MEETING OF THE
BOARD OF DIRECTORS OF THE
MUNICIPAL WATER DISTRICT OF ORANGE COUNTY
Jointly with the
PLANNING & OPERATIONS COMMITTEE
February 3, 2014, 8:30 a.m.
MWDOC Conference Room 101

P&O Committee:
Director Osborne, Chair
Director Barbre
Director Hinman

Staff: R. Hunter, K. Seckel, R. Bell, J. Berg, H. De La Torre, P. Meszaros

Ex Officio Member: J. Finnegan

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.

PRESENTATIONS

1. OVERVIEW ON IRWD STRAND RANCH PROJECT

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. ENVIRONMENTAL PROTECTION AGENCY WATERSENSE PROMOTIONAL PARTNER

3. DECISION-MAKING PROCESS FOR WATER INVESTMENTS IN ORANGE COUNTY

4. RESPONSE FROM MET ON THE SECOND LOWER CROSS FEEDER PROJECT

5. STATUS OF ONGOING MWDOC RELIABILITY AND ENGINEERING/PLANNING PROJECTS

6. WATER USE EFFICIENCY REPORTS
   a. Status of Water Use Efficiency Projects
   b. Water Use Efficiency Programs Savings and Implementation Report

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

ADJOURNMENT

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

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

Item No. 1

PRESENTATION ITEM
February 3, 2014

TO: **Planning & Operations**
(Directors Osborne, Barbre, Hinman)

FROM: Rob Hunter
General Manager Staff Contact: Karl Seckel

SUBJECT: **Overview on IRWD Strand Ranch Project**

STAFF RECOMMENDATION

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

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

IRWD has had their Strand Ranch Project up and operating for several years. MWDOC has discussed with IRWD staff the potential for others in Orange County to participate in the project. It would be good for IRWD to provide an update to our P&O Committee on the status of the project and the additional components that have been added in recent years. IRWD is planning on "testing" the ability to move water from the storage account into Orange County in the coming year.

IRWD staff has agreed to provide an update at our meeting.

Budgeted (Y/N): N/A	Budgeted amount: n/a	Core ☑	Choice
Action item amount: n/a	Line item:		
Fiscal Impact (explain if unbudgeted): Just staff time at this point.			

Item No. 2

INFORMATION ITEM
February 3, 2014

TO: Board of Directors

FROM: **Planning & Operations Committee**
(Directors Osborne, Barbre, Hinman)

Robert Hunter
General Manager

Staff Contact: J. Berg
WUE Programs Manager

SUBJECT: **Environmental Protection Agency WaterSense Promotional Partner**

STAFF RECOMMENDATION

Staff recommends the Board of Directors receive this staff report as information.

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

In January, staff enrolled MWDOC as an Environmental Protection Agency (EPA) WaterSense Promotional Partner. Modeled after the EnergyStar Program, the EPA created the WaterSense product labeling program to assist consumers in identifying water efficient plumbing fixtures, devices, and services. Products and services that have earned the WaterSense label have been certified to be at least 20 percent more water efficient without sacrificing performance.

For the past several years, the Municipal Water District of Orange County and Metropolitan Water District of Southern California have relied on the WaterSense labeling program for our rebate approved toilet and smart irrigation timer lists. These products are WaterSense labeled because: 1) they have been found, by independent laboratories, to use 20 percent less water than the current plumbing code; and 2) they meet product performance criteria for improved customer satisfaction. Partnering with WaterSense will help to facilitate MWDOC and Metropolitan's emphasis of market transformation, as established in our respective Water Use Efficiency Master Plan and Long Term Conservation Plan.

Budgeted (Y/N): N/A	Budgeted amount: N/A	Core __	Choice _X_
Action item amount: $0.00	Line item: N/A		
Fiscal Impact (explain if unbudgeted): Joining WaterSense is <u>free.</u>			

DETAILED REPORT

The WaterSense partnership connects MWDOC to a network of manufacturers, retail stores, distributors, builders, and other organizations working to promote the WaterSense label and water efficiency. MWDOC will gain exclusive access to outreach and marketing resources to help promote these programs of ours that are linked to WaterSense product labeling. The outreach and marketing resources have been developed based on market research conducted by EPA to best reach and connect with consumers. Finally, through a national awards campaign, EPA provides national recognition for WaterSense partners as leaders in water efficiency.

EPA requires all products bearing the WaterSense label to be independently certified. The WaterSense Product Certification System outlines the process and procedures for the product certification to ensure that all WaterSense labeled products meet EPA's criteria for efficiency and performance. The current list of WaterSense labeled products include:

- Showerheads (2 gallons per minute)
- High Efficiency Toilets (1.28 gallons per flush)
- Bathroom Faucets (1.5 gallons per minute)
- Weather-Based Irrigation Controllers
- Urinals (0.5 gallons per flush)
- Pre-Rinse Spray Valves (1.28 gallons per minute)
- New Homes

Note: MWDOC's Weather-Based Irrigation Controller (aka Smart Timer) statistical water saving evaluations were used by EPA in its Weather-Based Irrigation Controller labeling process.

The WaterSense label also appears on professional certification programs for landscape irrigation professionals. WaterSense labeled programs verify professional proficiency in water-efficient irrigation system design, installation/maintenance, and auditing. For example, the California Landscape Contractors Association (CLCA) has a Certified Water Manager Program that is WaterSense labeled. MWDOC works very closely with the CLCA to promote local landscape contractors enrolled in the Certified Water Manager Program. In fact, the CLCA Certified Water Manager Program relies on MWDOC's Water Smart Landscape Program for monthly irrigation performance reporting for dedicated irrigation meters.

Consumers researching WaterSense labeled products on the EPA website can also identify water agencies offering rebates for WaterSense labeled devices. As a WaterSense Partner, MWDOC's rebate programs will be included on the WaterSense website.

WaterSense is continually working to expand the number of products and service programs that qualify for the label. Labels that are currently being developed include:

- Water Softeners
- Soil Moisture-Based Irrigation Controllers
- Flushometer-Valve Toilets

As a Promotional Partner, MWDOC can participate in the planning and development of labeling for new devices. Device labeling opportunities that staff will advocate for include drip irrigation, sprinkler nozzles, clothes washers, and dishwashers. Staff also plans to obtain a WaterSense label for our Home Certification Program.

What are the Benefits of being a WaterSense Promotional Partner?

WaterSense Promotional Partners can access a variety of tools and resources to help promote water efficient appliances, devices, and services. MWDOC will receive the following benefits:

Participation in a National Water Efficiency Brand

- WaterSense Partner Logo
- WaterSense Promotional Label
- A voice in the WaterSense product labeling process
- Increased consumer confidence by promoting water-efficient products that meet or exceed WaterSense performance criteria
- Networking with our peers and sharing success stories
- Participating in partner-only webinars and receiving regular program news and updates

Access to the Partner Website

- Networking to find out how other partners are promoting WaterSense and water efficiency
- Downloads of free collateral and media materials, including *Partner Pipeline Newsletter,* public service announcements, factsheets, brochures, press releases, letters to the editor, and bill stuffers with the water-efficiency message for utility customers
- Customized promotional items, including magnets and stickers, with our logo/brand
- Support for campaigns such as Fix a Leak Week or We're for Water with tailored promotional materials

Recognition as a Leader in Water Efficiency

- Distinguish our organization from others with the WaterSense partner logo
- Gain recognition from EPA as an environmental steward
- Get listed on the WaterSense website and in other program materials
- Become eligible to win a WaterSense award

Membership Dues and Annual Reporting

There are no membership dues or fees to become a WaterSense Promotional Partner. Funding for the WaterSense Program is provided by the EPA.

Promotional Partners provide a brief annual report to EPA on promotional activities and incentive programs to assist EPA in determining the impact of the program in promoting labeled products. This reporting is submitted to EPA every February in electronic form. Staff estimates this reporting can be completed within a few hours each year. By completing this reporting, MWDOC is eligible for the WaterSense Partner of the Year Award.

For more information about the EPA WaterSense Program go to:
http://www.epa.gov/watersense/about_us/what_is_ws.html

Item No. 3

INFORMATION ITEM

February 3, 2014

TO: **Planning & Operations**
(Directors Osborne, Barbre, Hinman)

FROM: Rob Hunter
General Manager Staff Contact: Karl Seckel

SUBJECT: **Decision-Making Process for Water Investments in Orange County**

STAFF RECOMMENDATION

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

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

MWDOC is often questioned about when various water projects will be constructed and operating? MWDOC is also questioned regarding what the next regional project will be? The decision-making process for regional projects, such as Poseidon, Doheny, Cadiz, Strand Ranch, San Juan Basin Authority, Conjunctive Use, Second Lower Cross Feeder or other projects can be difficult and complex. The projects need participants and support to bring them to fruition. The support needs to be in the form of technical, financial and political analyses, recommendations or actions for the projects to move forward successfully. The Poseidon Workgroup struggled with this issue over the past several years and never arrived at a conclusion. Work is currently underway with a consultant at MNWD for such a decision-making process for their staff and Board. MWDOC has been tracking and participating in the process to a limited degree, and is supportive of the work being performed.

Budgeted (Y/N): N/A	Budgeted amount: n/a	Core ☑	Choice
Action item amount: n/a	Line item:		
Fiscal Impact (explain if unbudgeted): Just staff time at this point.			

For our upcoming budget, staff is examining how MWDOC can provide insight and assistance on a county-wide basis towards future regional project decision-making. Common elements that come up in this process involve:

- Need for the project – what is being provided in the form of benefits, both water resources and protection of our economy through an increased reliability?
- Examination of the options to a proposed project?
- Evaluation of the reliability improvements and costs compared to other options?
- Evaluation of how will the investment look over the long run?
- Examination of the reliability provided by MET and how any NEW project will fit into the overall regional reliability analysis?
- Decision-making to set the priorities

Three aspects stand out in the list:

1. The value of reliability and protection afforded customers and businesses
2. MET's future reliability
3. Decision-making process

Value of reliability - The value of reliability from investments in Water Resources Projects was last studied by MWDOC over 10 years ago in the 2003 OCBC Value of Water Reliability Study. Much has changed since that time including the methods of analysis. For example, Dr. David Sunding has developed and refined the use of this type of information and utilized it in the BDCP benefit/cost analysis. We have discussed with him development of this type of information that could be useful for OC decision-making. The value of reliability from investments in water resources projects is a mirror image of the cost of unreliability from not being able to meet demands under certain conditions. An update of the information would be valuable to the County in the decision-making process.

MET's future reliability - MET's future reliability depends on many future occurrences including completion of the BDCP, stabilization of the Colorado River supplies, development of many local projects in Southern California, managing the vagaries of imported supplies via their various storage programs and by all of us in Southern California building WUE practices into our daily routine. On the other side of the equation, the MET service area will be adding another 6 to 7 million people in Southern California over the next 30 to 40 years and the jobs to support that level of economic growth might require another 1.2 MAF of reliable supplies to be developed. Southern California, and hence Orange County does not have its reliability certainty fully in place for all future conditions. The MET IRP and planning efforts in Orange County will get us there – however, that plan will take 20 years or more and involves much uncertainty that will have to be worked through. Additional local

investments will help both Orange County and the MET service area to manage some of the uncertainty. Calculating the additional benefits brought to a local area via additional water resources projects will be key towards making local investment decisions, especially when examining the "value" of local investments. This type of information can be approached in several different ways and will be useful in that decision-making process.

Decision-making process - Project decision-making that takes into account all of the above circumstances.

Approaching these issues is not a simple process, however, it would be beneficial for MWDOC to conduct work in this area to help in the decision-making process at MWDOC and in Orange County. Staff will continue to investigate opportunities and options. This is not an inexpensive undertaking and may cost on the order of $200,000 dollars or more to bring on technical assistance for some of the modeling and economic work. Considerable staff time would also be involved. Staff will continue to update the Board.

Item No. 4

INFORMATION ITEM

February 3, 2014

TO: **Planning & Operations**
(Directors Osborne, Barbre, Hinman)

FROM: Rob Hunter
General Manager Staff Contact: Karl Seckel

SUBJECT: **Response from MET on the Second Lower Cross Feeder Project**

STAFF RECOMMENDATION

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

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

MWDOC has been working with MET on various aspects of the Second Lower Cross Feeder Project (SLCF) for some time. Last summer, staff convened several meetings with an Advisory Group consisting of a number of General Manager's from South County who had expressed an interest in better understanding MET's issues with the project. The discussions also included MET Staff members Debra Man and Gordon Johnson. The central issue revolved around whether there "was or was not" sufficient MET capacity that "could be counted on" during an emergency situation to convey water in the SLCF in the event the Diemer Plant is out of service due to earthquakes or other interruptions. The importance of this issue resulted in MWDOC requesting MET to document their perspective on the project, including their perspective on regional facility vulnerability in Orange County in the event of seismic events and what could be further pursued to improve Orange County's reliability.

Budgeted (Y/N): N/A	Budgeted amount: n/a	Core ☑	Choice
Action item amount: n/a	Line item:		
Fiscal Impact (explain if unbudgeted): Just staff time at this point.			

Attached is MET's correspondence on this matter.

MET's position, in summary, is as follows:

- MET has invested heavily in reliability through its improvements, including seismic upgrades, at the Diemer Plant. Given those investments, MET has suggested planning in Orange County should be based on up to 60 days without the Diemer Plant and without portions of the MET conveyance system. Longer durations of outages could occur with MET's major facilities including the State Water Project and the Colorado River Aqueduct. Work is underway by MET and through the BDCP Process to examine reliability strategies.
- MET's perspective is that new facilities need to be justified by **both** increased demands and the need for system flexibility, rather than simply by the need for system flexibility. MET's view is that the Second Lower Cross Feeder Project provides only local benefits for Orange County.
- MET cannot predict or guarantee a specific delivery capacity for the SLCF during an emergency event. MET has suggested that a similarly formulated project that involves the conveyance of local water may be a better concept to pursue. They are open to discussions involving the MET Conjunctive Use Storage Account in the Orange County groundwater basin.
- A further complication is that the Second Lower Feeder involves many miles of prestressed concrete cylinder pipe that will be slip lined over the next 10 years, further constraining system flows and involving time periods when the facilities will be out of operation.

Based the past discussions and MET's recent correspondence, MWDOC's staff recommendations are as follows:

1. Incorporate additional Conjunctive Use Storage, for emergency purposes, into the existing Emergency Services Program (ESP). MWDOC has been involved in these discussions for many years and was part of the group that put together the 2006 Emergency Services Program for exchanging up to 50 cfs of groundwater production with imported water and conveying this through the IRWD system. Currently, about 30 to 35 cfs of emergency supplies can be delivered under the concept, but it diminishes over time. The ESP limitation was 50 cfs. Thus an additional 15 to 20 cfs can be added under the existing agreement provisions. A review of the IRWD system to convey the additional capacity needs to be undertaken in conjunction with IRWD.
2. Examine NEW opportunities, for a conjunctive use wellfield of up to 50 cfs. The wellfield could be used in normal times for production of groundwater by basin agencies and under emergency situations, would be used for emergency supplies by the South County area. The project would be structured in a manner to provide

benefits both to the basin and to the non-basin areas, with concomitant cost sharing of the project costs. This will require close work with OCWD, the groundwater producers and the South County agencies.

3. The discussions should also involve MET to ascertain options involving the existing MET Conjunctive Use Storage Account and options for backfeeding into the MET system to serve portions of LA County.

Attachments:

1. MET information

Metropolitan Water District of Southern California
Second Lower Cross Feeder (SLCF)
December 2013

History, Background and Summary and Conclusions of 2013 Discussions Regarding the Second Lower Cross Feeder Project in Orange County and Diemer Plant Reliability

1.0 Project Background - Orange County Area Study

During 2003-2004, Metropolitan staff worked collaboratively with MWDOC staff on an Orange County Area Study that was primarily focused on reliability concerns of Orange County retail agencies and their dependency upon the Diemer Water Treatment Plant. Specifically, the Orange County Area Study was initiated to perform the following:

- Update timing projections for the Central Pool Augmentation (CPA) Project
- Clarify obligations within the Allen McColloch Pipeline (AMP) sales agreement
- Discuss reliability concerns in relation to potential outages of the Diemer Plant.

This collaborative study addressed each of the above areas. The projected on-line date for the CPA project was updated; several disagreements over obligations of the AMP sales agreement were resolved; and a comprehensive review of the seismic risk assessment and mitigation measures for the Diemer plant was completed. In addition, the Orange County Area Study identified a number of actions aimed at improving the reliability of the Diemer service area, including the initial consideration of a Second Lower Cross Feeder (SLCF) pipeline. These actions are summarized below.

1.1 Actions taken to improve operational flexibility

- *Coastal Junction Bypass Project.* Several 24" diameter pipeline connections were installed to allow the use of portable pumps at the Coastal Junction Structure to aid in meeting retail demands during Diemer outages.
- *OC-88 Reliability Project.* Additional pumps were installed at the OC-88 service connection/pump station to improve near-term back-up capability (and to meet long-term demands).

1.2 Actions taken (or underway) to strengthen the Diemer plant

- *Diemer Water Treatment Plant Reliability Assessment (2005).* This effort was aimed at evaluating the vulnerability of Diemer to postulated events including seismic activity, hydraulic surge, vehicle impact, equipment malfunction, fire, third-party construction, vandalism, wind-blown projectiles. The results included identification of 30 potential reliability improvements that were prioritized and either handled as O&M projects or recommended for inclusion in Metropolitan's Capital Investment Plan (CIP).

  At this time, 28 of the identified improvement projects are either complete or in progress including installation of a new 66kV incoming power supply from Southern California Edison, and various seismic upgrades covered in more detail below.

- *Seismic Assessment and Upgrade Program.* This program is aimed at evaluating the seismic adequacy of existing structures at all Metropolitan facilities, including the geotechnical evaluation of foundations. Potential slope stability issues are also addressed. For facilities that are potentially at risk, more detailed studies are undertaken to determine what actions are necessary to maintain reliability.

  The Diemer site has unique issues due to its location on the top of a hill, the original construction of the site, and the manner in which fill was placed to increase the plant's footprint. As a result, significant investments have been made on the following seismic upgrade projects (approximately $87 million expended to date with about $33 million remaining):

  - Filter outlet conduit slope stabilization
  - Filter Building seismic upgrades
  - Chemical facility foundation stabilization
  - East Washwater Tank foundation stabilization
  - Finished Water Reservoir foundation stabilization
  - Lower Feeder relocation
  - South Slope stabilization
  - West Washwater Tank upgrades
  - Washwater Reclamation Plant No. 2 slope stabilization
  - North Slope remediation
  - Administration Building seismic upgrade

- *Diemer Improvements Program*. This program is refurbishing major facilities at the Diemer plant to ensure long-term reliability. Approximately $135 million has been expended over the past decade on improvement projects, while approximately $130 million of investments are planned over the next 5 years.

  Completed projects include the North Access Road, Solids thickeners, 66 KV substation, and the Plant Maintenance Facility. On-going and planned projects include basin rehabilitation, filter valve replacement, chemical system upgrades, and Yorba Linda Power Plant modifications.

1.3 Initial concept of SLCF pipeline

In discussions regarding the Oxidation Retrofit Program (ORP) at the Diemer plant and the Orange County Area Study, the concept of a SLCF was initially considered as a potential means of maintaining reliable deliveries during scheduled shutdowns of the Diemer plant required for ORP construction and during unanticipated changes in demands or operational emergencies in the near-term, prior to the projected on-line date of the CPA Project.

Maintaining reliable deliveries to the Orange County service area during construction of the Diemer ORP was an important consideration. The construction of ozonation facilities at the Diemer plant was scheduled to occur during a five-year period from 2008 to 2012. At least three shutdowns of the plant, with durations of up to 10 days, were planned during this construction period. The potential SLCF would connect from the Second Lower Feeder to Metropolitan's East Orange County Feeder #2 and the AMP to deliver treated water from the Jensen plant to the south Orange County service area in the event that demands were higher than expected during the construction period, or if the shutdown durations were extended.

During the course of the Orange County Area Study, the projected on-line date of the CPA Project was updated to 2018-2025. As a result, there was considerable discussion among the study group regarding how near-term reliability concerns could be addressed in advance of construction of the CPA Project. These discussions eventually led to the initial concept of the SLCF as an accelerated component of the CPA Project.

The full buildout of the CPA Project had planned to include a link between the AMP and the East Orange County Feeder #2 (EOCF2) pipeline to allow some CPA water to be moved further west into Metropolitan's Central Pool. The concept for the SLCF was to accelerate the construction of the western segment of the CPA pipeline system and shift its location further north. This was intended to allow Jensen water to be delivered into southern Orange County (flowing east) in the near-term, and then CPA water to be delivered through this same pipeline into the Central Pool (flowing west) in the future. The driver for Metropolitan to proceed with the SLCF was its operational flexibility, as it would allow long outages to be scheduled at the Diemer plant during the upcoming ORP construction. Secondary benefits would include helping Orange County retail agencies meet demands during unplanned outages of the Diemer plant.

The SLCF was initially sized at 84-inches in diameter to allow 350-400 cfs of CPA water to move westward into the Central Pool. At this diameter, the SLCF was projected to be able to deliver up to 100 cfs of Jensen water eastward into the EOCF2 for delivery into south Orange County. However, such deliveries could only be made during Diemer outages, and the capacity would vary widely depending upon actual system operating conditions at the time.

(Note that the SLCF had initially been referred to as the Orange County Cross Feeder, including within the 2005 and 2006 Board letters).

2.0 Implementation of the SLCF as a regional facility

2.1 Board actions

In July 2005, Metropolitan's Board authorized preliminary design of the Second Lower Cross Feeder along with final design of the Coastal Junction Bypass project. These projects were justified by their ability to help Metropolitan schedule a series of upcoming long-duration outages associated with the Diemer Oxidation Retrofit Program.

In January 2006, the Board authorized final design of the SLCF. This action was based upon the near-term benefit of helping schedule required Diemer shutdowns. Secondary benefits included increased member agency reliability during potential emergency outages of the Diemer plant. The appropriated amount included funds for final design and acquisition of permanent and temporary easements.

The SLCF was planned to be an 84-inch diameter pipeline with a length of about 2.4 miles. It was to tie into the Second Lower Feeder near Red Gum Avenue in the city of Anaheim, follow public rights-of-way along Miraloma Avenue through primarily industrial areas within Anaheim and Placentia, and connect to the EOCF2 pipeline at Richfield Road in Placentia.

2.2 Changes in conditions

By mid-2007, Metropolitan's Integrated Area Study (IAS) was nearing completion. This collaborative planning effort noted that several conditions had changed significantly, leading to discussions regarding the justification for continuing with the SLCF project. These changes included:

- Construction cost estimates for the SLCF increased from $32 million to $70-$80 million due to a number of factors including the tight bidding market, significant shoring requirements, and the need for large-diameter isolation valves.
- Hydraulic modeling demonstrated that the projected benefits of the SLCF would decline over time. As overall demands increase within the Central Pool, less and less water could be conveyed through the pipeline. This analysis assumed that upstream demands would be met and that Orange County would receive the remaining capacity that could be delivered.
- Construction of the Diemer ozonation facilities was proceeding as scheduled, and the planned Diemer shutdowns were being completed while maintaining reliable deliveries to Orange County through the existing distribution system, under lower demand conditions and based on local operational improvements made in Orange County. The potential SLCF would not be essential as originally anticipated to provide additional operational flexibility during the ORP construction shutdowns.
- The target on-line date for the CPA Project was revised from 2018-2025 to beyond 2045.
- Metropolitan's reliability strategy was clarified and there was a consensus of the IAS study team to continue with the past practice of only increasing system flexibility when opportunities arise through demand-driven projects.

The result of these changed conditions was that Metropolitan no longer supported the SLCF as a Metropolitan-only project and progress on the final design effort was halted in 2007. At that time, approximately $1 million had been expended out of the $8.9 million

appropriated amount. Collaborative discussions continued, however, regarding potential justification of the SLCF as either a "local" facility or a "joint" facility.

2.3 Reassessment of project for local benefits

The SLCF project was reassessed as a facility that could improve the local distribution system, while opportunities were examined for providing regional benefits. For example, between late 2008 and mid-2010, Metropolitan worked with MWDOC and its consultant (AECOM Boyle) to reassess the feasibility of a reconfigured SLCF that might include a pump station and potentially provide local and/or regional benefits as well as operational flexibility for planned or unplanned facility outages. While this reassessment was successful in identifying additional potential local benefits of a SLCF pipeline, such as providing expanded access to local groundwater supplies and a limited potential for the SLCF to meet retail demands in an emergency, no compelling regional benefits were demonstrated for this pipeline. The summary report was left in draft form.

In the South Orange County Water Reliability Study, which was conducted by MWDOC in 2012 and 2013, the concept of a reduced diameter (48") SLCF was identified as one of several options to help improve reliability for south Orange County agencies.

3.0 Findings and Discussions in 2013

Metropolitan's findings related to the SLCF are summarized below in terms of Metropolitan's overall approach to infrastructure reliability and system flexibility.

- **Infrastructure reliability.** Metropolitan recognizes the member agency concerns regarding the reliability of Metropolitan's infrastructure and the impact of a Metropolitan outage at the retail level. In response to such concerns, Metropolitan has demonstrated a significant commitment to infrastructure reliability by investing hundreds of millions of dollars over the past decade to ensure the reliability of its regional facilities.

  Specific investments in the Diemer plant include:

  - Approximately $90 million has been expended to date on seismic upgrades at the Diemer plant alone. Key facilities have been upgraded based on current seismic codes and an improved understanding of the specific geotechnical issues at this site.
  - Over $130 million has been invested in rehabilitation projects at the Diemer plant over the past decade. A similar level of expenditures is planned over the next five years to ensure this facility remains reliable into the future.

  These investments have enhanced water delivery reliability within Orange County by reducing the risk of regional facility outages. These investments have also improved the reliability of the Diemer plant to be consistent with other Metropolitan regional facilities.

In summary, Metropolitan has followed a consistent approach to address specific vulnerabilities at existing facilities to enhance infrastructure reliability. From Metropolitan's perspective, new facilities such as the SLCF need to be justified by increased demands rather than by concerns over the reliability of existing infrastructure. However, when demand-driven facilities are constructed, Metropolitan strives to improve operational flexibility and reliability as described below.

- **System flexibility.** Metropolitan recognizes the importance of system flexibility to support water deliveries during emergencies and/or planned or unplanned facility outages. Metropolitan has consistently improved its system flexibility over time via multiple water sources, multiple treatment facilities, enhanced storage capabilities, interconnected piping systems, and conjunctive use programs. Metropolitan is also committed to continuing its past practice of increasing system flexibility and reliability through demand-driven projects.

  For the SLCF pipeline, this approach to system flexibility may be summarized as follows:

  - The initial proposal for the SLCF (and Metropolitan's Board action to initiate design) was consistent with Metropolitan's approach of increasing system flexibility through demand-driven projects. The SLCF was proposed as an accelerated component of the CPA Project which was being driven by projected increases in demands. The acceleration of a small component of this project was also deemed reasonable in view of the near-term benefit of managing planned outages of the Diemer plant.
  - After conditions changed significantly (due to better definition of construction costs, declining benefits, changed CPA timing, and completion of the Diemer ORP construction), there was no longer justification to continue with the SLCF pipeline project to meet regional needs.

MWDOC and a number of MWDOC's member agencies held several discussions with Metropolitan's engineering and operations staff in the summer of 2013. MWDOC and ten of its agencies had recently completed a cost estimate for a revised alignment of the SLCF under the assumption that hydraulically, between 50 and 100 cfs of water could be conveyed via the Metropolitan system and delivered to Orange County via the Second Lower Feeder under emergency conditions. The purpose of the recent discussions was to better understand the situations and conditions under which this capacity could be received. During those discussions, Metropolitan staff indicated the following:

- Under the best of conditions, the hydraulic capability of conveying Jensen water across the Los Angeles portion of Metropolitan's distribution system is challenging. Typically, the maximum flow rate possible at the junction of the Sepulveda Feeder and the Second Lower Feeder would be about 130 cfs. After traveling east through the distribution

system, a maximum of about 100 cfs could be delivered to Orange County under **absolute optimum** conditions.

- To maximize deliveries to Orange County, flow demands on the Sepulveda Feeder would have to be reduced. However, it was noted that some agencies cannot fully discontinue deliveries from that pipeline, and under some emergency conditions (e.g. power outages), would likely increase their demands upon Metropolitan's system.
- Assurances regarding the likelihood of dependable deliveries through the Second Lower Feeder during emergency situations are difficult to make. Metropolitan suggested that Orange County may want to consider other options, such as conveyance of local supplies to improve reliability, in order to determine what solution may provide the best value of investment for the County.

Metropolitan raised the issue of the Sepulveda and the Second Lower Feeders being comprised of Prestressed Concrete Cylinder Pipe (PCCP). These feeders have been recommended to be rehabilitated under a long-term program that will involve slip-lining 100 miles of Metropolitan's distribution system. Major sections of the Second Lower Feeder will be included, requiring 8 to 10 years to complete. The slip-lining work will result in a loss of about 8 inches of inside diameter and thus reduce the carrying capacity of the pipeline, further reducing potential delivery flow rates through the SLCF.

In further discussions, Metropolitan indicated that the seismic resilience of the Diemer Plant has been improved considerably over the last 10 years and that the plant is now better equipped to survive seismic shaking and earth movement, as follows:

- Metropolitan has conducted seismic reviews of its facilities for over 15 years and has completed considerable seismic upgrades at the Diemer Plant. This effort included re-assessing facilities based on updated code requirements and site-specific seismic data, and then reinforcing existing structures when warranted.
- Metropolitan's seismic design criteria are based on the current California Building Code (CBC), American Society of Civil Engineers (ASCE) Manual No. 7 - Minimum Design Loads for Buildings and Other Structures, ASCE Manual No. 41 - Seismic Rehabilitation of Existing Buildings, and ASCE 350 – Code Requirements for Environmental Engineering Concrete Structures.
- These codes incorporate provisions for expected performance levels of specific facilities. For example, as an owner/operator of lifeline facilities, it is important for Metropolitan's water-related facilities to be available for disaster relief and fire suppression following code-level seismic events. Therefore, per the CBC, Metropolitan's water-related facilities are designed for a seismic performance level that would allow for continued water operation with minimal downtime for repair, based on the code design-level earthquake for the plant.

- At the Diemer Plant, water-related facilities are designed for the code-level earthquake. The controlling fault for the Diemer facility is the Whittier Fault. The goal of this approach is for the facility to be safely occupied and its functionality restored in less than two months.
- Although difficult to predict with any degree of certainty, Metropolitan estimates the potential duration of outages for various facilities for code design-level events as illustrated in Table 1:

Table 1 – Estimated Facility Outage Durations for Code Design-level Events

Facility	Duration
MWD - CRA	Up to 6 Months
DWR	Approximately 6 months
MWD – Conveyance and Distribution	1 week to 2 months
MWD - Treatment Plants	1 week to 2 months

- Metropolitan has encouraged all member agencies to consider their unique situations and plan accordingly. During the preparation of the Orange County Reliability Study, Orange County retail agencies reached a consensus for their local planning criteria to accommodate delivery interruptions from the Metropolitan system of up to 60 days. During the recovery period following a major earthquake, there would be triage and prioritization to bring facilities back into operation in as short a time as possible at both the regional and local levels.

4.0 Conclusion

Through a series of cooperative efforts, studies and discussions over a number of years, Metropolitan has concluded that the SLCF project, even when considered as a local project within Orange County, may not represent the best investment for enhancing emergency reliability. The ability of the SLCF to deliver water into Orange County under emergency conditions would be highly dependent upon upstream conditions at the time of an event. As a result, Metropolitan could not guarantee a specific delivery capacity for the SLCF during an emergency. Furthermore, Metropolitan has invested heavily in improving the resilience of the Diemer plant. Metropolitan supports the consensus of Orange County water agencies to consider options that would enable the region to withstand interruptions of Metropolitan supplies for up to a 60-day period.

Status of Ongoing MWDOC Reliability and Engineering and Planning Projects

January 30. 2014

Description	Lead Agency	Status % Complete	Scheduled Completion Date	Comments
Baker Treatment Plant or Expansion of Baker Water Treatment Plant	IRWD, MNWD, SMWD, ETWD Trabuco CWD		On line date is late 2016	On January 29, Karl Seckel attended the Baker WTP Dedication Ceremony. All of the public speeches acknowledged the broad coming-together of agencies, boards, staff and consultants to make this type of project successful. MWDOC was not only recognized by the Project Participants, but also was provided a Recognition Award from Wendy Bucknam from the South Orange County Regional Economic Forum. The contractor has already been out on the site for the project walk and has begun marking rights of way and facilities and will soon begin the demolition on the old 3 MG clearwell to make room for the new plant. MWDOC has also been asked to help secure MET's concurrence on the quality of water being introduced into the South County Pipeline. Discussions are underway with MET.
MET Interconnections – Second Lower Cross Feeder	MWDOC			A report is included in the P&O Committee as an update for this month.
Doheny Desalination	MWDOC		Phase 3 Pilot	Work is underway on:

Description	Lead Agency	Status % Complete	Scheduled Completion Date	Comments
Project (aka South Orange Coastal Ocean Desalination Project (SOCOD))			Plant operations ceased in May 2012; working toward Phase 3 wrap up in Feb 2014.	• Site discussions with the State Parks. • Continuing discussions regarding the Phase 3 Wind-Up Agreement • Execution of Foundational Action Program Agreements for the Doheny Desal Project and the San Juan Basin Authority Project. Both efforts will provide additional information regarding the groundwater basin, the ocean desalination project and the interface between the two. Rob Hunter, Karl Seckel and Townsend Public Affairs traveled to Sacramento to meet with the California Department of Parks and Recreation Director Major General Anthony Jackson to discuss the appraisal process for the site and to discuss the long term relationship with State Parks at the Doheny site. State Parks has been a wonderful partner. Based on the meeting, the need for an appraisal for extending the current lease was eliminated and they agreed to continue at the current rate. Although they are very supportive of what we are trying to accomplish at the site and the way we are approaching the project, State Parks felt it was premature to enter into a long term agreement at this time.
Poseidon Resources Ocean Desalination Project in Huntington Beach				MWDOC is still processing the Poseidon LRP Agreement with MET.

Description	Lead Agency	Status % Complete	Scheduled Completion Date	Comments
Other Meetings				
				Karl Seckel attended the San Juan Basin Authority to respond to questions on the Foundational Action Funding Agreement. SJBA approved the form of agreement with several minor changes.
				Rob Hunter, Karl Seckel and Kelly Hubbard participated in discussions with the Three Cities, OCWD, Orange County Sanitation District and SOCWA (missed the meeting) regarding WEROC Funding for the coming year.
				Rob Hunter, Karl Seckel, Director Brett Barbre and Federal Advocate Jim Barker met via a phone call with South Coast Water District Board President Wayne Rayfield and General Manager Andy Brunhart to discuss plans for a Washington DC Trip on funding opportunities for Doheny Desal.
				Rob Hunter, Karl Seckel, Richard Bell, Harvey De La Torre and consultants Ed Means and Heather Dion convened a volunteer Workgroup to discuss comments on the BDCP EIR. Steve Arakawa and Margie Wheeler provided a superb summary presentation and discussion of the key issues. The Workgroup will be developing a template of responses for the BDCP EIR for Orange County entities to use to develop formal responses prior to the April 14 deadline.

Status of Water Use Efficiency Projects

February 2014

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
Smart Timer Rebate Program	MWDSC	82%	September 2015	In December 2013, 43 smart timers were installed in the residential sector and 49 in the commercial sector. Newport Beach has an ongoing smart timer installation program. In the month of December 2013, Newport Beach installed 4 smart timers in the residential sector and 21 smart timers in the commercial sector. These numbers are included in the program totals listed above. For program water savings and implementation information, see MWDOC Water Use Efficiency Program Savings and Implementation Report.
Rotating Nozzles Rebate Program	MWDSC	Ongoing	June 2015	In December 2013, 869 residential and 5,175 commercial rotating nozzles were installed in Orange County. Newport Beach has an ongoing rotating nozzle installation program. In the month of December 2013, Newport Beach reported the installation of 441 residential and 874 commercial rotating nozzles. These numbers are included in the program totals listed above. For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.
Water Smart Landscape Program	MWDOC	On-going	September 2014	In December 2013, a total of 12,313 meters received monthly irrigation performance reports comparing actual water use to a landscape irrigation budget customized to each meter. On December 17, Staff met with TrueGreen Landcare, one of

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
Water Smart Landscape Program (cont.)				the largest landscape maintenance contractors in the country, to reintroduce them to our programs and reestablish the loop of accountability for their existing clients that had previously been enrolled in the program. TrueGreen will rely on MWDOC's Water Smart Landscape Program to meet their Irrigation Performance Report requirements for the California Landscape Contractors Certified Water Manager Program. We also discussed a turf removal project at Whittier Law School served by Mesa Water. For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.
SoCal Water$mart Residential Indoor Rebate Program	MWDSC	On-going	June 2015	In December 2013, 375 high efficiency clothes washers and 248 high efficiency toilets were installed through this program. For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.
SoCal Water$mart Commercial Rebate Program	MWDSC	On-going	On-going	In December 2013, no indoor devices were installed through this program. For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.
Industrial Process Water Use Reduction Program	MWDOC	82%	December 2014	Survey scheduling is ongoing. A total of 40 Focused Surveys and 19 Comprehensive Surveys have been completed or are in progress. To date, eight companies have signed Incentive Agreements, and nine companies have signed Statements of Interest. Updated discharger lists have been obtained, and outreach is continuing to sites with feasible water savings potential.

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
Industrial Process Water Use Reduction Program (cont.)				Boeing has completed the monitoring period for Phase I and successfully saved approximately 16 million gallons of potable water during the last 12 months. The second installment of their incentive payment has been issued.
MWDOC Conservation Meeting	MWDOC	On-going	Monthly	There was no meeting this month. The next meeting will be on February 6, 2014 and will be hosted by the City of Newport Beach.
Metropolitan Conservation Meeting	MWDSC	On-going	Monthly	This month's meeting was a joint Water Use Efficiency and Public Information Officers meeting. The next meeting will be February 20, 2014 at Metropolitan.
Water Smart Hotel Program	MWDOC	68%	June 2014	MWDOC was awarded a Proposition 50 Water Use Efficiency grant and a Bureau of Reclamation grant, to be matched with Metropolitan funds, to conduct up to 105 commercial and landscape audits of hotels. Enhanced financial incentives will be distributed to augment rebate levels among SoCal Water$mart commercial fixtures. On January 17, 2014, a Survey was conducted at the Day's Inn, Buena Park.
Turf Removal Program	MWDOC	On-going	June 2014	In December 2013, 15 rebates were paid, representing 21,025 square feet of turf removed in Orange County. To date, the Turf Removal Program has removed approximately 1,356,031 square feet of turf. For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.
California Sprinkler Adjustment Notification System	MWDOC	81%	September 2014	MWDOC was awarded a grant from the Bureau of Reclamation to develop the California Sprinkler Adjustment Notification System (CSANS). This system will e-mail or "push" an irrigation index to assist property owners with making global irrigation scheduling adjustments. Participants will voluntarily register to receive this e-mail and can

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
California Sprinkler Adjustment Notification System (cont.)				unsubscribe at any time. Staff is in the process of completing the final system testing before pilot implementation of the CSANS. This pilot is anticipated to begin in February 2014.
Public Spaces Program	MWDOC	10%	December 2015	Through the Integrated Regional Watershed Management (IRWM) process, MWDOC is implementing a Proposition 84 grant to target the implementation of comprehensive landscape improvements for publicly owned landscape properties throughout the South Orange County IRWM Plan area. The program encourages the removal of non-functional turfgrass, the upgrade of antiquated irrigation timers, and the conversion of high-precipitation-rate fixed spray irrigation to low-precipitation-rate rotating nozzles and/or drip irrigation. These improvements are meant to result in water savings, a reduction of dry-weather runoff, pollution prevention, and reduced maintenance costs on not only the landscape itself, but also the asphalt street material. To date, five (5) cities have applied for funding through this program. As these projects come in, MWDOC staff will evaluate them for consistency with the program rules and regulations. If the project is suitable, a Notice to Proceed will be issued to the agency. Outreach to the cities continues. In November, the program opened up to the water districts. In February, the program plans to extend to commercial sites as well.
Home Certification Program	MWDOC	3%	July 2015	This program will provide rebates for the installation of residential water efficiency devices, including smart timers and high efficiency rotating nozzles. The program will also provide single-family sites with indoor and outdoor audits to identify

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
Home Certification Program (cont.)				areas for water savings improvements and opportunities. In December 2013, MWDOC received twenty-three (23) applications for the Home Certification Program. Fourteen surveys have been conducted, and survey results are pending for the remaining applications. The Program website is officially up and running. Participating retail water agencies can direct their customers to complete the program application at www.mwdoc.com/services/watersmart home.
Landscape Irrigation Survey Program	MWDSC	Ongoing	June 2016	Through this program, Metropolitan offers, at no cost, the services of a certified landscape irrigation auditor who will survey and provide written recommendations for qualifying non-residential properties within Metropolitan's service area. To participate, properties must have a minimum of one acre of irrigated area. Eligible landscapes include commercial and industrial sites, homeowner association common areas, and institutional sites such as schools, parks, and government facilities. To date, 77 sites in the MWDOC service area have contacted Metropolitan to request surveys. As these requests come in, MWDOC staff will continue to assist Metropolitan in scheduling the surveys and obtaining each site's water use history for incorporation into the customized written report that contains recommendations for improved efficiency.

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
Spray to Drip Conversion Pilot Program	MWDOC	10%	October 2014	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 homes will be encouraged to convert their existing spray nozzles to drip. The program is scheduled to launch during the first Quarter of 2014.
Commercial, Industrial, and Institutional Performance-Based Water Use Efficiency Program	MWDOC	1%	December 2015	This program will provide enhanced rebate incentives to commercial, industrial, and institutional sites and large-landscape properties (landscapes $\geq$ 1 acre). The program is scheduled to launch during the first Quarter of 2014.
Landscape Training and Outreach	MWDOC	5%	Ongoing	Orange County Garden Friendly: The Orange County Garden Friendly Program (OCGF) will promote the use of climate appropriate plants and water efficient irrigation practices with the overall goals of reducing water runoff and improving outdoor water use efficiency. The Orange County Garden Friendly Program will be a collaborative effort of the Orange County Stormwater Program (OCSP) and the University of California Cooperative Extension (UCCE). Each partner will play a role in planning and implementing the Program. Various water-related organizations will also provide program support and assist with implementation.

Orange County

Water Use Efficiency Programs Savings
and
Implementation Report

Retrofits and Acre-Feet Water Savings for Program Activity

Program	Program Start Date	Retrofits Installed in	Month Indicated		Current Fiscal Year		Overall Program		
			Interventions	Water Savings	Interventions	Water Savings	Interventions	Annual Water Savings[4]	Cumulative Water Savings[4]
High Efficiency Clothes Washer Program	2001	December-13	375	0.86	2,916	26.82	93,947	2,595	15,027
Smart Timer Program - Irrigation Timers	2004	December-13	92	2.83	504	43.20	10,706	3,634	19,554
Rotating Nozzles Rebate Program	2007	December-13	6,044	2.01	48,353	71.43	357,908	1,938	7,802
SoCal Water$mart Commercial Plumbing Fixture Rebate Program	2002	December-13	0	0.00	531	8.02	44,359	3,356	26,932
Water Smart Landscape Program [1]	1997	December-13	12,313	878.65	12,313	5,231.21	12,313	10,316	52,532
Industrial Process Water Use Reduction Program	2006	December-13	0	0.00	0	0.00	10	239	817
Turf Removal Program[3]	2010	December-13	21,025	0.25	278,845	39	1,356,031	190	437
High Efficiency Toilet (HET) Program	2005	December-13	248	0.88	1,441	56.15	30,014	1,109	7,064
Home Water Certification Program	2013	December-13	13	0.025	28	0.086	28	0.659	0.659
Synthetic Turf Rebate Program	2007		13	0	28	0	28	0	1
Ultra-Low-Flush-Toilet Programs [2]	1992		0	0	0	0	685,438	25,336	469
Home Water Surveys [2]	1995		0	0	0	0	363,926	4,892	138,457
Showerhead Replacements [2]	1991		0	0	0	0	11,867	73	1,708
Total Water Savings All Programs				**886**	**344,959**	**5,476**	**2,966,575**	**53,679**	**289,882**

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

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

(3) Turf Removal Interventions are listed as square feet.

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

HIGH EFFICIENCY CLOTHES WASHERS INSTALLED BY AGENCY

through MWDOC and Local Agency Conservation Programs

Agency	FY 01/02	FY 02/03	FY03/04	FY 04/05	FY 05/06	FY 06/07	FY 07/08	FY 08/09	FY 09/10	FY 10/11	FY 11/12	FY 12/13	FY13/14	Total	Current FY Water Savings Ac/Ft (Cumulative)	Cumulative Water Savings across all Fiscal Years
Brea	17	107	178	132	143	132	175	156	42	186	144	93	61	1,566	0.49	250.55
Buena Park	9	45	88	81	84	85	114	146	59	230	145	105	65	1,256	0.58	182.36
East Orange CWD RZ	3	8	20	20	11	18	22	17	3	23	10	10	6	171	0.05	28.38
El Toro WD	21	88	108	103	83	91	113	130	32	162	112	134	70	1,247	0.65	185.92
Fountain Valley	36	127	209	196	178	205	219	243	72	289	158	115	52	2,099	0.47	344.30
Garden Grove	39	173	278	243	243	238	304	332	101	481	236	190	86	2,944	0.84	466.05
Golden State WC	37	195	339	374	342	339	401	447	168	583	485	265	134	4,109	1.16	645.30
Huntington Beach	114	486	857	738	680	761	750	751	211	963	582	334	150	7,377	1.36	1,232.40
Irvine Ranch WD	159	626	1,087	1,093	1,445	1,972	2,052	1,844	1,394	2,621	2,170	1,763	876	19,102	8.32	2,859.85
La Habra	8	40	86	81	66	96	136	83	22	179	128	82	57	1,064	0.50	159.26
La Palma	3	5	13	21	18	33	35	51	25	76	46	34	17	377	0.14	53.91
Laguna Beach CWD	17	88	119	84	68	57	77	77	27	96	57	38	16	821	0.12	135.25
Mesa Water District	24	117	228	240	212	239	249	246	73	232	176	114	42	2,192	0.39	372.85
Moulton Niguel WD	158	630	841	640	570	652	716	742	250	1,127	679	442	208	7,655	1.93	1,212.31
Newport Beach	17	144	343	277	243	245	270	259	57	197	142	116	54	2,364	0.46	409.15
Orange	58	247	304	358	330	366	365	403	111	349	262	218	86	3,457	0.79	580.08
Orange Park Acres	-	-	-	-	-	4	8	-	-	-	-	-	-	12	0.00	2.43
San Juan Capistrano	16	95	120	107	102	109	103	127	43	190	110	76	33	1,231	0.27	195.46
San Clemente	32	182	235	170	136	204	261	278	63	333	206	140	46	2,286	0.50	360.70
Santa Margarita WD	140	510	743	573	592	654	683	740	257	1,105	679	553	333	7,562	3.01	1,165.68
Seal Beach	13	28	57	39	46	47	46	57	7	81	51	31	17	520	0.19	81.83
Serrano WD	9	16	54	39	39	30	31	23	7	21	20	13	8	310	0.09	54.41
South Coast WD	35	138	165	97	103	107	130	148	43	183	112	89	50	1,400	0.47	217.99
Trabuco Canyon WD	10	63	76	58	44	69	60	62	28	82	62	30	24	668	0.24	106.64
Tustin	21	89	152	138	127	152	146	144	45	174	97	78	28	1,391	0.24	232.72
Westminster	37	159	235	196	186	213	171	233	74	329	208	121	32	2,194	0.29	354.53
Yorba Linda	36	214	342	355	333	288	350	367	117	394	273	181	77	3,327	0.70	554.92
MWDOC Totals	1,069	4,620	7,277	6,453	6,424	7,406	7,987	8,106	3,331	10,686	7,350	5,365	2,628	78,702	24.25	12,445.22
Anaheim	917	677	904	1,364	701	854	847	781	860	910	477	331	133	9,756	1.18	1,684.25
Fullerton	40	196	369	289	263	269	334	330	69	397	270	200	94	3,120	0.87	493.89
Santa Ana	15	69	188	269	244	236	235	257	87	355	190	163	61	2,369	0.52	403.48
Non-MWDOC Totals	972	942	1,461	1,922	1,208	1,359	1,416	1,368	1,016	1,662	937	694	288	15,245	2.57	2,581.63
Orange County Totals	2,041	5,562	8,738	8,375	7,632	8,765	9,403	9,474	4,347	12,348	8,287	6,059	2,916	93,947	26.82	15,026.84

SMART TIMERS 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		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	9	0	0	2	0	8	0	9	8	1	0	34	66	293.54
Buena Park	3	1	0	0	0	0	4	19	3	0	0	0	10	20	44.07
East Orange CWD RZ	0	0	0	0	1	0	5	0	2	0	0	0	11	0	2.35
El Toro WD	0	25	2	18	5	5	26	2	7	2	6	0	60	321	1,524.63
Fountain Valley	1	0	0	6	2	2	8	2	3	2	1	0	35	17	74.26
Garden Grove	2	1	6	0	5	4	7	0	5	2	4	0	45	13	62.18
Golden State WC	1	2	9	22	7	4	13	3	9	50	2	0	88	103	304.73
Huntington Beach	13	1	6	27	6	36	15	4	18	33	13	14	116	139	419.22
Irvine Ranch WD	29	56	14	145	28	153	267	71	414	136	38	29	1,086	1,320	5,560.14
La Habra	0	0	0	21	0	0	3	0	4	7	2	0	17	29	89.27
La Palma	0	0	0	0	0	0	1	0	1	0	1	0	3	0	0.28
Laguna Beach CWD	2	0	2	14	4	1	109	2	76	2	2	0	229	19	93.32
Mesa Water District	6	7	13	7	7	22	21	0	10	2	5	2	106	73	337.74
Moulton Niguel WD	21	23	17	162	36	60	179	31	51	74	27	33	456	465	1,510.78
Newport Beach	10	27	7	58	6	0	275	12	242	26	87	64	888	334	1,360.40
Orange	5	2	2	13	5	8	25	0	20	24	9	9	143	111	461.21
San Juan Capistrano	10	0	7	49	13	1	103	2	14	17	3	0	171	78	274.96
San Clemente	81	20	13	209	46	11	212	17	26	7	5	0	937	332	1,476.08
Santa Margarita WD	25	44	10	152	61	53	262	7	53	171	29	15	551	616	2,084.11
Santiago CWD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Seal Beach	0	0	0	1	0	0	0	3	1	0	1	36	2	40	33.79
Serrano WD	0	0	11	0	4	0	3	0	1	0	0	0	19	0	3.78
South Coast WD	11	6	3	10	13	3	78	10	13	16	4	0	154	124	531.06
Trabuco Canyon WD	1	0	2	0	2	10	12	0	6	0	2	0	68	103	548.16
Tustin	7	9	10	14	10	0	11	0	8	4	8	0	58	34	137.46
Westminster	3	0	3	0	1	1	2	0	1	1	0	0	26	14	85.13
Yorba Linda	8	5	5	21	25	0	22	0	20	0	8	2	169	80	392.27
MWDOC Totals	242	238	142	949	289	374	1,671	185	1,017	584	258	204	5,482	4,451	17,704.92
Anaheim	9	59	5	46	12	11	23	60	19	10	5	26	116	361	1,376.17
Fullerton	2	2	2	39	9	33	22	51	9	29	3	0	69	154	384.65
Santa Ana	2	4	1	8	8	0	6	5	8	19	2	6	31	42	88.05
Non-MWDOC Totals	13	65	8	93	29	44	51	116	36	58	10	32	216	557	1,848.88
Orange County Totals	255	303	150	1,042	318	418	1,722	301	1,053	642	268	236	5,698	5,008	19,554

ROTATING NOZZLES 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			Total Program			Cumulative Water Savings across all Fiscal Years
	Small		Large	Small		Large	Small		Large	Small		Large	Small		Large	Small		Large	
	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	
Brea	8	100	0	32	0	0	130	0	0	65	120	0	48	0	0	305	220	0	6.43
Buena Park	0	0	2,535	29	0	0	32	0	0	65	0	0	53	0	0	216	75	2,535	447.88
East Orange	0	0	0	0	0	0	340	0	0	55	0	0	0	0	0	500	0	0	7.04
El Toro	145	2,874	890	174	0	0	357	76	0	23	6,281	0	36	3,288	0	823	12,809	890	296.85
Fountain Valley	21	0	0	83	0	0	108	0	0	35	0	0	0	0	0	381	0	0	6.74
Garden Grove	151	45	0	38	0	0	119	0	0	95	0	0	61	0	0	661	151	0	14.40
Golden State	280	29	0	303	943	0	294	0	0	257	2,595	0	35	0	0	1,413	3,567	0	59.08
Huntington Beach	39	3,420	305	203	625	0	458	0	0	270	0	0	120	0	0	1,505	4,909	2,681	719.35
Irvine Ranch	1,034	54,441	1,479	2,411	2,861	0	1,715	4,255	0	23,778	1,014	0	10,681	4,257	0	41,823	79,371	2,004	2293.35
La Habra	0	273	0	0	0	0	33	90	0	0	0	0	15	0	0	72	898	900	213.71
La Palma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0.24
Laguna Beach	191	0	0	156	0	0	763	0	0	3,596	0	0	0	878	0	4,922	925	0	54.50
Mesa Water District	195	83	0	118	0	0	297	277	0	246	0	0	187	0	0	1,324	385	343	109.18
Moulton Niguel	234	0	959	1,578	0	0	1,225	0	0	512	1,385	0	484	227	0	4,756	8,615	2,945	834.51
Newport Beach	92	4,781	0	337	1,208	0	640	3,273	0	25,250	50	0	14,064	5,048	0	40,470	15,099	0	469.97
Orange	129	0	0	135	30	0	343	0	0	264	0	0	124	0	0	2,114	193	0	43.33
San Clemente	729	1,299	0	2,612	851	0	4,266	117	1,343	631	172	0	113	5,004	0	8,935	7,468	1,343	331.48
San Juan Capistrano	656	5,709	0	1,452	0	0	949	0	0	684	30	0	283	0	0	4,528	7,399	0	220.89
Santa Margarita	1,731	937	611	3,959	3,566	0	4,817	0	0	983	0	0	182	0	0	12,916	4,571	611	379.11
Seal Beach	0	291	0	0	0	0	0	0	0	0	0	0	0	0	0	115	291	0	8.58
Serrano	1,498	0	0	364	0	0	58	0	0	190	0	0	105	0	0	2,333	0	0	41.61
South Coast	0	0	0	318	1,772	0	688	359	0	435	0	0	0	0	0	1,630	2,264	0	58.02
Trabuco Canyon	1,357	791	0	0	0	0	379	0	0	34	0	0	0	0	0	1,900	791	0	51.40
Tustin	314	0	0	512	0	0	476	1,013	0	265	0	0	280	0	0	2,419	1,013	0	49.38
Westminster	80	0	0	0	0	0	26	0	0	15	0	0	0	0	0	232	0	0	4.69
Yorba Linda	371	3,256	0	529	0	0	559	0	0	730	0	0	40	0	0	3,232	3,369	500	227.69
MWDOC Totals	9,255	78,329	6,779	15,343	11,856	0	19,072	9,460	1,343	58,478	11,647	0	26,911	18,702	0	139,535	154,383	14,752	6949.40
Anaheim	273	164	105	372	382	0	742	38,554	0	459	813	0	144	0	0	2,387	39,913	105	531.07
Fullerton	48	0	1,484	416	0	0	409	0	0	119	0	0	63	0	0	1,596	64	1,484	288.31
Santa Ana	48	572	0	53	0	0	22	65	0	99	0	0	0	2,533	0	463	3,226	0	32.91
Non-MWDOC Totals	369	736	1,589	841	382	0	1,173	38,619	0	677	813	0	207	2,533	0	4,446	43,203	1,589	852.29
Orange County Totals	9,624	79,065	8,368	16,184	12,238	0	20,245	48,079	1,343	59,155	12,460	0	27,118	21,235	0	143,981	197,586	16,341	7801.68

SOCAL WATER$MART COMMERCIAL PLUMBING FIXTURES REBATE PROGRAM[1]

INSTALLED BY AGENCY

through MWDOC and Local Agency Conservation Programs

Agency	FY 01/02	FY 02/03	FY 03/04	FY 04/05	FY 05/06	FY 06/07	FY 07/08	FY 08/09	FY 09/10	FY 10/11	FY 11/12	FY 12/13	FY 13/14	Totals	Cumulative Water Savings across all Fiscal Years
Brea	0	51	0	22	52	2	27	113	24	4	1	234	0	**530**	**263**
Buena Park	10	83	28	55	64	65	153	432	122	379	290	5	0	**1,686**	**691**
East Orange CWD RZ	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**
El Toro WD	23	23	73	42	5	2	0	92	143	1	137	0	212	**753**	**393**
Fountain Valley	1	94	2	59	35	63	17	35	0	2	314	0	0	**622**	**409**
Garden Grove	21	199	51	297	34	136	5	298	130	22	0	4	1	**1,198**	**1,058**
Golden State WC	11	197	34	232	80	531	46	414	55	68	135	0	0	**1,803**	**1,367**
Huntington Beach	5	191	73	185	82	209	48	104	126	96	156	104	104	**1,483**	**1,075**
Irvine Ranch WD	306	1,085	87	325	1,044	429	121	789	2,708	1,002	646	1,090	125	**9,757**	**4,485**
La Habra	10	37	52	45	60	16	191	75	53	4	0	0	0	**543**	**385**
La Palma	0	0	0	0	5	0	0	140	21	0	0	0	0	**166**	**56**
Laguna Beach CWD	2	30	2	18	9	12	20	137	189	0	0	0	27	**446**	**219**
Mesa Water District	424	155	22	130	241	141	141	543	219	669	41	6	0	**2,732**	**1,438**
Moulton Niguel WD	31	74	65	172	3	0	9	69	151	6	0	0	0	**580**	**595**
Newport Beach	4	230	9	77	24	94	98	27	245	425	35	0	0	**1,268**	**873**
Orange	84	144	22	553	127	88	18	374	67	1	73	1	20	**1,572**	**1,239**
San Juan Capistrano	0	34	21	181	0	6	2	1	1	0	0	0	0	**246**	**306**
San Clemente	0	36	5	95	40	173	2	18	43	0	19	0	0	**431**	**287**
Santa Margarita WD	0	16	3	56	0	0	6	23	11	0	0	0	0	**115**	**149**
Santiago CWD	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**
Seal Beach	3	34	44	40	61	45	1	2	124	0	0	0	0	**354**	**309**
Serrano WD	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**
South Coast WD	0	31	8	54	8	4	9	114	56	422	84	148	0	**938**	**304**
Trabuco Canyon WD	0	1	0	6	0	0	0	4	0	0	0	0	0	**11**	**11**
Tustin	9	114	16	82	14	7	115	145	25	230	0	0	0	**757**	**574**
Westminster	16	109	32	153	57	104	40	161	16	63	35	1	0	**787**	**729**
Yorba Linda	0	36	12	42	4	118	10	24	8	30	0	1	0	**285**	**402**
MWDOC Totals	**960**	**3,004**	**661**	**2,921**	**2,049**	**2,245**	**1,079**	**4,134**	**4,537**	**3,424**	**1,966**	**1,594**	**489**	**29,063**	**17,615**
Anaheim	1,042	400	947	362	1,113	780	766	3,298	582	64	48	165	42	**9,609**	**4,835**
Fullerton	28	41	138	270	91	96	133	579	29	4	0	94	0	**1,503**	**1,141**
Santa Ana	115	153	589	227	624	373	493	815	728	39	12	16	0	**4,184**	**3,341**
Non-MWDOC Totals	**1,185**	**594**	**1,674**	**859**	**1,828**	**1,249**	**1,392**	**4,692**	**1,339**	**107**	**60**	**275**	**42**	**15,296**	**9,317**
Orange County Totals	**2,145**	**3,598**	**2,335**	**3,780**	**3,877**	**3,494**	**2,471**	**8,826**	**5,876**	**3,531**	**2,026**	**1,869**	**531**	**44,359**	**26,932**

[1] Retrofit devices include ULF Toilets and Urinals, High Efficiency Toilets and Urinals, 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, and Water Pressurized Brooms.

Water Smart Landscape Program

Total Number of Meters in Program by Agency

Agency	FY 04-05	FY 05-06	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12/13	FY 13/14	Overall Water Savings To Date (AF)
Brea	0	0	0	0	0	0	0	22	22	22	29.83
Buena Park	0	0	0	0	0	17	103	101	101	101	304.13
East Orange CWD RZ	0	0	0	0	0	0	0	0	0	0	0.00
El Toro WD	88	109	227	352	384	371	820	810	812	812	3,582.17
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	0	0	0	14	34	32	34	32	32	32	150.35
Huntington Beach	0	0	0	0	0	31	33	31	31	31	99.76
Irvine Ranch WD	277	638	646	708	1,008	6,297	6,347	6,368	6,795	6,796	27,677.07
Laguna Beach CWD	0	0	0	0	57	141	143	141	124	124	538.41
La Habra	0	0	0	0	23	22	24	22	22	22	102.19
La Palma	0	0	0	0	0	0	0	0	0	0	0.00
Mesa Water District	191	170	138	165	286	285	288	450	504	511	2,139.57
Moulton Niguel WD	80	57	113	180	473	571	595	643	640	637	3,066.67
Newport Beach	32	27	23	58	142	171	191	226	262	299	1,030.57
Orange	0	0	0	0	0	0	0	0	0	0	0.00
San Clemente	191	165	204	227	233	247	271	269	269	269	1,811.67
San Juan Capistrano	0	0	0	0	0	0	0	0	0	0	0.00
Santa Margarita WD	547	619	618	945	1,571	1,666	1,746	1,962	1,956	2,271	10,567.03
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	0	0	0	62	117	108	110	118	118	118	605.27
Trabuco Canyon WD	0	0	0	12	49	48	62	60	60	60	256.32
Tustin	0	0	0	0	0	0	0	0	0	0	0.00
Westminster	0	0	0	10	18	18	20	18	18	18	88.20
Yorba Linda WD	0	0	0	0	0	0	0	0	0	0	0.00
MWDOC Totals	**1,406**	**1,785**	**1,969**	**2,733**	**4,395**	**10,025**	**10,787**	**11,273**	**11,766**	**12,123**	**52,049.2**
Anaheim	0	0	0	0	0	142	146	144	190	190	483.25
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
Non-MWDOC Totals	**0**	**0**	**0**	**0**	**0**	**142**	**146**	**144**	**190**	**190**	**483.25**
Orange Co. Totals	**1,406**	**1,785**	**1,969**	**2,733**	**4,395**	**10,167**	**10,933**	**11,417**	**11,956**	**12,313**	**52,532.44**

INDUSTRIAL PROCESS WATER USE REDUCTION PROGRAM

Number of Process Changes by Agency

Agency	FY 07/08	FY 08/09	FY 09/10	FY 10/11	FY 11/12	FY 12/13	FY 13/14	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
Buena Park	0	1	0	0	0	0	0	1	54	270
East Orange	0	0	0	0	0	0	0	0	0	0
El Toro	0	0	0	0	0	0	0	0	0	0
Fountain Valley	0	0	0	0	0	0	0	0	0	0
Garden Grove	0	0	0	0	0	0	0	0	0	0
Golden State	1	0	0	0	0	0	0	1	3	17
Huntington Beach	0	0	0	0	0	2	0	2	54	78
Irvine Ranch	0	0	2	1	1	1	0	5	84	197
La Habra	0	0	0	0	0	0	0	0	0	0
La Palma	0	0	0	0	0	0	0	0	0	0
Laguna Beach	0	0	0	0	0	0	0	0	0	0
Mesa Water District	0	0	0	0	0	0	0	0	0	0
Moulton Niguel	0	0	0	0	0	0	0	0	0	0
Newport Beach	0	0	0	0	0	0	0	0	0	0
Orange	1	0	0	0	0	0	0	1	43	255
San Juan Capistrano	0	0	0	0	0	0	0	0	0	0
San Clemente	0	0	0	0	0	0	0	0	0	0
Santa Margarita	0	0	0	0	0	0	0	0	0	0
Seal Beach	0	0	0	0	0	0	0	0	0	0
Serrano	0	0	0	0	0	0	0	0	0	0
South Coast	0	0	0	0	0	0	0	0	0	0
Trabuco Canyon	0	0	0	0	0	0	0	0	0	0
Tustin	0	0	0	0	0	0	0	0	0	0
Westminster	0	0	0	0	0	0	0	0	0	0
Yorba Linda	0	0	0	0	0	0	0	0	0	0
MWDOC Totals	2	1	2	1	1	3	0	10	239	817

[1] Acre feet of savings determined during a one year monitoring period.

If monitoring data is not available, the savings estimated in agreement is used.

TURF REMOVAL BY AGENCY[1]

through MWDOC and Local Agency Conservation Programs

Agency	FY 10/11		FY 11/12		FY 12/13		FY 13/14		Total Program		Cumulative Water Savings across all Fiscal Years
	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	
Brea	0	0	3,397	9,466	7,605	0	0	0	11,002	9,466	7.53
Buena Park	0	0	0	0	0	0	0	0	0	0	-
East Orange	0	0	0	0	0	0	1,964	0	1,964	0	0.27
El Toro	0	0	4,723	0	4,680	72,718	1,529	0	10,932	72,718	23.87
Fountain Valley	0	0	1,300	0	682	7,524	1,054	0	3,036	7,524	2.99
Garden Grove	0	46,177	14,013	0	4,534	0	3,274	0	21,821	46,177	33.47
Golden State	0	0	42,593	30,973	31,813	3,200	15,161	8,424	89,567	42,597	44.00
Huntington Beach	801	3,651	27,630	48,838	9,219	12,437	8,819	0	46,469	64,926	41.91
Irvine Ranch	5,423	12,794	6,450	1,666	32,884	32,384	14,456	54,381	59,213	101,225	41.52
La Habra	0	7,775	0	8,262	0	0	0	0	0	16,037	7.82
La Palma	0	0	0	0	0	0	0	0	0	0	-
Laguna Beach	978	0	2,533	0	2,664	1,712	1,886	226	8,061	1,938	3.13
Mesa Water District	0	0	6,777	0	10,667	0	5,953	0	23,397	0	6.67
Moulton Niguel	956	16,139	4,483	26,927	11,538	84,123	3,672	8,012	20,649	135,201	51.19
Newport Beach	0	0	3,454	0	3,548	2,346	894	0	7,896	2,346	3.23
Orange	0	0	12,971	0	15,951	8,723	0	0	28,922	8,723	12.36
San Clemente	0	0	21,502	0	16,062	13,165	2,648	10,000	40,212	23,165	18.98
San Juan Capistrano	0	0	22,656	103,692	29,544	27,156	6,581	0	58,781	130,848	69.86
Santa Margarita	4,483	5,561	1,964	11,400	10,151	11,600	689	10,257	17,287	38,818	18.86
Seal Beach	0	0	0	0	3,611	0	0	0	3,611	0	1.01
Serrano	0	0	0	0	0	0	2,971	0	2,971	0	0.42
South Coast	0	16,324	6,806	0	9,429	4,395	2,743	101,127	18,978	121,846	30.41
Trabuco Canyon	0	0	272	0	1,542	22,440	1,500	0	3,314	22,440	7.04
Tustin	0	0	0	0	9,980	0	1,410	0	11,390	0	2.99
Westminster	0	0	0	0	0	0	0	0	0	0	-
Yorba Linda	11,349	0	0	0	0	0	0	0	11,349	0	6.36
MWDOC Totals	23,990	108,421	183,524	241,224	216,104	303,923	77,204	192,427	500,822	845,995	435.89
Anaheim	0	0	0	0	0	0	0	0	0	0	-
Fullerton	0	0	0	0	0	0	0	9,214	0	9,214	1.29
Santa Ana	0	0	0	0	0	0	0	0	0	0	-
Non-MWDOC Totals	0	0	0	0	0	0	0	9,214	0	9,214	1.29
Orange County Totals	23,990	108,421	183,524	241,224	216,104	303,923	77,204	201,641	500,822	855,209	437.18

[1]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	Total	Cumulative Water Savings across all Fiscal Years
Brea	0	2	7	43	48	8	0	0	22	130	**26.26**
Buena Park	0	1	2	124	176	7	0	0	25	335	**72.31**
East Orange CWD RZ	0	0	10	12	1	0	0	0	0	23	**6.26**
El Toro WD	0	392	18	75	38	18	0	133	124	798	**185.73**
Fountain Valley	0	69	21	262	54	17	0	0	13	436	**111.59**
Garden Grove	0	14	39	443	181	24	0	0	18	719	**172.87**
Golden State WC	2	16	36	444	716	37	80	2	47	1,380	**301.36**
Huntington Beach	2	13	59	607	159	76	0	0	82	998	**228.03**
Irvine Ranch WD	29	1,055	826	5,088	2,114	325	0	1,449	369	11,255	**2,559.84**
Laguna Beach CWD	0	2	17	91	28	11	0	0	11	160	**37.28**
La Habra	0	3	18	296	34	20	0	0	4	375	**92.78**
La Palma	0	1	10	36	26	13	0	0	15	101	**20.90**
Mesa Water District	0	247	19	736	131	7	0	0	39	1,179	**308.43**
Moulton Niguel WD	0	20	104	447	188	46	0	0	125	930	**205.09**
Newport Beach	0	5	19	163	54	13	0	0	12	266	**63.20**
Orange	1	20	62	423	79	40	0	1	58	684	**159.85**
San Juan Capistrano	0	10	7	76	39	11	0	0	18	161	**35.83**
San Clemente	0	7	22	202	66	21	0	0	21	339	**79.03**
Santa Margarita WD	0	5	14	304	151	44	0	0	262	780	**134.27**
Seal Beach	0	678	8	21	12	1	0	2	0	722	**241.48**
Serrano WD	0	0	1	13	5	0	0	0	1	20	**5.49**
South Coast WD	2	2	29	102	41	12	23	64	34	309	**56.73**
Trabuco Canyon WD	2	0	4	23	23	0	0	0	2	54	**12.04**
Tustin	0	186	28	387	479	17	0	0	29	1,126	**276.55**
Westminster	0	17	25	541	167	23	0	0	12	785	**191.35**
Yorba Linda WD	0	14	89	323	96	18	0	0	18	558	**138.02**
MWDOC Totals	38	2,779	1,494	11,282	5,106	809	103	1,651	1,361	24,623	**5,722.58**
Anaheim	0	255	78	2,771	619	114	0	0	55	3,892	**971.11**
Fullerton	0	4	28	286	60	23	0	0	13	414	**99.97**
Santa Ana	0	11	25	925	89	23	0	0	12	1,085	**270.76**
Non-MWDOC Totals	0	270	131	3,982	768	160	0	0	80	5,391	**1,341.84**
Orange County Totals	38	3,049	1,625	15,264	5,874	969	103	1,651	1,441	30,014	**7,064.42**

HOME WATER SURVEYS PERFORMED BY AGENCY

through MWDOC and Local Agency Conservation Programs

Agency	FY 13/14		FY 14/15		Total		Cumulative
	Surveys	Cert Homes	Surveys	Cert Homes	Surveys	Cert Homes	Water Savings
Brea	0	0	0	0	0	0	0.00
Buena Park	0	0	0	0	0	0	0.00
East Orange	13	0	0	0	13	0	0.31
El Toro	0	0	0	0	0	0	0.00
Fountain Valley	2	0	0	0	2	0	0.05
Garden Grove	0	0	0	0	0	0	0.00
Golden State	0	0	0	0	0	0	0.00
Huntington Beach	0	0	0	0	0	0	0.00
Irvine Ranch	0	0	0	0	0	0	0.00
La Habra	0	0	0	0	0	0	0.00
La Palma	0	0	0	0	0	0	0.00
Laguna Beach	2	0	0	0	2	0	0.05
Mesa	0	0	0	0	0	0	0.00
Moulton Niguel	1	0	0	0	1	0	0.02
Newport Beach	0	0	0	0	0	0	0.00
Orange	0	0	0	0	0	0	0.00
San Clemente	0	0	0	0	0	0	0.00
San Juan Capistrano	1	0	0	0	1	0	0.02
Santa Margarita	7	0	0	0	7	0	0.16
Serrano	0	0	0	0	0	0	0.00
South Coast	2	0	0	0	2	0	0.05
Trabuco Canyon	0	0	0	0	0	0	0.00
Tustin	0	0	0	0	0	0	0.00
Westminster	0	0	0	0	0	0	0.00
Yorba Linda	0	0	0	0	0	0	0.00
MWDOC Totals	28	0	0	0	28	0	0.66
Anaheim	0	0	0	0	0	0	0.00
Fullerton	0	0	0	0	0	0	0.00
Santa Ana	0	0	0	0	0	0	0.00
Non-MWDOC Totals	0	0	0	0	0	0	0.00
Orange County Totals	28	0	0	0	28	0	0.659

SYNTHETIC TURF INSTALLED BY AGENCY[1]

through MWDOC and Local Agency Conservation Programs

Agency	FY 07/08		FY 08/09		FY 09/10		FY 10/11		Total Program		Cumulative Water Savings across all Fiscal Years
	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	
Brea	0	0	2,153	2,160	500	0	0	0	2,653	2,160	3.30
Buena Park	0	0	1,566	5,850	0	0	0	0	1,566	5,850	5.19
East Orange	0	0	0	0	983	0	0	0	983	0	0.55
El Toro	3,183	0	2,974	0	3,308	0	895	0	10,360	0	6.98
Fountain Valley	11,674	0	1,163	0	2,767	0	684	0	16,288	0	12.46
Garden Grove	1,860	0	0	0	3,197	0	274	0	5,331	0	3.47
Golden State	6,786	0	13,990	0	15,215	0	2,056	0	38,047	0	24.88
Huntington Beach	15,192	591	12,512	0	4,343	1,504	0	0	32,047	2,095	25.29
Irvine Ranch	11,009	876	13,669	0	2,585	0	0	0	27,263	876	21.00
La Habra	0	0	0	0	0	0	0	0	0	0	-
La Palma	429	0	0	0	0	0	0	0	429	0	0.36
Laguna Beach	3,950	0	3,026	0	725	0	0	0	7,701	0	5.84
Mesa Water District	4,114	0	3,005	78,118	4,106	0	2,198	0	13,423	78,118	63.46
Moulton Niguel	14,151	0	25,635	2,420	7,432	0	0	0	47,218	2,420	35.69
Newport Beach	2,530	0	6,628	0	270	0	0	0	9,428	0	6.92
Orange	4,169	0	7,191	0	635	0	0	0	11,995	0	8.89
San Clemente	9,328	0	11,250	455	2,514	1,285	500	0	23,592	1,740	18.37
San Juan Capistrano	0	0	7,297	639	2,730	0	4,607	0	14,634	639	9.02
Santa Margarita	12,922	0	26,069	0	21,875	0	7,926	0	68,792	0	44.68
Seal Beach	0	0	817	0	0	0	0	0	817	0	0.57
Serrano	7,347	0	1,145	0	0	0	0	0	8,492	0	6.97
South Coast	2,311	0	6,316	0	17,200	0	1,044	0	26,871	0	16.43
Trabuco Canyon	1,202	0	9,827	0	0	0	0	0	11,029	0	7.89
Tustin	6,123	0	4,717	0	2,190	0	0	0	13,030	0	9.67
Westminster	2,748	16,566	8,215	0	890	0	0	0	11,853	16,566	22.47
Yorba Linda	11,792	0	12,683	0	4,341	5,835	0	0	28,816	5,835	24.48
MWDOC Totals	132,820	18,033	181,848	89,642	97,806	8,624	20,184	0	432,658	116,299	384.83
Anaheim	4,535	0	7,735	20,093	13,555	65,300	4,122	0	29,947	85,393	69.18
Fullerton	4,865	876	5,727	0	6,223	0	105	0	16,920	876	12.36
Santa Ana	0	0	2,820	0	525	0	0	0	3,345	0	2.27
Non-MWDOC Totals	9,400	876	16,282	20,093	20,303	65,300	4,227	0	50,212	86,269	83.81
Orange County Totals	142,220	18,909	198,130	109,735	118,109	73,924	24,411	0	482,870	202,568	468.63

[1]Installed device numbers are calculated in square feet

ULF TOILETS INSTALLED BY AGENCY

through MWDOC and Local Agency Conservation Programs

Agency	Previous Years	FY 95-96	FY 96-97	FY 97-98	FY 98-99	FY 99-00	FY 00-01	FY 01-02	FY 02-03	FY 03-04	FY 04-05	FY 05-06	FY 06-07	FY 07-08	FY 08-09	Total	Cumulative Water Savings across all Fiscal Years
Brea	378	189	299	299	122	144	867	585	341	401	26	48	17	4	0	**3,720**	**1,569.44**
Buena Park	361	147	331	802	520	469	524	1,229	2,325	1,522	50	40	18	9	0	**8,347**	**3,221.94**
East Orange CWD RZ	2	0	33	63	15	17	15	50	41	44	19	18	13	2	0	**332**	**127.24**
El Toro WD	1,169	511	678	889	711	171	310	564	472	324	176	205	61	40	0	**6,281**	**2,883.15**
Fountain Valley	638	454	635	858	1,289	2,355	1,697	1,406	1,400	802	176	111	58	32	0	**11,911**	**4,988.63**
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**	**11,284.48**
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**	**10,916.54**
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**	**12,886.15**
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**	**10,965.00**
Laguna Beach CWD	283	93	118	74	149	306	220	85	271	118	32	26	29	6	0	**1,810**	**785.75**
La Habra	594	146	254	775	703	105	582	645	1,697	1,225	12	31	6	7	0	**6,782**	**2,733.13**
La Palma	65	180	222	125	44	132	518	173	343	193	31	27	20	17	0	**2,090**	**858.31**
Mesa Water District	1,610	851	1,052	2,046	2,114	1,956	1,393	1,505	2,387	988	192	124	56	14	0	**16,288**	**7,114.85**
Moulton Niguel WD	744	309	761	698	523	475	716	891	728	684	410	381	187	100	0	**7,607**	**3,119.21**
Newport Beach	369	293	390	571	912	1,223	438	463	396	1,883	153	76	36	16	0	**7,219**	**2,927.69**
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**	**6,798.18**
San Juan Capistrano	1,234	284	193	168	323	1,319	347	152	201	151	85	125	42	39	0	**4,663**	**2,170.00**
San Clemente	225	113	191	65	158	198	667	483	201	547	91	66	37	34	0	**3,076**	**1,212.77**
Santa Margarita WD	577	324	553	843	345	456	1,258	790	664	260	179	143	101	29	0	**6,522**	**2,785.02**
Seal Beach	74	66	312	609	47	155	132	81	134	729	29	10	6	12	0	**2,396**	**994.45**
Serrano WD	81	56	68	41	19	52	95	73	123	98	20	15	14	2	0	**757**	**313.59**
South Coast WD	110	176	177	114	182	181	133	358	191	469	88	72	32	22	0	**2,305**	**913.71**
Trabuco Canyon WD	10	78	42	42	25	21	40	181	102	30	17	20	12	14	0	**634**	**252.02**
Tustin	968	668	557	824	429	1,292	1,508	1,206	1,096	827	69	89	26	12	0	**9,571**	**4,106.91**
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**	**6,544.89**
Yorba Linda WD	257	309	417	457	404	1,400	759	1,690	1,155	627	158	136	81	41	0	**7,891**	**3,148.16**
MWDOC Totals	24,256	12,879	18,778	20,765	21,136	30,242	24,918	27,175	31,827	27,568	3,654	3,242	2,031	861	4	**249,336**	**105,621.20**
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**	**16,914.77**
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**	**6,894.71**
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**	**21,078.27**
Non-MWDOC Totals	3,011	4,161	3,687	7,583	5,207	18,477	12,133	19,298	22,636	15,988	924	582	531	369	3	**114,590**	**44,887.75**
Orange County Totals	27,267	17,040	22,465	28,348	26,343	48,719	37,051	46,473	54,463	43,556	4,578	3,824	2,562	1,230	7	**363,926**	**150,508.96**