicated irrigation meters. In addition, MWDOC will use a rebate-style format to build upon successful landscape water use efficiency programs implemented in Orange County.

Yorba Linda Water District strongly encourages the United States Bureau of Reclamation to award the requested funding to this Program as it provides local and regional benefits, including conserving and using water more efficiently and supports water supply reliability and energy savings.

Sincerely,



Doug Davert  
Interim General Manager

## Official Resolution

An Official Board Resolution adopted by the MWDOC Board on July 20, 2022 is included on page 62.

**RESOLUTION NO. 2128**  
**RESOLUTION OF THE BOARD OF DIRECTORS OF MUNICIPAL WATER DISTRICT**  
**OF ORANGE COUNTY SUPPORTING A BUREAU OF RECLAMATION FY 2023**  
**WATERSMART: WATER AND ENERGY EFFICIENCY GRANT APPLICATION**

**WHEREAS**, the Municipal Water District of Orange County submitted an application to the Bureau of Reclamation requesting funding for an Orange County Sustainable Landscapes Program Phase II to promote water conservation in the Municipal Water District of Orange County service area through the transformation of high water using landscapes to landscapes utilizing a combination of California Friendly/Native installations and high efficiency irrigation.

**WHEREAS**, the Municipal Water District of Orange County is committed to developing and implementing a comprehensive water use efficiency program designed to meet our local water supply reliability goals, make conservation a California way of life, and meet water efficiency standards as established by SB 606 and AB 1668,

**NOW, THEREFORE**, BE IT RESOLVED, that the Municipal Water District of Orange County Board of Directors designates Robert J. Hunter, General Manager, as the official who has reviewed and supports the application submittal and the legal authority to enter into an agreement on behalf of the District, and designates Joseph M. Berg, Director of Water Use Efficiency, as the District's representative to sign the progress reports and approve reimbursement claims.

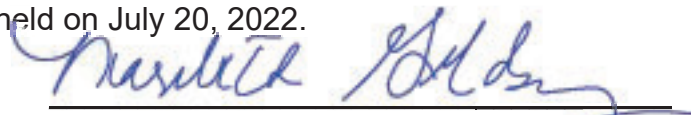
**NOW, THEREFORE**, BE IT FURTHER RESOLVED, that the Municipal Water District of Orange County Board of Directors assures its capability to provide the amount of funding and in-kind contributions specified in the funding plan.

**NOW, THEREFORE**, BE IT FURTHER RESOLVED, that the Municipal Water District of Orange County will work with the Bureau of Reclamation to meet established deadlines for entering into a cooperative agreement.

Said Resolution was adopted on July 20, 2022, by the following roll call vote:

AYES:	Directors Nederhood, Dick, McVicker, Seckel, Tamaribuchi, Thomas and Yoo Schneider
NOES:	None
ABSENT:	None
ABSTAIN:	None

I HEREBY CERTIFY the foregoing is a full, true, and correct copy of Resolution No. 2128 adopted by the Board of Directors of Municipal Water District of Orange County at its meeting held on July 20, 2022.

  
\_\_\_\_\_  
Maribeth Goldsby, Secretary  
Municipal Water District of Orange County



## Conflict of Interest Disclosure Statement

There is no actual or potential conflict of interest between MWDOC, the non-federal entity, and Department of Interior (federal entity). No federal funding will be used for lobbying activities and federal form SF-LLL Disclosure of Lobbying Activities is included in this proposal package.

## Uniform Audit Reporting Statement

MWDOC was not subject to a Single Audit for the most recently closed Fiscal year, FY21/22.

## Certification Regarding Lobbying

MWDOC has completed and submitted federal form SF-LLL Disclosure of Lobbying Activities with proposal package.

## SAM and UEI Verification

The screenshot below shows MWDOC's enrollment on SAM and MWDOC's UEI.

The screenshot shows the SAM.gov search results page. The search criteria are 'All Words' and 'e.g. 1606N020Q02'. The search results show one result for 'MUNICIPAL WATER DISTRICT OF ORANGE COUNTY WATER FACILITIES C' with an active registration. The registration details include:

Unique Entity ID	CAGE Code	Physical Address	Expiration Date	Purpose of Registration
DVKPZLJV6XL5	4FB96	18700 WARD ST, FOUNTAIN VALLEY, CA 92708 USA	Jan 5, 2023	Federal Assistance Awards

The page also shows a 'Sort by' dropdown set to 'Date Modified/Updated', a 'Results per page' dropdown set to 25, and a 'Showing 1 - 1 of 1 results' indicator.