

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

Jointly with the

**PLANNING & OPERATIONS COMMITTEE**

May 1, 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

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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>.

**ACTION ITEMS**

1. WEROC SOUTH EMERGENCY OPERATIONS CENTER (EOC) SEISMIC STUDY CONSULTANT APPROVAL

**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.)

2. MET'S PROPOSED FIXED TREATMENT CHARGE

3. INFORMATION RELATED TO THE ORANGE COUNTY FLOOD CONTROL ENCROACHMENT UPDATE (oral report)
4. STATUS REPORTS
  - a. Ongoing MWDOC Reliability and Engineering/Planning Projects
  - b. WEROC
  - c. Water Use Efficiency Projects
  - d. Water Use Efficiency Programs Savings and Implementation Report
5. REVIEW OF ISSUES RELATED TO CONSTRUCTION PROGRAMS, WATER USE EFFICIENCY, FACILITY AND EQUIPMENT MAINTENANCE, WATER STORAGE, WATER QUALITY, CONJUNCTIVE USE PROGRAMS, EDUCATION, DISTRICT FACILITIES, and MEMBER-AGENCY RELATIONS

## ADJOURNMENT

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

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



**ACTION ITEM**

May 17, 2017

**TO:** Board of Directors

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

Robert Hunter  
General Manager

Staff Contact: Kelly Hubbard

**SUBJECT: WEROC South Emergency Operations Center (EOC) Seismic Study  
Consultant Approval**

**STAFF RECOMMENDATION**

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Staff recommends the Board of Directors approve the selection of IDS Group to conduct a Seismic Assessment of the WEROC South EOC.

**COMMITTEE RECOMMENDATION**

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Committee recommends (To be determined at Committee Meeting)

**DETAILED REPORT**

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Following the recommendations of the WEROC EOC Facilities Assessment that was presented to the Board in November 2016, WEROC staff developed a Project Scope of Work to conduct a seismic study of the WEROC South EOC. The Project Scope of Work dated March 8, 2017 outlined two concepts as central goals of the assessment:

1. Life-safety protections of employees or volunteers working at the facility
2. The ability of the facility to continue serving as an EOC following anticipated shaking.

The project scope was sent to four firms that had been identified as providing seismic assessments and three quotes for services were received.

<b>Budgeted (Y/N): N</b>	Budgeted amount: 0	Core _X_	Choice __
<b>Action item amount: \$3,700</b>		Line item: 7040- Professional Services	
<b>Fiscal Impact (explain if unbudgeted):</b> From WEROC Reserves – At the time the budget was developed this effort was not anticipated. It arose based on the EOC Assessment completed earlier this year.			

Proposals were received from:

- IDS Group
- RMS Engineering & Design, Inc.
- Emami Engineering

The WEROC Manager, Principal Engineer and MWDOC Assistant General Manager reviewed all responses independently to determine whether the proposed scope of work met the requested scope of work. The proposals had a quite wide range of costs from a low of \$3,700 to a high of \$18,725. Evaluation of the three proposals plus follow-up questions indicated that all three met the requested scope of work.

Kelly Hubbard checked references for the IDS Group, including from MET, and received positive feedback for the company. Staff was concerned about the low quote from IDS and asked them directly whether they felt comfortable with the level of their quote and they responded in the affirmative and noted that they had designed and reviewed many of these types of structures. Staff recommends the Board of Directors approve staff recommendation to enter a contract with IDS Group for the completion of the South EOC Seismic Assessment.

### **Project Schedule**

Once the contract is completed with the consultant, the estimated project timeline is 2 months. Staff expects to bring back the South EOC Seismic Assessment to the Board in August 2017.



**INFORMATION ITEM**

May 1, 2017

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

**FROM: Robert Hunter, General Manager**

Staff Contact: Harvey De La Torre

**SUBJECT: Metropolitan Proposed Fixed Treatment Charge**

**STAFF RECOMMENDATION**

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Staff recommends the Planning & Operations Committee:

**COMMITTEE RECOMMENDATION**

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Committee recommends (To be determined at Committee Meeting)

**BACKGROUND**

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During last year's budget process, the Metropolitan Board asked for a workgroup of member agency managers to be formed to: (a) define the objectives and reasons for a Fixed Treatment Charge, (b) identify any alternative methodologies in assessing a charge, and (c) provide a suggested implementation date.

In February 2017, a final report was presented to the Metropolitan Finance and Insurance (F&I) Committee from the Fixed Treatment Charge Workgroup (Workgroup). Although there was not complete agreement, the Workgroup endorsed "Proposed Policy Principles, Recommendations, and Implementation Considerations" (Proposal) for a Fixed Treatment Charge beginning no sooner than January 1, 2021. This Fixed Treatment Charge would cover 16% (or \$42 million) of Metropolitan's treatment revenue requirement for FY 2016-17, and focus on the treatment demand cost portion.

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

## REPORT

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The Proposal was presented as an action item at the April 11 Metropolitan Board meeting, with a staff recommendation to approve the workgroup's recommendation of policy principles, treatment capacity charge, and implementation date. However, due to some concerns of implementing such a charge, the staff letter presented the following two options for discussion:

**Option #1 [Metropolitan Staff Recommendation]** to adopt the Resolution Approving the Treatment Charge Workgroup's Policy Principles, Recommendation for a Treatment Capacity Charge, and Implementation of a Treatment Capacity Charge

**Option #2** to adopt the Resolution Approving the Treatment Charge Workgroup's Proposed Policy Principles only and take no further action at this time.

The suggested policy principles are as followed:

- *Treatment rates and charges shall align treatment costs with treatment services and benefits received consistent with cost of service principles.*
- *Treatment services shall be recognized to include physical water treatment, as well as operational benefits such as available treatment capacity used by member agencies.*
- *In an effort to contain overall treatment costs on an on-going basis, Metropolitan shall programmatically identify opportunities to partially or fully decommission unneeded treatment infrastructure and minimize future operations/maintenance and capital expenditures. Metropolitan should obtain member agency commitment to utilize new or expanded future treatment capacity.*

The Metropolitan Board held a healthy debate on the item and the options considered by the Board. The proponents of Option #1 felt moving forward with a Fixed Treatment Charge was good for the region and ensured equity among the member agencies that use the treatment service. By simply adopting only the policy principles, and not implementing them, would be "a step away for regional cooperation and a step towards parochialism".

Proponents of Option #2 argued that the Board should just adopt the policy principles, staff has already sought ways to reduce treatment costs; and if the board seeks to make rate structure changes, it should be done during the budget process. In addition, they were concerned about how a proposed Fixed Treatment Charge could affect an agency's operations (e.g. smaller agencies could be penalize for normal operations).

The Board passed **Option #2 (Policy Principles Only)** 75.25% to 20.22%, with the opposition votes from MWDOC (Directors Dick, Barbre, and Ackerman), Fullerton, Beverly Hills, Upper San Gabriel, Las Virgenes, and Pasadena.

**Attachment: Metropolitan staff letter on Item 8-1: Treatment Charge Workgroup's proposed policy principles, recommended treatment capacity charge, and treatment capacity charge implementation**



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

4/11/2017 Board Meeting

8-1

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**Subject**

Adopt CEQA determination and adopt resolution approving Treatment Charge Workgroup's proposed policy principles, recommended treatment capacity charge, and treatment capacity charge implementation

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**Executive Summary**

In February 2017, a report was presented to the Finance and Insurance (F&I) Committee providing an overview of the work of the Treatment Charge Workgroup (Workgroup). The Workgroup met from September 2016 through February 2017. The culmination of this effort is the "Proposed Policy Principles, Recommendations, and Implementation Considerations" (Proposal) for a treatment fixed charge beginning no sooner than January 1, 2021, with the remaining treatment revenue requirement to continue to be recovered through a uniform, volumetric rate. The Proposal, included as [Attachment 1](#), was presented to and discussed by the F&I Committee at its February 2017 and March 2017 regular meetings. Pursuant to the Committee's consensus that the Proposal be presented as an action item at the April meetings of the F&I Committee and the Board, this letter recommends approval of the Proposal. Specifically, it recommends adoption of the Resolution approving the Treatment Charge Workgroup's proposed policy principles, recommendations for a treatment capacity charge, and implementation of a treatment capacity charge, provided as [Attachment 2](#).

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**Details**

On April 12, 2016, Metropolitan's Board of Directors adopted the biennial budget for fiscal years (FY) 2016/17 and 2017/18, water rates for calendar years (CY) 2017 and 2018, and charges for CY 2017. Pursuant to requests for staff to review and present alternatives to the 100% volumetric treatment surcharge, which recovers all revenue requirements allocable to Metropolitan's treatment function, staff, with consultation provided by Raftelis Financial Consultants, Inc., proposed the Board adopt a two-part Treated Water Fixed Charge based upon the cost of service report which was included in Board Letter 8-1 dated April 12, 2016. The first component of the proposed charge would have recovered the Fixed Standby costs of the treatment function and would have been apportioned to member agencies based on the average treated water sales by member agency for the most recent ten fiscal years (ten-year rolling average). The second component would have recovered the Fixed Demand costs and would have been apportioned to member agencies based on each agency's peak treated water demand for the last three summer seasons, defined as the highest daily treated water demand for May through September.

The Board voted instead to continue the 100% volumetric Treatment Surcharge and to: (1) define objectives of a new treated water charge, (2) further analyze alternatives to bring back to the Board for further discussion in fall 2016, and (3) bring a possible recommendation to the Board for a new treated water charge effective January 1, 2018. Staff proposed the following process to the Executive Committee to achieve those objectives:

- Staff would chair a Workgroup of member agencies to work on the issues;
- The Workgroup would use the monthly Member Agency Managers meeting to receive input and information;
- The Workgroup would provide analyses for the Board and develop options and approaches; and
- The F&I Committee would receive regular updates, review proposals and provide direction to the Workgroup.

On June 28, 2016, the Executive Committee formed the Workgroup, which was open to representatives of all of Metropolitan's member agencies, and directed the Workgroup participants to address the following policy issues:

- Define objectives of a fixed treated water charge;
- Determine costs to be included in a fixed charge;
- Determine allocation methodology;
- Address issues related to the implementation of a new charge; and
- Consider implementation in January 2018 or as part of the next biennial budget.

The Executive Committee also established a timeline pursuant to which the Workgroup would be formed in July/August 2016, the F&I Committee would receive a recommendation from the Workgroup in March 2017, and the F&I Committee would make a recommendation to the Board in July 2017 for potential implementation in CY 2018 or CY 2019.

Metropolitan retained Dr. Tom Chesnutt of A&N Technical Services, Inc. to facilitate the process for the participating member agencies. Sixteen member agencies participated in the process (List of Workgroup Participants, Attachment 5). On August 15, 2016, staff provided an update to the F&I Committee regarding the formation of the Workgroup, the Executive Committee's directions to the Workgroup on policy, and the intended process for the Workgroup.

The Workgroup met six times from September 2016 to February 2017. During the process, staff presented information to the Workgroup and Member Agency Managers, including information regarding water treatment plant flows, financial statement and rate impacts of write-down of treatment plants, review of the Metropolitan budget, review of the functionalization and allocation of Metropolitan's treatment costs, and a long-term Treatment Surcharge forecast. The Member Agency Managers were also provided with updates from September 2016 to November 2016 (there was no Member Agency Managers meeting in December 2016) and January 2017.

In February 2017, the Workgroup voted to present the "Proposed Policy Principles, Recommendations, and Implementation Considerations" included as [Attachment 1](#). Updates were provided to the F&I Committee from September 2016 to February 2017, with discussions of the Workgroup's Proposal at the February 2017 and March 2017 F&I Committee meetings.

### **Workgroup Proposal**

The Proposal consists of:

- Policy Principles for Treatment Rates and Charges;
- Recommendations for Treatment Rates and Charges; and
- An implementation consideration for Treated Water Charges.

#### Policy Principles for Treatment Rates and Charges

The Workgroup proposes that the Board adopt the following Policy Principles quoted in full below, which would provide a guidance framework for changes Metropolitan may wish to make to any treatment rate or charge now or in the future:

1. Treatment rates and charges shall align treatment costs with treatment services and benefits received consistent with cost of service principles.
2. Treatment services shall be recognized to include physical water treatment, as well as operational benefits such as available treatment capacity used by member agencies.
3. In an effort to contain overall treatment costs on an on-going basis, MWD shall programmatically identify opportunities to partially or fully decommission unneeded treatment infrastructure and minimize future O&M and capital expenditures. MWD should obtain member agency commitment to utilize new or expanded future treatment capacity.

#### Recommendations for Treatment Rates and Charges

The Workgroup further recommends the adoption of a Treatment Capacity Charge that mirrors the existing Metropolitan Capacity Charge. The Treatment Capacity Charge would recover the capital financing costs



functionalized to the Treatment function that are allocated to the Fixed Demand category. Fixed Demand costs are those capital costs incurred to meet maximum summer treatment capacity. These Treatment Fixed Demand costs would be recovered from member agencies based on their three-year trailing maximum summer peak day demand through treated water connections. The summer demand period is defined as May 1 through September 30. All other Treatment function costs would continue to be recovered through a uniform, volumetric rate per acre-foot of treated water sales. The Workgroup's recommended Treatment Capacity Charge reflects the second component of the two-part Treated Water Fixed Charge proposed by staff to the Board on April 12, 2016, which also proposed to recover Fixed Demand costs based on three-year trailing maximum summer peak day demand.

#### An implementation consideration for Treated Water Charges

To provide member agencies with sufficient time to plan for operational and financial impacts, the Workgroup proposes to incorporate the Treatment Capacity Charge into Metropolitan's biennial cost of service process and implement it no sooner than January 1, 2021. If implemented for CY 2021, the Treatment Capacity Charge for each agency would be determined based on the three-year trailing maximum summer peak day demand through treated water connections for CYs 2017 through 2019.

A resolution approving the Treatment Charge Workgroup's Policies, Recommendations, and Implementation, which includes the Treatment Capacity Charge, is provided as [Attachment 2](#). If the resolution approving all of the Workgroup's recommendations is approved, staff will include a Treatment Capacity Charge in the proposed rates and charges effective January 1, 2021 and January 1, 2022, developed in the manner described above. A resolution approving only the Workgroup's proposed Policy Principles is provided as [Attachment 4](#). If the resolution approving only the Workgroup's Policy Principles is approved, the principles would provide a guidance framework for changes Metropolitan may consider regarding treatment rates or charges in the future.

#### **Requests from the March 13, 2017 F&I Committee Meeting**

Members of the F&I Committee, at its March 13, 2017 meeting, requested that staff provide additional information regarding two topics.

##### **1. Resiliency**

One of the attributes of effective treated water cost recovery identified by the Workgroup was the structuring of Metropolitan's treatment revenues with low variability and appropriate levels of resiliency. The request was made for information about the need for financial resiliency through a treatment fixed charge, if financial resiliency is going to be part of the principles recommended by the Workgroup

The Workgroup provided background statements in their written communication to the F&I Committee, concluding "structuring MWD's treatment revenues with low variability and appropriate levels of resiliency" is one of "several important attributes of effective treated water cost recovery." (Page 1 of [Attachment 1](#).) Thus, the Workgroup is not proposing that the Board adopt financial resiliency as a policy principle, but the Workgroup does conclude that financial resiliency is an important attribute of the recovery of Metropolitan's treatment costs.

Financial resiliency has been in the forefront of recent water utility research. Financial resiliency is defined as "the ability to thrive in the presence of fiscal stresses that threaten to temporarily or systematically move an organization or industry off-balance or out of fiscal equilibrium."<sup>1</sup> Key to financial resiliency is the robustness of the utility business model in generating stable and adequate revenue streams. Fixed charges, when replacing revenues generated by volumetric rates, contribute to stable revenue streams and enhance financial resiliency.

The proposed Treatment Capacity Charge would generate a fixed revenue stream to replace a portion of the current treatment revenue requirement that is 100 percent dependent on sales volumes. By definition, the Treatment Capacity Charge would improve the stability of treatment cost recovery, of which 91 percent are fixed

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<sup>1</sup> Water Research Foundation, "Defining a Resilient Business Model for Water Utilities", prepared by: Jeff Hughes, Mary Tiger, Shadi Eskaf, Stacey Isaac Berahzer, Sarah Royster, Christine Boyle, and Dayne Batten, Environmental Finance Center at the University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-3330; and Peiffer Brandt and Catherine Noyes, Raftelis Financial Consultants, Inc., 1031 South Caldwell St., Suite 100, Charlotte, NC 28203; ©2014, page 2.

costs. This would result in less revenue dependent on sales volumes, a more stable revenue stream, and improved financial resilience across a range of hydrologic variability.

## 2. Background Information Regarding Treatment Costs

At the March 13, 2017 F&I Committee meeting, staff presented a summary slide (slide 6 of the PowerPoint presentation) containing the costs, by category, that make up Metropolitan's 2017/18 Treatment Revenue Requirement, which are functionalized as treatment costs pursuant to Metropolitan's cost of service process. A request was made for background information that makes up each of the categories of treatment costs summarized in slide 6. Staff made a detailed presentation to Workgroup participants on October 20, 2016, which contains the background information requested, and is included herein as [Attachment 3](#). The presentation referenced cost data shown in the current biennial budget document; it also referenced the relevant schedules in the cost of service study, which was included in Board Letter 8-1 dated April 12, 2016. This information was also provided as part of Attachment 4 in Board Letter 8a to the F&I Committee, dated February 14, 2017.

The budget is the foundation of the cost of service report. There is much detail in the budget document on Metropolitan's website regarding departmental operating and capital financing expenditures. Budgets are developed in detail by line item (labor, chemicals, materials, professional services, travel, etc.) for each team. The budgeted dollars by team roll up to units, units roll to sections, sections roll to groups. The largest portions of the budget for the Water System Operations (WSO) group are the Water Treatment and Conveyance and Distribution section budgets, which together make up 59 percent of WSO's budget. The other six WSO sections (Office of the General Manager, Operations Support Services, Water Quality, Water Operations and Planning, Safety and Environmental Services, Power Operations and Planning) serve a support function within the group. The Water Treatment section of the WSO budget of \$74.5 million includes the budget for the five treatment plants. (Page 63 of the budget, and slide 5 in [Attachment 3](#).) The Water Treatment Section budget includes the salaries and benefits, professional services, materials and supplies, outside services, and variable treatment costs for chemicals, power, and solids. Accordingly, a large portion of the Treatment Revenue Requirement is contained in the WSO Budget.

Treatment revenue requirements are made up of the following items: WSO direct departmental O&M costs at the five treatment plants; WSO support O&M costs; Support O&M costs from Other Groups; Capital Financing costs; Revenue Offsets; Administrative & General costs. (Schedules 8 and 9 in the cost of service report, and slide 10 in [Attachment 3](#).)

- WSO Direct O&M costs come from the budget and are functionalized to treatment by location and by activity so that they include only costs pertaining to treatment; thus, a portion of the Electrical and Control Teams O&M at the five treatment plants is subtracted because they perform Distribution functions. (Slide 9 in [Attachment 3](#).)
- WSO support O&M costs includes a portion of Operations Support, Operations Planning, Water Quality, Safety & Environmental, and Power Operations. These are functionalized to treatment by time keeping and team function.
- Support O&M costs from Other Groups includes Engineering, functionalized to treatment by Net Book Value (NBV) shares; it also includes Information Technology, Human Resources, and Office of the General Manager, and these costs are functionalized prorata by labor costs.
- Capital financing costs includes debt service and Pay-As-You-Go funding of the Capital Investment Plan. Capital costs are functionalized to treatment by NBV shares. Treatment NBV includes all Metropolitan facilities which perform treatment functions. Treatment NBV is around 31% in FY 2017/18. (Schedule 4 in the cost of service report, and slide 11 in [Attachment 3](#).)
- Revenue Offsets includes interest income and property tax revenues. These are functionalized prorata by total costs and by NBV shares, respectively.
- Administrative & General includes departmental O&M for Administrative Services, General Counsel, General Auditor, Ethics, and Office of the CFO. These costs are functionalized prorata by total costs.

The supporting treatment cost details can be found in the budget documents pages 36, 62, and 63; the cost of service report, pages 63 to 72; and the Workgroup October 20, 2016 presentation.

## Policy

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Metropolitan Water District Act Section 133: Fixing of Water Rates

Metropolitan Water District Act Section 134: Adequacy of Water Rates; Uniformity of Rates

Metropolitan Water District Act Section 134.5: Water Standby or Availability of Service Charge

Metropolitan Water District Administrative Code Section 4301(a): Cost of Service and Revenue Requirement

By Minute Item 50438, the Board, at its April 12, 2016 meeting, approved a motion that the Board (1) define objectives of a new treated water charge, (2) further analyze alternatives to bring back to the Board for further discussion in fall 2016, and (3) bring a possible recommendation for a new treated water charge effective January 1, 2018.

## California Environmental Quality Act (CEQA)

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### CEQA determination for Options #1, #2, and #3:

The proposed action is not defined as a project under CEQA because it involves continuing administrative activities, such as general policy and procedure making (Section 15378(b)(2) of the State CEQA Guidelines). In addition, the proposed action is not subject to CEQA because it involves other government fiscal activities, which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment (Section 15378(b)(4) of the State CEQA Guidelines). Finally, where it can be seen with certainty that there is no possibility that the proposed actions may have a significant impact on the environment, those actions are not subject to CEQA pursuant to Section 15061(b)(3) of the State CEQA Guidelines.

The CEQA determination for Options #1, #2, and #3 is: Determine that the proposed action is not defined as a project and is not subject to CEQA pursuant to Sections 15378(b)(2), 15378(b)(4), and 15061(b)(3) of the State CEQA Guidelines.

## Board Options

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### Option #1

Adopt the CEQA determination that the proposed action is not defined as a project under CEQA and is not subject to CEQA, and

Adopt the Resolution Approving the Treatment Charge Workgroup's Policy Principles, Recommendation for a Treatment Capacity Charge, and Implementation of a Treatment Capacity Charge.

**Fiscal Impact:** None

### Option #2

Adopt the CEQA determination that the proposed action is not defined as a project under CEQA and is not subject to CEQA, and

Adopt the Resolution Approving the Treatment Charge Workgroup's Proposed Policy Principles and take no further action at this time.

**Fiscal Impact:** None

### Option #3

Adopt the CEQA determination that the proposed action is not defined as a project under CEQA and is not subject to CEQA, and

Take no action at this time and maintain Metropolitan's current 100% volumetric Treatment Surcharge.

**Fiscal Impact:** None

**Staff Recommendation**

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Option #1

  
\_\_\_\_\_  
Gary Breaux  
Chief Financial Officer/  
Assistant General Manager4/4/2017  
Date  
\_\_\_\_\_  
Jeffrey Kightlinger  
General Manager4/4/2017  
Date

**Attachment 1 – Proposed Policy Principles, Recommendations, and Implementation Considerations**

**Attachment 2 – Resolution Approving the Treatment Charge Workgroup’s Proposed Policy Principles, Recommendations for a Treatment Capacity Charge, and Implementation of a Treatment Capacity Charge**

**Attachment 3 – October 20, 2016 Presentation to the Treatment Charge Workgroup, containing background material on treatment costs**

**Attachment 4 – Resolution Approving the Treatment Charge Workgroup’s Proposed Policy Principles**

**Attachment 5 – List of Workgroup Participants**

Ref# cfo12650105

**TREATMENT CHARGE WORKGROUP**  
**PROPOSED POLICY PRINCIPLES, RECOMMENDATIONS, AND**  
**IMPLEMENTATION CONSIDERATIONS**

**February 2, 2017**

The Treatment Charge Workgroup (“Workgroup”) was initially established by the MWD Board of Directors to develop recommendations for a fixed treatment surcharge for subsequent consideration by the Board. The constraints placed on the Workgroup were simply that any recommendations had to be based on the existing Cost of Service Study. Several meetings of the Workgroup have been utilized to discuss the attributes of successful treatment cost recovery, and the methods of accounting for assets, revenues and costs.

The Workgroup concluded there are several important attributes of effective treated water cost recovery. These include, but are not limited to, providing a clear nexus between member agency treatment service costs and the benefits received, and structuring MWD’s treatment revenues with low variability and appropriate levels of resiliency.

Prior to establishing a specific rate-related proposal, the Workgroup recommends the Board’s consideration and potential adoption of Policy Principles. These principles would provide a guidance framework for changes MWD may wish to make to the treated water portion of its rate structure in the future.

Potential imposition of a new treated water charge would more ideally be done in the context of a full rate refinement review. This would ensure the components of the resultant rate structure are fully harmonized. However, absent a full rate refinement review, modifications to MWD’s existing charges may be implemented to incorporate policy changes regarding the recovery of treatment component costs. This document presents Proposed Policy Principles, Recommendations, and an implementation consideration.

**Policy Principles for Treatment Rates and Charges:**

1. Treatment rates and charges shall align treatment costs with treatment services and benefits received consistent with cost of service principles.
2. Treatment services shall be recognized to include physical water treatment, as well as operational benefits such as available treatment capacity used by member agencies.
3. In an effort to contain overall treatment costs on an on-going basis, MWD shall programmatically identify opportunities to partially or fully decommission unneeded treatment infrastructure and minimize future O&M and capital expenditures. MWD

should obtain member agency commitment to utilize new or expanded future treatment capacity.

**Recommendations for Treatment Rates and Charges:**

1. Adopt a Treatment Capacity Charge that mirrors the existing Capacity Charge in a manner consistent with cost of service principles.
2. This Treatment Capacity Charge should be implemented based upon a three-year trailing maximum peak day flow through treated water service connections during the May 1 through September 30 peak summer demand period.

**An Implementation Consideration for Treated Water Charges:**

1. To provide member agencies with sufficient time to plan for operational and financial impacts to their agencies and sub-agencies, this Treatment Capacity Charge should be integrated into MWD's biennial cost of service process and considered for implementation at the Board's discretion with rates and charges effective no sooner than January 1, 2021 (thus, inclusive only of the summer peaks of 2017-2019.)

THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

RESOLUTION \_\_\_\_

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**RESOLUTION OF THE BOARD OF DIRECTORS  
OF THE METROPOLITAN WATER DISTRICT OF  
SOUTHERN CALIFORNIA  
APPROVING  
THE TREATMENT CHARGE WORKGROUP'S PROPOSED POLICY PRINCIPLES,  
RECOMMENDATIONS FOR A TREATMENT CAPACITY CHARGE, AND  
IMPLEMENTATION OF A TREATMENT CAPACITY CHARGE**

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WHEREAS, the Board of Directors ("Board") of The Metropolitan Water District of Southern California ("Metropolitan"), pursuant to Sections 133, 134 and 134.5 of the Metropolitan Water District Act (the "Act"), is authorized to fix such rate or rates for water as will result in revenue which, together with revenue from any water standby or availability of service charge or assessment, will pay the operating expenses of Metropolitan, provide for repairs and maintenance, provide for payment of the purchase price or other charges for property or services or other rights acquired by Metropolitan, and provide for the payment of the interest and principal of its bonded debt, including payment of the interest and principal of Metropolitan's non-tax funded debt; and

WHEREAS, on April 12, 2016, the Board voted to (1) define objectives of a new treated water charge, (2) further analyze alternatives to bring back to the Board for discussion in fall 2016, and (3) bring a possible recommendation to the Board for a new treated water charge effective January 1, 2018; and

WHEREAS, on June 28, 2016, the Executive Committee of the Board approved the formation of a Workgroup to achieve its objectives, with participation made open to all member agencies; and

WHEREAS, the Executive Committee established a timeline for the Workgroup to provide recommendations to Metropolitan's Finance and Insurance (F&I) Committee, and directed the Workgroup to:

- Define objectives of a fixed treated water charge;
- Determine costs to be included in a fixed charge;
- Determine allocation methodology;
- Address issues related to the implementation of a new charge; and
- Consider implementation in January 2018 or as part of the next biennial budget.

WHEREAS, Metropolitan retained Dr. Tom Chesnutt of A&N Technical Services, Inc. to facilitate the process, which took place from September 2016 through February 2017; and

WHEREAS, at the February meeting of the F&I Committee, the Workgroup presented its Proposal in a document titled, "Treatment Charge Workgroup Proposed Policy Principles, Recommendations, and Implementation Considerations" (Proposal), dated February 2, 2017; and

WHEREAS, the Proposal recommends that the Board adopt three policy principles, as follows:

1. Treatment rates and charges shall align treatment costs with treatment services and benefits received consistent with cost of service principles.
2. Treatment services shall be recognized to include physical water treatment, as well as operational benefits such as available treatment capacity used by member agencies.
3. In an effort to contain overall treatment costs on an on-going basis, MWD shall programmatically identify opportunities to partially or fully decommission unneeded treatment infrastructure and minimize future O&M and capital expenditures. MWD should obtain member agency commitment to utilize new or expanded future treatment capacity.

WHEREAS, the Proposal recommends a Treatment Capacity Charge that mirrors the existing Metropolitan Capacity Charge, to be allocated to member agencies based upon a three-year trailing maximum peak day flow through treated water service connections during the May 1 through September 30 peak summer demand period; and

WHEREAS, the recommended Treatment Capacity Charge would recover the capital financing costs incurred to meet maximum summer treatment capacity, also referred to as “fixed demand costs”; and

WHEREAS, to provide member agencies with sufficient time to plan for operational and financial impacts to their agencies and sub-agencies, the Proposal recommends the Treatment Capacity Charge be integrated into Metropolitan’s biennial cost of service process and considered for implementation at the Board’s discretion with rates and charges effective no sooner than January 1, 2021; and

WHEREAS, the F&I Committee considered the Proposal at its regular February 2017 and March 2017 meetings, pursuant to informational presentations, review, and deliberation; and

WHEREAS, on April 10, 2017, the Proposal, together with a staff review thereof, was further discussed and reviewed by the F&I Committee and by the Board on April 11, 2017; and

WHEREAS, each of said meetings of the Board were conducted in accordance with the Brown Act (commencing at 54950 of the Government Code), at which due notice was provided and quorums were present and acting throughout; and

NOW, THEREFORE, the Board of Directors of The Metropolitan Water District of Southern California does hereby resolve, determine and order as follows:

**Section 1.** That the Board of Directors of Metropolitan hereby adopts the following policy principles for the recovery of treatment costs:

1. Treatment rates and charges shall align treatment costs with treatment services and benefits received consistent with cost of service principles.
2. Treatment services shall be recognized to include physical water treatment, as well as operational benefits such as available treatment capacity used by member agencies.
3. In an effort to contain overall treatment costs on an on-going basis, MWD shall programmatically identify opportunities to partially or fully decommission unneeded treatment infrastructure and minimize future O&M and capital expenditures. MWD should obtain member agency commitment to utilize new or expanded future treatment capacity.



**Section 2.** That the Board hereby directs the General Manager to integrate into Metropolitan's biennial cost of service process for the proposal of rates and charges a Treatment Capacity Charge effective January 1, 2021.

**Section 3.** That such Treatment Capacity Charge shall mirror the existing Capacity Charge in a manner consistent with cost of service principles.

**Section 4.** That such Treatment Capacity Charge for each member public agency ("member agency") be based upon a three-year trailing maximum peak day flow through treated water service connections during the May 1 through September 30 peak summer demand period.

**Section 5.** That this Board finds that the adoption of the policy principles and Treatment Capacity Charge is not defined as a project under CEQA because it involves continuing administrative activities, such as general policy and procedure making (Section 15378(b)(2) of the State CEQA Guidelines). In addition, the proposed action is not subject to CEQA because it involves other government fiscal activities, which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment (Section 15378(b)(4) of the State CEQA Guidelines). Finally, where it can be seen with certainty that there is no possibility that the proposed actions may have a significant impact on the environment, those actions are not subject to CEQA pursuant to Section 15061(b)(3) of the State CEQA Guidelines.

**Section 6.** That the General Manager and the General Counsel are hereby authorized to do all things necessary and desirable to accomplish the purposes of this Resolution, including, without limitation, the commencement or defense of litigation.

**Section 7.** That the General Manager is hereby authorized and directed to take all necessary action to satisfy relevant statutes requiring notice by publication.

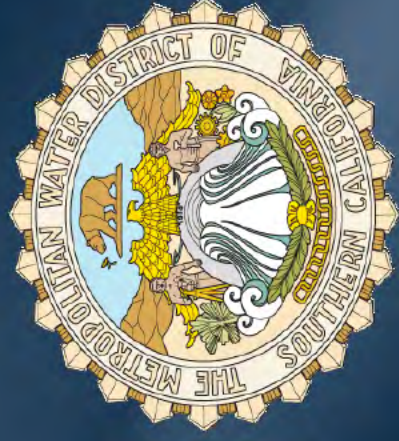
**Section 8.** That the Board Executive Secretary is hereby directed to transmit a certified copy of this Resolution to the presiding officer of the governing body of each member agency.

I HEREBY CERTIFY that the foregoing is a full, true and correct copy of a Resolution adopted by the Board of Directors of The Metropolitan Water District of Southern California, at its meeting held on April 11, 2017.

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Board Executive Secretary  
The Metropolitan Water District  
of Southern California

# Treatment Fixed Charge Workgroup Meeting #3



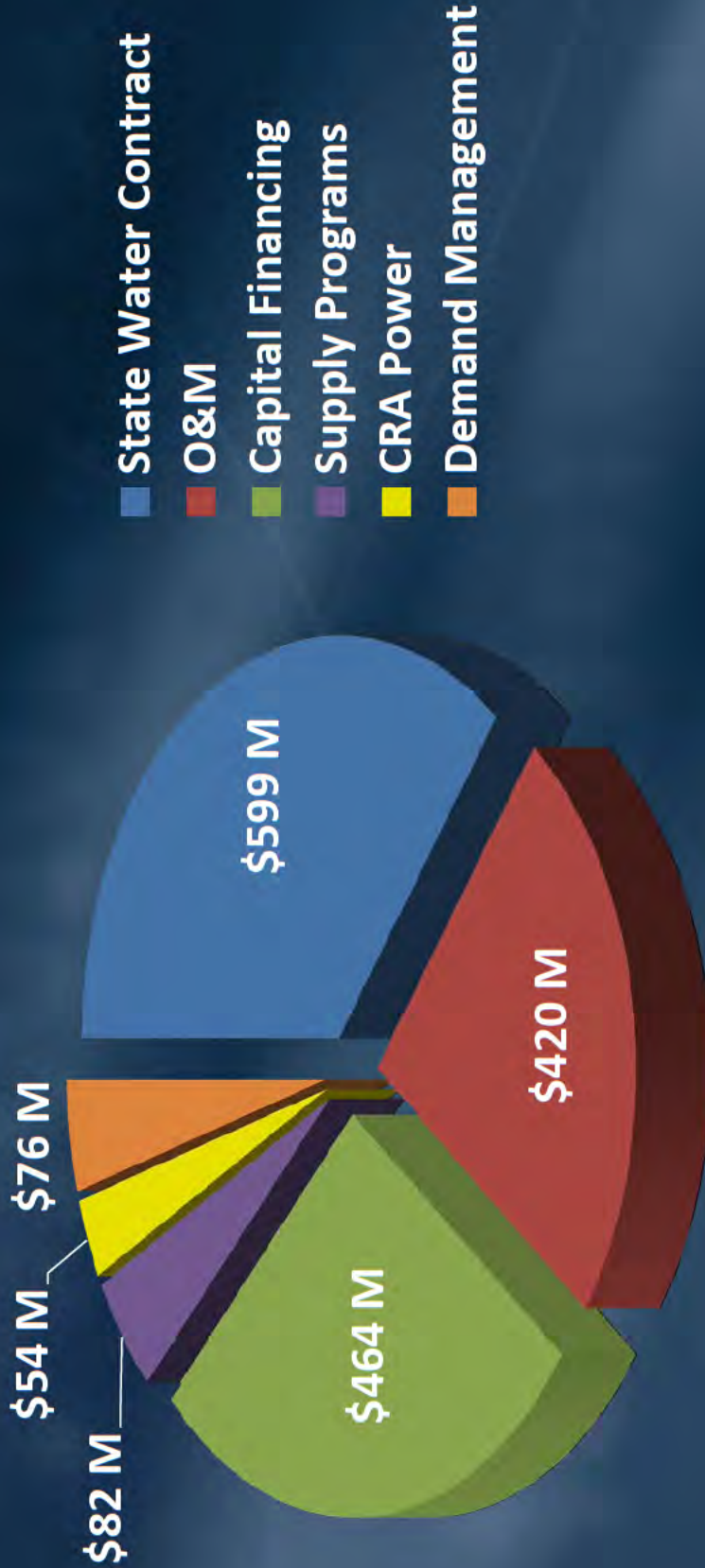
# Review of Budget

- Budget is foundation of Treatment Cost of Service
- Treatment Cost of Service analysis involves the functionalization of costs within the budget
  - Treatment O&M, WSO support costs, O&M from other groups, capital financing, and A&G costs
- Overview of components of fiscal year expenditure budget and departmental O&M budget



# Expenditures

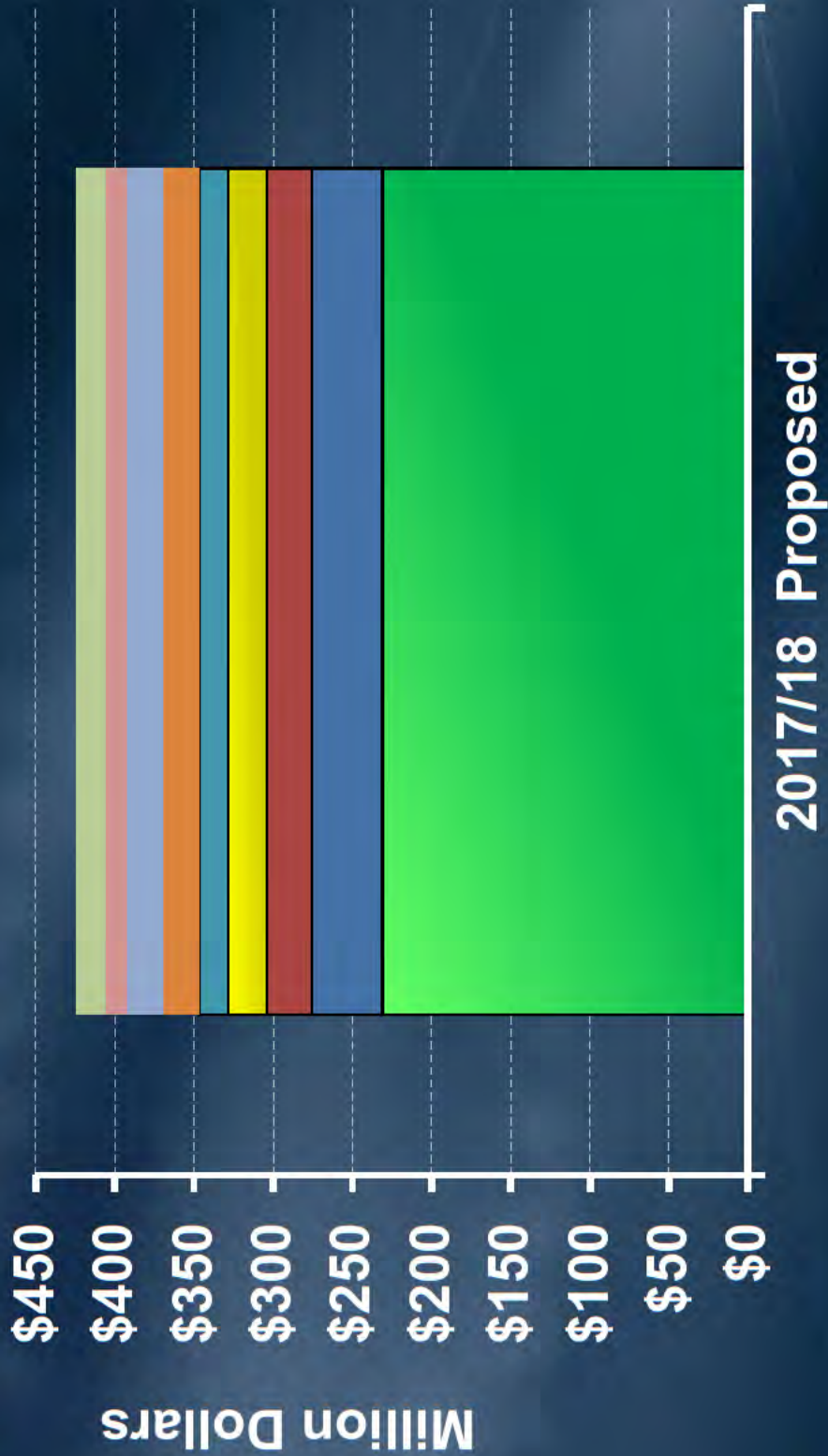
FY 2017/18 Budget - \$1.7 B



Without Revenue Offsets, Increase in Required Reserves

# O&M Expenditure Budget

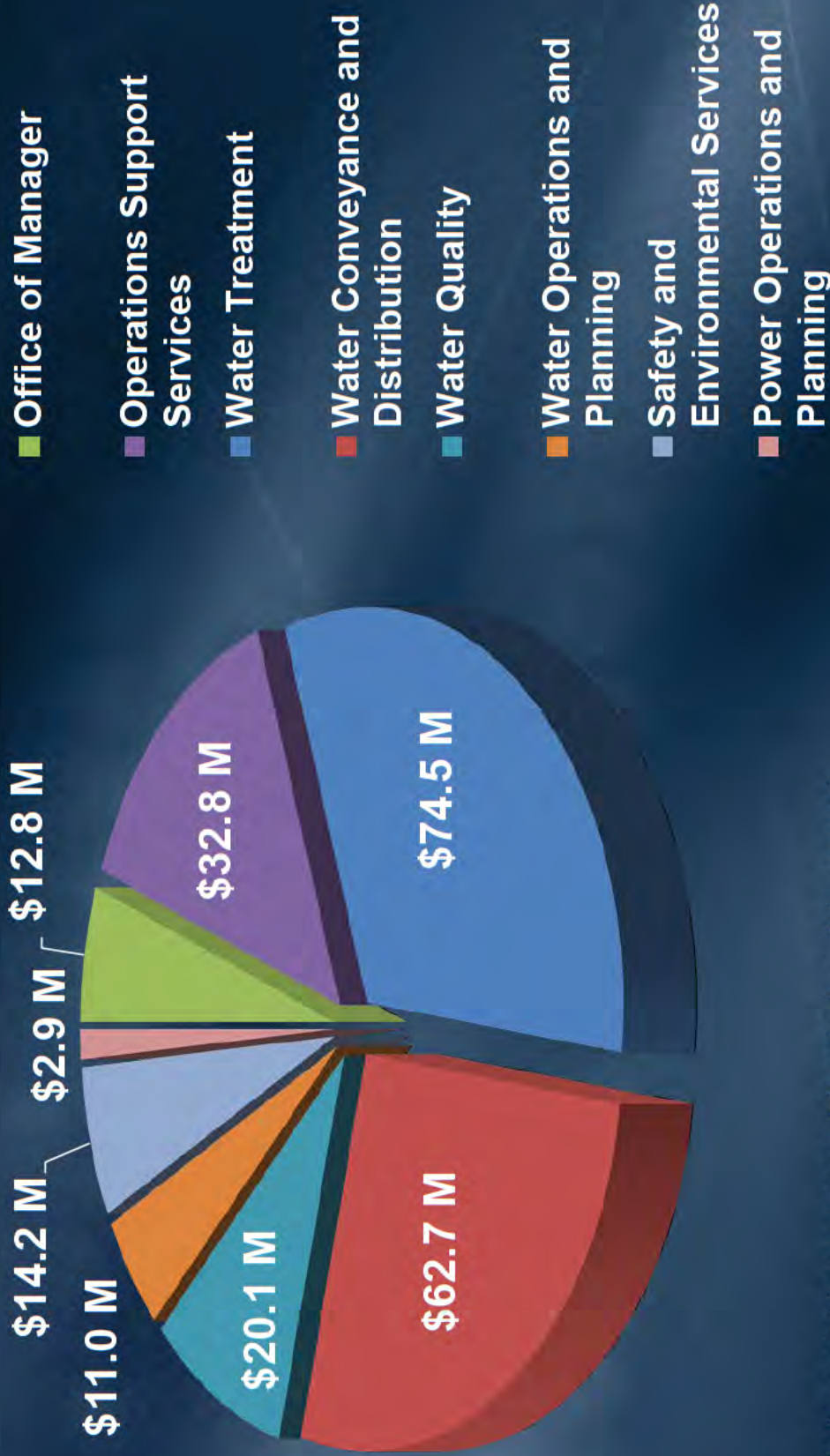
- Real Property Development & Mgmt
- Human Resources
- Legal, Audit, & Ethics
- Engineering Services
- Water System Operations
- GM & Board of Directors
- Chief Financial Officer
- External Affairs
- Business Technology





# Water System Operations Budget

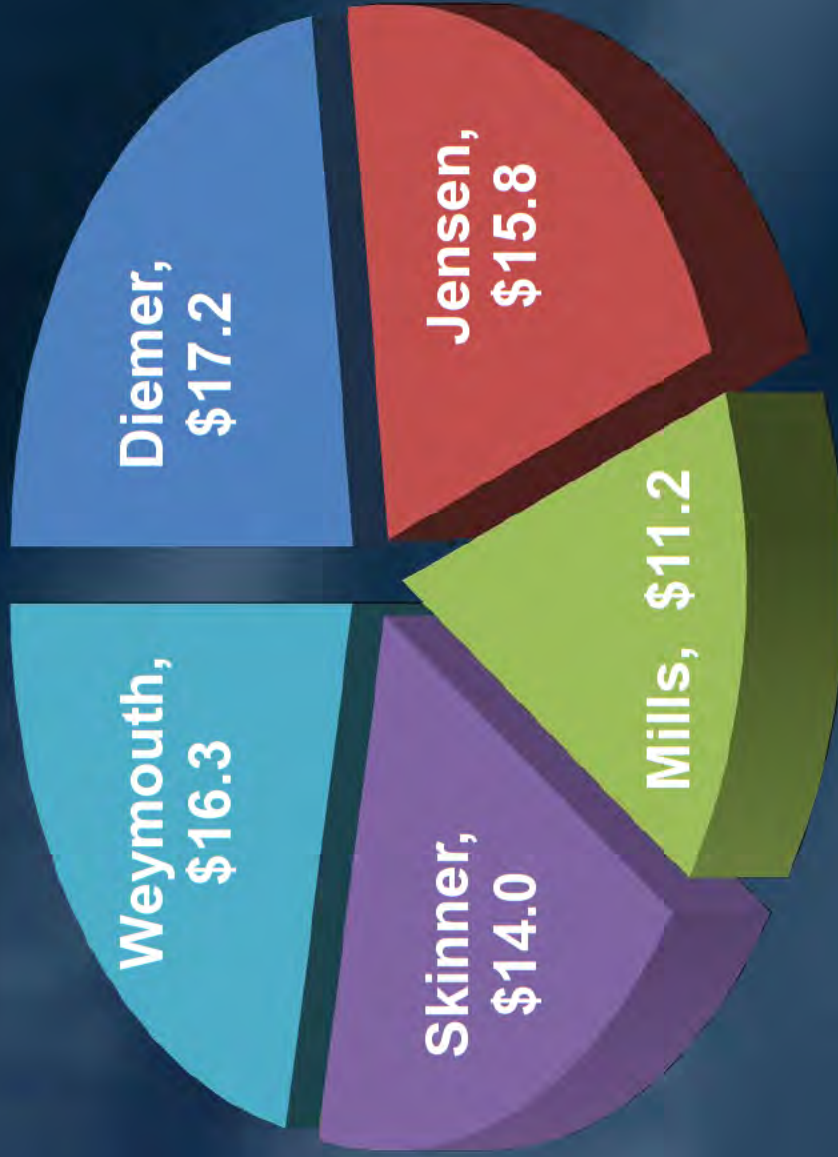
FY 2017/18 - \$231 M\*



\* Includes variable treatment (chemicals, solids, power)

4/11/2017 11:00 AM Meeting  
Water Treatment Section Budget

FY 2017/18 - \$74.5 M\*



\* Includes variable treatment at each plant (chemicals, solids, power)



# Treatment Cost of Service analysis:

## Functionalization of costs

- Start with direct Departmental O&M at the five treatment plants from Budget
- Add WSO support O&M
  - Oper. Support, Oper. Planning, Water Quality, Safety & Environmental, Power Operations
- Add support O&M from other groups
  - Human Resources, IT, Engineering, GM
- Add capital financing costs
- Subtract Revenue Offsets
- Add A&G

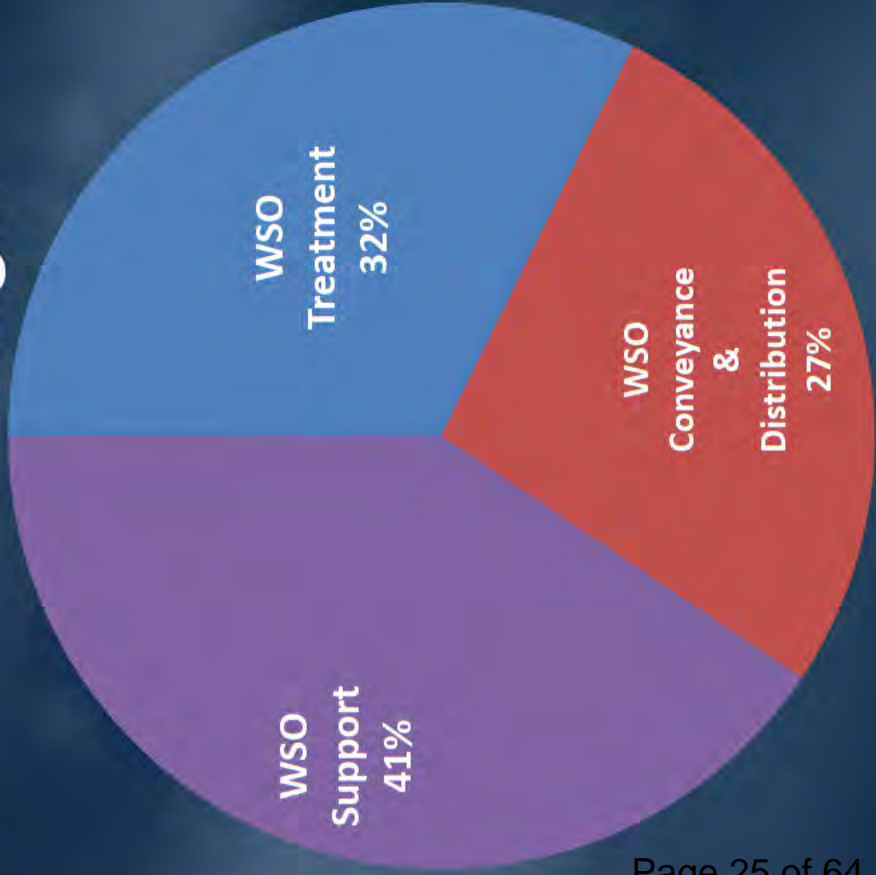


# FY17/18 WSO O&M Budget functionalized

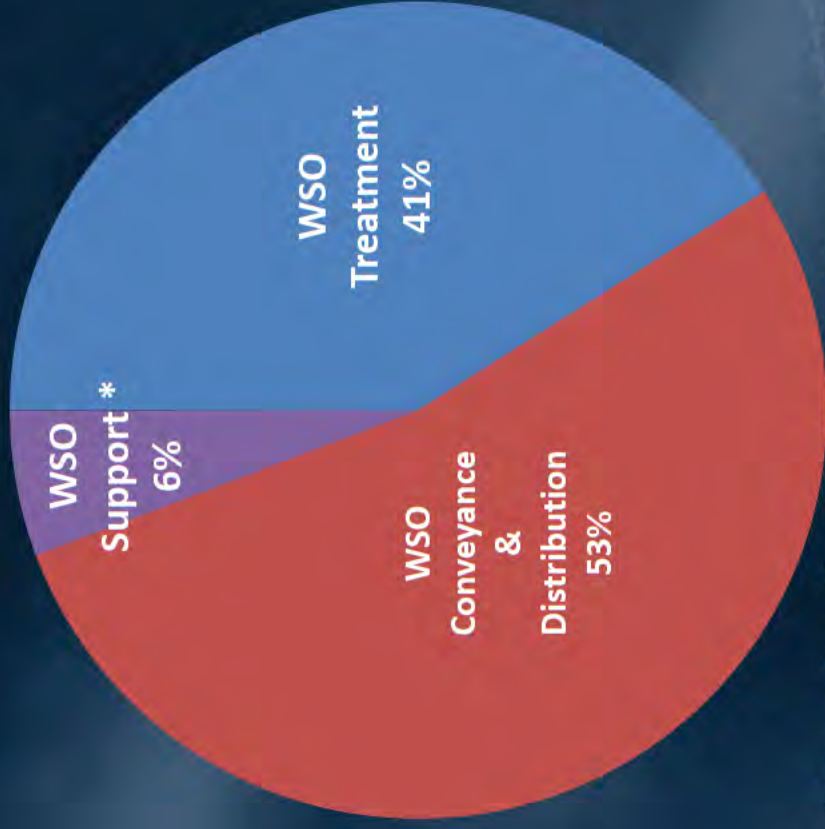
411/2017 Board Meeting

Attachment 3, Page 8 of 20

## Budget



## Revenue Requirement



\* Functionalized as Supply, Storage, A&G Sched. 8 in COS

# FY17/18 Treatment Direct O&M calculation

	\$million	Functionalized by
Water Treatment Section	74.5	location
Overhead Credit from Construction	(3.5)	Prorated by O&M (17%)
Electrical & Control Teams	<u>(9.0)</u>	Activity (50%)
Water Treatment Direct O&M	62.1	



# FY17/18 Treatment costs functionalization

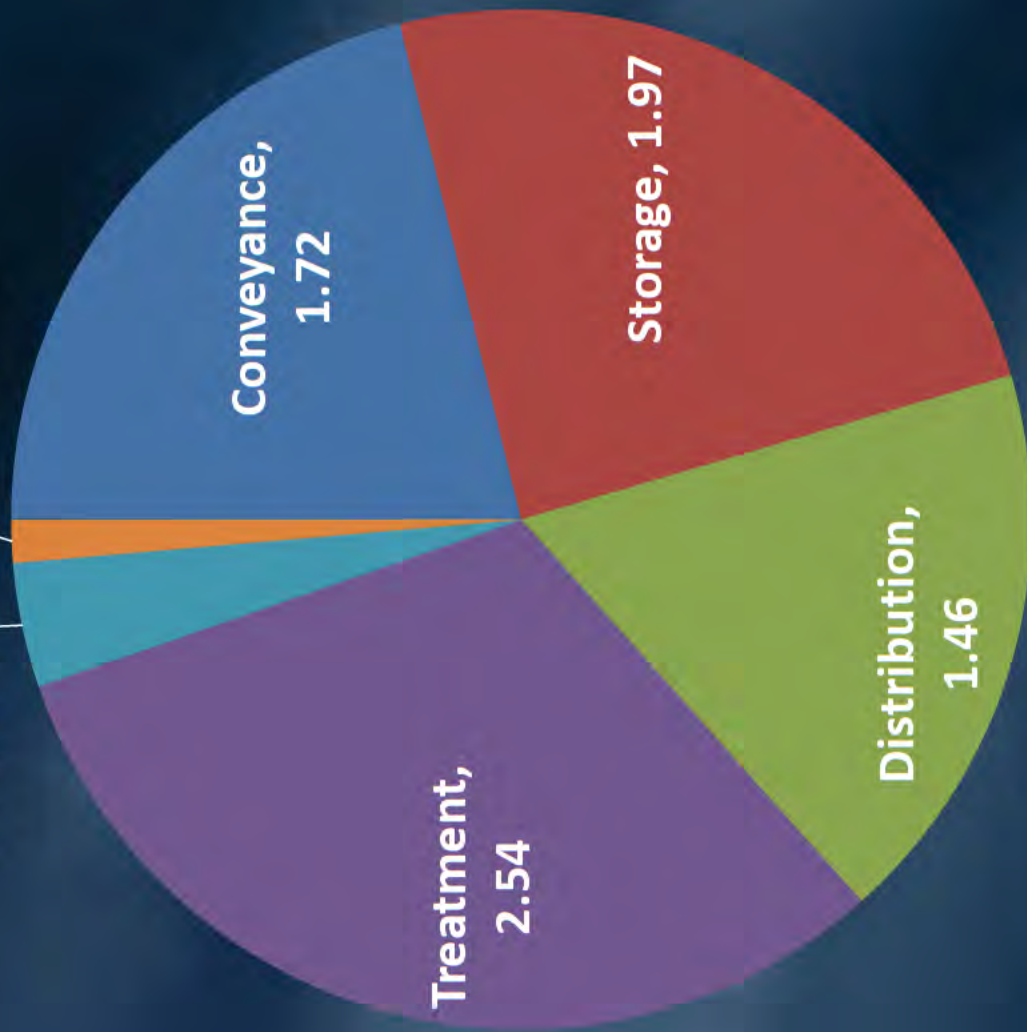
Dept. O&M	\$million	Functionalized by
Water Treatment Direct O&M	62.1	Location / activity
WSO support	23.7	Time keeping; Team function
Engineering & IT	15.7	NBV; Prorated by Labor \$
GM & HR	3.9	Prorated by Labor \$ (26%)
Capital financing costs	144.4	NBV (31%)
Revenue Offsets	(7.6)	Pro rata share of Taxes & Interest
A&G	<u>22.3</u>	Prorated by Rev. Req. (17%)
Revenue Requirement	264.5	

Page 27 of 64

# FY17/18 Net Book Value (\$billion)

A&G, 0.32

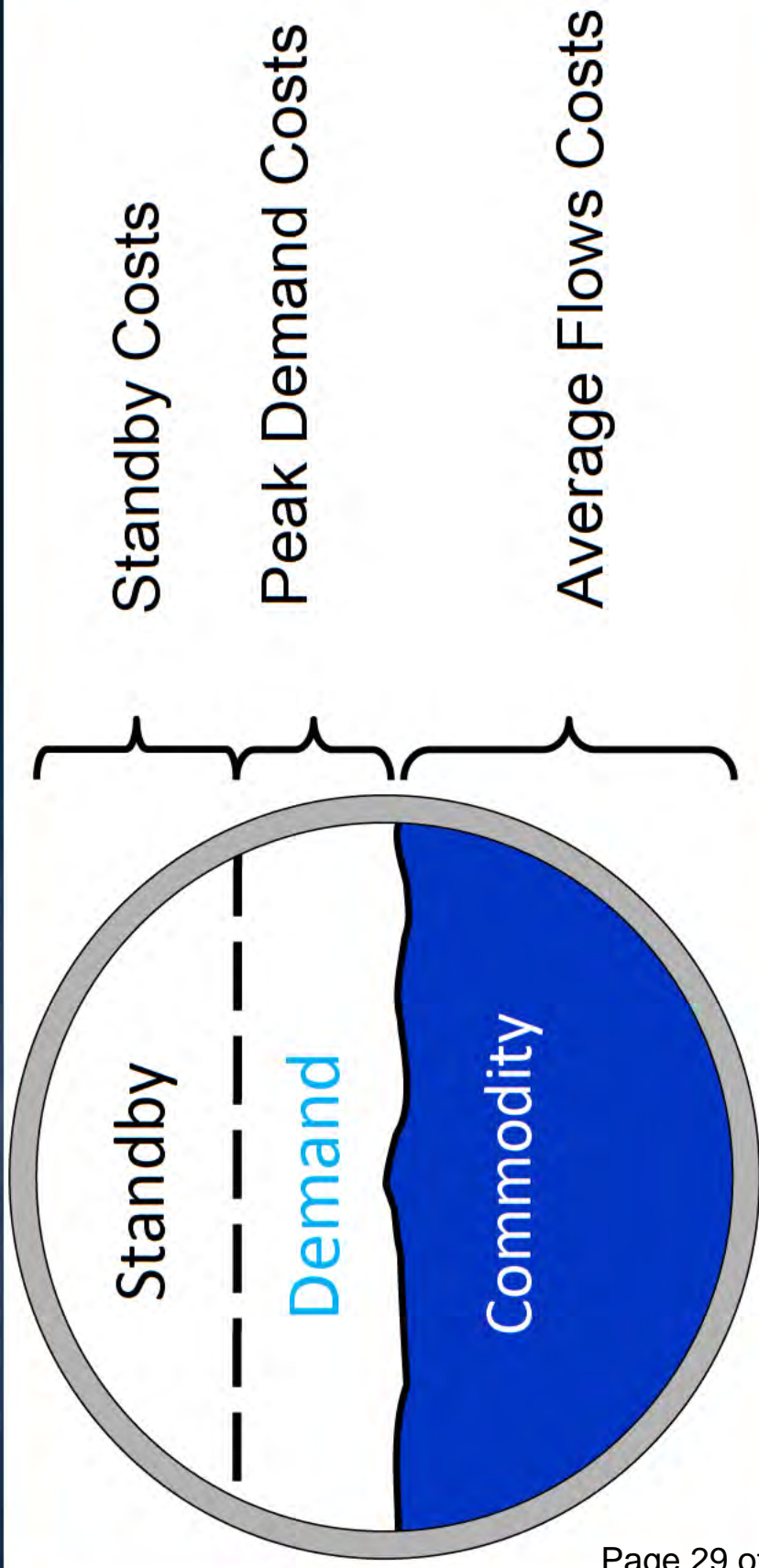
Hydro, 0.11



Sched. 4 in COS



# Cost of Service: Allocation of costs



# FY17/18 Treatment Cost of Service:

## Allocation of costs

- Fixed Commodity factor = Treated Sales / Treatment Design Capacity
  - Design capacity = 3,947 cfs = 2.86 MAF
  - $0.83 \text{ MAF} / 2.86 \text{ MAF} = 29\%$
- Demand factor = Treated Sales \* Non-coincident Peak Factor / Design Capacity
  - Treated non-coincident peak factor = 1.96
  - = 3-year non-coincident peak day/average flows
  - $0.83 \text{ MAF} * (1.96-1) / 2.86 \text{ MAF} = 28\%$
- Standby factor = residual = 43%



# FY17/18 Treatment Cost of Service: Allocation of costs (\$million)

	Capital	O&M + A&G - Offsets	Total
Fixed Commodity	41.8	96.6	138.4
Variable Commodity	0	24.5	24.5
Demand	40.1	2.0	42.1
<u>Standby</u>	<u>62.6</u>	<u>(3.0)</u>	<u>59.6</u>
total	144.4	120.0	264.5

Sched. 14 in COS

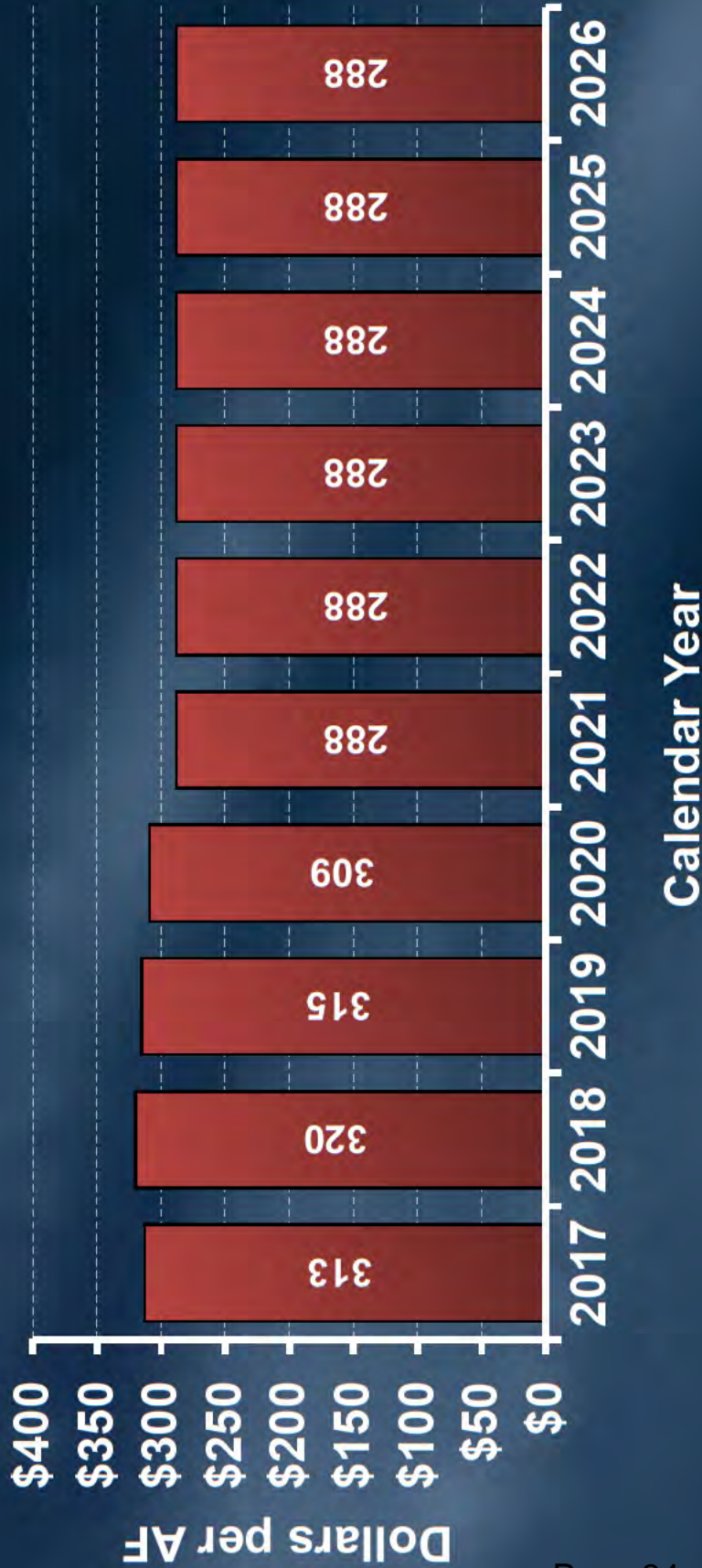
# FY17/18 Treatment Cost of Service: Distribution to Rate Elements

Revenue Requirement	Costs (\$million)	Rate
Fixed Commodity	138.4	
Variable Commodity	24.5	
Demand	42.1	
Standby	<u>59.6</u>	
Total	264.5	\$320/AF

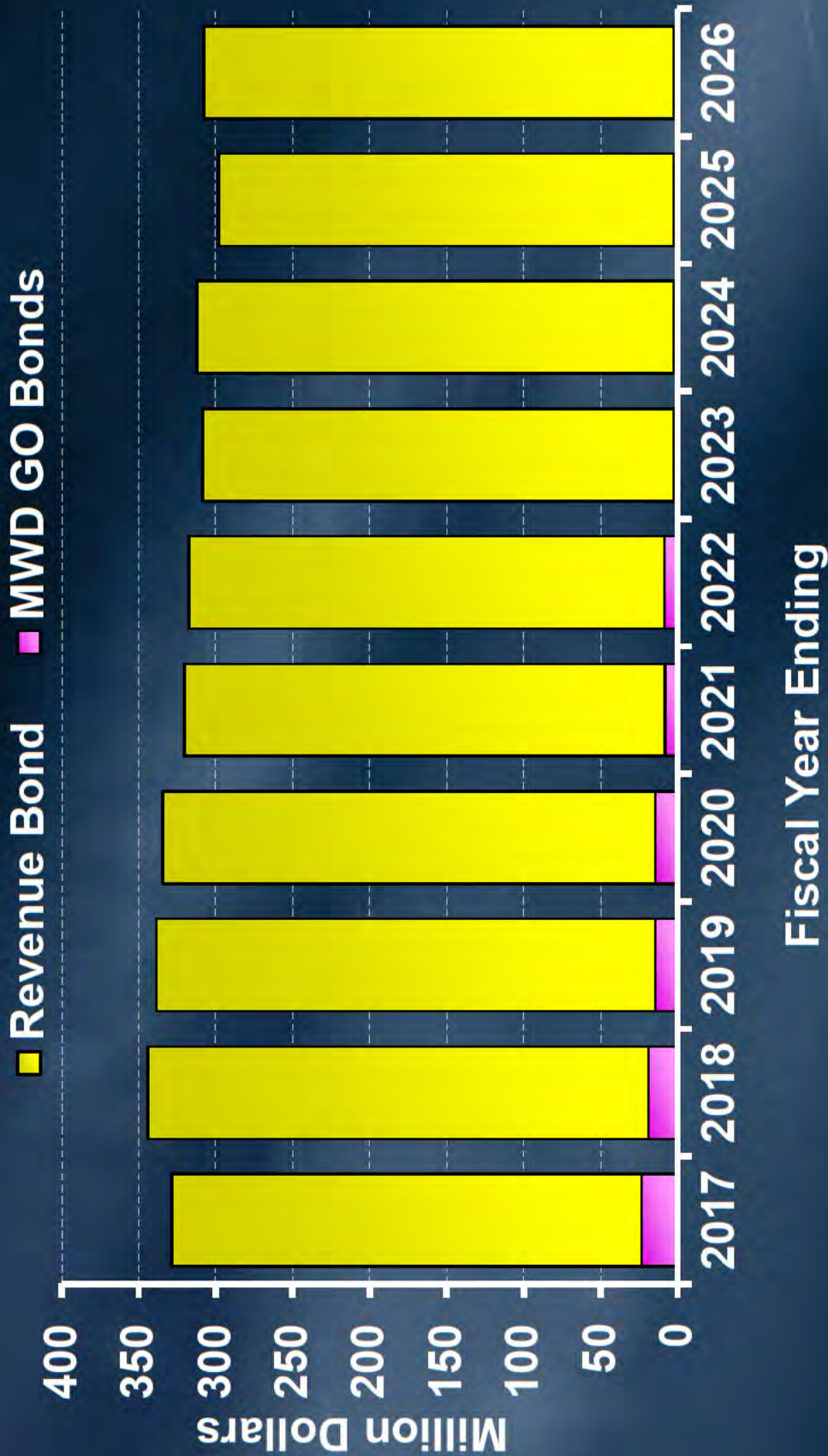


# Long-Term Treatment Surcharge Forecast

# Projected Treatment Surcharges



# Debt Service

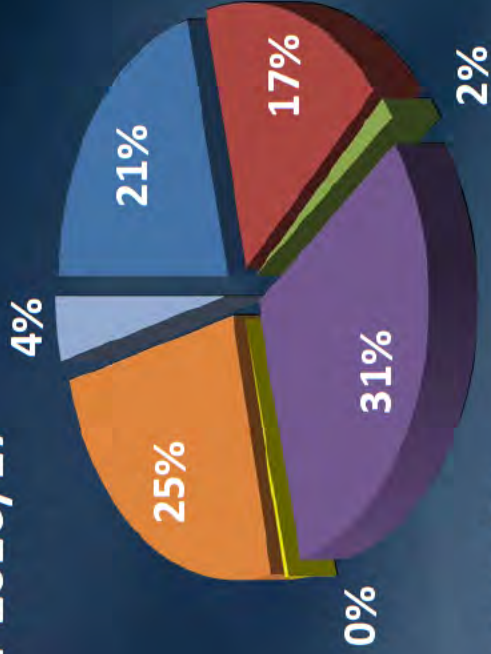




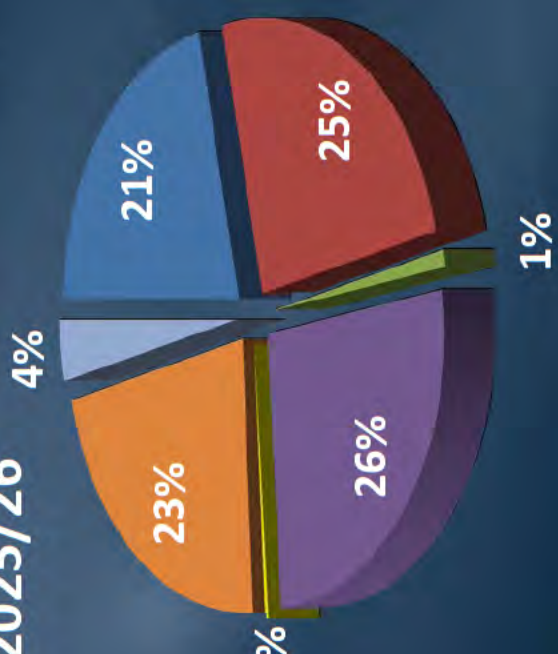
# Net Book Value

8-1

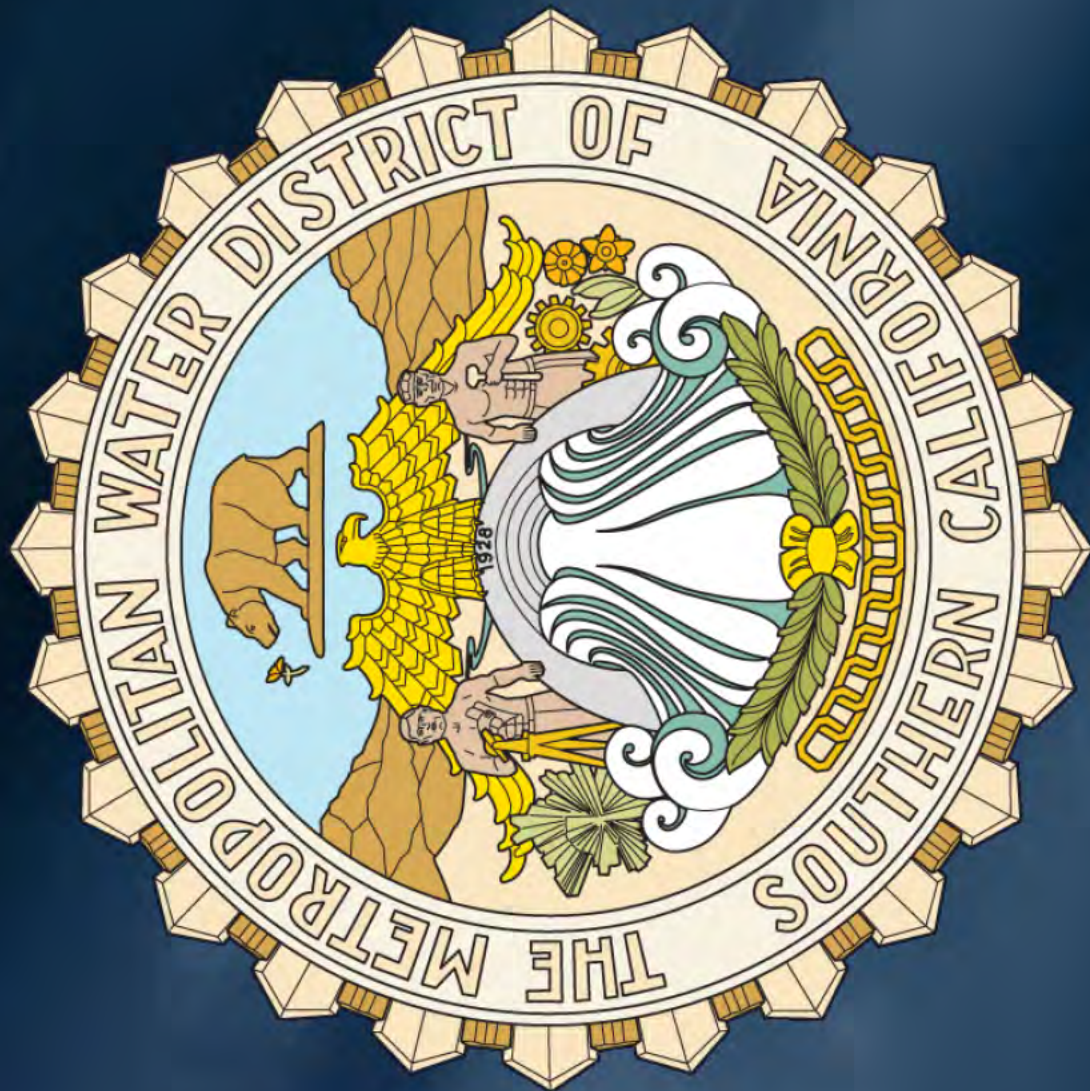
FY 2016/17



FY 2025/26



- Conveyance & Aqueduct
- Distribution
- Hydroelectric
- Treatment
- Source of Supply
- Storage
- Administrative & General



THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

RESOLUTION \_\_\_\_

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**RESOLUTION OF THE BOARD OF DIRECTORS  
OF THE METROPOLITAN WATER DISTRICT OF  
SOUTHERN CALIFORNIA  
APPROVING  
THE TREATMENT CHARGE WORKGROUP'S PROPOSED POLICY PRINCIPLES**

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WHEREAS, the Board of Directors ("Board") of The Metropolitan Water District of Southern California ("Metropolitan"), pursuant to Sections 133, 134 and 134.5 of the Metropolitan Water District Act (the "Act"), is authorized to fix such rate or rates for water as will result in revenue which, together with revenue from any water standby or availability of service charge or assessment, will pay the operating expenses of Metropolitan, provide for repairs and maintenance, provide for payment of the purchase price or other charges for property or services or other rights acquired by Metropolitan, and provide for the payment of the interest and principal of its bonded debt, including payment of the interest and principal of Metropolitan's non-tax funded debt; and

WHEREAS, on April 12, 2016, the Board voted to (1) define objectives of a new treated water charge, (2) further analyze alternatives to bring back to the Board for discussion in fall 2016, and (3) bring a possible recommendation to the Board for a new treated water charge effective January 1, 2018; and

WHEREAS, on June 28, 2016, the Executive Committee of the Board approved the formation of a Workgroup to achieve its objectives, with participation made open to all member agencies; and

WHEREAS, the Executive Committee established a timeline for the Workgroup to provide recommendations to Metropolitan's Finance and Insurance (F&I) Committee, and directed the Workgroup to:

- Define objectives of a fixed treated water charge;
- Determine costs to be included in a fixed charge;
- Determine allocation methodology;
- Address issues related to the implementation of a new charge; and
- Consider implementation in January 2018 or as part of the next biennial budget.

WHEREAS, Metropolitan retained Dr. Tom Chesnutt of A&N Technical Services, Inc. to facilitate the process, which took place from September 2016 through February 2017; and

WHEREAS, at the February meeting of the F&I Committee, the Workgroup presented its Proposal in a document titled, "Treatment Charge Workgroup Proposed Policy Principles, Recommendations, and Implementation Considerations" (Proposal), dated February 2, 2017; and



WHEREAS, the Proposal recommends that the Board adopt three policy principles, which would provide a guidance framework for changes Metropolitan may wish to make to any treatment rate or charge now or in the future, as follows:

1. Treatment rates and charges shall align treatment costs with treatment services and benefits received consistent with cost of service principles.
2. Treatment services shall be recognized to include physical water treatment, as well as operational benefits such as available treatment capacity used by member agencies.
3. In an effort to contain overall treatment costs on an on-going basis, MWD shall programmatically identify opportunities to partially or fully decommission unneeded treatment infrastructure and minimize future O&M and capital expenditures. MWD should obtain member agency commitment to utilize new or expanded future treatment capacity.

WHEREAS, the Proposal recommends a Treatment Capacity Charge that mirrors the existing Metropolitan Capacity Charge, to be allocated to member agencies based upon a three-year trailing maximum peak day flow through treated water service connections during the May 1 through September 30 peak summer demand period; and

WHEREAS, the recommended Treatment Capacity Charge would recover the capital financing costs incurred to meet maximum summer treatment capacity, also referred to as “fixed demand costs”; and

WHEREAS, to provide member agencies with sufficient time to plan for operational and financial impacts to their agencies and sub-agencies, the Proposal recommends the Treatment Capacity Charge be integrated into Metropolitan’s biennial cost of service process and considered for implementation at the Board’s discretion with rates and charges effective no sooner than January 1, 2021; and

WHEREAS, the F&I Committee considered the Proposal at its regular February 2017 and March 2017 meetings, pursuant to informational presentations, review, and deliberation; and

WHEREAS, on April 10, 2017, the Proposal, together with a staff review thereof, was further discussed and reviewed by the F&I Committee and by the Board on April 11, 2017; and

WHEREAS, each of said meetings of the Board were conducted in accordance with the Brown Act (commencing at 54950 of the Government Code), at which due notice was provided and quorums were present and acting throughout; and

NOW, THEREFORE, the Board of Directors of The Metropolitan Water District of Southern California does hereby resolve, determine and order as follows:

**Section 1.** That the Board of Directors of Metropolitan hereby adopts the following policy principles for the recovery of treatment costs, which would provide a guidance framework for changes Metropolitan may wish to make to any treatment rate or charge now or in the future:

1. Treatment rates and charges shall align treatment costs with treatment services and benefits received consistent with cost of service principles.

2. Treatment services shall be recognized to include physical water treatment, as well as operational benefits such as available treatment capacity used by member agencies.
3. In an effort to contain overall treatment costs on an on-going basis, MWD shall programmatically identify opportunities to partially or fully decommission unneeded treatment infrastructure and minimize future O&M and capital expenditures. MWD should obtain member agency commitment to utilize new or expanded future treatment capacity.

**Section 2.** That this Board finds that the adoption of the policy is not defined as a project under CEQA because it involves continuing administrative activities, such as general policy and procedure making (Section 15378(b)(2) of the State CEQA Guidelines). In addition, the proposed action is not subject to CEQA because it involves other government fiscal activities, which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment (Section 15378(b)(4) of the State CEQA Guidelines). Finally, where it can be seen with certainty that there is no possibility that the proposed actions may have a significant impact on the environment, those actions are not subject to CEQA pursuant to Section 15061(b)(3) of the State CEQA Guidelines.

**Section 3.** That the General Manager and the General Counsel are hereby authorized to do all things necessary and desirable to accomplish the purposes of this Resolution, including, without limitation, the commencement or defense of litigation.

**Section 4.** That the Board Executive Secretary is hereby directed to transmit a certified copy of this Resolution to the presiding officer of the governing body of each member agency.

I HEREBY CERTIFY that the foregoing is a full, true and correct copy of a Resolution adopted by the Board of Directors of The Metropolitan Water District of Southern California, at its meeting held on April 11, 2017.

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Secretary of the Board of Directors  
of The Metropolitan Water District  
of Southern California



### **List of Treatment Charge Workgroup Participants**

1. City of Anaheim
2. Calleguas Municipal Water District
3. Inland Empire Utilities Agency
4. Central Basin Municipal Water District
5. Eastern Municipal Water District
6. Foothill Municipal Water District
7. City of Glendale
8. City of Los Angeles
9. Las Virgenes Municipal Water District
10. Municipal Water District of Orange County
11. City of Pasadena
12. Three Valleys Municipal Water District
13. San Diego County Water Authority
14. Upper San Gabriel Valley Municipal Water District
15. West Basin Municipal Water District
16. Western Municipal Water District of Riverside County

# Status of Ongoing MWDOC Reliability, Engineering, and Planning Projects

April 27, 2017

Description	Lead Agency	Status % Complete	Scheduled Completion Date	Comments
<b>Baker Treatment Plant or Expansion of Baker Water Treatment Plant</b>	IRWD, MNWD, SMWD, ETWD Trabuco CWD		On line date was January 2017	The Baker Water Treatment Plant is a joint regional project by five SOC water districts for a 28.1 million gallon per day (mgd) [43.5 cubic feet per second (cfs)] drinking water treatment plant at the site of the former Baker Filtration Plant in the City of Lake Forest.
<b>Doheny Desalination Project</b>	South Coast Water District, Laguna Beach CWD			<p>South Coast Water District is continuing to move the project forward and to look for potential partners and grant funding. The CEQA process has been temporarily put on hold to evaluate the results of a recent geotechnical survey indicating a potentially wider and deeper alluvial channel that may allow for additional and/or alternative slantwell locations. The evaluation is scheduled to be completed by the end of June 2017.</p> <p>South Coast is in the process of establishing a Community Reliability Working Group and is looking to hold a kick-off meeting in May 2017. South Coast will also be conducting workshops on their reliability analysis in May/June 2017 followed by a Project Delivery Analysis workshop scheduled in June 2017.</p>

Description	Lead Agency	Status % Complete	Scheduled Completion Date	Comments
<b>Poseidon Resources Ocean Desalination Project in Huntington Beach</b>				Poseidon is still working on the permitting process and OCWD is still working on the system integration concepts.
<b>Orange County Reliability Study</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 3 to 4 months.
<b>MET Metering Work Group</b>				The Meter Workgroup is re-evaluating technology and criteria for measuring and accounting for low system flows to provide member agencies more flexibility. The intent is to expand the flow measurement range to better account for low flows than the current metering system provides. Charles Busslinger and Kevin Hostert participated in workgroup meetings on March 29, 2017 and April 26, 2017. The workgroup is making progress on design policy guidance to recognize newer technology (i.e. such as the additional precision provided by mag meters at lower flows) and revisiting MET Administrative Code Section 4504(b) limitation [a.k.a. 10:1 turnaround] which currently requires member agencies to pay for flows that are less than 10% of maximum design capacity of the meter as if they received 10% flows. Any final recommendations would be

<b>Description</b>	<b>Lead Agency</b>	<b>Status % Complete</b>	<b>Scheduled Completion Date</b>	<b>Comments</b>
				brought to the MET Board for consideration at the end of 2017 or early 2018.
<b>OC-28 Flow Metering Issue with MET</b>				MWDOC and OCWD are awaiting MET's analysis of the flow test to examine the metering issue from last summer. Preliminary results indicate that OCWD is owed about 700 AF of water.
<b>Service Connection CM-1 Cost Issues with MET</b>				Laguna Beach CWD and Newport Beach are continuing to study alternative methods of delivery of the water to avoid complications with the CM-1 meter. We are awaiting the outcome of the studies.
<b>North and Central Orange County Integrated Regional Watershed Management Area (IRWM) Plan Update</b>				The County of Orange and OCWD are continuing a stakeholder process to update and consolidate the 2011/2012 Integrated Regional Watershed Management Area (IRWM) Plans for North and Central Orange County. The new plan could be part of the Santa Ana Watershed Project Authority (SAWPA) One Water One Watershed (OWOW) Plan for the Santa Ana IRWM funding area; or it could become the basis to separate the North/Central OC into a separate IRWM funding area for future grant funds, mirroring the South OC funding area within the San Diego IRWM funding area. Staff member Charles Busslinger continues to participate in Ad-Hoc committee meetings to develop the goals and objectives of the plan.
<b>Other Meetings/Work</b>				

					<p>Santa Margarita WD continues working on the Draft Environmental Impact Report (DEIR) for the San Juan Watershed Project. Phase 1, scheduled for release in June/July 2017, and is designed to capture wet and dry weather runoff, while subsequent phases will look to introduce recycled water into San Juan Creek for Indirect Potable Reuse. Preliminary design work is focusing on locating two rubber dam sites (one just downstream of the confluence with Trabuco Creek, and the other near the southerly end of Alipaz Street). The updated cost estimate for the Phase 1 Rubber Dams has been reduced from \$34 M to \$15 M.</p>
					<p>MWDOC and MET Director Brett Barbre and Karl Seckel met with the Buena Park City Manager, Mayor and another Council member to discuss current water issues.</p>
					<p>Karl Seckel attended the Santa Ana River Project Authority PA-22 Committee to further investigate how the aerial images and interpretation of irrigable areas on a parcel by parcel basis can be used by our agencies to understand the implications of the SWRCB Efficiency Standards. MWDOC will be setting up a workgroup with about five of our agencies to help outline the concepts to develop within OC.</p>
					<p>Karl Seckel participated in the CalDesal call to provide input and comments into the DWR PSP for desalination projects. Approximately \$93 million is available for brackish and ocean desalination projects.</p>
					<p>Karl Seckel and Charles Busslinger met with Norris Brandt, the new Executive Administrator of the San Juan Basin Authority to</p>

					discuss opportunities to work together to help move projects forward.

**Status of Ongoing WEROC Projects  
April 2017**

<b>Description</b>	<b>Comments</b>
<b>Coordination with WEROC Member Agencies</b>	Francisco Soto finalized the Hazard Mitigation Plan Update Request for Proposal and released it to potential vendors. It is posted on the MWDOC website as well. Proposals are to be submitted to MWDOC by May 19, 2017. The hazard mitigation plan is required to be updated every 7 years to be eligible for Hazard Mitigation Grant funds. The costs for the update will be equally shared by the twenty water and wastewater agencies that are participating in the plan process.
<b>WEROC Radio Replacement Project</b>	<p>WEROC hosted a WEROC Radio Replacement Kickoff Meeting with Member Agencies and the County Communications Staff. The purpose was to explain what has been happening with the current WEROC radio system, what solutions were considered and the proposed solution moving forward. Staff used the time to confirm what agencies needed for communications and to answer any questions they had.</p> <p>Kelly Hubbard, Janine Schunk and Francisco began conducting site visits to test the new 800 MHz radio system at various member agency sites. Member agencies were asked to self-identify if they believed testing was needed at their facilities. The purpose of the test was to ensure that the proposed new radio system will function for each agency before implementation.</p> <p>Kelly attended the 800 MHz Countywide Coordinated Communications System (CCCS) Governance Committee to request approval of adding a WEROC channel to the County's 800 MHz system. The Committee approved the request. WEROC and the non-city Member Agencies will still need to sign the Joint Agreement for the Operation, Maintenance and Financial Management of the Orange County 800 Megahertz Countywide Coordinated Communications System to officially join the communications system. All WEROC City Members have already signed this agreement. The agreement largely commits the agencies to follow proper use and operation protocols for the system, as well as to pay for the annual maintenance and backbone cost sharing fees. The agreement will be presented to the MWDOC Board in June.</p>

	<p>Kelly met with County Communications Staff, Motorola Government Accounts, and their subcontractor for radio installation to discuss the project to ensure that the quotes from County Communications and Motorola are as accurate as possible when presented to the MWDOC Board. The project is complex due to 35 agencies, 40+ sites for programming/installation, and various levels of recommended service or equipment based on agency/site needs. Staff expect to bring a full proposal to the MWDOC Board in June.</p>
<b>Training and Programs</b>	<p>Kelly and Francisco attended California State Training Institute (CSTI) EOC Section Specific Train the Trainer Training. This training is part of a series that will certify WEROC staff to provide EOC Section Specific Training to staff and Member Agencies as part of the state's new EOC Staff Credentialing system. Additionally, it provided staff with new resources and updated training materials that can be used on a regular basis and shared with Member Agencies.</p> <p>Francisco attended the Cal/NV AWWA Spring Conference in Anaheim. This allowed Francisco the opportunity to network and gain a better understanding of the water industry. Francisco attended educational sessions related to emergency planning and water operations.</p> <p>All three WEROC staff received American Red Cross First Aid, CPR and AED certification. Kelly attended Sexual Harassment Prevention Training.</p>
<b>Coordination with the County of Orange</b>	<p>Francisco and Kelly attended the April monthly Orange County Emergency Management Organization Meeting (OCOMO) and a CalOES Public Assistance Workshop. OCEMO was focused on follow-ups to the winter storms and updates on county-wide coordination efforts. The Public Assistance Workshop was to brief agencies on the process for FEMA reimbursement for the Winter Storms. WEROC staff attended to assist any member agencies that are filling for reimbursement.</p>
<b>Coordination with Outside Agencies</b>	<p>Kelly provided facilitation of the California Water and Wastewater Agency Response Network (CalWARN) bi-annual workshop at the Cal-NV Spring Conference in Anaheim. Kelly facilitated</p>



	<p>a tabletop discussion on lessons learned from responding to the winter storms this year and provided a presentation on the FEMA reimbursement process.</p>
<p><b>WEROC Emergency Operations Center (EOC) Readiness</b></p>	<p>A request for quotes for a seismic study of the WEROC South EOC has been sent out to multiple consultants. Quotes were due April 14<sup>th</sup>. Please see full staff report in this month's packet for more information.</p> <p>Janine met with ATT Phone Repair staff to have 4 phone lines repaired at the WEROC South EOC. She also met with MET staff twice to have locks at the North EOC repaired.</p> <p>Janine has made significant progress on updating member agency, MWDOC and vendor contacts within the 4 plans and user list of Safety Center (Emergency Plan App), AlertOC, and other areas of the EOC for response readiness.</p> <p>Janine successfully participated in the County OA 1 and MARS (MET radio system) radio exercises this month.</p>

## Status of Water Use Efficiency Projects

May 2017

<b>Description</b>	<b>Lead Agency</b>	<b>Status % Complete</b>	<b>Scheduled Completion or Renewal Date</b>	<b>Comments</b>
<b>Smart Timer Rebate Program</b>	MWDSC	On-going	On-going	In March 2017, 201 residential and 193 commercial smart timers were installed in Orange County.  For program water savings and implementation information, see MWDSC Water Use Efficiency Program Savings and Implementation Report.
<b>Rotating Nozzles Rebate Program</b>	MWDSC	On-going	On-going	In March 2017, 3,534 rotating nozzles were installed in Orange County.  For program savings and implementation information, please see MWDSC Water Use Efficiency Program Savings and Implementation Report.
<b>SoCal WaterSmart Residential Indoor Rebate Program</b>	MWDSC	On-going	On-going	In March 2017, 385 high efficiency clothes washers and 42 premium high efficiency toilets were installed through this program.  For program savings and implementation information, please see MWDSC Water Use Efficiency Program Savings and Implementation Report.
<b>SoCal WaterSmart Commercial Rebate Program</b>	MWDSC	On-going	On-going	In March 2017, 192 premium high efficiency toilets and 93 laminar flow restrictors were installed through this program.  For program savings and implementation information, please see MWDSC Water Use Efficiency Program Savings and Implementation Report.

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
<b>Industrial Process Water Use Reduction Program</b>	MWD OC	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>	MWD OC	On-going	On-going	<p>In March 2017, 55 rebates were paid, representing \$110,894 in rebates paid this month in Orange County. To date, the Turf Removal Program has removed approximately 20.7 million square feet of turf.</p> <p>For program savings and implementation information, please see MWD OC Water Use Efficiency Program Savings and Implementation Report.</p>
<b>California Sprinkler Adjustment Notification System – Base Irrigation Schedule Calculator</b>	MWD OC	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>	MWD OC	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 technology. Through a rebate program format, residential and commercial sites will be encouraged to convert their existing spray nozzles to drip.

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
<b>Spray to Drip Conversion Program (cont.)</b>				To date, 193 residential sites and 52 commercial sites have completed spray to drip conversion projects.
<b>Landscape Design Assistance Program (LDAP)</b>	MWDOC	10%	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 received 18 design templates and has developed all the content for the <i>How To Apply</i> section of the website. The website is close to completion and expected to go live during the next couple of weeks.</p> <p>This month's meeting was held on April 6, 2017. The next meeting will be on May 4, 2017 at MWDOC.</p>
<b>MWDOC Conservation Meeting</b>	MWDOC	On-going	Monthly	There was no meeting this month due to a conflict with MET's <i>Spring into Green</i> festival.



# 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	March-17	385	1.11	3,279	34.86	112,062	3,866	23,809
Smart Timer Program - Irrigation Timers	2004	March-17	394	11.28	1,978	526.59	19,460	7,317	38,389
Rotating Nozzles Rebate Program	2007	March-17	3,534	14.13	37,308	149.17	558,666	2,741	11,173
SoCal WaterSmart Commercial Plumbing Fixture Rebate Program	2002	March-17	285	0.77	9,671	144.04	79,953	3,518	39,250
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	March-17	0	2.92	2	2.92	25	412	2,104
Turf Removal Program <sup>[3]</sup>	2010	March-17	69,895	0.81	694,573	69	20,721,242	2,902	7,233
High Efficiency Toilet (HET) Program	2005	March-17	42	0.15	940	40.15	59,525	2,200	14,151
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 <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				936	760,481	4,582	22,895,757	48,959	392,611

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

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

6 Turf Removal Interventions are listed as square feet.

13 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	FY 13/14	FY 14/15	FY 15/16	FY 16/17	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	46	1,856	0.41	397.91	960
Buena Park	146	59	230	145	105	106	91	76	44	1,508	0.39	307.38	780
East Orange CWD RZ	17	3	23	10	10	8	8	8	2	191	0.01	43.41	99
El Toro WD	130	32	162	112	134	121	111	65	38	1,512	0.35	310.50	782
Fountain Valley	243	72	289	158	115	102	110	76	52	2,387	0.63	532.47	1,235
Garden Grove	332	101	481	236	190	162	165	251	108	3,544	1.17	745.82	1,834
Golden State WC	447	168	583	485	265	283	359	260	124	5,001	1.40	1,053.23	2,588
Huntington Beach	751	211	963	582	334	295	319	225	139	8,205	1.33	1,868.15	4,246
Invine Ranch WD	1,844	1,394	2,621	2,170	1,763	1,664	1,882	1,521	1,110	24,403	11.90	4,891.22	12,627
La Habra	83	22	179	128	82	114	87	66	45	1,319	0.41	268.86	682
La Palma	51	25	76	46	34	25	34	29	7	455	0.09	92.72	235
Laguna Beach CWD	77	27	96	57	38	37	39	32	11	924	0.06	204.63	478
Mesa Water	246	73	232	176	114	86	89	113	72	2,510	0.80	568.79	1,299
Moulton Niguel WD	742	250	1,127	679	442	421	790	688	461	9,807	5.23	1,969.97	5,074
Newport Beach	259	57	197	142	116	92	95	66	46	2,609	0.55	609.43	1,350
Orange	403	111	349	262	218	163	160	124	67	3,885	0.66	887.50	2,010
Orange Park Acres	-	-	-	-	-	-	-	-	-	12	0.00	3.42	6
San Juan Capistrano	127	43	190	110	76	73	92	63	29	1,455	0.32	311.15	753
San Clemente	278	63	333	206	140	94	141	75	51	2,601	0.53	564.48	1,346
Santa Margarita WD	740	257	1,105	679	553	662	792	466	298	9,447	3.22	1,928.60	4,888
Seal Beach	57	7	81	51	31	29	38	23	5	598	0.02	129.46	309
Serrano WD	23	7	21	20	13	10	26	8	10	356	0.13	81.13	184
South Coast WD	148	43	183	112	89	79	68	43	38	1,578	0.39	338.79	817
Trabuco Canyon WD	62	28	82	62	30	45	47	34	23	793	0.19	167.99	410
Tustin	144	45	174	97	78	59	80	66	36	1,604	0.47	358.19	830
Westminster	233	74	329	208	121	82	109	149	78	2,580	0.89	553.45	1,335
Yorba Linda	367	117	394	273	181	167	156	123	48	3,744	0.53	851.45	1,937
<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>2,988</b>	<b>94,884</b>	<b>32.09</b>	<b>20,040.08</b>	<b>18,331</b>

Orange County Totals	9,474	4,347	12,348	8,287	6,059	5,696	6,640	5,416	3,279	112,062	34.86	23,808.92	21,650
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# SMART TIMERS INSTALLED BY AGENCY through MWDOC and Local Agency Conservation Programs

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		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	Res	Comm	
Brea	0	0	0	0	8	0	9	8	4	0	43	6	20	4	23	4	123	80	461.13
Buena Park	0	0	0	0	4	19	3	0	0	0	4	10	7	4	5	7	26	41	117.56
East Orange CWD RZ	0	0	1	0	5	0	2	0	0	0	2	0	1	0	6	1	20	1	7.28
El Toro WD	2	18	5	5	26	2	7	2	11	0	8	9	9	17	22	3	104	350	2,228.09
Fountain Valley	0	6	2	2	8	2	3	2	4	0	7	10	13	1	23	12	81	40	146.84
Garden Grove	6	0	5	4	7	0	5	2	9	0	10	14	13	11	13	0	86	38	141.85
Golden State WC	9	22	7	4	13	3	9	49	9	25	39	12	35	16	37	34	206	189	669.13
Huntington Beach	6	27	6	36	15	4	18	33	20	35	19	2	42	12	56	90	240	264	863.66
Invine Ranch WD	14	145	28	153	267	71	414	135	71	59	67	310	239	207	247	181	1,672	2,047	9,528.68
La Habra	0	21	0	0	3	0	4	7	2	0	4	7	3	3	1	8	32	44	171.57
La Palma	0	0	0	0	1	0	1	0	2	0	2	0	3	2	1	0	10	2	4.17
Laguna Beach CWD	2	14	4	1	109	2	76	2	71	0	86	0	86	1	4	0	474	20	197.49
Mesa Water	13	7	7	22	21	0	10	2	15	2	17	28	36	12	66	41	235	154	610.68
Moulton Niguel WD	17	162	36	60	179	31	51	74	40	45	46	95	163	100	198	95	876	767	2,968.54
Newport Beach	7	58	6	0	275	12	242	26	188	75	11	9	28	43	22	11	1,030	408	2,290.93
Orange	2	13	5	8	25	0	20	24	13	9	18	31	51	13	46	10	262	165	802.04
San Juan Capistrano	7	49	13	1	103	2	14	18	6	11	6	19	20	8	18	8	218	125	547.70
San Clemente	13	209	46	11	212	17	26	7	28	2	28	24	26	3	24	13	1,038	374	2,354.46
Santa Margarita WD	10	152	61	53	262	7	53	171	64	93	53	321	189	136	268	54	1,096	1,205	4,525.52
Santiago CWD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Seal Beach	0	1	0	0	0	3	1	0	1	36	1	12	2	2,446	2	4	7	2,502	3,435.01
Serrano WD	11	0	4	0	3	0	1	0	0	0	4	0	11	2	4	0	38	2	10.86
South Coast WD	3	10	13	3	78	10	13	16	8	4	104	73	9	11	2	0	273	212	991.82
Trabuco Canyon WD	2	0	2	10	12	0	6	0	2	0	6	1	16	50	8	3	98	157	839.58
Tustin	10	14	10	0	11	0	8	4	9	1	18	14	33	8	24	10	134	67	269.44
Westminster	3	0	1	1	2	0	1	1	2	0	13	17	7	1	12	12	60	44	164.12
Yorba Linda	5	21	25	0	22	0	20	0	12	5	32	2	61	27	52	71	318	183	686.66
<b>MWDOC Totals</b>	<b>142</b>	<b>949</b>	<b>289</b>	<b>374</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>1,191</b>	<b>671</b>	<b>8,757</b>	<b>9,481</b>	<b>35,034.83</b>

Anaheim	5	46	12	11	23	60	19	10	9	26	7	52	30	34	55	10	212	457	2,285.72
Fullerton	2	39	9	33	22	51	9	29	8	0	40	26	32	12	30	7	176	199	789.34
Santa Ana	1	8	8	0	6	5	8	19	7	8	9	27	22	26	11	3	78	100	278.79
<b>Non-MWDOC Totals</b>	<b>8</b>	<b>93</b>	<b>29</b>	<b>44</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>96</b>	<b>20</b>	<b>466</b>	<b>756</b>	<b>3,353.86</b>

<b>Orange County Totals</b>	<b>150</b>	<b>1,042</b>	<b>318</b>	<b>418</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>1,287</b>	<b>691</b>	<b>9,223</b>	<b>10,237</b>	<b>38,389</b>
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**ROTATING NOZZLES INSTALLED BY AGENCY**  
through MWDOC and Local Agency Conservation Programs

Agency	FY 11/12				FY 12/13				FY 13/14				FY 14/15				FY 15/16				FY 16/17				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	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.		
Brea	130	0	0	65	120	0	84	0	0	157	45	0	74	2,484	0	0	0	0	572	2,749	0	0	0	0	0	0	0	32.68	
Buena Park	32	0	0	65	0	0	53	0	0	248	0	0	45	98	0	0	0	0	509	173	2,535	0	0	0	0	0	0	453.42	
East Orange	340	0	0	55	0	0	30	0	0	221	0	0	0	0	0	0	0	0	751	0	0	0	0	0	0	0	0	10.83	
El Toro	357	76	0	23	6,281	0	56	3,288	0	1,741	28,714	0	730	4,457	0	55	242	0	3,369	46,222	890	0	0	0	0	0	0	820.63	
Fountain Valley	108	0	0	35	0	0	0	0	0	107	0	0	222	0	0	0	0	0	710	0	0	0	0	0	0	0	0	10.22	
Garden Grove	119	0	0	95	0	0	80	0	0	88	50	0	110	0	0	55	98	0	933	299	0	0	0	0	0	0	0	19.72	
Golden State	294	0	0	257	2,595	0	192	0	0	583	1,741	0	1,088	0	0	176	5,766	0	3,417	11,074	0	0	0	0	0	0	0	156.55	
Huntington Beach	458	0	0	270	0	0	798	1,419	0	1,421	632	0	1,989	5,047	0	331	6,325	0	3,797	11,496	2,681	0	0	0	0	0	0	793.98	
Irvine Ranch	1,715	4,255	0	25,018	1,014	0	11,010	4,257	0	1,421	632	0	1,989	5,047	0	331	6,325	0	47,133	91,375	2,004	0	0	0	0	0	0	2,907.46	
La Habra	33	90	0	0	0	0	15	0	0	109	338	0	300	0	0	0	0	0	481	1,236	900	0	0	0	0	0	0	221.65	
La Palma	0	0	0	0	0	0	0	0	0	0	0	0	46	505	0	0	2,385	0	56	2,890	0	0	0	0	0	0	0	14.18	
Laguna Beach	763	0	0	3,596	0	0	2,948	878	0	2,879	1,971	0	1,390	0	0	0	0	12,139	2,896	0	0	0	0	0	0	0	0	224.61	
Mesa Water	297	277	0	270	0	0	361	0	0	229	0	0	166	0	0	113	0	2,030	385	343	0	0	0	0	0	0	0	122.17	
Moulton Niguel	1,225	0	0	512	1,385	0	361	227	0	1,596	4,587	0	5,492	1,441	0	153	5,872	0	11,874	20,515	2,945	0	0	0	0	0	0	1,017.52	
Newport Beach	640	3,273	0	25,365	50	0	19,349	6,835	0	460	3,857	0	348	670	0	0	0	46,678	21,413	0	0	0	0	0	0	0	0	1,178.02	
Orange	343	0	0	264	0	0	245	120	0	304	668	0	631	91	0	0	0	3,170	1,072	0	0	0	0	0	0	0	0	69.27	
San Clemente	4,266	117	1,343	631	172	0	415	5,074	0	326	0	0	426	0	0	0	0	9,989	7,538	1,343	0	0	0	0	0	0	0	415.75	
San Juan Capistrano	949	0	0	684	30	0	370	0	0	495	737	0	310	593	0	75	123	0	5,495	8,852	0	0	0	0	0	0	0	257.03	
Santa Margarita	4,817	0	0	983	0	0	389	0	0	1,207	1,513	0	1,820	837	0	15	0	16,165	6,921	611	0	0	0	0	0	0	0	450.33	
Seal Beach	0	0	0	0	0	0	0	0	0	40	5,261	0	0	2,300	0	0	0	155	7,852	0	0	0	0	0	0	0	0	90.55	
Serrano	58	0	0	190	0	0	105	0	0	377	0	0	695	0	0	0	0	3,405	0	0	0	0	0	0	0	0	0	55.23	
South Coast	688	359	0	435	0	0	70	0	0	4,993	13,717	0	1,421	2,889	0	16	0	8,130	18,870	0	0	0	0	0	0	0	0	323.31	
Trabuco Canyon	379	0	0	34	0	0	0	0	0	56	0	0	130	0	0	0	4,339	2,086	5,130	0	0	0	0	0	0	0	0	70.87	
Tustin	476	1,013	0	378	0	0	329	0	0	408	0	0	317	386	0	65	0	3,371	1,399	0	0	0	0	0	0	0	0	69.73	
Westminster	26	0	0	15	0	0	0	0	0	54	0	0	73	0	0	105	0	464	0	0	0	0	0	0	0	0	0	6.53	
Yorba Linda	559	0	0	730	0	0	40	990	0	921	0	0	1,715	0	0	213	0	6,081	4,359	500	0	0	0	0	0	0	0	278.38	
MWDOC Totals	19,072	9,460	1,343	59,970	11,647	0	36,622	21,669	0	19,818	65,250	0	20,883	24,634	0	1,521	27,482	0	192,960	274,716	14,752	0	0	0	0	0	0	0	10,070.59

Anaheim	742	38,554	0	459	813	0	338	0	0	498	712	0	794	5,221	0	147	3,953	0	4,020	49,799	105	630.16
Fullerton	409	0	0	119	0	0	107	0	0	684	1,196	0	521	7,015	0	65	3,034	0	2,910	11,309	1,484	386.40
Santa Ana	22	65	0	99	0	0	86	2,533	0	310	0	0	0	1,420	0	0	1,106	0	859	5,752	0	85.35
Non-MWDOC Totals	1,173	38,619	0	677	813	0	531	2,533	0	1,492	1,908	0	1,315	13,656	0	212	8,093	0	7,789	66,860	1,589	1,101.91

<b>Orange County Totals</b>	<b>20,245</b>	<b>48,079</b>	<b>1,343</b>	<b>60,647</b>	<b>12,460</b>	<b>0</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>1,733</b>	<b>35,575</b>	<b>0</b>	<b>200,749</b>	<b>341,576</b>	<b>16,341</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11,172.50</b>
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**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	0	631	394
Buena Park	153	432	122	379	290	5	23	56	591	0	2,356	1,070
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	310	2,351	1,480
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	162	2,475	1,547
Irvine Ranch WD	121	789	2,708	1,002	646	1,090	451	725	11,100	3,701	25,609	7,281
La Habra	191	75	53	4	0	0	0	0	340	0	883	544
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	765	4,237	2,068
Moulton Niguel WD	9	69	151	6	0	0	0	3	413	92	1,088	814
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	2,343	4,522	1,787
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	0	207	206
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	170	1,360	820
Westminster	40	161	16	63	35	1	28	0	146	103	1,064	996
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>8,511</b>	<b>57,693</b>	<b>26,054</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	230	5,729	4,667
<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>1,160</b>	<b>22,260</b>	<b>13,195</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>9,671</b>	<b>79,953</b>	<b>39,250</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 Recirculating 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	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	0	0	1	0	2	54	446
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	1	0	0
Golden State	0	0	0	0	0	0	0	0	1	3	27
Huntington Beach	0	0	0	2	0	1	2	0	5	132	430
Irvine Ranch	2	1	1	1	1	0	2	0	8	102	516
La Habra	0	0	0	0	0	0	1	0	1	0	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	1	21	49
Orange	0	0	0	0	0	0	1	2	4	88	409
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	1	0	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>24</b>	<b>401</b>	<b>1878</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	1	11	225
<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>25</b>	<b>412</b>	<b>2104</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 MWD OC and Local Agency Conservation Programs

Agency	FY 11/12		FY 12/13		FY 13/14		FY 14/15		FY 15/16		FY 16/17		Total Program		Cumulative Water Savings across all Fiscal Years
	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	
Brea	3,397	9,466	7,605	0	5,697	0	71,981	30,617	118,930	404,411	4,478	0	212,088	444,494	209,57
Buena Park	0	0	0	0	0	0	11,670	1,626	77,127	16,490	3,741	0	92,538	18,116	32,32
East Orange	0	0	0	0	1,964	0	18,312	0	27,844	0	0	0	48,120	0	16,59
El Toro	4,723	0	4,680	72,718	4,582	0	27,046	221,612	63,546	162,548	8,390	23,019	112,967	479,897	232,85
Fountain Valley	1,300	0	682	7,524	4,252	0	45,583	5,279	65,232	0	418	0	117,467	12,803	48,90
Garden Grove	14,013	0	4,534	0	8,274	0	67,701	22,000	177,408	49,226	11,504	0	283,434	117,403	167,57
Golden State	42,593	30,973	31,813	3,200	32,725	8,424	164,507	190,738	310,264	112,937	0	0	581,902	346,272	377,04
Huntington Beach	27,630	48,838	9,219	12,437	20,642	0	165,600	58,942	305,420	270,303	9,560	21,534	538,872	415,705	355,17
Irvine Ranch	6,450	1,666	32,884	32,384	36,584	76,400	234,905	317,999	782,844	2,675,629	207,837	38,917	1,306,927	3,155,789	1,368,74
La Habra	0	8,262	0	0	0	0	14,014	1,818	49,691	72,164	0	0	63,705	90,019	55,33
La Palma	0	0	0	0	0	0	4,884	0	10,257	59,760	0	0	15,141	59,760	21,66
Laguna Beach	2,533	0	2,664	1,712	4,586	226	13,647	46,850	47,614	0	0	0	72,022	48,788	47,58
Mesa Water	6,777	0	10,667	0	22,246	0	131,675	33,620	220,815	106,896	3,006	42,848	395,186	183,364	193,22
Moulton Niguel	4,483	26,927	11,538	84,123	14,739	40,741	314,250	1,612,845	889,748	1,059,279	187,774	0	1,423,488	2,840,054	1,522,53
Newport Beach	3,454	0	3,548	2,346	894	0	33,995	65,277	76,675	375,404	953	0	119,519	443,027	175,93
Orange	12,971	0	15,951	8,723	11,244	0	120,093	281,402	289,990	106,487	5,471	2,366	455,720	398,978	315,20
San Clemente	21,502	0	16,062	13,165	18,471	13,908	90,349	1,137	215,249	438,963	3,950	0	365,583	467,173	278,80
San Juan Capistrano	22,656	103,692	29,544	27,156	12,106	0	101,195	32,366	197,290	143,315	2,624	40,748	365,415	347,277	310,13
Santa Margarita	1,964	11,400	10,151	11,600	17,778	48,180	211,198	514,198	534,048	550,420	8,822	28,094	788,444	1,169,453	686,70
Seal Beach	0	0	3,611	0	0	0	15,178	504	17,349	15,911	0	0	36,138	16,415	18,43
Serrano	0	0	0	0	2,971	0	41,247	0	127,877	4,403	2,539	0	174,634	4,403	56,38
South Coast	6,806	0	9,429	4,395	15,162	116,719	84,282	191,853	181,102	128,290	5,085	0	301,866	457,581	308,56
Trabuco Canyon	272	0	1,542	22,440	2,651	0	14,771	0	42,510	88,272	0	0	61,746	110,712	61,32
Tustin	0	0	9,980	0	1,410	0	71,285	14,137	232,697	33,362	9,043	0	324,415	47,499	119,41
Westminster	0	0	0	0	0	0	14,040	34,631	71,833	23,902	5,894	0	91,767	58,533	48,07
Yorba Linda	0	0	0	0	0	0	112,136	12,702	360,279	116,985	15,958	0	499,722	129,687	199,42
<b>MWD OC Totals</b>	<b>183,524</b>	<b>241,224</b>	<b>216,104</b>	<b>303,923</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>497,047</b>	<b>197,526</b>	<b>8,848,826</b>	<b>11,863,202</b>	<b>7,227,41</b>

Anaheim	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	5.16
Santa Ana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
<b>Non-MWD OC Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</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>9,214</b>	<b>5.16</b>

<b>Orange County Totals</b>	<b>183,524</b>	<b>241,224</b>	<b>216,104</b>	<b>303,923</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>497,047</b>	<b>197,526</b>	<b>8,848,826</b>	<b>11,872,416</b>	<b>7,233</b>
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<sup>(1)</sup> Installed device numbers are listed as square feet



# **HIGH EFFICIENCY TOILETS (HETs) INSTALLED BY AGENCY** through MWDOC 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	0	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	10	826	208.03
Garden Grove	0	14	39	443	181	24	0	0	63	350	363	6	1,483	348.18
Golden State WC	2	16	36	444	716	37	80	2	142	794	512	5	2,786	638.90
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	556	16,827	4,560.63
Laguna Beach CWD	0	2	17	91	28	11	0	0	45	112	81	-1	386	84.65
La Habra	0	3	18	296	34	20	0	0	37	94	83	2	587	165.43
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	4	1,615	511.99
Moulton Niguel WD	0	20	104	447	188	46	0	0	400	2,497	1,939	48	5,689	856.54
Newport Beach	0	5	19	163	54	13	0	0	49	168	243	8	722	145.94
Orange	1	20	62	423	79	40	0	1	142	978	416	12	2,174	422.27
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	13	874	181.22
Santa Margarita WD	0	5	14	304	151	44	0	0	528	997	1,152	111	3,306	509.22
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	9	1,019	178.96
Trabuco Canyon WD	0	0	4	23	23	0	0	0	10	108	169	4	341	48.39
Tustin	0	186	28	387	479	17	0	0	64	132	201	13	1,507	460.79
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	10	1,249	281.44
<b>MWDOC 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>851</b>	<b>50,599</b>	<b>11,721.11</b>
Anaheim	0	255	78	2,771	619	114	0	0	156	1,188	614	58	5,853	1,691.64
Fullerton	0	4	28	286	60	23	0	0	61	293	286	11	1,052	223.22
Santa Ana	0	11	25	925	89	23	0	0	33	602	293	20	2,021	515.52
<b>Non-MWDOC 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>89</b>	<b>8,926</b>	<b>2,430.38</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>940</b>	<b>59,525</b>	<b>14,151.49</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>
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[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	1,062	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>
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