

REVISED

MEETING OF THE BOARD OF DIRECTORS OF THE
MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Jointly with the

PLANNING & OPERATIONS COMMITTEE

February 5, 2018, 8:30 a.m.

MWDOC Conference Room 101

P&O Committee:

Director Osborne, Chair

Director Tamaribuchi

Director Yoo Schneider

Staff: R. Hunter, K. Seckel, J. Berg,
H. De La Torre, K. Davanaugh

Ex Officio Member: Director Barbre

MWDOC Committee meetings are noticed and held as joint meetings of the Committee and the entire Board of Directors and all members of the Board of Directors may attend and participate in the discussion. Each Committee has designated Committee members, and other members of the Board are designated alternate committee members. If less than a quorum of the full Board is in attendance, the Board meeting will be adjourned for lack of a quorum and the meeting will proceed as a meeting of the Committee with those Committee members and alternate members in attendance acting as the Committee.

PUBLIC COMMENTS - Public comments on agenda items and items under the jurisdiction of the Committee should be made at this time.

ITEMS RECEIVED TOO LATE TO BE AGENDIZED - Determine there is a need to take immediate action on item(s) and that the need for action came to the attention of the District subsequent to the posting of the Agenda. (Requires a unanimous vote of the Committee)

ITEMS DISTRIBUTED TO THE BOARD LESS THAN 72 HOURS PRIOR TO MEETING --
Pursuant to Government Code section 54957.5, non-exempt public records that relate to open session agenda items and are distributed to a majority of the Board less than seventy-two (72) hours prior to the meeting will be available for public inspection in the lobby of the District's business office located at 18700 Ward Street, Fountain Valley, California 92708, during regular business hours. When practical, these public records will also be made available on the District's Internet Web site, accessible at <http://www.mwdoc.com>.

ACTION ITEMS

1. TECHNICAL ASSISTANCE FOR THE DEVELOPMENT OF A WATER LOSS CONTROL SHARED SERVICES BUSINESS PLAN
2. ORANGE COUNTY RELIABILITY STUDY UPDATE BUDGET AUGMENTATION TO CDM SMITH

DISCUSSION ITEMS

3. STATE WATER BOARD'S PROPOSED RULEMAKING ON WASTEFUL WATER USES

INFORMATION ITEMS (The following items are for informational purposes only – background information is included in the packet. Discussion is not necessary unless a Director requests.)

4. STATUS REPORTS

- a. Ongoing MWDOC Reliability and Engineering/Planning Projects
- b. WEROC
- c. Water Use Efficiency Projects
- d. Water Use Efficiency Programs Savings and Implementation Report

5. REVIEW OF ISSUES RELATED TO CONSTRUCTION PROGRAMS, WATER USE EFFICIENCY, FACILITY AND EQUIPMENT MAINTENANCE, WATER STORAGE, WATER QUALITY, CONJUNCTIVE USE PROGRAMS, EDUCATION, DISTRICT FACILITIES, and MEMBER-AGENCY RELATIONS

ADJOURNMENT

NOTE: At the discretion of the Committee, all items appearing on this agenda, whether or not expressly listed for action, may be deliberated, and may be subject to action by the Committee. On those items designated for Board action, the Committee reviews the items and makes a recommendation for final action to the full Board of Directors; final action will be taken by the Board of Directors. Agendas for Committee and Board meetings may be obtained from the District Secretary. Members of the public are advised that the Board consideration process includes consideration of each agenda item by one or more Committees indicated on the Board Action Sheet. Attendance at Committee meetings and the Board meeting considering an item consequently is advised.

Accommodations for the Disabled. Any person may make a request for a disability-related modification or accommodation needed for that person to be able to participate in the public meeting by telephoning Maribeth Goldsby, District Secretary, at (714) 963-3058, or writing to Municipal Water District of Orange County at P.O. Box 20895, Fountain Valley, CA 92728. Requests must specify the nature of the disability and the type of accommodation requested. A telephone number or other contact information should be included so that District staff may discuss appropriate arrangements. Persons requesting a disability-related accommodation should make the request with adequate time before the meeting for the District to provide the requested accommodation.



ACTION ITEM
February 21, 2018

TO: Board of Directors

FROM: **Planning & Operations Committee**
(Directors Osborne, Tamaribuchi, Yoo Schneider)

Robert Hunter
General Manager

Joe Berg
Director of Water Use Efficiency

SUBJECT: Technical Assistance for the Development of a Water Loss Control Shared Services Business Plan

STAFF RECOMMENDATION

Staff recommends the Board of Directors authorize the General Manager to enter into a Professional Services Agreement with Water Systems Optimization, Inc. to develop a Water Loss Control Shared Services Business Plan.

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

For the past two years, staff has been implementing a Water Loss Control Program in partnership with member agencies and the Three-Cities. This Program includes a standing Water Loss Control Workgroup that meets bi-monthly, one-on-one technical assistance and distribution system leak detection from Water Systems Optimization, Inc. (WSO), and water sales/customer meter accuracy testing from Westerly Meters, Inc. (WMI) and McCall's Meters (MCM). The Water Loss Control Workgroup is a core-based service that all agencies participate in, and the one-on-one technical assistance and meter accuracy testing are choice-based services that individual agencies subscribe to.

To date, most agencies have completed two consecutive, annual Water Balances using the American Water Works Association water balance methodology. The results of this water

Budgeted (Y/N): Yes	Budgeted amount: \$100,000	Core <u> X </u>	Choice <u> </u>
Action item amount: \$50,000		Line item: Cost Center 35	
Fiscal Impact (explain if unbudgeted): Staff budgeted \$100,000 for the Leak Detection Equipment as a required match for the USBR grant. It is anticipated that no more than \$50,000 will be spent on equipment this fiscal year. Staff is proposing to utilize the balance (\$50,000) for consultant assistance to develop the Water Loss Control Shared Services Business Plan.			

balance work was presented to the Planning & Operations Committee on October 7, 2017. These results have also been presented to the California Department of Water Resources to better inform their water loss standards setting process for implementation of SB 555.

Many agencies are now progressing to Component Analysis to quantify volumes of Real Losses (or hidden losses) leaving the distribution systems that can be recovered. The Component Analysis will conclude with a customized Water Loss Control Plan for each agency. These will include recommendations for real loss reductions, such as active distribution system leak detection, system pressure management, and improved speed and quality of leak repairs. Recommendations will be based on an economic analysis intended to reduce real losses to an economic optimum volume.

In Fall of 2017, MWDOC was awarded a grant from the US Bureau of Reclamation (Bureau) to purchase leak detection equipment for use by retail water agencies. Staff is currently in the process of completing a Request for Quotes to obtain pricing, warranty, and training information from leak detection equipment manufacturers. Staff will return to the Board in April to request authorization for the equipment purchase.

Over the past year, staff has worked with member agencies to develop the Leak Detection Equipment Lending Library as envisioned in the Bureau grant. This included forming a Leak Detection Equipment Project Advisory Committee (PAC), discussions with the Water Loss Control Workgroup, and discussions with a few member agency managers. A key take away from these discussions was that if a field crew member does not use the leak detection equipment on a regular basis, their effectiveness in detecting leaks is marginal. What is needed is field crew who specialize in leak detection, uses the equipment on a routine basis, and has developed “an ear” for the sound of a leak. While the concept of a Leak Detection Lending Library was initially appealing to agencies, they began to express concern about available staff time and how proficient staff would be in using the equipment.

Staff still plans to purchase leak detection equipment; however, not in the quantities originally envisioned for the lending library. Rather, based on the input from member agencies, staff is seeking board authorization to explore developing a water loss control shared services business plan that includes water balance validation, distribution system leak detection, and sales meter accuracy testing.

DETAILED REPORT

Member agencies have expressed an interest for MWDOC to provide expanded Water Loss Control Shared Services. This would allow for a transition from our current use of consultants for these services to locally-based, technically-proficient MWDOC staff available to member agencies. It is envisioned that the types of shared services would include:

- Annual Water Balance Validation as required by SB 555
 - This service is currently being provided by WSO
 - MWDOC to provide as a Core activity
- Distribution System Leak Detection Services
 - This service is currently being provided by WSO
 - MWDOC to provide as a Choice activity
- Sales Meter Accuracy Testing Services
 - This service is currently being provided by WMI and MCM

- MWDOC to provide as a Choice activity

As a result of this shift in direction, member agencies have asked staff to develop a Water Loss Control Shared Services Business Plan (WLCSS Business Plan). This WLCSS Business Plan would be developed over the next year and presented to the Board for adoption no later than December 2018. If adopted, staff will then incorporate these shared services into the FY 19-20 budget process for implementation. The intent of the WLCSS Business Plan is to:

- Identify what shared services will be provided and the associated benefits
- How the shared services will be provided
- Staffing, equipment, office, and warehouse needs
- Annual cost and funding methods
- Evaluation of competition providing similar services
- Pros and cons of shared services versus use of consultants

Staff solicited a proposal from Water Systems Optimization, Inc. to assist with the development of the WLCSS Business Plan. WSO was selected due to their subject matter expertise, positive relationship with MWDOC and member agencies, and depth of knowledge of water loss among Orange County retail agencies. While developing these shared services would be in direct competition with some services provided by WSO, they recognize significant additional technical assistance opportunity exists to work with agencies throughout Orange County.

Over the next 11 months, MWDOC and WSO staff will work together to develop the WLCSS Business Plan. Internally, development of the WLCSS Business Plan will require an interdepartmental effort including senior management, water use efficiency, human resources, accounting, and information technology. During this time, we will keep the Board and member agencies apprised of our progress and solicit input along the way.

Nothing about this request represents an obligation for MWDOC to proceed with offering water loss control shared services. This request is limited to a detailed exploration of the cost and feasibility of offering water loss control shared services to member agencies.



ACTION ITEM
February 21, 2018

TO: Planning & Operations Committee
(Directors Osborne, Tamaribuchi, Yoo Schneider)

FROM: Robert Hunter, General Manager

Staff Contact: Karl Seckel

**SUBJECT: ORANGE COUNTY RELIABILITY STUDY UPDATE BUDGET
AUGMENTATION TO CDM SMITH**

STAFF RECOMMENDATION

Staff recommends the Board of Directors approve a budget augmentation to CDM Smith in the amount of \$36,372 to complete the Water Reliability Study 2018 Update. Furthermore, staff recommends an additional contingency amount be included in the amount of \$8,000 for additional time, if required, for workshops, additional model runs, or meetings with agencies or groups of agencies beyond what has been estimated.

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

CDM Smith and MWD OC staff have been working on the update to the Water Reliability study since the Board approved the additional services in February 2017. Primary elements of the update included more recent climate modeling for both the Colorado River and the State Water Project, updating the cost of local projects to be included in the analysis, and inclusion of assumptions for shortage sharing on the lower Colorado River system i.e. Drought Contingency Plan.

The timing of the work has been slowed because of reconciliation of various climate modeling efforts to ensure we are using the appropriate data. As included in all of our contracts as we near the completion of the majority of work, the cost to complete the effort was prepared by our consulting team. CDM Smith has prepared the attached request for additional work to complete the study in the amount of 36,372.

Budgeted (Y/N): Y	Budgeted amount: \$81,590	Core <u>X</u>	Choice <u> </u>
Action item amount: \$44,372		Line item: 21-7010	
Fiscal Impact (explain if unbudgeted):			

DETAILED REPORT

In February 2017, CDM Smith was authorized \$81,590 to update the O.C. Water Reliability Study. In the attached CDM Smith letter, under Table 1 – Proposed Project Budget (pg. 5), it indicates the total cost to complete the work is \$52,690. That requires an additional authorization of \$36,372, taking into account the amount of money still remaining in our agreement. Staff recommends approval of the additional authorization of \$36,372 which also includes an adjustment of the hourly rates for CDM which have been held constant since 2015. Furthermore, completing the study will require a number of meetings and workshops with the board and with our agencies. We have attempted to estimate the cost for this work; however, staff recommends an additional contingency authorization of about \$8,000 be included in case additional model runs or analyses are needed as we share the information with the Board and our agencies. The other variables contained within the upcoming work include meeting with MET staff to review overall assumptions and how we are proposing to handle the drought contingency plan allocations on the lower Colorado River. Finally, the California WaterFix appears to be headed for a single tunnel alternative. In order to complete the modeling, we will have to wait until the release of information from MET and DWR on the yield of the project under the various hydrologies. This will require our basic modeling to be updated. Estimates of the cost for this work have been included in the request.

The last item is the timing for completion of this work. It is dependent upon the meeting with MET and the review of input and comments from them and others, the release of the new cost and change configuration for the California WaterFix. Our hope is that the work can be completed by April or May this year.

Attachment – CDM Smith Scope and Budget Amendment for the 2018 Orange County Water Reliability Study Update, January 29, 2018

January 29, 2018

Karl Seckel, Assistant General Manager
Municipal Water District of Orange County
PO Box 20895, Fountain Valley, CA 92708

Subject: 2018 Orange County Water Reliability Study Update

Dear Karl:

As requested, CDM Smith has prepared a scope and budget amendment to complete the 2018 Orange County Water Reliability Study Update (2018 OC Study Update). The scope of work and budget presented here builds from the scope and budget amendment sent to you on February 27, 2017 (referred to as Change Order #2 2017).

Changed Conditions and Need for 2018 OC Study Update

Since the publication of the 2016 OC Study, several changed conditions have occurred that warrant an update to the study, referred to as the 2018 OC Study Update. These changed conditions are as follows:

- 1) **Newer climate models.** At the time of the 2016 OC Study, the older Coupled Model Intercomparison Project Phase 3 (CMIP3) global climate models (GCMs) were the only ones being used by water professionals to determine potential impacts to water supply reliability, even though more recent Phase 5 (CMIP5) GCMs were available. Most climate researchers and scientists believe that the CMIP5 modeling is superior to CMIP3 modeling in that it reflects additional atmospheric details other than just carbon emissions. In addition, these newer models are considerably higher in resolution making downscaling them to watershed regions more robust. Recently, the Bureau of Reclamation and National Center for Atmospheric Research have calibrated their hydrologic water models to be able to reflect the latest climate modeling included in the CMIP5.
- 2) **Colorado River water shortage declarations.** For the 2016 OC Study it was assumed that shortage declarations for water releases from Lake Mead to California and Metropolitan would occur when lake levels fell below 1,000 feet. Based on the planning scenarios used for that study, the probability of Lake Mead falling to that elevation was rare. Since then, the Bureau and Lower Colorado River Basin states have been working on a draft drought contingency plan (DCP) that would trigger shortage declarations starting at lake elevation of 1,045 feet. While this draft DCP has yet to be adopted, it is believed that something similar will most likely have to be implemented to manage lake levels from falling below 1,000 feet.

- 3) **Latest supply yield and cost numbers for water projects.** At the time of the 2016 OC Study, many of the Orange County projects and several of MET's water projects were still being evaluated in terms of supply yield and costs. Since then, more refined supply and cost numbers have been developed for Poseidon's Huntington Beach seawater desalination project, Doheny seawater desalination project, San Juan Basin Watershed project, and MET's regional recycled water recharge project (Carson project). This information will be incorporated into the project by project analyses.
- 4) **Changed configuration for California WaterFix.** Given the lack of support and funding from agriculture and tentative support for a smaller project from Santa Clara Valley Water District and others, a one-tunnel project option is being discussed by the remaining proponents of the California WaterFix. While the overall project capacity would be reduced under this changed configuration, MET would likely become a more significant funding partner and thus could receive a greater capacity from a one-tunnel project. The original two-tunnel solution would likely be retained from an environmental impact study perspective, but one-tunnel would be constructed first with the second tunnel being phased in implementation. MET is currently analyzing this changed condition from a supply and cost perspective. New costs and yields from MET will need to be incorporated into the modeling effort.

Change Order #2 2017 had the following scope:

- 1) Incorporating the latest climate modeling, using a select number of global climate models from CMIP5
- 2) Testing wet year yield benefits of new conceptual regional surface reservoir (similar to a second DVL)
- 3) Development of new planning scenarios, with focus on different combinations of MET project successes (i.e., WaterFix and/or Regional Recycled Recharge Project [sometimes referred to as "Carson Project"]) and climate change impacts

The budget for Change Order #2 2017 was \$81,590 which was authorized by the MWDOC Board. The status of completing Change Order #2 2017 is as follows:

- 1) New climate models from CMIP5 were compared to the previous set of climate models used for the 2016 OC Study, and analyzed in terms of emission scenarios and applicability for use for the 2018 OC Study Update. From the 97 CMIP5 climate models available, three were selected to be representative of moderate to significant in terms of impacts to imported and local water supplies. These climate models were then used by CDM Smith sub-contractor and climate change expert Dr. David Yates to determine impacts to State Water Project deliveries, Colorado River supply, and Santa Ana stormflows. This effort took considerably more effort than anticipated because CDM Smith wanted the results to be consistent with published studies by the US Bureau of Reclamation, which recently used CMIP5 climate models to update their basin studies in

California and Colorado River Basin states. In addition, a new method of determining potential Colorado River water shortages to California and MET was used, based on a draft DCP that was presented to MET's Board for input and consideration. To further validate these results, MWDOC wanted documentation of the climate change modeling and new assumptions regarding Colorado River allocations during droughts to be able to share/get input from MET staff prior to completion of the modeling work. Thus, CDM prepared a substantial Technical Memorandum that was not originally anticipated in the scope of work. A meeting with MET staff is being established at this time to review the basics of the modeling work.

- 2) The OC Reliability Model used for the 2016 OC Study was updated to incorporate the new climate models and Colorado River allocations, and was also updated to be able to test wet year yields from a new conceptual regional surface reservoir. The results of this effort will be documented in the final 2018 OC Study Update Executive Report.
- 3) New draft planning scenarios for the 2018 OC Study Update were developed for MWDOC's review. However, these were not finalized as certain parameters were still being discussed, such as assumptions regarding the need for additional emergency supply capacity in South Orange County. As this new information becomes available, staff will finalize the planning scenarios to be evaluated. These scenarios will be used to test the cost-effectiveness of various OC projects and documented in the final 2018 OC Study Update Executive Report.

The remaining project budget for Change Order #2 2017 is \$16,318.

Amended Scope of Work and Budget

To address the changed conditions described earlier and complete the 2018 OC Study Update, the following completion scope of work and budget has been prepared.

Task 1. Update OC Reliability Model

The OC Reliability Model will be updated to incorporate the latest assumptions regarding supply yields for OC water projects and MET regional projects, such as Poseidon's Huntington Beach seawater desalination, Doheny seawater desalination, San Juan Basin Watershed, MET's regional recycled water recharge, and others. This task would also include incorporation of new State Water Project deliveries under a one-tunnel WaterFix solution. This task would be dependent on MET providing MWDOC with simulations on the supply benefits of a one-tunnel WaterFix project to incorporate into the modeling work.

Task 2. Update Cost Spreadsheet Tool

To estimate present value costs for the planning period, a cost spreadsheet tool was developed by CDM Smith. This tool incorporates capital and O&M costs, with assumptions regarding financing and LRP funding, in order to derive a net present value for Orange County. Updated costs for OC water projects and MET imported water costs will be used for the 2018 OC Study Update.

Task 3. Finalize New Planning Scenarios

New planning scenarios, representing various combinations of assumptions for future climate, success or no success of MET initiatives such as California WaterFix and regional recycled water recharge project, and emergency supply capacity in South Orange County will be finalized, with input from a working group of OC water managers.

Task 4. Analyze Scenarios for Both Supply and System Reliability Benefits

Using the updated OC Reliability Model and Cost Spreadsheet Tool, supply reliability curves and net present value will be estimated for the planning scenarios, testing different OC projects such as Poseidon's Huntington Beach seawater desalination, Doheny desalination, OC Basin emergency supply project and combinations of those. The projects will be assessed in terms of supply and emergency benefits, where applicable. In addition, a new conceptual regional surface reservoir will be tested to determine its yield viability to capture additional wet-year water and cost-effectiveness for reducing shortages to OC.

Task 5. Project Meetings and OC Workgroup Meetings

A total of four project meetings, which could be in-person meetings or conference calls are provided in the budget augmentation. A meeting with MET will also be conducted to address a number of issues and solicit feedback on overall assumptions. Finally, three OC Workgroup meetings will be conducted to get input from OC water managers throughout this effort.

Task 6. Draft and Final Executive Report

A draft Executive Report will be prepared for MWDOC and OC water agency review. This will be in a similar format as the 2016 OC Study Executive Report. A final Executive Report will be prepared addressing all comments received from MWDOC and OC water agency managers.

Budget for Amended Scope of Work

As CDM Smith's billing rates have not changed since the beginning of this entire effort, starting in December of 2015, we are proposing a nominal increase in the billing rate for the three principals working on this project as shown below:

	Current <u>Billing Rate</u>	Proposed <u>Billing Rate</u>	Percent <u>Change</u>
Dan Rodrigo, Project Manager	\$250/hr	\$270/hr	6.0%
Lanaya Voelz, Principal-in-Charge	\$190/hr	\$200/hr	5.3%
Andrea Zimmer, Project Engineer	\$155/hr	\$165/hr	6.5%

These proposed billing rates, on aggregate, represent less than three years of average CPI from the start of 2015 to the end of 2017.

The proposed budget, based on the above-mentioned proposed billing rates, is shown by task in Table 1. The total proposed project budget is **\$52,690**. After subtracting the remaining project budget from Change Order #2 2017 of **\$16,318** results in a net project amendment of **\$36,372**.

Karl Seckel
January 29, 2018
Page 5

Table 1. Proposed Project Budget

	Labor Hours					Labor Costs	Other Costs*	Total Costs
	Rodrigo	Voelz	Zimmer	Admin	Total			
Task 1. Update OC Reliability Model	6	0	16	0	22	\$ 4,230	\$ -	\$ 4,230
Task 2. Update Cost Spreadsheet Tool	12	6	0	0	18	\$ 4,380	\$ -	\$ 4,380
Task 3. Finalize Planning Scenarios	8	0	8	0	16	\$ 3,440	\$ -	\$ 3,440
Task 4. Analyze Planning Scenarios and Assess Project Benefits	20	0	48	0	68	\$ 13,220	\$ -	\$ 13,220
Task 5. Project Meetings	24	8	24	7	63	\$ 12,725	\$ 200	\$ 12,925
Task 6. Draft and Final Executive Report	20	8	40	8	76	\$ 14,420	\$ 75	\$ 14,495
Total	90	22	136	15	263	\$ 52,415	\$ 275	\$ 52,690
<i>Billing Rates (\$/Hour)</i>						Less Remaining Budget		\$ 16,318
						Proposed Budget Amendment		\$ 36,372

The schedule to complete the work is dependent on setting of several meetings and getting modeling input from MET for the single tunnel alternative. Assuming the information will be available from MET in March, the work should be able to be completed in April or May.

Please feel free to contact me if you have any questions or need further information.

Sincerely,



Dan Rodrigo
Sr. Vice President and Project Manager
CDM Smith Inc.

cc: Lanaya Voelz



DISCUSSION ITEM
February 5, 2018

TO: Planning & Operations Committee
(Directors Osborne, Tamaribuchi, Yoo Schneider)

FROM: Robert Hunter, General Manager

Staff Contact: J. Berg, Director of Water Use Efficiency

SUBJECT: State Water Board's Proposed Rulemaking on Wasteful Water Uses

STAFF RECOMMENDATION

Staff recommends the Planning & Operations Committee review, discuss, and make recommendations for the comment letter.

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

On November 1, 2017, the State Board Resources Control Board (State Board) released a Notice of Proposed Regulatory Action for a Rulemaking to permanently prohibit certain wasteful water uses that were prohibited under the previous drought emergency regulation that expired on November 25, 2017. A public Workshop was held during the November 21, 2017 State Board meeting. The workshop provided the public an opportunity to discuss the permanent prohibition of certain wasteful water use practices with the State Board and staff. The proposed regulatory action was discussed with MWD OC's Public Affairs and Legislation Committee at their December 18, 2017 meeting. The rulemaking process included a comment period that closed December 26, 2017.

On January 31, 2018, the State Board released a 15-Day Notice of Proposed Regulatory Action. This notice includes changed text of the proposed regulation regarding to permanently prohibit certain wasteful water uses. A copy of this notice is provided as Attachment A. The written comment period closes at 12:00 p.m. on February 14, 2018. The State Board will consider adoption of the regulation at their February 20, 2018 meeting.

Budgeted (Y/N):	Budgeted amount:	Core __	Choice __
Action item amount:	Line item:		
Fiscal Impact (explain if unbudgeted):			

It is important to note that these permanently prohibited practices are a concurrent and separate rulemaking effort from the conservation legislation (AB 1668 and SB 606). Both are pillars of the broader framework to make conservation a California Way of Life.

Staff requests a discussion of the changed text of the proposed regulation at this Planning and Operations Committee meeting at which time staff will present a draft comment letter. Following this discussion, staff will update the comment letter for Board consideration at the February 7, 2018 Joint Board Workshop.

DETAILED REPORT

Background

The State Water Board first adopted drought emergency conservation regulations in July 2014. Included in these regulations were prohibitions against certain wasteful water use practices. The Board expanded, updated, extended, and readopted the emergency regulations several times, most recently in February 2017. Governor Brown ended the Drought State of Emergency in April 2017. In response, the State Water Board partially repealed the February drought emergency conservation regulations, maintaining urban water supplier reporting requirements and the prohibitions on wasteful water use practices. These remained in place until November 25, 2017 when the Governors last drought related Executive Order expired.

Executive orders B-37-16 and B-40-17 set forth actions to use water more wisely, eliminate water waste, strengthen local drought resilience, and improve agricultural water use efficiency and drought planning. To eliminate wasteful water practices that are not efficient uses of the state's water resources, the executive orders directed the State Board to permanently prohibit practices that waste water. On November 1, 2017, the State Board released a Notice of Proposed Regulatory Action (NPROA) for a Rulemaking to permanently prohibit certain wasteful water uses.

As noted, these permanently prohibited practices are a concurrent and separate rulemaking effort from the conservation legislation (AB 1668 and SB 606). Both are pillars of the broader framework to make conservation a California Way of Life.

Proposed Regulatory Action

The State Board proposes to establish California Code of Regulations¹ on Conservation and the Prevention of Waste and Unreasonable Use and within this chapter will be a new article², Article 2, on Water Conservation. This article is proposed to provide for permanent prohibitions against wasteful water uses. The prohibitions that are proposed would be consistent with existing requirements in California Code of Regulations³ by operation of law.

- The proposed regulation prohibits the following wasteful water use practices:
 1. The application of water to outdoor landscapes in a manner that causes runoff

¹ Title 23, Division 3, Chapter 3.5

² Article 2

³ Title 23, Division 3, Chapter 2, Article 22.5, §865 and §866

2. The use of a hose to wash an automobile except where the hose is equipped with a shut-off nozzle
 3. The application of potable water to hardscapes
 4. The use of potable water in non-recirculating ornamental fountains or other decorative water features
 5. The application of water to outdoor landscapes during or within 48-hours after measurable rainfall
 6. The irrigation of turfgrass on public street medians and verges unless the turfgrass serves a community or neighborhood function
- The proposed regulation also prohibits serving water except when requested in restaurants and bars, and requires the operators of hotels and motels to offer patrons the option of not having their towels and linens washed daily.
 - Finally, the regulation authorizes penalties for homeowners' associations that block, stifle, or threaten homeowners from reducing or eliminating the watering of vegetation or lawns during a declared drought emergency, or installing or being forced to reverse or remove water-efficient landscaping, in violation of existing law. The proposed regulation similarly prevents any city, county, or city and county from imposing fines as prohibited by §8627.7 of the Government Code.

What has changed from the initial proposal?

Based on the input received at the November 21, 2017 Public Workshop and subsequent comments letters from stakeholders, the following provides a summary of the changed text of the proposed regulation. All original proposed language remains the same with the exception of:

- The application of water to outdoor landscapes in a manner that causes more than incidental runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures
 - Added language specifying "more than incidental" runoff
- The use of potable water in an ornamental fountain or other decorative water feature except where the water is part of a recirculating system or the fountain is registered on the National Register of Historic Places
 - Added language exempting fountains registered in the National Register of Historic Places
- The application of water to irrigate turf and ornamental landscapes during and within 48 hours after measurable rainfall of at least one-fourth of one inch of rain. In determining whether measurable rainfall of at least one-fourth of one inch of rain occurred in a given area, enforcement may be based on records of the National Weather Service, the closest CIMIS station to the parcel, or any other reliable source of rainfall data available to the entity undertaking enforcement of this subdivision
 - Measureable rainfall was increased from one-tenth of an inch to one-fourth of an inch.
- Serving of drinking water, other than upon request, in eating or drinking establishments
 - Would only be prohibited during a period of time which the Governor has issued a proclamation of a state of emergency.
- As of January 1, 2025, the irrigation of turf on public street medians or publicly

owned and maintained landscaped areas between the street and sidewalk, except where: (i) the turf serves a community or neighborhood function, including, but not limited to, recreational uses and civic or community events; (ii) the turf is irrigated incidentally by an irrigation system, the primary purpose of which is the irrigation of trees; or (iii) the turf is irrigated with recycled water through an irrigation system installed prior to January 1, 2018

- Establishes a compliance horizon of January 1, 2025 to give public agencies time to comply
- Adds clarifying language allowing turf irrigated incidentally by an irrigation system with the primary purpose is the irrigation of trees
- Exempts medians and parkways irrigated with recycled water as of January 1, 2018

Next Steps

With the background and summary of changed language provided above, staff is composing a comment letter that will be presented to the Planning and Operations Committee at their February 5, 2018 meeting. With input from this committee, staff will update the letter and present it to the Joint Board Workshop for adoption at their February 7 meeting.

State Water Resources Control Board

TITLE 23. WATERS DIVISION 3. STATE WATER RESOURCES CONTROL BOARD AND REGIONAL WATER QUALITY CONTROL BOARDS CHAPTER 3.5 Conservation and the Prevention of Waste and Unreasonable Use

15-Day Notice of Proposed Regulatory Action

NOTICE IS HEREBY GIVEN that the State Water Resources Control Board (State Board) has changed the text of the proposed regulation regarding Water Conservation and the Prevention of Waste and Unreasonable Use, and is making the changed text available for public comment prior to adoption, amendment, or repeal of the resulting regulation.

A copy of the proposed text with the new changes clearly illustrated is included herein. For the Internet posting of this notice, the regulation text is posted as a separate document in conjunction with the notice document.

LIST OF MATERIAL ADDED

- Description of method for indicating changes to the proposed regulation.
- Changes to the proposed regulation

WRITTEN COMMENT PERIOD AND SUBMITTAL OF COMMENTS

Any person, or his or her representative, may submit written comments regarding the changes to the proposed regulation. **The written comment period closes at 12:00 p.m. (Noon) on February 14, 2018.** The State Board will only consider comments received at the State Board offices by that time.

Please send comment letters to Ms. Jeanine Townsend, Clerk to the Board, by email at commentletters@waterboards.ca.gov, (916) 341-5620 (fax), or by mail or hand delivery addressed to:

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100, Sacramento, CA 95812-2000 (by mail)
1001 I Street, 24th Floor, Sacramento, CA 95814 (by hand delivery)

Please also indicate in the subject line, **“Comment Letter – Changes to Proposed Regulation Prohibiting Wasteful Water Use Practices.”** Hand and special deliveries should also be addressed to Ms. Townsend at the address above. Couriers delivering comments must check in with lobby security and have them contact Ms. Townsend. Due to the limitations of the email system, emails larger than 15 megabytes are rejected and cannot be delivered or received by the State Water Board. We request that comments larger than 15 megabytes be submitted under separate emails.

All comments, including email or fax transmissions, should include the author's name and U.S. Postal Service mailing address in order for the State Board to provide any notices that may be required in future.

To be added to the mailing list "**Water Conservation Regulations**" for this rulemaking and to receive notification of updates of this rulemaking, you may subscribe by going to www.waterboards.ca.gov/water_issues/programs/conservation_portal/regs/wasteful_water_use.s.html (click on "subscription lists").

Please note that under the California Public Records Act (Gov. Code, § 6250 et seq.), your written and oral comments, attachments, and associated contact information (e.g., your address, phone, email, etc.) become part of the public record and can be released to the public upon request.

SPECIAL ACCOMMODATION REQUEST

Consistent with California Government Code Section 7296.2, special accommodation or language needs may be provided for any of the following:

- Documents made available in an alternate format or another language;
- A disability-related reasonable accommodation.

To request these special accommodations or language needs, please contact the Clerk to the Board at (916) 341-5600 as soon as possible, but no later than 10 business days before the scheduled Board hearing. TTY/TDD/Speech to Speech users may dial 711 for the California Relay Service.

SI NECESITA ARREGLOS ESPECIALES

Conforme a la Sección 7296.2, del Código del Gobierno de California, los siguientes servicios o arreglos especiales pueden ser solicitados:

- Servicio de intérprete durante la audiencia;
- Documentos en otro idioma o en un formato alterno;
- Arreglos razonables relacionados a una discapacidad.

Para pedir estos arreglos especiales o servicios en otro idioma, puede contactar a la Secretaria de la Junta (Board) al (916) 341-5600 lo más pronto posible, pero a más tardar 10 días hábiles antes de la fecha de la audiencia de la Junta (Board). Los usuarios del Sistema TTY/TDD/Voz-Voz pueden marcar el 7-1-1 para utilizar el California Relay Service.

STATE BOARD CONTACT PERSONS

Requests of copies of the text of the proposed regulation, the statement of reasons, or other information upon which the rulemaking is based, or other inquiries should be addressed to the following:

Charlotte Ely
State Water Resources Control Board
Office of Research, Planning and Performance
1001 "I" Street
Sacramento, CA 95814
Telephone No.: (916) 319-8564
E-mail address: Charlotte.Ely@waterboards.ca.gov

The backup contact person is:

Kathy Frevert
State Water Resources Control Board
Office of Research, Planning and Performance
1001 "I" Street
Sacramento, CA 95814
Telephone No.: (916) 322-5273
E-mail address: Kathy.Frevert@waterboards.ca.gov

INTERNET ACCESS

The documents relating to this proposed action may also be found on the State Water Board's website at the following address:

www.waterboards.ca.gov/water_issues/programs/conservation_portal/index.shtml

**DESCRIPTION OF METHOD FOR INDICATING CHANGES TO THE PROPOSED
REGULATION FOR WATER CONSERVATION AND THE PREVENTION OF WASTE AND
UNREASONABLE USE (Z-2017-1031-01)**

Changes made to the proposed regulation are indicated as follows:

- Additional regulation text is indicated by a red underline (underline).
- Deleted regulation text is indicated by a red strikethrough (~~strikethrough~~).

**CHANGES TO THE PROPOSED REGULATION FOR WATER CONSERVATION AND THE
PREVENTION OF WASTE AND UNREASONABLE USE (Z-2017-1031-01)**

PROPOSED TEXT OF REGULATION

Title 23. Waters

**Division 3. State Water Resources Control Board and Regional Water Quality Control
Boards**

Chapter 2. Appropriation of Water

~~Article 22. Prevention of Waste and Unreasonable Use~~

Chapter 3. Determination of Right to the Use of Water

Article 2. Adjudications Under Water Code Sections 2500 Through 2900

Chapter 3.5. Conservation and the Prevention of Waste and Unreasonable Use

Article 1. Prevention of Waste and Unreasonable Use

~~§ 955. Claims to Water Supplied by District or Water Company. [Renumbered]~~

~~§ 855.~~ § 955. Policy and Definition.

(a) In investigating any uses of water and making the determinations required by this article, the board shall give particular consideration to the reasonableness of use of ~~reclaimed~~ recycled water or reuse of water.

(b) As used in this article, “misuse of water” or “misuse” means any waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water.

Authority cited: Section 1058, Water Code.

Reference: Sections 100, 275, 1240, 1251, 1253 and 1257, Water Code; and Section 2, Article X, California Constitution.

~~§ 956. Divided Interests. [Renumbered]~~

~~§ 856.~~ § 956. Investigations.

The board staff shall investigate an allegation of misuse of water:

- (1) when an interested person shows good cause, or
- (2) when the board itself believes that a misuse may exist.

Authority cited: Section 1058, Water Code.

Reference: Sections 100, 183, 275 and 1051, Water Code; and Section 2, Article X, California Constitution.

~~§ 957. Undivided Interests. [Renumbered]~~

~~§ 857.~~ § 957. Notifications, Hearings and Orders.

(a) If the investigation indicates that a misuse of water has occurred, the board staff shall notify interested persons and allow a reasonable period of time in which to terminate such misuse or demonstrate to the satisfaction of the board staff that misuse has not occurred.

(b) At the end of the time set by the board staff, and upon application of any interested person or upon its own motion, the board may hold a hearing to determine if misuse has occurred or continues to occur.

(c) If the misuse is alleged to have occurred or to continue to occur in connection with exercise of rights evidenced by a permit or license issued by the board, the board shall notice the hearing as a permit revocation hearing pursuant to Water Code Section 1410.1, or as a license revocation hearing pursuant to Water Code Section 1675.1, as appropriate; or as a preliminary cease and desist order hearing pursuant to Water Code Section 1834.

(d) The board may issue an order requiring prevention or termination thereof.

Authority cited: Section 1058, Water Code.

Reference: Sections 100, 275, 183, 1051, 1401, 1675.1 and 1834, Water Code.

~~§ 958. General Requirements for Proofs of Claims. [Repealed]~~

~~§ 858.~~ § 958. Noncompliance with Order Regarding Misuse Under Water Right Entitlement.
If a permittee or licensee does not comply with any order issued pursuant to Section ~~857~~957 within such reasonable period of time as allowed by the board, or such extension thereof as may for good cause be allowed by the board, and if such order includes a finding that waste, unreasonable use, method of use, or method of diversion has occurred in connection with exercise of a right evidenced by a permit or license issued by the board, a revocation action may be commenced by the board:

(a) If the hearing has been noticed as a permit or license revocation hearing, and if the board finds that misuse has occurred or continues to occur, the board may order the permit or license revoked or impose appropriate additional or amended terms or conditions on the entitlement to prevent recurrence of the misuse;

(b) If the hearing pursuant to Section ~~857~~957 has been noticed as a preliminary cease and desist order hearing, and if the board finds that misuse has occurred or continues to occur, the board may issue a preliminary cease and desist order.

Authority cited: Section 1058, Water Code.

Reference: Sections 1410, 1675 and 1831, Water Code.

~~§ 959. Specific Requirements for Irrigation Proofs. [Repealed]~~

~~§ 859.~~ § 959. Noncompliance with Other Order.

If a person other than a permittee or licensee does not comply with any order issued pursuant to Section ~~857~~957 within such reasonable period of time as allowed by the board, or such extension thereof as may for good cause be allowed, and if such order includes a finding that such person has misused or continues to misuse water, the board may request appropriate legal action by the Attorney General.

Authority cited: Section 1058, Water Code.

Reference: Section 275, Water Code.

~~§ 960. Uses Other than Irrigation. [Repealed]~~

~~§ 860. § 960. Alternative Procedure.~~

The procedure established in this article shall be construed as alternative to, and not exclusive of, the procedures established in Chapter 5 of Title 23, California Administrative Code, in accordance with Section 4007 therein.

Authority cited: Section 1058, Water Code.

Reference: Section 275, Water Code.

~~§ 961. Signature of Deponent. [Renumbered]~~

~~§ 735. § 961. Napa River, Special.~~

(a) Budding grape vines and certain other crops in the Napa Valley may be severely damaged by spring frosts. During a frost, the high instantaneous demand for water for frost protection by numerous vineyardists and other water users frequently exceeds the supply in the Napa River stream system. This results in uncoordinated diversions and possible infringements upon other rights. Therefore, all diversions of water from the stream system between March 15 and May 15 determined to be significant by the board or a court of competent jurisdiction shall be considered unreasonably unreasonable and a violation of Water Code Section 100 unless controlled by a watermaster administering a board or court approved distribution program. Diversions for frost protection and irrigation during this period shall be restricted to: (1) replenishment of reservoirs filled prior to March 15 under an appropriative water right permit, or (2) diversions permitted by the court.

(b) The service area of the distribution program may be revised at any time by order of the board or the court. The board will retain jurisdiction to revise terms and conditions of all frost protection permits should future conditions warrant.

(c) Under this section diversion of water during the spring frost season from March 15 to May 15 to replenish water stored in reservoirs prior to the frost season is "regulation," as defined in Chapter 2, Article 2, Section 657: Replenishment diversion must be to reservoirs for which a permit or license authorizing winter storage prior to the frost season has been issued.

Authority cited: Section 1058, Water Code.

Reference: Section 2, Article X, California Constitution; and Sections 100, 275 and 1051.5, Water Code.

~~§ 962. Objections. [Renumbered]~~

~~§ 862. § 962. Russian River, Special.~~

Budding grape vines and certain other crops in the Russian River watershed may be severely damaged by spring frosts. Frost protection of crops is a beneficial use of water under section 671 of this chapter 2 of this division. During a frost, however, the high instantaneous demand for water for frost protection by numerous vineyardists and other water users may contribute to a rapid decrease in stream stage that results in the mortality of salmonids due to stranding. Stranding mortality can be avoided by coordinating or otherwise managing diversions to reduce instantaneous demand. Because a reasonable alternative to current practices exists, the Board has determined these diversions must be conducted in accordance with this section.

(a) After March 14, 2012, except for diversion upstream of Warm Springs Dam in Sonoma County or Coyote Dam in Mendocino County, any diversion of water from the Russian River stream system, including the pumping of hydraulically connected groundwater, for purposes of frost protection from March 15 through May 15, shall be diverted in accordance with a board approved water demand management program (WDMP). For purposes of this section, groundwater pumped within the Russian River watershed is considered hydraulically connected to the Russian River stream system if that pumping contributes to a reduction in stream stage to any surface stream in the Russian River watershed during any single frost event.

(b) The purpose of the WDMP is to assess the extent to which diversions for frost protection affect stream stage and manage diversions to prevent cumulative diversions for frost protection from causing a reduction in stream stage that causes stranding mortality. The WDMP, and any revisions thereto, shall be administered by an individual or governing body (governing body) capable of ensuring that the requirements of the program are met. Any WDMP developed pursuant to this section shall be submitted to the board by February 1 prior to the frost season.

(c) At a minimum, the WDMP shall include (1) an inventory of the frost diversion systems within the area subject to the WDMP, (2) a stream stage monitoring program, (3) an assessment of the potential risk of stranding mortality due to frost diversions, (4) the identification and timelines for implementation of any corrective actions necessary to prevent stranding mortality caused by frost diversions, and (5) annual reporting of program data, activities, and results. In addition, the WDMP shall identify the diverters participating in the program and any known diverters within the area subject to the WDMP who declined to participate. The WDMP also shall include a schedule for conducting the frost inventory, developing and implementing the stream stage monitoring program, and conducting the risk assessment.

(1) Inventory of frost diversion systems: The governing body shall establish an inventory of all frost diversions included in the WDMP. The inventory, except for diversion data, shall be completed within three months after board approval of a WDMP. The inventory shall be updated annually with any changes to the inventory and with frost diversion data. The inventory shall include for each frost diversion:

- (A) Name of the diverter;
- (B) Source of water used and location of diversion;
- (C) A description of the diversion system and its capacity;
- (D) Acreage frost protected and acres frost protected by means other than water diverted from the Russian River stream system; and
- (E) The rate of diversion, hours of operation, and volume of water diverted during each frost event for the year.

(2) Stream stage monitoring program: The governing body shall develop a stream stage monitoring program in consultation with National Marine Fisheries Service (NMFS) and California Department of Fish and Game (DFG). For the purposes of this section, consultation involves an open exchange of information for the purposes of obtaining recommendations. The governing body is authorized to include its own expert scientists and engineers in the consultation, and request board staff to participate, when desired. The stream stage monitoring program shall include the following:

- (A) A determination of the number, type, and location of stream gages necessary for the WDMP to monitor and assess the extent to which frost diversions may affect stream stage and cause stranding mortality;

- (B) A determination of the stream stage that should be maintained at each page to prevent stranding mortality;
 - (C) Provisions for the installation and ongoing calibration and maintenance of stream gages; and
 - (D) Monitoring and recording of stream stage at intervals not to exceed 15 minutes.
- (3) Risk assessment: Based on the inventory and stream stage information described above, and information regarding the presence of habitat for salmonids, the governing body shall conduct a risk assessment that evaluates the potential for frost diversions to cause stranding mortality. The risk assessment shall be conducted in consultation with NMFS and DFG. The governing body is authorized to include its own expert scientists and engineers in the consultation, and request board staff to participate, when desired. The risk assessment shall be evaluated and updated annually.
- (4) Corrective Actions: If the governing body determines that diversions for purposes of frost protection have the potential to cause stranding mortality, the governing body shall notify the diverter(s) of the potential risk. The governing body, in consultation with the diverters, shall develop a corrective action plan that will prevent stranding mortality. Corrective actions may include alternative methods for frost protection, best management practices, better coordination of diversions, construction of off-stream storage facilities, real-time stream gage and diversion monitoring, or other alternative methods of diversion. Corrective actions also may include revisions to the number, location and type of stream stage monitoring pages, or to the stream stages considered necessary to prevent stranding mortality. In developing the corrective action plan the governing body shall consider the relative water right priorities of the diverters and any time delay between groundwater diversions and a reduction in stream stage. The corrective action plan shall include a schedule of implementation. To the extent feasible, the corrective action plan shall include interim corrective actions if long-term corrective actions are anticipated to take over three years to fully implement. The diverters shall implement corrective actions in accordance with the corrective action plan, or cease diverting water for frost protection.
- (5) Annual Reporting: The governing body shall submit a publically available annual report of program operations, risk assessment, and corrective actions by September 1 following the frost season that is the subject of the report. The report shall include:
- (A) The frost inventory, including diversion data.
 - (B) Stream stage monitoring data.
 - (C) The risk assessment and its results, identification of the need for any additional data or analysis, and a schedule for obtaining the data or completing the analysis.
 - (D) A description of any corrective action plan that has been developed, any corrective actions implemented to date, and a schedule for implementing any additional corrective actions.
 - (E) Any instances of noncompliance with the WDMP or with a corrective action plan, including the failure to implement identified corrective actions. The report shall document consultations with DFG and NMFS regarding the stream stage monitoring program and risk assessment and shall explain any deviations from recommendations made by DFG or NMFS during the consultation process. In addition, the annual report shall evaluate the effectiveness of the WDMP and recommend any necessary changes to the WDMP, including any proposed additions or subtractions of program participants. Any recommendations for revisions to the WDMP shall include a program implementation plan and schedule. The board may require changes to the WDMP, including but not limited to the risk assessment, corrective action plan, and schedule of implementation, at any time.

(d) The governing body may develop and submit for the Deputy Director for Water Rights' approval, criteria, applicable to any participant in its WDMP, for identifying groundwater diversions that are not hydraulically connected to the Russian River stream system. The governing body may submit to the Deputy Director a list of groundwater diverters that appear to meet these criteria and could be exempted from this section. The Deputy Director is authorized to exempt the listed groundwater diverters, or identify the reason for not exempting the listed groundwater diverters. Beginning three years from the effective date of this section, if an individual groundwater diverter can independently demonstrate to the satisfaction of the Deputy Director that the diversion is not hydraulically connected to the Russian River stream system, the Deputy Director is authorized to exempt the groundwater diverter from this section.

(e) Compliance with this section shall constitute a condition of all water right permits and licenses that authorize the diversion of water from the Russian River stream system for purposes of frost protection. The diversion of water in violation of this section, including the failure to implement the corrective actions included in any corrective action plan developed by the governing body, is an unreasonable method of diversion and use and a violation of Water Code section 100, and shall be subject to enforcement by the board. The board has continuing authority to revise terms and conditions of all permits and licenses that authorize the diversion of water for purposes of frost protection should future conditions warrant.

Authority cited: Section 1058, Water Code.

Reference: Section 2, Article X, California Constitution; and Sections 100, 275 and 1051.5, Water Code.

Article 2. Wasteful and Unreasonable Water Uses

§ 963. Wasteful and Unreasonable Water Use Practices.

The State Water Resources Control Board (State Board) has determined that it is a waste and unreasonable use of water under Article X, section 2 of the California Constitution to divert or use water inconsistent with subdivision (a) regardless of water right seniority, given the need for the water to support other more critical uses.

(a) As used in this article:

(1) "Commercial agricultural use meeting the definition of Government Code section 51201, subdivision (b)" includes irrigation, frost protection and heat control, but does not include cleaning, processing or other similar post-harvest activities.

~~(2) "Total potable water production" means all potable water that enters into a water supplier's distribution system, excluding water placed into storage and not withdrawn for use during the reporting period, or water exported outside the supplier's service area.~~

~~(3) (2) "Urban water supplier" means a supplier that meets the definition set forth in Water Code section 10617, except it does not refer to suppliers when they are functioning solely in a wholesale capacity, but does apply to suppliers when they are functioning in a retail capacity.~~

~~(4) "Water year" means the period from October 1 through the following September 30. Where a water year is designated by year number, the designation is by the calendar year number in which the water year ends.~~

~~(3) "Turf" has the same meaning as in Section 491.~~

(4) "Incidental runoff" means unintended amounts (volume) of runoff, such as unintended, minimal overspray from sprinklers that escapes the area of intended use. Water leaving an intended use area is not considered incidental if it is part of the facility or system design, if it is due to excessive application, if it is due to intentional overflow or application, or if it is due to negligence.

(b)(1) The use of water is prohibited as identified in this subdivision for ~~any of~~ the following actions:

(A) The application of water to outdoor landscapes in a manner that causes ~~more than incidental~~ runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures;

(B) The use of a hose that dispenses water to wash a motor vehicle, except where the hose is fitted with a shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use;

(C) The application of potable water directly to driveways and sidewalks;

(D) The use of potable water in an ornamental fountain or other decorative water feature, except where: (D)(i) the water is part of a recirculating system; or (D)(ii) the fountain is registered on the National Register of Historic Places;

(E) The application of water to irrigate turf and ornamental landscapes during and within 48 hours after measurable rainfall of at least one-~~tenth fourth~~ of one inch of rain. In determining whether measurable rainfall of at least ~~tenth fourth~~ of one inch of rain occurred in a given area, enforcement may be based on records of the National Weather Service, the closest CIMIS station to the parcel, or any other reliable source of rainfall data available to the entity undertaking enforcement of this subdivision;

(F) The serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served ~~and/or purchased~~, during a period for which the Governor has issued a proclamation of a state of emergency under the California Emergency Services Act (Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code) based on drought conditions; and
(G) As of January 1, 2025, the irrigation of turf on public street medians or publicly owned ~~or and~~ maintained landscaped areas between the street and sidewalk, except where:

(i) the turf serves a community or neighborhood function, including, but not limited to, recreational uses and civic or community events;

(ii) the turf is irrigated incidentally by an irrigation system, the primary purpose of which is the irrigation of trees; or

(iii) the turf is irrigated with recycled water through an irrigation system installed prior to January 1, 2018; ~~and~~.

(2) Notwithstanding subdivision (b)(1), the use of water is not prohibited by this article under the following circumstances:

(A) To the extent necessary to address an ~~immediate~~ health and safety need. This may include, but is not limited to, street sweeping and pressure washing of public sidewalks and the use of potable water in a fountain or water feature when required by law to be potable.

(B) To the extent necessary to comply with a term or condition in a permit issued by a state or federal agency.

(C) When the water is used exclusively for commercial agricultural use meeting the definition of Government Code section 51201, subdivision (b).

(c) To promote water conservation, operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each guestroom using clear and easily understood language.

(d)(1) To prevent the waste and unreasonable use of water and to promote water conservation, any homeowners' association or community service organization or similar entity is prohibited from:

(A) Taking or threatening to take any action to enforce any provision of the governing documents or architectural or landscaping guidelines or policies of a common interest development where that provision is void or unenforceable under section 4735, subdivisions (a) and (b) of the Civil Code;

(B) Imposing or threatening to impose a fine, assessment, or other monetary penalty against any owner of a separate interest for reducing or eliminating the watering of vegetation or lawns during a declared drought emergency, as described in section 4735, subdivision (c) of the Civil Code; or

(C) Requiring an owner of a separate interest upon which water-efficient landscaping measures have been installed in response to a declared drought emergency, as described in section 4735, subdivisions (c) and (d) of the Civil Code, to reverse or remove the water-efficient landscaping measures upon the conclusion of the state of emergency.

(2) As used in this subdivision:

(A) "Architectural or landscaping guidelines or policies" includes any formal or informal rules other than the governing documents of a common interest development.

(B) "Homeowners' association" means an "association" as defined in section 4080 of the Civil Code.

(C) "Common interest development" has the same meaning as in section 4100 of the Civil Code.

(D) "Community service organization or similar entity" has the same meaning as in section 4110 of the Civil Code.

(E) "Governing documents" has the same meaning as in section 4150 of the Civil Code.

(F) "Separate interest" has the same meaning as in section 4185 of the Civil Code.

(3) If a disciplinary proceeding or other proceeding to enforce a rule in violation of subdivision (d)(1) is initiated, each day the proceeding remains pending shall constitute a separate violation of this regulation.

(e) To prevent the waste and unreasonable use of water and to promote water conservation, any city, county, or city and county is prohibited from imposing a fine under any local maintenance ordinance or other relevant ordinance as prohibited by section 8627.7 of the Government Code.

(f) The taking of any action prohibited in subdivision (b) (d) or (e), or the failure to take any action required in subdivision (c), is an infraction punishable by a fine of up to five hundred

dollars (\$500) for each day in which the violation occurs. The fine for the infraction is in addition to, and does not supersede or limit, any other remedies, civil or criminal.

(g) A decision or order issued under this article by the Board or an officer or employee of the Board is subject to reconsideration under article 2 (commencing with section 1122) of chapter 4 of part 1 of division 2 of the Water Code.

Authority: Section 1058, Water Code.

References: Article X, Section 2, California Constitution; Sections 4080, 4100, 4110, 4150, 4185, and 4735, Civil Code; Sections 102, 104, 105, 275, 350, and 10617, Water Code; *Light v. State Water Resources Control Board* (2014) 226 Cal.App.4th 1463.

ENGINEERING & PLANNING	
Doheny Ocean Desalination Project	<p>UPDATED</p> <p>Department of Water Resources (DWR) released the draft funding awards for the fourth round of Proposition 1 Desalination Grants (Water Desalination Grant Program). 8 projects out of 30 proposals are recommended for funding to receive a total of \$34.4 million of available funds. Doheny is listed as one of three projects to receive the maximum of \$10 million each for construction funding. A public workshop will be held at MET on February 5th from 1:00 to 4:00 pm to receive public comments.</p> <p>DWR also announced it will begin a continuous application process that will be conducted under the same guidelines as Round 4. Applications will be reviewed and qualified projects will be awarded on a first ready, first served basis until all grant funds are exhausted. (If all recommended projects receive funding there will be \$43 million remaining in the Program for construction type projects and approximately \$15.5 million for feasibility, design and research type projects.)</p> <p>GHD is developing a Scope of Work for a 3rd party legal firm to assist with Design-Build-Operate (DBO) contract development. A Request For Proposals (RFP) for 3rd party legal firms is anticipated to be released in early February 2018.</p> <p>Two workshops on the Administrative Draft Environmental Impact Report (ADEIR) are planned for February 2018 (dates pending). The release of the draft EIR for public comments is anticipated in March 2018.</p>
Orange County Reliability Study	<p>CDM-Smith submitted a technical memo draft for staff input on January 8th which follows-up on the 2016 study climate modeling assumptions. The update discusses modeling assumptions based on more recently available information; use of updated Colorado River assumptions, and updated State Water Project assumptions for the reliability study update.</p> <p>Next steps are to meet with MET staff to discuss Colorado River shortage assumptions. Once the modeling is completed under the updated assumptions, project evaluations for supply and system improvements will be completed. A final report is expected in the Spring 2018.</p>
South Orange County Emergency Service Program	<p>Karl Seckel and Charles Busslinger met with IRWD staff on January 22nd for a follow up meeting to discuss the technical details of a possible renewal/extension of the South Orange County Emergency Services Program.</p> <p>The current Emergency Services Program Agreement is in effect through 2029. The agreement defines minimum monthly flow rate 'reservations' through IRWD's system for South Orange County agencies in the event of a planned or emergency short term outage. The agreement acknowledges IRWD has a diminishing ability to deliver water to South Orange County over time as</p>

	<p>IRWD's service area is built out; with 0 flow available in the months of July through September beginning in 2020.</p> <p>A scope of work is being developed to study the ability/constraints of IRWD's system to move water through their system to South Orange County agencies into the future. Once proposals have been received, a recommendation to award a study contract will be brought to the Board for consideration.</p>
North and Central O.C. Integrated Regional Watershed Management Area	<p>Charles Busslinger attended the January 9th Ad Hoc committee meeting for the IRWM Plan (OC Plan). The committee reviewed public comments to the draft OC Plan and a response to comments is being prepared with the final draft.</p> <p>In order to be eligible for many state grant programs, the state requires projects be incorporated into an IRWM plan. A call for projects to build the OC Plan project list is now open through February 21st.</p> <p>The OC Plan is a sub-regional plan for the Santa Ana Funding Area. As the OC Plan is not a Department of Water Resources (DWR)-approved plan for the Santa Ana Funding Area, all projects submitted to the OC Plan will be submitted to the Santa Ana Watershed Project Authority (SAWPA) under the One Water One Watershed (OWOW) Plan.</p>
Scheduled Shutdowns: Upper Feeder & Lake Mathews Forebay Shutdown	<p>The January 6th to 19th shutdown of the Upper Feeder has been completed and the pipeline has been returned to service. A new flexible expansion joint was installed for the Upper Feeder Santa Ana River Bridge to provide increased seismic resilience.</p> <p>A pre-planning meeting was held at MWDOC on January 25th for a scheduled February 12th – 18th shutdown of the Lake Mathews Forebay to refurbish the Outlet Tower and replace a primary valve at WR-19. The shutdown will affect the Santiago Lateral (A-08, OC-13, and OC-33) and the Lower Feeder (OC-36 as well as some connections for Western MWD).</p>
San Juan Basin Authority	<p>The SJBA Board meeting for January 2018 was cancelled.</p> <p>The Santa Margarita Water District (SMWD) as the Lead Agency for the proposed San Juan Watershed Project has completed the preparation of an Environmental Impact Report (EIR) pursuant to the California Environmental Quality Act (CEQA).</p> <p>SMWD, in conjunction with South Coast Water District, proposes the San Juan Watershed Project to develop facilities to manage surface water resources to enhance groundwater resources of the San Juan Groundwater Basin. SMWD has prepared a Draft Program Environmental Impact Report (PEIR) pursuant to CEQA for the multiple phases of the proposed project.</p> <p>Charles Busslinger attended the January 30th public meeting on the Draft PEIR which was held to receive public comments regarding the content of the Draft Report.</p>

Service Connection CM-1 Cost Issues with MET	(Nothing New) A meeting was held on December 18th between staff from MWDOC, City of Newport Beach, Laguna Beach County WD, and Tom Epperson of Tetra Tech to discuss alternatives analyzed for CM-1 and the concurrent ability to deliver MET water and groundwater to LBCWD through Newport Beach's water system. MWDOC staff will next work with MET staff to explore the acceptability of the identified alternatives.
Use of East Orange County Feeder No. 2 for Conveyance of Groundwater	(Nothing New) MWDOC has been discussing concepts for pumping groundwater into the EOCF No. 2 for conveyance to South Orange County during an emergency event. Upcoming discussions will be held with MET.
Poseidon Resources	(Nothing New) The State Lands Commission approved the lease amendment for the proposed Huntington Beach Desalination Project on October 19, 2017. The Santa Ana Regional Water Quality Control Board will next consider approval of an Ocean Discharge Permit Amendment for the project in the first half of 2018, and finally the California Coastal Commission will then consider approval of a Coastal Development Permit. OCWD is still working on the system integration concepts.

**Status of Ongoing WEROC Projects
January 2018**

Description	Comments
Coordination with WEROC Member Agencies	<p>Ongoing: WEROC, with Michal Baker as the lead consultant, is facilitating 19 agencies through the process of updating the Orange County Water and Wastewater Multi-Jurisdictional Hazard Mitigation Plan. Update: Francisco Soto has been working with each agency to ensure that assignments between meetings are completed on time and the project stays on schedule. The next meeting is scheduled to take place in February.</p> <p>Kelly Hubbard provided a presentation on WEROC to the Orange County Sanitation District Safety Committee. The presentation provided a brief overview of WEROC programs and disaster coordination.</p> <p>Kelly provided a presentation on the WEROC program and its draft budget considerations to the OC MET Managers. Anaheim, Santa Ana and Fullerton are 3 of the funding partners for WEROC. Additional funding agencies are Orange County Water District, South Orange County Wastewater Authority, Orange County Sanitation District, and MWDOC.</p>
Training and Programs	<p>Kelly provided new staff from the last 6 months with training on the MWDOC Continuity of Operations Plan (COOP). This includes safety concepts such as evacuation, preparedness, and restoration of business operations.</p> <p>Kelly provided a training on how to do hazard analysis charts and how to make them a useful tool for ongoing emergency preparedness and planning to the American Red Cross Disaster Preparedness Academy.</p> <p>Francisco Soto attended the California Office of Emergency Services EOC Section Specific - Management Training on January 17th. CalOES revised all of their EOC Section specific trainings and are providing their training materials to participants to use. This provided Francisco a great refresher, as well as new materials for the WEROC staff to use.</p> <p>Kelly provided 2 sessions of Standardized Emergency Management System (SEMS), National Incident Management System (NIMS) and Incident Command System (ICS) Combined Training for WEROC agencies and staff. This is a required training for grant compliance and Kelly offers several sessions a year.</p> <p>MWDOC hosted First Aid/CPR/AED training for all staff. The training included in-depth first aid training and the concepts of stop-the-bleed first aid.</p>

	<p>Kelly provided a presentation to the City of Laguna Beach Community Emergency Response Team (CERT) as part of their annual awards program. She spoke about her experience in Vegas and lessons for individuals on preparedness.</p> <p>Kelly provided training for the WEROC EOC Staff and Member Agency staff on fulfilling the role of Logistics in the EOC during a disaster.</p>
Coordination with the County of Orange	<p>Kelly attended the January Orange County Emergency Management Organization (OCEMO) meeting and Exercise Design meeting that took place at the County EOC. County Emergency Management Bureau staff provided a presentation on the Operational Area EOC, expectations of local government and general capabilities.</p> <p>Ongoing: WEROC staff participation in the OA Agreement Revision Working Group. Francisco attended the OA Agreement meeting which primarily reviewed the Powers and Duties of the OA Positions section which will be discussed in further detail at the next meeting.</p>
Coordination with Outside Agencies	<p>Kelly has provided some coordination support to water and wastewater utilities impacted by the Montecito Mudflows. This was excellent practice with some lessons learned on the resource management process. Kelly is working on capturing those lessons in the WEROC plans and documents.</p>

Status of Water Use Efficiency Projects

January 2018

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
Smart Timer Rebate Program	MWDSC	Ongoing	Ongoing	<p>In December 2017, 175 residential and 59 commercial smart timers were installed in Orange County.</p> <p>For program water savings and implementation information, see MWDOC Water Use Efficiency Program Savings and Implementation Report.</p>
Rotating Nozzles Rebate Program	MWDSC	Ongoing	Ongoing	<p>In December 2017, 33 rotating nozzles were installed in Orange County.</p> <p>For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.</p>
SoCal Water\$mart Residential Indoor Rebate Program	MWDSC	Ongoing	Ongoing	<p>In December 2017, 307 high efficiency clothes washers and 25 premium high efficiency toilets were installed through this program.</p> <p>For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.</p>
SoCal Water\$mart Commercial Rebate Program	MWDSC	Ongoing	Ongoing	<p>In December 2017, 1,681 premium high efficiency toilets were installed through this program.</p> <p>For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.</p>

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
Industrial Process/ Water Savings Incentive Program (WSIP)	MWDSC	30%	June 2020	<p>This program is designed for non-residential customers to improve their water efficiency through upgraded equipment or services that do not qualify for standard rebates. Incentives are based on the amount of water customers save and allows for customers to implement custom water-saving projects.</p> <p>Total water savings to date for the entire program is 582 AFY and 2,647 AF cumulatively.</p>
Turf Removal Program	MWDOC	Ongoing	Ongoing	<p>In December 2017, 38 rebates were paid, representing \$97,458.78 in rebates paid this month in Orange County. To date, the Turf Removal Program has removed approximately 21.2 million square feet of turf.</p> <p>For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.</p>
Spray to Drip Conversion Program	MWDOC	Ongoing	Ongoing	<p>This is a rebate program designed to encourage residential and commercial sites to convert their existing conventional spray heads to low-volume, low-precipitation drip technology.</p> <p>To date, 216 residential sites and 55 commercial sites have completed spray to drip conversion projects.</p>
Landscape Design Assistance Program (LDAP)	MWDOC	70%	April 2018	<p>This is a pilot program designed to offer free front yard landscape design assistance to customers who are participating in MWDOC's Turf Removal Rebate Program.</p> <p>To date, MWDOC has received and approved 90 questionnaires, and 82 site consultations have been</p>

Item 4c

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
Landscape Design Assistance Program (LDAP) (cont.)				performed. Of the 82 sites, 73 have received their custom designs and have been sent their Letters To Proceed to begin their projects. MWDOC will be visiting these sites to take photos once each project is complete. Photos will also be taken at six and twelve months after installation.
Recycled Water Retrofit Program	MWDSC	15%	September 2018	This program provides incentives for commercial sites to convert dedicated irrigation meters to recycled water. To date, Metropolitan has provided a total of \$128,700.10 in funding to 18 sites irrigating over 61 acres of landscape, and MWDOC has paid a total of \$10,686.00 in grant funding to eight of those sites irrigating 54.6 acres of landscape. The total potable water savings achieved by these projects is 132 AFY.

Orange County

Water Use Efficiency Programs Savings and Implementation Report

Retrofits and Acre-Feet Water Savings for Program Activity

Program	Program Start Date	Retrofits Installed in	Month Indicated		Current Fiscal Year		Overall Program		
			Interventions	Water Savings	Interventions	Water Savings	Interventions	Annual Water Savings[4]	Cumulative Water Savings[4]
High Efficiency Clothes Washer Program	2001	December-17	307	0.88	2,052	21.85	114,964	3,966	26,936
Smart Timer Program - Irrigation Timers	2004	December-17	234	3.97	1,348	80.45	21,833	7,894	46,482
Rotating Nozzles Rebate Program	2007	December-17	33	0.13	794	3.17	563,612	2,760	18,323
SoCal WaterSmart Commercial Plumbing Fixture Rebate Program	2002	December-17	1,681	5.18	3,677	35.20	88,956	4,814	44,248
Industrial Process/Water Savings Incentive Program (WSIP)	2006	December-17	0	0.00	0	0.00	28	582	2,647
Turf Removal Program ^[3]	2010	December-17	61,156	0.71	344,596	13.26	21,250,197	2,976	10,233
High Efficiency Toilet (HET) Program	2005	December-17	25	0.09	283	6.10	59,930	2,215	16,718
Water Smart Landscape Program ^[1]	1997						12,677	10,621	72,668
Home Water Certification Program	2013						312	7,339	15,266
Synthetic Turf Rebate Program	2007						685,438	96	469
Ultra-Low-Flush-Toilet Programs ^[2]	1992						363,926	13,452	162,561
Home Water Surveys ^[2]	1995						11,867	160	1,708
Showerhead Replacements ^[2]	1991						270,604	1,667	19,083
Total Water Savings All Programs				11	352,750	160	23,444,344	51,211	422,091

^[3] Water Smart Landscape Program participation is based on the number of water meters receiving monthly Irrigation Performance Reports.

^[2] Cumulative Water Savings Program To Date totals are from a previous Water Use Efficiency Program Effort.

^[1] Turf Removal Interventions are listed as square feet.

^[4] Cumulative & annual water savings represents both active program savings and passive savings that continues to be realized due to plumbing code changes over time.

HIGH EFFICIENCY CLOTHES WASHERS INSTALLED BY AGENCY through MWDOC and Local Agency Conservation Programs

Agency	FY 11/12	FY 12/13	FY13/14	FY14/15	FY15/16	FY16/17	FY17/18	Total	Current FY Water Savings Ac/Ft (Cumulative)	Cumulative Water Savings across all Fiscal Years	15 yr. Lifecycle Savings Ac/Ft
Brea	144	93	115	114	76	57	24	1,891	0.22	449.36	978
Buena Park	145	105	106	91	76	54	30	1,548	0.31	351.56	801
East Orange CWD RZ	10	10	8	8	8	3	-	192	0.00	48.55	99
El Toro WD	112	134	121	111	65	47	20	1,541	0.22	353.60	797
Fountain Valley	158	115	102	110	76	65	26	2,426	0.30	597.83	1,255
Garden Grove	236	190	162	165	251	127	45	3,608	0.49	845.36	1,867
Golden State WC	485	265	283	359	260	138	85	5,100	0.92	1,195.71	2,639
Huntington Beach	582	334	295	319	225	180	73	8,319	0.81	2,087.65	4,304
Invine Ranch WD	2,170	1,763	1,664	1,882	1,521	1,373	707	25,373	7.69	5,634.74	13,129
La Habra	128	82	114	87	66	53	30	1,357	0.31	307.61	702
La Palma	46	34	25	34	29	10	9	467	0.10	106.38	242
Laguna Beach CWD	57	38	37	39	32	19	12	944	0.14	228.90	488
Mesa Water	176	114	86	89	113	80	29	2,547	0.32	637.48	1,318
Moulton Niguel WD	679	442	421	790	688	575	286	10,207	2.96	2,253.81	5,281
Newport Beach	142	116	92	95	66	61	30	2,654	0.32	678.98	1,373
Orange	262	218	163	160	124	80	41	3,939	0.43	993.16	2,038
Orange Park Acres	-	-	-	-	-	-	-	12	0.00	3.76	6
San Juan Capistrano	110	76	73	92	63	33	17	1,476	0.22	351.08	764
San Clemente	206	140	94	141	75	70	50	2,670	0.55	636.18	1,382
Santa Margarita WD	679	553	662	792	466	367	159	9,675	1.63	2,198.28	5,006
Seal Beach	51	31	29	38	23	9	13	615	0.12	146.13	318
Serrano WD	20	13	10	26	8	11	3	360	0.03	90.44	186
South Coast WD	112	89	79	68	43	44	24	1,608	0.27	380.82	832
Trabuco Canyon WD	62	30	45	47	34	28	13	811	0.13	189.72	420
Tustin	97	78	59	80	66	44	26	1,638	0.25	402.27	848
Westminster	208	121	82	109	149	84	36	2,622	0.39	623.71	1,357
Yorba Linda	273	181	167	156	123	56	31	3,783	0.31	952.39	1,957
MWDOC Totals	7,350	5,365	5,094	6,002	4,726	3,668	1,819	97,383	19.46	22,745.44	18,814

Anaheim	477	331	285	295	266	213	104	10,786	1.12	2,606.58	5,581
Fullerton	270	200	186	211	165	107	58	3,753	0.58	809.36	1,942
Santa Ana	190	163	131	132	259	141	71	3,042	0.69	774.67	1,574
Non-MWDOC Totals	937	694	602	638	690	461	233	17,581	2.39	4,190.62	3,397

Orange County Totals	8,287	6,059	5,696	6,640	5,416	4,129	2,052	114,964	21.85	26,936.05	22,211
-----------------------------	--------------	--------------	--------------	--------------	--------------	--------------	--------------	----------------	--------------	------------------	---------------

SMART TIMERS INSTALLED BY AGENCY

through MWDOC and Local Agency Conservation Programs

Agency	FY 11/12		FY 12/13		FY 13/14		FY 14/15		FY 15/16		FY 16/17		FY 17/18		Total Program		Cumulative Water Savings across all Fiscal Years
	Res	Comm	Res	Comm	Res	Comm	Res	Comm	Res	Comm	Res	Comm	Res	Comm	Res	Comm.	
Brea	8	0	9	8	4	0	43	6	20	4	31	4	20	0	151	80	521.72
Buena Park	4	19	3	0	0	0	4	10	7	4	10	7	11	3	42	44	147.67
East Orange CWD RZ	5	0	2	0	0	0	2	0	1	0	11	1	4	0	29	1	18.80
El Toro WD	26	2	7	2	11	0	8	9	9	17	33	8	16	4	131	359	2,476.50
Fountain Valley	8	2	3	2	4	0	7	10	13	1	33	12	13	8	104	48	178.65
Garden Grove	7	0	5	2	9	0	10	14	13	11	28	0	20	0	121	38	173.20
Golden State WC	13	3	9	49	9	25	39	12	35	16	56	37	51	5	276	197	812.43
Huntington Beach	15	4	18	33	20	35	19	2	42	12	88	94	35	30	307	298	1,061.60
Irvine Ranch WD	267	71	414	135	71	59	67	310	239	207	344	420	237	56	2,006	2,342	11,330.93
La Habra	3	0	4	7	2	0	4	7	3	1	12	7	4	0	40	44	203.18
La Palma	1	0	1	0	2	0	2	0	3	2	1	0	2	0	12	2	5.98
Laguna Beach CWD	109	2	76	2	71	0	86	0	86	1	27	0	6	0	503	20	235.04
Mesa Water	21	0	10	2	15	2	17	28	36	12	149	41	25	0	343	154	733.07
Moulton Niguel WD	179	31	51	74	40	45	46	95	163	100	236	129	189	16	1,103	817	3,577.28
Newport Beach	275	12	242	26	168	75	11	9	28	43	30	12	18	0	1,056	409	2,615.40
Orange	25	0	20	24	13	9	18	31	51	13	69	10	38	12	323	177	936.09
San Juan Capistrano	103	2	14	18	6	11	6	19	20	8	22	8	16	5	238	130	642.45
San Clemente	212	17	26	7	28	2	28	24	26	3	37	13	20	0	1,071	374	2,655.49
Santa Margarita WD	262	7	53	171	64	93	53	321	189	136	326	221	177	128	1,331	1,500	5,671.10
Santiago CWD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Seal Beach	0	3	1	0	1	36	1	12	2	2,446	2	4	5	0	12	2,502	5,119.58
Serrano WD	3	0	1	0	0	0	4	0	11	2	4	0	3	0	41	2	13.96
South Coast WD	78	10	13	16	8	4	104	73	9	11	7	0	10	2	288	214	1,147.62
Trabuco Canyon WD	12	0	6	0	2	0	6	1	16	50	13	3	14	0	117	157	950.38
Tustin	11	0	8	4	9	1	18	14	33	8	33	23	17	1	160	81	339.47
Westminster	2	0	1	1	2	0	13	17	7	1	17	12	12	0	77	44	197.20
Yorba Linda	22	0	20	0	12	5	32	2	61	27	72	71	39	10	377	193	827.01
MWDOC Totals	1,671	185	1,017	583	571	402	648	1,026	1,123	3,136	1,691	1,137	1,002	280	10,259	10,227	42,591.78

Anaheim	23	60	19	10	9	26	7	52	30	34	87	10	31	0	275	457	2,606.44
Fullerton	22	51	9	29	8	0	40	26	32	12	53	7	27	0	226	199	933.90
Santa Ana	6	5	8	19	7	8	9	27	22	26	15	3	8	0	90	100	350.07
Non-MWDOC Totals	51	116	36	58	24	34	56	105	84	72	155	20	66	0	591	756	3,890.41
Orange County Totals	1,722	301	1,053	641	595	436	704	1,131	1,207	3,208	1,846	1,157	1,068	280	10,850	10,983	46,482

**ROTATING NOZZLES INSTALLED BY AGENCY
through MWDOC and Local Agency Conservation Programs**

Agency	FY 11/12			FY 12/13			FY 13/14			FY 14/15			FY 15/16			FY 16/17			FY 17/18			Total Program			Cumulative Water Savings across all Fiscal Years
	Small		Large	Small		Large	Small		Large	Small		Large	Small		Large	Small		Large	Small		Large	Small		Large	
	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	
Brea	130	0	0	65	120	0	84	0	0	157	45	0	74	2,484	0	0	0	0	0	0	0	572	2,749	0	49.46
Buena Park	32	0	0	65	0	0	53	0	0	248	0	0	45	98	0	0	0	0	0	0	0	509	173	2,535	813.11
East Orange	340	0	0	55	0	0	30	0	0	221	0	0	0	0	0	0	0	0	30	0	0	781	0	0	19.29
El Toro	357	76	0	23	6,281	0	56	3,288	0	1,741	28,714	0	730	4,457	0	55	242	0	0	0	0	3,369	46,222	890	1,191.53
Fountain Valley	108	0	0	35	0	0	0	0	0	107	0	0	222	0	0	0	0	0	0	0	0	710	0	0	17.21
Garden Grove	119	0	0	95	0	0	80	0	0	88	50	0	110	0	0	55	98	0	0	0	0	933	299	0	32.52
Golden State	294	0	0	257	2,595	0	192	0	0	583	1,741	0	1,088	0	0	207	6,008	0	74	0	0	3,522	11,316	0	242.07
Huntington Beach	458	0	0	270	0	0	120	0	0	798	1,419	0	1,345	2,836	0	149	3,362	0	0	0	0	3,797	12,526	2,681	1,310.95
Irvine Ranch	1,715	4,255	0	25,018	1,014	0	11,010	4,257	0	1,421	632	0	1,989	5,047	0	335	9,511	0	206	0	0	47,343	94,561	2,004	4,745.30
La Habra	33	90	0	0	0	0	15	0	0	109	338	0	300	0	0	0	0	0	0	0	0	481	1,236	900	365.97
La Palma	0	0	0	0	0	0	0	0	0	0	0	0	46	505	0	0	2,385	0	0	0	56	2,890	0	26.08	
Laguna Beach	763	0	0	3,596	0	0	2,948	878	0	2,879	1,971	0	1,390	0	0	0	0	0	0	0	12,139	2,896	0	301.19	
Mesa Water	297	277	0	270	0	0	361	0	0	229	0	0	166	0	0	113	0	0	36	0	2,066	385	343	195.29	
Moulton Niguel	1,225	0	0	512	1,385	0	361	227	0	1,596	4,587	0	5,492	1,441	0	153	5,872	0	186	0	12,060	20,515	2,945	1,689.16	
Newport Beach	640	3,273	0	25,365	50	0	19,349	6,835	0	460	3,857	0	348	670	0	0	0	0	45	0	46,723	21,413	0	1,584.28	
Orange	343	0	0	264	0	0	245	120	0	304	668	0	631	91	0	0	0	0	0	0	3,170	1,072	0	109.25	
San Juan Capistrano	949	0	0	684	30	0	370	0	0	495	737	0	310	593	0	75	123	0	0	0	5,495	8,852	0	445.50	
San Clemente	4,266	117	1,343	631	172	0	415	5,074	0	326	0	0	426	0	0	0	0	0	83	0	10,072	7,538	1,343	799.92	
Santa Margarita	4,817	0	0	983	0	0	389	0	0	1,207	1,513	0	1,820	837	0	15	0	0	104	0	16,269	6,921	611	824.37	
Seal Beach	0	0	0	0	0	0	0	0	0	40	5,261	0	0	2,300	0	0	0	0	0	0	155	7,852	0	127.44	
Serrano	58	0	0	190	0	0	105	0	0	377	0	0	695	0	0	0	0	0	0	0	3,405	0	0	93.29	
South Coast	688	359	0	435	0	0	70	0	0	4,993	13,717	0	1,421	2,889	0	16	0	0	0	0	8,130	18,870	0	472.75	
Trabuco Canyon	379	0	0	34	0	0	0	0	0	56	0	0	130	0	0	0	4,339	0	0	0	2,086	5,130	0	131.59	
Tustin	476	1,013	0	378	0	0	329	0	0	408	0	0	317	386	0	65	-341	0	30	0	3,401	1,058	0	120.83	
Westminster	26	0	0	15	0	0	0	0	0	54	0	0	73	0	0	105	0	0	0	0	464	0	0	10.98	
Yorba Linda	559	0	0	730	0	0	40	990	0	921	0	0	1,715	0	0	213	0	0	0	0	6,081	4,359	500	460.06	
MWDOC Totals	19,072	9,460	1,343	59,970	11,647	0	36,622	21,669	0	19,818	65,250	0	20,883	24,634	0	1,556	31,599	0	794	0	193,789	278,833	14,752	16,179.37	
Anaheim	742	38,554	0	459	813	0	338	0	0	498	712	0	794	5,221	0	147	3,953	0	0	0	4,020	49,799	105	1,350.45	
Fullerton	409	0	0	119	0	0	107	0	0	684	1,196	0	521	7,015	0	65	3,034	0	0	0	2,910	11,309	1,484	668.74	
Santa Ana	22	65	0	99	0	0	86	2,533	0	310	0	0	0	1,420	0	0	1,106	0	0	0	859	5,752	0	124.46	
Non-MWDOC Totals	1,173	38,619	0	677	813	0	531	2,533	0	1,492	1,908	0	1,315	13,656	0	212	8,093	0	0	0	7,789	66,860	1,589	2,143.65	
Orange County Totals	20,245	48,079	1,343	60,647	12,460	0	37,153	24,202	0	21,310	67,158	0	22,198	38,290	0	1,768	39,692	0	794	0	201,578	345,693	16,341	18,323.02	

SOCAL WATER\$MART COMMERCIAL PLUMBING FIXTURES REBATE PROGRAM^[1]
INSTALLED BY AGENCY
through MWDOC and Local Agency Conservation Programs

Agency	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	Totals	Cumulative Water Savings across all Fiscal Years
Brea	1	234	0	10	91	734	0	1,365	494
Buena Park	290	5	23	56	591	133	0	2,489	1,217
East Orange CWD RZ	0	0	0	0	0	0	0	0	0
El Toro WD	137	0	212	6	268	35	0	1,062	655
Fountain Valley	314	0	0	1	249	0	357	1,229	657
Garden Grove	0	4	1	167	676	410	0	2,451	1,644
Golden State WC	135	0	1	0	1,008	53	0	2,865	2,083
Huntington Beach	156	104	144	7	783	641	0	2,954	1,753
Irvine Ranch WD	646	1,090	451	725	11,100	5,958	1,717	29,583	8,565
La Habra	0	0	0	0	340	42	0	925	605
La Palma	0	0	0	0	0	509	0	675	131
Laguna Beach CWD	0	0	27	0	0	0	0	446	342
Mesa Water	41	6	0	79	661	782	0	4,254	2,307
Moulton Niguel WD	0	0	0	3	413	281	0	1,277	908
Newport Beach	35	0	0	0	566	0	0	1,834	1,414
Orange	73	1	271	81	275	2,851	0	5,030	2,035
San Juan Capistrano	0	0	14	0	0	0	0	260	427
San Clemente	19	0	0	1	0	0	0	432	412
Santa Margarita WD	0	0	0	2	90	743	0	950	283
Santiago CWD	0	0	0	0	0	0	0	0	0
Seal Beach	0	0	0	0	0	184	0	538	471
Serrano WD	0	0	0	0	0	0	0	0	0
South Coast WD	84	148	0	382	0	0	0	1,320	577
Trabuco Canyon WD	0	0	0	0	0	0	0	11	16
Tustin	0	0	0	75	358	212	0	1,402	913
Westminster	35	1	28	0	146	177	0	1,138	1,093
Yorba Linda	0	1	0	0	226	84	0	595	616
MWDOC Totals	1,966	1,594	1,172	2,161	17,275	13,829	2,074	65,085	29,621
Anaheim	48	165	342	463	3,072	309	747	14,500	7,653
Fullerton	0	94	0	178	476	621	274	3,052	1,821
Santa Ana	12	16	17	5	1,293	238	582	6,319	5,153
Non-MWDOC Totals	60	275	359	646	4,841	1,168	1,603	23,871	14,627
Orange County Totals	2,026	1,869	1,531	2,807	22,116	14,997	3,677	88,956	44,248

[1] Retrofit devices include UL+ Iolets and Urinals, High Efficiency Iolets and Urinals, Multi-Family and Multi-Family 4-Liter HETs, Zero Water Urinals, High Efficiency Clothes Washers, Cooling Tower Conductivity Controllers, Ph Cooling Tower Conductivity Controllers, Flush Valve Retrofit Kits, Pre-rinse Spray heads, Hospital X-Ray Processor Recirculating Systems, Steam Sterilizers, Food Steamers, Water Pressurized Brooms, Laminar Flow Restrictors, and Ice Making Machines.

INDUSTRIAL PROCESS/WATER SAVINGS INCENTIVE PROGRAM

Number of Projects by Agency

Agency	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	Overall Program Interventions	Annual Water Savings[1]
Brea	0	0	0	0	0	0	0	0	0
Buena Park	0	0	0	0	1	0	0	2	54
East Orange	0	0	0	0	0	0	0	0	0
El Toro	0	0	0	0	0	0	0	0	0
Fountain Valley	0	0	0	0	0	1	0	1	23
Garden Grove	0	0	0	0	1	0	0	1	0
Golden State	0	0	0	0	0	0	0	1	3
Huntington Beach	0	2	0	1	2	0	0	5	132
Irvine Ranch	1	1	1	0	2	1	0	9	115
La Habra	0	0	0	0	1	0	0	1	0
La Palma	0	0	0	0	0	0	0	0	0
Laguna Beach	0	0	0	0	0	0	0	0	0
Mesa Water	0	0	0	0	0	0	0	0	0
Moulton Niguel	0	0	0	0	0	0	0	0	0
Newport Beach	0	0	0	1	0	0	0	1	21
Orange	0	0	0	0	1	2	0	4	88
San Juan Capistrano	0	0	0	0	0	0	0	0	0
San Clemente	0	0	0	0	0	0	0	0	0
Santa Margarita	0	0	0	0	0	0	0	0	0
Seal Beach	0	0	0	0	0	0	0	0	0
Serrano	0	0	0	0	0	0	0	0	0
South Coast	0	0	0	0	1	1	0	2	134
Trabuco Canyon	0	0	0	0	0	0	0	0	0
Tustin	0	0	0	0	0	0	0	0	0
Westminster	0	0	0	0	0	0	0	0	0
Yorba Linda	0	0	0	0	0	0	0	0	0
MWDOC Totals	1	3	1	2	9	5	0	27	571
Anaheim	0	0	0	0	0	0	0	0	0
Fullerton	0	0	0	0	0	0	0	0	0
Santa Ana	0	0	0	0	1	0	0	1	11
OC Totals	1	3	1	2	10	5	0	28	582

[1] Acre feet of savings determined during a one year monitoring period.
If monitoring data is not available, the savings estimated in agreement is used.

TURF REMOVAL BY AGENCY⁽¹⁾
through MWDOC and Local Agency Conservation Programs

Agency	FY 11/12		FY 12/13		FY 13/14		FY 14/15		FY 15/16		FY 16/17		FY 17/18		Total Program		Cumulative Water Savings across all Fiscal Years
	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	
Brea	3,397	9,466	7,605	0	5,697	0	71,981	30,617	118,930	404,411	8,354	479	3,199	26,214	219,163	471,187	306.82
Buena Park	0	0	0	0	0	0	11,670	1,626	77,127	16,490	3,741	0	4,108	0	96,646	18,116	48.39
East Orange	0	0	0	0	1,964	0	18,312	0	27,844	0	0	0	0	0	48,120	0	23.32
El Toro	4,723	0	4,880	72,718	4,382	0	27,046	221,612	63,546	162,548	13,139	48,019	5,465	0	123,181	504,897	324.94
Fountain Valley	1,300	0	682	7,524	4,252	0	45,583	5,279	65,232	0	3,679	0	4,012	0	124,740	12,803	68.61
Garden Grove	14,013	0	4,534	0	8,274	0	67,701	22,000	177,408	49,226	11,504	0	4,487	0	287,921	117,403	224.31
Huntington Beach	42,593	30,973	31,813	3,200	32,725	8,424	164,507	190,738	310,264	112,937	0	0	0	0	581,902	346,272	506.98
Huntington Beach	27,630	48,838	9,219	12,437	20,642	0	165,600	58,942	305,420	270,303	9,560	21,534	6,696	6,032	545,568	421,737	490.59
Irvine Ranch	6,450	1,666	32,884	32,384	36,584	76,400	234,905	317,999	782,844	2,675,629	231,483	46,725	44,718	47,467	1,375,291	3,211,064	2,015.22
La Habra	0	8,262	0	0	0	0	14,014	1,818	49,691	72,164	0	0	1,450	0	65,155	90,019	77.05
La Palma	0	0	0	0	0	0	4,884	0	10,257	59,760	0	0	0	0	15,141	59,760	32.14
Laguna Beach	2,533	0	2,864	1,712	4,586	226	13,647	48,850	47,614	0	3,059	0	220	0	75,301	48,788	65.38
Mesa Water	6,777	0	10,667	0	22,246	0	131,675	33,620	220,815	106,896	4,173	77,033	5,940	0	402,293	217,549	284.94
Moulton Niguel	4,483	26,927	11,538	84,123	14,739	40,741	314,250	1,612,845	889,748	1,059,279	220,749	0	48,908	0	1,505,371	2,840,054	2,135.49
Newport Beach	3,454	0	3,548	2,346	894	0	33,995	65,277	76,675	375,404	2,924	0	861	6,499	122,351	449,526	256.27
Orange	12,971	0	15,951	8,723	11,244	0	120,093	281,402	289,990	108,487	12,847	2,366	6,548	0	489,644	398,978	437.83
San Clemente	21,502	0	16,062	13,165	18,471	13,908	90,349	1,137	215,249	438,963	4,267	0	19,542	0	385,442	467,173	398.21
San Juan Capistrano	22,656	103,692	29,544	27,156	12,106	0	101,195	32,366	197,290	143,315	2,624	40,748	0	0	365,415	347,277	409.91
Santa Margarita	1,964	11,400	10,151	11,600	17,778	48,180	211,198	514,198	534,048	550,420	17,010	28,094	34,267	25,000	830,899	1,194,453	971.39
Santiago	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Seal Beach	0	0	3,611	0	0	0	15,178	504	17,349	15,911	1,234	0	752	0	38,124	16,415	26.23
Serrano	0	0	0	0	2,971	0	41,247	0	127,877	4,403	5,450	0	0	0	177,545	4,403	82.26
South Coast	6,806	0	9,429	4,395	15,162	116,719	84,282	191,853	181,102	128,290	14,967	0	9,350	7,806	321,098	465,387	420.05
Trabuco Canyon	272	0	1,542	22,440	2,651	0	14,771	0	42,510	88,272	1,465	0	768	0	63,979	110,712	85.98
Tustin	0	0	9,980	0	1,410	0	71,285	14,137	232,697	33,362	11,173	0	7,768	0	334,313	47,499	173.16
Westminster	0	0	0	0	0	0	14,040	34,631	71,833	23,902	11,112	0	5,500	0	102,485	58,533	71.34
Yorba Linda	0	0	0	0	0	0	112,136	12,702	360,279	116,985	19,420	0	7,323	3,696	510,507	133,383	290.04
MWDOC Totals	183,524	241,224	216,104	303,923	238,978	304,598	2,195,544	3,692,153	5,493,639	7,015,357	613,934	264,998	221,882	122,714	9,187,595	12,053,388	10,226.89

Anaheim	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Fullerton	0	0	0	0	0	0	9,214	0	0	0	0	0	0	0	0	9,214	6.45
Santa Ana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Non-MWDOC Totals	0	0	0	0	0	9,214	0	0	0	0	0	0	0	0	0	9,214	6.45

Orange County Totals	183,524	241,224	216,104	303,923	238,978	313,812	2,195,544	3,692,153	5,493,639	7,015,357	613,934	264,998	221,882	122,714	9,187,595	12,062,602	10,233
-----------------------------	----------------	----------------	----------------	----------------	----------------	----------------	------------------	------------------	------------------	------------------	----------------	----------------	----------------	----------------	------------------	-------------------	---------------

[1] Unallocated device numbers are listed as square feet

HIGH EFFICIENCY TOILETS (HETs) INSTALLED BY AGENCY

through MWDOC and Local Agency Conservation Programs

Agency	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	Total	Cumulative Water Savings across all Fiscal Years
Brea	0	0	38	146	154	4	2	452	96.82
Buena Park	0	0	96	153	112	13	2	686	186.07
East Orange CWD RZ	0	0	13	26	24	0	0	86	20.43
El Toro WD	0	133	218	869	264	12	1	2,038	524.33
Fountain Valley	0	0	41	132	220	7	8	831	243.61
Garden Grove	0	0	63	350	363	7	1	1,485	411.46
Golden State WC	80	2	142	794	512	9	10	2,800	758.66
Huntington Beach	0	0	163	1,190	628	4	3	2,904	698.52
Irvine Ranch WD	0	1,449	810	1,777	2,798	638	152	17,061	5,296.69
Laguna Beach CWD	0	0	45	112	81	1	2	390	101.42
La Habra	0	0	37	94	83	5	1	591	190.75
La Palma	0	0	21	59	52	4	0	222	56.39
Mesa Water	0	0	147	162	162	7	2	1,620	581.14
Moulton Niguel WD	0	0	400	2,497	1,939	49	30	5,720	1,101.30
Newport Beach	0	0	49	168	243	11	5	730	177.34
Orange	0	1	142	978	416	17	3	2,182	515.48
San Juan Capistrano	0	0	35	140	202	3	2	525	116.91
San Clemente	0	0	72	225	246	11	1	873	218.33
Santa Margarita WD	0	0	528	997	1,152	114	26	3,335	652.39
Seal Beach	0	2	17	50	69	-1	0	857	385.24
Serrano WD	0	0	2	40	55	3	0	121	23.54
South Coast WD	23	64	102	398	235	11	3	1,024	222.75
Trabuco Canyon WD	0	0	10	108	169	2	0	339	62.73
Tustin	0	0	64	132	201	12	4	1,510	525.18
Westminster	0	0	35	161	359	3	1	1,332	403.46
Yorba Linda WD	0	0	40	280	379	12	4	1,255	335.11
MWDOC Totals	103	1,651	3,330	12,038	11,118	958	263	50,969	13,906.05

Anaheim	0	0	156	1,188	614	70	13	5,878	1,941.76
Fullerton	0	0	61	293	286	14	7	1,062	268.25
Santa Ana	0	0	33	602	293	20	0	2,021	601.53
Non-MWDOC Totals	0	0	250	2,083	1,193	104	20	8,961	2,811.54

Orange County Totals	103	1,651	3,580	14,121	12,311	1,062	283	59,930	16,717.58
-----------------------------	------------	--------------	--------------	---------------	---------------	--------------	------------	---------------	------------------

Water Smart Landscape Program

Total Number of Meters
in Program by Agency

Agency	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	Overall Water Savings To Date (AF)
Brea	0	0	0	0	22	22	22	22	22	64.37
Buena Park	0	0	17	103	101	101	101	101	101	462.69
East Orange CWD RZ	0	0	0	0	0	0	0	0	0	0.00
El Toro WD	352	384	371	820	810	812	812	812	812	4,856.93
Fountain Valley	0	0	0	0	0	0	0	0	0	0.00
Garden Grove	0	0	0	0	0	0	0	0	0	0.00
Golden State WC	14	34	32	34	32	32	32	32	32	200.59
Huntington Beach	0	0	31	33	31	31	31	31	31	148.43
Irvine Ranch WD	708	1,008	6,297	6,347	6,368	6,795	6,797	6,769	6,780	38,304.89
Laguna Beach CWD	0	57	141	143	141	124	124	124	124	733.07
La Habra	0	23	22	24	22	22	22	22	22	136.72
La Palma	0	0	0	0	0	0	0	0	0	0.00
Mesa Water	165	286	285	288	450	504	511	514	515	2,943.57
Moulton Niguel WD	180	473	571	595	643	640	675	673	661	4,120.71
Newport Beach	58	142	171	191	226	262	300	300	300	1,501.19
Orange	0	0	0	0	0	0	0	0	0	0.00
San Clemente	227	233	247	271	269	269	299	407	459	2,368.77
San Juan Capistrano	0	0	0	0	0	0	0	0	0	0.00
Santa Margarita WD	945	1,571	1,666	1,746	1,962	1,956	2,274	2,386	2,386	14,178.10
Seal Beach	0	0	0	0	0	0	0	0	0	0.00
Serrano WD	0	0	0	0	0	0	0	0	0	0.00
South Coast WD	62	117	108	110	118	118	118	164	164	829.91
Trabuco Canyon WD	12	49	48	62	60	60	60	60	60	350.52
Tustin	0	0	0	0	0	0	0	0	0	0.00
Westminster	10	18	18	20	18	18	18	18	18	116.46
Yorba Linda WD	0	0	0	0	0	0	0	0	0	0.00
MWDOC Totals	2,733	4,395	10,025	10,787	11,273	11,766	12,196	12,435	12,487	71,316.9
Anaheim	0	0	142	146	144	190	190	190	190	1,351.53
Fullerton	0	0	0	0	0	0	0	0	0	0.00
Santa Ana	0	0	0	0	0	0	0	0	0	0.00
Non-MWDOC Totals	0	0	142	146	144	190	190	190	190	1,351.53
Orange Co. Totals	2,733	4,395	10,167	10,933	11,417	11,956	12,386	12,625	12,677	72,668.45

HOME WATER SURVEYS PERFORMED BY AGENCY

through MWDOC and Local Agency Conservation Programs

Agency	FY 13/14		FY 14/15		FY 15/16		Total		Cumulative Water Savings
	Surveys	Cert Homes	Surveys	Cert Homes	Surveys	Cert Homes	Surveys	Cert Homes	
Brea	1	0	2	0	0	0	3	0	0.16
Buena Park	0	0	1	0	0	0	1	0	0.05
East Orange	19	0	1	0	0	0	20	0	1.39
El Toro	0	0	3	0	0	0	3	0	0.14
Fountain Valley	3	0	4	0	1	0	8	0	0.42
Garden Grove	0	0	6	0	1	0	7	0	0.31
Golden State	0	0	0	0	0	0	0	0	0.00
Huntington Beach	2	0	5	0	2	0	9	0	0.42
Irvine Ranch	1	0	3	0	6	0	10	0	0.35
La Habra	0	0	1	0	0	0	1	0	0.05
La Palma	0	0	0	0	0	0	0	0	0.00
Laguna Beach	4	0	8	0	1	0	13	0	0.68
Mesa Water	0	0	0	0	0	0	0	0	0.00
Moulton Niguel	4	0	4	0	0	0	8	0	0.47
Newport Beach	2	0	8	0	6	0	16	0	0.66
Orange	2	0	18	0	1	0	21	0	1.01
San Clemente	15	0	13	0	0	0	28	0	1.67
San Juan Capistrano	4	0	13	0	2	0	19	0	0.94
Santa Margarita	15	0	40	1	14	0	69	1	3.27
Seal Beach	0	0	1	0	2	0	3	0	0.09
Serrano	0	0	2	0	0	0	2	0	0.09
South Coast	6	0	4	0	1	0	11	0	0.64
Trabuco Canyon	0	0	4	0	0	0	4	0	0.19
Tustin	0	0	10	0	5	0	15	0	0.59
Westminster	0	0	0	0	0	0	0	0	0.00
Yorba Linda	0	0	13	0	10	0	23	0	0.85
MWDOC Totals	78	0	164	1	52	0	294	1	14.44

Anaheim	0	0	0	0	0	0	0	0	0.00
Fullerton	0	0	17	0	1	0	18	0	0.82
Santa Ana	0	0	0	0	0	0	0	0	0.00
Non-MWDOC Totals	0	0	17	0	1	0	18	0	0.82

Orange County Totals	78	0	181	1	53	0	312	1	15.266
-----------------------------	-----------	----------	------------	----------	-----------	----------	------------	----------	---------------

SYNTHETIC TURF INSTALLED BY AGENCY^[1] through MWDOC and Local Agency Conservation Programs

Agency	FY 07/08		FY 08/09		FY 09/10		FY 10/11		Total Program		Cumulative Water Savings across all Fiscal Years
	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	
Brea	0	0	2,153	2,160	500	0	0	0	2,653	2,160	3.30
Buena Park	0	0	1,566	5,850	0	0	0	0	1,566	5,850	5.19
East Orange	0	0	0	0	983	0	0	0	983	0	0.55
El Toro	3,183	0	2,974	0	3,308	0	895	0	10,360	0	6.98
Fountain Valley	11,674	0	1,163	0	2,767	0	684	0	16,288	0	12.46
Garden Grove	1,860	0	0	0	3,197	0	274	0	5,331	0	3.47
Golden State	6,786	0	13,990	0	15,215	0	2,056	0	38,047	0	24.88
Huntington Beach	15,192	591	12,512	0	4,343	1,504	0	0	32,047	2,095	25.29
Irvine Ranch	11,009	876	13,669	0	2,585	0	0	0	27,263	876	21.00
La Habra	0	0	0	0	0	0	0	0	0	0	-
La Palma	429	0	0	0	0	0	0	0	429	0	0.36
Laguna Beach	3,950	0	3,026	0	725	0	0	0	7,701	0	5.84
Mesa Water	4,114	0	3,005	78,118	4,106	0	2,198	0	13,423	78,118	63.46
Moulton Niguel	14,151	0	25,635	2,420	7,432	0	0	0	47,218	2,420	35.69
Newport Beach	2,530	0	6,628	0	270	0	0	0	9,428	0	6.92
Orange	4,169	0	7,191	0	635	0	0	0	11,995	0	8.89
San Clemente	9,328	0	11,250	455	2,514	1,285	500	0	23,592	1,740	18.37
San Juan Capistrano	0	0	7,297	639	2,730	0	4,607	0	14,634	639	9.02
Santa Margarita	12,922	0	26,069	0	21,875	0	7,926	0	68,792	0	44.68
Seal Beach	0	0	817	0	0	0	0	0	817	0	0.57
Serrano	7,347	0	1,145	0	0	0	0	0	8,492	0	6.97
South Coast	2,311	0	6,316	0	17,200	0	1,044	0	26,871	0	16.43
Trabuco Canyon	1,202	0	9,827	0	0	0	0	0	11,029	0	7.89
Tustin	6,123	0	4,717	0	2,190	0	0	0	13,030	0	9.67
Westminster	2,748	16,566	8,215	0	890	0	0	0	11,853	16,566	22.47
Yorba Linda	11,792	0	12,683	0	4,341	5,835	0	0	28,816	5,835	24.48
MWDOC Totals	132,820	18,033	181,848	89,642	97,806	8,624	20,184	0	432,658	116,299	384.83

Anaheim	4,535	0	7,735	20,093	13,555	65,300	4,122	0	29,947	85,393	69.18
Fullerton	4,865	876	5,727	0	6,223	0	105	0	16,920	876	12.36
Santa Ana	0	0	2,820	0	525	0	0	0	3,345	0	2.27
Non-MWDOC Totals	9,400	876	16,282	20,093	20,303	65,300	4,227	0	50,212	86,269	83.81

Orange County Totals	142,220	18,909	198,130	109,735	118,109	73,924	24,411	0	482,870	202,568	468.63
-----------------------------	----------------	---------------	----------------	----------------	----------------	---------------	---------------	----------	----------------	----------------	---------------

[1] Installed device numbers are calculated in square feet

ULF TOILETS INSTALLED BY AGENCY
through MWDOC and Local Agency Conservation Programs

Agency	Previous Years	FY 95-96	FY 96-97	FY 97-98	FY 98-99	FY 99-00	FY 00-01	FY 01-02	FY 02-03	FY 03-04	FY 04-05	FY 05-06	FY 06-07	FY 07-08	FY 08-09	Total	Cumulative Water Savings across all Fiscal Years
Brea	378	189	299	299	122	144	867	585	341	401	26	48	17	4	0	3,720	1,692.64
Buena Park	361	147	331	802	520	469	524	1,229	2,325	1,522	50	40	18	9	0	8,347	3,498.37
East Orange CWD RZ	2	0	33	63	15	17	15	50	41	44	19	18	13	2	0	332	138.23
El Toro WD	1,169	511	678	889	711	171	310	564	472	324	176	205	61	40	0	6,281	3,091.16
Fountain Valley	638	454	635	858	1,289	2,355	1,697	1,406	1,400	802	176	111	58	32	0	11,911	5,383.10
Garden Grove	1,563	1,871	1,956	2,620	2,801	3,556	2,423	3,855	3,148	2,117	176	106	67	39	0	26,298	12,155.41
Golden State WC	3,535	1,396	3,141	1,113	3,024	2,957	1,379	2,143	3,222	1,870	167	116	501	43	0	24,607	11,731.47
Huntington Beach	3,963	1,779	2,600	2,522	2,319	3,492	3,281	2,698	3,752	1,901	367	308	143	121	0	29,246	13,854.70
Irvine Ranch WD	4,016	841	1,674	1,726	1,089	3,256	1,534	1,902	2,263	6,741	593	626	310	129	0	26,700	11,849.23
Laguna Beach CWD	283	93	118	74	149	306	220	85	271	118	32	26	29	6	0	1,810	845.69
La Habra	594	146	254	775	703	105	582	645	1,697	1,225	12	31	6	7	0	6,782	2,957.73
La Palma	65	180	222	125	44	132	518	173	343	193	31	27	20	17	0	2,090	927.52
Mesa Water	1,610	851	1,052	2,046	2,114	1,956	1,393	1,505	2,387	988	192	124	56	14	0	16,288	7,654.27
Moulton Niguel WD	744	309	761	698	523	475	716	891	728	684	410	381	187	100	0	7,607	3,371.14
Newport Beach	369	293	390	571	912	1,223	438	463	396	1,883	153	76	36	16	0	7,219	3,166.77
Orange	683	1,252	1,155	1,355	533	2,263	1,778	2,444	2,682	1,899	193	218	88	53	4	16,600	7,347.93
San Juan Capistrano	1,234	284	193	168	323	1,319	347	152	201	151	85	125	42	39	0	4,663	2,324.42
San Clemente	225	113	191	65	158	198	667	483	201	547	91	66	37	34	0	3,076	1,314.64
Santa Margarita WD	577	324	553	843	345	456	1,258	790	664	260	179	143	101	29	0	6,522	3,001.01
Seal Beach	74	66	312	609	47	155	132	81	134	729	29	10	6	12	0	2,396	1,073.80
Serrano WD	81	56	68	41	19	52	95	73	123	98	20	15	14	2	0	757	338.66
South Coast WD	110	176	177	114	182	181	133	358	191	469	88	72	32	22	0	2,305	990.05
Trabuco Canyon WD	10	78	42	42	25	21	40	181	102	30	17	20	12	14	0	634	273.02
Tustin	968	668	557	824	429	1,292	1,508	1,206	1,096	827	69	89	26	12	0	9,571	4,423.88
Westminster	747	493	969	1,066	2,336	2,291	2,304	1,523	2,492	1,118	145	105	70	24	0	15,683	7,064.28
Yorba Linda WD	257	309	417	457	404	1,400	759	1,690	1,155	627	158	136	81	41	0	7,891	3,409.49
MWDOC Totals	24,256	12,879	18,778	20,765	21,136	30,242	24,918	27,175	31,827	27,568	3,654	3,242	2,031	861	4	249,336	113,878.61

Anaheim	447	1,054	1,788	3,661	1,755	7,551	4,593	6,346	9,707	5,075	473	371	462	341	1	43,625	18,359.52
Fullerton	1,453	1,143	694	1,193	1,364	2,138	1,926	2,130	2,213	1,749	172	77	44	23	2	16,321	7,435.23
Santa Ana	1,111	1,964	1,205	2,729	2,088	8,788	5,614	10,822	10,716	9,164	279	134	25	5	0	54,644	22,887.95
Non-MWDOC Totals	3,011	4,161	3,687	7,583	5,207	18,477	12,133	19,298	22,636	15,988	924	582	531	369	3	114,590	48,682.70

Orange County Totals	27,267	17,040	22,465	28,348	26,343	48,719	37,051	46,473	54,463	43,556	4,578	3,824	2,562	1,230	7	363,926	162,561.30
-----------------------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------	---------------	--------------	--------------	--------------	--------------	----------	----------------	-------------------