

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

Jointly with the

**PLANNING & OPERATIONS COMMITTEE**

September 5, 2017, 8:30 a.m.

MWDOC Conference Room 101

**P&O Committee:**

Director Dick, Chair

Director Tamaribuchi

Director Yoo Schneider

Staff: R. Hunter, K. Seckel, J. Berg,

H. De La Torre, K. Davanaugh

Ex Officio Member: W. Osborne

---

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>.

**PRESENTATION ITEM**

1. PRESENTATION ON ORANGE COUNTY OPERATIONAL AREA AGREEMENT REVISION EXECUTIVE SUMMARY
2. PRESENTATION BY KEVIN HARDY - EXECUTIVE DIRECTOR OF NATIONAL WATER RESEARCH INSTITUTE

**DISCUSSION ITEM**

3. STATUS OF MET'S IN-LIEU DELIVERIES

4. LEGISLATIVE UPDATE ON MONNING (SB-623) AND THE LONG TERM CONSERVATION LEGISLATION

### **ACTION ITEM**

5. REQUEST TO APPROVE A REFRESHED MWDOC LOGO DESIGN

**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.)

6. METROPOLITAN'S ASSESSED VALUATION FOR MWDOC AND ORANGE COUNTY FOR FISCAL YEAR 2017-18
7. SOLE SOURCE AGREEMENT WITH TETRA TECH REGARDING HYDRAULIC ASSISTANCE IN EVALUATING OPTIONS FOR CHANGES AT SERVICE CONNECTION CM-1
8. SOLE SOURCE AGREEMENT WITH RAFTELIS FINANCIAL CONSULTANTS FOR ANALYSIS AND REPORT OF RESULTS OF 5-YEAR POST-MONITORING OF BUDGET BASED TIERED RATE DWR GRANT
9. 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
10. 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.



**PRESENTATION**  
September 5, 2017

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

**FROM:**       **Robert Hunter, General Manager**

Staff Contact: Kelly Hubbard, WEROC Emergency Manager

**SUBJECT:   Presentation on Orange County Operational Area Agreement Revision  
Executive Summary**

**STAFF RECOMMENDATION**

---

Staff recommends the Planning & Operations Committee receive and discuss presentation.

**SUMMARY**

---

Staff will provide a presentation on the OC Operational Area Agreement, why it's being updated, and the update process. The presentation will include WEROC and MWDOC's role in this process.

Attached: Presentation "OA Agreement Revision Executive Summary"

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

# OA Agreement Revision Executive Summary

MWDOC P&O Committee

September 5, 2017

1



# Operational Area Agreement

## Background

---

- Operational Area (OA) Concept:
  - Composed of County agencies and all political entities within it, including cities and special districts
  - Manages and/or coordinates information, resources, and priorities among local governments within the operational area
  - Serves as the coordination and communication link between the local government level and regional level
- Required by the Standardized Emergency Management System (SEMS)
- OC Operational Area Agreement is the mechanism to accomplish this



# Reasons for Revising OA Agreement

---

- Pre-dates many advances in emergency management (i.e. NIMS) – 22 yrs. old
- Agreement is difficult to administer
  - For example - contradictions within governance structure, points of contact and lines of succession
- Some sections simply need to be updated because things have changed
  - For example - plans, activation levels, agencies and response organizations
- Opportunities
  - Use process as a training experience for new emergency managers in Orange County
  - Increase awareness of expectations and responsibilities laid out in this plan for County and local jurisdictions



# OA Agreement Key Sections & Provisions

---

- OA Governance Structure
  - Identifies membership and responsibilities
- Positions, Roles and Responsibilities of the OA
  - Identifies who is in charge for specific county-wide events
  - Specifies the OA Manager's responsibilities to support the OA
  - Outlines the County's responsibilities; including fiscal
  - Maintenance of OA Emergency Plans and EOC
  - Responsibilities for overall county-wide readiness



# OA Agreement Revision Process (2017-2019)



# Questions





**PRESENTATION ITEM**

September 5, 2017

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

**FROM: Robert Hunter, General Manager**

Staff Contact: Karl Seckel

**SUBJECT: PRESENTATION BY KEVIN HARDY, EXECUTIVE DIRECTOR OF  
NATIONAL WATER RESEARCH INSTITUTE**

**STAFF RECOMMENDATION**

---

Staff recommends the Planning & Operations Committee receive and file the report and presentation by Kevin Hardy.

**COMMITTEE RECOMMENDATION**

---

Committee recommends (To be determined at Committee Meeting)

**SUMMARY**

---

MWDOC was one of the founding members of NWRI in 1991 and continued as a member into the early 2000's before we discontinued our membership. NWRI recently completed an executive search and filled the NWRI Executive Director position with the hire of Kevin Hardy. Kevin was invited to provide an overview and direction for where he sees the future of NWRI. The info below was excerpted from the press release regarding Kevin's hire.

Nationally recognized executive leader Kevin Hardy has joined the National Water Research Institute (NWRI) as its new Executive Director, taking charge of a nonprofit organization focused on supporting innovative scientific research and activities to improve the quality of our water supplies and increase available sources of water.

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



Hardy's background in public service begins with a Master's degree in Public Administration from San Diego State University and a J.D. from the School of Law at the University of San Diego. Within the water sector, he served 7 years as General Manager and 14 years as an executive of the Encina Wastewater Authority, a public agency that provides recycled water, resource recovery, and wastewater treatment services in San Diego County, California. In addition, he was past President of both the California Association of Sanitation Agencies and the California Sanitation Risk Management Authority.

"Kevin is a great fit for NWRI," said James Ferryman, President of the NWRI Board of Directors. "He is a successful strategic planner and he is very personable, both of which are traits essential for leading an organization as collaborative as NWRI. Significantly, he also understands the practical, day-to-day needs of utilities – and NWRI was formed by water and wastewater utilities to help them solve scientific and technical problems that they could not tackle alone. No doubt Kevin will strengthen NWRI's already excellent reputation as a trusted source of information and expertise in the water industry."

Since its establishment in 1991, NWRI has leveraged funding through collaborative partnerships that support research and education in areas such as recycled water, desalination, treatment technologies, sustainable water practices, and others. Much of NWRI's recent work has revolved around planned potable reuse, in which treated wastewater is used to augment public water supplies. NWRI also awards the Athalie Richardson Irvine Clarke Prize each year for outstanding achievements in water science. The Prize – a \$50,000 check and medallion – is the highlight of NWRI's annual Clarke Prize Conference.

"This opportunity with NWRI is really exciting, and I confidently look forward to the challenges of this unique job," Hardy said. "It is rare to work on critical issues with colleagues whom you respect and who inspire you and, at the same time, have a hand in creating the future, especially for something as important as water."

Hardy has already identified several goals for the nonprofit under his leadership, such as working with policymakers to continue developing regulations for potable reuse; building upon relationships with public and private agencies; and facilitating NWRI's well-established expert panel program to help guide technological innovation and policies that shape the future of water in the United States.

A native of Michigan with deep Southern California roots, Hardy will be the third Executive Director of NWRI, following Jeffrey Mosher (2005-2016) and Ronald Linsky (1991-2005). He may be reached at [khardy@nwri-usa.org](mailto:khardy@nwri-usa.org) or (714) 378-3278.



**DISCUSSION ITEM**

September 5, 2017

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

**FROM: Robert Hunter**  
**General Manager**

Staff Contact: H. De La Torre  
M. Baum-Haley

**SUBJECT: ORAL REPORT ON THE IN-LIEU PROGRAM STATUS**

**STAFF RECOMMENDATION**

---

Staff recommends the Planning & Operations Committee receive and discuss the following

**COMMITTEE RECOMMENDATION**

---

Committee recommends (To be determined at Committee Meeting)

**REPORT**

---

On July 19, 2017, the MWDOC Board of Directors authorize the General Manager to enter into Cyclic Agreement(s) with the Metropolitan Water District, Orange County Water District, and the cities of Anaheim, Fullerton, and Santa Ana, implementing a one-time Metropolitan In-Lieu Program, as adopted by the Metropolitan Board on July 11, 2017.

MWDOC Staff will provide an oral report stating:

- The status of the Cyclic Agreements
- Number of agencies participating
- An update on the In-Lieu deliveries

Budgeted (Y/N): N/A	Budgeted amount: N/A	Core <u>  X  </u>	Choice <u>  </u>
Action item amount: N/A	Line item: N/A		
Fiscal Impact (explain if unbudgeted): N/A			



**DISCUSSION ITEM**

September 5, 2017

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

**FROM: Robert Hunter**  
**General Manager**

Staff Contact: Heather Baez

**SUBJECT: LEGISLATIVE UPDATE**

**STAFF RECOMMENDATION**

---

Staff recommends the Planning & Operations Committee receive and file this presentation.

**COMMITTEE RECOMMENDATION**

---

Committee recommends (To be determined at Committee Meeting)

**REPORT**

---

At the August 21 Public Affairs and Legislation Committee meeting, the committee directed staff to return to the Planning and Operations Committee to provide an oral update on SB 623 (Monning) and the Long Term Conservation legislation.

**SB 623 (Monning)**

- On June 21, 2017 the MWDOC Board of Directors adopted a watch position on SB 623 (Monning) with the stipulation that if a public goods charge or water tax is amended into the bill as rumored, the Board would move to an immediate oppose.
- SB 623 (Monning) was amended on August 21, 2017 *with* a water tax language added.

**Long Term Conservation legislation**

- A number of Bills have been introduced in efforts to implement Governor Brown's Executive Order B-37-17 *Making Water Conservation a California Way of Life*.

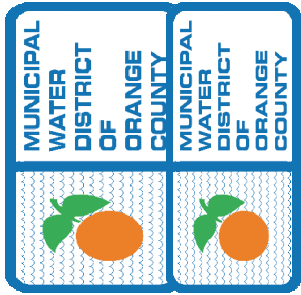
<b>Budgeted (Y/N):</b> n/a	Budgeted amount: \$0	Core _x_	Choice __
<b>Action item amount:</b> n/a	Line item:		
<b>Fiscal Impact (explain if unbudgeted):</b> None			



- On April 19, 2017 the MWDOC Board of Directors adopted a support position on AB 1654 (Rubio) and an oppose position on AB 1668 (Friedman).
- After all these bills were heard in the Senate Natural Resources and Water Committee on July 11, they were amended to intent language the Chair recommended that both sides come together during the summer recess and work towards a consensus-based approach on the bill language.
- On August 21, 2017, AB 1668 (Friedman), SB 606 (Skinner & Hertzberg) were amended with identical language loosely based on stakeholder feedback from the Senate Committee. This newest framework language is much more consistent with the Governor's recommendations, and still leaves areas of concern regarding recycled water credits, indoor water-use standard, and outdoor landscape water-use standard. Assemblywoman Rubio declined to have this language amended into AB 1654.

MWDOC's Sacramento advocate Syrus Devers will provide an oral update on the status of both the long term conservation legislation and SB 623 (Monning).

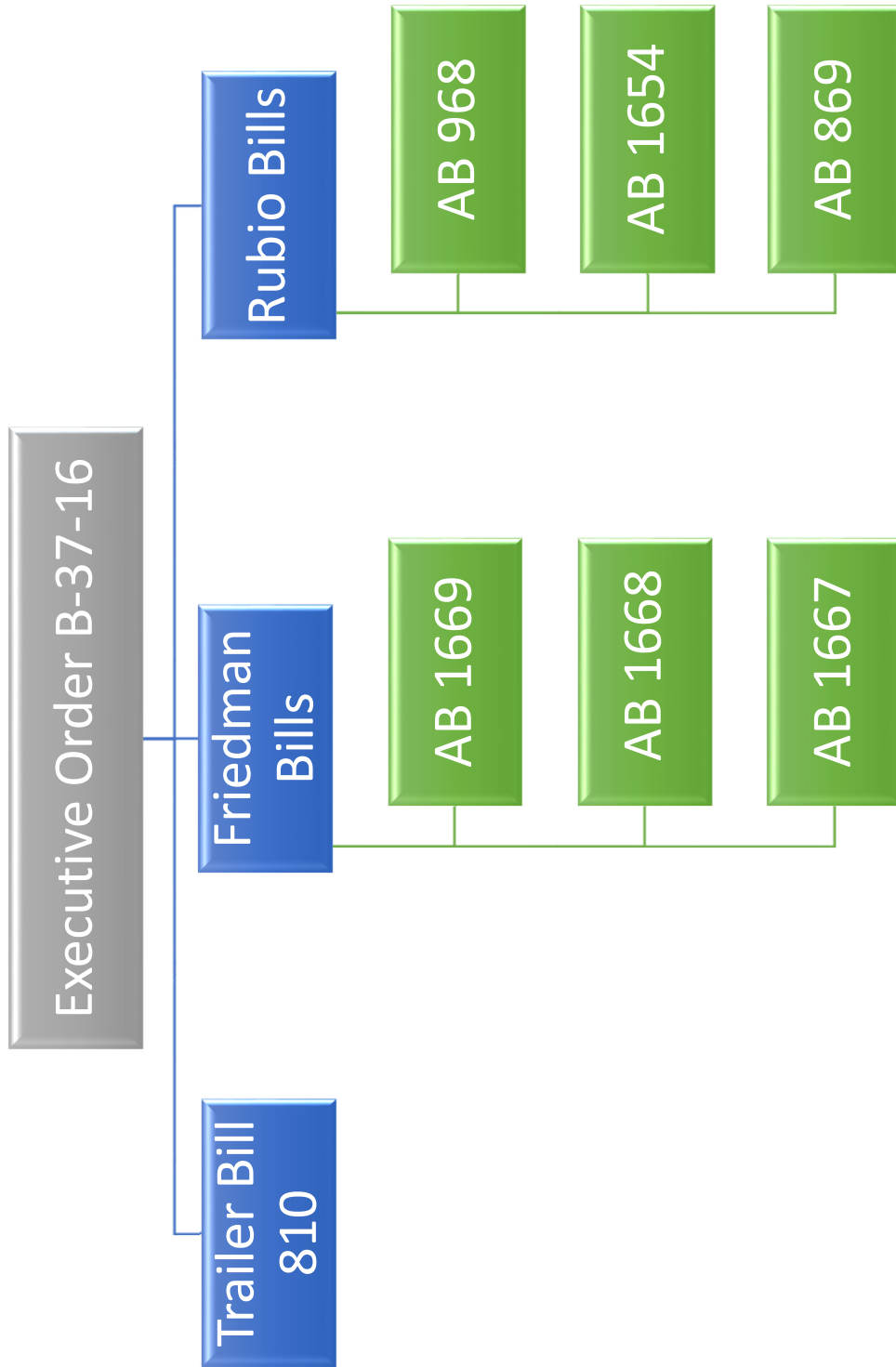
The full, amended text of AB 1668 can be found [here](#), SB 606 [here](#), and SB 623 [here](#).



# Update on Executive Order B-37-16 “Making Water Conservation a California Way of Life”

Municipal Water District of Orange  
County

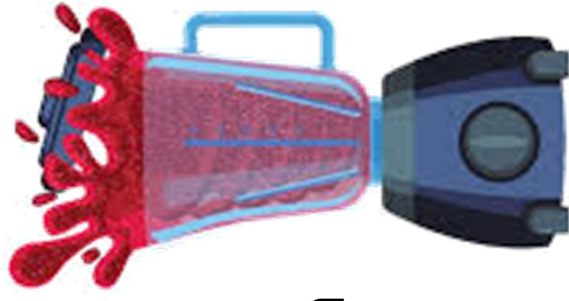
## Initial Legislation



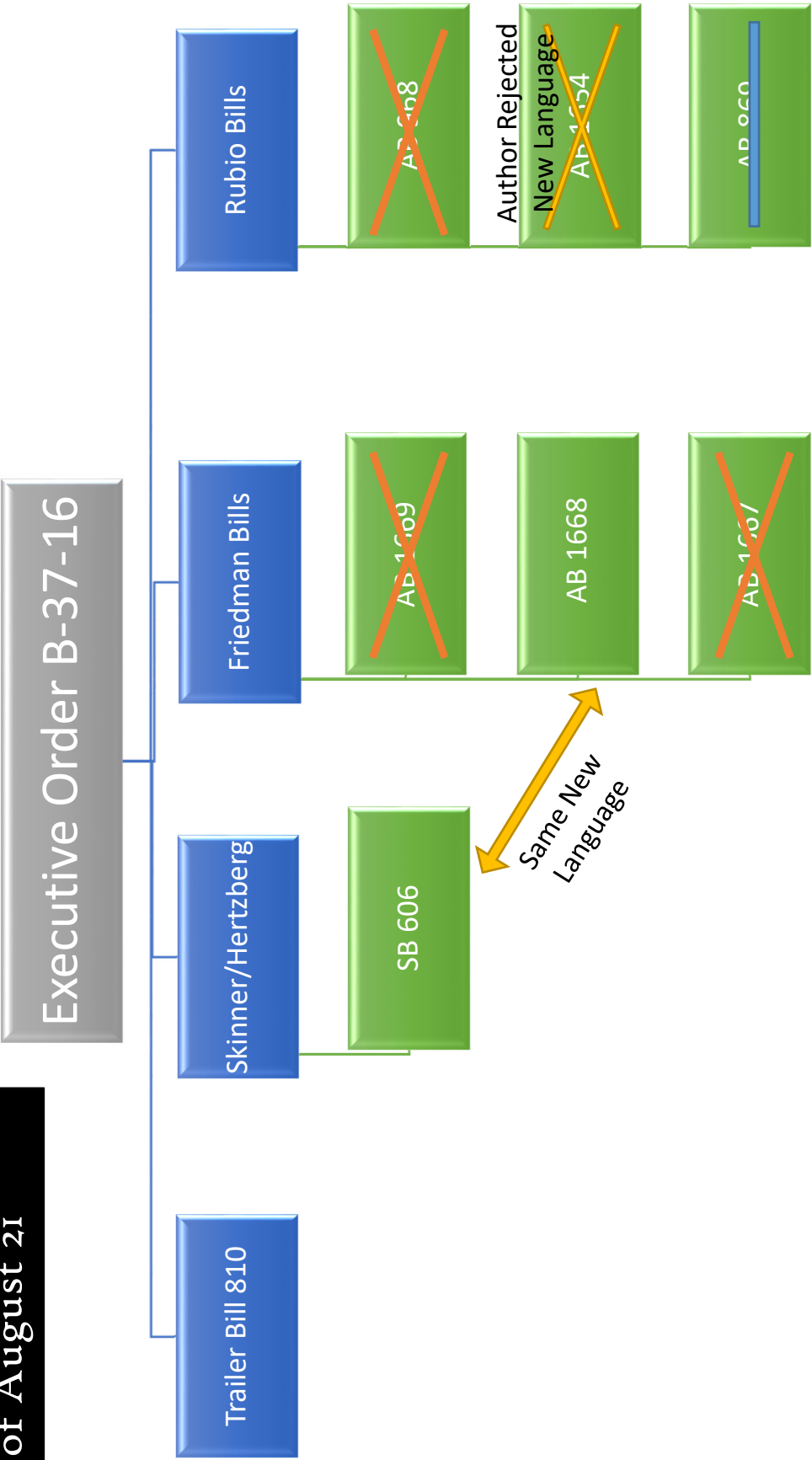


# Process

- 💧 July 11 - bills were heard in the Senate Natural Resources and Water Committee
- 💧 Chair recommended that both sides come together during the summer recess
- 💧 Work towards a consensus-based approach on the bill language



Current Legislation  
as of August 21



## New Language Areas of Concern

- 💧 Recycled water credits
- 💧 Indoor water-use standard
- 💧 Outdoor landscape water-use standard





# Discussion & Questions

# Backup Slides

# Principles for development and implementation of Long-Term WUE Standards

- Water suppliers have primary responsibility for meeting standards and retain flexibility for water supply portfolio
- Advance the state's goals to mitigate and adapt to climate change
- Standards should acknowledge the shade, air quality, and heat-island reduction benefits provided by trees through support of water-efficient irrigation practices to keep trees healthy
- The state should identify opportunities for streamlined reporting, eliminate redundant data submissions and incentivize open access to data collected by urban and agricultural water suppliers





# Setting Water Use Objective

***Indoor Water Use Standard +  
Outdoor Water Use Standard +  
Water Loss Standard =  
Supplier Water Use Objective***

Water suppliers will also calculate **actual** urban water use by subtracting water delivered to the CII sector from total water production:

***If Water Use Objective  $\geq$  Total Water Production - CII Deliveries an agency is in compliance***



# Indoor & Outdoor Standards

***Residential Indoor Water Use Standard =***  
*(Service area population) x (residential indoor standard) x (number of days in a year)*

## ***Outdoor Irrigation Standard***

The proposed outdoor irrigation water use standard is defined as a percentage of reference evapotranspiration (ET<sub>o</sub>) based on the year of development

Table 3-1 Existing SB X7-7 Standards for Outdoor Water Use

Category		% of ET <sub>o</sub>
Residential Landscape by Parcel Development Date	Before 2010	0.8
	Between 2010 and 2015	0.7
	After 2015	0.55
Commercial Landscape		0.45
Landscapes Irrigated by Recycled Water		1.0
Special Landscape Areas (e.g., Parks and Fields)		1.0





**ACTION ITEM**  
September 5, 2017

**TO:** Board of Directors

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

Robert Hunter  
General Manager

Staff Contact: Tiffany Baca

**SUBJECT:** Request to approve a refreshed MWDOC logo design

**STAFF RECOMMENDATION**

---

Staff recommends the Board of Directors select and approve an updated, modernized MWDOC logo design. Two designs have been provided for consideration.

**COMMITTEE RECOMMENDATION**

---

Committee recommends (To be determined at Committee Meeting)

**SUMMARY**

---

Like most marketing collateral and branding materials, a company logo has a certain shelf life and should be refreshed over time in order to maintain brand recognition, and, keep the organization's image modern. Logo updates, even if very subtle, are necessary to keep an organization's identity fresh in the eyes of its stakeholders.

**BACKGROUND**

---

The original MWDOC logo was adopted in 1971 and is still being used today. In 2011, an attempt to update the logo was made however, the revitalized logo design never resonated with the MWDOC staff or Board at the time, and the original logo was still being used regularly on letterhead, marketing materials, reports, business cards and more.

<b>Budgeted (Y/N):</b>	Budgeted amount:
<b>Action item amount:</b>	Line item:
<b>Fiscal Impact (explain if unbudgeted):</b>	

## **Refresh vs. Redesign**

Different from a redesign, which typically is part of a rebranding effort that often accompanies a name change, a refresh maintains the integrity of the original or previous logo.

MWDOC has been doing business since 1951 and the original logo is a part of the MWDOC brand. It is certainly recognizable throughout the water industry, and will be in circulation into the future through a variety of past partnership endeavors, print and electronic materials on the internet, historic reports and more. A refresh will update the logo, without becoming unidentifiable to our stakeholders. Brands like Coca-Cola update or refresh their logo almost every year however, throughout the world, the logo that represents the brand which continues to be subtly refreshed, remains recognizable.

For the MWDOC brand, the element of the logo that remains identifiable in all past variations is the orange. While not all logos visually relay what the product or service is that is being offered (e.g. Nike's swoosh, McDonalds M, Walmart's star), it makes sense to bring the water element back into the refreshed design.

## **Complexity**

In our heavily digital world, minimalism has gained a significant amount of attention, not just because 'simple' looks good, but because it works and it makes sense across a wide variety of platforms and media. Getting rid of the excess details translates better electronically, and is much easier to recognize than a busier design. Complex logos are also very difficult to scale down and are nearly impossible to read when cropped to a small profile picture box, or made into an icon.

## **Cost**

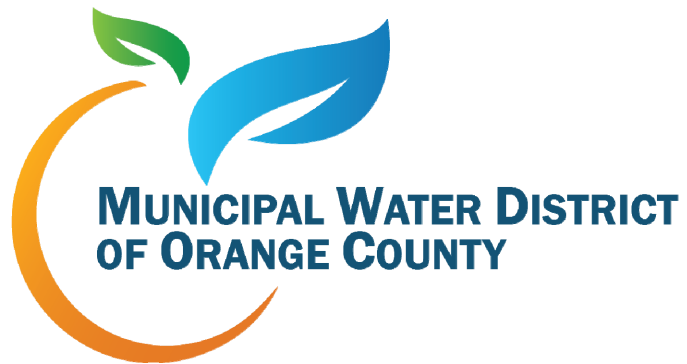
Staff solicited bids from a total of 18 vendors for this logo refresh project, 12 responses were received. Bids that were received and considered reasonable came in at an average price of \$2100, the lowest bid being \$300, the highest \$15,000. When staff developed a variety of mockup designs to relay the visual expectations of the project, it was determined that the final design could be completed in-house at no additional cost to MWDOC.

## **Designs offered for consideration**

Two final designs are being presented for Board consideration. Variations of the logo have been represented so that the Board can see the different ways it can be manipulated and still be recognizable as the MWDOC brand.



Option 1.



Option 2.





**INFORMATION ITEM**

September 5, 2017

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

**FROM: Robert Hunter, General Manager**

Staff Contact: Harvey De La Torre  
Christopher Lingad

**SUBJECT: Metropolitan's Assessed Valuation for MWDOC and Orange County for Fiscal Year 2017-18**

**STAFF RECOMMENDATION**

---

Staff recommends the Planning & Operations Committee to receive and file the information provided below.

**COMMITTEE RECOMMENDATION**

---

Committee recommends (To be determined at Committee Meeting)

**REPORT**

---

This letter reports Metropolitan's (MET) certified assessed valuations for Fiscal Year 2017-18, as of August 15, 2017, which is used to determined member agency percentage participation, vote and director entitlement.

MWDOC's certified assessed valuation for FY 2017-18 totals \$467,416,621,748, a 6.4% increase from FY 2016-17 assessed valuation. MWDOC's assessed valuation accounts for 17.15% of the total within MET's service area, an increase of 0.06% from last year. MET calculates vote entitlement and director entitlement based on the certified assessed valuations. Therefore, MWDOC's vote entitlement is 46,742 (which results in a voting share of 17.15%) and an entitlement of four Directors.

<b>Budgeted (Y/N): N</b>	Budgeted amount: None	Core <u>  X  </u>	Choice <u>    </u>
<b>Action item amount: N/A</b>	Line item:		
<b>Fiscal Impact (explain if unbudgeted):</b>			

For all of Orange County, MWDOC, Anaheim, Santa Ana, and Fullerton have a combined certified assessed valuation for FY 2017-18 of \$554,196,005,436. This provides Orange County a voting share of 20.34% at MET. Thus giving Orange County a total entitlement of seven MWD Directors (4 - MWDOC, 1 – Anaheim, 1 – Santa Ana, and 1 - Fullerton. MWD's Board of Directors remain at 38.

**Attachment: Metropolitan staff letter on Item 5A: *Report on list of certified assessed valuations for fiscal year 2017/18 and tabulation of assessed valuations, percentage participation, and vote entitlement of member agencies as of August 15, 2017***



- **Board of Directors**  
***Finance and Insurance Committee***

8/15/2017 Board Meeting

5A

---

## Subject

Report on list of certified assessed valuations for fiscal year 2017/18 and tabulation of assessed valuations, percentage participation, and vote entitlement of member agencies as of August 15, 2017

---

## Executive Summary

Every year, Metropolitan receives the certified assessed valuation from the county auditors for the six counties where Metropolitan provides water service. All county auditors have until the 15<sup>th</sup> day of August to provide the certified assessed valuation to Metropolitan, which is why Metropolitan's Board holds its August regular and committee meetings on the third week of the month. This year, Metropolitan received the last of the counties' information on August 9, 2017.

Based on the information received, staff reports that certified assessed valuations for Metropolitan's six-county service area totaled \$2.7 trillion for fiscal year (FY) 2017/18. The percentage participation and vote entitlement by member agencies as of August 15, 2017 have been updated accordingly and are reported in this letter and in [Attachment 1](#).

---

## Description

Metropolitan uses a weighted voting system based on assessed valuation. Under Section 55 of the Metropolitan Water District Act, each member agency gets one vote for every \$10 million of assessed valuation of property taxable for Metropolitan's purposes. Under Section 52 of the Metropolitan Water District Act, assessed valuation is also used to determine how many representatives an agency has on the Metropolitan Board. Each member agency is guaranteed at least one board member, and may appoint an additional representative for each 5 percent of assessed valuation of property that Metropolitan holds within the entire district. As part of the Metropolitan Water District Act, the process of determining assessed valuation is made each August, based on submissions from the auditors of each of the six counties in the Metropolitan service area.

This letter reports the certified assessed valuations for FY 2017/18 and member agency percentage participation, vote and director entitlement ([Attachment 1](#)), which become effective for all purposes at the August 15, 2017 regular Board meeting.

The certificates of the county auditors for the six counties covering Metropolitan's area, certifying the FY 2017/18 assessed valuations of all property used for calculating Metropolitan's FY 2017/18 vote and director entitlement, are on file in the office of the Controller.



The assessed valuations by the respective county auditors are as follows:

County	Assessed Valuations Taxable by Metropolitan
Los Angeles	\$ 1,327,581,241,391
Orange	557,081,861,692
Riverside	172,900,950,741
San Bernardino	104,206,656,889
San Diego	479,685,194,457
Ventura	99,174,964,981
<b>Total:</b>	<b>\$ 2,740,630,870,151</b>

A comparison of FY 2016/17 and FY 2017/18 assessed valuations and the percentage of change ([Attachment 2](#)), and a comparison of FY 2016/17 and FY 2017/18 vote entitlement and the percentage change ([Attachment 3](#)) are attached for your information.

## Policy

Metropolitan Water District Act Section 52: Additional Directors

Metropolitan Water District Act Section 55: Voting by Board

Metropolitan Water District Act Section 305: Certification of Assessed Valuations; Segregation of Valuations

## Fiscal Impact

None

  
 Gary Breau  
 Chief Financial Officer/  
 Assistant General Manager

8/10/2017  
Date

  
 Jeffrey Kightlinger  
 General Manager

8/10/2017  
Date

**Attachment 1 – Assessed Valuations, Percentage Participation, and Vote and Director Entitlement of Member Public Agencies as of August 15, 2017**

**Attachment 2 – Comparison of Assessed Valuations for the Fiscal Years 2016/17 and 2017/18**

**Attachment 3 – Comparison of Vote Entitlement Percentage for the Fiscal Years 2016/17 and 2017/18**

**The Metropolitan Water District of Southern California  
Assessed Valuations, Percentage Participation, and  
Vote and Director Entitlement of Member Public Agencies  
As of August 15, 2017**

<u>Member Agency</u>	<u>*Assessed Valuation Amount Certified</u>	<u>Percent of Total</u>	<u>** Vote Entitlement</u>	<u>*** Director Entitlement</u>
Anaheim	\$ 42,993,014,051	1.58%	4,299	1
Beverly Hills	31,895,476,543	1.17%	3,190	1
Burbank	22,990,151,288	0.84%	2,299	1
Calleguas MWD	98,445,631,526	3.61%	9,845	1
Central Basin MWD	138,379,271,962	5.08%	13,838	2
Compton	4,234,240,661	0.16%	423	1
Eastern MWD	73,237,701,420	2.69%	7,324	1
Foothill MWD	17,566,634,780	0.64%	1,757	1
Fullerton	18,756,660,502	0.69%	1,876	1
Glendale	30,029,644,450	1.10%	3,003	1
Inland Empire Utilities Agency	103,526,344,608	3.80%	10,353	1
Las Virgenes MWD	24,174,811,240	0.89%	2,417	1
Long Beach	47,696,807,330	1.75%	4,770	1
Los Angeles	554,948,425,775	20.37%	55,495	5
MWD of Orange County	467,416,621,748	17.15%	46,742	4
Pasadena	28,739,699,319	1.05%	2,874	1
San Diego County Water Authority	476,434,806,733	17.48%	47,643	4
San Fernando	1,840,290,971	0.07%	184	1
San Marino	6,210,380,782	0.23%	621	1
Santa Ana	25,029,709,135	0.92%	2,503	1
Santa Monica	34,217,426,863	1.26%	3,422	1
Three Valleys MWD	65,103,319,300	2.39%	6,510	1
Torrance	27,551,578,679	1.01%	2,755	1
Upper San Gabriel Valley MWD	98,685,468,265	3.62%	9,869	1
West Basin MWD	186,639,004,964	6.85%	18,664	2
Western MWD	98,209,800,386	3.60%	9,821	1
<b>TOTAL ASSESSED VALUATIONS WITHIN METROPOLITAN</b>	<b>\$ 2,724,952,923,281</b>	<b>100%</b>	<b>272,497</b>	<b>38</b>

Percentage may not foot due to rounding.

\* The above valuations include only those which have been certified by the County Auditors, in accordance with Section 305 of the Metropolitan Water District Act, Statutes of 1969, as amended. The certified valuations have been reduced to reflect Homeowners' Property Exemptions and do not include areas excluded from Metropolitan

\*\* Each member of the Board shall be entitled to cast one vote for each ten million dollars (\$10,000,000) of assessed valuation of property taxable for district purposes, in accordance with Section 55 of the Metropolitan Water District Act.

\*\*\* In addition to one representative, pursuant to Section 52 of the MWD Act (Chapter 781, Stats. 1998), each member agency shall be entitled to one additional representative for each full five percent of the assessed valuation of property taxable for Metropolitan purposes.

**The Metropolitan Water District of Southern California**  
**Comparison of Assessed Valuations for the Fiscal Years 2016/17 and 2017/18**

<b>Member Agency</b>	<b>FY 2016/17 Assessed Valuation</b>	<b>FY 2017/18 Assessed Valuation</b>	<b>Percentage Change</b>
<b>Los Angeles County:</b>			
Beverly Hills	\$ 29,253,485,577	\$ 31,924,866,743	9.1%
Burbank	21,452,632,988	23,086,224,888	7.6%
Glendale	28,437,521,625	30,167,746,050	6.1%
Los Angeles	523,381,806,364	557,325,563,020	6.5%
Pasadena	26,810,764,574	28,864,758,519	7.7%
San Marino	5,848,079,789	6,230,512,782	6.5%
Santa Monica	33,019,858,234	34,284,876,041	3.8%
Long Beach	45,773,784,614	47,961,064,620	4.8%
Torrance	25,982,266,810	27,710,557,203	6.7%
Compton	4,076,557,524	4,287,027,122	5.2%
West Basin MWD	176,154,508,058	187,426,614,572	6.4%
Three Valleys MWD	62,542,010,963	65,606,413,009	4.9%
Foothill MWD	16,766,445,371	17,681,459,980	5.5%
Central Basin MWD	133,011,675,796	139,431,794,681	4.8%
Las Virgenes MWD	23,159,755,987	24,274,197,515	4.8%
Upper San Gabriel Valley MWD	93,794,384,405	99,402,922,844	6.0%
San Fernando	1,790,541,423	1,853,911,379	3.5%
<b>Total Los Angeles County</b>	<b>1,251,256,080,102</b>	<b>1,327,520,510,968</b>	<b>6.1%</b>
<b>Orange County:</b>			
Anaheim	41,298,748,250	43,210,845,651	4.6%
Santa Ana	23,830,512,013	25,176,439,665	5.6%
Fullerton	17,962,253,618	18,875,415,502	5.1%
MWD of Orange County	441,426,391,496	469,819,160,874	6.4%
<b>Total Orange County</b>	<b>524,517,905,377</b>	<b>557,081,861,692</b>	<b>6.2%</b>
<b>Riverside County:</b>			
Eastern MWD	69,569,840,670	73,914,146,427	6.2%
Western MWD	93,526,539,340	98,986,804,314	5.8%
<b>Total Riverside County</b>	<b>163,096,380,010</b>	<b>172,900,950,741</b>	<b>6.0%</b>
<b>San Bernardino County:</b>			
Inland Empire Utilities Agency	97,833,881,115	104,206,656,889	6.5%
<b>San Diego County:</b>			
San Diego County Water Authority	451,903,253,245	479,679,613,984	6.1%
<b>Ventura County:</b>			
Calleguas MWD	94,716,938,804	99,174,964,981	4.7%
<b>Total Within Metropolitan</b>	<b>2,583,324,438,653</b>	<b>2,740,564,559,255</b>	<b>6.1%</b>
<b>Excluded Areas</b>	<b>61,745,437</b>	<b>66,310,896</b>	<b>7.4%</b>
<b>*Total Taxable by Metropolitan</b>	<b>\$ 2,583,386,184,090</b>	<b>\$ 2,740,630,870,151</b>	<b>6.1%</b>

**The Metropolitan Water District of Southern California**  
**Comparison of Vote Entitlement Percentage for the Fiscal Years 2016/17 and 2017/18**

<b>Member Agency</b>	<b>FY 2016/17</b>		<b>FY 2017/18</b>		<b>Change</b>	
	<b>Vote Entitlement</b>	<b>Vote Entitlement Percentage</b>	<b>Vote Entitlement</b>	<b>Vote Entitlement Percentage</b>	<b>Vote Entitlement</b>	<b>Vote Entitlement Percentage</b>
Anaheim	4,108	1.60%	4,299	1.58%	191	-0.02%
Beverly Hills	2,922	1.14%	3,190	1.17%	268	0.03%
Burbank	2,136	0.83%	2,299	0.84%	163	0.01%
Calleguas MWD	9,400	3.66%	9,845	3.61%	445	-0.05%
Central Basin MWD	13,194	5.14%	13,838	5.08%	644	-0.06%
Compton	402	0.16%	423	0.16%	21	0.00%
Eastern MWD	6,889	2.68%	7,324	2.69%	435	0.00%
Foothill MWD	1,665	0.65%	1,757	0.64%	92	0.00%
Fullerton	1,784	0.69%	1,876	0.69%	92	-0.01%
Glendale	2,830	1.10%	3,003	1.10%	173	0.00%
Inland Empire Utilities Agency	9,715	3.78%	10,353	3.80%	638	0.02%
Las Virgenes MWD	2,306	0.90%	2,417	0.89%	111	-0.01%
Long Beach	4,551	1.77%	4,770	1.75%	219	-0.02%
Los Angeles	52,096	20.29%	55,495	20.37%	3,399	0.08%
MWD of Orange County	43,900	17.10%	46,742	17.15%	2,842	0.06%
Pasadena	2,668	1.04%	2,874	1.05%	206	0.02%
San Diego County Water Authority	44,863	17.47%	47,643	17.48%	2,780	0.01%
San Fernando	178	0.07%	184	0.07%	6	0.00%
San Marino	583	0.23%	621	0.23%	38	0.00%
Santa Ana	2,368	0.92%	2,503	0.92%	135	0.00%
Santa Monica	3,295	1.28%	3,422	1.26%	127	-0.03%
Three Valleys MWD	6,203	2.42%	6,510	2.39%	307	-0.03%
Torrance	2,582	1.01%	2,755	1.01%	173	0.01%
Upper San Gabriel Valley MWD	9,307	3.62%	9,869	3.62%	562	0.00%
West Basin MWD	17,536	6.83%	18,664	6.85%	1,128	0.02%
Western MWD	9,275	3.61%	9,821	3.60%	546	-0.01%
<b>Total</b>	<b>256,756</b>	<b>100%</b>	<b>272,497</b>	<b>100%</b>	<b>15,741</b>	<b>0.00%</b>

Percentages may not foot due to rounding.



# MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

*Fiscal Year 2016-17*

## ***Sole Source Procurement Justification for Projects under \$25,000\****



- A. Supplier Information/Name of Company and Prime Contact at the Supplier and at MWDOC: Tom Epperson from Tetra Tech
- B. Contract awards to Supplier over prior 36-months: None
- C. Product(s) or Service(s) to be provided and Deliverables: Provide hydraulic assistance in evaluating options for changes at service connection CM-1 to provide water service to Newport Beach and Laguna Beach County Water District (LBCWD) without causing water quality problems in a MET pipeline.
- D. Justification Definition\*\*: Most qualified to provide services based on his recent work on similar issues with Newport Beach and LBCWD.
- E. Narrative Explanation: Over the past six months, Tom Epperson and Tetra Tech have been providing hydraulic analyses on the concurrent ability to deliver MET water and groundwater at the same time to LBCWD through Newport Beach's water system. The solution being contemplated at this time by LBCWD will work for them and does not require MET to make any changes, but it may not be the best solution when considering the impact on all parties including MET over the long run. MWDOC staff desire to examine several other options that might better meet the needs of all parties. Since Tom is familiar with the recent hydraulic work he completed for LBCWD he is able to bring that information to MWDOC to examine a broader range of solutions.
- F. Budget Line Item Reference & Amount: 02-2010-7010, time and materials basis not to exceed \$10,000
- G. Core or Choice designation: Core

H. Signature/Approvals:

*Karl W. Jickel*

*8-25-17*

Requestor

Date

*Ruffa*

*8-25-17*

General Manager

Date

\* Projects over \$25,000 must go to a Committee of the Board.

\*\* Possible justifications include but are not limited to: Only qualified bidder; Proprietary item; Urgent necessity; Bid process did not produce competitors; Governmental agency, association or Utility; Prior phase of professional services contract completed successfully by same Consultant; and Special technical expertise by Consultant for tasks desired.

# Item 8 MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Fiscal Year 2016-17

## *Sole Source Procurement Justification*



- A. Supplier Information/Name of Company and Prime Contact at the Supplier and at MWDOC:  
Raftelis Financial Consultants, Inc.
- B. Contract awards to Supplier over prior 36-months: Raftelis conducted MWDOC's Rate Structure Development in 2016 at a cost of \$64,900.
- C. Product(s) or Service(s) to be provided and Deliverables:  
Analysis and report of results of five-year post-monitoring of Budget Based Tiered Rate DWR Grant. A requirement of the grant is that an evaluation of the five years following implementation of the grant be prepared and submitted to DWR. The work contracted for will fulfill this Grant requirement.
- D. Justification Definition\*\*  
Sanjay Guar has been providing assistance on this project back to the project inception in 2008 and was selected under a Statement of Qualifications from among three consultants to provide assistance on the rate structure issues when he moved to Raftelis in 2010; he has the best background and expertise to complete this work and has worked with many of our agencies in implementing Budget Based Tiered Rates.
- E. Narrative Explanation:  
In August 2017, staff took this item to the Board for several reasons and the Board approved the contract. In completing the internal contracts to get the consultant underway, this contract appears to be considered as a Sole Source contract, even though the selection of Raftelis in 2010 was completed based on evaluations of Statements of Qualification. The following should be noted:
- The contract is for more than \$25,000 (thus it went to the Board for approval in Aug 2017)
  - In the context of it being a NEW contract in 2017, it is being treated as a Sole Source Contract, even though the selection of Raftelis in 2010 was based on Statements of Qualifications from among three consultants.
  - Legal Counsel suggested that the cleanest approach was to seek Board approval (which staff did).
  - Grant funds are available to cover the cost of this contract, so it is not resulting in a cost against the General Funds of the District
  - The justification for the Sole Source basis of the contract is provided below

Due to the short time between the Grant Advertisement and the Grant Submittal date in 2008, Red Oak Consulting and Sanjay Guar were provided a sole source contract in 2008 to provide assistance to MWDOC and its agencies to prepare the grant proposal to DWR. MWDOC was successful in getting selected for the Grant. The State froze the grant for about 2 years due to the State's financial troubles. During this period Sanjay moved from Red Oak Consulting to Raftelis Financial Consultants. In 2010 MWDOC requested Statements of Qualifications for on-going assistance for the Grant work; we received three proposals and divided the work between Red Oak Consultants and Raftelis Financial Consultants. The 2010 contract with Raftelis in the amount of \$36,000 provided for assistance in completing the grant, the grant report and for setting up the process for the five-year monitoring following completion of the grant (at that time we were anticipating setting up the five year monitoring,

\* Projects over \$25,000 must go to a Committee of the Board.

\*\* Possible justifications include but are not limited to: Only qualified bidder; Proprietary item; Urgent necessity; Bid process did not produce competitors; Governmental agency, association or Utility; Prior phase of professional services contract completed successfully by same Consultant; and Special technical expertise by Consultant for tasks desired.



but preparing five 1-year monitoring reports to DWR that could be completed by staff). Thus, the 2010 contract with Raftelis covered both grant assistance and for setting up the 5-year monitoring work as required under the DWR Grant. Approximately \$23,000 remained from the 2010 contract as of 2012 and no additional work was completed by Raftelis after 2012. Each year, MWDOC carried over the remaining funds, but we did not seek time extensions or keep the 2010 contract active. The Grant Report, documenting the work completed under the Grant, was not completed until 2015 and we were aware that at some point we would need to complete the five year monitoring report. Since we were close to being five years post implementation, we waited until 2017 to proceed with the monitoring.

The five year monitoring process was started in 2017 by way of a meeting with Raftelis and the Grant Participants to determine how best to complete the monitoring. It was noted that five years had passed since the three grant implementers had converted to Budget Based Tiered Rates, so we could now complete a single analysis and complete all five years (assuming it was acceptable to DWR). Various options to complete the monitoring were discussed and a recommendation on the approach was made by the Participants. Staff discussed the options with DWR to seek their input on the five-year monitoring. The DWR contract was not specific on the monitoring approach so DWR indicated we could choose whichever method we thought was best and they indicated it was acceptable to cover all five years in one report. Based on that, Raftelis provided a NEW proposal to complete the monitoring work at an estimated cost of \$41,721. The NEW scope was required because 7 years had passed since the original scope, hourly rates had changed and because the type of analysis for the monitoring decided in 2017 was different than what was anticipated in 2010. Because so much time had passed in the process from the original consultant selection made in 2010, staff took the conservative path of taking this to the Board as a NEW sole source contract. The Board approved the contract in August.

At this time, staff is completing the internal documents which require this sole source justification to be provided to the Board even though the Board already approved the contract. It is being completed at this time as part of our internal contracting procedures.

F. Budget Line Item Reference & Amount: 02-21-7010 \$41,721

G. Core or Choice designation: Choice

H. Signature/Approvals:



8-25-17

Requestor, Karl W. Seckel

Date



8-25-17

Robert J. Hunter, General Manager

Date

\* Projects over \$25,000 must go to a Committee of the Board.

\*\* Possible justifications include but are not limited to: Only qualified bidder; Proprietary item; Urgent necessity; Bid process did not produce competitors; Governmental agency, association or Utility; Prior phase of professional services contract completed successfully by same Consultant; and Special technical expertise by Consultant for tasks desired.

<b>ENGINEERING &amp; PLANNING</b>	
<b>Doheny Desalination Project</b>	<p><b><u>UPDATED - Doheny Desal Project</u></b></p> <p>South Coast WD is continuing to move the project forward, as follows:</p> <p><b><u>STATUS INFORMATION BY TASK ORDER</u></b></p> <p><b>Task Order # 1 – Program Management</b></p> <ul style="list-style-type: none"> <li>• DWR Water Desalination Grant Application is due September 1, 2017.</li> <li>• Work continues on the MWD LRP Application.</li> </ul> <p><b>Task Order # 5A – Public Outreach Phase 2</b></p> <ul style="list-style-type: none"> <li>• The SCWD Water Reliability Public Working Group held a third meeting on August 22.</li> </ul> <p><b>Task Order # 7 – Project Delivery Analysis Project Delivery Workshop 5</b></p> <ul style="list-style-type: none"> <li>• To Be Determined.</li> </ul> <p><b>Task Order # 8B– Environmental Impact Report</b></p> <ul style="list-style-type: none"> <li>• -Sept 2017: 2nd NOP Scoping Meeting to discuss latest offshore geophysics and slant well implications</li> <li>• November 13, 2017: Draft EIR Released for Public Comments</li> <li>• April 30, 2018: SCWD Board of Directors Final EIR Certification</li> <li>• June 4, 2018: End of NOD 30-day Period</li> </ul> <p><b>Task Orders # 10 &amp; 12– Geophysical Survey &amp; Hydrology Reports</b></p> <ul style="list-style-type: none"> <li>• Final Offshore Geophysical and Hydrology Reports are currently being reviewed by SCWD</li> </ul> <p><b>Task Order # 13 – Value for Money Analysis (VfM)</b></p> <ul style="list-style-type: none"> <li>• Final Value for Money (VfM) Report was submitted to SCWD August 15, 2017.</li> </ul> <p><b>Task Order # 14 – Updated Slant Well Modeling</b></p> <ul style="list-style-type: none"> <li>• Draft Report – September 27, 2017.</li> <li>• Final Report – October 11, 2017.</li> </ul> <p><b>Task Order # 15 – Alternative Power Supply Analysis</b></p> <ul style="list-style-type: none"> <li>• Final Alternative Power Supply Analysis by August 31, 2017</li> </ul> <p>Karl Seckel has been asked to provide information at the August 30 meeting of the South Coast Water District Citizens Reliability Meeting on the potential to expand the Emergency Services Contract for groundwater to be delivered to</p>



	South Orange County during outages of the MET system. MWDOC has continued to work with IRWD on their ability to extend the existing Emergency Services Contract beyond 2030 and to increase the amount of the contract. It appears from IRWD that an extension is possible but that the amount of emergency capacity may have to be augmented by way of a pump-in to the East Orange County Feeder No. 2. MWDOC is also working on what is required to utilize the East Orange County Feeder No. 2 for such a project.
<b>Poseidon Resources</b>	<b>(Nothing New)</b> Poseidon is still working on the permitting process. The public review period for the Draft Supplemental Environmental Impact Report (EIR) was extended to July 27, 2017. Poseidon anticipates a decision by the State Lands Commission on October 19 and then will continue working their way towards the Santa Ana Regional Water Quality Control permit and then on to the California Coastal Commission, likely in the first half of 2018. OCWD is still working on the system integration concepts.
<b>Orange County Reliability Study</b>	<b>(Nothing New)</b> CDM-Smith and MWDOC staff are in the process of completing follow-up work to the 2016 study. The work includes modeling of more recently available information, updating Colorado River assumptions, assessment of additional scenarios for the Huntington Beach Desalination Plant, and assessment of the value of new storage. The work is expected to be completed in the next few months.
<b>OC-28 Flow Metering Issue with MET</b>	MWDOC, MET and OCWD have exchanged information and MWDOC and OCWD are developing information to present to MET regarding the flow metering problems from last summer at OCWD's OC-28 service connection.
<b>Service Connection CM-1 Cost Issues with MET</b>	Over the past six months, Tom Epperson and Tetra Tech have been providing hydraulic analyses on the concurrent ability to deliver MET water and groundwater at the same time to LBCWD through Newport Beach's water system. The solution being contemplated at this time by LBCWD will work well and does not require MET to make any changes, but there may be times when water quality issues arise in the MET system. It may be advantageous to examine several other options that can eliminate the water quality problems in the MET pipeline. Staff will be utilizing the services of Tetra Tech to help examine a broader range of solutions.
<b>North and Central O.C. Integrated Regional Watershed Management Area</b>	Charles Busslinger has been participating in weekly ad hoc committee meetings to develop the goals, objectives, and strategies for the North and Central IRWM Plan. The draft goals, objectives, and strategies will be presented to stakeholders for comments on August 29, 2017. The final draft plan is anticipated by the end of Summer 2017.

<b>San Juan Basin Authority</b>	<p>Santa Margarita WD continues working on the San Juan Watershed Project. Phase 1, which is being designed to capture wet and dry weather runoff, with subsequent phases looking to introduce recycled water into San Juan Creek for Indirect Potable Reuse. The relatively recent discovery of a geological rock formation (ancient landslide) near Stonehill Drive appears to be a partial barrier to sub-surface flow. This impacts the proposed location of the rubber dams and the ability for Phase I to capture and percolate water into the basin resulting in the estimated water capture for Phase I being reduced from 1,700 AFY to 700 AFY. The budget for Phase I has therefore increased to \$20 million (approximately \$1,400 to \$1,600 per AF). The Draft Environmental Impact Report (DEIR) is now scheduled for public review in August 2017. A new video is available at: <a href="http://sanjuanwatershed.com/project-overview-video/">http://sanjuanwatershed.com/project-overview-video/</a></p>
	<p>Karl Seckel and Charles Busslinger attended the South Orange County Reliability Summit sponsored by the San Diego Regional Water Quality Control Board. The purpose of the Summit was to bring together stakeholders to discuss:</p> <ul style="list-style-type: none"> <li>• San Juan Watershed Project</li> <li>• Doheny Desal Project</li> <li>• Direct Potable Reuse</li> <li>• Other basin issues</li> </ul> <p>The meeting resulted in a good discussion of the issues facing these projects. The Regional Board is attempting to provide assistance towards the development of these projects while complying with basin regulations.</p>
	<p>Karl Seckel, Francisco Soto and MWDOC Director Sat Tamaribuchi attended the OCBC Infrastructure Committee to present information on the WEROC Hazard Mitigation Study and to participate in the discussion on the California WaterFix presented by Brandon Goshi of MET.</p>
	<p>Karl Seckel, Charles Busslinger and Harvey De La Torre discussed emergency storage in the MET system with Bob Harding and Edgar Fandialan at MET to find out when they may be developing new information for the MET system. They are expecting to provide an updated report after the first of the year. They reported that MET, DWR and LADWP are working jointly on concepts involving the duration of outages for impacts from the San Andreas Fault.</p>
	<p>Karl Seckel and MWDOC Director Megan Yoo Schneider attended the August meeting of the South Orange County Integrated Watershed Management Plan. A report was provided on the overall progress of the Grants received since the formation of this group in 2004. Almost \$36 M in grants have been provided that have led to local projects in the amount of \$216 M through the process. MWDOC has received about \$8 M in grant funding for WUE efforts.</p>

	<p>Karl Seckel, Rob Hunter, Harvey De La Torre and Kevin Hostert received a briefing from IRWD on the status of the Strand Ranch, Stockdale West, Drought Relief Project with Castaic Lake Water Agency and the proposal submitted to the California Water Commission, the Kern Fan Water Storage Project. IRWD has about 36,000 AF of water stored to date and the amount in storage will increase further this year.</p>
	<p>Charles Busslinger attended the first day of the Urban Water Institute Conference on August 16, 2017. There were two presentations on Oroville Dam Recovery efforts by Jack Safely, MET Import Supply Unit Manager, and Jeanne Kuttel Chief, DWR Division of Engineering &amp; Oroville Emergency Recovery Team. The Oroville incident has resulted in several changes including, new risk categories for dams, a requirement for Department of Safety of Dams (DSOD) to produce a 5-year Capital Improvement Program, new Emergency Action Plans, new Inundation Maps which include a full dam breach scenarios with full reservoirs, and re-evaluation of 93 dams in California.</p> <p>The second session was a panel discussion on policy with Ron Stork of Friends of the River, Jeff Kightlinger of MET, Jennifer Pierre GM of State Water Contractors, and Erin Mellon DWR Public Affairs. Issues discussed ranged from the erosion of public confidence, and ways of moving forward, to a discussion about how to communicate that California is ‘a middle-aged State in a middle-aged country’ with aging infrastructure whose maintenance must be funded. When it came time to discuss who would be paying for the repairs, the consensus seemed to be that the courts would decide.</p>
	<p>Charles Busslinger and Kelly Hubbard attended the OC Emergency Management Organization meeting on August 3, 2017. Dr. Ken Hudnut – USGS presented an overview of the Shakeout Scenario, a computer simulation scenario of a rupture of the San Andreas. Dr. Hudnut noted that the direction of rupture has different consequences for Los Angeles with a south to north rupture tending to concentrate energy into the LA Basin, whereas a north to south rupture would not. Dr. Hudnut also indicated that the State is reviewing the current ‘shelter in place’ strategy for Southern California to one of ‘Survivor movement and evacuation’. There is some concern over the logistical difficulties of supplying millions of people in a disaster zone.</p>
	<p>Charles Busslinger discussed the long term impacts of WUE on sanitary sewer systems with staff from both the Public Policy Institute of California and the California Urban Water Agencies, who are each doing related work on this topic. Neither of the efforts are specifically evaluating the long term impacts, but CUWA may look at this in a Phase 3 of their study.</p>

**Status of Ongoing WEROC Projects  
August 2017**

<b>Description</b>	<b>Comments</b>
<b>Coordination with WEROC Member Agencies</b>	<p><i>Ongoing: WEROC, with Michal Baker as the lead consultant, are facilitating 19 agencies through the process of updating the Orange County Water and Wastewater Multi-Jurisdictional Hazard Mitigation Plan. Update: Francisco has been working with each agency to ensure that assignments between meetings are completed on time and the project stays on schedule. On Tuesday, August 8, 2017, as part of this project planning process, Francisco gave a presentation to the Orange County Business Council. The presentation focused on defining hazard mitigation, reviewing the process to writing a plan, informing participants how crucial their involvement is, and answering questions related to WEROC and the hazard mitigation planning process.</i></p> <p>The WEROC Emergency Coordinator Quarterly meeting was August 1. The meeting primarily focused on lessons from the ongoing Unknown Contamination of Water trainings and development of the Spring Exercise.</p> <p>Kelly assisted Orange County Water District staff with reviewing an upcoming evacuation drill format and tools.</p> <p>Kelly sat on an interview panel to review candidates for a Compliance and Emergency Coordinator position at South Coast Water District.</p>
<b>Training and Programs</b>	<p><i>Ongoing: WEROC is hosting a series of trainings related to a year-long training program intended to lead up to a full field and EOC exercise in spring 2018 based on an unknown contaminate in the water system. Update: Kelly delivered two Emergency Water Quality Sample Kit (EWQSK) Tabletop Exercises with a total of 73 participants. The exercises provided a review of the EWQSK, determining a credible threat, and public notification protocols. The focus of the exercise was to have open discussions on how to improve the kits and response protocols in order to enhance the tools available to WEROC member agencies for any future event that may occur.</i></p> <p>Kelly provided a second session of training on the EWQSK concepts for MWDOC staff assigned to the WEROC EOC. And</p>

	<p>almost all MWDOC staff assigned to the WEROC EOC participated in the tabletop exercises noted above.</p> <p>Colin Eckerle, WEROC/Engineering Intern, completed the purchase of materials needed for the EWQSK training kits. These are grant funded kits that will be used for training with hazmat and water utilities in the field. Colin will be putting together all purchasing information needed to request reimbursement for the project.</p> <p>Kelly, Janine, and Francisco met to discuss WEROC's social media strategy. The discussion focused on relevant topics and events that member agencies and the public will find interesting and educational. As a result of the meeting an annual social media schedule and WEROC staff assignments for posting content was developed so that content is posted on a regular basis.</p>
<b>Emergency Plans</b>	<p>Francisco is currently working on incorporating Kelly's recommendations to the Emergency Operations Plan (EOP). The update includes a streamlined approach, update to current information, and the incorporation of corrective actions from previous WEROC training and exercises. Additionally, Francisco is working on the hazard specific annexes. The structure of the annexes is being modified to reflect current response protocols and to provide staff greater guidance based on lessons from previous exercises. Once the plan and hazard specific annexes are completed, the plan will be brought to the Board for approval. EOC staff and member agencies will receive training on the revised plan and copies.</p> <p>Janine has begun the process of updating and simplifying the MWDOC Continuity of Operations Plan within the Safety Center Application. This will allow users to easily navigate through the plan on their mobile devices and find critical information in a timely manner, even when out of office.</p>
<b>Coordination with the County of Orange</b>	<p>Kelly and Charles Busslinger attended the August Orange County Emergency Management Organization (OCEMO) meeting that took place at the Orange County Transportation Authority. Dr. Ken Hudnut from the U.S. Geological Survey (USGS) presented on the earthquake threat to Southern California and Jim Acosta from Cal OES went over the highlights of the Southern California Catastrophic Earthquake Response Planning Meeting that took place at the end of July in Rancho Cucamonga.</p>

	<p>Kelly attended the OC Operational Area 5 year Training and Exercise Seminar. The purpose of the seminar is to update the county-wide 5 year exercise and training calendar that is provided to CalOES and FEMA as a component of meeting NIMS compliance as a county and to also justify grant funding for training programs. All government agencies in OC are encouraged to participate in the review process and provide input.</p> <p>Kelly, Janine, and Francisco attended the AlertOC User Group and WebEOC Subcommittee meeting. This meeting focused on providing updates to both systems and giving participants an overview of future improvements to the programs. WEROC staff are updating guidances for the WEROC member agencies on how to use these two systems based on the updates discussed.</p> <p><i>Operational Area Agreement Revision Working Group Updates: The OA is currently making revisions to the OA Emergency Management Agreement. The OA Agreement is signed by 114 government entities in Orange County and hasn't been updated since it was originally created in the late 90's. A key topics of discussion during this month's meeting included "Section 2.1 Operational Area Signatory Council", which details the signatories roles and responsibilities, "Section 2.2 Operational Area Executive Board", which details the makeup of the voting members and their responsibilities, and "Section 2.3: Orange County Emergency Management Organization", which details the roles and responsibilities of the standing subcommittee to the Executive Board.</i></p> <p>Kelly attended the OC Urban Area Working Group (UAWG) Quarterly Meeting. This group determines which projects receive homeland security grant funding with OC.</p> <p>Kelly attended the OA Operational Area Executive Board Quarterly meeting as the ISDOC voting representative. The executive board heard updates on various emergency management programs from throughout the county and approved the Homeland Security Emergency Management Performance Grant (EMPG) allocation for the 2018 grant year.</p> <p>Kelly attended an OC OA Recovery Seminar on August 24<sup>th</sup>. The OA is leading a county-wide recovery plan writing process. Recovery plans are critical to the successful recovery of communities following major disasters. The OA will be hosting a tabletop exercise as a follow-up to this seminar.</p>
--	--



<b>WEROC EOC Readiness</b>	<p>Janine met with IDS Group to conduct a seismic evaluation of the MWDOC Administration Building for the purpose of ensuring that our staff are safe in the event of an earthquake and that our alternate EOC is functional following an earthquake. This report is expected in September. IDS Group also completed the seismic study of the South EOC.</p> <p>General EOC readiness actions completed/facilitated by Janine at the North and South EOC: facility cleanings, pest control, fire extinguisher service, and continued document updates.</p> <p>Francisco participated in the MARS monthly radio test and the OA monthly radio test.</p> <p>Janine has researched new phone and internet plans for the WEROC EOCs, which will save the district money each month. She has finalized the new CAL Net AT&amp;T contract for both the South and North EOC. CAL Net is pre-negotiated communications pricing for government agencies in CA.</p> <p>Francisco met with an electrical contractor at the South EOC to work on quotes for recommended safety improvements at the site.</p> <p>Karl Seckel and Kelly met with Bob Hill and Dennis Cafferty of El Toro Water District to discuss potential future improvements to the WEROC EOC and coordination with ETWD throughout the process.</p>
----------------------------	--

## Status of Water Use Efficiency Projects

August 2017

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
<b>Smart Timer Rebate Program</b>	MWDSC	On-going	On-going	<p>In July 2017, 324 residential and 109 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>
<b>Rotating Nozzles Rebate Program</b>	MWDSC	On-going	On-going	<p>In July 2017, 121 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>
<b>SoCal Water\$mart Residential Indoor Rebate Program</b>	MWDSC	On-going	On-going	<p>In June 2017, 198 high efficiency clothes washers and 24 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>
<b>SoCal Water\$mart Commercial Rebate Program</b>	MWDSC	On-going	On-going	<p>In June 2017, 2,649 premium high efficiency toilets, 310 laminar flow restrictors, and 1 cooling tower conductivity controller 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>

<b>Description</b>	<b>Lead Agency</b>	<b>Status % Complete</b>	<b>Scheduled Completion or Renewal Date</b>	<b>Comments</b>
<b>Industrial Process Water Use Reduction Program</b>	MWDOC	96%	September 2016	A total of 41 Focused Surveys and 19 Comprehensive Surveys have been completed or are in progress. To date, 15 companies have signed Incentive Agreements. Updated discharger lists have been obtained, and outreach is continuing to sites with feasible water savings potential. As a result of this program, 412 AFY of water savings is being achieved.
<b>Turf Removal Program</b>	MWDOC	On-going	On-going	<p>In July 2017, 54 rebates were paid, representing \$60,861.15 in rebates paid this month in Orange County. To date, the Turf Removal Program has removed approximately 20.9 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>
<b>California Sprinkler Adjustment Notification System – Base Irrigation Schedule Calculator</b>	MWDOC	On-going	On-going	<p>The California Sprinkler Adjustment Notification System (CSANS) sends an e-mail or “push” an irrigation index to assist property owners with making global irrigation scheduling adjustments. Participants voluntarily register to receive this e-mail at <a href="http://www.csans.net">www.csans.net</a> and can unsubscribe at any time.</p> <p>An annual support contract with Enterprise Information Systems, the original developer of CSANS, was recently executed. Support will include annual web hosting, technical support, functional refinements, and ongoing application health and maintenance.</p>
<b>Spray to Drip Conversion Program</b>	MWDOC	75%	October 2017	This is a pilot program designed to test the efficacy of replacing conventional spray heads in shrub beds with low-volume, low-precipitation drip

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
<b>Spray to Drip Conversion Program (cont.)</b>				<p>technology. Through a rebate program format, residential and commercial sites will be encouraged to convert their existing spray nozzles to drip.</p> <p>To date, 202 residential sites and 52 commercial sites have completed spray to drip conversion projects.</p>
<b>Landscape Design Assistance Program (LDAP)</b>	MWDOC	30%	December 2017	<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 performed 38 one-on-one site consultations. Fifty-four questionnaires have been received and approved. Twenty-six of the 38 sites 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.</p>

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	June-17	198	0.57	4,129	77.89	112,912	3,895	23,836
Smart Timer Program - Irrigation Timers	2004	July-17	449	7.41	449	7.42	20,934	7,746	38,732
Rotating Nozzles Rebate Program	2007	July-17	121	0.48	121	0.48	562,939	2,758	12,271
SoCal WaterSmart Commercial Plumbing Fixture Rebate Program	2002	June-17	2,960	8.81	14,997	226.85	85,279	3,518	39,421
Water Smart Landscape Program [1]	1997	November-15	12,677	904.62	12,677	3,615.21	12,677	10,621	72,668
Industrial Process Water Use Reduction Program	2006	July-17	0	0.00	0	0.00	25	25	2,282
Turf Removal Program[3]	2010	July-17	37,620	0.44	37,620	5	20,905,601	2,927	10,190
High Efficiency Toilet (HET) Program	2005	June-17	24	0.09	1,058	45.17	59,643	2,205	14,157
Home Water Certification Program	2013	November-15	0	0.000	53	0.251	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			922	3,979	71,104	23,092,157	49,077	397,392	

Page 55 of 61

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

Cumulative Water Savings Program To Date totals are from a previous Water Use Efficiency Program Effort.

Turf Removal Interventions are listed as square feet.

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 08/09	FY 09/10	FY 10/11	FY 11/12	FY 12/13	FY13/14	FY14/15	FY15/16	FY16/17	Total	Current FY Water Savings Ac/Ft (Cumulative)	Cumulative Water Savings across all Fiscal Years	15 yr. Lifecycle Savings Ac/Ft
Brea	156	42	186	144	93	115	114	76	57	1,867	1.01	398.29	966
Buena Park	146	59	230	145	105	106	91	76	54	1,518	0.97	307.73	785
East Orange CWD RZ	17	3	23	10	10	8	8	8	3	192	0.03	43.45	99
El Toro WD	130	32	162	112	134	121	111	65	47	1,521	0.83	310.81	787
Fountain Valley	243	72	289	158	115	102	110	76	65	2,400	1.31	532.91	1,242
Garden Grove	332	101	481	236	190	162	165	251	127	3,563	2.53	746.47	1,844
Golden State WC	447	168	583	485	265	283	359	260	138	5,015	2.91	1,053.71	2,595
Huntington Beach	751	211	963	582	334	295	319	225	180	8,246	3.24	1,869.56	4,267
Irvine Ranch WD	1,844	1,394	2,621	2,170	1,763	1,664	1,882	1,521	1,373	24,666	26.42	4,900.29	12,763
La Habra	83	22	179	128	82	114	87	66	53	1,327	0.99	269.13	687
La Palma	51	25	76	46	34	25	34	29	10	458	0.18	92.82	237
Laguna Beach CWD	77	27	96	57	38	37	39	32	19	932	0.22	204.91	482
Mesa Water	246	73	232	176	114	86	89	113	80	2,518	1.68	569.06	1,303
Moulton Niguel WD	742	250	1,127	679	442	421	790	688	575	9,921	11.28	1,973.90	5,133
Newport Beach	259	57	197	142	116	92	95	66	61	2,624	1.18	609.94	1,358
Orange	403	111	349	262	218	163	160	124	80	3,898	1.52	887.94	2,017
Orange Park Acres	-	-	-	-	-	-	-	-	-	12	0.00	3.42	6
San Juan Capistrano	127	43	190	110	76	73	92	63	33	1,459	0.68	311.29	755
San Clemente	278	63	333	206	140	94	141	75	70	2,620	1.25	565.14	1,356
Santa Margarita WD	740	257	1,105	679	553	662	792	466	367	9,516	7.13	1,930.98	4,924
Seal Beach	57	7	81	51	31	29	38	23	9	602	0.11	129.60	311
Serrano WD	23	7	21	20	13	10	26	8	11	357	0.25	81.17	185
South Coast WD	148	43	183	112	89	79	68	43	44	1,584	0.88	339.00	820
Trabuco Canyon WD	62	28	82	62	30	45	47	34	28	798	0.49	168.16	413
Tustin	144	45	174	97	78	59	80	66	44	1,612	0.93	358.46	834
Westminster	233	74	329	208	121	82	109	149	84	2,586	1.82	553.65	1,338
Yuba Linda	367	117	394	273	181	167	156	123	56	3,752	1.14	851.72	1,941
<b>MWDOC Totals</b>	<b>8,106</b>	<b>3,331</b>	<b>10,686</b>	<b>7,350</b>	<b>5,365</b>	<b>5,094</b>	<b>6,002</b>	<b>4,726</b>	<b>3,668</b>	<b>95,564</b>	<b>70.98</b>	<b>20,063.53</b>	<b>18,463</b>
<b>Non-MWDOC Totals</b>	<b>1,368</b>	<b>1,016</b>	<b>1,662</b>	<b>937</b>	<b>694</b>	<b>602</b>	<b>638</b>	<b>690</b>	<b>461</b>	<b>17,348</b>	<b>6.91</b>	<b>3,772.38</b>	<b>3,352</b>
<b>Orange County Totals</b>	<b>9,474</b>	<b>4,347</b>	<b>12,348</b>	<b>8,287</b>	<b>6,059</b>	<b>5,696</b>	<b>6,640</b>	<b>5,416</b>	<b>4,129</b>	<b>112,912</b>	<b>77.89</b>	<b>23,835.92</b>	<b>21,814</b>



# 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	7	0	138	80	461.50
Buena Park	4	19	3	0	0	0	4	10	7	4	10	7	4	1	35	42	117.79
East Orange CWD RZ	5	0	2	0	0	0	2	0	1	0	11	1	2	0	27	1	11.15
El Toro WD	26	2	7	2	11	0	8	9	9	17	33	8	6	0	121	355	2,231.96
Fountain Valley	8	2	3	2	4	0	7	10	13	1	33	12	5	0	96	40	147.30
Garden Grove	7	0	5	2	9	0	10	14	13	11	28	0	9	0	110	38	142.54
Golden State WC	13	3	9	49	9	25	39	12	35	16	56	37	17	0	242	192	672.02
Huntington Beach	15	4	18	33	20	35	19	2	42	12	88	94	18	0	290	268	867.83
Invine Ranch WD	267	71	414	135	71	59	67	310	239	207	344	420	67	20	1,836	2,306	9,694.03
La Habra	3	0	4	7	2	0	4	7	3	1	12	7	3	0	39	44	171.76
La Palma	1	0	1	0	2	0	2	0	3	2	1	0	0	0	10	2	4.17
Laguna Beach CWD	109	2	76	2	71	0	86	0	86	1	27	0	2	0	499	20	198.55
Mesa Water	21	0	10	2	15	2	17	28	36	12	149	41	5	0	323	154	614.51
Moulton Niguel WD	179	31	51	74	40	45	46	95	163	100	236	129	60	0	974	801	2,993.18
Newport Beach	275	12	242	26	168	75	11	9	28	43	30	12	5	0	1,043	409	2,291.98
Orange	25	0	20	24	13	9	18	31	51	13	69	10	15	12	300	177	803.10
San Juan Capistrano	103	2	14	18	6	11	6	19	20	8	22	8	4	0	226	125	547.88
San Clemente	212	17	26	7	28	2	28	24	26	3	37	13	4	0	1,055	374	2,355.06
Santa Margarita WD	262	7	53	171	64	93	53	321	189	136	326	221	56	76	1,210	1,448	4,640.61
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	3	0	10	2,502	3,435.01
Serrano WD	3	0	1	0	0	0	4	0	11	2	4	0	0	0	38	2	10.86
South Coast WD	78	10	13	16	8	4	104	73	9	11	7	0	1	0	279	212	992.05
Trabuco Canyon WD	12	0	6	0	2	0	6	1	16	50	13	3	3	0	106	157	839.81
Tustin	11	0	8	4	9	1	18	14	33	8	33	23	9	0	152	80	278.60
Westminster	2	0	1	1	2	0	13	17	7	1	17	12	5	0	70	44	164.35
Yorba Linda	22	0	20	0	12	5	32	2	61	27	72	71	14	0	352	183	687.59
<b>MWDOC Totals</b>	<b>1,671</b>	<b>185</b>	<b>1,017</b>	<b>583</b>	<b>571</b>	<b>402</b>	<b>648</b>	<b>1,026</b>	<b>1,123</b>	<b>3,136</b>	<b>1,691</b>	<b>1,137</b>	<b>324</b>	<b>109</b>	<b>9,581</b>	<b>10,066</b>	<b>35,375.21</b>

Anaheim	23	60	19	10	9	26	7	52	30	34	87	10	8	0	252	457	2,287.20
Fullerton	22	51	9	29	8	0	40	26	32	12	53	7	8	0	207	199	790.40
Santa Ana	6	5	8	19	7	8	9	27	22	26	15	3	0	0	82	100	278.97
<b>Non-MWDOC Totals</b>	<b>51</b>	<b>116</b>	<b>36</b>	<b>58</b>	<b>24</b>	<b>34</b>	<b>56</b>	<b>105</b>	<b>84</b>	<b>72</b>	<b>155</b>	<b>20</b>	<b>16</b>	<b>0</b>	<b>541</b>	<b>756</b>	<b>3,356.58</b>
<b>Orange County Totals</b>	<b>1,722</b>	<b>301</b>	<b>1,053</b>	<b>641</b>	<b>595</b>	<b>436</b>	<b>704</b>	<b>1,131</b>	<b>1,207</b>	<b>3,208</b>	<b>1,846</b>	<b>1,157</b>	<b>340</b>	<b>109</b>	<b>10,122</b>	<b>10,812</b>	<b>38,732</b>

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

Agency	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	
	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	
Brea	84	0	0	157	45	0	74	2,484	0	0	0	0	0	0	0	572	2,749	0	44.79
Buena Park	53	0	0	248	0	0	45	98	0	0	0	0	0	0	0	509	173	2,535	455.45
East Orange	30	0	0	221	0	0	0	0	0	0	0	0	0	0	30	781	0	0	12.17
El Toro	56	3,288	0	1,741	28,714	0	730	4,457	0	55	242	0	0	0	0	3,369	46,222	890	1,002.90
Fountain Valley	0	0	0	107	0	0	222	0	0	0	0	0	0	0	0	710	0	0	11.68
Garden Grove	80	0	0	88	50	0	110	0	0	55	98	0	0	0	0	933	299	0	22.03
Golden State	192	0	0	583	1,741	0	1,088	0	0	207	6,008	0	0	0	0	3,448	11,316	0	208.30
Huntington Beach	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	839.27
Irvine Ranch	11,010	4,257	0	1,421	632	0	1,989	5,047	0	335	9,511	0	0	0	0	47,137	94,561	2,004	3,161.05
La Habra	15	0	0	109	338	0	300	0	0	0	0	0	0	0	0	481	1,236	900	224.70
La Palma	0	0	0	0	0	0	46	505	0	0	2,385	0	0	0	0	56	2,890	0	25.92
Laguna Beach	2,948	878	0	2,879	1,971	0	1,390	0	0	0	0	0	0	0	0	12,139	2,896	0	279.23
Mesa Water	361	0	0	229	0	0	166	0	0	113	0	0	0	0	0	2,030	385	343	126.72
Moulton Niguel	361	227	0	1,596	4,587	0	5,492	1,441	0	153	5,872	0	91	0	0	11,965	20,515	2,945	1,104.35
Newport Beach	19,349	6,835	0	460	3,857	0	348	670	0	0	0	0	0	0	0	46,678	21,413	0	1,405.66
Orange	245	120	0	304	668	0	631	91	0	0	0	0	0	0	0	3,170	1,072	0	78.55
San Clemente	415	5,074	0	326	0	0	426	0	0	0	0	0	0	0	0	9,989	7,538	1,343	443.92
San Juan Capistrano	370	0	0	495	737	0	310	593	0	75	123	0	0	0	0	5,495	8,852	0	270.69
Santa Margarita	389	0	0	1,207	1,513	0	1,820	837	0	15	0	0	0	0	0	16,165	6,921	611	477.37
Seal Beach	0	0	0	40	5,261	0	0	2,300	0	0	0	0	0	0	0	155	7,852	0	120.94
Serrano	105	0	0	377	0	0	695	0	0	0	0	0	0	0	0	3,405	0	0	21.02
South Coast	70	0	0	4,993	13,717	0	1,421	2,889	0	16	0	0	0	0	0	8,130	18,870	0	371.47
Trabuco Canyon	0	0	0	56	0	0	130	0	0	0	4,339	0	0	0	0	2,086	5,130	0	77.64
Tustin	329	0	0	408	0	0	317	386	0	65	-341	0	0	0	0	3,371	1,058	0	82.93
Westminster	0	0	0	54	0	0	73	0	0	105	0	0	0	0	0	464	0	0	54.07
Yorba Linda	40	990	0	921	0	0	1,715	0	0	213	0	0	0	0	0	6,081	4,359	500	121.25
MWDOC Totals	36,622	21,669	0	19,818	65,250	0	20,883	24,634	0	1,556	31,599	0	121	0	0	193,116	278,833	14,752	11,044.08
Orange County Totals	37,153	24,202	0	21,310	67,158	0	22,198	38,290	0	1,768	39,692	0	121	0	0	200,905	345,693	16,341	12,270.86

7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65  
66  
67  
68  
69  
70  
71  
72  
73  
74  
75  
76  
77  
78  
79  
80  
81  
82  
83  
84  
85  
86  
87  
88  
89  
90  
91  
92  
93  
94  
95  
96  
97  
98  
99  
100  
101  
102  
103  
104  
105  
106  
107  
108  
109  
110  
111  
112  
113  
114  
115  
116  
117  
118  
119  
120  
121  
122  
123  
124  
125  
126  
127  
128  
129  
130  
131  
132  
133  
134  
135  
136  
137  
138  
139  
140  
141  
142  
143  
144  
145  
146  
147  
148  
149  
150  
151  
152  
153  
154  
155  
156  
157  
158  
159  
160  
161  
162  
163  
164  
165  
166  
167  
168  
169  
170  
171  
172  
173  
174  
175  
176  
177  
178  
179  
180  
181  
182  
183  
184  
185  
186  
187  
188  
189  
190  
191  
192  
193  
194  
195  
196  
197  
198  
199  
200  
201  
202  
203  
204  
205  
206  
207  
208  
209  
210  
211  
212  
213  
214  
215  
216  
217  
218  
219  
220  
221  
222  
223  
224  
225  
226  
227  
228  
229  
230  
231  
232  
233  
234  
235  
236  
237  
238  
239  
240  
241  
242  
243  
244  
245  
246  
247  
248  
249  
250  
251  
252  
253  
254  
255  
256  
257  
258  
259  
260  
261  
262  
263  
264  
265  
266  
267  
268  
269  
270  
271  
272  
273  
274  
275  
276  
277  
278  
279  
280  
281  
282  
283  
284  
285  
286  
287  
288  
289  
290  
291  
292  
293  
294  
295  
296  
297  
298  
299  
300  
301  
302  
303  
304  
305  
306  
307  
308  
309  
310  
311  
312  
313  
314  
315  
316  
317  
318  
319  
320  
321  
322  
323  
324  
325  
326  
327  
328  
329  
330  
331  
332  
333  
334  
335  
336  
337  
338  
339  
340  
341  
342  
343  
344  
345  
346  
347  
348  
349  
350  
351  
352  
353  
354  
355  
356  
357  
358  
359  
360  
361  
362  
363  
364  
365  
366  
367  
368  
369  
370  
371  
372  
373  
374  
375  
376  
377  
378  
379  
380  
381  
382  
383  
384  
385  
386  
387  
388  
389  
390  
391  
392  
393  
394  
395  
396  
397  
398  
399  
400  
401  
402  
403  
404  
405  
406  
407  
408  
409  
410  
411  
412  
413  
414  
415  
416  
417  
418  
419  
420  
421  
422  
423  
424  
425  
426  
427  
428  
429  
430  
431  
432  
433  
434  
435  
436  
437  
438  
439  
440  
441  
442  
443  
444  
445  
446  
447  
448  
449  
450  
451  
452  
453  
454  
455  
456  
457  
458  
459  
460  
461  
462  
463  
464  
465  
466  
467  
468  
469  
470  
471  
472  
473  
474  
475  
476  
477  
478  
479  
480  
481  
482  
483  
484  
485  
486  
487  
488  
489  
490  
491  
492  
493  
494  
495  
496  
497  
498  
499  
500  
501  
502  
503  
504  
505  
506  
507  
508  
509  
510  
511  
512  
513  
514  
515  
516  
517  
518  
519  
520  
521  
522  
523  
524  
525  
526  
527  
528  
529  
530  
531  
532  
533  
534  
535  
536  
537  
538  
539  
540  
541  
542  
543  
544  
545  
546  
547  
548  
549  
550  
551  
552  
553  
554  
555  
556  
557  
558  
559  
560  
561  
562  
563  
564  
565  
566  
567  
568  
569  
570  
571  
572  
573  
574  
575  
576  
577  
578  
579  
580  
581  
582  
583  
584  
585  
586  
587  
588  
589  
590  
591  
592  
593  
594  
595  
596  
597  
598  
599  
600  
601  
602  
603  
604  
605  
606  
607  
608  
609  
610  
611  
612  
613  
614  
615  
616  
617  
618  
619  
620  
621  
622  
623  
624  
625  
626  
627  
628  
629  
630  
631  
632  
633  
634  
635  
636  
637  
638  
639  
640  
641  
642  
643  
644  
645  
646  
647  
648  
649  
650  
651  
652  
653  
654  
655  
656  
657  
658  
659  
660  
661  
662  
663  
664  
665  
666  
667  
668  
669  
670  
671  
672  
673  
674  
675  
676  
677  
678  
679  
680  
681  
682  
683  
684  
685  
686  
687  
688  
689  
690  
691  
692  
693  
694  
695  
696  
697  
698  
699  
700  
701  
702  
703  
704  
705  
706  
707  
708  
709  
710  
711  
712  
713  
714  
715  
716  
717  
718  
719  
720  
721  
722  
723  
724  
725  
726  
727  
728  
729  
730  
731  
732  
733  
734  
735  
736  
737  
738  
739  
740  
741  
742  
743  
744  
745  
746  
747  
748  
749  
750  
751  
752  
753  
754  
755  
756  
757  
758  
759  
760  
761  
762  
763  
764  
765  
766  
767  
768  
769  
770  
771  
772  
773  
774  
775  
776  
777  
778  
779  
780  
781  
782  
783  
784  
785  
786  
787  
788  
789  
790  
791  
792  
793  
794  
795  
796  
797  
798  
799  
800  
801  
802  
803  
804  
805  
806  
807  
808  
809  
810  
811  
812  
813  
814  
815  
816  
817  
818  
819  
820  
821  
822  
823  
824  
825  
826  
827  
828  
829  
830  
831  
832  
833  
834  
835  
836  
837  
838  
839  
840  
841  
842  
843  
844  
845  
846  
847  
848  
849  
850  
851  
852  
853  
854  
855  
856  
857  
858  
859  
860  
861  
862  
863  
864  
865  
866  
867  
868  
869  
870  
871  
872  
873  
874  
875  
876  
877  
878  
879  
880  
881  
882  
883  
884  
885  
886  
887  
888  
889  
890  
891  
892  
893  
894  
895  
896  
897  
898  
899  
900  
901  
902  
903  
904  
905  
906  
907  
908  
909  
910  
911  
912  
913  
914  
915  
916  
917  
918  
919  
920  
921  
922  
923  
924  
925  
926  
927  
928  
929  
930  
931  
932  
933  
934  
935  
936  
937  
938  
939  
940  
941  
942  
943  
944  
945  
946  
947  
948  
949  
950  
951  
952  
953  
954  
955  
956  
957  
958  
959  
960  
961  
962  
963  
964  
965  
966  
967  
968  
969  
970  
971  
972  
973  
974  
975  
976  
977  
978  
979  
980  
981  
982  
983  
984  
985  
986  
987  
988  
989  
990  
991  
992  
993  
994  
995  
996  
997  
998  
999  
1000

**SOCAL WATER\$MART COMMERCIAL PLUMBING FIXTURES REBATE PROGRAM<sup>[1]</sup>**  
**INSTALLED BY AGENCY**  
 through MWDOC and Local Agency Conservation Programs

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	FY 16/17	Totals	Cumulative Water Savings across all Fiscal Years
Brea	27	113	24	4	1	234	0	10	91	734	1,365	421
Buena Park	153	432	122	379	290	5	23	56	591	133	2,489	1,076
East Orange CWD RZ	0	0	0	0	0	0	0	0	0	0	0	0
El Toro WD	0	92	143	1	137	0	212	6	268	35	1,062	587
Fountain Valley	17	35	0	2	314	0	0	1	249	0	872	584
Garden Grove	5	298	130	22	0	4	1	167	676	410	2,451	1,484
Golden State WC	46	414	55	68	135	0	1	0	1,008	53	2,865	1,896
Huntington Beach	48	104	126	96	156	104	144	7	783	641	2,954	1,565
Irvine Ranch WD	121	789	2,708	1,002	646	1,090	451	725	11,100	5,958	27,866	7,340
La Habra	191	75	53	4	0	0	0	0	340	42	925	546
La Palma	0	140	21	0	0	0	0	0	0	509	675	103
Laguna Beach CWD	20	137	189	0	0	0	27	0	0	0	446	312
Mesa Water	141	543	219	669	41	6	0	79	661	782	4,254	2,069
Moulton Niguel WD	9	69	151	6	0	0	0	3	413	281	1,277	821
Newport Beach	98	27	245	425	35	0	0	566	0	0	1,834	1,279
Orange	18	374	67	1	73	1	271	81	275	2,851	5,030	1,801
San Juan Capistrano	2	1	1	0	0	0	14	0	0	0	260	397
San Clemente	2	18	43	0	19	0	0	1	0	0	432	381
Santa Margarita WD	6	23	11	0	0	0	0	2	90	743	950	235
Santiago CWD	0	0	0	0	0	0	0	0	0	0	0	0
Seal Beach	1	2	124	0	0	0	0	0	0	184	538	427
Serrano WD	0	0	0	0	0	0	0	0	0	0	0	0
South Coast WD	9	114	56	422	84	148	0	382	0	0	1,320	509
Trabuco Canyon WD	0	4	0	0	0	0	0	0	0	0	11	15
Tustin	115	145	25	230	0	0	0	75	358	212	1,402	822
Westminster	40	161	16	63	35	1	28	0	146	177	1,138	998
Yorba Linda	10	24	8	30	0	1	0	0	226	84	595	559
<b>MWDOC Totals</b>	<b>1,079</b>	<b>4,134</b>	<b>4,537</b>	<b>3,424</b>	<b>1,966</b>	<b>1,594</b>	<b>1,172</b>	<b>2,161</b>	<b>17,275</b>	<b>13,829</b>	<b>63,011</b>	<b>26,224</b>
Anaheim	766	3,298	582	64	48	165	342	463	3,072	309	13,753	6,901
Fullerton	133	579	29	4	0	94	0	178	476	621	2,778	1,627
Santa Ana	493	815	728	39	12	16	17	5	1,293	238	5,737	4,668
<b>Non-MWDOC Totals</b>	<b>1,392</b>	<b>4,692</b>	<b>1,339</b>	<b>107</b>	<b>60</b>	<b>275</b>	<b>359</b>	<b>646</b>	<b>4,841</b>	<b>1,168</b>	<b>22,268</b>	<b>13,196</b>
<b>Orange County Totals</b>	<b>2,471</b>	<b>8,826</b>	<b>5,876</b>	<b>3,531</b>	<b>2,026</b>	<b>1,869</b>	<b>1,531</b>	<b>2,807</b>	<b>22,116</b>	<b>14,997</b>	<b>85,279</b>	<b>39,421</b>

[1] Retrofit devices include ULF Toilets and Urinals, High Efficiency Toilets 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 Redistributing Systems, Steam Sterilizers, Food Steamers, Water Pressurized Brooms, Laminar Flow Restrictors, and Ice Making Machines.

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

# **INDUSTRIAL PROCESS WATER USE REDUCTION PROGRAM** **Number of Process Changes by Agency**

Agency	FY 09/10	FY 10/11	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	0	0
Buena Park	0	0	0	0	0	0	1	0	0	2	54
East Orange	0	0	0	0	0	0	0	0	0	0	0
El Toro	0	0	0	0	0	0	0	0	0	0	0
Fountain Valley	0	0	0	0	0	0	0	0	0	0	0
Garden Grove	0	0	0	0	0	0	1	0	0	1	0
Golden State	0	0	0	0	0	0	0	0	0	1	3
Huntington Beach	0	0	0	2	0	1	2	0	0	5	132
Irvine Ranch	2	1	1	1	1	0	2	0	0	8	102
La Habra	0	0	0	0	0	0	1	0	0	1	0
La Palma	0	0	0	0	0	0	0	0	0	0	0
Laguna Beach	0	0	0	0	0	0	0	0	0	0	0
Mesa Water	0	0	0	0	0	0	0	0	0	0	0
Moulton Niguel	0	0	0	0	0	0	0	0	0	0	0
Newport Beach	0	0	0	0	0	1	0	0	0	1	21
Orange	0	0	0	0	0	0	1	2	0	4	88
San Juan Capistrano	0	0	0	0	0	0	0	0	0	0	0
San Clemente	0	0	0	0	0	0	0	0	0	0	0
Santa Margarita	0	0	0	0	0	0	0	0	0	0	0
Seal Beach	0	0	0	0	0	0	0	0	0	0	0
Serrano	0	0	0	0	0	0	0	0	0	0	0
South Coast	0	0	0	0	0	0	1	0	0	1	0
Trabuco Canyon	0	0	0	0	0	0	0	0	0	0	0
Tustin	0	0	0	0	0	0	0	0	0	0	0
Westminster	0	0	0	0	0	0	0	0	0	0	0
Yorba Linda	0	0	0	0	0	0	0	0	0	0	0
<b>MWDOC Totals</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>9</b>	<b>2</b>	<b>0</b>	<b>24</b>	<b>401</b>
Anaheim	0	0	0	0	0	0	0	0	0	0	0
Fullerton	0	0	0	0	0	0	0	0	0	0	0
Santa Ana	0	0	0	0	0	0	1	0	0	1	11
<b>OC Totals</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>10</b>	<b>2</b>	<b>0</b>	<b>25</b>	<b>412</b>

[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<sup>(1)</sup>**  
through MWDOC and Local Agency Conservation Programs

Agency	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.	
Brea	5,597	0	71,981	30,617	118,930	404,411	8,354	479	0	0	215,964	444,973	302.71
Buena Park	0	0	11,670	1,626	77,127	16,490	3,741	0	1,000	0	93,538	18,116	47.95
East Orange	1,964	0	18,312	0	27,844	0	0	0	0	0	48,120	0	23.32
El Toro	4,582	0	27,046	221,612	63,546	162,548	13,139	48,019	734	0	118,450	504,897	324.28
Fountain Valley	4,252	0	45,583	5,279	65,232	0	3,679	0	0	0	120,728	12,803	68.05
Garden Grove	8,274	0	67,701	22,000	177,408	49,226	11,504	0	0	0	283,434	117,403	223.69
Golden State	32,725	8,424	164,507	190,738	310,264	112,937	0	0	0	0	581,902	346,272	506.98
Huntington Beach	20,642	0	165,600	58,942	305,420	270,303	9,560	21,534	0	0	538,872	415,705	488.81
Irvine Ranch	36,584	76,400	234,905	317,999	782,844	2,675,629	231,483	46,725	10,132	0	1,340,705	3,163,597	2,003.73
La Habra	0	0	14,014	1,818	49,691	72,164	0	0	501	0	64,206	90,019	76.92
La Palma	0	0	4,884	0	10,257	59,760	0	0	0	0	15,141	59,760	32.14
Laguna Beach	4,586	226	13,647	46,850	47,614	0	3,059	0	0	0	75,081	48,788	65.35
Mesa Water	22,246	0	131,675	33,620	220,815	106,896	4,173	77,033	0	0	396,353	217,549	284.11
Moulton Niguel	14,739	40,741	314,250	1,612,845	889,748	1,059,279	220,749	0	6,624	0	1,463,087	2,840,054	2,129.57
Newport Beach	894	0	33,995	65,277	76,675	375,404	2,924	0	0	0	121,490	443,027	255.24
Orange	11,244	0	120,093	281,402	289,990	106,487	12,847	2,366	1,000	0	464,096	398,978	437.06
San Clemente	18,471	13,908	90,349	1,137	215,249	438,963	4,267	0	6,371	0	372,271	467,173	396.37
San Juan Capistrano	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	17,778	48,180	211,198	514,198	534,048	550,420	17,010	28,094	6,179	0	802,811	1,169,453	963.96
Seal Beach	0	0	15,178	504	17,349	15,911	1,234	0	0	0	37,372	16,415	26.13
Serrano	2,971	0	41,247	0	127,877	4,403	5,450	0	0	0	177,545	4,403	82.26
South Coast	15,162	116,719	84,282	191,853	181,102	128,290	14,967	0	988	0	312,736	457,581	417.78
Trabuco Canyon	2,651	0	14,771	0	42,510	88,272	1,465	0	768	0	63,979	110,712	85.98
Tustin	1,410	0	71,285	14,137	232,697	33,362	11,173	0	0	0	326,545	47,499	172.08
Westminster	0	0	14,040	34,631	71,833	23,902	11,112	0	0	0	96,985	58,533	70.57
Yorba Linda	0	0	112,136	12,702	360,279	116,985	19,420	0	3,323	0	506,507	129,687	288.97
<b>MWDOC Totals</b>	<b>238,978</b>	<b>304,598</b>	<b>2,195,544</b>	<b>3,692,153</b>	<b>5,493,639</b>	<b>7,015,357</b>	<b>613,934</b>	<b>264,998</b>	<b>37,620</b>	<b>0</b>	<b>8,965,713</b>	<b>11,930,674</b>	<b>10,183.91</b>

Anaheim	0	0	0	0	0	0	0	0	0	0	0	0	-
Fullerton	0	9,214	0	0	0	0	0	0	0	0	0	9,214	-
Santa Ana	0	0	0	0	0	0	0	0	0	0	0	0	-
<b>CD Non-MWDOC Totals</b>	<b>0</b>	<b>9,214</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9,214</b>	<b>0.00</b>

<b>Orange County Totals</b>	<b>238,978</b>	<b>313,812</b>	<b>2,195,544</b>	<b>3,692,153</b>	<b>5,493,639</b>	<b>7,015,357</b>	<b>613,934</b>	<b>264,998</b>	<b>37,620</b>	<b>0</b>	<b>8,965,713</b>	<b>11,939,888</b>	<b>10,184</b>
-----------------------------	----------------	----------------	------------------	------------------	------------------	------------------	----------------	----------------	---------------	----------	------------------	-------------------	---------------

<sup>(1)</sup> Installed device numbers are listed as square feet



# **HIGH EFFICIENCY TOILETS (HETs) INSTALLED BY AGENCY** through MWDOD and Local Agency Conservation Programs

Agency	FY05-06	FY 06-07	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	FY 16-17	Total	Cumulative Water Savings across all Fiscal Years
Brea	0	2	7	43	48	8	0	0	38	146	154	4	450	77.50
Buena Park	0	1	2	124	176	7	0	0	96	153	112	13	684	156.79
East Orange CWD RZ	0	0	10	12	1	0	0	0	13	26	24	0	86	16.77
El Toro WD	0	392	18	75	38	18	0	133	218	869	264	12	2,037	437.55
Fountain Valley	0	69	21	262	54	17	0	0	41	132	220	7	823	207.90
Garden Grove	0	14	39	443	181	24	0	0	63	350	363	7	1,484	348.22
Golden State WC	2	16	36	444	716	37	80	2	142	794	512	9	2,790	639.07
Huntington Beach	2	13	59	607	159	76	0	0	163	1,190	628	4	2,901	574.80
Irvine Ranch WD	29	1,055	826	5,088	2,114	325	0	1,449	810	1,777	2,798	638	16,909	4,564.12
Laguna Beach CWD	0	2	17	91	28	11	0	0	45	112	81	1	388	84.74
La Habra	0	3	18	296	34	20	0	0	37	94	83	5	590	165.55
La Palma	0	1	10	36	26	13	0	0	21	59	52	0	218	46.77
Mesa Water	0	247	19	736	131	7	0	0	147	162	162	7	1,618	512.11
Moulton Niguel WD	0	20	104	447	188	46	0	0	400	2,497	1,939	49	5,690	856.59
Newport Beach	0	5	19	163	54	13	0	0	49	168	243	11	725	146.06
Orange	1	20	62	423	79	40	0	1	142	978	416	17	2,179	422.48
San Juan Capistrano	0	10	7	76	39	11	0	0	35	140	202	3	523	94.48
San Clemente	0	7	22	202	66	21	0	0	72	225	246	11	872	181.13
Santa Margarita WD	0	5	14	304	151	44	0	0	528	997	1,152	114	3,309	509.35
Seal Beach	0	678	8	21	12	1	0	2	17	50	69	-1	857	348.77
Serrano WD	2	0	1	13	5	0	0	0	2	40	55	3	121	18.39
South Coast WD	2	2	29	102	41	12	23	64	102	398	235	11	1,021	179.05
Trabuco Canyon WD	0	0	4	23	23	0	0	0	10	108	169	2	339	48.30
Tustin	0	186	28	387	479	17	0	0	64	132	201	12	1,506	460.74
Westminster	0	17	25	541	167	23	0	0	35	161	359	3	1,331	346.73
Yorba Linda WD	0	14	89	323	96	18	0	0	40	280	379	12	1,251	281.53
<b>MWDOD Totals</b>	<b>38</b>	<b>2,779</b>	<b>1,494</b>	<b>11,282</b>	<b>5,106</b>	<b>809</b>	<b>103</b>	<b>1,651</b>	<b>3,330</b>	<b>12,038</b>	<b>11,118</b>	<b>954</b>	<b>50,702</b>	<b>11,725.49</b>
Anaheim	0	255	78	2,771	619	114	0	0	156	1,188	614	70	5,865	1,892.15
Fullerton	0	4	28	286	60	23	0	0	61	293	286	14	1,055	223.35
Santa Ana	0	11	25	925	89	23	0	0	33	602	293	20	2,021	515.52
<b>Non-MWDOD Totals</b>	<b>0</b>	<b>270</b>	<b>131</b>	<b>3,982</b>	<b>768</b>	<b>160</b>	<b>0</b>	<b>0</b>	<b>250</b>	<b>2,083</b>	<b>1,193</b>	<b>104</b>	<b>8,941</b>	<b>2,431.02</b>
<b>Orange County Totals</b>	<b>38</b>	<b>3,049</b>	<b>1,625</b>	<b>15,264</b>	<b>5,874</b>	<b>969</b>	<b>103</b>	<b>1,651</b>	<b>3,580</b>	<b>14,121</b>	<b>12,311</b>	<b>1,058</b>	<b>59,643</b>	<b>14,156.51</b>

# 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
<b>MWDOC Totals</b>	<b>78</b>	<b>0</b>	<b>164</b>	<b>1</b>	<b>52</b>	<b>0</b>	<b>294</b>	<b>1</b>	<b>14.44</b>

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
<b>Non-MWDOC Totals</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0.82</b>
<b>Orange County Totals</b>	<b>78</b>	<b>0</b>	<b>181</b>	<b>1</b>	<b>53</b>	<b>0</b>	<b>312</b>	<b>1</b>	<b>15.266</b>

# **SYNTHETIC TURF INSTALLED BY AGENCY<sup>[1]</sup>** 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
<b>MWDOC Totals</b>	<b>132,820</b>	<b>18,033</b>	<b>181,848</b>	<b>89,642</b>	<b>97,806</b>	<b>8,624</b>	<b>20,184</b>	<b>0</b>	<b>432,658</b>	<b>116,299</b>	<b>384.83</b>

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
<b>Non-MWDOC Totals</b>	<b>9,400</b>	<b>876</b>	<b>16,282</b>	<b>20,093</b>	<b>20,303</b>	<b>65,300</b>	<b>4,227</b>	<b>0</b>	<b>50,212</b>	<b>86,269</b>	<b>83.81</b>

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

[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
<b>MWDOC Totals</b>	<b>24,256</b>	<b>12,879</b>	<b>18,778</b>	<b>20,765</b>	<b>21,136</b>	<b>30,242</b>	<b>24,918</b>	<b>27,175</b>	<b>31,827</b>	<b>27,568</b>	<b>3,654</b>	<b>3,242</b>	<b>2,031</b>	<b>861</b>	<b>4</b>	<b>249,336</b>	<b>113,878.61</b>

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
<b>Non-MWDOC Totals</b>	<b>3,011</b>	<b>4,161</b>	<b>3,687</b>	<b>7,583</b>	<b>5,207</b>	<b>18,477</b>	<b>12,133</b>	<b>19,298</b>	<b>22,636</b>	<b>15,988</b>	<b>924</b>	<b>582</b>	<b>531</b>	<b>369</b>	<b>3</b>	<b>114,590</b>	<b>48,682.70</b>

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