

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

Jointly with the  
**PLANNING & OPERATIONS COMMITTEE**

September 4, 2018, 8:30 a.m.  
MWDOC Conference Room 101

**P&O Committee:**

Director Osborne, Chair  
Director Tamaribuchi  
Director Yoo Schneider

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

Ex Officio Member: Director Barbre

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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>.

**DISCUSSION ITEM**

1. STATUS OF THE ORANGE COUNTY WATER RELIABILITY STUDY 2018 UPDATE
2. STATUS UPDATE ON MWDOC'S PROPOSED WATER RELIABILITY PILOT PROGRAM – IRWD'S STRAND RANCH WATER BANK
3. UPDATE RE WATER LOSS CONTROL SHARED SERVICES BUSINESS PLAN

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

4. METROPOLITAN'S ASSESSED VALUATION FOR MWDOC AND ORANGE

- COUNTY FOR FISCAL YEAR 2018-19
5. 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
6. 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.



Item No. 1

**DISCUSSION ITEM**

September 4, 2018

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

**FROM: Robert Hunter, General Manager**

Staff Contact: Karl Seckel

**SUBJECT: Status of the Orange County Water Reliability Study 2018 Update**

**STAFF RECOMMENDATION**

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Staff recommends the Planning & Operations Committee receive and file the report.

**COMMITTEE RECOMMENDATION**

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Committee recommends (To be determined at Committee Meeting)

**SUMMARY**

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Staff and CDM Smith are working diligently to complete the 2018 Orange County Water Reliability Study Update. The current schedule anticipates conducting an initial workshop with our member agencies to QC the MWDOC and CDM work efforts on either September 20 or September 24 to receive initial input. Staff anticipates an update to the MWDOC P&O Committee on October 1<sup>st</sup> and then a presentation to WACO on October 5.

Work over the Past Month has included:

- Securing and confirming project information from the various agencies for the various projects
- Reviewing the methodology and calculations for the evaluation of projects
- Drafting an introductory section to provide the background and setting for the 2018 Study update

<b>Budgeted (Y/N):</b>	Budgeted amount:	Core <input checked="" type="checkbox"/>	Choice <input type="checkbox"/>
<b>Action item amount:</b>	Line item:		
<b>Fiscal Impact (explain if unbudgeted):</b>			



**DISCUSSION ITEM**  
**September 4, 2018**

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

**FROM: Robert Hunter, General Manager**

Staff Contact: Karl Seckel, Assistant General Manager  
Harvey De La Torre, Associate General Manager

**SUBJECT: Status Update on MWDOC's Proposed Water Reliability Pilot Program –**  
**IRWD's Strand Ranch Water Bank**

**STAFF RECOMMENDATION**

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Staff recommends the Planning & Operations Committee to discuss the item and provide direction to staff

**COMMITTEE RECOMMENDATION**

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Committee recommends (To be determined at Committee Meeting)

**BACKGROUND**

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At last month's MWDOC Planning and Operations Committee, staff presented the concept of developing a MWDOC Water Reliability Pilot Program whereby MWDOC would contract with Irvine Ranch Water District (IRWD) to reserve the option to access up to 5,000 Acre-Feet (AF) of Extraordinary Supply of water from IRWD's Water Banking Program over a time period of 7 years. The purpose of this pilot program is to provide MWDOC retail agencies with reliability "insurance" to access extraordinary supplies during a Metropolitan (MET) drought allocation or during emergency conditions. It is a method to mitigate the supply risk for the immediate future, until the CA WaterFix is operational, and access additional supplies when needed at a significantly lower cost of the reserve or option payment than the MET allocation surcharge.

The proposed pilot program is relatively simple in concept:

Budgeted (Y/N): N	Budgeted amount: None	Core _X_	Choice __
Action item amount: N/A	Line item:		
Fiscal Impact (explain if unbudgeted):			

- MWDOC would contract with IRWD to reserve or option a specific amount of extraordinary supply water (5,000 AF) from the IRWD Water Bank at a specified annual rate (\$25/AF) for a specific period of time (7 years);
- If MWDOC determined that we need to “call” on that extraordinary supply to meet customer demands during an allocation then the water would be purchased and additional costs incurred;
- If MWDOC found that there was no need to call on the reserved extraordinary supply, then no additional charges are incurred and the annual payments could be viewed as an insurance premium (payments for coverage not exercised).

The primary benefits of the proposed pilot program are that MWDOC and our Member Agencies obtain an appropriately sized extraordinary supply at a price well below the cost of developing our own supply, if utilized this supply would be 28% less than paying the MET surcharge with a savings of \$3.85 million. The limited downside is that if the option is not exercised then the annual cost of \$125,000 (\$880,000 over 7 years) can be viewed as being forgone.

The proposed agencies’ roles and responsibilities of the pilot program are listed below:

MWDOC’s role and responsibilities:

- Implement and administer the Pilot Program with the retail Member Agencies.
- Communicate calls for water to IRWD; coordinate deliveries to participants.
- Coordinate with MET deliveries into MWDOC service area.
- Invoice the retail agencies’ access and use of this pilot program, and all necessary MET costs.
- Compensate IRWD according to the proposed contract terms:
  - Annual reservation charges for right to call on the water (\$25 per AF)
  - Actual extraction and deliveries costs (Estimated at \$533 per AF in the year 2025)

Irvine Ranch Water District’s role and responsibilities:

- Provide up to 5,000 AF of Extraordinary Supply from its Water Bank to MWDOC.
- Operate its Water Bank.
- Coordinate recovery and delivery of Extraordinary Supply from IRWD’s Water Bank for conveyance into MWDOC’s service area.

Attached for further review is the proposed terms, conditions and payment structure of the proposed pilot program between MWDOC and IRWD, as of July 30, 2018.

## **REPORT**

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As discussed at last month’s Planning & Operations committee meeting, there were a number of next steps needed such as feedback from the MWDOC member agencies and further evaluation.

Since the Committee’s review last month, MWDOC staff has presented and/or discussed the proposed Pilot Program to a number of stakeholder groups and member agencies. Among them are:

- MWDOC General Manager's August meeting
- OCWD Groundwater Producer's August meeting
- Mesa Water's August Board Meeting
- Santa Margarita Water District's Water Quality and Innovation August Committee meeting

Although most of the discussions focused on the terms, conditions, and payment structure of the program (i.e. how does it work? what cost?) as well as a review of how Extraordinary Supply Credits apply in MET's drought allocation plan, there was general interest in the development of a pilot program. There were questions/issues raised that require further analysis and discussion, such as:

- What is the probability that we will ever need to use this program?
- Are the proposed annual costs i.e. annual reservation charge (\$25/AF) appropriate for the need of this program?
- Are we limited to only 5,000 AF of usage throughout the entire 7-year period?
- Should this be offered as a MWDOC "Choice" program to the retail agencies rather than "Core"?

In addition, as part of the analysis we have included this pilot program in the evaluation of projects for the Orange County Reliability Study.

Staff has not started developing an agreement with IRWD nor have we developed the framework of how the Pilot Program would be implemented or charged among the MWDOC retail member agencies. Staff has placed these next steps on hold until more discussions with the member agencies are completed and the MWDOC Committee has provided staff with further direction.

**Attachment: Proposed DRAFT Terms for a Water Reliability Pilot Program Between IRWD and MWDOC**

**Proposed Terms for Water Reliability Pilot Program Between IRWD and MWDOC**  
(As of July 30, 2018)

**DRAFT****General Terms:**

Parties	Irvine Ranch Water District (IRWD) and Municipal Water District of Orange County (MWDOC).
Purpose	IRWD and MWDOC seek to implement a Water Reliability Pilot Program (Pilot Program) for the benefit of the MWDOC member agencies utilizing IRWD's Strand and Stockdale Water Banking Projects (Water Bank). The Pilot Program will provide MWDOC with extraordinary water supply during periods when Metropolitan Water District of Southern California (Metropolitan) declares a Water Supply Allocation or during system emergency conditions.
Program Overview	Over the duration of the Pilot Program, MWDOC will pay, on behalf of its member agencies, annual reservation charges for the right to call on Pilot Program water during the same year, consistent with defined price and payment terms.
Pilot Program Water	IRWD would make up to 5,000 acre-feet (AF) of water (net of Kern County losses) from its Water Bank available for delivery to MWDOC over the Term of the Pilot Program.

**Program Duration:**

Length of Pilot Program:	Initial Pilot Program duration of 7 years fixed (no opt out).  Discussions/negotiations related to future extensions of the program shall consider Metropolitan regional storage levels, water deliveries, payments made in the Pilot Program and the expected start-up date of the California WaterFix (estimated 2035).
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Agency Roles:	
IRWD's Role	<p>IRWD would:</p> <ul style="list-style-type: none"> <li>• Make available Pilot Program Water from its Water Bank;</li> <li>• Operate its Water Bank; and</li> <li>• Coordinate the recovery and delivery of water consistent with the Coordinated Operating Water Storage, Exchange and Delivery Agreement among IRWD, MWDOC and Metropolitan (Coordinated Agreement).</li> <li>• Consider program extensions of some type up to the start-up of the California WaterFix (estimated 2035)</li> </ul>
MWDOC's Roles	<p>MWDOC would:</p> <ul style="list-style-type: none"> <li>• Implement the Pilot Program such that it is cost neutral to IRWD;</li> <li>• Participate to provide additional water supply reliability to its member agencies by way of the Pilot Program;</li> <li>• Coordinate with member agencies on exercising calls for water;</li> <li>• Communicate requests to IRWD for the recovery and delivery of called upon Pilot Program Water;</li> <li>• Coordinate with Metropolitan such deliveries into MWDOC's service area;</li> <li>• Make all up front, annual reservation, water call and other cost payments to IRWD, as described under the Price and Payment Terms, over the course of the program and invoice for actual water deliveries made under the Pilot Program; and</li> <li>• Pay all Metropolitan Full Service Rates pursuant to the Coordinated Agreement.</li> <li>• Consider program extensions of some type up to the start-up of the California WaterFix (estimated 2035)</li> </ul>



## Price and Payment Terms (MWDOC pays to IRWD):

**DRAFT**

<b>Up Front Fixed Costs:</b>	
Up to \$5,000 One-time Program Set-up Fee	Covers IRWD's actual administrative and legal costs to develop a Pilot Program Agreement.
<b>Annual Costs:</b>	
Annual Reservation Charge of \$25 per AF:	Based on IRWD's opportunity loss of 2,500 AF of water for reserving up to 5,000 AF of water in storage for MWDOC. Paid each of the seven years (no opt out).
<b>Variable \$510 per AF Cost to Call on Water:</b>	
Actual costs estimated at \$150 per AF Cost of Water	IRWD's cost of water is based on <u>actual costs</u> incurred to acquire water supplies through unbalanced exchanges, net of losses, and includes Rosedale's fees, Kern County Water Agency third party banking fees, share of recharge O&M costs, and Kern County conveyance costs.
Actual costs estimated at \$100 per AF for Recovery Costs	<u>Actual</u> recovery costs include estimated cost of power, Rosedale's fees, share of recovery O&M costs and Kern County conveyance costs.
Fixed fee of \$260 per AF Capital Facility Use Fee	Capital facility use fee is based on IRWD's total capital costs and the total amount of water expected to be delivered from the projects over 50 years.
<b>Other Costs:</b>	
\$500 Transaction Fee Each Time Water is Called	Covers IRWD's administrative costs to coordinate recovery of water from the Water Bank, invoicing and tracking.



**DISCUSSION ITEM**  
**September 4, 2018**

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

**FROM: Robert Hunter, General Manager**

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

**SUBJECT: Update - Water Loss Control Shared Services Business Plan**

**STAFF RECOMMENDATION**

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Staff recommends the Planning & Operations Committee receive and discuss the attached Update on the Water Loss Control Shared Services Business Plan.

**COMMITTEE RECOMMENDATION**

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Committee recommends (To be determined at Committee Meeting)

**SUMMARY**

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For the past three years, MWDOC has been implementing a comprehensive Water Loss Control Technical Assistance Program in partnership with our member agencies and the 3-Cities. This effort was established in response to water loss control requirements of Assembly Bill 1420 and Senate Bill 555. During this time, all agencies have accessed technical assistance, and the types of technical assistance desired by agencies has expanded.

Due to the Program's success, in February 2018, the Board authorized staff to develop a Water Loss Control Shared Services Business Plan. The purpose of the Business Plan is to map out how MWDOC can offer Water Loss Control Technical Assistance on a long-term basis.

Staff will provide the Planning & Operations Committee with the attached presentation that summarizes the potential direction of the Water Loss Control Shared Services Business Plan. Following the presentation, staff welcomes Planning & Operations Committee input to further shape the Business Plan.

Staff will return to the Planning & Operations Committee later this year with the completed Business Plan for consideration.

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



# Update: Water Loss Control Shared Services Business Plan



Joe Berg, Director of Water Use Efficiency  
Municipal Water District of Orange County

July 10, 2018

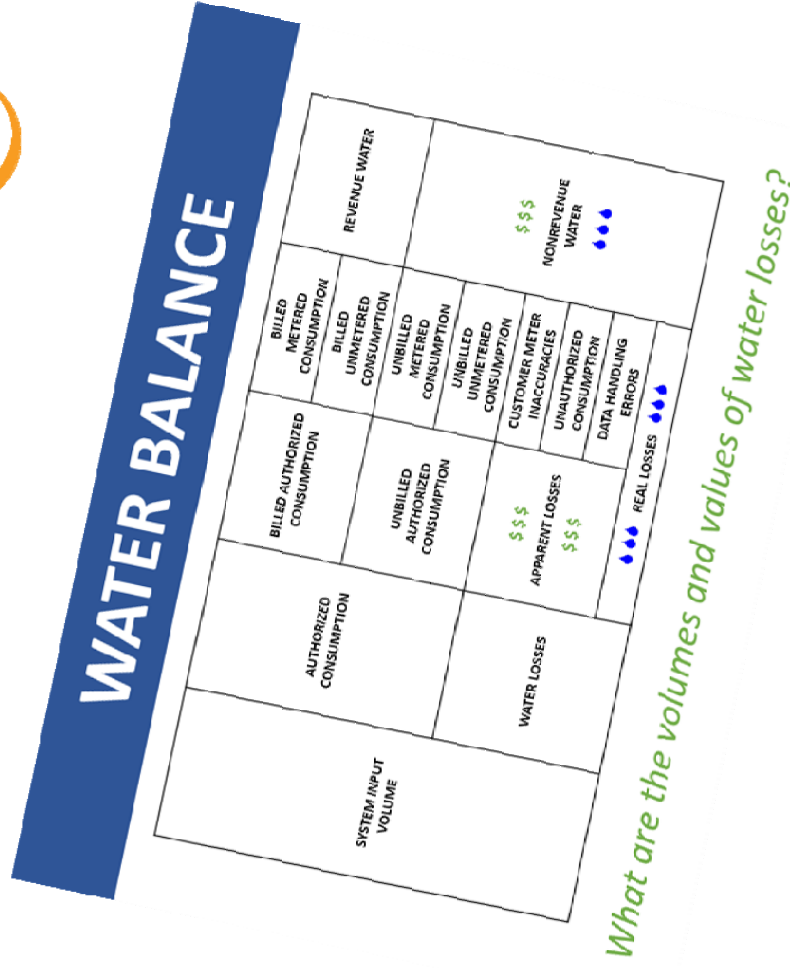
# Presentation Content

- Background
- Summary of Water Loss Control Shared Services Survey Results
- How Much Shared Services?
- Shared Services Models
- Timeline
- Discussion



# Background

- ◆ In 2015, the Board authorized implementation of a comprehensive Water Loss Control Technical Assistance Program (TAP) to assist member agencies in complying with AB 1420
- ◆ In 2016, the Board authorized the addition of sales meter accuracy testing to the TAP
- ◆ In 2018, the Board authorized the purchase of leak detection equipment for an equipment lending library





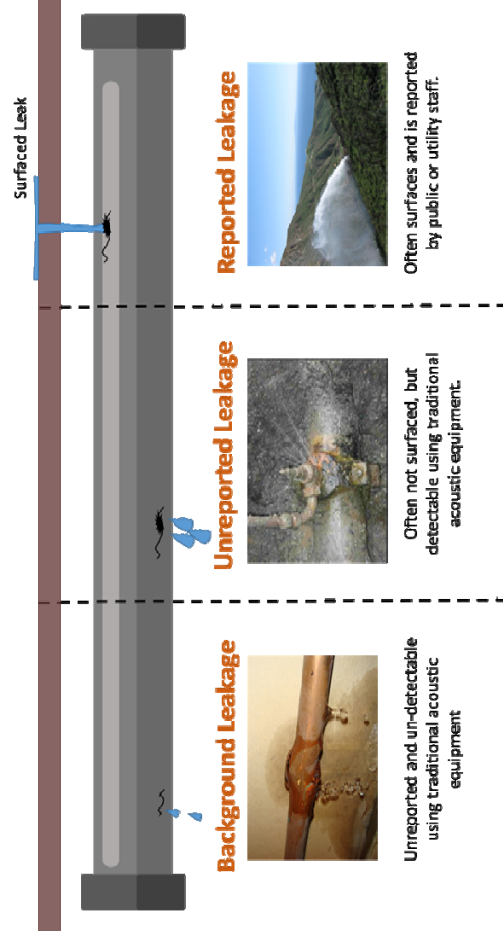
# Background (Cont.)

- In 2018, the Board authorized Water Balance Validation research to better inform the SB 555 water loss standards setting process
- In 2018, the Board authorized staff to explore offering water loss control shared services through the development of a Water Loss Control Shared Services Business Plan
- The purpose of this presentation is to apprise the Board of the general direction the Business Plan is headed and to seek input



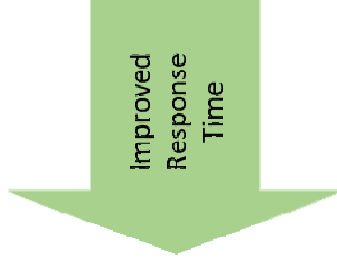
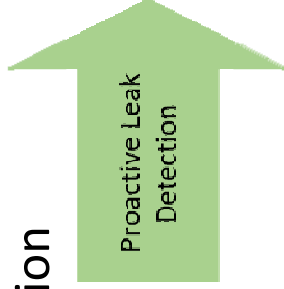
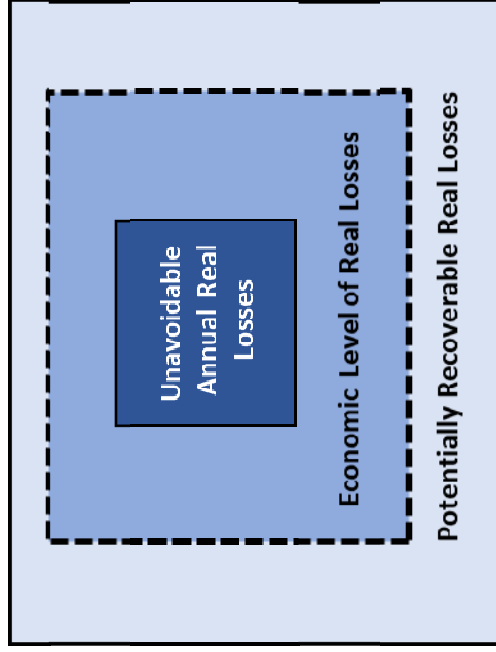
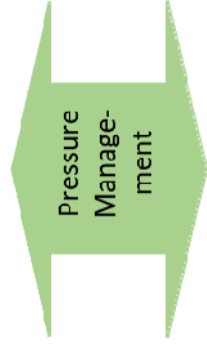
# Shared Services Survey

- To help shape the content and direction of the Business Plan, staff surveyed member agencies and the 3-Cities to identify:
  - What shared services were of interest
    - Water Balance Validation
    - Meter Accuracy Testing
    - Leak Detection
    - Pressure Survey
    - Distribution System Flushing



# Shared Services Survey (Cont.)

- How shared services should be funded; either core or choice
- Preliminary levels of participation
- 25 of 32 retail agencies responded to the survey
- Survey says?

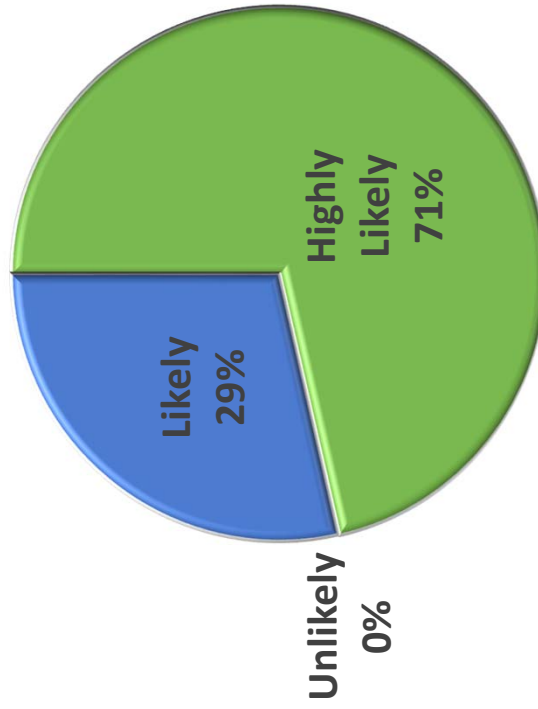




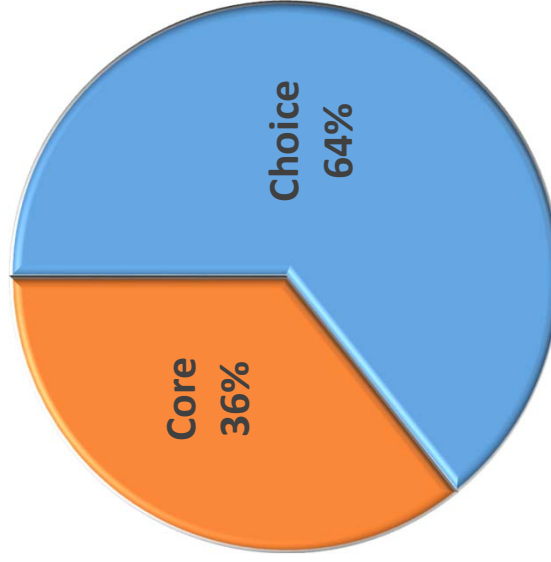
## Water Audit Validation Shared Service



If MWD OC provided annual Water Audit Validation Services, as required by SB 555, would your agency participate?



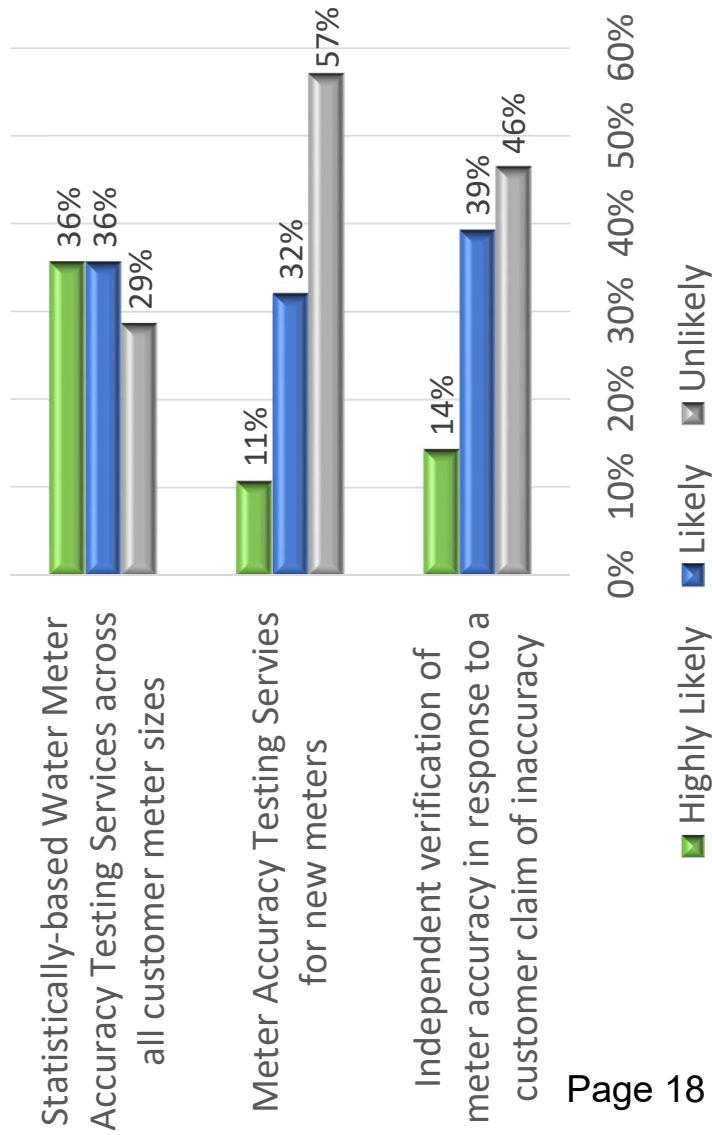
Should annual Water Audit Validation be a Core or Choice funded activity?



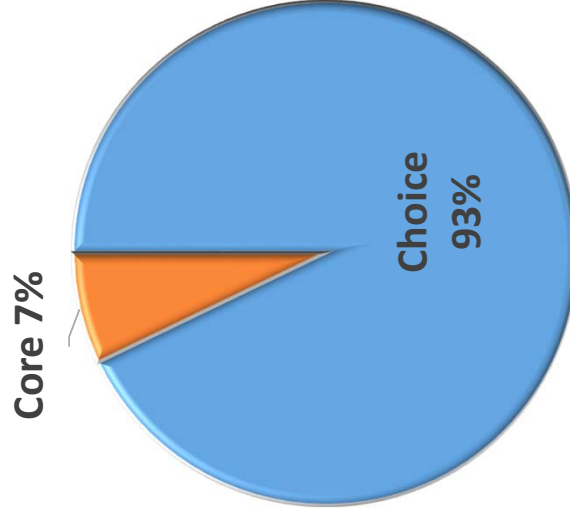
# Sales Meter Accuracy Testing Shared Service



Likelihood to participate if MWDOC provided the following services



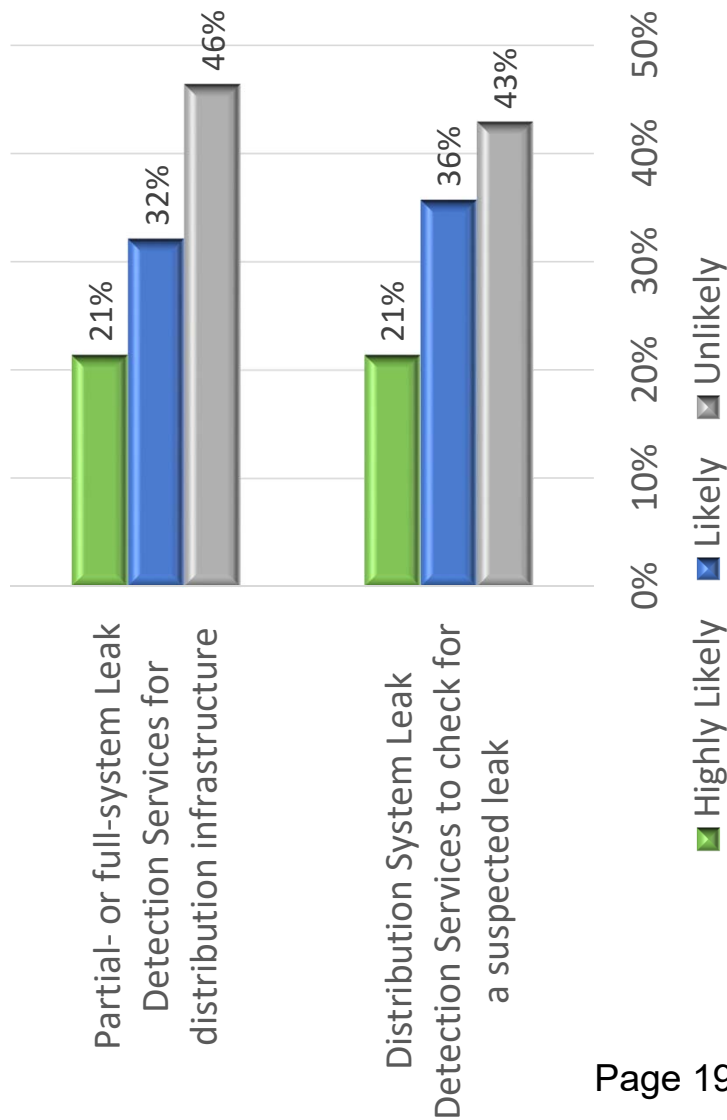
Should Meter Accuracy Testing be a Core or Choice funded activity?



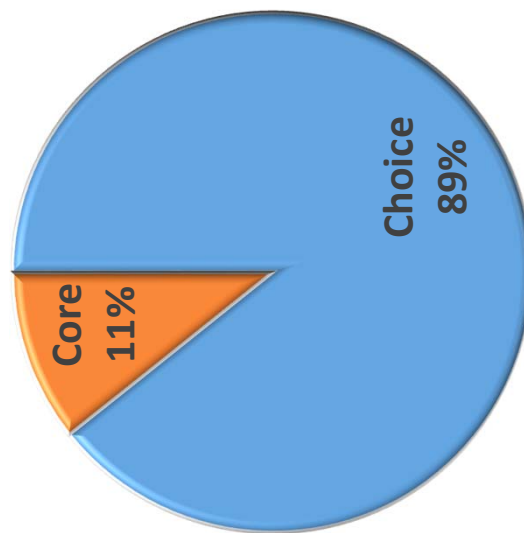
# Distribution System Leak Detection Shared Service



Likelihood to participate if MWD OC provided the following services



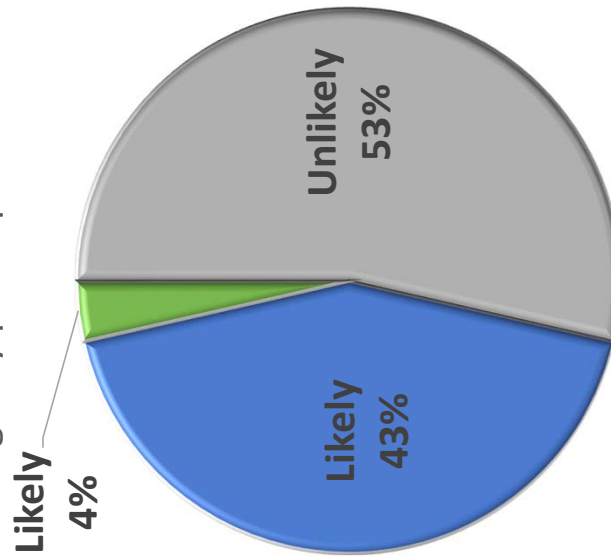
Should Distribution System Leak Detection be a Core or Choice funded activity?



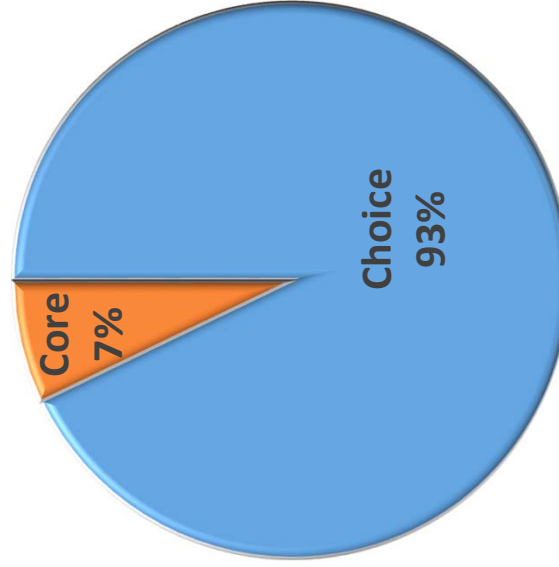
## Distribution System Pressure Survey Shared Service



If MWDOC provided Distribution System Pressure Surveys (system-wide or pressure zone), would your **Highly Likely** agency participate?



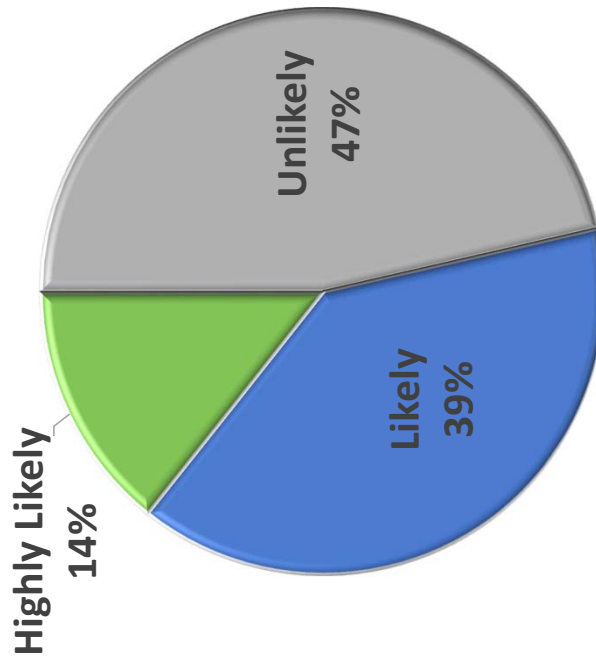
Should Distribution System Pressure Surveys be a Core or Choice funded activity?



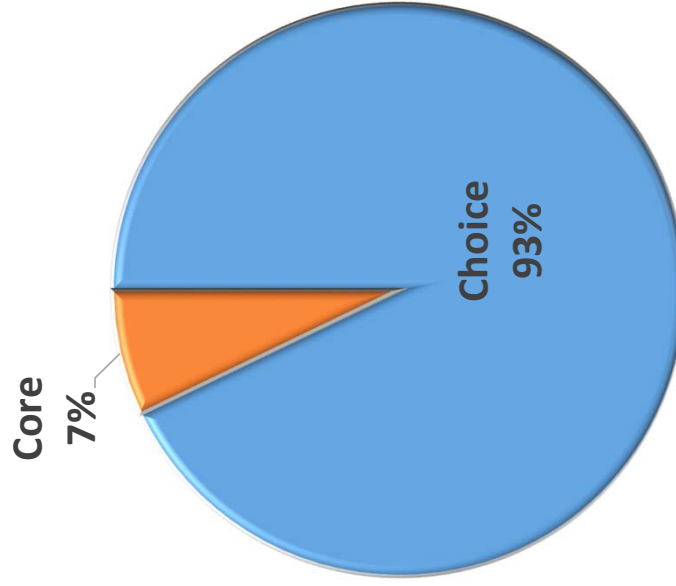
## Distribution System Flushing Shared Service



If MWDOC provided Distribution System Flushing Services, would your agency participate?



Should Distribution System Flushing Services be a Core or Choice funded activity?



# How much shared services?



- There is support for most WLC Shared Services:
  - Water Audit Validation - 25 agencies indicated they would use validation services
  - Sales Meter Accuracy Testing - agencies indicated they would test between 3,100 to 4,300 meters per year
  - System Leak Detection - agencies indicated they would survey between 500 and 550 miles of mains per year
  - System Pressure Survey - 10 agencies indicated they would use pressure survey services
  - System Flushing - agencies indicated they would flush 600 miles of mains per year

An analysis into staffing necessary to provide these levels of shared services is currently underway

# Shared Services Models –

- Contract Services Model
  - Approach for current TAP
  - Matches resources directly to work load
  - Minimizes risk of stranded staffing and equipment assets
  - Likely higher cost to use private sector services
  - Increased management / oversight by existing MWDOC staff

- In-house Services Model
  - Potential for cost savings over private sector
  - Risk of stranded staffing and equipment assets
  - Local control of process and services
  - More accountability and flexibility of services



# Timeline



- September 4, 2018: Planning & Operations Committee Briefing (today)
- November 2018: Committee & Board Consider Business Plan
- December 2018 – April 2019: Budgeting for MWD OC and participating agencies
- July 2019: Begin offering shared services





# Discussion

- Shared Services Survey Results
- Shared Services Models
- Timeline





**INFORMATION ITEM**

September 4, 2018

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

**FROM: Robert Hunter, General Manager**

Staff Contact: Harvey De La Torre  
Chris Lingad

**SUBJECT: Metropolitan's Assessed Valuation for MWDOC and Orange County for Fiscal Year 2018-19**

**STAFF RECOMMENDATION**

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

**COMMITTEE RECOMMENDATION**

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Committee recommends (To be determined at Committee Meeting)

**REPORT**

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This letter reports on Metropolitan's (MET) certified assessed valuations for Fiscal Year 2018-19, as of August 20, 2018. The assessed valuation is used at MET to determine each member agency's percentage participation, vote and director entitlement.

MWDOC's certified assessed valuation for FY 2018-19 totals \$496,958,593,501, a 6.3% increase from FY 2017-18 assessed valuation. As a result, this gives MWDOC a voting entitlement of 46,696 or voting percentage of 17.13%; a decrease of 0.02% from last year. In addition, MWDOC's vote percentage of 17.13% entitles the District to four seats on the MET Board of Directors. Pursuant of Section 52 of the MET Act, each MET member agency shall be entitled to one additional Director for each full five percent of the assessed valuation voting percentage.

<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 2018-19 of \$591,442,913,594. This provides Orange County a voting share of 20.29% at MET. Thus giving Orange County a total entitlement of seven MWD Directors (4 - MWDOC, 1 – Anaheim, 1 – Santa Ana, and 1 – Fullerton). MET's Board of Directors remain at 38.

**Attachment: Metropolitan staff letter on Item 5A: *Report on list of certified assessed valuations for fiscal year 2018/19 and tabulation of assessed valuations, percentage participation, and vote entitlement of member agencies as of August 20, 2018***



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

8/20/2018 Special Board Meeting

5A-1

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## Subject

Report on list of certified assessed valuations for fiscal year 2018/19 and tabulation of assessed valuations, percentage participation, and vote entitlement of member agencies as of August 20, 2018

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## 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 10, 2018.

Based on the information received, staff reports that certified assessed valuations for Metropolitan's six-county service area totaled \$2.9 trillion for fiscal year (FY) 2018/19. The percentage participation and vote entitlement by member agencies as of August 20, 2018, have been updated accordingly and are reported in this letter and in **Attachment 1**.

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## Details

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 entitled to one board member and may appoint an additional representative for each full 5 percent of Metropolitan's assessed valuation of taxable property that is within such member agency's service area. 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 2018/19 and member agency percentage participation, vote and director entitlement (**Attachment 1**), which become effective for all purposes at the August 21, 2018, regular Board meeting.

The certificates of the county auditors for the six counties covering Metropolitan's area, certifying the FY 2018/19 assessed valuations of all property used for calculating Metropolitan's FY 2018/19 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	\$ 1,415,348,200,339
Orange	591,442,913,594
Riverside	184,632,096,560
San Bernardino	112,941,852,371
San Diego	508,577,696,294
<u>Ventura</u>	<u>103,677,243,594</u>
<b>Total:</b>	<b>\$ 2,916,620,002,752</b>

A comparison of FY 2017/18 and FY 2018/19 assessed valuations and the percentage of change (**Attachment 2**) and a comparison of FY 2017/18 and FY 2018/19 vote entitlement and the percentage change (**Attachment 3**) are attached for your information.

### Policy

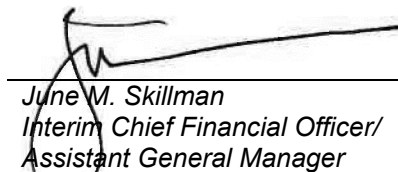
Metropolitan Water District Act Section 52: Additional Directors

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

  
 June M. Skillman  
 Interim Chief Financial Officer/  
 Assistant General Manager

8/16/2018

Date

  
 Jeffrey Kightlinger  
 General Manager

8/16/2018

Date

**Attachment 1 – Assessed Valuations, Percentage Participation, and Vote and Director Entitlement of Member Public Agencies as of August 20, 2018**

**Attachment 2 – Comparison of Assessed Valuations for the Fiscal Years 2017/18 and 2018/19**

**Attachment 3 – Comparison of Vote Entitlement Percentage for the Fiscal Years 2017/18 and 2018/19**

**The Metropolitan Water District of Southern California  
Assessed Valuations, Percentage Participation, and  
Vote and Director Entitlement of Member Public Agencies  
As of August 20, 2018**

<u>Member Agency</u>	<u>*Assessed Valuation Amount Certified</u>	<u>Percent of Total</u>	<u>** Vote Entitlement</u>	<u>*** Director Entitlement</u>
Anaheim	\$ 45,450,504,615	1.57%	4,545	1
Beverly Hills	34,257,609,411	1.18%	3,426	1
Burbank	23,852,579,276	0.82%	2,385	1
Calleguas MWD	102,958,987,713	3.55%	10,296	1
Central Basin MWD	146,127,421,770	5.04%	14,613	2
Compton	4,545,424,971	0.16%	455	1
Eastern MWD	78,336,472,844	2.70%	7,834	1
Foothill MWD	18,529,261,500	0.64%	1,853	1
Fullerton	19,866,326,404	0.68%	1,987	1
Glendale	31,493,656,583	1.09%	3,149	1
Inland Empire Utilities Agency	112,269,680,268	3.87%	11,227	1
Las Virgenes MWD	25,105,456,981	0.87%	2,511	1
Long Beach	50,340,374,900	1.74%	5,034	1
Los Angeles	597,346,642,404	20.59%	59,735	5
MWD of Orange County	496,958,593,501	17.13%	49,696	4
Pasadena	30,534,783,134	1.05%	3,053	1
San Diego County Water Authority	505,334,566,546	17.42%	50,533	4
San Fernando	1,928,278,848	0.07%	193	1
San Marino	6,517,299,945	0.22%	652	1
Santa Ana	26,319,898,552	0.91%	2,632	1
Santa Monica	37,222,221,474	1.28%	3,722	1
Three Valleys MWD	68,814,961,044	2.37%	6,881	1
Torrance	28,941,661,343	1.00%	2,894	1
Upper San Gabriel Valley MWD	104,296,772,578	3.60%	10,430	1
West Basin MWD	198,921,222,083	6.86%	19,892	2
Western MWD	104,859,267,655	3.61%	10,486	1
<b>TOTAL ASSESSED VALUATIONS WITHIN METROPOLITAN</b>	<b>\$ 2,901,129,926,343</b>	<b>100%</b>	<b>290,114</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 2017/18 and 2018/19**

<b>Member Agency</b>	<b>FY 2017/18 Assessed Valuation</b>	<b>FY 2018/19 Assessed Valuation</b>	<b>Percentage Change</b>
<b>Los Angeles County:</b>			
Beverly Hills	\$ 31,924,866,743	\$ 34,286,487,211	7.4%
Burbank	23,086,224,888	23,946,886,076	3.7%
Glendale	30,167,746,050	31,629,390,783	4.8%
Los Angeles	557,325,563,020	599,677,084,566	7.6%
Pasadena	28,864,758,519	30,658,235,134	6.2%
San Marino	6,230,512,782	6,537,142,145	4.9%
Santa Monica	34,284,876,041	37,288,442,874	8.8%
Long Beach	47,961,064,620	50,599,943,529	5.5%
Torrance	27,710,557,203	29,097,794,463	5.0%
Compton	4,287,027,122	4,597,476,207	7.2%
West Basin MWD	187,426,614,572	199,697,256,735	6.5%
Three Valleys MWD	65,606,413,009	69,310,713,559	5.6%
Foothill MWD	17,681,459,980	18,642,640,500	5.4%
Central Basin MWD	139,431,794,681	147,162,822,284	5.5%
Las Virgenes MWD	24,274,197,515	25,203,574,511	3.8%
Upper San Gabriel Valley MWD	99,402,922,844	105,006,092,501	5.6%
San Fernando	1,853,911,379	1,941,557,848	4.7%
<b>Total Los Angeles County</b>	<b>1,327,520,510,968</b>	<b>1,415,283,540,926</b>	<b>6.6%</b>
<b>Orange County:</b>			
Anaheim	43,210,845,651	45,664,235,615	5.7%
Santa Ana	25,176,439,665	26,464,260,473	5.1%
Fullerton	18,875,415,502	19,982,651,004	5.9%
MWD of Orange County	469,819,160,874	499,331,766,502	6.3%
<b>Total Orange County</b>	<b>557,081,861,692</b>	<b>591,442,913,594</b>	<b>6.2%</b>
<b>Riverside County:</b>			
Eastern MWD	73,914,146,427	79,004,560,399	6.9%
Western MWD	98,986,804,314	105,627,536,161	6.7%
<b>Total Riverside County</b>	<b>172,900,950,741</b>	<b>184,632,096,560</b>	<b>6.8%</b>
<b>San Bernardino County:</b>			
Inland Empire Utilities Agency	104,206,656,889	112,941,852,371	8.4%
<b>San Diego County:</b>			
San Diego County Water Authority	479,679,613,984	508,571,874,321	6.0%
<b>Ventura County:</b>			
Calleguas MWD	99,174,964,981	103,677,243,594	4.5%
<b>Total Within Metropolitan</b>	<b>2,740,564,559,255</b>	<b>2,916,549,521,366</b>	<b>6.4%</b>
<b>Excluded Areas</b>	<b>66,310,896</b>	<b>70,481,386</b>	<b>6.3%</b>
<b>*Total Taxable by Metropolitan</b>	<b>\$ 2,740,630,870,151</b>	<b>\$ 2,916,620,002,752</b>	<b>6.4%</b>

**The Metropolitan Water District of Southern California**  
**Comparison of Vote Entitlement Percentage for the Fiscal Years 2017/18 and 2018/19**

Member Agency	FY 2017/18		FY 2018/19		Change	
	Vote Entitlement	Vote Entitlement Percentage	Vote Entitlement	Vote Entitlement Percentage	Vote Entitlement	Vote Entitlement Percentage
Anaheim	4,299	1.58%	4,545	1.57%	246	-0.01%
Beverly Hills	3,190	1.17%	3,426	1.18%	236	0.01%
Burbank	2,299	0.84%	2,385	0.82%	86	-0.02%
Calleguas MWD	9,845	3.61%	10,296	3.55%	451	-0.06%
Central Basin MWD	13,838	5.08%	14,613	5.04%	775	-0.04%
Compton	423	0.16%	455	0.16%	32	0.00%
Eastern MWD	7,324	2.69%	7,834	2.70%	510	0.01%
Foothill MWD	1,757	0.64%	1,853	0.64%	96	-0.01%
Fullerton	1,876	0.69%	1,987	0.68%	111	0.00%
Glendale	3,003	1.10%	3,149	1.09%	146	-0.02%
Inland Empire Utilities Agency	10,353	3.80%	11,227	3.87%	874	0.07%
Las Virgenes MWD	2,417	0.89%	2,511	0.87%	94	-0.02%
Long Beach	4,770	1.75%	5,034	1.74%	264	-0.02%
Los Angeles	55,495	20.37%	59,735	20.59%	4,240	0.22%
MWD of Orange County	46,742	17.15%	49,696	17.13%	2,954	-0.02%
Pasadena	2,874	1.05%	3,053	1.05%	179	0.00%
San Diego County Water Authority	47,643	17.48%	50,533	17.42%	2,890	-0.07%
San Fernando	184	0.07%	193	0.07%	9	0.00%
San Marino	621	0.23%	652	0.22%	31	0.00%
Santa Ana	2,503	0.92%	2,632	0.91%	129	-0.01%
Santa Monica	3,422	1.26%	3,722	1.28%	300	0.03%
Three Valleys MWD	6,510	2.39%	6,881	2.37%	371	-0.02%
Torrance	2,755	1.01%	2,894	1.00%	139	-0.01%
Upper San Gabriel Valley MWD	9,869	3.62%	10,430	3.60%	561	-0.03%
West Basin MWD	18,664	6.85%	19,892	6.86%	1,228	0.01%
Western MWD	9,821	3.60%	10,486	3.61%	665	0.01%
<b>Total</b>	<b>272,497</b>	<b>100%</b>	<b>290,114</b>	<b>100%</b>	<b>17,617</b>	<b>0.00%</b>

Percentages may not foot due to rounding.



<b>ENGINEERING &amp; PLANNING</b>	
<b>Orange County Reliability Study</b>	Staff and CDM Smith are working diligently to complete the 2018 Orange County Water Reliability Study Update. The current schedule anticipates conducting an initial workshop with our member agencies to QC the MWDOC and CDM work efforts on either September 20 or September 24 to receive initial input. Staff anticipates an update to the MWDOC P&O Committee on October 1 <sup>st</sup> and then a presentation to WACO on October 5.
<b>South Orange County Emergency Service Program</b>	<p>Dudek was hired to assist MWDOC and IRWD regarding this effort as it includes modeling of the IRWD system to evaluate various options.</p> <p>Phase 1 of the study is examining the ability of the <u>existing IRWD system</u> to convey water to SOC during emergency situations. The preliminary results of the Phase 1 evaluation indicates the following:</p> <ul style="list-style-type: none"> <li>• Approximately 21 cfs (ranges from 16 cfs to 35 cfs) is available to send to SOC in 2018, however, most of that capacity goes away by 2022 as demands build in the IRWD system.</li> <li>• With 10% conservation by IRWD, it appears as if additional capacity is available, but it drops to about 15 cfs by 2022 and will continue dropping until IRWD increases groundwater production.</li> </ul> <p>Phase 2 will examine the <u>future ability of the IRWD system</u> (beyond 2025) to convey water to SOC during emergency situations. Phase 2 will also consider additional groundwater production for the IRWD service area of 12,500 AF per year to be developed by 2025. While exploring options for the future groundwater production, the study will also evaluate other options for conveying water to SOC as additional water production is brought on-line by IRWD. The Phase 2 work should be completed in October 2018.</p> <p>The total needs of the SOC agencies are estimated to range between 31 and 43 cfs (equivalent to 20 to 27.5 mgd).</p>
<b>Workshop with B&amp;V Engineers and Hazen &amp; Sawyer Consultants</b>	MWDOC will be holding a meeting on August 31 to discuss, in a workshop setting, issues associated with the integration of local projects, especially with respect to mixing waters of differing qualities. This concept can include ocean desalination projects, other local project or projects such as the pump-in to the EOCF#2. We will have MET staff at the meeting to help us understand their associated concerns.
<b>Strand Ranch Project</b>	Please see the P&O packet for details on this item.
<b>Upcoming Issues with MET</b>	MET Evaluation of Regional Storage Portfolio (ERSP). The second meeting with MET and its member agencies will be held in late August. The purpose is to discuss the update of emergency criteria and re-evaluation of Metropolitan's Emergency Storage Requirements.

<b>Poseidon Resources</b>	<p><b>(Nothing new to report)</b> The OCWD Board approved a new non-binding 2018 Water Reliability Agreement (Term Sheet) with Poseidon Resources On July 18, 2018.</p> <p>Poseidon continues working with the Santa Ana Regional Water Quality Control Board (SARWQCB) to renew and update its existing National Pollution Discharge Elimination System permit and comply with new regulations (referred to as the Ocean Plan amendments) which were approved by the State Water Resources Control Board in May 2015. Poseidon expects the SARWQCB to act on its permit in the next 6 months. Assuming success, Poseidon would then seek a permit from the California Coastal Commission in 2019.</p>
<b>SMWD Rubber Dams Project</b>	<p>The Draft Environmental Impact Report (DEIR) public review period was closed for comments on February 23, 2018. Ultimately twenty-one comment letters were received with the major topics of concern being characterized as relating to:</p> <ul style="list-style-type: none"> <li>• Steelhead trout migration including the provisions of fish passages</li> <li>• Impacts on San Juan Creek Lagoon</li> <li>• Aesthetics and impacts of the various structures that may be required as part of the project on the surrounding neighborhoods</li> <li>• Sediment transport</li> </ul> <p>Legal review of the draft document has been completed. An approach for addressing the comments was developed amongst the team members with a new schedule also being developed. The additional technical studies of the issues listed above are being performed. The results will be incorporated into the Responses to Comments and brought to the Board for consideration of adopting the EIR</p>
<b>Doheny Ocean Desalination Project</b>	<p><b>(Nothing new to report)</b> South Coast WD released the Doheny Ocean Desalination Project Draft Environmental Impact Report (EIR) on May 17, 2018. A Public Meeting for the EIR was held on June 26, 2018, and the EIR public comment period closed on August 6, 2018.</p> <p>A Request for Qualifications (RFQ) for a 3rd party legal firm to assist with Design-Build-Operate (DBO) contract development was released and 5 proposals were received. Interviews are being scheduled for late August and it is anticipated that the South Coast WD Board will consider awarding a contract in September 2018.</p> <p>South Coast WD staff also submitted a grant application for up to \$20 million for project construction through Bureau of Reclamation 'Water SMART: Desalination Construction Projects under the WIIN Act'. Applications are currently being reviewed.</p>

Meetings	
	<p>Karl Seckel and Jim Green, Chief of Operations at MET, are discussing how best to bring resolution to this issues that have been dragging on for years. MET has suggested, and MWDOC is willing to participate, in having Utah State Water Lab construct a replica of the piping for the OC070 facility and test the accuracy of a temporary sonic meter. If it can be demonstrated that such a meter set-up can register accurately, then the same meter can be used in the field at the OC-70 facility to conduct the necessary flow test. MET has proposed that MWDOC and MET enter into a letter agreement to conduct the Utah State and OC-70 flow test. The cost is about \$15,000. If the OC-70 meter is determined to be accurate, MWDOC would pay the costs and if the OC-70 meter is not accurate, MET will pay the costs and a process to determine the historical readjustment will begin.</p> <p>Karl Seckel and Jim Green are also working on a concept whereby EOCWD can locate a generator at the OC-70 site to ensure the pumping into their system can always be maintained. Ultimately, this will take an agreement between the parties.</p>
	<p>Charles Busslinger attended the monthly San Juan Basin Authority (SJBA) Board Meeting. The San Juan Bedrock Barrier Investigation is moving into the next phase with the completion of the two monitoring wells. The wells will be used to monitor groundwater responses to pumping pattern changes by both South Coast Water District and the City of San Juan Capistrano. The data collected at the new monitoring wells will help determine the following questions posed by Wildermuth Environmental:</p> <ul style="list-style-type: none"> <li>• Is the aquifer east of the San Juan Creek conveying groundwater at rates that are enough to support pumping at the South Coast WD well field?</li> <li>• Do the existing Orange County Public Work's sheet-piles impact the groundwater flow system between the City and South Coast WD well fields?</li> </ul> <p>The San Juan Basin Authority is reviewing an Aquifer Test Work Plan to conduct two separate constant rate pumping tests to help answer the questions above. The two wells to be pumped are the South Coast's Stonehill well and the City's Kinoshita well. Testing is proposed to start shortly depending on the County's sheet pile schedule.</p>
	<p>Charles Busslinger attended a meeting with MET staff on July 26, 2018 to discuss a planned shutdown of the Orange County Feeder. The shutdown is necessary to make lining repairs to the OCF within Bristol Street, between Willits Street and the I-405, including the section directly in front of South Coast Plaza. Due to the high traffic volumes during Christmas shopping season, the shutdown is scheduled for Feb. 18<sup>th</sup> to Aug. 9<sup>th</sup> 2019.</p>
	<p>Rob Hunter and Karl Seckel met with SMWD representatives Dan Ferons, Don Bunts and Consultant Roy Wolfe. The purpose was to get an update on efforts to more the Fenner Valley Project (Cadiz) forward. They discussed</p>

	<p>the pilot testing work to remove chromium vi, arsenic and iron from their water and felt that MET would be comfortable with the results being obtained. The remaining discussions centered on options to convey the water in the MET aqueduct. MET has a new program manager and a meeting will be set to review the technical issues of conveying the water while still protecting MET's flexibility.</p>
	<p>MET has a number of difficult projects in OC where they are requesting our agencies to shut down certain service connection for several months during the summer. These types of shutdowns are not normal, but permitting issues and competing shutdowns in the winter time have pushed schedules into the summer period. MWDOC is working with its agencies on a shutdown of the Orange County Feeder that will impact Mesa Water and a shutdown of the Second Lower Feeder that serves La Palma and Golden State Water Company. The issues being balanced are to conduct shutdowns in the summer under planned conditions or push the shutdowns off and possible have emergency shutdowns.</p>
	<p>Karl Seckel attended a workshop on the Chino Basin Water Bank. Four agencies in the upper Santa Ana River Watershed completed a Phase 1 study to evaluate the opportunities for formation of the "Chino Basin Water Bank" to allow storage and retrieval of water without harming the current users of the basin. Based on results of the Phase 1 study, the four agencies formed a JPA called the Chino Basin Water Bank. The four agencies are IEUA, Cucamonga Valley MWD, Monte Vista Water District and the City of Ontario. They believe there is 400,000 to 600,000 AF of groundwater storage capacity that can be used without any MPI (Material Physical Injury) to existing users. They evaluated other water banks and will be using that info to develop terms and conditions for the Chino Basin Water Bank. They are just now starting Phase 2 that will take place between August 2018 and June 2019 to:</p> <ul style="list-style-type: none"> <li>• Determine the costs associated with storage and recovery of water from a facilities perspective.</li> <li>• Develop operating plans along with template provisions for storage and recovery of water, with cost estimates based on the facilities analysis and the cost of acquiring water from various sources.</li> <li>• Work with prospective participants to evaluate and comment on the terms and conditions for storage and recovery of water, while protecting the existing basin users.</li> <li>• The CBWB could also involve the storage of water from the SARCCUP program and hence could involve "extraordinary water supplies".</li> </ul>

**Status of Ongoing WEROC Projects  
August 2018**

Description	Comments
<b>Coordination with WEROC Member Agencies</b>	<p><i>Ongoing: WEROC, with Michal Baker as the lead consultant, is facilitating 19 agencies through the process of updating the Orange County Water and Wastewater Multi-Jurisdictional Hazard Mitigation Plan. Update: The public review draft of the Hazard Mitigation Plan has been distributed to the public and surrounding jurisdictions for comment. Information on the public review process has been posted to the MWDOC and participating agency's websites and social media pages. A press release can be found on the MWDOC website (<a href="http://www.mwdoc.com">www.mwdoc.com</a>) front page under "Headline News" and then the draft document can be found at <a href="https://www.mwdoc.com/your-water/emergency-management/emergency-management-resources/">https://www.mwdoc.com/your-water/emergency-management/emergency-management-resources/</a> under Mitigation. Once the 30 day period of public comment concludes, any comments received will be incorporated into the plan as appropriate and it will then be submitted to CalOES and FEMA for approval.</i></p> <p><i>WEROC Radio Replacement Update: Francisco Soto continues to work with member agencies, Motorola, and the Sheriff's Communications staff to implement the OC 800 MHz radio system for WEROC. Francisco worked with the Sheriff's Communication Division to provide two 800 MHz Radio trainings for WEROC member agencies. One training took place on July 25<sup>th</sup> and the second took place on August 14<sup>th</sup>. Francisco is continuing to work with City Agencies to program the WEROC channel into their existing 800 MHz radios. WEROC hired ACME-RF to remove the repeater equipment from Pleasant Peak and Catalina Island. Both removals are scheduled to take place the week of August 27<sup>th</sup>, 2018. The Pleasant Peak repeater removal may be delayed due to the Holy Fire.</i></p> <p>The WEROC Emergency Coordinator Quarterly meeting took place August 7, 2018. Topics discussed included: Member Agency Fuel Survey, the County-wide exercise, Water Quality Notification Translations, NIMS Guidance, Lessons Learned from the Tubbs Fire (Santa Rosa), and upcoming events. Of significant discussion was a meeting with Edison on their new Public Safety Power Shutoff plan and the new Dam Plan requirements. Both of these topics are discussed further under Coordination with the County.</p>
<b>Training and Programs</b>	<p>Francisco and Kelly Hubbard attended the California Emergency Services Association – Southern Chapter Annual Program and Awards. Staff had an opportunity to network with emergency managers from around the State and learn important concepts on Peer Support Teams and Emergency Management Mutual Aid.</p>

	<p>WEROC hosted Fire Awareness and Safety for Utility Staff training. The training provided attendees with information on fire behavior, fire organizational response structures, and how to be safe responding to the field around active wildland fires. Training was provided by Mike Ferdig, retired OCFA Battalion Chief.</p>
<b>Coordination with the County of Orange</b>	<p>Francisco attended the August Orange County Emergency Management Organization (OCEMO) General Meeting and Kelly attended the OCEMO Exercise Design meeting. Claudine Jaenichen, Associate Professor at Chapman University and Executive Board Member of the Design Network for Emergency Management, presented "Design for Emergency Management." Professor Jaenichen presented on how to design outreach and notification materials and communications for pre-disaster planning and more importantly response during disaster to be most effective in communicating critical information to the public. Additionally, the Emergency Management Division (EMD) and the Social Services Agency (SSA) provided an overview of the County of Orange and Orange County Operational Area Mass Care and Shelter Annex. Kelly attended the OCEMO Exercise Design Meeting for the January 2019 County-Wide exercise. Many of the WEROC agencies will be participating in this exercise, including the WEROC staff at the WEROC EOC and the County EOC.</p> <p>Kelly and Francisco attended a meeting with Southern California Edison (SCE) and the Operational Area to discuss the Public Safety Power Shutoff program. SCE will utilize this program to proactively shut off power in high fire risk areas when extreme weather conditions present a clear and imminent threat to Edison powerlines. The idea is that Edison will proactively shutoff power to any lines that could possibly be knocked down by various weather conditions and create a fire or safety hazard. The program will provide the water utilities with very little notification of the plan being activated and does not guarantee that they will actually receive notification prior to the power being shutoff. This could result in losing power at critical water and wastewater facilities with no notification to pre-deploy generators if they are available. This program will impact any facility in the area, including what has traditionally been considered critical facilities that in the past would not be impacted by rotating outages, such as hospitals, police stations, schools, etc. Kelly is working with the County to receive the Edison maps of what facilities are within these areas and then working with Member Agencies to update their Power Outage Plans.</p> <p><i>County and FEMA Recovery Exercise Update: WEROC staff is working with the County and FEMA on a Recovery Exercise on October 18, 2018 that involves responding to a 7.8 earthquake on the San Andreas Fault. The exercise scenario will begin 3 weeks after the earthquake and focus on recovery operations. The</i></p>

	<p><i>exercise is unique in that it is testing long term recovery concepts by focusing in on housing and infrastructure repair. Kelly continues to participate and work with the county to develop this exercise.</i></p> <p><i>Ongoing: WEROC staff participation in the OA Agreement Revision Working Group. Kelly met with the ISDOC Executive Committee to present the current status of the Working Group and OA Agreement revision process. Kelly informed the ISDOC Executive Committee that MWDOC has formally requested that WEROC be added to the OA Agreement as a direct voting member and discussed the potential of how this representation could impact ISDOC's representation to the OA Executive Board. Kelly continues to work the ISDOC Executive Committee to receive a formal stance on changes to the OA Agreement to be presented to the OA Agreement Working Group.</i></p> <p><i>Ongoing: The Operational Area has started its review and update of the County of Orange and Orange County Operational Area Flood, Dam and Reservoir Annex. This update will combine what was two separate plans, as well as address planning requirement updates in Dam Emergency Action Planning that were implemented this year. Each meeting of this group will address specific chapters of the county plan and address coordination issues for all agencies involved. WEROC was one of 2 agencies who submitted suggested corrections for chapters 1 and 2 which were being reviewed this month. Member Agencies with dams were in attendance to voice concurrence with the WEROC suggested changes. WEROC also addressed the new dam planning requirements at its quarterly member agency meeting. Staff has significant concerns regarding what the initial planning requirements were (stated in November 2017 by CalOES and submitted by agencies by the January 1, 2018 deadline) and what is now being required by CalOES (updated July 2018). Although the current requirements are more expansive and reflect a better more robust planning document, there are still areas of planning that are unclear in regards to notifications, local emergency agency responsibilities and pre-coordination with local emergency agencies. In addition to the lack of communication with member agencies by the state on these changes. Kelly is working with the State, County, Member Agencies with Dams, and local emergency agencies to try to facilitate plans that are clear and well-coordinated.</i></p> <p><i>Kelly attended the quarterly Emergency Management Council and Operational Area (OA) Executive Board meeting as the voting representative for ISDOC. Major topics included updates on upcoming County/OA exercises, alert and warning systems, and the Holy Fire (which was active at the time). The meeting was brief in order to allow critical staff to return to the OA EOC and the field Incident Command Post for the Holy Fire.</i></p>
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<b>EOC Readiness</b>	<p>Janine Schunk participated in the OA and MET Radio Test and WebEOC tests for the month.</p> <p>Janine coordinated Fire Extinguisher Service for both WEROC EOC's.</p> <p>Janine completed a significant update of WEROC contacts that are pre-loaded into AlertOC for reverse notifications during an event. These contacts are specific to WEROC operations and coordination with staff and its member agencies.</p>
<b>Coordination with Outside Agencies</b>	<p>Karl Seckel, Kelly, and Francisco met with the Center for Demographic Research (CDR) to discuss the current mapping project and how MWDOC staff can better coordinate with CDR staff when ordering maps. Kelly and Francisco will work with CDR and MWDOC staff on a new project request form that will ensure MWDOC staff are aware of what data can be incorporated into maps and that any requested project meets expected outcomes.</p> <p>Kelly was invited by the Orange County Intelligence Assessment Center (OCIAC) to a Department of Homeland Security and MET tabletop exercise. The exercise scenario involved MET's security program regarding chemical storage, transportation and response to an unusual event. The exercise was led by DHS and was an excellent training opportunity for all involved.</p>
<b>Holy Fire Response</b>	<p>WEROC staff were notified of the Holy Fire early on the afternoon of Monday, August 6, 2018 by a MWDOC Staff Member and by a Member Agency. Shortly thereafter the OC Operational Area EOC requested WEROC to provide staff to the county EOC. Kelly Hubbard responded to the County EOC that afternoon for 1 shift. Following that first shift, the county went to a limited staffing plan for monitoring and support of the County Hotline. Incident Command (IC) for the fire was the Cleveland National Forest Fire Service with support from OCFA and many other local fire agencies. Since the fire continued to grow away from OC, WEROC provided monitoring and summary support to Member Agencies closest to the fire and water utilities on the Riverside County front of the fire. Kelly attended one field Incident Command Post briefing to support Trabuco Canyon Water District and provide coordination with the IC. WEROC provided the County EOC with a call-out staffing list for the rest of the week and weekend, but was not requested.</p> <p>As of August 27, 2018 a flare up of the Holy Fire started near Santiago Peak. Cleveland National Forest Fire Service is still in command of the response and the fire is burning away from OC. It does pose a small threat to OC communication towers, however OC Communications has a continuity plan for any impacts they may experience.</p>



## Status of Water Use Efficiency Projects

September 2018

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
<b>Smart Timer Rebate Program</b>	MWDSC	Ongoing	Ongoing	In July 2018, 128 residential and 70 commercial smart timers were installed in Orange County.  For program water savings and implementation information, see MWDOC Water Use Efficiency Program Savings and Implementation Report.
<b>Rotating Nozzles Rebate Program</b>	MWDSC	Ongoing	Ongoing	In July 2018, no rotating nozzles were installed in Orange County.  For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.
<b>SoCal Water\$mart Residential Indoor Rebate Program</b>	MWDSC	Ongoing	Ongoing	In July 2018, 107 high efficiency clothes washers and 12 premium high efficiency toilets were installed through this program.  For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.
<b>SoCal Water\$mart Commercial Rebate Program</b>	MWDSC	Ongoing	Ongoing	In July 2018, 595 laminar flow restrictors and 628 plumbing flow control valves were installed through this program.  For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.
<b>Industrial Process/ Water Savings Incentive Program (WSIP)</b>	MWDSC	50%	July 2020	This program is designed for non-residential customers to improve their water efficiency through upgraded equipment or services that do not qualify for standard rebates. Incentives are based on the amount of water customers save and allows for customers to implement custom water-saving projects. Last fiscal

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
				<p>year, two projects have been completed, saving over 57 AFY.</p> <p>Total water savings to date for the entire program is 640 AFY and 3,082 AF cumulatively.</p>
<b>Turf Removal Program</b>	MWDOC	Ongoing	Ongoing	<p>In July 2018, 32 rebates were paid, representing \$32,139.00 in rebates paid this month in Orange County. To date, the Turf Removal Program has removed approximately 21.5 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>Spray to Drip Conversion Program</b>	MWDOC	Ongoing	Ongoing	<p>This is a rebate program designed to encourage residential and commercial sites to convert their existing conventional spray heads to low-volume, low-precipitation drip technology.</p> <p>To date, 231 residential sites and 60 commercial sites have completed spray to drip conversion projects.</p>
<b>Recycled Water Retrofit Program</b>	MWDSC	50%	September 2018	<p>This program provides incentives for commercial sites to convert dedicated irrigation meters to recycled water. To date, Metropolitan has provided a total of \$147,624.85 in funding to 22 sites irrigating over 66 acres of landscape, and MWDOC has paid a total of \$41,483.00 in grant funding to 15 of those sites. The total potable water savings achieved by these projects is over 149 AFY.</p>

# Orange County

## Water Use Efficiency Programs Savings and Implementation Report

**Retrofits and Acre-Foot 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	July-18	107	0.31	107	0.31	116,652	4,024	30,371
Smart Timer Program - Irrigation Timers	2004	July-18	198	4.34	198	4.42	22,911	8,101	54,890
Rotating Nozzles Rebate Program	2007	July-18	0	0.00	0	0.00	564,307	2,749	19,631
Commercial Plumbing Fixture Rebate Program	2002	July-18	1,223	1.58	1,223	1.58	94,996	4,939	49,305
Industrial Process/Water Savings Incentive Program (WSIP)	2006	July-18	0	0.00	0	0.00	30	640	3,082
Turf Removal Program <sup>[3]</sup>	2010	July-18	23,571	0.27	23,571	0.27	21,618,649	3,027	13,308
High Efficiency Toilet (HET) Program	2005	July-18	12	0.04	12	0.51	60,115	2,222	19,273
Water Smart Landscape Program <sup>[1]</sup>	1997						12,677	10,621	72,668
Home Water Certification Program	2013						312	7,339	15,266
Synthetic Turf Rebate Program	2007						685,438	96	469
Ultra-Low-Flush-Toilet Programs <sup>[2]</sup>	1992						363,926	13,452	162,561
Home Water Surveys <sup>[2]</sup>	1995						11,867	160	1,708
Showerhead Replacements <sup>[2]</sup>	1991						270,604	1,667	19,083
Total Water Savings All Programs			7		25,111	7	23,822,484	51,705	446,364

Page 43 of 50

<sup>(1)</sup> Water Smart Landscape Program participation is based on the number of water meters receiving monthly Irrigation Performance Reports.

<sup>(2)</sup> Cumulative Water Savings Program To Date totals are from a previous Water Use Efficiency Program Effort.

<sup>(3)</sup> Turf Removal Interventions are listed as square feet.

<sup>(4)</sup> 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 12/13	FY13/14	FY14/15	FY15/16	FY16/17	FY17/18	FY18/19	Total	Current FY Water Savings Ac/Ft (Cumulative)	Cumulative Water Savings across all Fiscal Years	15 yr. Lifecycle Savings Ac/Ft
Brea	93	115	114	76	57	56	-	1,923	0.00	502.63	995
Buena Park	105	106	91	76	54	50	-	1,568	0.00	396.78	811
East Orange CWD RZ	10	8	8	8	3	1	-	193	0.00	53.71	100
El Toro WD	134	121	111	65	47	50	1	1,572	0.00	398.49	813
Fountain Valley	115	102	110	76	65	49	1	2,450	0.00	664.37	1,268
Garden Grove	190	162	165	251	127	87	1	3,651	0.00	947.18	1,889
Golden State WC	265	283	359	260	138	156	6	5,177	0.02	1,342.81	2,679
Huntington Beach	334	295	319	225	180	141	4	8,391	0.01	2,310.57	4,342
Irvine Ranch WD	1,763	1,664	1,882	1,521	1,373	1,203	38	25,907	0.11	6,404.71	13,405
La Habra	82	114	87	66	53	48	1	1,376	0.00	347.36	712
La Palma	34	25	34	29	10	14	1	473	0.00	120.32	245
Laguna Beach CWD	38	37	39	32	19	20	-	952	0.00	253.44	493
Mesa Water	114	86	89	113	80	54	3	2,575	0.01	707.73	1,332
Moulton Niguel WD	442	421	790	688	575	527	23	10,471	0.07	2,551.15	5,418
Newport Beach	116	92	95	66	61	51	-	2,675	0.00	749.46	1,384
Orange	218	163	160	124	80	74	1	3,973	0.00	1,100.69	2,056
Orange Park Acres					-	-	-	12	0.00	4.09	6
San Juan Capistrano	76	73	92	63	33	33	1	1,493	0.00	392.02	773
San Clemente	140	94	141	75	70	85	-	2,705	0.00	709.64	1,400
Santa Margarita WD	553	662	792	466	367	274	21	9,811	0.06	2,474.24	5,076
Seal Beach	31	29	38	23	9	17	-	619	0.00	162.93	320
Serrano WD	13	10	26	8	11	8	-	365	0.00	100.05	189
South Coast WD	89	79	68	43	44	36	-	1,620	0.00	423.46	838
Trabuco Canyon WD	30	45	47	34	28	22	-	820	0.00	211.90	424
Tustin	78	59	80	66	44	49	1	1,662	0.00	447.70	860
Westminster	121	82	109	149	84	65	-	2,651	0.00	695.77	1,372
Yorba Linda	181	167	156	123	56	67	4	3,823	0.01	1,055.68	1,978
<b>MWDOC Totals</b>	<b>5,365</b>	<b>5,094</b>	<b>6,002</b>	<b>4,726</b>	<b>3,668</b>	<b>3,237</b>	<b>107</b>	<b>98,908</b>	<b>0.31</b>	<b>25,528.86</b>	<b>19,109</b>
Anaheim	331	285	295	266	213	173	-	10,855	0.00	3,037.43	5,617
Fullerton	200	186	211	165	107	99	-	3,794	0.00	998.43	1,963
Santa Ana	163	131	132	259	141	124	-	3,095	0.00	806.18	1,601
<b>Non-MWDOC Totals</b>	<b>694</b>	<b>602</b>	<b>638</b>	<b>690</b>	<b>461</b>	<b>396</b>	<b>-</b>	<b>17,744</b>	<b>0.00</b>	<b>4,842.04</b>	<b>3,428</b>
<b>Orange County Totals</b>	<b>6,059</b>	<b>5,696</b>	<b>6,640</b>	<b>5,416</b>	<b>4,129</b>	<b>3,633</b>	<b>107</b>	<b>116,652</b>	<b>0.31</b>	<b>30,370.91</b>	<b>22,537</b>

# **SMART TIMERS INSTALLED BY AGENCY** through MWDOC and Local Agency Conservation Programs

Agency	FY 12/13		FY 13/14		FY 14/15		FY 15/16		FY16/17		FY17/18		FY18/19		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	9	8	4	0	6	43	20	4	31	4	32	0	2	0	165	80	584.33
Buena Park	3	0	0	0	10	4	7	4	10	7	15	3	2	4	48	48	184.05
East Orange CWD RZ	2	0	0	0	0	2	1	0	11	1	6	0	0	0	31	1	26.81
El Toro WD	7	2	11	0	8	9	9	17	33	8	29	4	2	0	146	359	2,728.64
Fountain Valley	3	2	4	0	7	10	13	1	33	12	28	12	2	0	121	52	228.37
Garden Grove	5	2	9	0	14	13	13	11	28	0	27	2	5	0	133	40	208.43
Golden State WC	9	49	9	25	12	39	35	16	56	37	88	6	6	13	319	211	976.48
Huntington Beach	18	33	20	35	2	19	42	12	88	94	70	30	6	0	348	298	1,300.84
Irvine Ranch WD	414	135	71	59	310	67	239	207	344	420	416	78	34	0	2,219	2,364	13,079.68
La Habra	4	7	2	0	7	4	3	1	12	7	8	0	3	0	47	44	235.19
La Palma	1	0	2	0	0	2	3	2	1	0	5	0	1	0	16	2	8.29
Laguna Beach CWD	76	2	71	0	86	0	86	1	27	0	11	0	0	0	508	20	272.36
Mesa Water	10	2	15	2	17	28	36	10	149	41	49	0	5	0	372	154	855.93
Moulton Niguel WD	51	74	40	45	95	46	163	100	236	129	284	33	20	51	1,218	885	4,261.73
Newport Beach	242	26	168	75	11	11	28	43	30	12	24	0	0	0	1,062	409	2,940.58
Orange	20	24	13	9	31	18	51	13	69	10	61	13	8	0	354	178	1,075.03
San Juan Capistrano	14	18	6	11	6	6	20	8	22	8	23	5	1	0	246	130	745.55
San Clemente	26	7	28	2	28	2	26	3	37	13	38	41	1	0	1,090	415	3,014.29
Santa Margarita WD	53	171	64	93	321	53	189	136	326	221	273	220	11	2	1,438	1,594	6,917.32
Santiago CWD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Seal Beach	1	0	1	36	1	1	2	2,446	2	4	5	0	0	0	12	2,502	6,804.34
Serrano WD	1	0	0	0	0	4	11	2	4	0	8	0	0	0	46	2	17.80
South Coast WD	13	16	8	4	73	104	9	11	7	0	15	2	0	0	293	214	1,307.18
Trabuco Canyon WD	6	0	2	0	6	6	16	50	13	3	20	0	2	0	125	157	1,062.61
Tustin	8	4	9	1	18	14	33	8	33	23	27	1	4	0	174	81	403.52
Westminster	1	1	2	0	13	17	7	1	17	12	22	0	2	0	89	44	231.71
Yorba Linda	20	0	12	5	32	2	61	27	72	71	68	10	6	0	412	193	985.15
<b>MWDOC Totals</b>	<b>1,017</b>	<b>583</b>	<b>571</b>	<b>402</b>	<b>1,026</b>	<b>648</b>	<b>1,123</b>	<b>3,136</b>	<b>1,691</b>	<b>1,137</b>	<b>1,652</b>	<b>460</b>	<b>123</b>	<b>70</b>	<b>11,032</b>	<b>10,477</b>	<b>50,456.22</b>

Anaheim	19	10	9	26	7	52	30	34	87	10	62	0	5	0	311	457	2,930.89
Fullerton	9	29	8	0	40	26	32	12	53	7	43	0	0	0	242	199	1,080.63
Santa Ana	8	19	7	8	9	27	22	26	15	3	11	0	0	0	93	100	422.18
<b>Non-MWDOC Totals</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>116</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>646</b>	<b>756</b>	<b>4,433.70</b>
<b>Orange County Totals</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>1,768</b>	<b>460</b>	<b>128</b>	<b>70</b>	<b>11,678</b>	<b>11,233</b>	<b>54,890</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				FY 18/19				Total Program				Cumulative Water Savings across all Fiscal Years
	Small		Large		Small		Large		Small		Large		Small		Large		Small		Large		Small		Large		Small		Large		
	Res	Comm.	Comm.	Res	Res	Comm.	Comm.	Large	Comm.	Res	Comm.	Comm.	Large	Comm.	Res	Comm.	Comm.	Large	Comm.	Res	Comm.	Comm.	Large	Comm.	Res	Comm.	Comm.	Large	
Brea	84	0	0	157	45	0	74	2,484	0	0	0	0	0	0	0	0	0	0	0	0	0	0	572	2,749	0	61.57			
Buena Park	53	0	0	248	0	0	45	98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	509	173	2,535	815.14			
East Orange	30	0	0	221	0	0	0	0	0	0	0	0	0	0	30	0	0	0	0	0	0	0	781	0	0	20.63			
El Toro	56	3,288	0	1,741	28,714	0	730	4,457	0	55	242	0	36	0	0	0	0	0	0	0	0	0	3,260	43,348	890	1,374.09			
Fountain Valley	0	0	0	107	0	0	222	0	0	0	0	0	0	85	0	0	0	0	0	0	0	0	919	2,874	0	19.34			
Garden Grove	80	0	0	88	50	0	110	0	0	55	98	0	52	0	0	0	0	0	0	0	0	0	855	254	0	35.24			
Golden State	192	0	0	583	1,741	0	1,088	0	0	207	6,008	0	161	-495	0	0	0	0	0	0	0	0	3,480	10,837	0	289.77			
Huntington Beach	120	0	0	798	1,419	0	1,345	2,836	0	149	3,362	0	-37	0	0	0	0	0	0	0	0	0	4,001	9,135	2,681	1,351.83			
Irvine Ranch	11,010	4,257	0	1,421	632	0	1,989	5,047	0	335	9,511	0	356	-215	0	0	0	0	0	0	0	0	46,498	43,325	2,004	4,986.44			
La Habra	15	0	0	109	338	0	300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,515	55,404	900	369.02			
La Palma	0	0	0	0	0	0	46	505	0	0	2,385	0	33	0	0	0	0	0	0	0	0	0	89	3,163	0	38.08			
Laguna Beach	2,948	878	0	2,879	1,971	0	1,390	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11,948	2,896	0	355.81			
Mesa Water	361	0	0	229	0	0	166	0	0	113	0	0	36	0	0	0	0	0	0	0	0	0	2,062	302	343	199.99			
Moulton Niguel	361	227	0	1,596	4,587	0	5,492	1,441	0	153	5,872	0	893	0	0	0	0	0	0	0	0	0	12,728	20,598	2,945	1,782.02			
Newport Beach	19,349	6,835	0	460	3,857	0	348	670	0	0	0	0	45	0	0	0	0	0	0	0	0	0	46,865	16,632	0	1,812.10			
Orange	245	120	0	304	668	0	631	91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,133	5,853	0	118.53			
San Juan Capistrano	370	0	0	495	737	0	310	593	0	75	123	0	59	0	0	0	0	0	0	0	0	0	5,027	3,143	0	459.63			
San Clemente	415	5,074	0	326	0	0	426	0	0	0	0	0	146	0	0	0	0	0	0	0	0	0	10,062	11,948	1,343	828.92			
Santa Margarita	389	0	0	1,207	1,513	0	1,820	837	0	15	0	0	224	0	0	0	0	0	0	0	0	0	15,387	7,283	611	852.79			
Seal Beach	0	0	0	40	5,261	0	0	2,300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	155	7,561	0	157.83			
Serrano	105	0	0	377	0	0	695	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,907	291	0	98.75			
South Coast	70	0	0	4,993	13,717	0	1,421	2,889	0	16	0	0	0	0	0	0	0	0	0	0	0	0	9,628	18,870	0	566.88			
Trabuco Canyon	0	0	0	56	0	0	130	0	0	0	4,339	0	0	0	0	0	0	0	0	0	0	0	729	4,339	0	149.82			
Tustin	329	0	0	408	0	0	317	386	0	65	-341	0	30	0	0	0	0	0	0	0	0	0	4,444	1,849	0	127.11			
Westminster	0	0	0	54	0	0	73	0	0	105	0	0	50	0	0	0	0	0	0	0	0	0	748	0	0	12.37			
Yorba Linda	40	990	0	921	0	0	1,715	0	0	213	0	0	0	0	0	0	0	0	0	0	0	0	5,790	1,103	500	478.49			
MWDOC Totals	36,622	21,669	0	19,818	65,250	0	20,883	24,634	0	1,556	31,599	0	2,199	-710	0	0	0	0	0	0	0	0	0	194,823	274,867	14,752	17,362.20		

Anaheim	338	0	0	498	712	0	794	5,221	0	147	3,953	0	0	0	0	0	0	0	4,020	49,799	105	1,402.16
Fullerton	107	0	0	684	1,196	0	521	7,015	0	65	3,034	0	0	0	0	0	0	0	2,910	11,309	1,484	719.68
Santa Ana	86	2,533	0	310	0	0	0	1,420	0	0	1,106	0	0	0	0	0	0	0	859	5,752	0	146.67
<b>Non-MWDOC Totals</b>	<b>531</b>	<b>2,533</b>	<b>0</b>	<b>1,492</b>	<b>1,908</b>	<b>0</b>	<b>1,315</b>	<b>13,656</b>	<b>0</b>	<b>212</b>	<b>8,093</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7,789</b>	<b>66,860</b>	<b>1,589</b>	<b>2,268.51</b>
<b>Orange County Totals</b>	<b>37,153</b>	<b>24,202</b>	<b>0</b>	<b>21,310</b>	<b>67,158</b>	<b>0</b>	<b>22,198</b>	<b>38,290</b>	<b>0</b>	<b>1,768</b>	<b>39,692</b>	<b>0</b>	<b>2,199</b>	<b>-710</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>202,612</b>	<b>341,727</b>	<b>16,341</b>	<b>19,630.71</b>

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

Agency	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	Totals	Cumulative Water Savings across all Fiscal Years
Brea	234	0	10	91	734	242	0	1,607	586
Buena Park	5	23	56	591	133	49	0	2,538	1,363
East Orange CWD RZ	0	0	0	0	0	0	0	0	0
El Toro WD	0	212	6	268	35	737	717	2,516	750
Fountain Valley	0	0	0	1	249	0	895	1,767	755
Garden Grove	4	1	167	676	410	0	0	2,451	1,805
Golden State WC	0	1	0	1,008	53	93	0	2,958	2,278
Huntington Beach	104	144	7	783	641	10	0	2,964	1,942
Irvine Ranch WD	1,090	451	725	11,100	5,958	1,599	0	29,465	9,779
La Habra	0	0	0	340	42	0	0	925	664
La Palma	0	0	0	0	509	0	0	675	159
Laguna Beach CWD	0	27	0	0	0	0	0	446	373
Mesa Water	6	0	79	661	782	0	0	4,254	2,545
Moulton Niguel WD	0	0	3	413	281	506	0	1,783	1,032
Newport Beach	0	0	0	566	0	0	0	1,834	1,550
Orange	1	271	81	275	2,851	458	0	5,488	2,277
San Juan Capistrano	0	14	0	0	0	0	0	260	457
San Clemente	0	0	1	0	0	0	0	432	444
Santa Margarita WD	0	0	2	90	743	598	506	2,054	368
Santiago CWD	0	0	0	0	0	0	0	0	0
Seal Beach	0	0	0	0	184	278	0	816	519
Serrano WD	0	0	0	0	0	0	0	0	0
South Coast WD	148	0	382	0	0	0	0	1,320	646
Trabuco Canyon WD	0	0	0	0	0	0	0	11	18
Tustin	0	0	75	358	212	2	0	1,404	1,005
Westminster	1	28	0	146	177	25	0	1,163	1,191
Yorba Linda	1	0	0	226	84	338	0	933	684
<b>MWDOC Totals</b>	<b>1,594</b>	<b>1,172</b>	<b>2,161</b>	<b>17,275</b>	<b>13,829</b>	<b>5,830</b>	<b>1,223</b>	<b>70,064</b>	<b>33,187</b>
Anaheim	165	342	463	3,072	309	1,808	0	15,561	8,466
Fullerton	94	0	178	476	621	274	0	3,052	2,015
Santa Ana	16	17	5	1,293	238	582	0	6,319	5,637
<b>Non-MWDOC Totals</b>	<b>275</b>	<b>359</b>	<b>646</b>	<b>4,841</b>	<b>1,168</b>	<b>2,664</b>	<b>0</b>	<b>24,932</b>	<b>16,119</b>
<b>Orange County Totals</b>	<b>1,869</b>	<b>1,531</b>	<b>2,807</b>	<b>22,116</b>	<b>14,997</b>	<b>8,494</b>	<b>1,223</b>	<b>94,996</b>	<b>49,305</b>

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

# INDUSTRIAL PROCESS/WATER SAVINGS INCENTIVE PROGRAM

Number of Projects by Agency

Agency	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	Overall Program Interventions	Annual Water Savings[1]	Cumulative Water Savings across all Fiscal Years[1]
Brea	0	0	0	0	0	0	0	0	0	0	0
Buena Park	0	0	0	0	1	0	0	0	2	54	519
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	1	0	0	1	23	33
Garden Grove	0	0	0	0	1	0	0	0	1	0	1
Golden State	0	0	0	0	0	0	0	0	1	3	31
Huntington Beach	0	2	0	1	2	0	1	0	6	180	626
Irvine Ranch	1	1	1	0	2	1	0	0	9	115	670
La Habra	0	0	0	0	1	0	0	0	1	0	1
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	1	0	0	0	0	1	21	78
Orange	0	0	0	0	1	2	1	0	5	97	530
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	1	1	0	0	2	134	191
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>1</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>9</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>29</b>	<b>628</b>	<b>2677</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	1	0	0	0	1	11	405
<b>OC Totals</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>10</b>	<b>5</b>	<b>2</b>	<b>0</b>	<b>30</b>	<b>640</b>	<b>3082</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 12/13		FY 13/14		FY 14/15		FY 15/16		FY 16/17		FY 17/18		FY 18/19		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	7,605	0	5,697	0	71,981	30,617	118,930	404,411	8,354	479	9,853	27,234	0	0	225,817	472,207	405,62
Buena Park	0	0	0	0	11,670	1,626	77,127	16,490	3,741	0	4,586	0	1,230	0	98,354	18,116	64.76
East Orange	0	0	1,964	0	18,312	0	27,844	0	0	0	0	0	0	0	48,120	0	30.06
El Toro	4,680	72,718	4,582	0	27,046	221,612	63,546	162,548	13,139	48,019	7,273	42,510	561	0	125,550	547,407	425.36
Fountain Valley	682	7,524	4,252	0	45,583	5,279	65,232	0	3,679	0	8,631	0	699	0	130,058	12,803	89.26
Garden Grove	4,534	0	8,274	0	67,701	22,000	177,408	49,226	11,504	0	4,487	0	0	0	287,921	117,403	281.06
Golden State	31,813	3,200	32,725	8,424	164,507	190,738	310,264	112,937	0	0	0	0	0	0	581,902	346,272	636.92
Huntington Beach	9,219	12,437	20,642	0	165,600	58,942	305,420	270,303	9,560	21,534	14,236	6,032	528	0	553,636	421,737	628.19
Irvine Ranch	32,884	32,384	36,584	76,400	234,905	317,999	782,844	2,675,629	231,483	46,725	86,893	61,037	3,786	0	1,421,252	3,224,634	2,673.43
La Habra	0	0	0	0	14,014	1,818	49,691	72,164	0	0	3,003	0	0	0	66,708	90,019	99.21
La Palma	0	0	0	0	4,884	0	10,257	59,760	0	0	0	0	0	0	15,141	59,760	42.63
Laguna Beach	2,664	1,712	4,586	226	13,647	46,850	47,614	0	3,059	0	589	0	0	0	75,670	48,788	82.86
Mesa Water	10,667	0	22,246	0	131,675	33,620	220,815	106,896	4,173	77,033	17,373	77,785	1,360	0	415,086	295,334	396.89
Moulton Niguel	11,538	84,123	14,739	40,741	314,250	1,612,845	889,748	1,059,279	220,749	0	98,271	0	4,221	0	1,558,955	2,840,054	2,758.25
Newport Beach	3,548	2,346	894	0	33,995	65,277	76,675	375,404	2,924	0	5,938	6,499	0	0	127,428	449,526	337.75
Orange	15,951	8,723	11,244	0	120,093	281,402	289,990	106,487	12,847	2,366	11,956	0	1,315	0	476,367	398,978	561.14
San Clemente	16,062	13,165	18,471	13,908	90,349	1,137	215,249	438,963	4,267	0	33,083	7,098	0	0	398,983	474,271	523.35
San Juan Capistrano	29,544	27,156	12,106	0	101,195	32,366	197,290	143,315	2,624	40,748	0	0	0	0	365,415	347,277	509.68
Santa Margarita	10,151	11,600	17,778	48,180	211,198	514,198	534,048	550,420	17,010	28,094	62,706	25,000	2,421	0	861,759	1,194,453	1,263.24
Santiago	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Seal Beach	3,611	0	0	0	15,178	504	17,349	15,911	1,234	0	752	0	0	0	38,124	16,415	33.87
Serrano	0	0	2,971	0	41,247	0	127,877	4,403	5,450	0	555	0	2,000	0	180,100	4,403	108.17
South Coast	9,429	4,395	15,162	116,719	84,282	191,853	181,102	128,290	14,967	0	13,319	7,806	0	0	325,067	465,387	531.26
Trabuco Canyon	1,542	22,440	2,651	0	14,771	0	42,510	88,272	1,465	0	4,788	0	0	0	67,999	110,712	111.56
Tustin	9,980	0	1,410	0	71,285	14,137	232,697	33,362	11,173	0	16,926	0	0	0	343,471	47,499	229.18
Westminster	0	0	0	0	14,040	34,631	71,833	23,902	11,112	0	10,033	0	0	0	107,018	58,533	95.16
Yorba Linda	0	0	0	0	112,136	12,702	360,279	116,985	19,420	0	9,529	3,696	5,450	0	518,163	133,383	381.57
<b>MWDOC Totals</b>	<b>216,104</b>	<b>303,923</b>	<b>238,976</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>424,780</b>	<b>264,697</b>	<b>23,571</b>	<b>0</b>	<b>9,414,064</b>	<b>12,195,371</b>	<b>13,300.42</b>

Anaheim	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Fullerton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6.45
Santa Ana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
<b>Non-MWDOC Totals</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>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9,214</b>	<b>6.45</b>

<b>Orange County Totals</b>	<b>216,104</b>	<b>303,923</b>	<b>238,976</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>424,780</b>	<b>264,697</b>	<b>23,571</b>	<b>0</b>	<b>9,414,064</b>	<b>12,204,585</b>	<b>13,307</b>
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[1] Installed device numbers are listed as square feet

# **HIGH EFFICIENCY TOILETS (HETs) INSTALLED BY AGENCY**

through MWDOC and Local Agency Conservation Programs

Agency	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	Total	Cumulative Water Savings across all Fiscal Years
Brea	0	38	146	154	4	6	0	456	116.31
Buena Park	0	96	153	112	13	3	0	687	215.26
East Orange CWD RZ	0	13	26	24	0	0	0	86	24.09
El Toro WD	133	218	869	264	12	6	2	2,045	611.53
Fountain Valley	0	41	132	220	7	9	0	832	278.72
Garden Grove	0	63	350	363	7	4	0	1,488	474.87
Golden State WC	2	142	794	512	9	11	0	2,801	877.48
Huntington Beach	0	163	1,190	628	4	3	0	2,904	821.99
Invine Ranch WD	1,449	810	1,777	2,798	638	239	9	17,157	6,024.11
Laguna Beach CWD	0	45	112	81	1	4	0	392	118.10
La Habra	0	37	94	83	5	1	0	591	215.86
La Palma	0	21	59	52	4	2	0	224	66.01
Mesa Water	0	147	162	162	7	3	0	1,621	650.09
Moulton Niguel WD	0	400	2,497	1,939	49	40	1	5,731	1,344.36
Newport Beach	0	49	168	243	11	6	0	731	208.28
Orange	1	142	978	416	17	10	0	2,189	608.81
San Juan Capistrano	0	35	140	202	3	9	0	532	139.76
San Clemente	0	72	225	246	11	6	0	878	255.87
Santa Margarita WD	0	528	997	1,152	114	34	0	3,343	793.90
Seal Beach	2	17	50	69	-1	0	0	857	421.72
Serrano WD	0	2	40	55	3	0	0	121	28.68
South Coast WD	64	102	398	235	11	7	0	1,028	266.55
Trabuco Canyon WD	0	10	108	169	2	3	0	342	77.41
Tustin	0	64	132	201	12	10	0	1,516	589.78
Westminster	0	35	161	359	3	4	0	1,335	460.36
Yorba Linda WD	0	40	280	379	12	8	0	1,259	388.69
<b>MWDOC Totals</b>	<b>1,651</b>	<b>3,330</b>	<b>12,038</b>	<b>11,118</b>	<b>958</b>	<b>428</b>	<b>12</b>	<b>51,146</b>	<b>16,078.60</b>

Anaheim	0	156	1,188	614	70	19	0	5,884	2,192.98
Fullerton	0	61	293	286	14	9	0	1,064	313.92
Santa Ana	0	33	602	293	20	0	0	2,021	687.54
<b>Non-MWDOC Totals</b>	<b>0</b>	<b>250</b>	<b>2,083</b>	<b>1,193</b>	<b>104</b>	<b>28</b>	<b>0</b>	<b>8,969</b>	<b>3,194.44</b>

<b>Orange County Totals</b>	<b>1,651</b>	<b>3,580</b>	<b>14,121</b>	<b>12,311</b>	<b>1,062</b>	<b>456</b>	<b>12</b>	<b>60,115</b>	<b>19,273.04</b>
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