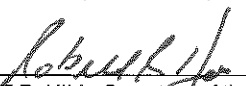


PI hereby certify that the following agenda was posted at least 72 hours prior to the time of the meeting so noticed below at 24251 Los Alisos Boulevard, Lake Forest, California.



ROBERT R. HILL, Secretary of the
El Toro Water District and the Board of
Directors thereof

AGENDA

EL TORO WATER DISTRICT REGULAR MEETING OF THE BOARD OF DIRECTORS

**February 28, 2019
7:30 a.m.**

CALL MEETING TO ORDER – President Vergara

PLEDGE OF ALLEGIANCE – Director Freshley

ORAL COMMUNICATIONS/PUBLIC COMMENTS

Members of the public may address the Board at this time or they may reserve this opportunity with regard to an item on the agenda, until said item is discussed by the Board. Comments on other items will be heard at the time set aside for "DIRECTORS COMMENTS/NON-AGENDA ITEMS." The public will identify themselves when called on and limit their comments to three minutes.

ITEMS RECEIVED TOO LATE TO BE AGENDIZED

Determine need and take action to agendize items(s) which arose subsequent to the posting of the Agenda. (ROLL CALL VOTE: Adoption of this recommendation requires a two-thirds vote of the Board members present, or, if less than two-thirds of the Board members are present, a unanimous vote of those members present.)

PRESENTATION OF AWARDS, RECOGNITIONS AND INTRODUCTIONS

a. Service Awards

There are no acknowledgements.

b. Continuing Education & Training, Degree and Certification Program
acknowledgement

1. Mr. Hill will recognize and congratulate on behalf of the Board, Cesar Cassani, Waste Water Operator 1, for obtaining his Associate Degree for Water Utility Science from Rancho Santiago Community College.

- c. Special District/Employee Association/Community Award Acknowledgement and Employee Special Recognition

There are no acknowledgements.

1. California Association of Sanitation Agencies (CASA) Education Foundation (Oral)

The president of the CASA Education Foundation (Mike Dunbar) will provide an overview of the annual CASA scholarship program that provides scholarship opportunities to three students each year working toward a degree in an engineering or scientific field.

Recommended Action: Authorize the General Manager to contribute \$1,000 to the annual CASA scholarship program.

CONSENT CALENDAR

(All matters under the Consent Calendar will be approved by one motion unless a Board member or a member of the public requests separate action or discussion on a specific item)

2. Approval of Minutes (Minutes Included)

Consider approving the minutes of the January 22, 2019 Board meeting

APPROVAL OF ITEMS REMOVED FROM TODAY'S CONSENT CALENDAR

The Board will discuss items removed from today's Consent Calendar requiring further discussion.

Recommended Action: The Board will be requested to approve the items removed from today's consent Calendar.

DIRECTOR/COMMITTEE REPORTING

3. Director Reports for Meetings Attended (Oral Report)

GENERAL MANAGER ACTION ITEMS

4. **Resolution No. 19-2-1 Increasing the number of General Meetings that are Pre-Approved for all Directors to Attend for the Calendar Year 2019** (Reference Material Included)

President Vergara has increased the number of General Meetings that are Pre-Approved for all Directors to attend for the Calendar Year 2019 as highlighted in Exhibit A.

Recommended Action: The Board will consider adopting Resolution No. 19-2-1 to increase the number of General Meetings that are pre-approved for all Directors to attend for the calendar year 2019 as highlighted in Exhibit A.

RESOLUTION NO. 19-2-1

RESOLUTION OF THE BOARD OF DIRECTORS OF THE
EL TORO WATER DISTRICT
TO INCREASE THE NUMBER OF GENERAL MEETINGS
THAT ARE PRE-APPROVED FOR ALL DIRECTORS TO ATTEND
FOR THE CALENDAR YEAR 2019

GENERAL MANAGER INFORMATION ITEMS

5. **General Manager's Monthly Report** (Report Included)

Staff will review and comment on the General Manager's Monthly Report.

6. **State Drought Regulations – Monthly Report** (Reference Material Included)

Staff will review and comment on reporting of monthly and cumulative water production compared to actual water production in 2013.

7. **Legislative Reports** (Reference Materials Included)

Staff and General Counsel will review and comment on the Legislative reports.

8. **Public Education and Outreach & Water Conservation Reports** (Reference Material Included)

9. **SOCWA Reports** (Reference Material Included)

- a. SOCWA Special Board Meeting – February 7, 2019
- b. SOCWA Board Meeting – February 7, 2019
- c. SOCWA Engineering Committee Meeting – February 14, 2019

- d. SOCWA Finance Committee Meeting – February 19, 2019

10. Municipal Water District Of Orange County (MWDOC) Report
(Reference Material Included)

- a. MWDOC Planning/Operations Committee – February 4, 2019
- b. MWDOC/MET Directors Workshop – February 6, 2019
- c. MWDOC Administration & Finance Committee – February 13, 2019
- d. MWDOC Public Affairs & Legislation Committee – February 19, 2019
- e. MWDOC Board Meeting – February 20, 2019
- f. MWDOC Managers Meeting – February 21, 2019
- g. MWDOC Water Policy Forum – February 21, 2019

11. Local Agency Formation Commission (LAFCO) Report

- a. Report on the February 13, 2019 LAFCO meeting

12. South Orange County Watershed Management Area (SOCWMA) Management and/or Executive Committee Report

- a. Report on the January 31, 2019 SOCWMA Ad-Hoc Committee Meeting
- b. Report on the February 4, 2019 SOCWMA Management Committee Meeting - canceled

13. ISDOC Meetings (Reference Material Included)

- a. Report on the January 31, 2019 ISDOC Quarterly Luncheon Meeting
- b. Report on the February 5, 2019 ISDOC Executive Committee Meeting

14. WACO Meetings (Reference Material Included)

- a. Report on the February 1, 2019 WACO Meeting

- b. Report on the February 19, 2019 WACO Planning Committee meeting

15. City Coordination Efforts

- a. Report on the February 27, 2019 City of Lake Forest Quarterly Utility Coordination Meeting

COMMITTEE AND GENERAL INFORMATION

16. Dates to Remember for February/March 2019(Reference Material Included)

17. Carry-Over Pending Matters (Reference Material Included)

DIRECTOR COMMENTS/NON-AGENDA ITEMS

ATTORNEY REPORT

CLOSED SESSION

At this time the Board will go into Closed Session as follows:

1. In accordance with Government Code Section 54956.96 in order to receive, discuss, and/or take action concerning information obtained by the District's representative pertaining to a closed session of the South Orange County Wastewater Authority ("SOCWA"), a joint powers agency.
2. To conduct the General Manager's annual performance evaluation pursuant to Government Code Section 54957 (b) (1).
3. To consider the potential amendment of the General Manager's Employment Agreement pursuant to Government Code Section 54957 (b) (1).
4. Conference with Legal Counsel – potential litigation pursuant to paragraph (2) of Government Code Section 54956.9 (one matter).

REGULAR SESSION

REPORT ON CLOSED SESSION (Legal Counsel)

Mr. Granito will provide an oral report on the Closed Session.

18. GENERAL MANAGER COMPENSATION

Board Action: The District's Board of Directors will discuss and consider granting the District's General Manager a compensation increase in the amount and form as determined by the Board.

ADJOURNMENT

Recommended Action: The Board will be requested to take action adjourning today's Board meeting to **Thursday, March 28, 2019 at 7:30 a.m.** at the El Toro Water District, 24251 Los Alisos Boulevard, Lake Forest, California.

The agenda material for this meeting is available to the public at the District's Administrative Office, which is located at 24251 Los Alisos Blvd., Lake Forest, Ca. 92630. If any additional material related to an open session agenda item is distributed to all or a majority of the board of directors after this agenda is posted, such material will be made available for immediate public inspection at the same location.

Request for Disability-Related Modifications or Accommodations

If you require any disability-related accommodation, including auxiliary aids or services, in order to participate in this public meeting, please telephone the District's Recording Secretary, Polly Welsch at (949) 837-7050, extension 225 at least forty-eight (48) hours prior to said meeting. If you prefer, your request may be submitted in writing to El Toro Water District, P.O. Box 4000, Laguna Hills, California 92654, Attention: Polly Welsch.

MINUTES OF THE REGULAR MEETING
OF THE
BOARD OF DIRECTORS
OF THE
EL TORO WATER DISTRICT
January 22, 2019

President Vergara called the meeting of the Board of Directors of the ELTORO WATER DISTRICT to order at 7:30 o'clock a.m. on January 22, 2019 at the El Toro Water District Administrative Offices, 24251 Los Alisos Boulevard, Lake Forest, California.

President Vergara led in the Pledge of Allegiance to the flag.

Present at today's meeting were Committee Members JOSE F. VERGARA, MARK MONIN, M. SCOTT GOLDMAN, MIKE GASKINS and KATHRYN FRESHLEY.

Also present were ROBERT R. HILL, General Manager/Secretary, DENNIS P. CAFFERTY, Assistant General Manager/District Engineer, JUDY CIMORELL, Human Resources Manager, NEELY SHAHBAKHTI, Finance Manager/Controller, SHERRI SEITZ, Employee, ALEX HRADECKY, Employee, RICK OLSON, Operations Superintendent, ERIC WILSON, Mechanic, RICHARD BABBE, CAMP Representative, TIFFANY BACA, MWDOC Representative, SARAH WILSON, MWDOC Representative, GILBERT J. GRANITO, General Counsel, and POLLY WELSCH, Recording Secretary.

Oral Communications - Public Comments

President Vergara stated that at this time members of the public may address the Board or they may reserve this opportunity with regards to an item on the agenda, until the Board discusses said item later in today's meeting.

There were no comments.

Items Received Too Late To Be Agendized

President Vergara asked if there are any items received too late to be agendized. Mr. Hill replied no.

MWDOC Presentation

Ms. Seitz introduced Tiffany Baca and Sarah Wilson of MWDOC who will be presenting a recognition in honor of ETWD hosting the Water Resources and Conservation Patch clinic at the Water Recycling Plant on November 3, 2018. She further stated that with ETWD's support of the MWDOC Girl Scout Program, 40 Girl Scouts earned a Water Resources Conservation Patch and gained a better understanding of their local water supply sources.

Ms. Baca and Ms. Wilson presented the District with a certificate of Recognition.

At approximately 7:40 o'clock a.m. Ms. Baca and Ms. Wilson left the meeting.

Presentation of Awards, Recognitions and Introductions

- a. Mr. Hill recognized and congratulated on behalf of the Board, Dennis Cafferty, Assistant General Manager/District Engineer, for 30 years of service with the District.

Special District/Employee Association/Community Award Acknowledgement and
Employee Special Recognition

- a. Mr. Hill recognized and congratulated on behalf of the Board, Alex Hradecky, Maintenance Worker 1, for achieving his Water Distribution Operator Grade D2 and Grade T2 Certifications from the State of California State Water Resources Control Board.

At approximately 7:45 o'clock a.m. Mr. Hradecky left the meeting.

CAMP Presentation

Mr. Babbe stated that economic growth strengthened during the year. He further stated that the labor market remains strong with the unemployment rate near a 49-year low.

Mr. Babbe stated that inflation firmed up near the Federal Reserve's desired target level, and market volatility increased at year end driven by weakening economic expectations, peak profit concerns, trade worries, interest rate concerns, and political uncertainty. He further stated that after increasing most of the year, interest rates fell sharply at year's end.

Mr. Babbe stated that the market's expectations for additional interest rate hikes during 2019 have declined significantly.

Mr. Babbe stated that per agreed upon strategy, CAMP continues to shorten the portfolio's overall duration. He further stated that they purchased no individual securities in the 4th quarter and let all maturities roll into the CAMP pool to take advantage of rising short-term rates.

Mr. Babbe stated that given interest rate levels, it was to the District's benefit to allow securities to mature rather than realize losses due to sales. He further stated that an additional \$380,000 will roll into the CAMP pool during the 1st quarter.

Mr. Babbe stated that with the increase in the District's LAIF balance, approximately 50% of the portfolio is currently invested in short-term floating rate investments. He further stated that given the change in interest rate expectations, the District may want to re-evaluate its strategy for the portfolio.

Mr. Babbe stated that Economic Fundamentals remain strong, but U.S. Equities experience significant volatility in the 4th quarter. He further stated that a selloff in equity markets saw Treasury yields drop considerably in the 4th quarter as investors sought safety in government bonds.

Mr. Babbe stated that the Federal Reserve raised the federal funds target rate by 25 basis points for the 4th time in 2018, but the consequential bump in yields was overcome by continued equity market uncertainty.

Mr. Babbe stated that implied forward yields predict zero rate hikes in 2019; however CAMP feels it depends on economic conditions.

Mr. Babbe stated that the portfolio performance continues to perform well relative to the benchmark over longer periods of time. He further stated that the drop in interest rates resulted in unrealized gains which allowed the portfolio to recoup a significant portion of the unrealized losses earlier in the quarter. Mr. Babbe stated that CAMP dividends increased significantly during the 4th quarter

with the shift of additional assets to the pool and the increase in the CAMP dividend rate.

Mr. Babbe stated that with no new investments, the managed portfolio's yield remains unchanged. He further stated that the direction on interest rates going forward has become uncertain.

Vice President Monin asked what is LAIF's yield. Mr. Babbe replied that as of the 16th of January it was 2.36%.

Vice President Monin asked if CAMP is able to purchase CDs or Money Markets. Mr. Babbe replied that they can purchase negotiable CD's on the District's behalf, but they cannot buy FDIC insured.

At approximately 8:04 o'clock a.m. Mr. Babbe left the meeting.

Consent Calendar

All matters under the Consent Calendar will be approved by one motion unless a Board member or a member of the public requests separate action or discussion on a specific item.

1. Consider approving the December 20, 2018 Board meeting minutes.
2. Consider approving the Directors to attend the CalDesal Conference on February 6-8, 2019 in Palm Springs, CA.

President Vergara asked for a Motion.

Motion: Director Goldman made a Motion, seconded by Vice President Monin, and unanimously carried across the Board to approve the Consent Calendar.

Roll Call Vote:

Director Gaskins	aye
Vice President Monin	aye
Director Goldman	aye
President Vergara	aye
Director Freshley	aye

Approval of Items Removed from the Consent Calendar

There were no items removed from today's Consent Calendar.

Director/Committee Reporting

Director Gaskins stated that he attended a meeting with the Board President regarding Committee assignments. He also attended several MWDOC meetings, the WACO meeting, the ISDOC Executive Committee meeting where CSDA presented a series of workshops, and he will be attending the CASA conference this week and the ISDOC Quarterly luncheon at the end of this month.

Vice President Monin stated that he attended the OCWA luncheon, the WACO meeting, and the ISDOC Executive Committee meeting where he was appointed to an Ad-Hoc Committee. He also attended the OC Board of Supervisors swearing in ceremony, the Laguna Woods City Council meeting, the MWDOC/MET Directors workshop, the MWDOC Admin/Finance meeting, and will be attending the CASA conference this week, and also the WACO Planning meeting.

Director Goldman stated that he attended the WACO meeting where they discussed legislation, and he attended the SOCWA Board meeting. He also plans to attend the CASA Board meeting at the CASA conference, and the SCWC luncheon meeting.

Director Freshley stated that she attended the WACO meeting, the MWDOC/MET Directors workshop, the Lisa Bartlett swearing in ceremony, the Laguna Woods City Council meeting, the SOCWA Board meeting, the MWDOC Planning/Operations meeting, the MWDOC Board meeting, the OCWA luncheon, and she plans to attend the CASA conference this week, a Special SOCWA Finance meeting, the South OC Economic Coalition, the SCWC luncheon meeting, and the ISDOC quarterly luncheon meeting.

President Vergara stated that he attended the MWDOC Admin/Finance meeting, WACO meeting, WACO Planning Committee meeting, the OCWA luncheon, and will be attending TV-6 at the end of this month. He further stated that he met with each of the Directors regarding the Standing Committee meetings.

General Manager Action Items

Resolution No. 19-1-2 Modifying Appointment of ETWD Standing Committee Members for the Calendar Year 2019

Mr. Hill stated that included in the package is the Standing Committee list as Exhibit A.

President Vergara asked if adding the HR Committee, could there be more than 2 people on the Committee. Mr. Hill replied that it is a standing committee meeting and not an ad-hoc meeting, but you still can only have two Board members on each committee.

President Vergara removed Freshley from the Alternate position on the HR Committee.

President Vergara asked for a Motion.

Motion: Director Gaskins made a Motion, seconded by Vice President Monin to approve as amended Resolution No. 19-1-2 modifying the appointment of Directors to the various organization and Standing Committees of the Board for the calendar year 2019.

Roll Call Vote

Director Gaskins	aye
Vice President Monin	aye
President Vergara	aye
Director Goldman	aye
Director Freshley	aye

General Manager Information Items

Annual Board of Directors Workshop

Mr. Hill stated that annually in January or February the Board President shall initiate a Board Workshop to self-assess Board effectiveness and include an opportunity to openly discuss District issues beyond the Board itself, such as tentative workshop dates, timeframe, and location.

Mr. Hill stated that included in the Board package is an excerpt from the 2017 Strategic Plan meeting. He further stated that the meeting will be from 8:00 am to noon and include light morning refreshments and a light lunch.

Mr. Hill stated that staff has investigated the service area and no hotels are available on February 23rd; therefore the meeting will be held at the District office. Mr. Cafferty suggested using the EOC in the Field Office.

General Manager's Monthly Report

Vice President Monin stated that the Customer Service report looks good.

Mr. Cafferty stated that at the Capital Projects report yesterday, one of the things that was asked about was the South OC pipeline turnout status. He stated that MNWD is still working on the appraisal of the property, and the owner is aware of the project.

Mr. Cafferty stated that lab certification measures are in place to ensure this doesn't happen again. He further stated that ELAP was only communicating with one staff person, and now they have additional contact information, and the expiration date will be on several staff's calendars.

Mr. Cafferty stated that there are a number of certifications which need to be renewed, and staff is working on a list to better maintain these certification renewal dates.

Mr. Cafferty stated that staff did verify the Dam insurance premium increase was the result of the Oroville Dam Spillway as they are part of the State's Dam Pool.

State Drought Regulations – Monthly Report

Mr. Hill stated that the report is included in the Board package and comparing everything back to a similar month in 2013.

Legislative Reports

Mr. Hill stated that the Water Tax is now called AB 134 and has not gone away. He further stated that ACWA is opposing this Water Tax and offering alternatives.

Public Education and Outreach/Water Conservation Reports

Ms. Seitz stated that there were no water waste complaints for the month of December. She further stated that the January bill message will be "Give your landscape a break. A friendly reminder to turn off your sprinklers while it is raining and for at least 48 hours after. Let mother nature do the work."

Ms. Seitz stated that staff is working with Communications Lab to send newly elected Officials congratulatory letters, and invite them to an orientation and tour on Friday, March 1st.

Ms. Seitz stated that MWDOC has started their Poster Contest "Water is Life".

Ms. Seitz stated that staff will be attending the Senior Summit which is at a different location this time.

Ms. Seitz stated that in December staff attended a booth at the Lake Forest Chamber of Commerce Elf Yourself 5K and provided water for runners and walkers with the District's water trailer.

At approximately 8:40 o'clock a.m. Ms. Seitz left the meeting.

SOCWA Reports

Director Goldman stated that he attended the SOCWA Board meeting where they discussed emergency WEROC equipment.

Mr. Cafferty stated that at the SOCWA Engineering meeting, they discussed biosolids handling technology, Regional Plant capital 10-year plan, and a discussion regarding the amount of cash SOCWA is holding and determining what to do with it.

MWDOC

Vice President Monin stated that he has no comments.

Director Freshley stated that at the Planning/Operations meeting they discussed the issue with OCWD and MNWD, and the OC Water Reliability Study.

Mr. Hill stated that at the Managers meeting there was a lot of discussion about the OCWD and MNWD issue, and an addendum. He further stated that the study is supposed to be final in 6 months, and market analysis to similar basins is also being conducted. Mr. Hill stated that the agreement would be for 5,000 acre feet to store MET water.

LAFCO

There was no meeting.

SOCWMA

Mr. Cafferty stated that he is now on an ad-hoc committee that is reviewing applications for grant funding.

ISDOC Meetings

There were no comments.

WACO Meetings

Vice President Monin stated that they discussed an in-depth analysis of upcoming meetings and eliminating topics. He further stated that they also discussed MWDOD employees contributing to the Paradise fire victims, which ETWD employees also did.

City Coordination Efforts

There were no comments.

Committee and General Information

There were no comments.

Dates to Remember

There were no comments.

Carry-Over Pending Matters

Mr. Cafferty presented a presentation on the equipment maintenance for the District vehicles, generators, backhoes, and pumps. He introduced Mr. Eric Wilson, Senior Mechanic who is single handedly in charge of the maintenance for the entire program.

Director Gaskins asked if the Kenworth truck has issues. Mr. Wilson replied that the tank vessel is in great shape, but the tractor is wearing down.

Mr. Cafferty stated that next month we will be discussing cyber security.

At approximately 9:30 o'clock a.m. Mr. Wilson and Mr. Olson left the meeting.

Director Comments/Non-Agenda Items

President Vergara stated that the new Directors need to take a training for the Transparency Certification. Staff will provide the information to the new Directors on the Governance training.

Attorney Report

Mr. Granito reported that there is no need for a Closed Session today and therefore the Regular Session continued.

Adjournment

There being no further business to come before the Board, the following motion was duly made and passed.

Motion: Vice President Monin moved, seconded by Director Freshly and unanimously carried that today's meeting be hereby adjourned at 9:35 o'clock a.m. to Thursday, February 28, 2019 at 7:30 o'clock a.m. at the District's Administrative Offices, 24251 Los Alisos Blvd., Lake Forest, California.

Roll Call Vote:

Director Gaskins	aye
Vice President Monin	aye
Director Freshley	aye
President Vergara	aye
Director Goldman	aye

Respectfully submitted,

POLLY WELSCH
Recording Secretary

APPROVED:

JOSE F. VERGARA, President of
the El Toro Water District and the
Board of Directors thereof

ROBERT R. HILL, Secretary
of the El Toro Water District and
the Board of Directors thereof

RESOLUTION NO. 19-2-1

RESOLUTION OF THE BOARD OF DIRECTORS OF THE
EL TORO WATER DISTRICT
TO INCREASE THE NUMBER OF GENERAL MEETINGS
THAT ARE PRE-APPROVED FOR ALL DIRECTORS TO ATTEND
FOR THE CALENDAR YEAR 2019

WHEREAS, the Board of Directors of the EL TORO WATER DISTRICT
deems it to be in the best interest of the District to modify the President's
appointment of Directors to various Organizations and Standing Committees of the
Board; and

WHEREAS, said list of appointments is attached hereto marked Exhibit "A,"
and made part of this Resolution.

NOW, THEREFORE, IT IS HEREBY RESOLVED that the Board of Directors
of the EL TORO WATER DISTRICT hereby confirms the appointment of Directors to
various Organizations and Standing Committees of the Board as listed in Exhibit "A".

ADOPTED, SIGNED AND APPROVED this 28th day of February 2019.

JOSE F. VERGARA, President
El Toro Water District and the
Board of Directors thereof

(SEAL)

ATTEST:

ROBERT R. HILL, Secretary
El Toro Water District and the
Board of Directors thereof

STATE OF CALIFORNIA)

COUNTY OF ORANGE)

I, ROBERT R. HILL, Secretary of the Board of Directors of the El Toro Water District, do hereby certify that the above and foregoing is a full, true and correct copy of Resolution No. 19-2-1 of said Board, and that the same has not been amended or repealed.

DATED: February 28, 2019

ROBERT R. HILL, Secretary
El Toro Water District and of
the Board of Directors thereof

(SEAL)

BOARD MEMBER ORGANIZATIONAL AND STANDING COMMITTEE ASSIGNMENTS – 2019

<u>ORGANIZATION</u>	<u>REPRESENTATIVE</u>	<u>ALTERNATE</u>	<u>FREQUENCY</u>
WACO Planning	Vergara	Monin	Monthly
WateReuse	Vergara	Goldman	Bi-Monthly
SOCWA Board	Goldman	Freshly	Monthly
SOCWA Finance	Freshly	Dennis	Monthly
ISDOC	Monin	Gaskins	Monthly
LAFCO	Freshly	Gaskins	As Required
JPIA	Freshly	Gaskins	Semi-Annual
MWDOC Board	Vergara	Monin	Monthly
MWDOC Finance	Monin	Vergara	Monthly
MWDOC Public Affairs	Gaskins	Vergara	Monthly
MWDOC Plan & Ops	Freshly	Vergara	Monthly
SAC	Freshly	Gaskins	Semi-Annual
South Co. Watershed Exec	Monin	Freshly	As Required
South OC Economic Coalition	Vergara	Gaskins	Monthly
South OC Water Agencies Grp	Vergara	Goldman	Bi-Monthly

<u>ETWD COMMITTEE</u>	<u>CHAIRMAN</u>	<u>ALTERNATE</u>	<u>FREQUENCY</u>
Agenda Review	Vergara	Monin	Monthly
Engineering	Goldman	Freshly	Monthly (Full Board)
Finance/Insurance Committee (FIC)	Monin	Freshly	Monthly (Full Board)
Community Advisory Group (CAG)	Gaskins	Vergara	Quarterly
Regional Reclamation Committee (RRC)	Goldman	Freshly	Monthly
Computer Technology	Freshly	Gaskins	Annual/As Required
Audit Committee	Monin	Freshly	Annual/As Required
Budget Committee	Freshly	Monin	Annual/As Required
HR Committee	Gaskins	Monin	Annual/As Required

DIRECTORS WILL NOT BE COMPENSATED FOR ATTENDING MEETINGS NOT LISTED UNLESS AUTHORIZED BY THE BOARD PRESIDENT, WITH THE EXCEPTION OF OCWA, WACO, CAG, ISDOC quarterly luncheon, MWDOC Quarterly Policy Forum events, MWDOC/Met Directors, MWDOC Elected Officials forum, So Cal Water Committee, **City Council meetings in the 5 cities we serve, Supervisor/Congressmen meetings in the areas we serve.**

Exhibit A to Resolution No. 19-2-1

GENERAL MANAGER'S REPORT

February 2019

I. OFFICE OF THE GENERAL MANAGER

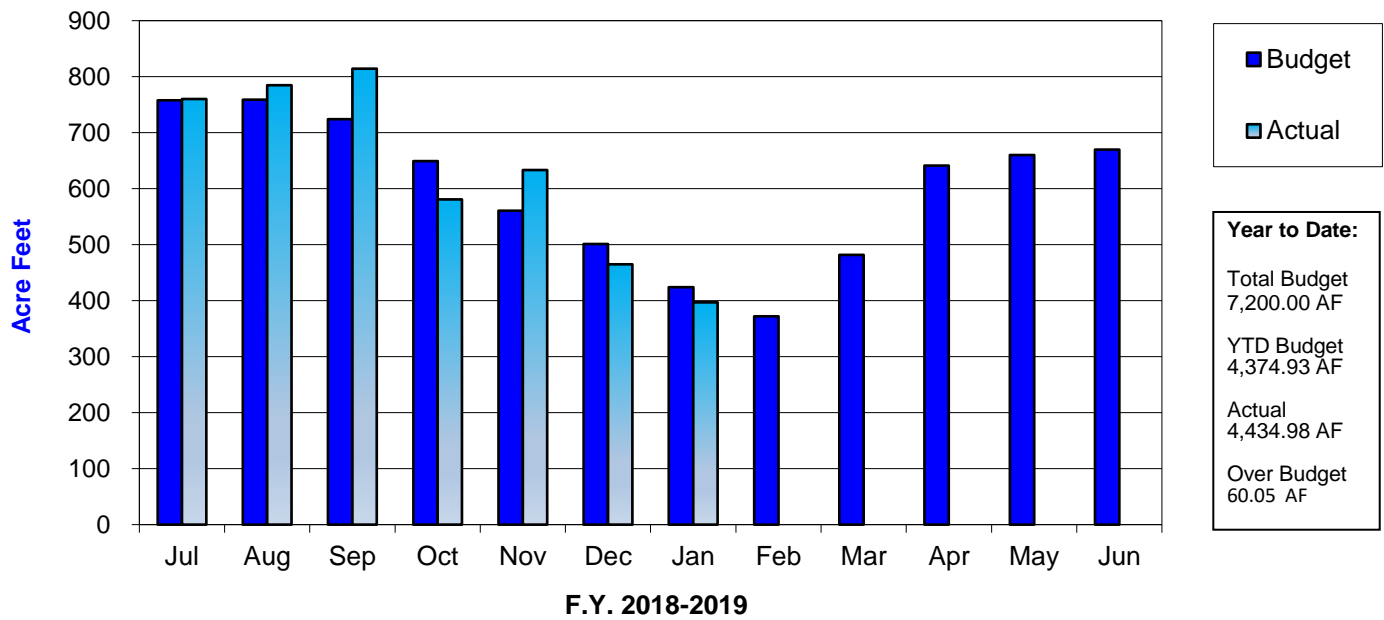
- Attended Chair/GM Meetings
- Attended Orientation Meeting with Director Gaskins and Legal Counsel
- Attended Lunch Meeting with Joone Lopez, General Manager at MNWD
- Attended Poseidon Meeting Regarding Capacity
- Attended Meeting with Staff Regarding Water Loss Control
- Attended Meeting with Brandon Ida of ACWA
- Attended CAG Meeting
- Attended Full Board Strategic Workshop
- Attended Engineering & Finance Committee Meetings
- Attended Regular Board Meeting

II. DOMESTIC AND RECYCLED WATER SALES

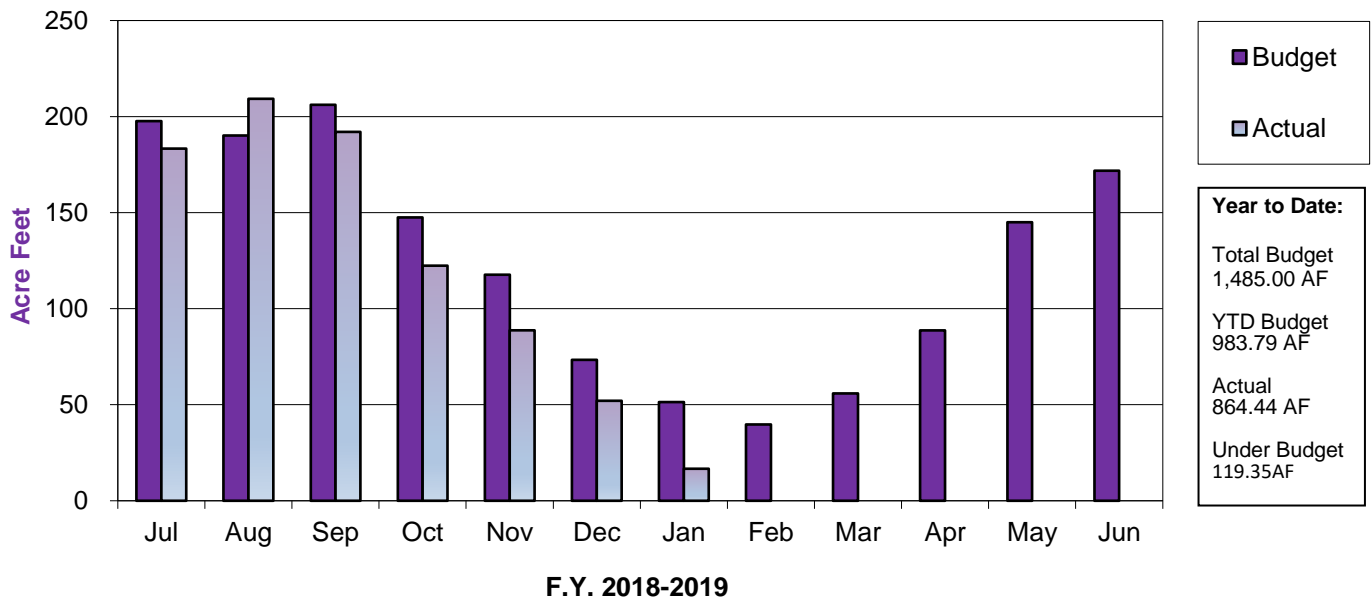
Actual domestic sales for the year-to-date as of January 31, 2019 are 4,434.98 acre-feet. This compares to year-to-date budgeted domestic sales of 4,374.93 acre-feet. The year-to-date variation in actual to budgeted sales reflects an increase of 60.05 acre-feet. Actual sales are 231.92 acre-feet lower than last year-to-date actual sales for the same period.

Actual recycled sales for the year-to-date as of January 31, 2019 are 864.44 acre-feet. This compares to year-to-date budgeted recycled sales of 983.79 acre-feet. The year-to-date variation in actual to budgeted sales reflects a decrease of 119.35 acre-feet. Actual sales are 85.98 acre-feet lower than last year-to-date actual sales for the same period.

POTABLE WATER SALES



RECYCLED WATER SALES



Customer Service Activity Report

JANUARY 2019

Regular Service Calls	JAN 2019	JAN 2018	Telephone Calls	JAN 2019	JAN 2018
Serviceman Dispatched to Read, Connect/Disconnect Service	70	71	Change of Service: Connections and Disconnections	102	61
Field Investigations:			Billing / Payments & Graph Inquires	367	368
Check for leaks - calls to CS Office:(irrigation,meter,street leaks)			Assistance with online payments and ETWD's portal (cc, e-checks)	122	99
Customer Responsible	23	20	Variance / Waiver Inquiries	50	64
District Responsible	5	13	Variance / Waiver Requests Processed	10	14
None found/other	14	11	Ordinance Infraction / Water Waste Complaints	0	2
High Reads Checked - High Consumption (Billing Dept.)	9	21			
Cust Leaks: _4_ No Leaks: _5_					
Check Stopped Slowed Meters-Low Consumption (Billing)	8	25	Outside Utility Districts	72	70
Re-Check Read	13	10	Phone calls Transfer to other Departments within ETWD	140	167
Ordinance Infraction	1	1	phone calls for the Board of Directors	4	7
Recycled Water	0	0	Recycled Water	0	3
Water Quality: Taste / Odor / Color	2	6	Water Quality Taste - Odor - Color	3	8
Phone response: _1_ Field response: _1_			Leaks / Breaks	13	49
Flooding (Hydrant) Meters issued	0	0	Flooding Meter calls (Hydrant)	1	1
Sewer - Odor/Stoppage/ Manhole Covers	0	6	Sewer Problems (odor / spills)	5	10
Meter Box: Lids / Covers Replaced	33	30			
Meter Box Clean, Digout	7	20	Backflow / Cross Connection (questions or yearly testing forms)	3	4
			ETWD facilities inquiries: Boxes/Covers/Lids/Hydrants/Pump Stations/Graffiti/ "Gen. Maint"		
Raised Meter Box	1	8		8	7
Trim Bushes / Meter Obstruction	16	6			
General Maintenance Response	8	0	Tyco (ADT) Calls (Alarms to ETWD facilities)	0	2
Fire Hydrants: Hit / Leaks / Caps	0	4	ATT Calls (access to tower sites)	2	0
Pressure(psi) Checks / Reads	5	4	SCE Calls (access to tower sites)	2	1
CSSOV (Angle Meter/Ball Valve/Gate Valve/Globe Valve) chk,repair,replaced	8	8	Pager Calls specifically for Pump Stations - SCADA	0	0
AMS angle-meter-stop replace/repair	0	0			
Bees Removed	1	3			
Backflow / Cross Connection	5	0	Payment Extensions	90	118
			Delinquent Payment Calls to Customer 's prior to shut off per billing calendar (automatic courtesy dialer)	65	26
Fogged Registers	46	3	Return Calls from customers left on our voice mail system. Ext 500	11	30
OMCOP: Old Meter Change - Out Program	0	40	Email Correspondence:	113	149
calls)	5	11	Maintenance Service Order Requests (bees, psi, fogged-dirty registers)	1	5
On-Call After Hrs. CS Response	23	29	Misc. (other: employment, deliveries, sales calls)	35	29
# 48/24 Hr. Door Hangers Hung	178	178			
# Locked Off For Non-Pay (Disconnect)	10	10			
Removed Meter	0	0			
New Meter	19	1			
Unread Meters	15	33			
Total Field Investigations	525	572	Total Telephone Calls	1219	1294
Uncollectible Accounts:			Credit Card Payments	JAN 2019	JAN 2018
Budget YTD	\$ 11,667.00	\$ 11,667.00	REGULAR	718 \$77,598.96	643 \$69,318.61
Actual YTD	\$ 399.00	\$ 9,301.00	DISCONNECTS		

**EL TORO WATER DISTRICT
COLLECTION SYSTEM ACTIVITY REPORT**

MONTH ENDING:

January

2019

ODOR COMPLAINTS	NUMBER	LOCATION, ORIGIN, ACTION:		
Outside Laguna Woods Village				
Outside Laguna Woods Village				
Laguna Woods Village				
New World				
Private System				
Other: WRP				
TOTAL	0			
ROOT FOAMING	FOOTAGE	CHEMICAL USED	CHEMICAL COST	COMMENTS:
Outside Laguna Woods Village				
Laguna Woods Village				
New World				
Other				
TOTAL	0			
ROOT CUTTING	FOOTAGE	COMMENTS:		
Outside Laguna Woods Village				
Laguna Woods Village	150			
New World				
TOTAL	150			
HYDRO-CLEANING	FOOTAGE	COMMENTS:		
Outside Laguna Woods Village	30,727			
Laguna Woods Village				
New World				
Private System				
Hot Spots	26,045			
ETWD TOTALS:	56,772			
SANTA MARGARITA TOTALS:				
COMBINED TOTALS:	56,772			
TV INSPECTIONS	FOOTAGE	COMMENTS:		
Outside Laguna Woods Village				
Laguna Woods Village	9,100			
New World				
Private System				
Other				
TOTAL	9,100			
Wet Wells	Number	1	NORTHLINE	
Flow Meter/Sampling	Number			
WATER TANK FILLS	60	60,000		

**EL TORO WATER DISTRICT
MONTHLY POTABLE WATER QUALITY REPORT**

The quality and safety of drinking water in the U.S. is regulated by the federal government through the U.S. Environmental Protection agency (USEPA). In California, those standards are enforced by the California Department of Public Health (CDPH). Water Quality parameters must meet both primary and secondary water quality standards as established by the CDPH.

PRIMARY STANDARDS - are intended to protect public health against substances in the water that may be harmful to humans if consumed for long periods of time.

SECONDARY STANDARDS - are to ensure esthetic qualities of water such as taste, odor or clarity. Rather than its healthfulness, these standards govern substances that may influence consumer acceptance of water.

Given that 100% of ETWD's potable water resource is fully treated and delivered by Metropolitan Water District of southern California (MWDSC) through an enclosed and protected conveyance system, the majority of the State and federal primary and secondary source water quality monitoring requirements are performed by MWDSC. The District's physical responsibility for water quality monitoring is associated with the distribution system. To monitor the distribution system water quality the District utilizes both in house and outside lab services. Routine distribution analysis conforming to CDPH requirements is conducted for the following constituents:

- 1) **Microbiological** - The number of microbiological samples and the frequency of analysis during the month is based on the population and/or service connections served. Utilizing a population of 50,000, the CDPH requires that 20 "representative" samples be collected and analyzed for coliform bacteria. The objective is to maintain water quality that is absent of coliform bacteria which is a general indicator for the existence of fecal coliform.
- 2) **Chlorine Residual** - The chlorine residual monitoring is performed in conjunction with the microbiological monitoring. The CDPH requirement for treated surface water mandates that the distribution system maintain a "detectable" residual. The number of and frequency of sampling is determined utilizing the same formula applied to microbiological requirements. At a minimum, we are obligated to collect and analyze for chlorine residual each time we collect the representative microbiological samples. Per EPA Disinfectants & Disinfection Byproduct Rule (D/DBP), which was effective January 2002, requires quarterly reporting for all sampling.
- 3) **TTHM & HAA5 Stage 2 DBPR Compliance** The U.S. Environmental Protection Agency (EPA) published the Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBPR) on January 4, 2006. The Stage 2 DBPR builds on existing regulations by requiring water systems to meet disinfection byproduct (DBP)* maximum contaminant levels (MCLs) at each monitoring site in the distribution system to better protect public health. The Stage 2 DBP rule is intended to reduce potential cancer and reproductive and developmental health risks from disinfection byproducts (DBPs) in drinking water, which form when disinfectants are used to control microbial pathogens. This final rule strengthens public health protection for customers of systems that deliver disinfected water by requiring such systems to meet maximum contaminant levels as an average at each compliance monitoring location (instead of as a system-wide average as in previous rules) for two groups of DBPs, trihalomethanes (TTHM) and five haloacetic acids (HAA5). The rule targets systems with the greatest risk and builds incrementally on existing rules. This regulation will reduce DBP exposure and related potential health risks and provide more equitable public health protection. The Stage 2 DBPR is being released simultaneously with the Long Term 2 Enhanced Surface Water Treatment Rule to address concerns about risk tradeoffs between pathogens and DBPs.

The mandatory requirement under the Stage 2 DBP rule, known as an Initial Distribution System Evaluation (IDSE) was completed by ETWD in 2008 and a Stage 2 monitoring plan has been approved by CDPH. Full Stage 2 compliance begins in 2012. The IDSE identified the locations with high disinfection byproduct concentrations. These locations will then be used by the District as the 8 sampling sites for Stage 2 DBP rule compliance monitoring. Compliance with the maximum contaminant levels for two groups of disinfection byproducts (TTHM and HAA5) will be calculated for each monitoring location in the distribution system. This approach, referred to as the locational running annual average (LRAA), differs from current requirements, which determine compliance by calculating the running annual average of samples from all monitoring locations across the system. The Stage 2 DBP rule also requires each system to determine if they have exceeded an operational evaluation level, which is identified using their compliance monitoring results. The operational evaluation level provides an early warning of possible future MCL violations, which allows the system to take proactive steps to remain in compliance. A system that exceeds an operational evaluation level is required to review their operational practices and submit a report to the state that identifies actions that may be taken to mitigate future high DBP levels, particularly those that may jeopardize their compliance with the DBP MCLs.

- 4) **Physical Quality** - Physical Quality analysis is associated with the esthetic qualities of the finished water. Primarily, we are performing analysis for taste, odor and Turbidity (Clarity). In accordance with CDPH requirements, the District collects a minimum of 15 samples per month.
- 5) **Nitrites** - Although the chloramine disinfection process has been effective in controlling TTHM levels, it requires increased monitoring and adjustment as a result of its susceptibility to the Nitrification process. Nitrification is a biological process caused by naturally occurring ammonia oxidizing bacteria. Nitrification in chloraminated drinking water can have various adverse impacts on water quality, the most serious of which is the loss of total chlorine residual which is required by the CDPH and the subsequent potential to increase bacteria-logical activity within the finished or treated water system. MWD has developed an effective nitrification monitoring and prevention program which ETWD staff have adopted and incorporated into the District's daily water quality monitoring and action plan. The number and frequency of this type of monitoring is not currently regulated by CDPH. Staff monitor the level of nitrites in source water, reservoirs and the distribution system daily and weekly in conjunction with the microbiological and chlorine sampling program. A nitrite level of between 0.015 and 0.030 would signal an alert. > 0.030 would require action such as the addition of chlorine to produce a chloramine residual.

EL TORO WATER DISTRICT MONTHLY POTABLE WATER QUALITY ANALYSIS					
MONTH:		January		YEAR : 2019	
CONSTITUENT ANALYSIS		INSIDE LAB		OUTSIDE LAB	
	MCL	NO.	RESULTS	NO.	RESULTS
1 Microbiological	Pres/Absence	149(A)	Pres/Absence		Average
2 Chlorine (ppm)	Detectable Resid	144	Average = 1.47 ppm		
3 TTHM (ppb) (Stage 2)	0.080 ppb		N/A		ppb
3 HAA5 (ppb) (Stage 2)	0.060 ppb		N/A		ppb
4 Physical Quality:			RANGE		
Turbidity (ppm)	5 NTU	20	0.00 to 0.12		
Odor	3 Units	20	ND<1		
Color	15 Units	20	ND<5		
Temperature	No standard	20	60.0°F To 65.0°F		
5 Nitrite (Alert/Action level)ppm	0.015 to 0.030 ppm	72	0.001 to 0.008 Res.		

To ensure water quality compliance, the District annually performs approximately 8,750 water quality analytical evaluations of the samples collected from the distribution system.

Abbreviations:

RES	Indicates that the nitrification was isolated to a reservoir and treated
ND	None detected
Pres/Absence	Presence (P) or Absence (A) related to a positive or negative bacteriological result
MCL	Maximum Contaminant Level
NTU	Nephelometric Turbidity Units, a measure of the suspended material in the water
ppm	Parts per million
ppb	Parts per billion
Total Coliform	No more than 5% of the monthly samples may be total coliform-positive
N/A	Not available

MICROBIOLOGICAL MONITORING

JANUARY 2019

PRESSURE ZONE LEGEND

GRAVITY 570	LOW 1 484	SPARTAN 620-710	MID 630
SHENANDOAH 894	LOW 2 465	REDUCED HIGH 537	ULTRA HIGH 800-920
CHERRY 770-815	LOW 3 409	HIGH 645-720	R-6 620

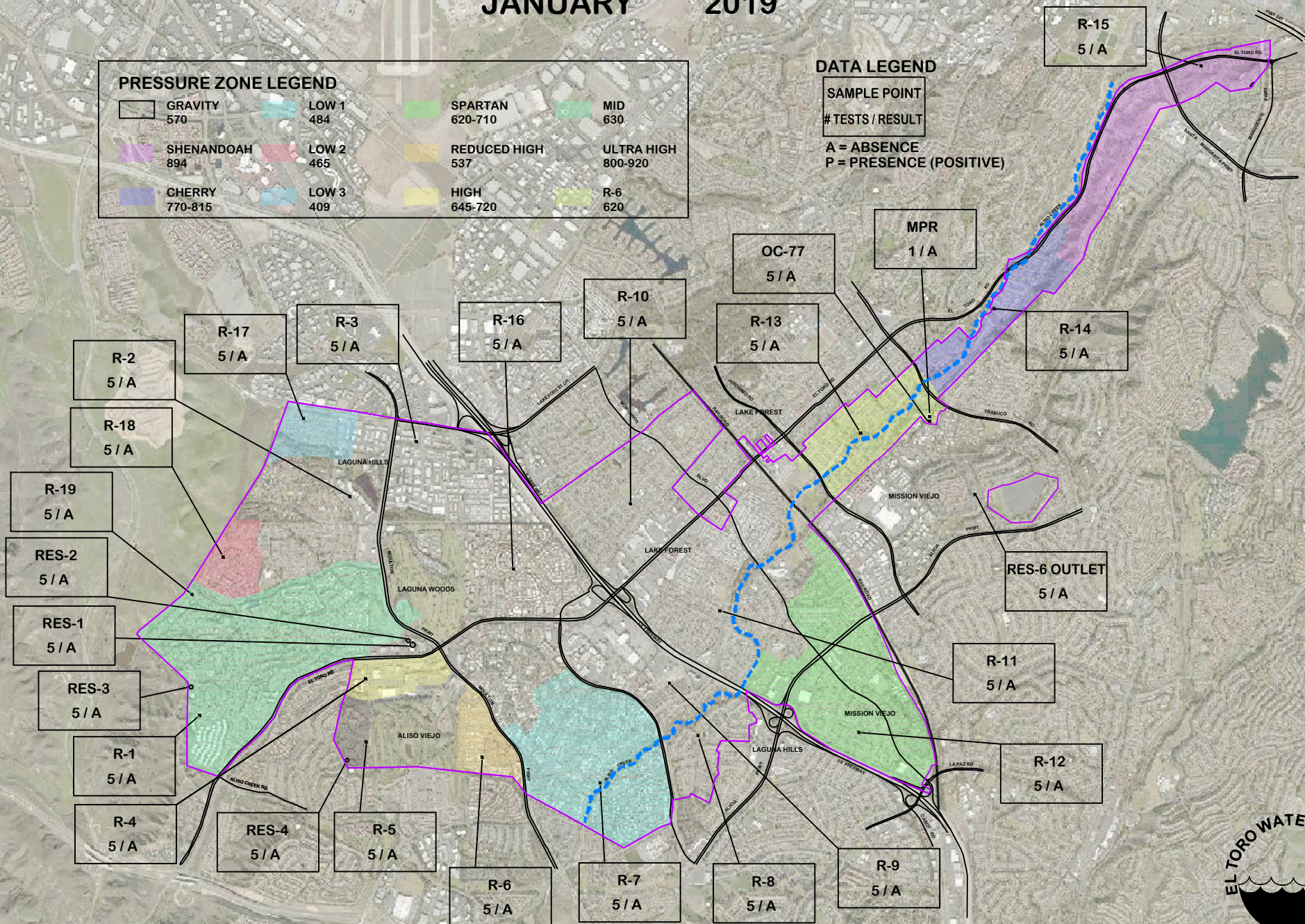
DATA LEGEND

SAMPLE POINT

TESTS / RESULT

A = ABSENCE

P = PRESENCE (POSITIVE)



CHLORINE RESIDUAL MONITORING

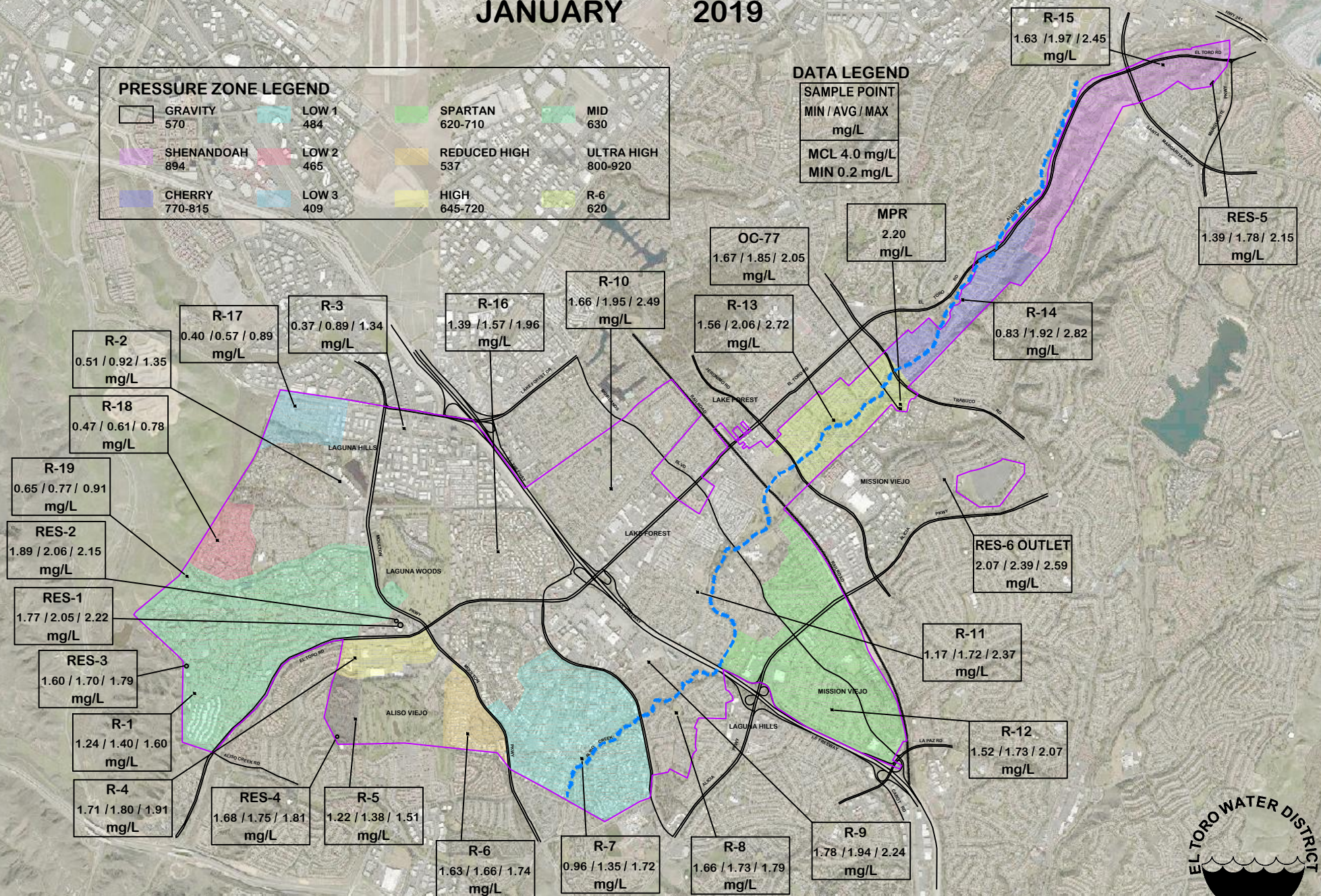
JANUARY 2019

PRESSURE ZONE LEGEND

GRAVITY 570	LOW 1 484	SPARTAN 620-710	MID 630
SHENANDOAH 894	LOW 2 465	REDUCED HIGH 537	ULTRA HIGH 800-920
CHERRY 770-815	LOW 3 409	HIGH 645-720	R-6 620

DATA LEGEND

SAMPLE POINT MIN / AVG / MAX mg/L
MCL 4.0 mg/L MIN 0.2 mg/L



NITRITE MONITORING

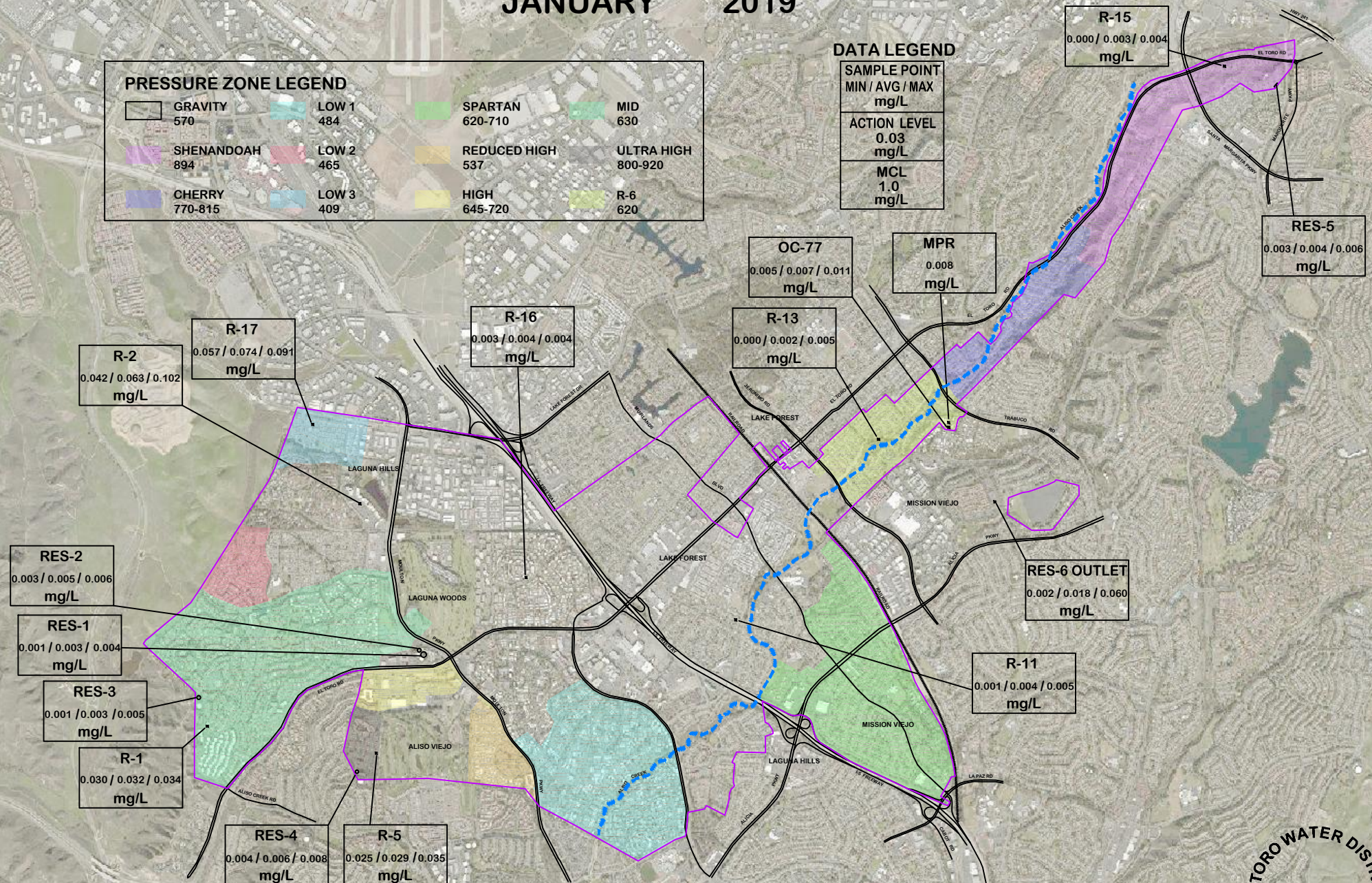
JANUARY 2019

PRESSURE ZONE LEGEND

GRAVITY 570	LOW 1 484	SPARTAN 620-710	MID 630
SHENANDOAH 894	LOW 2 465	REDUCED HIGH 537	ULTRA HIGH 800-920
CHERRY 770-815	LOW 3 409	HIGH 645-720	R-6 620

DATA LEGEND

SAMPLE POINT MIN / AVG / MAX mg/L
ACTION LEVEL 0.03 mg/L
MCL 1.0 mg/L



FLUORIDE MONITORING

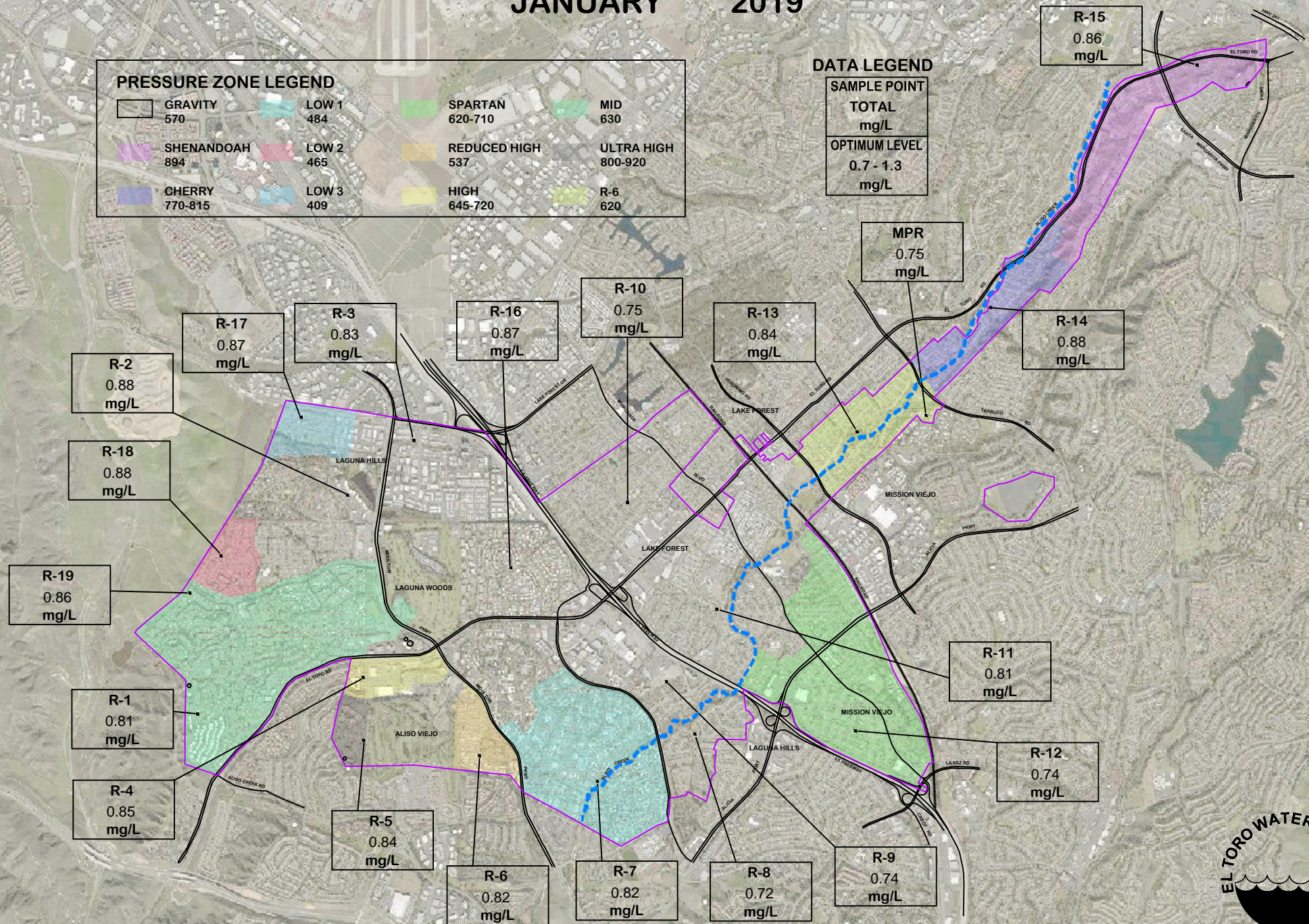
JANUARY 2019

PRESSURE ZONE LEGEND

GRAVITY 570	LOW 1 484	SPARTAN 620-710	MID 630
SHENANDOAH 894	LOW 2 465	REDUCED HIGH 537	ULTRA HIGH 800-920
CHERRY 770-815	LOW 3 409	HIGH 645-720	R-6 620

DATA LEGEND

SAMPLE POINT
TOTAL mg/L
OPTIMUM LEVEL 0.7 - 1.3 mg/L



Weekly Water Quality System Status

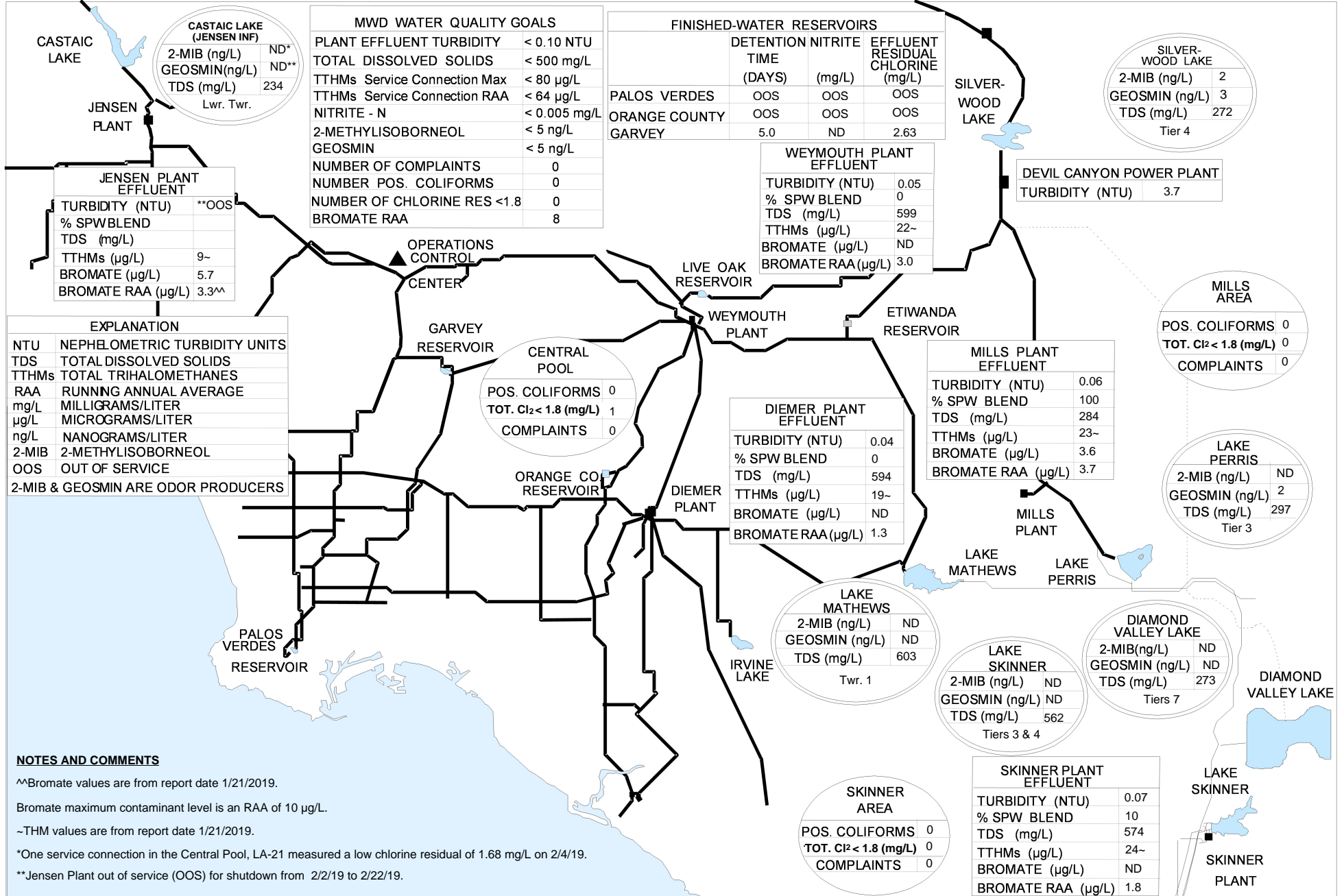
Wednesday, February 06, 2019

Generated On:2/6/2019 1:13:54 PM



THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

No violations of State or Federal regulations were recorded during the current period.



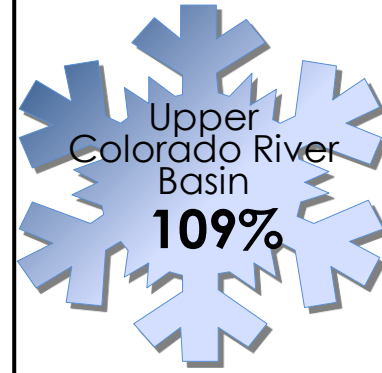
MWD water quality goals meets or exceed all State and Federal regulations.

WATER QUALITY INFORMATION LINE: (800) 354-4420
VISIT MWD ON THE WEB AT <http://www.mwdh2o.com>



Water Supply Conditions Report

As of: 02/10/2019

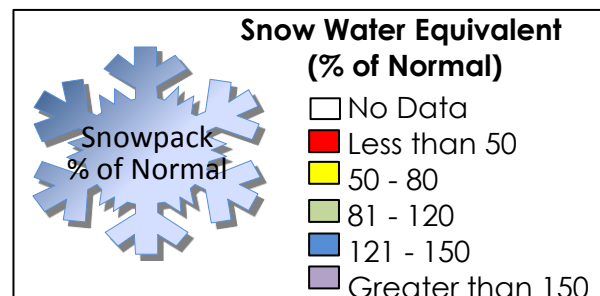
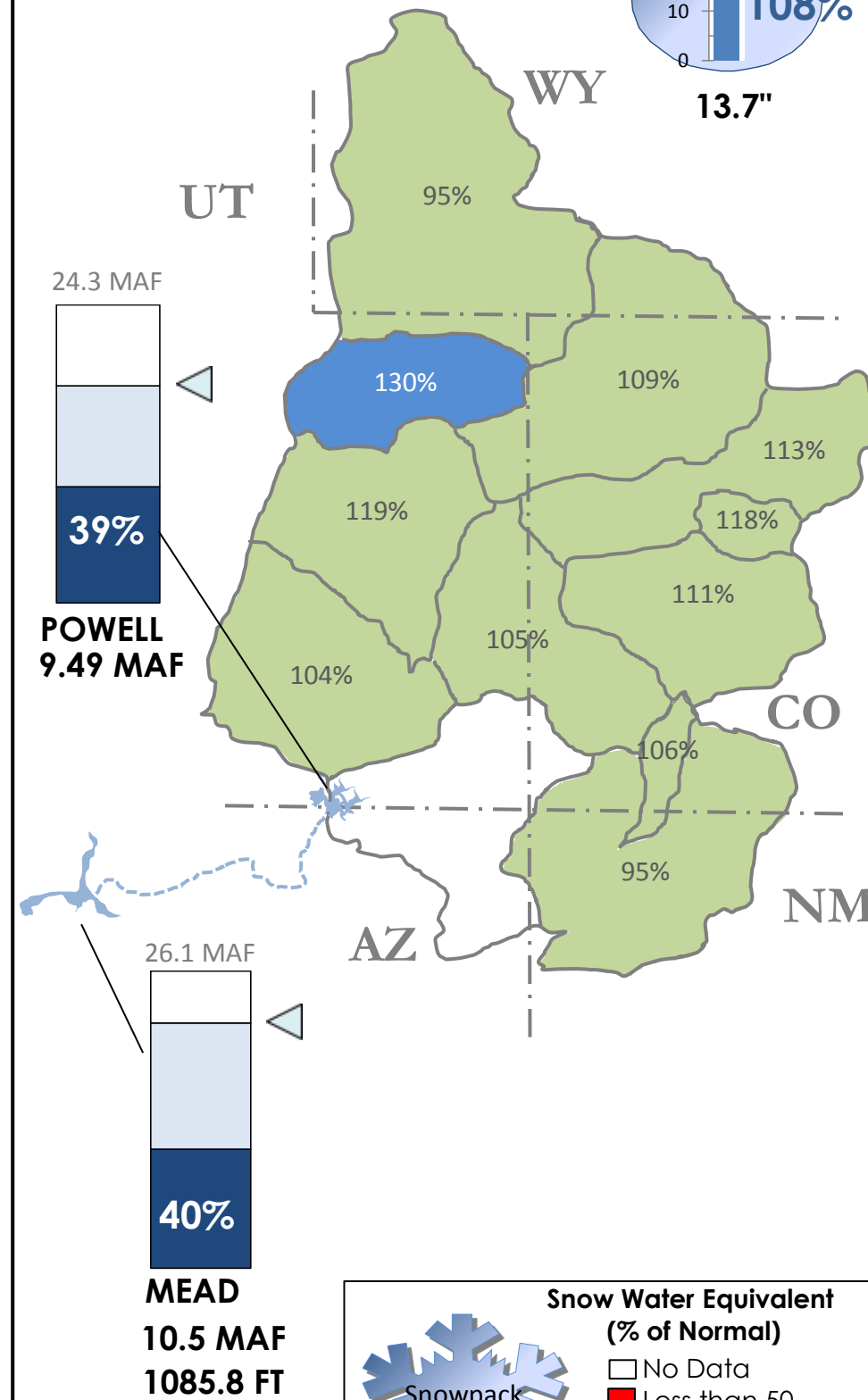
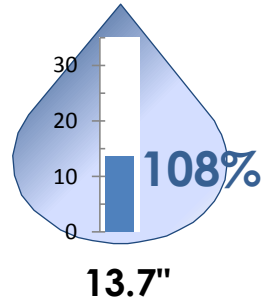


2019 Colorado River

889,231 AF

71% of full CRA

Does not include storage withdrawals



Turn page for more CRA Data

Flip Over for SWP Data

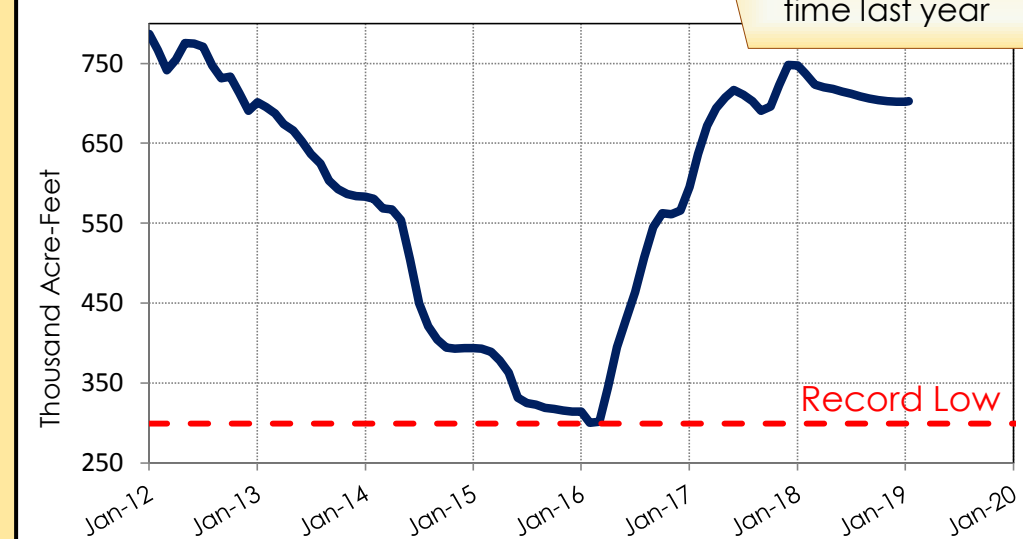
Highlights

- Northern Sierra snowpack is at 112% of normal
- Upper Colorado River Basin snowpack is at 109% of normal
- Southern California precipitation above normal - Los Angeles (169% of normal) and San Diego (158% of normal)

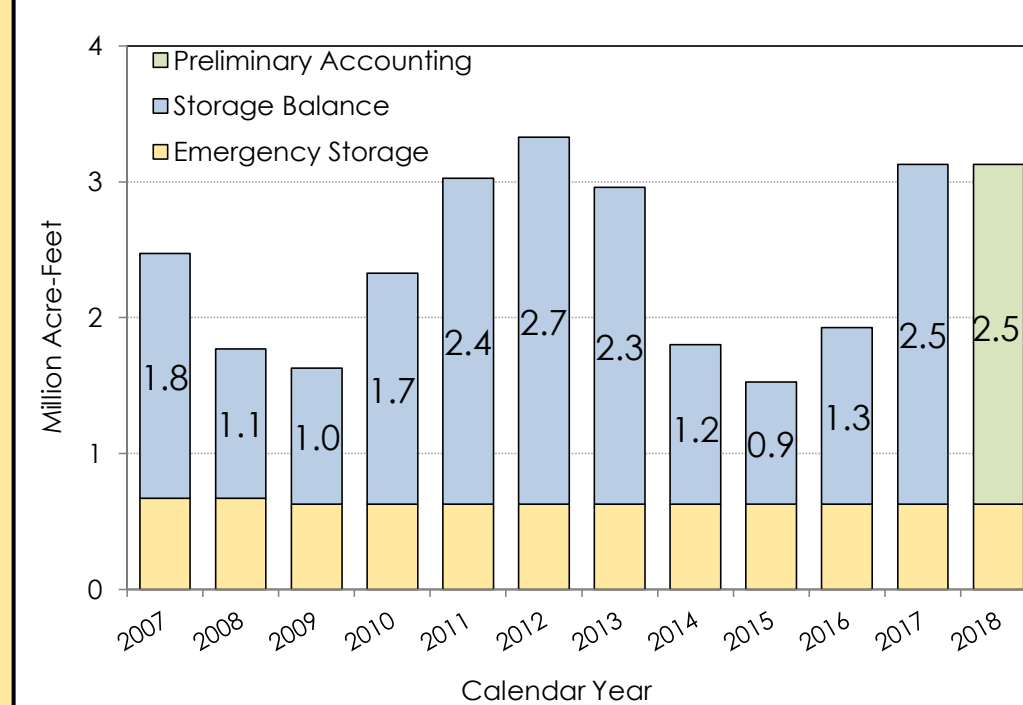
Diamond Valley Lake Storage

Capacity: 810 TAF

43 TAF less in storage than this time last year



MWD Storage Reserve Levels



This report is produced by the Water Resource Management Group and contains information from various federal, state, and local agencies. The Metropolitan Water District of Southern California cannot guarantee the accuracy or completeness of this information. Readers should refer to the relevant state, federal, and local agencies for additional or for the most up to date water supply information. Reservoirs, lakes, aqueducts, maps, watersheds, and all other visual representations on this report are not drawn to scale.

<http://www.mwdh2o.com/WSCR>

This report is best printed double sided on legal size paper (8.5" x 14") and folded in quarters



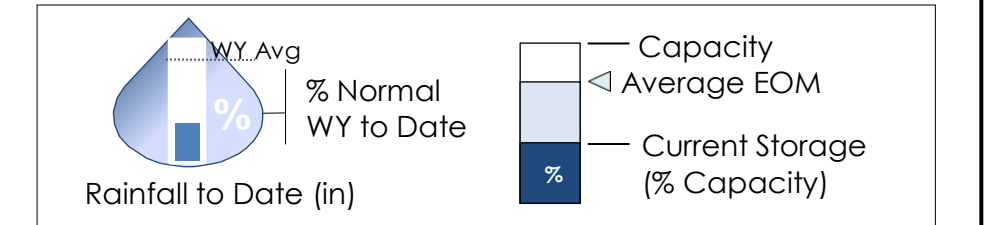
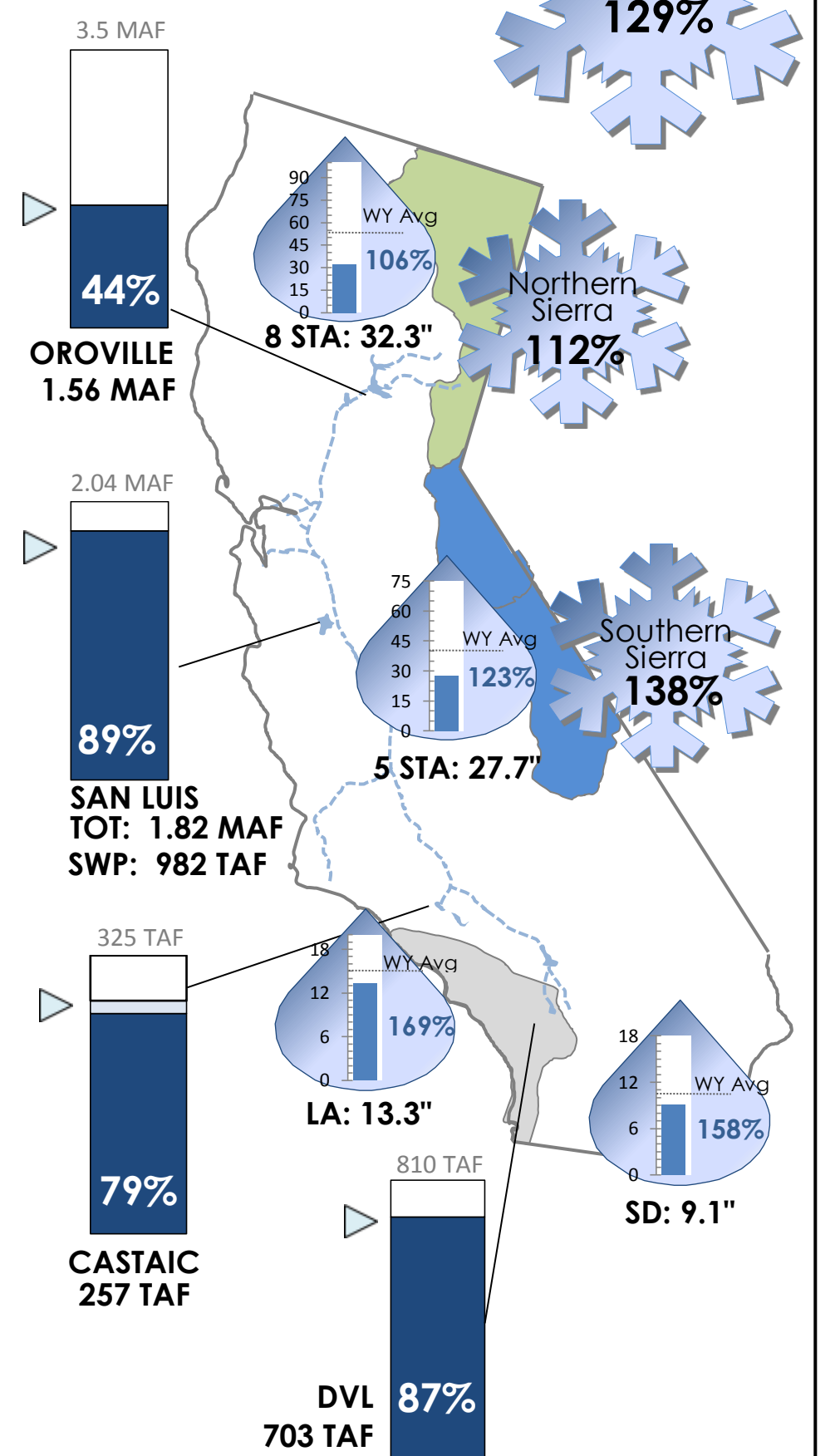
Water Supply Conditions Report

As of: 02/10/2019

2019 SWP Allocation

286,725 AF

15% of Table A



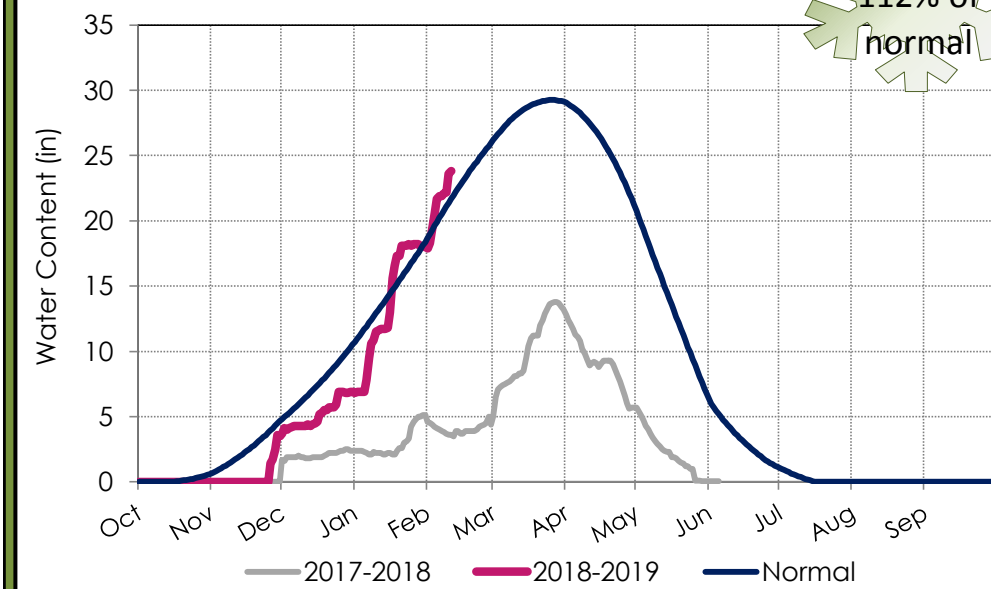
Flip Over for CRA Data

Turn page for more SWP Data

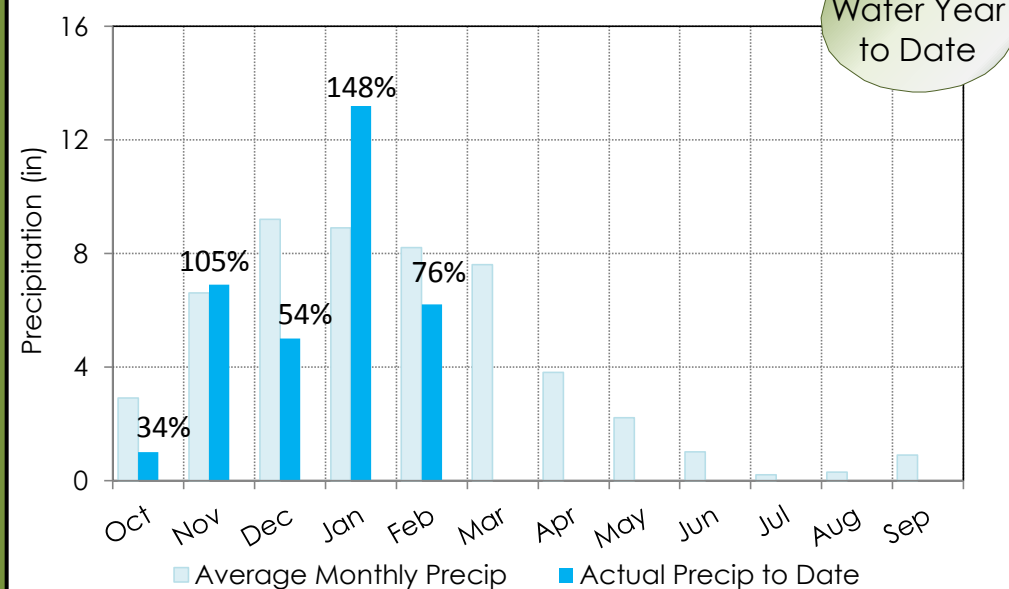
As of: 02/10/2019

State Water Project Resources

Northern Sierra Snowpack

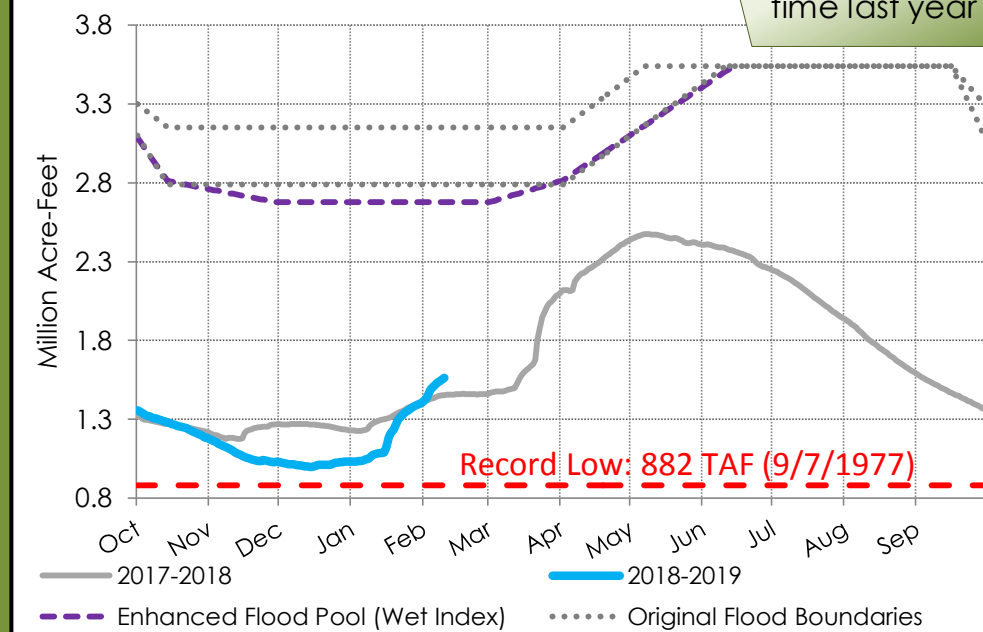


8 Station Index Precip

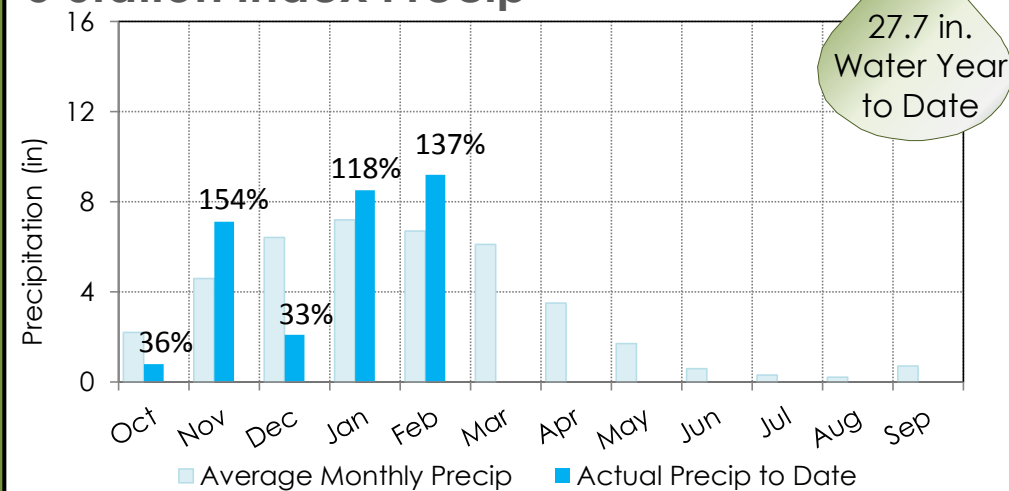


Oroville Reservoir Storage

Capacity: 3.5 MAF



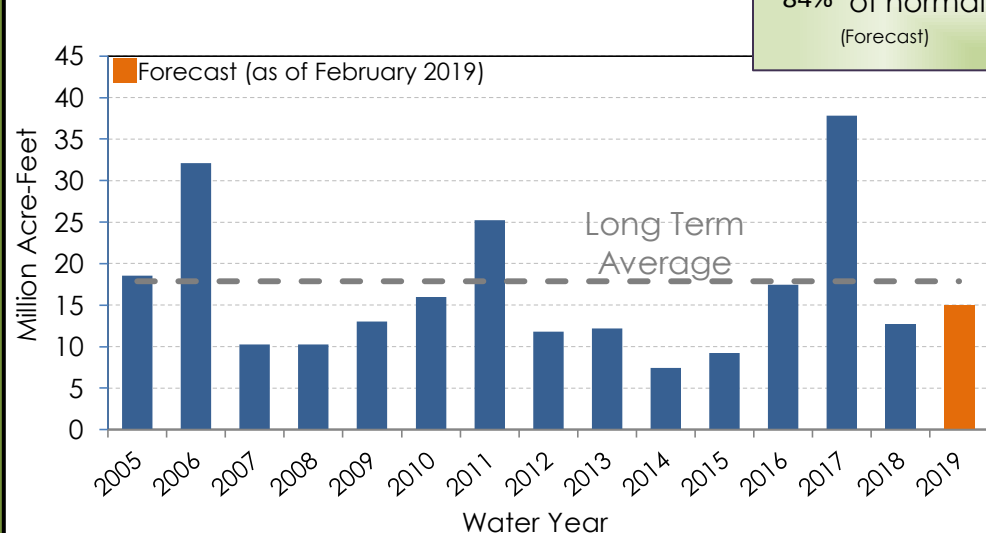
5 Station Index Precip



Other SWP Contract Supplies for 2019 (AF)

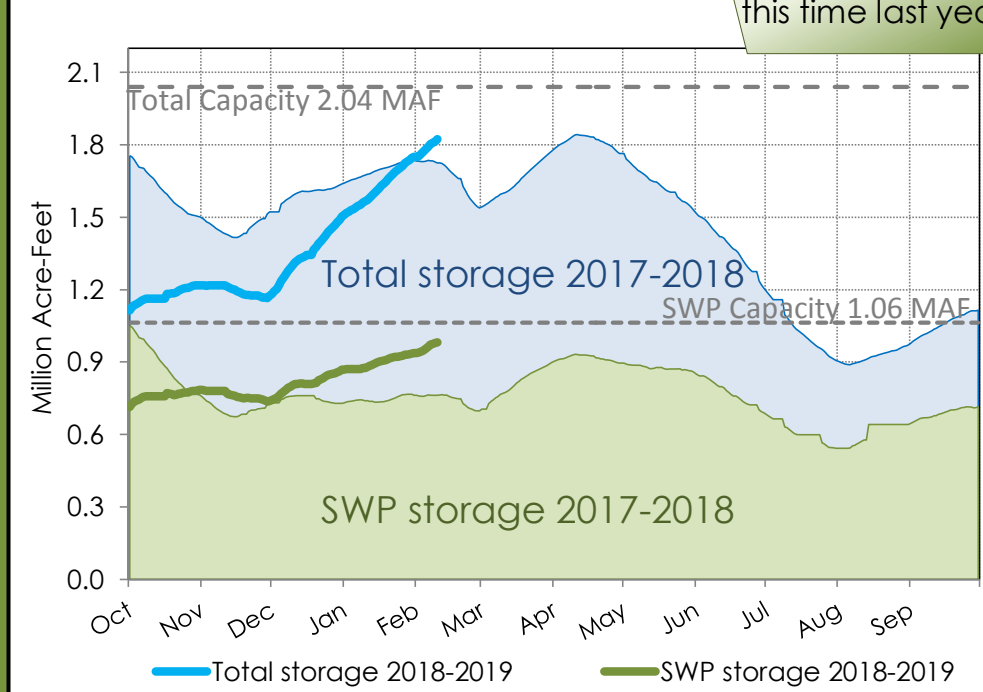
Transfer/Exchanges	TBD
Pool A/B (Purchased)	TBD
Carryover Supplies	256,000

Sacramento River Runoff



San Luis Reservoir Storage

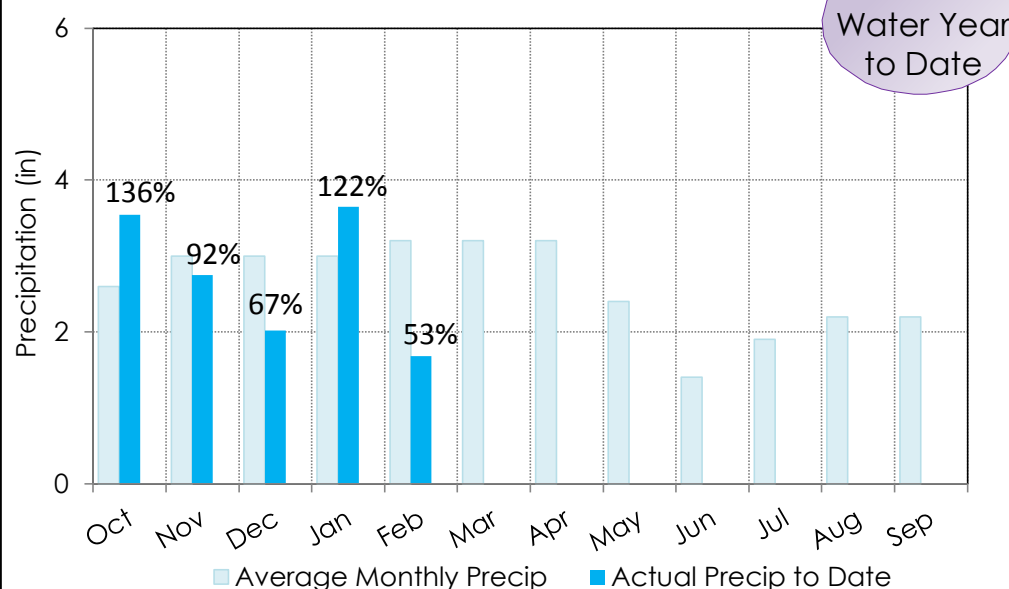
Capacity: 2.04 MAF



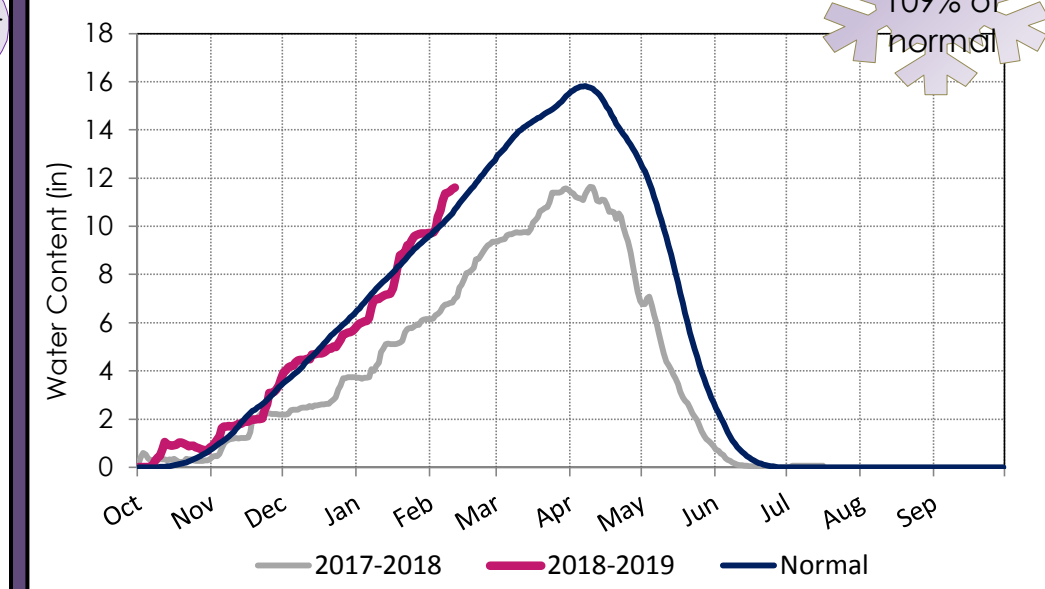
Colorado River Resources

As of: 02/10/2019

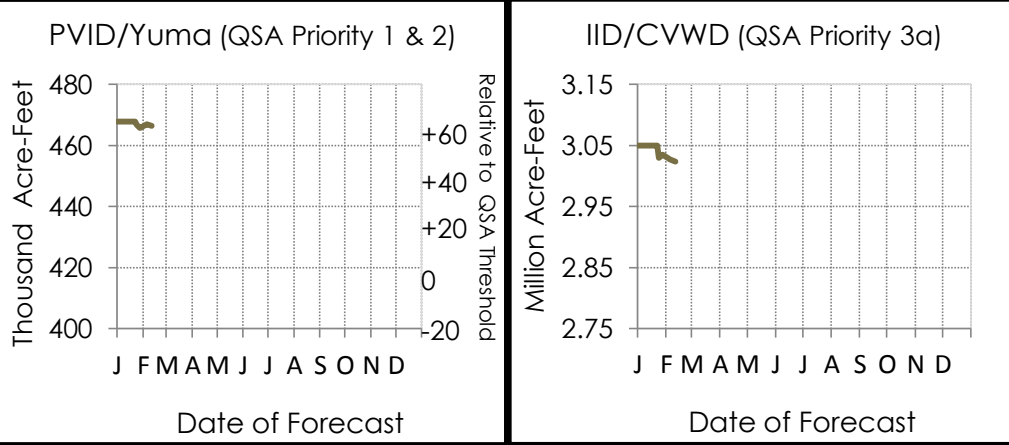
Upper Colorado Basin Precip



Upper Colorado Basin Snowpack

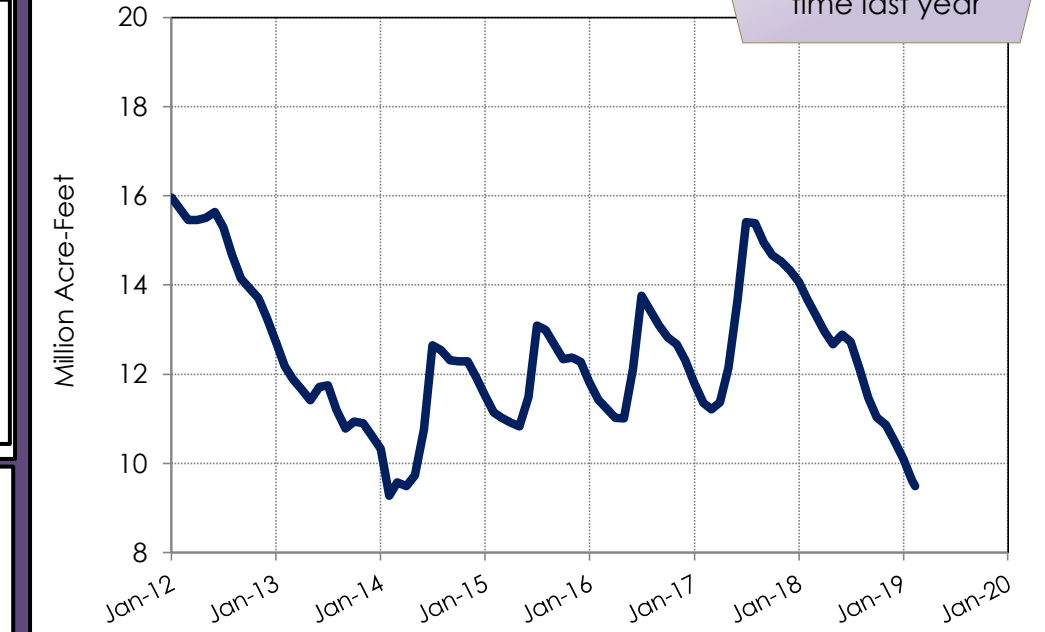


2019 Colorado River Ag Use



Lake Powell Storage

Capacity: 24.3 MAF

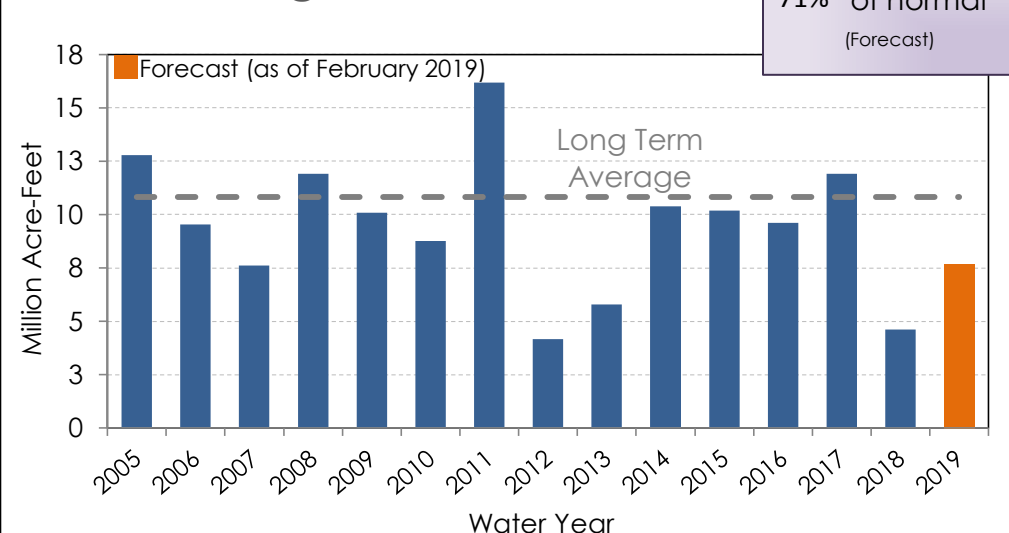


Lake Mead Shortage/Surplus Outlook

	2019	2020	2021	2022	2023
Shortage	0%	69%	82%	81%	79%
Surplus	0%	0%	0%	1%	4%

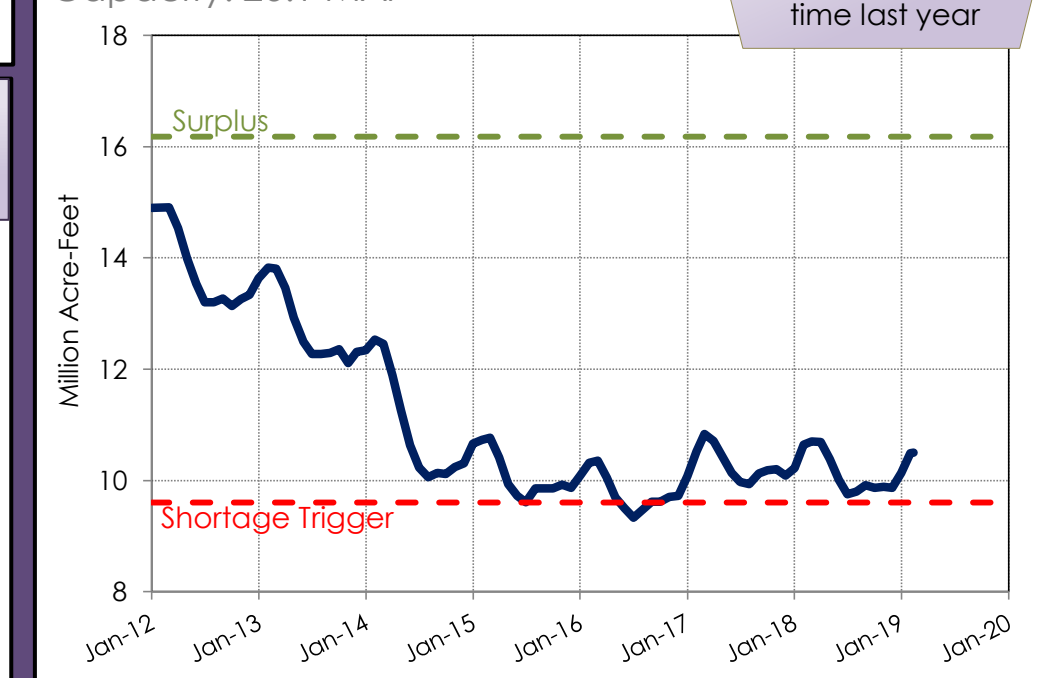
Likelihood based on results from the January 2019 MTOM/CRSS model run.

Powell Unregulated Inflow



Lake Mead Storage

Capacity: 26.1 MAF



WILL SERVE REQUEST STATUS REPORT

(January 2019)

All projects subject to previously issued Will Serve Letters are either Complete or the Will Serve Letter has Expired
(Will Serve Letters Expire One Year from Date of Issuance)

Date Requested	Applicant	Project Description	Type	Location	Status	Date Issued
11/14/17	Laguna Hills Investment Company	Oakbrook Village Bldg. D	ND	24231 Ave. de la Carlota	Issued	12/19/17
1/3/18	PS Business Parks, L.P.	GameCraft Brewing	TI	23301 Ave. de la Carlota	Issued	3/6/18
7/17/18	City of Laguna Woods	A Place for Paws Dog Park	ND	23301 Ridge Route Dr.	Issued	7/25/18
7/17/18	MPVCA Laguna LLC	24022 Calle de la Plata Fire Service	ND	24022 Calle de la Plata Dr.	Issued	8/1/18
11/30/18	Camino Oaks LLC	24191 Paseo de Valencia Fire Service	ND	24191 Paseo de Valencia	Issued	11/30/18

ND = New Development

TI = Tenant Improvement

EL TORO WATER DISTRICT UNAUTHORIZED DISCHARGE SUMMARY YEAR OF 2019

DATE	PUBLIC / PRIVATE	SPILL TYPE	LOCATION	REASON	IMMEDIATE CORRECTIVE MEASURES	PREVIOUS MAINTENANCE		POST-INCIDENT PREVENTIVE MEASURES	RWQCB	DISCHARGED TO	SPILL VOLUME (PUBLIC) Gallons		SPILL VOLUME (PRIVATE) Gallons		REGULATORY NOTIFICATION AND RESPONSE
						CLEANING	TV				CONTAINED	SPILLED	CONTAINED	SPILLED	
January 23, 2019	PUBLIC	Sewer	RES. 23566 Los Adornos Aliso Viejo	Root Intrusion	Ran root cutter in Public Lateral and cut the blockage out.			Tv'd the line and saw it was cleared	9	Grass Yard	3	5			Notified OCEH, RWQCB 9, and City of Aliso Viejo
February 2, 2019	Private	Sewer	Res. 23902 Bough Ave. Mission Viejo	Toliet Paper Blockage	Collections ran a snake in line breaking the blockage. Noticed there was a belly in line, a dip in line where material can collect causing blockages.			Tv'd the line and saw it was cleared that is when the dip in line was discovered	9	Grass Yard	1	1			Notified OCEH, RWQCB 9, and City of Mission Viejo
LEGEND											4	6	0	0	
S.DC = San Diego Creek		RES. = Residential			R.S. = Rocks										
S.D. = Storm Drain		C. = Commercial			C.W.D. = Calcium Water Deposits										
A.C. = Aliso Creek		S.B. = Siphon			B.P. = Broken Pipe										
G.B. = Grease Blockage		P.F. = Power Failure			U.W. = Untreated Water										

Bob Hill

From: SWRCB Office Research, Planning & Performance <drinc@waterboards.ca.gov>
Sent: Thursday, February 14, 2019 9:44 AM
To: Bob Hill
Subject: Monitoring Report Acknowledgement for January 2019

Hello Robert Hill

Thank you for your Monitoring Report. Below is the information you have submitted for the month of January 2019. If this information is incorrect, you can edit the report or re-submit your report for the month with the corrected information. We use your most recently submitted monthly report in our calculations.

Reporter	Robert Hill
Urban Water Supplier(Number)	El Toro Water District (562)
Reporting Month	0119
Stage/Mandatory	None No
Days Outside Irrigation	
Total Potable Water Production	419.69 AF
2013 Same Month Production	543.15 AF
CII Water	62.91 AF
Commercial Agricultural Water	0 AF
Commercial Agricultural Water 2013	AF
Recycled Water	23.64 AF
Non-revenue Water	AF
Residential Use Percentage	321.71 %
Population	48628
Estimated R-GPCD	70
Number Complaints	1
Number Follow-ups	1

Number Warnings	0
Rate Penalties	0
Other Penalties	0
Enforcement Actions	
Actions Taken	
Implementation Comments	
Qualification	

To edit your report click [HERE](#) (After logging in, select the report to edit, click on “Edit”, make your corrections, and click on “Update” when finished)

State Water Resources Control Board Office of Research, Planning & Performance

EI Toro Water District
SWRCB Emergency Drought Regulations
Monthly Urban Water Supplier Reporting/ Tracking

Month	Total Purchases 2013 (AF)	ET 2013	Total Purchases 2015-2019 (AF)	ET 2015-2019	Delta (AF)	Delta %	Residential % of Total 2015-2019	Residential Usage 2015-2019 (AF)	GPCD 2015-2019	RW 2013 (AF)	RW 2015-2019 (AF)
Jun-15	996.66	6.00	773.57	5.73	-223.09	-22%	61.75%	477.68	107	62.62	55.65
Jul-15	1,016.80	5.80	723.00	5.95	-293.8	-29%	60.26%	435.68	94	56.51	87.87
Aug-15	1,042.70	6.55	790.17	6.24	-252.53	-24%	61.06%	482.48	104	49.34	124.29
Sep-15	963.00	5.26	663.40	4.96	-299.6	-31%	63.32%	420.06	94	46.06	101.44
Oct-15	811.60	3.92	613.70	3.86	-197.9	-24%	61.46%	377.18	82	25.45	90.39
Nov-15	684.20	2.51	528.90	3.26	-155.3	-23%	64.97%	343.63	77	16.87	58.30
Dec-15	593.20	2.49	430.70	2.36	-162.5	-27%	67.92%	292.53	63	15.55	32.44
Jan-16	543.15	2.53	417.00	1.89	-126.15	-23%	75.41%	314.46	68	13.00	23.43
Feb-16	502.41	2.89	455.20	3.83	-47.21	-9%	74.80%	340.50	79	18.35	55.08
Mar-16	736.34	4.06	474.45	3.99	-261.89	-36%	70.86%	336.20	73	35.55	52.33
Apr-16	825.00	4.82	526.00	5.15	-299	-36%	71.43%	375.72	84	53.97	105.24
May-16	874.56	5.97	621.70	4.65	-252.86	-29%	67.21%	417.84	90	62.80	133.64
Jun-16	996.66	6.00	731.50	5.81	-265.16	-27%	66.57%	486.96	109	62.62	172.45
Jul-16	1,016.80	5.80	770.10	6.78	-246.7	-24%	67.21%	517.56	112	56.51	195.68
Aug-16	1,042.70	6.55	753.50	5.96	-289.2	-28%	64.76%	488.00	105	49.34	198.34
Sep-16	963.00	5.26	672.80	4.50	-290.2	-30%	65.56%	441.09	99	46.06	160.69
Oct-16	811.60	3.92	600.30	3.23	-211.3	-26%	65.59%	393.77	85	25.45	110.38
Nov-16	684.20	2.51	524.60	2.76	-159.6	-23%	69.16%	362.81	81	16.87	80.81
Dec-16	593.20	2.49	429.60	1.91	-163.6	-28%	71.19%	305.82	66	15.55	49.90
Jan-17	543.15	2.53	357.22	1.99	-185.93	-34%	78.25%	279.51	60	13.00	27.75
Feb-17	502.41	2.89	341.84	1.77	-160.57	-32%	79.10%	270.39	65	18.35	21.00
Mar-17	736.34	4.06	544.19	4.27	-192.15	-26%	77.34%	420.88	91	35.55	88.91
Apr-17	825.00	4.82	634.95	5.17	-190.05	-23%	69.72%	442.66	99	53.97	146.88
May-17	874.56	5.97	669.86	4.70	-204.7	-23%	67.16%	449.91	97	62.80	170.35
Jun-17	996.66	6.00	734.87	5.25	-261.79	-26%	67.01%	492.44	110	62.62	168.67
Jul-17	1,016.80	5.80	849.65	6.34	-167.15	-16%	65.31%	554.91	120	56.51	206.55
Aug-17	1,042.70	6.55	829.15	6.13	-213.55	-20%	64.21%	532.43	115	49.34	201.74
Sep-17	963.00	5.26	684.25	4.80	-278.75	-29%	64.06%	438.35	98	46.06	157.58
Oct-17	811.60	3.92	731.30	3.57	(80.30)	-10%	66.20%	484.11	105	25.45	144.70
Nov-17	684.20	2.51	548.66	2.36	-135.54	-20%	66.12%	362.75	81	16.87	79.64
Dec-17	593.20	2.49	646.24	3.26	53.04	9%	69.45%	448.82	97	15.55	105.69
Jan-18	543.15	2.53	481.56	2.38	-61.59	-11%	71.74%	345.48	75	13.00	59.07
Feb-18	502.41	2.89	529.34	3.12	26.93	5%	71.59%	378.95	91	18.35	92.01
Mar-18	736.34	4.06	526.15	3.72	(210.19)	-29%	71.90%	378.33	82	35.55	43.98
Apr-18	825.00	4.82	638.39	4.82	(186.61)	-23%	72.66%	463.88	104	53.97	140.30
May-18	874.56	5.97	630.76	3.80	(243.80)	-28%	66.48%	419.30	91	62.80	129.23
Jun-18	996.66	6.00	778.62	6.29	(218.04)	-22%	66.04%	514.17	115	62.62	180.46
Jul-18	1,016.80	5.80	847.99	7.42	(168.81)	-17%	66.13%	560.76	121	56.51	215.87
Aug-17	1,042.70	6.55	834.68	6.85	(208.02)	-20%	63.16%	527.21	114	49.34	233.30
Sep-18	963.00	5.26	724.38	5.21	(238.62)	-25%	63.93%	463.07	103	46.06	171.40
Oct-18	811.60	3.92	670.25	4.04	(141.35)	-17%	62.97%	422.09	91	25.45	105.58
Nov-18	684.20	2.51	528.64	3.17	(155.56)	-23%	65.60%	346.77	77	16.87	86.52
Dec-18	593.20	2.49	442.99	2.07	(150.21)	-25%	71.88%	318.40	69	15.55	21.47
Jan-19	543.15	2.53	419.69	2.30	(123.46)	-23%	76.65%	321.71	70	13.00	23.64
Total	35,420.17	193.46	27,125.81	187.62	-8294.36	-23%	68.07%	18,247.26	91	1,653.61	4,910.63

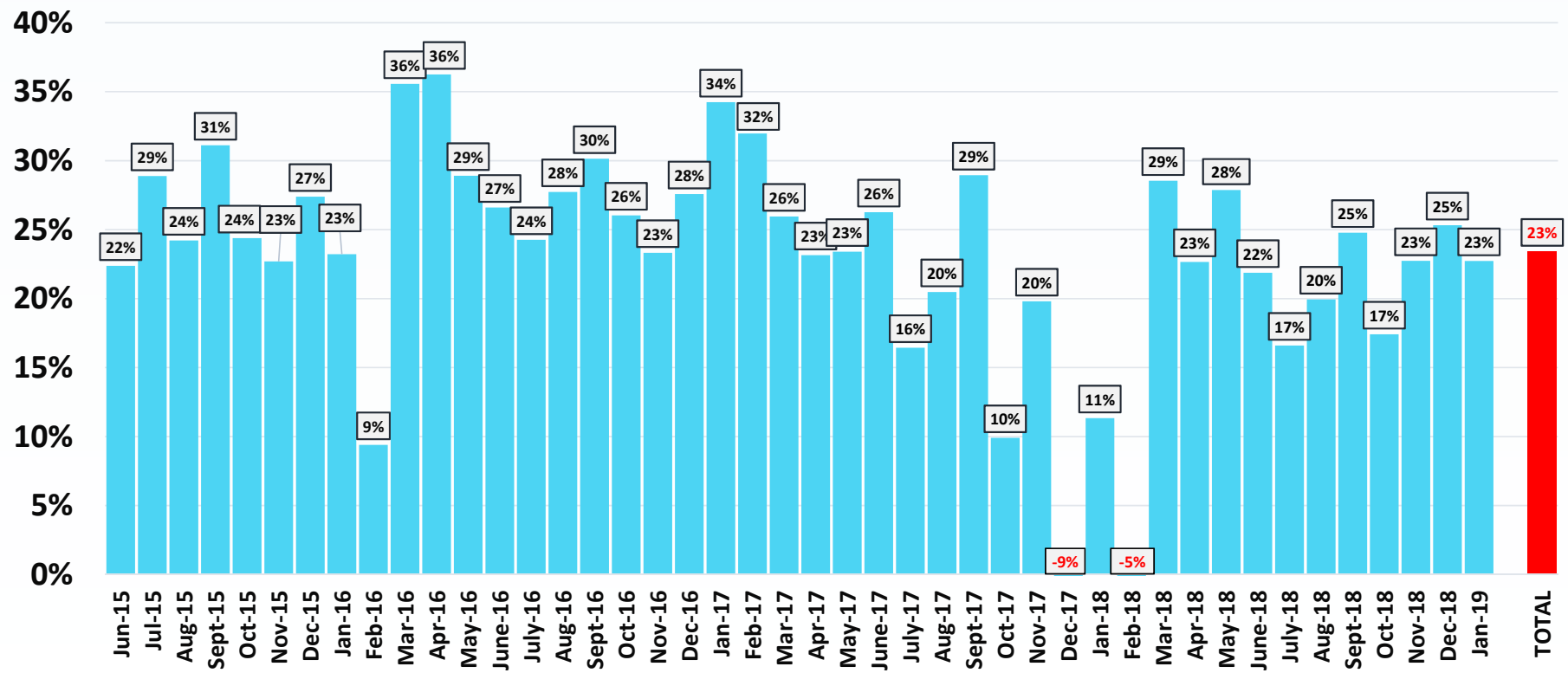
(WRP) Tertiary Treatment Plant

Jan-19

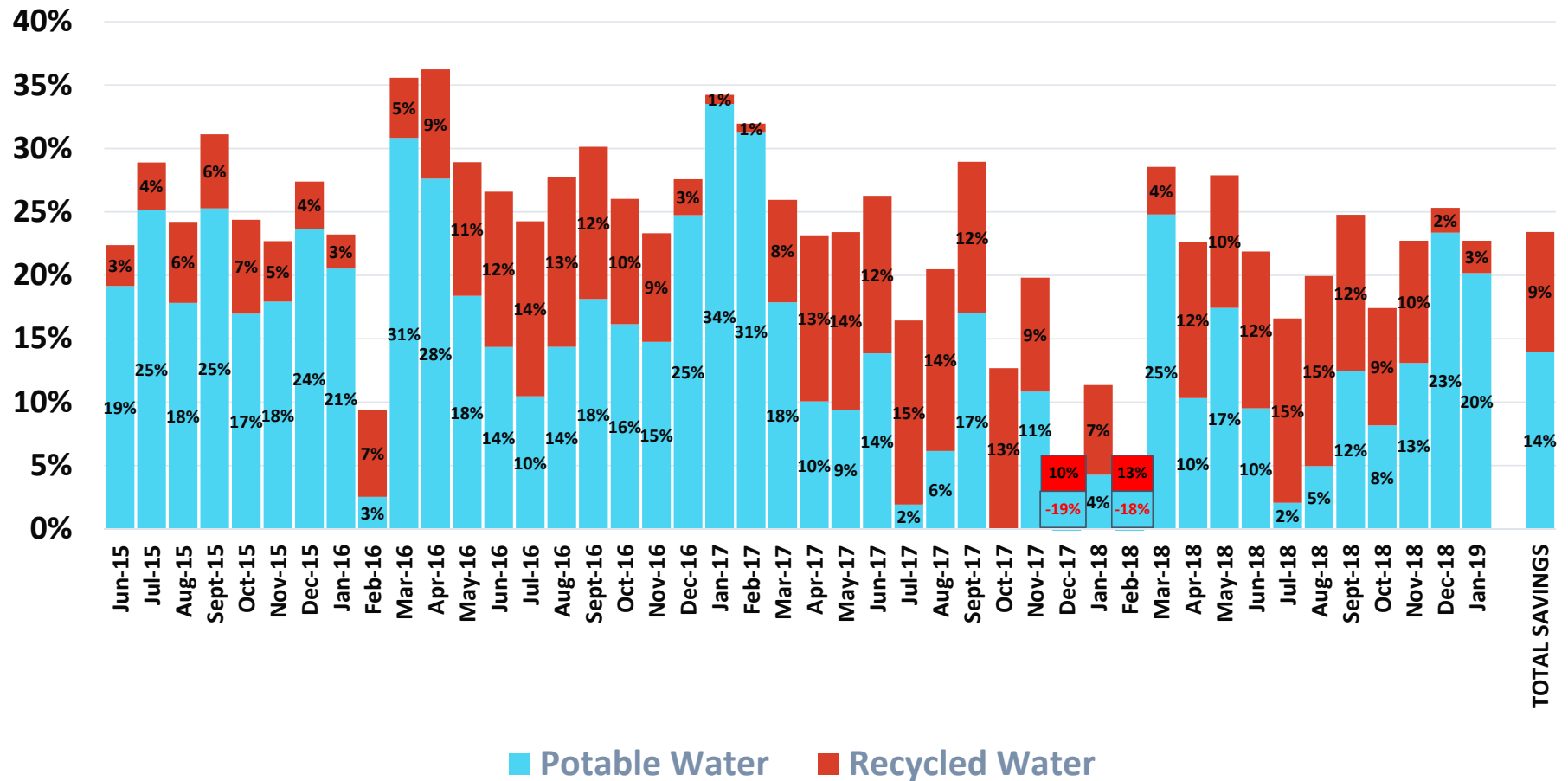
Total Recycled Water Production

Flow, Units	G.C. Irrigation	Main Distribution	WRP Irrigation/Utility	Total, Production
Avg. Daily Q MGD	0.044	0.146	0.058	0.248
Total Q MG	1.377	4.527	1.800	7.704
Total Acre Feet	4.226	13.893	5.524	23.643
* No Potable Water Was Used to Supplement the Recycled Water Total Production this Month				

ETWD WATER SAVINGS COMPARED TO 2013



ETWD WATER SAVINGS COMPARED TO 2013



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*Municipal Water District of Orange County, California
Washington Update
February 12, 2019*

Washington is still reeling from the longest federal shutdown in history as federal workers have returned to work after being absent for some five weeks.

As this report is being written, key House and Senate Appropriators came to a tentative funding agreement last night on the remaining seven spending bills to fund the federal government through September 30th. The current funding authority expires at midnight, Friday night, February 15th.

The deal under consideration would include \$1.38 Billion for an additional 55 miles of a physical barrier along the Southern Border. Previously, President Trump had requested \$5.7 Billion for such a barrier.

The funding bill is being written today and is likely to be finished later this evening or tomorrow.

The President has criticized the agreement and hasn't indicated if he will sign it or not.

It has been widely believed that the President would not be able to receive the \$5.7 Billion for the border wall from the Conference Committee and, as a result, he was likely to consider either declaring a "National Emergency" or use "Executive Order" powers to trigger the re-programming of existing federal funds to build a wall or a fence.

If done by an Executive Order the plan would allow the Administration to move money from different budgetary programs and accounts without Congressional approval. And politically,

the Executive Order procedure would not require the very controversial National Emergency Declaration.

There have been discussions in Washington that the White House may seek to move funds appropriated for Army Corps of Engineers flood control projects in Northern California as well as other disaster relief funds for different parts of the country to build a Southern barrier structure. There would be other unnamed accounts also used to build a barrier wall.

At the present time we don't know what other accounts the White House is looking at; we only know it is looking for different pots of money to use for Homeland Security purposes.

The relevance of this discussion is there are several MWDOC Member Agencies who have applied for various federal grants—and the grant funds that have been budgeted for various kinds of water infrastructure as well as other federal grant programs throughout the federal government-- may possibly be targeted for Homeland Security purposes. We are monitoring this issue closely.

The Colorado River Drought Contingency Plan:

The Bureau of Reclamation has issued a new deadline of March 4th for the seven states to come to a consensus on a plan. The Imperial Irrigation District, the largest water user on the Colorado River, won't sign off on a deal until it receives more resources to manage the Salton Sea. They are seeking a \$200 Million in federal funds from National Farm Bill for projects at the Salton Sea. If no agreement can be reached, the Bureau of Reclamation will step in and make key management decisions regarding the Colorado River system.

Wildfire Funding:

No long-term wildfire disaster relief measure for California has been signed into law. Since our last conference call, the House passed a measure on January 16th that included long-term disaster relief in the amount of approximately \$12 Billion (for wildfire and hurricanes) but that bill was never considered by the Senate during the shutdown period.

The current CR that reopened the government through February 15th was essentially a clean CR and it did not have any significant relief aid included.

It has been widely reported that the conference report that is being prepared by the bipartisan conference committee this week will include major disaster relief aid which is considered as mostly non-controversial.

Infrastructure Bill in the New Congress:

Congressman Peter DeFazio (D-Ore.), the incoming Chairman of the House Transportation and Infrastructure Committee, held a daylong hearing on Infrastructure Issues last week. He plans to have his committee hold several hearings on the issue and plans to craft some form of Infrastructure Bill later this year. The vexing issue that has yet to be resolved—how to pay for an ambitious national infrastructure bill –which would also include water infrastructure.

JCB 2/12/19



Memorandum

To: Municipal Water District of Orange County
From: Syrus Devers, Best Best & Krieger
Date: February 19, 2019
Re: Monthly State Political Report

Legislative Report

In General

The Legislature continues its march toward the bill introduction deadline of February 22nd. As of the date this report was prepared approximately 800 bills have been introduced, which is not quite the anticipated halfway. In other words, over half the bill that will eventually be introduced will be put across in the new week. No significant legislation related to water policy has been set for a hearing as of yet. BB&K will give an update at the hearing on rumored legislation, including the return of Senator Hertzberg's ban on ocean outfalls from water treatment plants.

The Budget Subcommittees, however, have started setting key budget items for hearing. Most importantly, the SWRCB and the DWR budgets are up on March 6th and 7th in the Assembly and Senate, respectively. The trailer bill on the water tax will not be ultimately determined at that time, but the SWRCB's comments and the member's questions will be of obvious interest to all parties.

Tax on Water

The Assembly Water, Parks & Wildlife Committee, the Environmental Safety and Toxic Substances Committee, and the Assembly Budget Subcommittee #3 held a joint informational hearing on February 6th on "Implementing Safe Drinking Water". The lead witness was the recently appointed head of the Natural Resources Agency Wade Crowfoot. The list of speakers was weighted in favor of the water tax, but little if any new information was presented by proponents. Cindy Paulson from the California Urban Water Agencies and EMWD's Paul Jones closed the panel discussions with well-informed presentations on the scope of the problem and details about what solutions need to look like. As is usually the case, both the committee room and public gallery section were overcrowded and the line of witnesses stretched out of the room, around two corners, and down a long hall.



BEST BEST & KRIEGER
ATTORNEYS AT LAW

As this was only an informational hearing, the real action was elsewhere. The administration, as explained below, has launched a public relations campaign while the opponents have been focused on office meetings. BB&K and MWDOC staff have been directly involved in those meetings, but have refrained from expressing support or opposition for legislation that the Board has not yet seen, but have expressed support for the concepts in the forthcoming CMUA and ACWA sponsored legislation. The effort so far has been impressive. In addition to IRWD doing the majority of the work drafting the legislation, it has worked with the co-sponsor, the California Municipal Utilities Association, on an impressive rollout of the proposal including coordinated introductions in both houses by Senator Caballero and Assembly Member Daly. ACWA is coordinating the lobbying effort to make sure no offices get overlooked.

Administrative Report

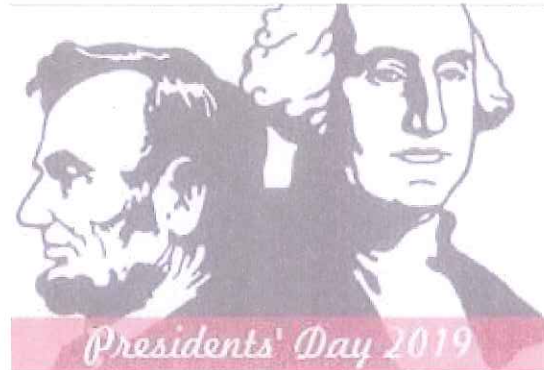
The big news is the Governor's State of the State address. Nothing he said was new, but the fact that he said it in his first address to the Legislature makes it news. The two most relevant items were his support for the water tax, which was included in his proposed budget released last month, and his opposition to the two-tunnel WaterFix proposal in favor of a single tunnel, which he publically stated before he was elected. Perhaps the only new information was his acknowledgment that his support for a single tunnel was based on the political perception of MWD, whereas in the past he has been silent on his reasoning.

In one sense nothing has changed; the battle lines drawn months ago have not moved and both sides have been actively pursuing their agendas. In another sense there has been a change in perception, which matters in politics. Newsom has made clear he's not looking for any quarter and the battle now becomes very public. Regarding the WaterFix he holds all the cards. It would take continued attention and resources to bring the twin tunnels to completion, so he wins simply by withholding his support, but he went well beyond that.

Newsom also replaced Felicia Marcus as Chair of SWRCB with Joaquin Esquivel, and appointed Laurel Firestone to her seat. Esquivel was the board member who appeared in support of the water tax at an informational hearing last year, and Firestone was, of course, the lead proponent of the water tax. With these two moves, Newsom has shifted the SWRCB's focus to the water tax and away from the WaterFix.

The County of Orange Report

February 12, 2019
by Lewis Consulting Group



The Free World Awaits San Juan Capistrano Decision

Well, at least the Moulton Niguel, South Coast and Santa Margarita Water Districts are! At their February 5, 2019 meeting, the San Juan Capistrano City Council heard presentations from the three districts; who would each like to assume control and maintenance of the city water utility.

The next city council meeting is February 19th, at which time the city might vote which district to begin exclusive negotiations with. In the meantime, LAFCO, which has already completed a study waits in the wings to review the selection.



LAFCO FINALLY to Meet

After the cancellation of its December and January meetings, LAFCO appears ready to make up for lost time. The February 13th meeting (which is 1 day after our print deadline) features a long list of agenized items, including:

- discussion relative to the appointment process for expired terms and its vacant seat
- an update on current professional services agreements
- special recognition of outgoing Commissioner Todd Spitzer
- a mid-year update on their FY 2018-2019 Work Plan
- election of 2019 LAFCO Officers

Also, the 2019 Strategic Plan has been set for March 13, 2019 at the OCTA Conference Room 8.

Supervisor Race Takes Shape

In the election contest to succeed Todd Spitzer for 3rd District Supervisor, voting has been underway since February 11, culminating with the March 12th Special Election.

The candidates are:

Retired	Larry Bales
Orange County Business Owner	Kris Murray
Educator/Businesswoman	Loretta Sanchez
Small Business Owner	Katherine Daigle
Businesswoman	Deborah Pauly
Mayor of Irvine	Don Wagner
Attorney/Businesswoman/Mother	Kim-Thy "Katie" Hoang Baliss



With the exception of Katherine Daigle, all candidates paid for a candidates ballot statement. With the field comprised of six Republicans and one Democrat, the math seems to favor former Democrat Congresswoman Loretta Sanchez.

In recent weeks, numerous surveys have been conducted. The surveys imply that at the present time it is essentially a two person contest between Loretta Sanchez and Don Wagner. Sanchez has a small to moderate lead in each survey with all other candidates mired in single digits.



3-1 Board Split Already Apparent

With the election of the Board's first Democrat in recent years, Doug Chaffee, it's already clear what the major fight will entail as democrats attempt to increase their number. The looming battle based on Supervisor Chaffee's actions so far will be over outsourcing. The few times the new Supervisor has questioned or broken ranks with his colleagues is over who is best suited to

perform certain tasks for the County, County employees or contracted private sector companies? Because the Orange County Employees Association is heavily vested in the fight to retain as many County employees as possible, look for this issue to be a major fight over the years to come.

The Blue Wave . . . Board of Supervisors Next?

With Loretta Sanchez holding the current polling lead in the 3rd District Supervisor Special Election, look to 2020 to be the battle royale over party domination of the Board. Whether Loretta Sanchez or someone else wins this Special Election, they will need to prepare quickly for a March 2020 re-election re-match. The March date is important because with a spirited Democrat Presidential primary fight, turn-out could help

Democrats win outright in the March contest. A candidate with 50% +1 can avoid a November run-off.

In addition to the 3rd District Supervisor race, Supervisor Andrew Do will have a tough re-election fight on his hands as Santa Ana Mayor Miguel Pulido prepares to run against him. Pulido has served on the Santa Ana City Council since 1986 and has served as Santa Ana Mayor since 1994. An election sweep of Sanchez and Pulido would create a 3-2 Democrat Board majority.



PPIC Poll

California Still Deep Blue

The latest survey released by the Public Policy Institute of California [PPIC], corroborates the 2018 Democrat election landslide in California.

In recent decades California has moved decidedly to the left and Republicans will soon qualify for "endangered species" recognition.

Californians are apparently happy with our new Governor Gavin Newsome, who enjoys a 44%-

23% approval rating and must not be worried about legislative super majorities for Democrats given that by a 55%-40% margin they believe things in California are headed in the right direction. When described details of Governor Newsome's budget, 70% generally favor compared to 22% in opposition.

Although 61% of respondents still believe passage of the Property Tax Limitation, Proposition 13, in 1978 turned out to be mostly a good thing, a plurality 47%-43% favor deleting Proposition 13's tax limitation for commercial property. The passage of what is called a "split roll" would result in \$6-10 billion a year in new tax revenue.

Those surveyed listed the following as the most important issues facing California today:

- 15% Immigration / illegal immigration
- 11% Education school teachers
- 10% Jobs / economy
- 8% Environment pollution / Global Warming
- 6% Homelessness
- 5% Government in general, problems with elected officials
- 5% Health care / health insurance
- 5% Housing costs availability
- 5% State budget / deficit / taxes
- 4% Infrastructure
- 3% Crime gangs drugs
- 2% Water / drought
- 21% Other / don't know

On the national front, Californians approve of the job being done by Speaker Nancy Pelosi 48%-39%. However, President Trump does not fare as well with only 30% approval while 67% disapprove.

More respondents declared themselves as either very liberal 14% or somewhat liberal 22% than very conservative 11% or somewhat conservative 20%. 49% of those surveyed think of themselves closer to the Democratic Party compared to 24% choosing the GOP.

The survey of 1,707 adults yields a margin of error of +/- 3.3%. The survey was conducted January 20-29, 2019.

California Drought-ing - Going, Going, GONE!

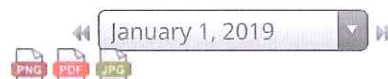
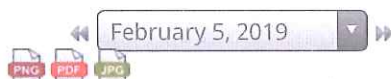
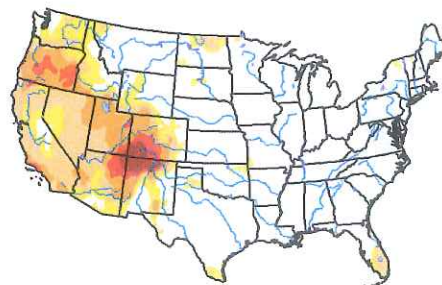
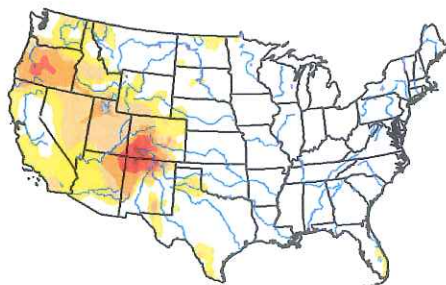
All the hills are white and the skies are grey (apologies to the Mamas & Papas).

One winter storm after another has smashed down the California drought. In less than a month, drought busting rain and snow changed the drought monitor's analysis from a state that was mostly in drought (although a weak level) to a state that is mostly drought free or just abnormally dry.

Area type: National
Area: Continental U.S. (CONUS)
Statistics type: Cumulative Percent Area

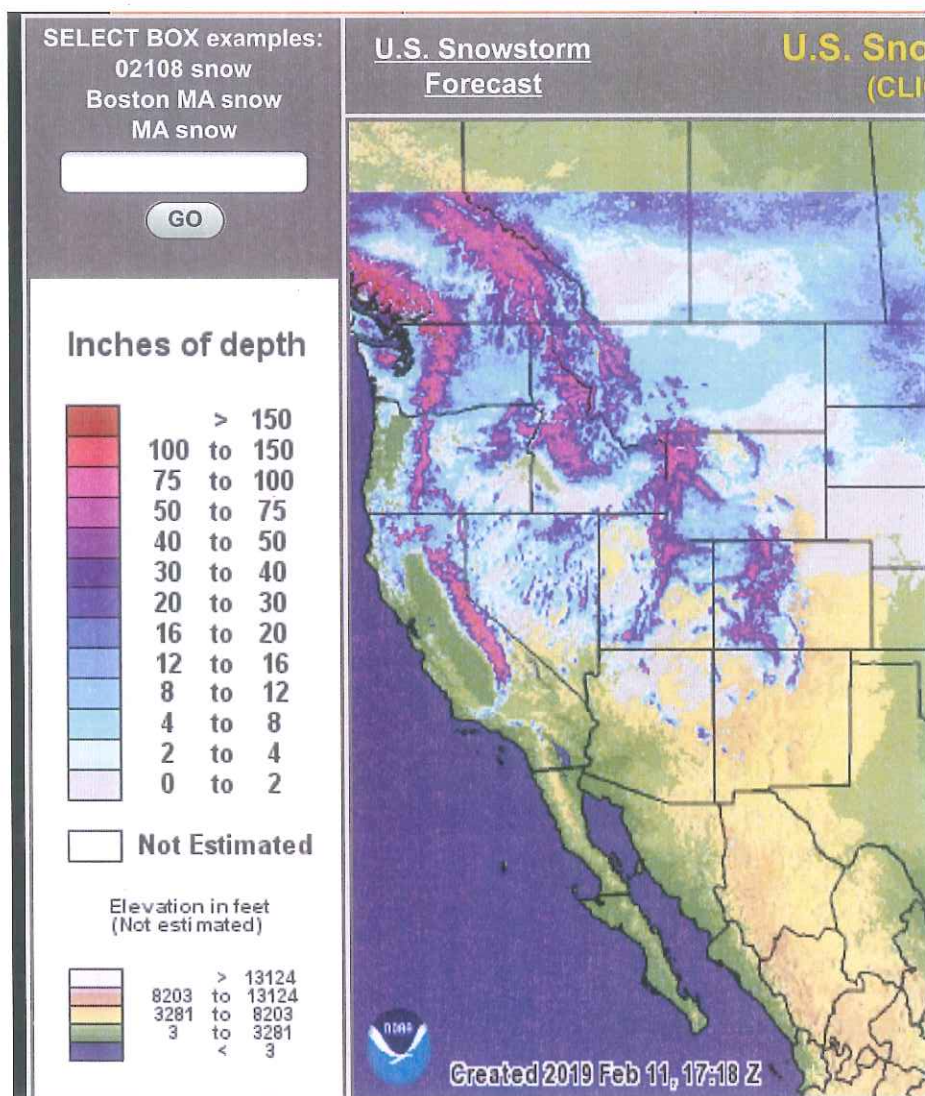
Drought Classification

None D0 (Abnormally Dry) D1 (Moderate Drought) D2 (Severe Drought)
D3 (Extreme Drought) D4 (Exceptional Drought)



The latest Drought Monitor does not include the update released Thursday, February 14, 2019, where even more improvement is anticipated. As we go to print, a new winter storm is expected to dump an additional five feet of snow in some parts of the Sierras. In a few months, Spring snow melt and flooding may be our new big concern.

There's Snow in Them Thar Hills!



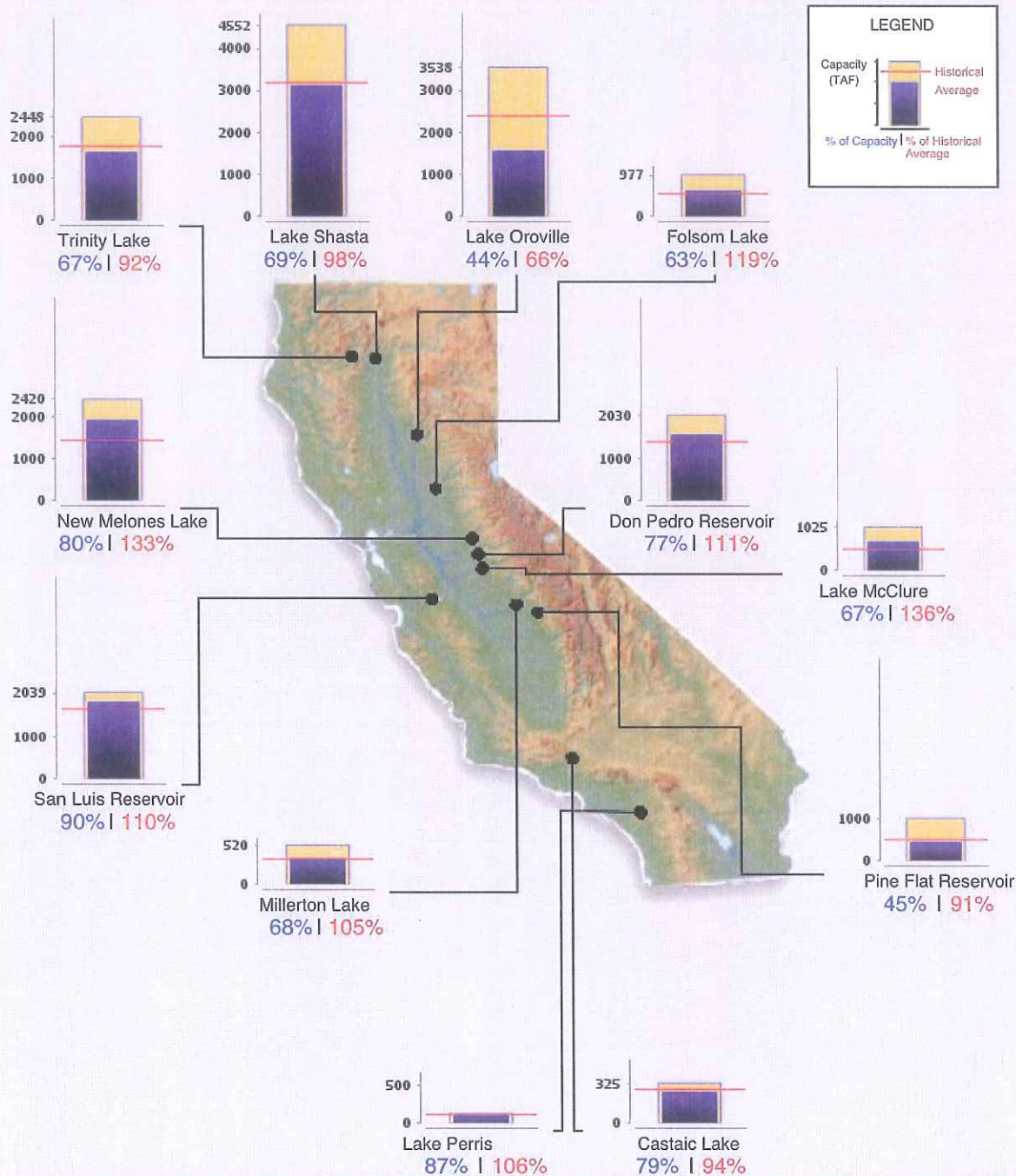
The latest U.S. Snow Cover Maps confirm the good news for both the Sierras and the Rocky Mountains. Hopefully, Colorado River lakes will finally begin to recover.



Reservoir Conditions

Ending At Midnight - February 11, 2019

CURRENT RESERVOIR CONDITIONS



Municipal Water District of Orange County

Item No. 1e

Bill Matrix
Prepared by Best Best & Krieger
February 19, 2019

Measure	Author	Topic	Status	Location	Brief Summary	Position	Priority	Notes 1
AB 129	Bloom D	Waste management: plastic microfiber.	1/7/2019- Read first time.	12/4/2018-A. PRI NT	Would declare the intent of the Legislature to, among other things, enact legislation to recognize the emerging threat that microfibers pose to the environment and water quality and would make related findings and declarations.	Out for Analysis	B. Watch	
AB 134	Bloom D	Safe, clean, affordable, and accessible drinking water.	1/7/2019- Read first time.	12/5/2018-A. PRI NT	Would state findings and declarations relating to the intent of the Legislature to adopt policies to ensure that every Californian has the right to safe, clean, affordable, and accessible drinking water.	Out for Analysis	A. Priority Support/ Oppose	
AB 217	Garcia, Eduardo D	Safe and Affordable Drinking Water Fund.	2/4/2019- Referred to Com. on E.S. & T.M.	2/4/2019-A. E.S. & T.M.	Would establish the Safe and Affordable Drinking Water Fund in the State Treasury and would provide that moneys in the fund are available, upon appropriation by the Legislature, to the board to provide a stable source of funding to secure access to safe drinking water for all Californians, while also ensuring the long-term sustainability of drinking water service and infrastructure.	Watch	A. Priority Support/ Oppose	
AB 223	Stone, Mark D	California Safe Drinking Water Act: microplastics.	2/4/2019- Referred to Com. on E.S. & T.M.	2/4/2019-A. E.S. & T.M.	The California Safe Drinking Water Act requires the State Water Resources Control Board to administer provisions relating to the regulation of drinking water to protect public health. Current law requires the state board, on or before July 1, 2020, to adopt a definition of microplastics in drinking water and, on or before July 1, 2021, to adopt a standard methodology to be used in the testing of drinking water for microplastics and requirements for 4 years of testing and reporting of microplastics in drinking water, including public disclosure of those results. This bill would require the state board, to the extent possible, and where feasible and cost effective, to work with the State Department of Public Health in complying with those requirements.	Out for Analysis	A. Priority Support/ Oppose	
AB 292	Quirk D	Recycled water: raw water and	2/7/2019- Referred to Coms.	2/7/2019-A. E.S. & T.M.	Current law requires the State Water Resources Control Board, on or before December 31, 2023, to adopt			

		groundwater augmentation.	on E.S. & T.M. and W., P., & W.		uniform water recycling criteria for direct potable reuse through raw water augmentation, as specified. This bill would eliminate the definition of "direct potable reuse" and instead would substitute the term "groundwater augmentation" for "indirect potable reuse for groundwater recharge" in these definitions. The bill would require, on or before December 31, 2023, the state board to adopt uniform water recycling criteria for raw water augmentation.			
<u>AB 441</u>	<u>Eggman D</u>	Water: underground storage.	2/12/2019- From printer. May be heard in committee March 14.	2/11/2019-A. PRI NT	Under current law, the right to water or to the use of water is limited to that amount of water that may be reasonably required for the beneficial use to be served. Current law provides for the reversion of water rights to which a person is entitled when the person fails to beneficially use the water for a period of 5 years. Current law declares that the storing of water underground, and related diversions for that purpose, constitute a beneficial use of water if the stored water is thereafter applied to the beneficial purposes for which the appropriation for storage was made. This bill would revise the above declaration to additionally provide that certain uses of stored water while underground constitute beneficial use.			
<u>SB 1</u>	<u>Atkins D</u>	California Environmental , Public Health, and Workers Defense Act of 2019.	2/12/2019- Set for hearing March 20.	1/16/2019-S. E.Q.	Current state law regulates the discharge of air pollutants into the atmosphere. The Porter-Cologne Water Quality Control Act regulates the discharge of pollutants into the waters of the state. The California Safe Drinking Water Act establishes standards for drinking water and regulates drinking water systems. The California Endangered Species Act requires the Fish and Game Commission to establish a list of endangered species and a list of threatened species, and generally prohibits the taking of those species. This bill would require specified agencies to take prescribed actions regarding certain federal requirements and standards pertaining to air, water, and protected species, as specified.	Out for Analysis	B. Watch	
<u>SB 19</u>	<u>Dodd D</u>	Water resources: stream gages.	1/16/2019- Referred to Com. on N.R. & W.	1/16/2019-S. N.R. & W.	Would require the Department of Water Resources and the State Water Resources Control Board, upon an appropriation of funds by the Legislature, to develop a plan to deploy a network of stream gages	Out for Analysis	B. Watch	

					that includes a determination of funding needs and opportunities for modernizing and reactivating existing gages and deploying new gages, as specified. The bill would require the department and the board, in consultation with the Department of Fish and Wildlife, the Department of Conservation, the Central Valley Flood Protection Board, interested stakeholders, and, to the extent they wish to consult, local agencies, to develop the plan to address significant gaps in information necessary for water management and the conservation of freshwater species.			
<u>SB 45</u>	<u>Allen D</u>	Wildfire, Drought, and Flood Protection Bond Act of 2020.	1/16/2019- Referred to Coms. on N.R. & W., EQ, and GOV. & F.	1/16/2019-S. N.R. & W.	Would enact the Wildfire, Drought, and Flood Protection Bond Act of 2020, which, if approved by the voters, would authorize the issuance of bonds in an unspecified amount pursuant to the State General Obligation Bond Law to finance projects to restore fire damaged areas, reduce wildfire risk, create healthy forest and watersheds, reduce climate impacts on urban areas and vulnerable populations, protect water supply and water quality, protect rivers, lakes, and streams, reduce flood risk, protect fish and wildlife from climate impacts, improve climate resilience of agricultural lands, and protect coastal lands and resources.	Out for Analysis	B. Watch	
<u>SB 134</u>	<u>Hertzberg D</u>	Water conservation: water loss performance standards: enforcement.	1/24/2019- Referred to Com. on N.R. & W.	1/24/2019-S. N.R. & W.	Current law authorizes the State Water Resources Control Board to issue information orders, written notices, and conservation orders to an urban retail water supplier that does not meet its urban water use objective, and existing law authorizes the board to impose civil liability for a violation of an order or regulation issued pursuant to these provisions, as specified. Current law requires the board, no earlier than January 1, 2019, and no later than July 1, 2020, to adopt rules requiring urban retail water suppliers to meet performance standards for the volume of water losses. This bill would prohibit the board from imposing liability for a violation of the performance standards for the volume of water losses except as part of the enforcement of an urban water use objective.			
<u>SB 200</u>	<u>Monning D</u>	Safe and Affordable Drinking Water Fund.	2/1/2019- From printer. May be	1/31/2019-S. RLS.	Would establish the Safe and Affordable Drinking Water Fund in the State Treasury and would provide that moneys in the fund are			

			<i>acted upon on or after March 3.</i>		<i>available, upon appropriation by the Legislature, to the State Water Resources Control Board to provide a stable source of funding to secure access to safe drinking water for all Californians, while also ensuring the long-term sustainability of drinking water service and infrastructure.</i>			
<u>SB 204</u>	<u>Dodd D</u>	<i>State Water Project: contracts.</i>	<i>2/5/2019-From printer. May be acted upon on or after March 7.</i>	<i>2/4/2019-S. RLS.</i>	<i>Would require the Department of Water Resources to provide at least 10 days' notice to the Joint Legislative Budget Committee and relevant policy and fiscal committees of the Legislature before holding public sessions to negotiate any potential amendment of a long-term water supply contract that is of projectwide significance with substantially similar terms intended to be offered to all contractors, or that would permanently transfer a contractual water amount between contractors.</i>			
Total Measures: 12								
Total Tracking Forms: 12								

ETWD Public Education and Outreach Report

February 28, 2019

The following provides an update on the education and outreach ETWD is developing or has completed.

Drought Log

Customer Service continues to update the drought response log. This includes phone calls, walk-ins and emails regarding water waste complaints and ETWD's permanent mandatory conservation measure inquiries. There were one water waste complaints for the month of January regarding water runoff.

Messaging/Materials

The February bill message: "Thinking of removing turf and replacing your landscape with a drought friendly concept, visit www.etwd.com for turf removal rebates. Rebate levels have increased to \$3 square foot for both residential and commercial customers."

Newly Elected Officials Congratulatory Letters/ETWD Orientation & Tour

ETWD sent out congratulatory letters to all the newly elected officials representing ETWD and the newly local water district electeds.

The District is holding an orientation and tour of R-6 for our non-water industry newly elected and elected officials on Friday, March 1st from 8:00 am – 10:00 am. Currently we have six rsyps. Those that did not rsvp received a reminder phone call this week.

Laguna Woods Village Television Channel 6

Vice President Monin will discuss water conservation on LWV TV -6 on February 22, 2019.

South County Native Plant Nursery Pilot Program

ETWD, along with MNWD, California Native Plant Society (CNPS), WaterNow Alliance, City of San Clemente, City of San Juan Capistrano, MET, IRWD, SMWD and SCWD are exploring the development of a south county native plant nursery pilot program. This objective of this program is to increase the availability of CA native plant stock in local nurseries, improve identification and marketability of CA native plants, create CA native plant education & training materials for local nurseries and educate residents on benefits and maintenance of CA native plants. Program details include nursery survey, training seminar for nursery managers, education and plant maintenance training for nursery staff, point of sale educational and marketing materials for local nurseries, and web-based resources for education and training materials. Currently, MNWD is leading

the pilot program and the group is teleconferencing each week to developing an MOU structure for agency collaboration, co-funding and co-ownership of pilot materials and agency participation details.

Children's Water Education Festival

ETWD will be a presenter at the Children's Water Education Festival this year and Sherri will return to volunteer to assist the OCWD water festival team. The festival will be held on Wednesday, March 27th and March 28th at UCI. 8,000 third, fourth and fifth grade students and their teachers will be attending this event. ETWD sponsors the event as platinum sponsorship that includes sponsorship towards some of the busing. They no longer host a sponsor luncheon, but directors are welcome to schedule a visit between 10 am and 12 noon on either day.

CAPIO

Sherri has joined The California Association of Public Information Officials (CAPIO), a professional association of city, special districts, private PR firms, police, fire, and television public information officials. CAPIO provides education and networking to help their members develop and advance in communications.

Sherri is scheduled to attend the annual conference in Newport Beach from April 8 – 11, 2019.

CESA

Sherri has joined the California Emergency Services Association (CESA), the professional association of California's emergency managers. CESA is a non-profit professional organization dedicated to the promotion of mutual support and cooperation across disciplines in preparing for natural and human caused disasters and public emergencies.

Sherri is scheduled to attend the annual conference in Rohnert Park, California from October 21 – 24, 2019.

ETWD Community Outreach Schedule

Wednesday, February 27, 2019 – Cub Scout Tour

A Mission Viejo Cub Scout pack will tour the Water Recycling Plant from 2:00 pm to 3:30 p.m.

Friday, March 1, 2019 – Elected Officials Tour

Elected officials orientation and tour. 8:00 am – 10:00 am at ETWD. Room location is tentatively set for the boardroom.

Monday, March 4, 2019 – Third Mutual Water Committee

Sherri will be presenting information on water conservation and rebates to the Third Mutual Water Committee at 10:30 am. The goal of this meeting is to refine the conservation message for the board meeting on March 19th.

Saturday, March 9, 2019 – Pet Expo

ETWD will host a booth and distribute water from our emergency drinking water trailer at the Pet Expo on Saturday, March 9, 2019 from 10:00 am – 2:00 pm at the Lake Forest Sports Park & Recreation Center in Lake Forest.

Tuesday, March 19, 2019 – Third Mutual Board Meeting

Sherri will present information on water conservation at the board meeting at 9:30 am.

Saturday, March 30, 2019 – Santiago Canyon College Class Tour

The Water Reclamation and Reuse class at Santiago Canyon College will tour the Water Recycling plant on March 30, 2019 focusing on tertiary treatment.

Friday, May 17, 2019 – South County Senior Summit

ETWD will host a booth and sponsor the 2019 South County Senior Summit at Soka University in Aliso Viejo from 8:00 am – 12:00 pm.



Orange County Supervisor Lisa Bartlett,
The City of Lake Forest,
The Pet Adoption Center of Orange County,
and Saddleback Church



Invite Animal Lovers and their Pets to the

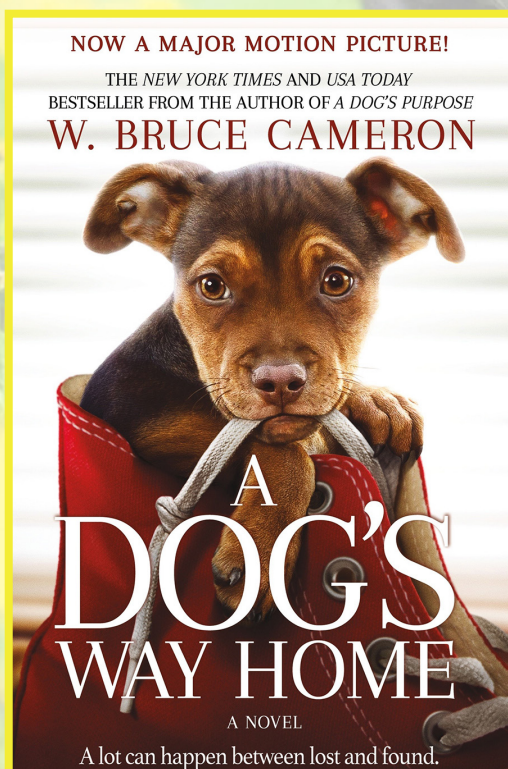
South County Pet Expo

Saturday, March 9 | 10:00 AM – 2:00 PM

Lake Forest Sports Park & Recreation Center
28000 Rancho Parkway, Lake Forest, CA 92630

Featuring Very Special Guest: W. Bruce Cameron
Author of the Bestselling Book and Major Motion Picture

“A DOG’S WAY HOME”








Bruce Cameron will conduct a book signing of “A Dog’s Way Home” and his many other New York Times and USA Today Bestsellers!

**Overflow Parking & Shuttle Service
Available at Saddleback Church!**

(Enter at Portola Parkway & Purpose Drive)

The Pet Expo will also feature:

-  **FREE Admission, Parking & Shuttle Service!**
-  **Rescue Groups with Lovable Pets to Adopt!**
-  **Enjoy Entertaining Canine Demonstrations!**
-  **A Wide Array of Pet Products and Services!**
-  **FREE Giveaways and Great Pet Information!**
-  **Food Trucks, Music, Fun for Families & Pets!**

For event information, contact Kevin Fernandez at kfernandez@lakeforestca.gov
For Vendor Booth Info, contact April Josephson at sponsor@adoptocpets.org

**EL TORO WATER DISTRICT
CONSERVATION PROGRAM
Monthly
Status Report
February 28, 2019**

REBATE PROGRAMS

The following tables are the current device rebate amounts for MET, MWDOC and ETWD for the fiscal year 2018/19 from July 1st through June 30th. An update to the Turf Removal Rebate Program rebates is noted.

Select device purchases are eligible for rebates while devices meet eligibility requirements and while funding lasts. The rebate process is completed online through www.ocwatersmart.com. Customers without computer access can call 888-376-3314 to apply.

1) Residential Rebate Program:

Device	MET Rebate	MWDOC Grant	ETWD Rebate	Total Rebate (up to)
High Efficiency Clothes Washer (CEE tier one or better)	\$85		\$115	\$200
Premium High Efficiency Toilet (4 liter)	\$40		\$60	\$100
Rotating Sprinkler Nozzles (min 30 per home)	\$2 ea		\$1	\$3
Smart Irrigation Timer	\$80		\$75	\$155
Turf Removal Program (up to 5,000 sq ft)* Effective 2-13-19	\$2 sq. ft	\$1		\$3 sq. ft.
Soil Moisture Sensor System <1 Acre >1 Acre	\$80 \$35/station		\$75	\$155 \$35/station
Rain Barrels – 1/1 – 6/30/17 Cisterns (200 -500 gallon) (501-999 gallon) (1,000 gallon or more)	\$35 \$250 \$300 \$350		\$15	\$50 \$250 \$300 \$350
Drip Irrigation (per kit and up to 5 kits)		\$90 base plus \$85		\$175 per kit

***Designated recycled water sites are not eligible for turf removal rebates. MWDOC Grant funding based on availability.**

2) Commercial Plumbing/Irrigation Devices Rebate Program:

Device	MET Rebate	MWDOC Grant	ETWD Rebate	Total Rebate (up to)
Premium High Efficiency Toilet (4 liter)	\$40			\$40
Multi-family Premium High Efficiency Toilet (4 liter)	\$40			\$40
Zero Water/Ultra Low Water Urinal	\$200			\$200
Plumbing Flow Control Valve (min. 10)	\$5			\$5
Smart Irrigation Timer (weather based or central computer)	\$35/station			\$35/station
Rotating Sprinkler Nozzles (minimum quantity of 15)	\$2		\$1	\$3
Rotating Nozzles – Large Rotary	\$13			\$13
Turf Removal Program (up to 50,000 sq ft)* Effective 2-13-19	\$2 sq. ft.	\$1 sq. ft.		\$3 sq. ft.
Drip Irrigation (sq. ft.)(maximum 45,000 sq. ft.)		\$0.20 sq. ft.		\$0.20 sq. ft.
Soil Moisture Sensor System	\$35/station			\$35/station

*Designated recycled water sites are not eligible for turf removal rebates.

Additional commercial rebates available online at ocwatersmart.com. MWDOC Grant funding based on availability.

Metropolitan Water District voted to change rebate amounts and program requirements to the Turf Removal Program:

1. Program name will be now be called the Turf Removal Program.
2. Maximum sq. ft. increased. Residential customers maximum is 5,000 sq. ft. and commercial customers maximum is 50,000 sq. ft.
3. Plant coverage is reduced to 3 plants per 100 sq. ft. Other sustainability requirements will stay in place.
4. Increase rebate amounts. MET's rebate amount is up to \$2 sq. ft. for both residential and commercial. MWDOC is providing grant funding in the amount of \$1 for South County customers. Grant expected to last through June 2020. All ETWD customers will receive up to \$3 sq. ft.
5. MET removed the front yard first requirement.

WATER USE EFFICIENCY PLAN UPDATE (WATER CONSERVATION PLAN)

The District Water Budget-Based Tiered Conservation Rate Structure (WBBTCRS) pricing structure is the primary plan that gives customers the incentive needed to be efficient. The Plan efforts initially will concentrate on those customers continually in the Inefficient and Excessive Tiers (Tiers 3 and 4). [As of January 2019 year-to-date sales, residential accounted for 60% of the overall Tier 3 usage and dedicated irrigation accounted for 60% of Tier 4 usage.](#)

TOTAL CONSUMPTION COMPARISON TO EVAPOTRANSPIRATION (ET) FACTOR

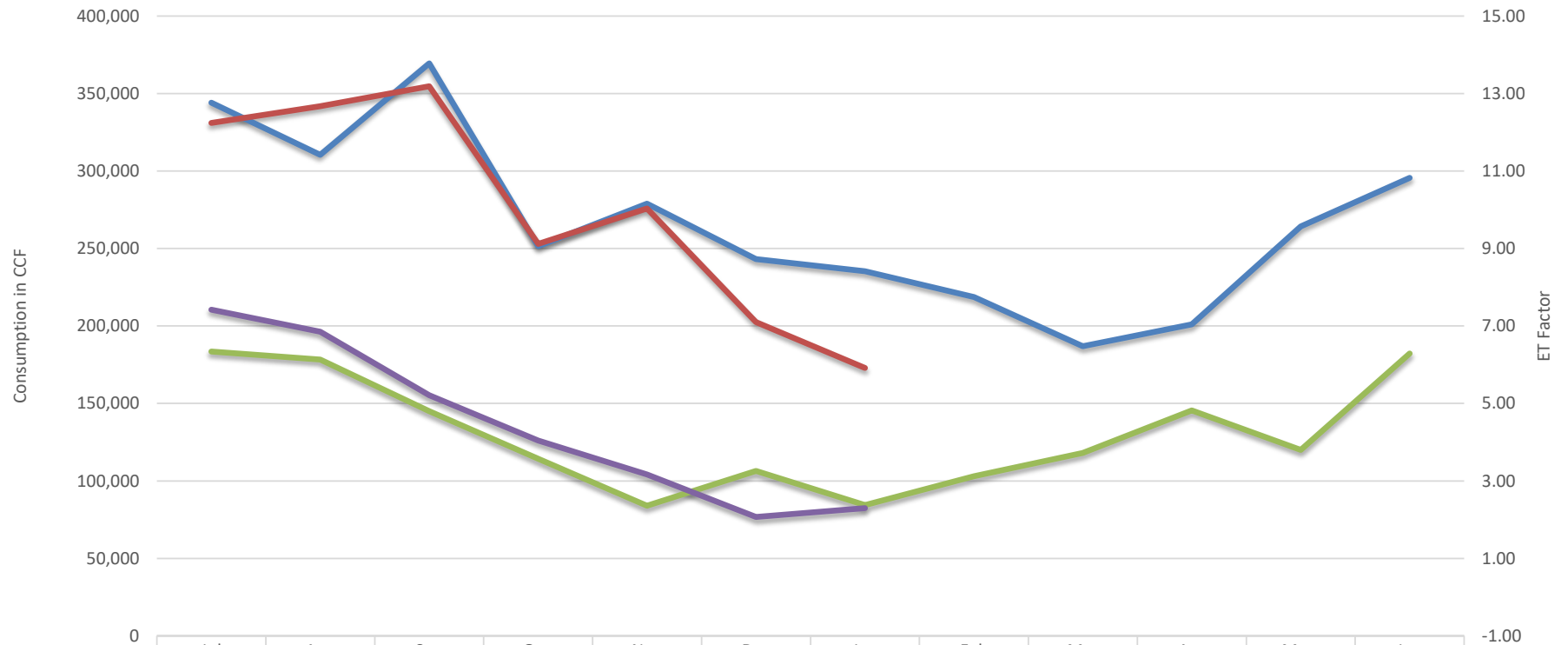
Included in this month's Conservation Report is a chart comparing the current fiscal year 2018/19 consumption and ET factor to the fiscal 2017/18 consumption and ET factor. [The ET factor decreased 3% from January 2018 when compared to January 2019. There was a 27% decrease in consumption reflected in January 2019.](#)

MWDOC's—WATER USE EFFICIENCY PROGRAMS SAVINGS AND IMPLEMENTATION REPORT / ETWD's—WATER USE EFFICIENCY PROGRAM SAVINGS REPORT

[The MWDOC and ETWD's Program Savings Reports are omitted from this report this month. MWDOC's Water Use Efficiency Program Savings tables were not available for December and January.](#)

By: Sherri Seitz
Date: February 21, 2019

Total Consumption Comparison



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
2017-2018	344,078	310,451	369,472	251,478	278,939	243,123	235,364	218,623	186,920	201,067	264,239	295,506
2018-2019	331,098	341,819	354,683	253,007	275,853	202,506	172,911					
17/18 ET	6.34	6.13	4.80	3.57	2.36	3.26	2.38	3.12	3.72	4.82	3.80	6.29
18/19 ET	7.42	6.85	5.21	4.04	3.17	2.07	2.30					
%	96%	110%	96%	101%	99%	83%	73%	0%	0%	0%	0%	0%

El Toro Water District Water Use Efficiency Program Savings

Program	Program Start Year	Program/Total Years	Avoided Water Use Acre Feet/Annual	Avoided Water Use Million Gallons/Annual	Avoided Water Costs Based on MWDOC Rate (\$2.16 CCF) Annual
High Efficiency Toilet (HET)	2005	14	43.7	14.2	\$41,126
High Efficiency Clothes Washers--Residential	2001	18	22.2	7.2	\$20,892
*SoCal Water Smart Commercial Plumbing Fixtures Rebate Program (ULFT's, HET's, Urinals, HECW, Cooling Tower Conductivity Controllers)	2002	17	44.1	14.4	\$41,503
SmarTimer Program--Irrigation Timers	2004	15	182.0	59.3	\$171,280
Rotating Nozzles Rebate Program	2007	12	144.9	47.2	\$136,366
Turf Removal Program	2010	9	35.6	11.6	\$33,541
**Water Smart Landscape Program - Ended 2016	1997	20	242.9	79.2	\$228,594
Synthetic Turf Rebate Program-Ended 2011	2007	8	0.9	0.3	\$847
***Ultra Low Flush Toilets (ULFT)--Ended 2009	1992	16	193.2	58.0	\$167,487
Computer Controlled Irrigation System--Gate 11--Ended 2006	2001	6	8.9	2.9	\$8,357
Totals			918.4	299.3	\$864,327

* Formerly the Save Water Save a Buck - Commercial Rebate Program

** Formerly the Landscape Performance Certification Program

*** Correction on date and total

Because of our participation in Water Use Efficiency Programs, the District will not be using an estimated 299.3 million gallons of water per year.

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-18	257	0.74	1,474	14.35	118,019	4,072	30,418
Smart Timer Program - Irrigation Timers	2004	December-18	166	1.45	1,601	109.26	24,325	8,370	55,160
Rotating Nozzles Rebate Program	2007	December-18	114	0.46	2,965	35.56	567,272	2,760	22,276
Commercial Plumbing Fixture Rebate Program	2002	December-18	1,429	4.40	7,172	40.58	100,945	5,153	49,516
Industrial Process/Water Savings Incentive Program (WSIP)	2006	December-18	0	0.00	2	7.31	33	673	3,414
Turf Removal Program ^[3]	2010	January-19	77,358	0.90	501,131	21.49	22,096,209	3,094	13,375
High Efficiency Toilet (HET) Program	2005	December-18	19	0.07	153	6.51	60,256	2,227	19,279
Water Smart Landscape Program [1]	1997						12,677	10,621	72,668
Home Water Certification Program	2013						312	7.339	15.266
Synthetic Turf Rebate Program	2007						685,438	96	469
Ultra-Low-Flush-Toilet Programs ^[2]	1992						363,926	13,452	162,561
Home Water Surveys ^[2]	1995						11,867	160	1,708
Showerhead Replacements ^[2]	1991						270,604	1,667	19,083
Total Water Savings All Programs				8	514,498	235	24,311,883	52,353	449,942

⁽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 12/13	FY13/14	FY14/15	FY15/16	FY16/17	FY17/18	FY18/19	Total	Current FY Water Savings Ac/Ft (Cumulative)	Cumulative Water Savings across all Fiscal Years	15 yr. Lifecycle Savings Ac/Ft
Brea	93	115	114	76	57	56	29	1,952	0.28	503.63	1,010
Buena Park	105	106	91	76	54	50	23	1,591	0.17	397.58	823
East Orange CWD RZ	10	8	8	8	3	1	3	196	0.02	53.82	101
El Toro WD	134	121	111	65	47	50	20	1,591	0.19	399.14	823
Fountain Valley	115	102	110	76	65	49	19	2,468	0.17	664.99	1,277
Garden Grove	190	162	165	251	127	87	41	3,691	0.36	948.56	1,910
Golden State WC	265	283	359	260	138	156	59	5,230	0.59	1,344.64	2,706
Huntington Beach	334	295	319	225	180	141	47	8,434	0.48	2,312.06	4,364
Irvine Ranch WD	1,763	1,664	1,882	1,521	1,373	1,203	483	26,352	4.51	6,420.06	13,635
La Habra	82	114	87	66	53	48	23	1,398	0.23	348.12	723
La Palma	34	25	34	29	10	14	4	476	0.04	120.42	246
Laguna Beach CWD	38	37	39	32	19	20	12	964	0.11	253.85	499
Mesa Water	114	86	89	113	80	54	21	2,593	0.23	708.35	1,342
Moulton Niguel WD	442	421	790	688	575	527	191	10,639	1.97	2,556.94	5,505
Newport Beach	116	92	95	66	61	51	26	2,701	0.27	750.36	1,398
Orange	218	163	160	124	80	74	32	4,004	0.33	1,101.76	2,072
Orange Park Acres					-	-	-	12	0.00	4.09	6
San Juan Capistrano	76	73	92	63	33	33	10	1,502	0.09	392.33	777
San Clemente	140	94	141	75	70	85	38	2,743	0.34	710.95	1,419
Santa Margarita WD	553	662	792	466	367	274	115	9,905	1.21	2,477.48	5,125
Seal Beach	31	29	38	23	9	17	5	624	0.04	163.10	323
Serrano WD	13	10	26	8	11	8	-	365	0.00	100.05	189
South Coast WD	89	79	68	43	44	36	18	1,638	0.16	424.08	848
Trabuco Canyon WD	30	45	47	34	28	22	3	823	0.02	212.00	426
Tustin	78	59	80	66	44	49	17	1,678	0.16	448.25	868
Westminster	121	82	109	149	84	65	22	2,673	0.20	696.53	1,383
Yorba Linda	181	167	156	123	56	67	22	3,841	0.24	1,056.30	1,987
MWDOC Totals	5,365	5,094	6,002	4,726	3,668	3,237	1,283	100,084	12.41	25,569.43	19,336
Anaheim	331	285	295	266	213	173	63	10,918	0.63	3,039.61	5,649
Fullerton	200	186	211	165	107	99	72	3,866	0.72	1,000.91	2,000
Santa Ana	163	131	132	259	141	124	56	3,151	0.59	808.11	1,630
Non-MWDOC Totals	694	602	638	690	461	396	191	17,935	1.94	4,848.63	3,465
Orange County Totals	6,059	5,696	6,640	5,416	4,129	3,633	1,474	118,019	14.35	30,418.06	22,801

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

Agency	FY 12/13		FY 13/14		FY 14/15		FY 15/16		FY16/17		FY17/18		FY18/19		FY19/20		FY20/21		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	Res	Comm.	
Brea	9	8	4	0	43	6	20	4	31	4	32	0	20	0	0	0	0	0	183	80	585.16
Buena Park	3	0	0	0	4	10	7	4	10	7	15	3	13	4	0	0	0	0	59	48	184.56
East Orange CWD RZ	2	0	0	0	2	0	1	0	11	1	6	0	1	0	0	0	0	0	32	1	26.86
El Toro WD	7	2	11	0	8	9	9	17	33	8	29	4	20	0	0	0	0	0	164	359	2,729.47
Fountain Valley	3	2	4	0	7	10	13	1	33	12	28	12	22	1	0	0	0	0	141	53	229.97
Garden Grove	5	2	9	0	10	14	13	11	28	0	27	2	24	0	0	0	0	0	152	40	209.31
Golden State WC	9	49	9	25	39	12	35	16	56	37	88	6	48	14	0	0	0	0	361	212	979.10
Huntington Beach	18	33	20	35	19	2	42	12	88	94	70	30	71	59	0	0	0	0	413	357	1,343.55
Irvine Ranch WD	414	135	71	59	67	310	239	207	344	420	416	78	230	82	0	0	0	0	2,415	2,446	13,143.92
La Habra	4	7	2	0	4	7	3	1	12	7	8	0	12	3	0	0	0	0	56	47	237.63
La Palma	1	0	2	0	2	0	3	2	1	0	5	0	2	0	0	0	0	0	17	2	8.34
Laguna Beach CWD	76	2	71	0	86	0	86	1	27	0	11	0	3	0	0	0	0	0	511	20	272.50
Mesa Water	10	2	15	2	17	28	36	12	149	41	49	0	22	55	0	0	0	0	389	209	893.73
Moulton Niguel WD	51	74	40	45	46	95	163	100	236	129	284	33	181	55	0	0	0	0	1,379	889	4,271.85
Newport Beach	242	26	168	75	11	9	28	43	30	12	24	0	15	0	0	0	0	0	1,077	409	2,941.28
Orange	20	24	13	9	18	31	51	13	69	10	61	13	58	26	0	0	0	0	404	204	1,094.84
San Juan Capistrano	14	18	6	11	6	19	20	8	22	8	23	5	14	0	0	0	0	0	259	130	746.15
San Clemente	26	7	28	2	28	24	26	3	37	13	38	41	21	0	0	0	0	0	1,110	415	3,015.21
Santa Margarita WD	53	171	64	93	53	321	189	136	326	221	273	220	142	19	0	0	0	0	1,569	1,611	6,934.81
Santiago CWD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Seal Beach	1	0	1	36	1	12	2	2,446	2	4	5	0	2	0	0	0	0	0	14	2,502	6,804.43
Serrano WD	1	0	0	0	4	0	11	2	4	0	8	0	10	0	0	0	0	0	56	2	18.26
South Coast WD	13	16	8	4	104	73	9	11	7	0	15	2	5	7	0	0	0	0	298	221	1,312.12
Trabuco Canyon WD	6	0	2	0	6	1	16	50	13	3	20	0	19	0	0	0	0	0	142	157	1,063.40
Tustin	8	4	9	1	18	14	33	8	33	23	27	1	25	0	0	0	0	0	195	81	404.49
Westminster	1	1	2	0	13	17	7	1	17	12	22	0	18	0	0	0	0	0	105	44	232.45
Yorba Linda	20	0	12	5	32	2	61	27	72	71	68	10	47	3	0	0	0	0	453	196	989.06
MWDOC Totals	1,017	583	571	402	648	1,026	1,123	3,136	1,691	1,137	1,652	460	1,045	328	0	0	0	0	11,954	10,735	50,672.42

Anaheim	19	10	9	26	7	52	30	34	87	10	66	0	90	68	0	0	0	0	400	525	2,980.95
Fullerton	9	29	8	0	40	26	32	12	53	7	45	0	52	0	0	0	0	0	296	199	1,083.22
Santa Ana	8	19	7	8	9	27	22	26	15	3	16	0	18	0	0	0	0	0	116	100	423.47
Non-MWDOC Totals	36	58	24	34	56	105	84	72	155	20	127	0	160	68	0	0	0	0	812	824	4,487.64

Orange County Totals	1,053	641	595	436	704	1,131	1,207	3,208	1,846	1,157	1,779	460	1,205	396	-	-	-	-	12,766	11,559	55,160
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ROTATING NOZZLES INSTALLED BY AGENCY
through MWDOC and Local Agency Conservation Programs

Agency	FY 12/13			FY 13/14			FY 14/15			FY 15/16			FY 16/17			FY 17/18			FY 18/19			Total Program			Cumulative Water Savings across all Fiscal Years
	Small		Large	Small		Large	Small		Large	Small		Large	Small		Large	Small		Large	Small		Large	Small		Large	
	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	
Brea	65	120	0	84	0	0	157	45	0	74	2,484	0	0	0	0	0	0	0	0	0	0	572	2,749	0	85.79
Buena Park	65	0	0	53	0	0	248	0	0	45	98	0	0	0	0	0	0	0	0	0	0	509	173	2,535	819.21
East Orange	55	0	0	30	0	0	221	0	0	0	0	0	0	0	0	30	0	0	0	0	0	781	0	0	23.32
El Toro	23	6,281	0	56	3,288	0	1,741	28,714	0	730	4,457	0	55	242	0	36	0	0	0	0	0	3,260	43,348	890	1,738.92
Fountain Valley	35	0	0	0	0	0	107	0	0	222	0	0	0	0	0	85	0	0	0	283	0	919	3,157	0	26.33
Garden Grove	95	0	0	80	0	0	88	50	0	110	0	0	55	98	0	52	0	0	0	0	0	855	254	0	40.26
Golden State	257	2,595	0	192	0	0	583	1,741	0	1,088	0	0	207	6,008	0	161	-495	0	35	259	0	3,515	11,096	0	391.95
Huntington Beach	270	0	0	120	0	0	798	1,419	0	1,345	2,836	0	149	3,362	0	-37	0	0	0	0	0	4,001	9,135	2,681	1,433.89
Irvine Ranch	25,018	1,014	0	11,010	4,257	0	1,421	632	0	1,989	5,047	0	335	9,511	0	356	-215	0	0	0	0	46,498	43,325	2,004	5,469.24
La Habra	0	0	0	15	0	0	109	338	0	300	0	0	0	0	0	0	0	0	0	0	0	1,515	55,404	900	375.11
La Palma	0	0	0	0	0	0	0	0	0	46	505	0	0	2,385	0	33	0	0	0	0	0	89	3,163	0	61.83
Laguna Beach	3,596	0	0	2,948	878	0	2,879	1,971	0	1,390	0	0	0	0	0	0	0	0	0	0	0	11,948	2,896	0	465.06
Mesa Water	270	0	0	361	0	0	229	0	0	166	0	0	113	0	0	36	0	0	0	0	0	2,062	302	343	209.38
Moulton Niguel	512	1,385	0	361	227	0	1,596	4,587	0	5,492	1,441	0	153	5,872	0	893	0	0	647	38	0	13,375	20,636	2,945	1,970.31
Newport Beach	25,365	50	0	19,349	6,835	0	460	3,857	0	348	670	0	0	0	0	45	0	0	0	0	0	46,865	16,632	0	2,267.73
Orange	264	0	0	245	120	0	304	668	0	631	91	0	0	0	0	0	0	0	0	0	0	3,133	5,853	0	137.11
San Juan Capistrano	684	30	0	370	0	0	495	737	0	310	593	0	75	123	0	59	0	0	40	1,400	0	5,067	4,543	0	504.70
San Clemente	631	172	0	415	5,074	0	326	0	0	426	0	0	0	0	0	146	0	0	0	0	0	10,062	11,948	1,343	886.42
Santa Margarita	983	0	0	389	0	0	1,207	1,513	0	1,820	837	0	15	0	0	224	0	0	0	0	0	15,387	7,283	611	908.67
Seal Beach	0	0	0	0	0	0	40	5,261	0	0	2,300	0	0	0	0	0	0	0	0	0	0	155	7,561	0	218.61
Serrano	190	0	0	105	0	0	377	0	0	695	0	0	0	0	0	0	0	0	0	0	0	1,907	291	0	109.69
South Coast	435	0	0	70	0	0	4,993	13,717	0	1,421	2,889	0	16	0	0	0	0	0	0	0	0	9,628	18,870	0	755.13
Trabuco Canyon	34	0	0	0	0	0	56	0	0	130	0	0	0	4,339	0	0	0	0	0	0	0	729	4,339	0	186.27
Tustin	378	0	0	329	0	0	408	0	0	317	386	0	65	-341	0	30	0	0	47	0	0	4,491	1,849	0	140.25
Westminster	15	0	0	0	0	0	54	0	0	73	0	0	105	0	0	50	0	0	42	0	0	790	0	0	15.25
Yorba Linda	730	0	0	40	990	0	921	0	0	1,715	0	0	213	0	0	0	0	0	34	0	0	5,824	1,103	500	515.75
MWDOC Totals	59,970	11,647	0	36,622	21,669	0	19,818	65,250	0	20,883	24,634	0	1,556	31,599	0	2,199	-710	0	845	1,980	0	195,668	276,847	14,752	19,756.19

Anaheim	459	813	0	338	0	0	498	712	0	794	5,221	0	147	3,953	0	0	0	0	0	0	0	4,020	49,799	105	1,505.60
Fullerton	119	0	0	107	0	0	684	1,196	0	521	7,015	0	65	3,034	0	0	0	0	140	0	0	2,910	11,309	1,484	823.24
Santa Ana	99	0	0	86	2,533	0	310	0	0	0	1,420	0	0	1,106	0	0	0	0	0	0	0	859	5,752	0	191.08
Non-MWDOC Totals	677	813	0	531	2,533	0	1,492	1,908	0	1,315	13,656	0	212	8,093	0	0	0	0	140	0	0	7,789	66,860	1,589	2,519.93

Orange County Totals	60,647	12,460	0	37,153	24,202	0	21,310	67,158	0	22,198	38,290	0	1,768	39,692	0	2,199	-710	0	985	1,980	0	203,457	343,707	16,341	22,276.11
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COMMERCIAL PLUMBING FIXTURES REBATE PROGRAM^[1]
INSTALLED BY AGENCY
through MWDOC and Local Agency Conservation Programs

Agency	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	Totals	Cumulative Water Savings across all Fiscal Years
Brea	234	0	10	91	734	242	0	1,607	586
Buena Park	5	23	56	591	133	49	0	2,538	1,363
East Orange CWD RZ	0	0	0	0	0	0	0	0	0
El Toro WD	0	212	6	268	35	737	717	2,516	750
Fountain Valley	0	0	1	249	0	895	0	1,767	755
Garden Grove	4	1	167	676	410	0	0	2,451	1,805
Golden State WC	0	1	0	1,008	53	93	0	2,958	2,278
Huntington Beach	104	144	7	783	641	10	0	2,964	1,942
Irvine Ranch WD	1,090	451	725	11,100	5,958	1,599	993	30,458	9,816
La Habra	0	0	0	340	42	0	0	925	664
La Palma	0	0	0	0	509	0	0	675	159
Laguna Beach CWD	0	27	0	0	0	0	0	446	373
Mesa Water	6	0	79	661	782	0	0	4,254	2,545
Moulton Niguel WD	0	0	3	413	281	506	3,434	5,217	1,159
Newport Beach	0	0	566	0	0	0	0	1,834	1,550
Orange	1	271	81	275	2,851	458	512	6,000	2,284
San Juan Capistrano	0	14	0	0	0	0	0	260	457
San Clemente	0	0	1	0	0	0	0	432	444
Santa Margarita WD	0	0	2	90	743	598	506	2,054	368
Santiago CWD	0	0	0	0	0	0	0	0	0
Seal Beach	0	0	0	0	184	278	0	816	519
Serrano WD	0	0	0	0	0	0	0	0	0
South Coast WD	148	0	382	0	0	0	0	1,320	646
Trabuco Canyon WD	0	0	0	0	0	0	0	11	18
Tustin	0	0	75	358	212	2	284	1,688	1,015
Westminster	1	28	0	146	177	25	0	1,163	1,191
Yorba Linda	1	0	0	226	84	338	0	933	684
MWDOC Totals	1,594	1,172	2,161	17,275	13,829	5,830	6,446	75,287	33,368
Anaheim	165	342	463	3,072	309	1,808	361	15,922	8,482
Fullerton	94	0	178	476	621	274	365	3,417	2,028
Santa Ana	16	17	5	1,293	238	582	0	6,319	5,637
Non-MWDOC Totals	275	359	646	4,841	1,168	2,664	726	25,658	16,147
Orange County Totals	1,869	1,531	2,807	22,116	14,997	8,494	7,172	100,945	49,516

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

INDUSTRIAL PROCESS/WATER SAVINGS INCENTIVE PROGRAM

Number of Projects by Agency

Agency	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	Overall Program Interventions	Annual Water Savings[1]	Cumulative Water Savings across all Fiscal Years[1]
Brea	0	0	0	0	0	0	0	0	0	0	0
Buena Park	0	0	0	0	1	0	0	0	2	54	541
East Orange	0	0	0	0	0	0	0	0	0	0	0
El Toro	0	0	0	0	0	0	0	1	1	9	3
Fountain Valley	0	0	0	0	0	1	0	0	1	23	42
Garden Grove	0	0	0	0	1	0	0	0	1	0	1
Golden State	0	0	0	0	0	0	0	0	1	3	32
Huntington Beach	0	2	0	1	2	0	1	0	6	180	701
Irvine Ranch	1	1	1	0	2	1	1	0	10	119	722
La Habra	0	0	0	0	1	0	0	0	1	0	1
La Palma	0	0	0	0	0	0	0	0	0	0	0
Laguna Beach	0	0	0	0	0	0	0	0	0	0	0
Mesa Water	0	0	0	0	0	0	0	0	0	0	0
Moulton Niguel	0	0	0	0	0	0	0	0	0	0	0
Newport Beach	0	0	0	1	0	0	0	0	1	21	86
Orange	0	0	0	0	1	2	1	0	5	97	569
San Juan Capistrano	0	0	0	0	0	0	0	0	0	0	0
San Clemente	0	0	0	0	0	0	0	0	0	0	0
Santa Margarita	0	0	0	0	0	0	0	0	0	0	0
Seal Beach	0	0	0	0	0	0	0	0	0	0	0
Serrano	0	0	0	0	0	0	0	0	0	0	0
South Coast	0	0	0	0	1	1	0	0	2	134	247
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	1	1	20	7
MWDOC Totals	1	3	1	2	9	5	3	2	32	662	2952
Anaheim	0	0	0	0	0	0	0	0	0	0	0
Fullerton	0	0	0	0	0	0	0	0	0	0	0
Santa Ana	0	0	0	0	1	0	0	0	1	11	462
OC Totals	1	3	1	2	10	5	3	2	33	673	3414

[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 12/13		FY 13/14		FY 14/15		FY 15/16		FY 16/17		FY 17/18		FY 18/19		Total Program		Cumulative Water Savings across all Fiscal Years
	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	
Brea	7,605	0	5,697	0	71,981	30,617	118,930	404,411	8,354	479	9,853	27,234	3,180	17,790	228,997	489,997	408.56
Buena Park	0	0	0	0	11,670	1,626	77,127	16,490	3,741	0	4,586	0	1,230	0	98,354	18,116	64.76
East Orange	0	0	1,964	0	18,312	0	27,844	0	0	0	0	0	0	0	48,120	0	30.06
El Toro	4,680	72,718	4,582	0	27,046	221,612	63,546	162,548	13,139	48,019	7,273	42,510	7,437	9,895	132,426	557,302	427.70
Fountain Valley	682	7,524	4,252	0	45,583	5,279	65,232	0	3,679	0	8,631	0	2,849	27,679	132,208	40,482	93.44
Garden Grove	4,534	0	8,274	0	67,701	22,000	177,408	49,226	11,504	0	4,487	0	0	0	287,921	117,403	281.06
Golden State	31,813	3,200	32,725	8,424	164,507	190,738	310,264	112,937	0	0	0	0	0	0	581,902	346,272	636.92
Huntington Beach	9,219	12,437	20,642	0	165,600	58,942	305,420	270,303	9,560	21,534	14,236	6,032	7,937	36,267	561,045	458,004	634.31
Irvine Ranch	32,884	32,384	36,584	76,400	234,905	317,999	782,844	2,675,629	231,483	46,725	86,893	61,037	38,440	130,708	1,455,906	3,355,342	2,696.58
La Habra	0	0	0	0	14,014	1,818	49,691	72,164	0	0	3,003	0	1,504	0	68,212	90,019	99.42
La Palma	0	0	0	0	4,884	0	10,257	59,760	0	0	0	0	0	0	15,141	59,760	42.63
Laguna Beach	2,664	1,712	4,586	226	13,647	46,850	47,614	0	3,059	0	589	0	0	0	75,670	48,788	82.86
Mesa Water	10,667	0	22,246	0	131,675	33,620	220,815	106,896	4,173	77,033	17,373	77,785	1,360	0	415,086	295,334	396.89
Moulton Niguel	11,538	84,123	14,739	40,741	314,250	1,612,845	889,748	1,059,279	220,749	0	98,271	0	73,579	0	1,628,313	2,840,054	2,767.96
Newport Beach	3,548	2,346	894	0	33,995	65,277	76,675	375,404	2,924	0	5,938	6,499	0	35,480	127,428	485,006	342.72
Orange	15,951	8,723	11,244	0	120,093	281,402	289,990	106,487	12,847	2,366	11,956	0	10,320	1,798	485,372	400,776	562.65
San Clemente	16,062	13,165	18,471	13,908	90,349	1,137	215,249	438,963	4,267	0	33,083	7,098	6,500	0	405,483	474,271	524.26
San Juan Capistrano	29,544	27,156	12,106	0	101,195	32,366	197,290	143,315	2,624	40,748	0	0	0	0	365,415	347,277	509.68
Santa Margarita	10,151	11,600	17,778	48,180	211,198	514,198	534,048	550,420	17,010	28,094	62,706	25,000	22,302	23,198	881,640	1,217,651	1,269.27
Santiago	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Seal Beach	3,611	0	0	0	15,178	504	17,349	15,911	1,234	0	752	0	0	0	38,124	16,415	33.87
Serrano	0	0	2,971	0	41,247	0	127,877	4,403	5,450	0	555	0	4,000	0	182,100	4,403	108.45
South Coast	9,429	4,395	15,162	116,719	84,282	191,853	181,102	128,290	14,967	0	13,319	7,806	5,990	0	331,057	465,387	532.10
Trabuco Canyon	1,542	22,440	2,651	0	14,771	0	42,510	88,272	1,465	0	4,788	0	1,536	0	69,535	110,712	111.78
Tustin	9,980	0	1,410	0	71,285	14,137	232,697	33,362	11,173	0	16,926	0	5,941	6,894	349,412	54,393	230.98
Westminster	0	0	0	0	14,040	34,631	71,833	23,902	11,112	0	10,033	0	5,461	0	112,479	58,533	95.92
Yorba Linda	0	0	0	0	112,136	12,702	360,279	116,985	19,420	0	9,529	3,696	11,856	0	524,569	133,383	382.47
MWDOC Totals	216,104	303,923	238,978	304,598	2,195,544	3,692,153	5,493,639	7,015,357	613,934	264,998	424,780	264,697	211,422	289,709	9,601,915	12,485,080	13,367.28

Anaheim	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Fullerton	0	0	0	9,214	0	0	0	0	0	0	0	0	0	0	0	9,214	7.74
Santa Ana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Non-MWDOC Totals	0	0	0	9,214	0	0	0	0	0	0	0	0	0	0	0	9,214	7.74

Orange County Totals	216,104	303,923	238,978	313,812	2,195,544	3,692,153	5,493,639	7,015,357	613,934	264,998	424,780	264,697	211,422	289,709	9,601,915	12,494,294	13,375
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[1] Installed device numbers are listed as square feet

HIGH EFFICIENCY TOILETS (HETs) INSTALLED BY AGENCY

through MWDOC and Local Agency Conservation Programs

Agency	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	Total	Cumulative Water Savings across all Fiscal Years
Brea	0	38	146	154	4	6	0	456	116.31
Buena Park	0	96	153	112	13	3	0	687	215.26
East Orange CWD RZ	0	13	26	24	0	0	0	86	24.09
El Toro WD	133	218	869	264	12	6	6	2,049	611.70
Fountain Valley	0	41	132	220	7	9	1	833	278.76
Garden Grove	0	63	350	363	7	4	0	1,488	474.87
Golden State WC	2	142	794	512	9	11	2	2,803	877.57
Huntington Beach	0	163	1,190	628	4	3	0	2,904	821.99
Irvine Ranch WD	1,449	810	1,777	2,798	638	239	96	17,244	6,027.81
Laguna Beach CWD	0	45	112	81	1	4	0	392	118.10
La Habra	0	37	94	83	5	1	0	591	215.86
La Palma	0	21	59	52	4	2	3	227	66.14
Mesa Water	0	147	162	162	7	3	3	1,624	650.22
Moulton Niguel WD	0	400	2,497	1,939	49	40	11	5,741	1,344.78
Newport Beach	0	49	168	243	11	6	0	731	208.28
Orange	1	142	978	416	17	10	3	2,192	608.94
San Juan Capistrano	0	35	140	202	3	9	2	534	139.85
San Clemente	0	72	225	246	11	6	7	885	256.16
Santa Margarita WD	0	528	997	1,152	114	34	2	3,345	793.98
Seal Beach	2	17	50	69	-1	0	0	857	421.72
Serrano WD	0	2	40	55	3	0	0	121	28.68
South Coast WD	64	102	398	235	11	7	0	1,028	266.55
Trabuco Canyon WD	0	10	108	169	2	3	2	344	77.50
Tustin	0	64	132	201	12	10	4	1,520	589.95
Westminster	0	35	161	359	3	4	0	1,335	460.36
Yorba Linda WD	0	40	280	379	12	8	2	1,261	388.78
MWDOC Totals	1,651	3,330	12,038	11,118	958	428	144	51,278	16,084.22

Anaheim	0	156	1,188	614	70	19	5	5,889	2,193.20
Fullerton	0	61	293	286	14	9	4	1,068	314.09
Santa Ana	0	33	602	293	20	0	0	2,021	687.54
Non-MWDOC Totals	0	250	2,083	1,193	104	28	9	8,978	3,194.82

Orange County Totals	1,651	3,580	14,121	12,311	1,062	456	153	60,256	19,279.04
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Rain Barrels by Agency

Agency	Total Program		FY 13/14		FY 14/15		FY 15/16		FY 16/17		FY 17/18		FY 18/19	
	Res	CII	Res	CII	Res	CII	Res	CII	Res	CII	Res	CII	Res	CII
Brea	86	-	-	-	15	-	61	-	8	-	2	-	-	-
Buena Park	193	-	5	-	9	-	148	-	24	-	5	-	2	-
East Orange	39	-	8	-	8	-	23	-	-	-	-	-	-	-
El Toro	108	-	5	-	4	-	78	-	13	-	7	-	1	-
Fountain Valley	392	-	8	-	22	-	210	-	136	-	16	-	-	-
Garden Grove	346	-	16	-	34	-	237	-	38	-	17	-	4	-
Golden State WC	515	-	14	-	43	-	239	-	207	-	11	-	1	-
Huntington Beach	1,203	-	147	-	294	-	700	-	50	-	11	-	1	-
Irvine Ranch	1,008	-	21	-	101	-	778	-	82	-	24	-	2	-
La Habra	71	-	12	-	15	-	39	-	4	-	1	-	-	-
La Palma	8	-	-	-	-	-	4	-	4	-	-	-	-	-
Laguna Beach	439	-	67	-	279	-	85	-	7	-	1	-	-	-
Mesa Water	349	-	8	-	64	-	229	-	32	-	14	-	2	-
Moulton Niguel	417	-	2	-	74	-	259	-	63	-	12	-	7	-
Newport Beach	69	-	3	-	4	-	52	-	5	-	5	-	-	-
Orange	382	-	8	-	41	-	284	-	31	-	15	-	3	-
San Juan Cap	289	-	20	-	70	-	192	-	4	-	3	-	-	-
San Clemente	172	-	7	-	54	-	95	-	6	-	8	-	2	-
Santa Margarita	355	-	30	-	29	-	237	-	46	-	9	-	4	-
Santiago	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Seal Beach	71	-	8	-	20	-	37	-	4	-	2	-	-	-
Serrano	40	-	-	-	11	-	21	-	8	-	-	-	-	-
South Coast	183	-	14	-	97	-	55	-	14	-	3	-	-	-
Trabuco Canyon	58	-	-	-	11	-	44	-	2	-	1	-	-	-
Tustin	239	-	9	-	23	-	175	-	27	-	5	-	-	-
Westminster	219	-	5	-	8	-	118	-	63	-	23	-	2	-
Yorba Linda	228	-	5	-	20	-	185	-	18	-	-	-	-	-
MWDOC Totals	7,479	-	422	-	1,350	-	4,585	-	896	-	195	-	31	-

Anaheim	298	-	12	-	27	-	235	-	18	-	2	-	4	-
Fullerton	219	-	16	-	13	-	171	-	19	-	-	-	-	-
Santa Ana	241	-	8	-	46	-	154	-	31	-	2	-	-	-
Non-MWDOC Totals	758	-	36	-	86	-	560	-	68	-	4	-	4	-

OC Totals	8,237	-	458	-	1,436	-	5,145	-	964	-	199	-	35	-
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**NOTICE OF SPECIAL MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
BOARD OF DIRECTORS**

February 7, 2019

7:30 a.m.

NOTICE IS HEREBY GIVEN that a Special Meeting of the South Orange County Wastewater Authority (SOCWA) Board of Directors has called by Chairman Ferons to be held on **February 7, 2019, at 7:30 a.m.** at the SOCWA Administrative Office located at 34156 Del Obispo Street, Dana Point, California.

THE SOCWA MEETING ROOM IS WHEELCHAIR ACCESSIBLE. IF YOU REQUIRE ANY SPECIAL DISABILITY RELATED ACCOMMODATIONS (I.E., ACCESS TO AN AMPLIFIED SOUND SYSTEM, ETC.) PLEASE CONTACT THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY SECRETARY'S OFFICE AT (949) 234-5421 AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO THE SCHEDULED MEETING. THIS AGENDA CAN BE OBTAINED IN ALTERNATE FORMAT UPON WRITTEN REQUEST TO THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY'S SECRETARY AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO THE SCHEDULED MEETING.

AGENDA EXHIBITS AND OTHER WRITINGS THAT ARE DISCLOSABLE PUBLIC RECORDS DISTRIBUTED TO ALL, OR A MAJORITY OF, THE MEMBERS OF THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY BOARD OF DIRECTORS IN CONNECTION WITH A MATTER SUBJECT TO DISCUSSION OR CONSIDERATION AT AN OPEN MEETING OF THE BOARD OF DIRECTORS ARE AVAILABLE FOR PUBLIC INSPECTION IN THE AUTHORITY OFFICE, 34156 DEL OBISPO STREET, DANA POINT, CA ("AUTHORITY OFFICE"). IF SUCH WRITINGS ARE DISTRIBUTED TO MEMBERS OF THE BOARD LESS THAN TWENTY-FOUR (24) PRIOR TO THE MEETING, THEY WILL BE AVAILABLE IN THE RECEPTION AREA OF THE AUTHORITY OFFICE AT THE SAME TIME AS THEY ARE DISTRIBUTED TO THE BOARD MEMBERS, EXCEPT THAT, IF SUCH WRITINGS ARE DISTRIBUTED IMMEDIATELY PRIOR TO, OR DURING, THE MEETING, THEY WILL BE AVAILABLE IN THE BOARD MEETING ROOM.

AGENDA

1. Call Meeting to Order

2. Public Comments

THOSE WISHING TO ADDRESS THE BOARD OF DIRECTORS ON ANY ITEM LISTED ON THE AGENDA SHOULD SUBMIT A "REQUEST TO BE HEARD" FORM TO THE CLERK OF THE BOARD BEFORE THE PRESIDING OFFICER ANNOUNCES THAT AGENDA ITEM. YOUR NAME WILL BE CALLED TO SPEAK AT THAT TIME.

3. Closed Session

Closed Session pursuant to Government code section 54957

A. Public Employee Performance Evaluation - Title: General Manager.

NOTICE OF SPECIAL MEETING – BOARD OF DIRECTORS

February 7, 2019

Page 2 of 2

I hereby certify that the foregoing Notice was personally emailed or mailed to each member of the SOCWA Board of Directors at least 24 hours prior to the scheduled time of the Special Meeting referred to above.


I hereby certify that the foregoing Notice was posted at least 24 hours prior to the time of the above-referenced Board of Directors at the usual agenda posting location of the South Orange County Wastewater Authority and at www.socwa.com.

Dated this 3rd day of February 2019.

B. Burnett

Betty C. Burnett, General Manager/Secretary
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

I hereby certify that the following Agenda was posted at least 72 hours prior to the time of the Board Meeting so noticed below, at the usual agenda posting location of the South Orange County Wastewater Authority [SOCWA] and at www.socwa.com.


Betty Burnett, General Manager
SOCWA and the Board of Directors thereof

AGENDA

Regular Meeting of The South Orange County Wastewater Authority Board of Directors

February 7, 2019
8:30 a.m.

THE BOARD OF DIRECTORS MEETING ROOM IS LOCATED AT 34156 DEL OBISPO STREET, DANA POINT, CA. THE ROOM IS WHEELCHAIR ACCESSIBLE. IF YOU REQUIRE ANY SPECIAL DISABILITY RELATED ACCOMMODATIONS (I.E. ACCESS TO AN AMPLIFIED SOUND SYSTEM, ETC.), PLEASE CONTACT THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY'S SECRETARY'S OFFICE AT 949-234-5421 AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO THE SCHEDULED MEETING. THIS AGENDA CAN BE OBTAINED IN ALTERNATE FORMAT UPON WRITTEN REQUEST TO THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY SECRETARY AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO THE SCHEDULED MEETING.

AGENDA ATTACHMENTS AND OTHER WRITINGS THAT ARE DISCLOSABLE PUBLIC RECORDS DISTRIBUTED TO ALL, OR A MAJORITY OF, THE MEMBERS OF THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY BOARD OF DIRECTORS IN CONNECTION WITH A MATTER SUBJECT TO DISCUSSION OR CONSIDERATION AT AN OPEN MEETING OF THE BOARD OF DIRECTORS ARE AVAILABLE FOR PUBLIC INSPECTION IN THE AUTHORITY OFFICE, 34156 DEL OBISPO STREET, DANA POINT, CA ("AUTHORITY OFFICE"). IF SUCH WRITINGS ARE DISTRIBUTED TO MEMBERS OF THE BOARD OF DIRECTORS LESS THAN SEVENTY-TWO (72) HOURS PRIOR TO THE MEETING, THEY WILL BE AVAILABLE IN THE RECEPTION AREA OF THE AUTHORITY OFFICE AT THE SAME TIME AS THEY ARE DISTRIBUTED TO THE BOARD OF DIRECTORS, EXCEPT THAT, IF SUCH WRITINGS ARE DISTRIBUTED IMMEDIATELY PRIOR TO, OR DURING, THE MEETING, THEY WILL BE AVAILABLE IN THE BOARD OF DIRECTORS MEETING ROOM.

1. CALL MEETING TO ORDER

2. PLEDGE OF ALLEGIANCE

3. ORAL COMMUNICATIONS

- A. Members of the public may address the board regarding an item on the agenda or may reserve this opportunity during the meeting at the time item is discussed by the board. There will be a three-minute limit for public comments.

4. CONSENT CALENDAR

A. Minutes of Board of Directors Meeting(s)

Board of Directors Meeting - January 10, 2019..... 1

ACTION The Board will be requested to approve subject Minutes.

AGENDA
South Orange County Wastewater Authority
Board of Directors Meeting
February 7, 2019

B. Minutes of Executive Committee

Special Executive Committee Meeting - October 16, 201831

ACTION The Board will be requested to receive and file subject Minutes
approved by the Executive Committee.

C. Financial Matters

1) Monthly Financials Report for December 2018.....32

a) Summary of Disbursements for June 2018 – Exhibit A33

b) Schedule of Funds Available for Reinvestment – Exhibit B34

c) Schedule of Cash and Investments – Exhibit C.....35

d) Capital Summaries – Exhibit D36

Capital Projects - Graph – Exhibit D137

e) Budget vs. Actual Expenses

O&M Budget vs. Actual Comparison by PC – Exhibit E138

O&M & Environmental Safety Costs Summary E-1.2.....44

Budget vs. Actual Comparison - Engineering – Exhibit E246

Budget vs. Actual Comparison Administration – Exhibit E3.....47

Budget vs. Actual Comparison Information Technology (IT) – Exhibit E448

ACTION Staff recommends to the Board of Directors to ratify the Summary
of Disbursements for the period December 1, 2018, to December
31, 2018, totaling \$2,615,193 and receive and file the December
2018 Financial Reports as submitted.

D. Operational Reports

1) Monthly Operations Report – December 2018.....49

2) Ocean Outfall Discharges61

3) Quarterly Report on Key Operational Expenses63

4) Beach/Ocean Monitoring Report.....71

5) Recycled Water Report.....95

6) Pretreatment Report99

ACTION The Board will be requested to receive and file the *December 2018*
Operations Reports.

E. Capital Improvement Program

Status Report(s) 103

ACTION The Board will be requested to receive and file subject reports.

AGENDA
South Orange County Wastewater Authority
Board of Directors Meeting
February 7, 2019

F. Minutes of Engineering Committee Meeting(s)

Engineering Committee October 11, 2018	119
Engineering Committee December 13, 2018	122

ACTION The Board will be requested to receive and file subject Minutes approved by the Engineering Committee.

5. ENGINEERING MATTERS

A. Award of Contract – RTP Site Improvements 2019 Engineering Services [PC 17] 126

ACTION The Board will be requested to approve the award of an engineering services contract to Tetra Tech, not to exceed \$122,000.00.

6. GENERAL MANAGER'S REPORTS

A. Salt and Nutrient Management Plan Five Year Update [PC12] 133

ACTION The Board will be requested to authorize the General Manager to enter into a contract with Wildermuth Environmental, not to exceed \$125,000.

B. Fiscal Year 2017-18 Supplemental Financial Statements 138

ACTION The Finance Committee recommends to the Board of Directors to receive and file the FY 2017-18 Supplemental Financial Statements as submitted.

C. Project Committee No. 15 Litigation Update Report

ACTION Information and discussion only.

D. Coastal Treatment Plant Near Term Capital Projects

- Verbal Report, Project Committee No. 15 Chair, Mike Dunbar

ACTION Information and discussion only.

E. General Manager's Status Report 151

ACTION Information item only.

F. Monthly Progress Report on State Audit Recommendations 165

ACTION The Board will be requested to receive and file the Monthly Progress Report on State Audit Recommendations – State Audit Response Schedule.

AGENDA
South Orange County Wastewater Authority
Board of Directors Meeting
February 7, 2019

7. CLOSED SESSION

A Closed Session will be conducted for the following matter:

Existing Litigation per paragraph (1) of Subdivision (d) of Government Code Section 54956.9, *Case of SOCWA et al. v. Moulton Niguel Water District* Case Number RIC 1721240.

8. REPORT OUT OF CLOSED SESSION

OTHER MATTERS

A. Open discussion or items received too late to be agendaized.

Note: Determine the need to take action on the following item(s) introduced by the General Manager which arose subsequent to the agenda being posted.

[Adoption of this action requires a two-thirds vote of the Board, or if less than two-thirds are present a unanimous vote.]

ADJOURNMENT

THE NEXT REGULAR SOCWA BOARD MEETING WILL BE HELD ON
March 7, 2019 at 8:30 a.m.

**NOTICE OF REGULAR MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
ENGINEERING COMMITTEE**

February 14, 2019

8:30 a.m.

NOTICE IS HEREBY GIVEN that a Regular Meeting of the South Orange County Wastewater Authority (SOCWA) Engineering Committee has been scheduled to be held on **February 14, 2019, at 8:30 a.m.** at the SOCWA Administrative Office located at 34156 Del Obispo Street, Dana Point, California.

THE SOCWA MEETING ROOM IS WHEELCHAIR ACCESSIBLE. IF YOU REQUIRE ANY SPECIAL DISABILITY RELATED ACCOMMODATIONS (I.E., ACCESS TO AN AMPLIFIED SOUND SYSTEM, ETC.) PLEASE CONTACT THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY SECRETARY'S OFFICE AT (949) 234-5421 AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO THE SCHEDULED MEETING. THIS AGENDA CAN BE OBTAINED IN ALTERNATE FORMAT UPON WRITTEN REQUEST TO THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY'S SECRETARY AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO THE SCHEDULED MEETING.

AGENDA EXHIBITS AND OTHER WRITINGS THAT ARE DISCLOSABLE PUBLIC RECORDS DISTRIBUTED TO ALL, OR A MAJORITY OF, THE MEMBERS OF THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY ENGINEERING COMMITTEE IN CONNECTION WITH A MATTER SUBJECT TO DISCUSSION OR CONSIDERATION AT AN OPEN MEETING OF THE ENGINEERING COMMITTEE ARE AVAILABLE FOR PUBLIC INSPECTION IN THE AUTHORITY OFFICE, 34156 DEL OBISPO STREET, DANA POINT, CA ("AUTHORITY OFFICE"). IF SUCH WRITINGS ARE DISTRIBUTED TO MEMBERS OF THE BOARD ENGINEERING COMMITTEE LESS THAN 72 HOURS PRIOR TO THE MEETING, THEY WILL BE AVAILABLE IN THE RECEPTION AREA OF THE AUTHORITY OFFICE AT THE SAME TIME AS THEY ARE DISTRIBUTED TO THE ENGINEERING COMMITTEE MEMBERS, EXCEPT THAT, IF SUCH WRITINGS ARE DISTRIBUTED IMMEDIATELY PRIOR TO, OR DURING, THE MEETING, THEY WILL BE AVAILABLE IN THE ENGINEERING COMMITTEE MEETING ROOM.

AGENDA

- 1. Call Meeting to Order**
- 2. Public Comments**

PERSONS WISHING TO ADDRESS THE ENGINEERING COMMITTEE ON MATTERS NOT LISTED ON THE AGENDA MAY DO SO AT THIS TIME. "REQUEST TO BE HEARD" FORMS ARE AVAILABLE AT THE ENTRANCE TO THE BOARD ROOM. COMMENTS ARE LIMITED TO THREE (3) MINUTES UNLESS FURTHER TIME IS GRANTED BY THE PRESIDING OFFICER. SUBMIT FORM TO THE CLERK OF THE BOARD PRIOR TO THE BEGINNING OF THE MEETING.

THOSE WISHING TO ADDRESS THE ENGINEERING COMMITTEE ON ANY ITEM LISTED ON THE AGENDA SHOULD SUBMIT A "REQUEST TO BE HEARD" FORM TO THE CLERK OF THE BOARD BEFORE THE PRESIDING OFFICER ANNOUNCES THAT AGENDA ITEM. YOUR NAME WILL BE CALLED TO SPEAK AT THAT TIME.

NOTICE OF ENGINEERING COMMITTEE

February 14, 2019

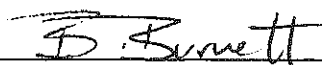
Page 2 of 2

3. Review/Approval of Meeting Minutes (June '18 and January '19)
4. Operations Report
5. Cost Allocation Report Presentation
6. Co-Generation System Status Report
7. Innovative Biosolids RFP Status Report (Project Committees 2 and 17)
8. Review of Engineering Services Proposals - Regional Treatment Plant Motor Control Center (Project Committee 17)
9. Review of Bids – Regional Treatment Plant Miscellaneous Improvements 2018 (Project Committee 17)
10. Regional Treatment Plant Draft Capital Improvement Budget Fiscal Year 2019/20 (Project Committee 17)
11. Regional Treatment Plant AWT Upgrade Project Status (Project Committee 17)
12. AWMA Road Repair Cost Allocation (Project Committees 15 and 21)
13. Coastal Treatment Plant Aeration Upgrade Technical Memorandum Presentation (Project Committee 15)
14. Coastal Treatment Plant Draft Capital Improvement Budget Fiscal Year 2019/20 (Project Committee 15)
15. Coastal Treatment Plant AWT Upgrade Project Status Report (Project Committee 15)

I hereby certify that the foregoing Notice was personally emailed or mailed to each member of the SOCWA Engineering Committee at least 72 hours prior to the scheduled time of the Regular Meeting referred to above.

I hereby certify that the foregoing Notice was posted at least 72 hours prior to the time of the above-referenced Engineering Committee at the usual agenda posting location of the South Orange County Wastewater Authority and at www.socwa.com.

Dated this 6th day of February 2019.



Betty C. Burnett, General Manager/Secretary
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

**NOTICE OF SPECIAL MEETING
OF THE
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY
FINANCE COMMITTEE**

**February 19, 2019
8:30 a.m.**

NOTICE IS HEREBY GIVEN that a Special Meeting of the South Orange County Wastewater Authority (SOCWA) Finance Committee was called by the Chairman to be held on **February 19, 2019 at 8:30 a.m.** at the SOCWA Administrative Office located at 34156 Del Obispo Street, Dana Point, California.

THE SOCWA MEETING ROOM IS WHEELCHAIR ACCESSIBLE. IF YOU REQUIRE ANY SPECIAL DISABILITY RELATED ACCOMMODATIONS (I.E., ACCESS TO AN AMPLIFIED SOUND SYSTEM, ETC.) PLEASE CONTACT THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY SECRETARY'S OFFICE AT (949) 234-5421 AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO THE SCHEDULED MEETING. THIS AGENDA CAN BE OBTAINED IN ALTERNATE FORMAT UPON WRITTEN REQUEST TO THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY'S SECRETARY AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO THE SCHEDULED MEETING.

AGENDA EXHIBITS AND OTHER WRITINGS THAT ARE DISCLOSABLE PUBLIC RECORDS DISTRIBUTED TO ALL, OR A MAJORITY OF, THE MEMBERS OF THE SOUTH ORANGE COUNTY WASTEWATER AUTHORITY FINANCE COMMITTEE IN CONNECTION WITH A MATTER SUBJECT TO DISCUSSION OR CONSIDERATION AT AN OPEN MEETING OF THE FINANCE COMMITTEE ARE AVAILABLE FOR PUBLIC INSPECTION IN THE AUTHORITY OFFICE, 34156 DEL OBISPO STREET, DANA POINT, CA ("AUTHORITY OFFICE"). IF SUCH WRITINGS ARE DISTRIBUTED TO MEMBERS OF THE FINANCE COMMITTEE LESS THAN TWENTY-FOUR (24) PRIOR TO THE MEETING, THEY WILL BE AVAILABLE IN THE RECEPTION AREA OF THE AUTHORITY OFFICE AT THE SAME TIME AS THEY ARE DISTRIBUTED TO THE FINANCE COMMITTEE MEMBERS, EXCEPT THAT, IF SUCH WRITINGS ARE DISTRIBUTED IMMEDIATELY PRIOR TO, OR DURING, THE MEETING, THEY WILL BE AVAILABLE IN THE FINANCE COMMITTEE MEETING ROOM.

AGENDA

- 1. Call Meeting to Order**
- 2. Pledge of Allegiance**
- 3. Public Comments**

THOSE WISHING TO ADDRESS THE FINANCE COMMITTEE ON ANY ITEM LISTED ON THE AGENDA SHOULD SUBMIT A "REQUEST TO BE HEARD" FORM TO THE CLERK OF THE BOARD BEFORE THE PRESIDING OFFICER ANNOUNCES THAT AGENDA ITEM. YOUR NAME WILL BE CALLED TO SPEAK AT THAT TIME.

NOTICE OF SPECIAL MEETING – FINANCE COMMITTEE

February 19, 2019

Page 2 of 2

4. Approval of Minutes

- a) Finance Committee Meeting Minutes of November 16, 2018
- b) Finance Committee Meeting Minutes of November 30, 2018
- c) Finance Committee Meeting Minutes of January 28, 2018

Recommendation: Finance Committee approval of minutes as submitted

5. FY2018 / 19 Budget Adjustment

Recommendation

The Finance Committee recommends to the Board of Directors a Budget Increase of \$92,391 to the Administration Budget to fund the actuarial services and the cost distribution study accomplished in FY 2018/19 Budget year as Board approved work.

6. Carollo Cost Distribution Study

- Staff Presentation
- Q&A

Recommendation:

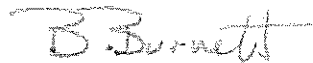
Staff recommends the Finance Committee to review and comment on the Carollo Report and accept the recommendation for consideration of Board of Directors on March 7, 2019.

7. Adjournment

I hereby certify that the foregoing Notice was personally emailed or mailed to each member of the SOCWA Finance Committee at least 24 hours prior to the scheduled time of the Special Meeting referred to above.

I hereby certify that the foregoing Notice was posted at least 24 hours prior to the time of the above-referenced Finance Committee at the usual agenda posting location of the South Orange County Wastewater Authority and at www.socwa.com.

Dated this 14th day of February 2019.



Betty C. Burnett, General Manager/Secretary
SOUTH ORANGE COUNTY WASTEWATER AUTHORITY

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

Jointly with the

PLANNING & OPERATIONS COMMITTEE

February 4, 2019, 8:30 a.m.

Conference Room 101

P&O Committee:

Director Yoo Schneider, Chair
Director Tamaribuchi
Director Dick

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

Ex Officio Member: Director Barbre

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

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

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

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

ACTION ITEM

1. WATER USE EFFICIENCY RESEARCH PROJECTS

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. 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

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

ADJOURNMENT

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

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



ACTION ITEM
February 20, 2019

TO: Board of Directors

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

Robert Hunter, General Manager
Staff Contact: J. Berg, Director of Water Use Efficiency

SUBJECT: Water Use Efficiency Research Projects

STAFF RECOMMENDATION

Staff recommends the Board of Directors approve implementation of research projects as detailed below including:

1. A contribution of \$15,000 to the California Water Efficiency Partnership for the development of Water Use Efficiency Standards Compliance and Water Conservation Tracking Tools,
2. A professional services contract with Water Systems Optimization, Inc. to:
 - a. Conduct Water Balance Validation Research and staff training in an amount not to exceed \$56,000
 - b. Conduct Leak Detection Research and staff training in an amount not to exceed \$100,000

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

Staff has identified the following four research projects for Board consideration this fiscal year:

- Water Use Efficiency Standards Compliance and Water Conservation Tracking Tools
- Water Balance Validation Research
- Leak Detection Research, and
- Pressure Regulating Valve Replacement Pilot Program and Water Savings Evaluation

Budgeted (Y/N): Yes	Budgeted amount: \$96,000	Core <u> X </u>	Choice <u> </u>
Action item amount: \$96,000		Line item: 35-7040	
Fiscal Impact (explain if unbudgeted):			

All four research projects are designed to assist agencies in complying with new water use efficiency standards included in Senate Bills 555 and 606, and Assembly Bill 1668.

The total cost for these research activities is \$353,500. Staff proposes to use a combination of budgeted research funds (\$75,000) and budgeted but repurposed landscape education funds (\$21,000) for a total of \$96,000 or 25 percent for MWDOC's contribution to the research. Repurposed landscape education funding is available because very favorable pricing was secured near the end of FY 2017-18 for the Qualified Water Efficient Landscaper Program instructor. MWDOC funds will leverage an additional \$265,500 or 75 percent from other funding sources such as Metropolitan, water suppliers from throughout the state, and the US Bureau of Reclamation.

DETAILED REPORT

The following provides descriptions of the four research projects including goals, funding partners, budget, etc.

Water Use Efficiency Standards Compliance and Water Conservation Tracking Tool

The California Water Efficiency Partnership (CalWEP), in conjunction with the Alliance for Water Efficiency, is seeking funds to develop tools to assist members with compliance with California's new water use efficiency mandates contained in Assembly Bill 1668 and Senate Bill 606. Two tools are targeted for development including:

1. A California Water Use Efficiency Standards Compliance Tool - This tool will allow an urban water supplier to calculate their water use objective and compare the objective to their actual water use. The water use objective will include volumes of water for indoor, outdoor, and water loss standards. Actual water use from billing data will be entered into the tool for comparison to the supplier's water use objective. The compliance tool will be developed in a way that will allow for the tool to be refined over time in response to the evolution of the standards. CalWEP will engage with the Department of Water Resources during the development process to ensure the tool is consistent with the new standards.
2. An Updated California-Specific Water Conservation Tracking Tool - This tool will allow an urban supplier to track the costs and water savings of water use efficiency program implementation over time. It also allows agencies to optimize program implementation by evaluating the costs and savings of customized water use efficiency program portfolios to meet a water savings goal. This tool was used to develop MWDOC's Water Use Efficiency Master Plan in 2013. The updated tool will include water conservation programs specific to California, such as:
 - Modular functionality that separates compliance detection and conservation planning to ensure compliance;
 - Improved indoor and outdoor water use accounting and GPCD target tracking;
 - New functionality to evaluate costs and benefits of CII mixed-use meter conversion;

- New functionality to assess water savings and cost-effectiveness of CII water use audits and management reports for different types and sizes of commercial and industrial water users;
- New functionality for tracking costs and water savings of water loss auditing, reporting, pressure management, and leak detection and repair activities;
- Updates to the Tracking Tool Library to incorporate the most current information on implementation costs and water savings for conservation activities aimed at reducing residential indoor, landscape, and CII water uses; and
- Updates to the Tracking Tool Library to incorporate the most current information on implementation costs and water savings for utility leak detection and repair activities including pressure management.

The proposal for the development of the tools is from M.Cubed and A&N Technical Services, Inc. and is provided as **Attachment A**. CalWEP is soliciting funding support from water agencies throughout the state to develop these tools. The cost for both tools is \$205,500. While the funding drive began this month, to date the following funding commitments have been made:

• Inland Empire Utilities Agency	\$15,000
• Municipal Water District of Orange County	\$15,000 (proposed)
• Regional Water Authority	\$20,000
• Solano County Water Agency	\$20,000
• Sonoma County Water Agency	\$10,000
• Western Municipal Water District	<u>\$10,000</u>
	\$90,000 (44%)

It is anticipated the funding drive will conclude this summer, at which time development of the tools will begin. The tools will be completed within 8 to 11 months including testing and user training. Staff requests board authorization for MWD OC to contribute \$15,000 toward the development of the tools. This represents less than eight percent of the cost of the tools, but leverages full access to the tools and shares the cost with water agencies throughout the state.

Water Balance Validation Research

On March 9, 2018, State Water Resources Control Board (Water Board) staff began a stakeholder process to develop rules requiring urban retail water suppliers to meet performance standards for the volume of water loss. This was the first of four stakeholder meetings the Water Board plans to hold. At this meeting, Water Board staff revealed they will base these performance standards on as little as two years of validated water loss audit data. This represents a significant area of concern for MWD OC staff. Not only is the Water Board planning to set the standards on a very limited data set (two years), but they are also planning to use two different validation processes. The 2017 validation process was funded by the Water Board and utilized two consultants working very closely to validate water audit reports for all urban water suppliers in the state. This provided a common validation approach and, therefore, a very consistent state-wide data set. In 2018, validations were done by a broader group of validators, including consultants and water agency staff who completed the Cal-Nev AWWA Water Audit Validator Certification. As a result, the

variability of water balance validations will increase significantly from 2017 to present and may result in the standard being set based upon poor quality data.

With this in mind, in 2018 the MWDOC Board authorized staff to utilize Water System Optimization, Inc. (WSO) to perform water balance validations for all member agencies in order to have a third consecutive year of consistently validated water balances. The results of the three-year dataset are provided in Figure 1. This dataset show moderate to significant variability from year to year for most agencies (64%) and minimal variability for others (36%). In addition, there is significant variability from agency to agency. Staff presented these results to the Water Board staff leading the process to set the water loss volume standard.

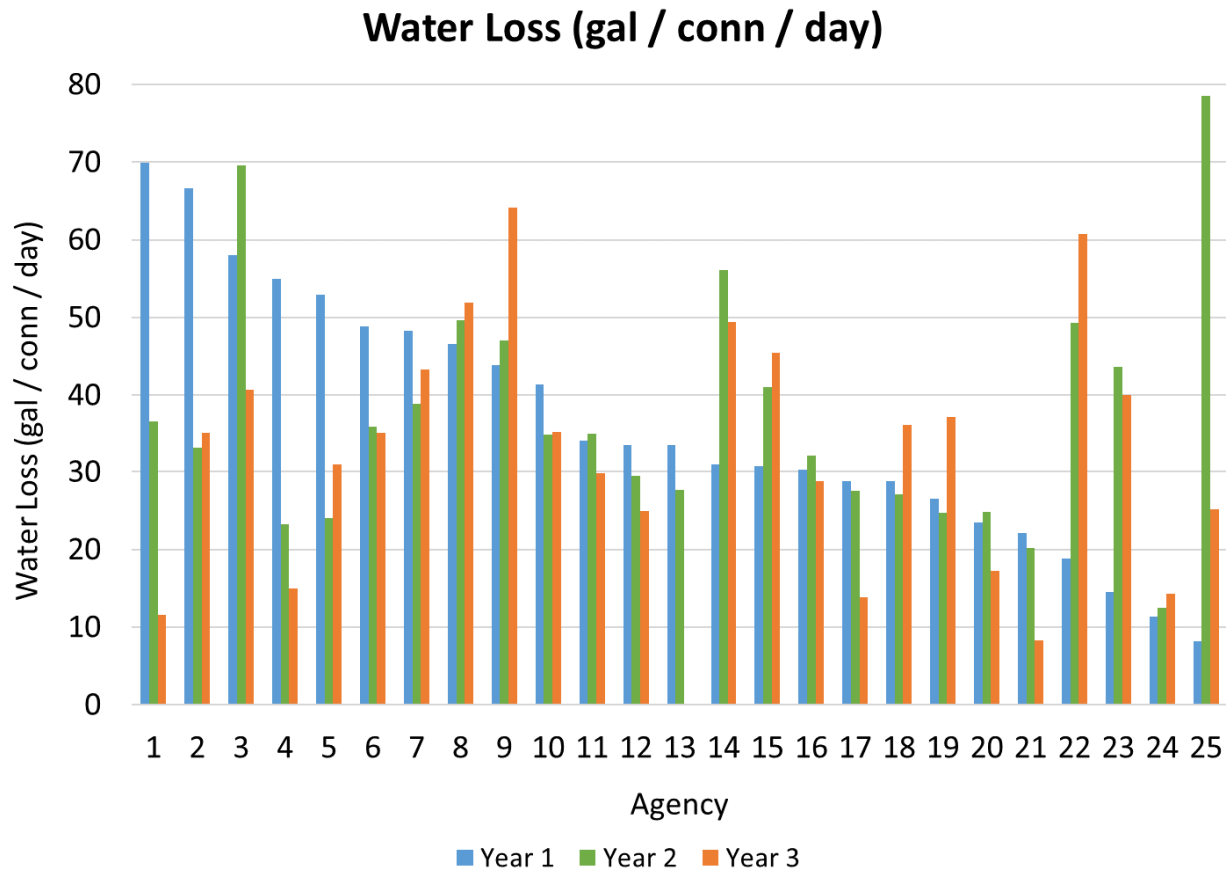


Figure 1

Both staff and WSO believe a five-year data set would be more appropriate for setting the performance standard for a volume of water losses, with an emphasis placed on the last two to three years of data in the five-year dataset. Staff is advocating that the Water Board adopt a two-step process for adopting the volume standard for water loss. The first step would extend the water loss audit reporting to five years before setting water loss standards. This will allow for agencies to continually improve the data used to compile the audit, thus improving the confidence in the water balance results. The second step would use the bigger and more consistent data set to set the volumetric standard for water loss.

Staff is proposing to extend our water loss audit report validation for 2019 to all member agencies as a Core program using MWDOC budgeted research funds. This project has two goals:

- Goal 1: Complete water balance validations for all MWDOC member agencies to establish a fourth consecutive year of consistently validated water balances.
- Goal 2: Provide hands on water balance validation training for MWDOC's Water Loss Control Programs Supervisor.

This will allow Orange County's data to be validated consistently for a fourth consecutive year. The results of this four-year data set will be shared with Water Board staff with the intent to use this data to better inform the standards setting process.

In addition, this validation process will serve as a training opportunity for MWDOC's new Water Loss Control Program Supervisor. One-on-one training will be provided by WSO using our member agencies as case studies. Once completed, the Supervisor will be ready to take the California-Nevada American Water Works Association Water Audit Validator Certification Course and Exam.

Staff discussed this research and training effort with WSO and negotiated a discounted cost of \$2,000 per agency¹. The total cost for this effort would be \$56,000 for 28 water balance validations. WSO was amenable to the discounted rate because they will work with a larger number of agencies, and the data will have value to the Water Board's standard setting process.

Staff recommends the Board of Directors authorize the General Manager to sign a professional services contract with Water Systems Optimization, Inc. to conduct Water Balance Validation Research in an amount not to exceed \$56,000

Leak Detection Research

Staff proposes to conduct a Leak Detection Research project in partnership with the Metropolitan Water District of Southern California, US Bureau of Reclamation, and member agencies. This project has two goals:

- Goal 1: Conduct leak detection and repair to evaluate water savings and feasibility of a standardized Conservation Credits Program incentive from Metropolitan.
- Goal 2: Hands on leak detection training for MWDOC's Leak Detection Technician.

Staff proposes to use our existing leak detection contractor, WSO to perform leak detection on 230 miles of distribution system while simultaneously training MWDOC Shared Services staff. Up to six retail water agencies with varying levels of water loss and pipe materials will be included in the research. WSO and MWDOC staff will document all leaks, track repairs, and quantify water savings. Leak detection results will also be used to corroborate estimates of real water loss calculated in annual water balances required by SB 555. All

¹ MWDOC technical assistance program includes water loss audit validation by WSO at a fixed cost of \$2,500 per retail agency.

information will be reported to Metropolitan to evaluate water savings and feasibility of a standardized Conservation Credits Program incentive from Metropolitan.

As summarized in Table 1, the budget for this research effort is \$100,000 and is proposed to be funded by MWDOC, Metropolitan, US Bureau of Reclamation, and in-kind support from participating member agencies. WSO will perform the leak detection while simultaneously training MWDOC's Leak Detection Technician. WSO will also establish data collection procedures, aggregate and analyze results, document results including recommendations and presents results to project partners. Data collection procedures will then be used by MWDOC staff administering water loss control shared services.

Table 1 Leak Detection Research Funding Partnership			
Funding Partner	Leak Detection and Training	Evaluation	Total
MWDOC		\$25,000	\$25,000
Metropolitan	\$30,000		\$30,000
US Bureau of Reclamation	\$45,000		\$45,000
Total:	\$75,000	\$25,000	\$100,000

Staff recommends the Board of Directors approve a professional services contract with Water Systems Optimization, Inc. to conduct Leak Detection Research and MWDOC staff training in an amount not to exceed \$100,000

Pressure Regulating Valve Replacement Pilot Program and Water Savings Evaluation

The California Plumbing Code requires homes and businesses to have a pressure regulating valve (PRV) when the water supply pressure or street pressure is 80 psi or greater.

According to the Uniform Plumbing Code Illustrated Training Manual:

"[a] limit of 80 psi (551.6 kPa) is the maximum static pressure of any water supply system. The reason for this is to reduce water hammer, unnecessary use of water, splashing, excessive discharge of pressure relief valves and to protect appliance and fixture valves and mechanisms from pressure that exceeds their design limits. Any installation with pressures above 80 psi will require a pressure regulating valve to limit the pressure to 80 psi or below.

PRVs appear to have a useful life of 10 – 12 years. When they fail, they usually fail in the open position, therefore increasing indoor water pressure to street pressure. As a result, all plumbing fixtures, appliances, and leaks are likely flowing at higher rates, resulting in increased water use. Staff is proposing implementation of a study, in partnership with host member agencies, to evaluate the viability of a PRV replacement program to save water. The study will rely on a plumber(s) to canvas targeted neighborhoods known to have high pressure. With homeowner permission, the plumber will test the PRV. If the test results in a failed PRV, the plumber will offer to replace it with a new one. Pre and post retrofit water use will be collected and analyzed by MWDOC staff to quantify water savings.

The study will be implemented using a combination of funding from MWDOC and Metropolitan. Staff is in the process of conducting a Request for Proposals (RFP) process to hire a plumber(s) to perform the field work. Staff will return to the Board this spring with a detailed proposal once the RFP process has been completed. If this research results in a significant amount of indoor water savings, PRVs could be added to the regional rebate program as a new water saving opportunity to assist agencies in meeting indoor water use standards contained in SB 606 and AB 1668.

Summary

In summary, these research efforts are designed to assist agencies to comply with new water use efficiency standards contained in Senate Bills 555 and 606, and Assembly Bill 1668. This research will provide quality data to better inform water loss standards, assist agencies in complying with standards, and train MWDOC water loss control shared services staff who will implement water loss programs to comply with standards.

As shown in Table 2, the total cost for these research activities is \$353,500. Staff proposes to use a combination of budgeted research funds (\$75,000) and budgeted but repurposed landscape education funds (\$21,000) for a total of \$96,000 or 25 percent for MWDOC's contribution to the research. Repurposed landscape education funding is available because very favorable pricing was secured near the end of FY 2017-18 for the Qualified Water Efficient Landscaper Program instructor. MWDOC funds will leverage an additional \$265,500 or 75 percent from other funding sources such as Metropolitan, water suppliers from throughout the state, and the US Bureau of Reclamation.

Table 2 Summary of Research Projects			
Research Project	MWDOC Contribution	Metropolitan or Other Contributions	Total:
Water Use Efficiency Standards Compliance and Water Conservation Tracking Tools	\$15,000	Other = \$190,500	\$205,500
Water Balance Validation Research	\$56,000	\$0.00	\$56,000
Leak Detection Research	\$25,000	Metropolitan = \$30,000 USBR = \$45,000	\$100,000
Pressure Regulating Valve Replacement Water Savings Evaluation	To Be Determined		
Total:	\$96,000	\$265,500	\$353,500



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DATE: December 3, 2018
TO: Joe Berg, California Water Efficiency Partnership Board
Mary Ann Dickenson, California Water Efficiency Partnership
FR: David Mitchell (M.Cubed) and Tom Chesnutt (A&N Technical Services)
RE: Proposal to develop Tools for New State Urban Water Use Standards

Introduction

This letter proposal sets forth development of two independent but related tools:

1. A California WUE Standards Compliance Tool (CalWEP Tool) and
2. An updated California-specific version of the AWE Water Conservation Tracking Tool (AWE Tool)

The first tool would be used to determine compliance with new State Urban Water Use Standards. The second would be used to attain or ensure compliance through planned design of intentional WUE programs. Members of CalWEP and AWE would have access to these planning (AWE tool) and California WUE Standards compliance (CalWEP tool) tools. The CalWEP tool would necessarily be a work in progress as the Standards are being finalized. The AWE Water Conservation Tracking Tool is an Excel-based planning model that water suppliers can use to evaluate the water savings, costs, and benefits of conservation (WUE) programs. Using information entered into the Tracking Tool from a utility's system, it provides a standardized methodology for water savings and benefit-cost accounting, and includes a library of pre-defined conservation activities from which users can build conservation programs.

The Tracking Tool is used widely across the nation. Many utilities in California rely on it for conservation planning. Different versions of the Tracking Tool have been developed for unique state regulatory environments. For example, one version is specific to the plumbing codes, appliance standards, and landscape requirements in California. However, California is currently in the process of making significant changes to these regulations. Helping water utilities plan for compliance with these regulatory changes is one of the main purposes of the Tracking Tool.

This proposal describes the pending changes to California urban water conservation regulations and proposes modifications to the Tracking Tool to help California urban water suppliers plan their water conservation programs to comply with the new state requirements. The proposal sets out a modular approach that separates (1) California state compliance from (2) the task of conservation program planning to ensure compliance. This modular approach will allow urban water suppliers to use alternative approaches to compliance determination or conservation planning at their choice. The modular approach would also allow use of the California-specific tools for cross-checking and validation of alternative approaches.

Changing State Urban Water Conservation Regulations

A major change on California's urban water management horizon is the implementation of Executive Order B-37-16. The stated goal of the order is to "help Californians *adopt permanent changes* to use water more wisely".¹ Specifically, the Executive Order states:

The Department of Water Resources (Department) shall work with the Water Board to develop new water use targets as part of a permanent framework for urban water agencies. These new water use targets shall build upon the existing state law requirements that the state achieve a 20% reduction in urban water usage by 2020 ... These water use targets shall be customized to the unique conditions of each water agency, shall generate more statewide water conservation than existing requirements, and shall be based on strengthened standards for:

- a. Indoor residential per capita water use;*
- b. Outdoor irrigation, in a manner that incorporates landscape area, local climate, and new satellite imagery data;*
- c. Commercial, industrial, and institutional water use; and*
- d. Water lost through leaks.*

New Per Capita Water Use Targets for Indoor and Outdoor Water Use

Key to the Executive Order is the requirement that urban water suppliers meet new water use targets that will replace the 20x2020 targets set under Senate Bill X7-7 passed in 2009. Importantly, the new targets must result in greater statewide water savings than the 20x2020 targets they are replacing.

The state is developing new standards and targets for indoor residential water use and outdoor residential and non-residential landscape water use. Current law (AB 1668 and SB 606) sets an initial indoor residential target of 55 gpcd. The target would be reduced to 52.5 gpcd in 2025 and to 50 gpcd in 2030, if studies of residential indoor water use support lowering the targets. Currently, indoor residential water use is thought to average about 58 gpcd², which is about 14% greater than the target being proposed for 2030.

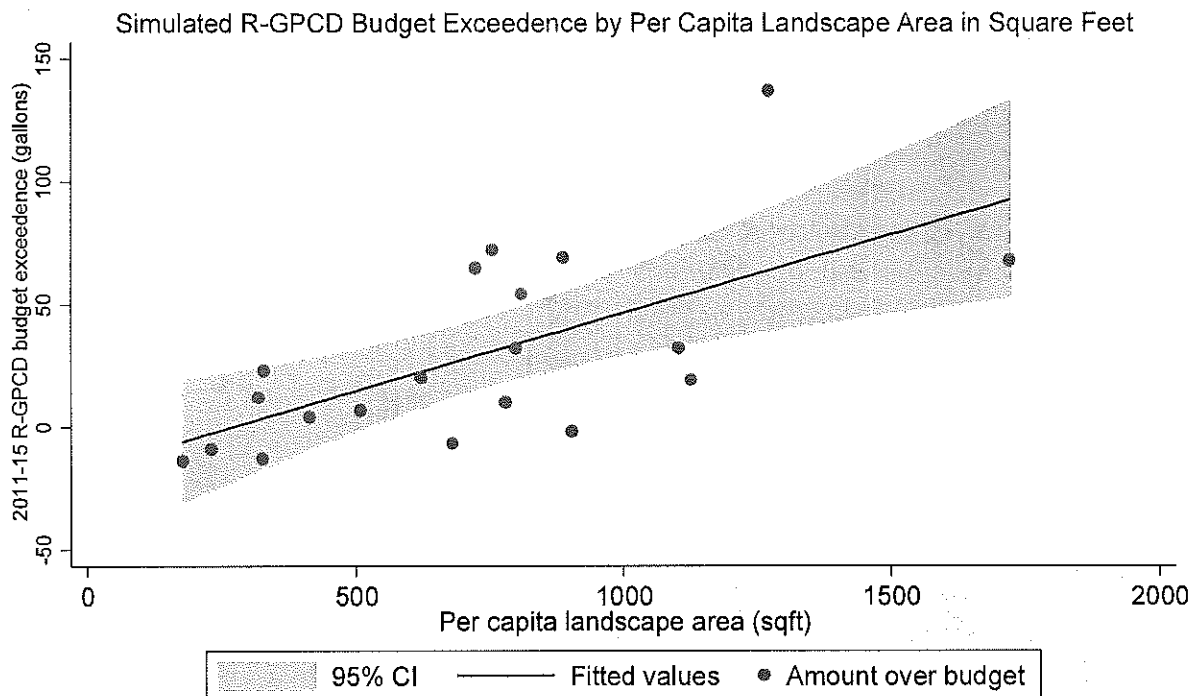
The outdoor component of the target will be based on estimated landscape area multiplied by a fraction of a measure of evapotranspiration using the principles of the Model Water Efficient Landscape Ordinance. While the fraction of measured evapotranspiration that will determine the outdoor water allowance has not been settled, it is likely to be somewhere in the range of 0.45 to 0.8.³

¹ State of California. 2017. Making Water Conservation a California Water of Life: Implementing Executive Order B-37-16. Prepared by California Department of Water Resources, State Water Resources Control Board, California Public Utilities Commission, California Department of Food and Agriculture, California Energy Commission.

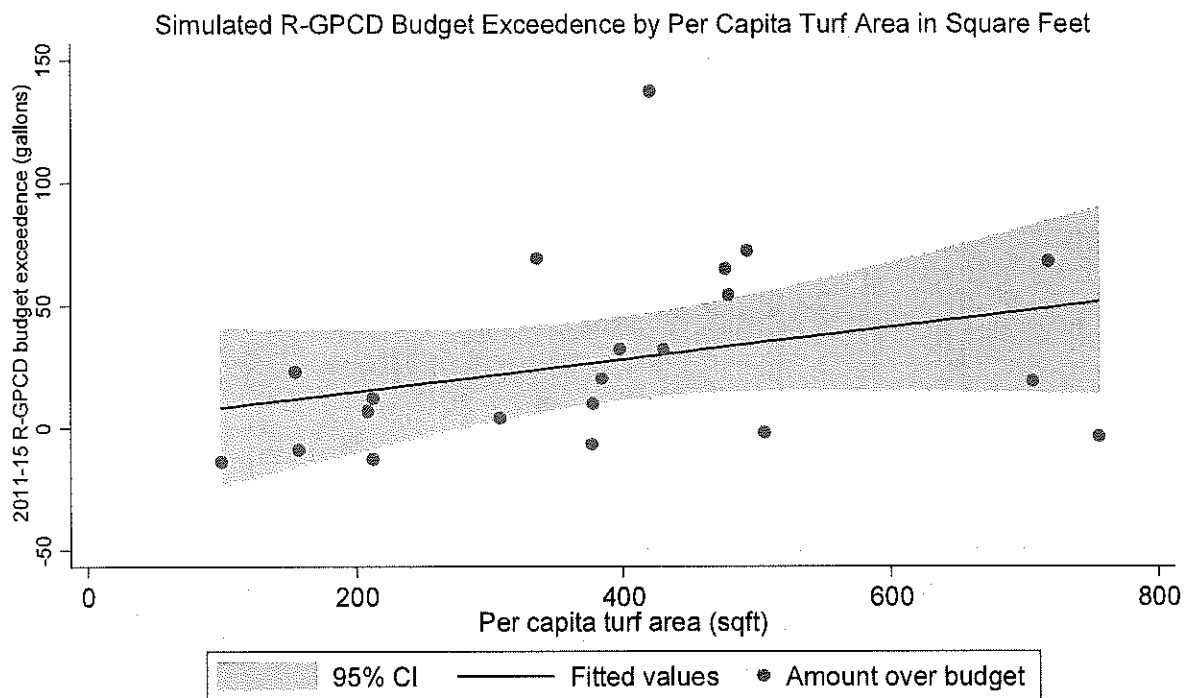
² M.Cubed. 2016. Projected Statewide and County-Level Effects of Plumbing Codes and Appliance Standards on Indoor GPCD. Prepared for the California Department of Water Resources.

³ This is based on changes DWR is proposing to make to the maximum applied water allowance (MAWA) in the Model Water Efficient Landscape Ordinance (MWELo) which would serve as the benchmark for setting the outdoor urban water use targets. The pre-2015 MAWA was 0.7 of ETo. The current MWELo (effective Feb. 2016) lowered the MAWA to 0.55 for residential landscape projects and to 0.45 for non-residential projects. See <https://www.water.ca.gov/LegacyFiles/wateruseefficiency/landscapeordinance/docs/2015%20MWELo%20Guidance%20for%20Local%20Agencies.pdf>

Analysis of recent historical residential water use and landscape area for a statewide sample of 20 water suppliers indicates that regions with significant landscape and turf area per capita may be challenged to meet the new outdoor standards. For example, the following two charts show the results of a simulation examining the extent to which 2011-15 average R-GPCD for the sampled suppliers would exceed a hypothetical residential water target.⁴ Simulation results are sorted by landscape and turf area per capita. The charts show a strongly positive correlation between the magnitude of per capita landscape and turf area and the magnitude of exceedance of the simulated target for the sampled districts. Moreover, budget exceedance in the simulation is commonplace even though residential demand was lower than normal in 2014 and 2015 due to drought water use restrictions.



⁴ The simulated monthly outdoor budgets were set to measured residential landscape area multiplied by $\max(\text{average monthly ET}_o \times 0.55 - 0.3 \times \text{average monthly precipitation}, 0)$. The annual budget is the sum of the monthly budgets. Indoor budgets were set to 55 gpcd. The budgets were compared to each supplier's average R-GPCD for 2011-2015.



The new indoor and outdoor targets will put new urgency on accurate assessments of the water savings potential and cost-effectiveness of conservation programs targeted to reduce residential and landscape water use. Modifications to the Tracking Tool are needed to better support indoor and outdoor water use accounting and to ensure that the Tracking Tool Library's indoor and landscape water conservation program specifications accurately incorporate the best available information on water savings and program implementation costs.

CII Performance Standards

The state is also proposing new performance measures for CII water use, including (1) classification of all CII accounts using the North American Industry Classification System (NAICS) and where feasible development of CII subsector water use benchmarks for identification of CII accounts with potential for water use efficiency improvements; (2) completion of water use audits or water management plans for CII accounts over a specified size, volume, or percentage threshold; and (3) conversion of all landscapes over a specified size threshold that are served by a mixed-use meter CII account to dedicated irrigation accounts.

It is not yet known what the threshold will be for completing water use audits or water management plans for CII accounts. The state indicated in its Making Conservation a California Way of Life report that it will develop regulations and guidelines by October 1, 2021 (CWC 10609.10(a)), though this may change under future legislation. It stands to reason that water suppliers with a high fraction of

commercial and industrial water use are likely to bear most of the burden of the new requirements. As a general rule, the top 10% of CII water users account for 70 to 80% of all CII water uses.⁵

Completing water use audits and management reports for these large CII customers will be a complex and expensive task which may require use of consultants with specialized knowledge in industrial process water use. Commercial and industrial audits and management plans can be highly technical and expensive to complete. Based on data compiled in 2005 by the California Urban Water Conservation Council, CII water use surveys and management reports were shown to have a median cost range of \$1,000 to \$30,000 and a mean cost range of \$4,000 to \$100,000 per intervention.⁶ The wide cost ranges are primarily driven by the complexity of the water end uses under investigation – completing a water use survey for a large industrial refinery, for example, requires much more effort and time than completing one for a small commercial laundry or kitchen.

Currently, the Tracking Tool's program library does not include default entries for CII water use audits and management reports. It will be important to add new program specifications for these activities to the library in anticipation of the state requirements.

CII Mixed Meter Conversion

The state has also proposed that urban water suppliers convert all landscapes above a certain size served by mix-use CII meters to dedicated irrigation meters. While the landscape size threshold has not yet been determined, it is conceivable that individual water suppliers may have to convert hundreds if not thousands of acres of landscape from mixed-use to dedicated irrigation meters. This represents a potentially significant task and cost for urban water suppliers. Large landscaped areas often are served by more than one meter and determining which meter is serving which parts of a landscape can be complicated and often can only be accomplished through trial and error.

Whether this requirement will yield cost-effective water savings is an unsettled question. Modifications to the Tracking Tool are needed to help water suppliers accurately assess the expected costs and benefits of CII mixed-use meter conversion.

System Water Loss Reporting and Reduction

Executive Order B-37-16 places significant emphasis on accelerating data collection and reporting on system water loss and taking actions to minimize leaks. Specifically, it states:

The Water Board and the Department [of Water Resources] shall direct actions to minimize water system leaks that waste large amounts of water. The Water Board, after funding projects to address health and safety, shall use loans from the Drinking Water State Revolving Fund to prioritize local projects that reduce leaks and other water system losses. The Water Board and the Department [of Water Resources] shall direct urban and

⁵ Mitchell, David and Thomas Chesnutt. 2017. CII Water Use and Drought Response: Case Study of California Water Service. Prepared for California Water Service, Department of Water Resources, and State Water Resources Control Board.

⁶ California Urban Water Conservation Council. 2005. BMP Costs & Savings Study: A Guide to the Data and Methods for Cost Effectiveness Analysis of Urban Water Conservation Best Management Practices. California Urban Water Conservation Council. Sacramento.

agricultural water suppliers to accelerate their data collection, improve water system management, and prioritize capital projects to reduce water waste. The California Public Utilities Commission shall order investor-owned water utilities to accelerate work to minimize leaks.

Senate Bill 555, passed in 2015, requires the Water Board to develop water loss performance standards for urban retail water suppliers between January 2019 and July 2020. These standards are expected to be incorporated into the new water use targets (SB 606 & AB 1668) the state is developing for urban water suppliers.

Modifications to the Tracking Tool are needed so that users can accurately account for the costs of state water loss auditing and reporting requirements, the costs of leak detection and minimization actions, and the expected water savings from these actions over time. (Note: SB 555 requires life-cycle cost analysis, and the state will need to apply and interpret this requirement.) This will require updating the Tracking Tool Library to include new water loss management activities. It may also require the development a new Tracking Tool module specifically designed for water loss accounting and tracking of water savings from leak minimization activities.

Summary of Needed Updates and Modifications to Tracking Tool

In light of the above, necessary updates and modifications to the Tracking Tool include:

- Modular functionality that separates compliance detection and conservation planning to ensure compliance
- Improved indoor and outdoor water use accounting and GPCD target tracking;
- New functionality to evaluate costs and benefits of CII mixed-use meter conversion;
- New functionality to assess water savings and cost-effectiveness of CII water use audits and management reports for different types and sizes of commercial and industrial water users;
- New functionality for tracking costs and water savings of water loss auditing, reporting, pressure management, and leak detection and repair activities;
- Updates to the Tracking Tool Library to incorporate the most current information on implementation costs and water savings for conservation activities aimed at reducing residential indoor, landscape, and CII water uses;
- Updates to the Tracking Tool Library to incorporate the most current information on implementation costs and water savings for utility leak detection and repair activities including pressure management.

Proposed Scope of Work

The Scope of Work follows the standard software development paradigm, breaking work tasks into the following five categories:

1. Requirements Analysis
2. Design
3. Development
4. Testing
5. Rollout

Requirements Analysis

The requirements analysis is arguably the most important step since it will guide everything that follows. The purpose of the requirements analysis is to determine the changes that need to be made to the Tracking Tool from the perspective of the user.

Task 1 – Formation of Project Advisory Committee. The first step in completing the requirements analysis will be formation of a Project Advisory Committee (PAC) comprised of California Water Efficiency Partnership members and staff. In addition to general project oversight, the PAC will provide a forum for the identification and prioritization of Tracking Tool modifications. This will be done over the course of several meetings with the PAC early in the project.

Task 2 – User Interviews. Up to 10 interviews will be conducted with Tracking Tool users and state agency staff. These users will be queried about how they currently use the Tracking Tool for conservation planning, whether and how they intend to use it in their planning for compliance with future state water use regulations, and what changes to the Tracking Tool would best facilitate this planning. Interview results will be compiled and summarized in a Technical Memorandum that will be distributed to the PAC.

Task 3 – Documented Requirements Analysis

Upon completion of the user interviews and initial PAC meetings, we will prepare a draft Technical Memorandum documenting the requirements analysis and describing in detail the proposed updates to the Tracking Tool and its Program Library in terms of its functionality, design, and data structure. Following review and comment by the PAC, the requirements analysis memorandum will be finalized.

Design

Task 4 – Preliminary Re-Design. A preliminary re-design of the Tracking Tool will be prepared based on the results of the requirements analysis. This preliminary re-design will be presented to the PAC for review and input. The re-design will consist of mock-ups of the user interface and output worksheets of the Tracking Tool.

Task 5 – Final Re-Design. Based on PAC feedback on the preliminary re-design, a final re-design of the Tracking Tool will be developed and presented to the PAC for approval.

Development

Task 6 Compliance Module Coding. This stand-alone module can be used independently of the AWE tracking tool. The module will allow an agency to enter service area specific data (population, landscape area, Et, etc.) into state performance metrics to determine compliance with its potential urban water use objective. The module will allow an agency to choose different levels of indoor water use, MAWA and water loss, through user-friendly pull downs to calculate its urban water use objective. It will also require the user to enter water use by customer class to compare to the objective. Additional state efficiency standards for CII non-outdoor use, efficient water loss levels, and estimated use for approved variances will also be included to complete the calculation of the agency's urban water use objective.

It is of course true that ultimate compliance with California state regulations for "Conservation as a California Way of Life" cannot be specified with certainty until the California state regulations have been

finalized. Ultimately, the state may provide a tool to assist in compliance determination. That said, a reasonable forecast can now be made on where state regulations will end up. California water utilities need to be able to reduce the current state of uncertainty surrounding their compliance. This task will develop an urban water use objective calculator to fill this void in the interim. Should the state quickly provide a compliance tool, this task can be scaled back.

Task 7 – Tracking Tool Coding. Coding of the Tracking Tool will commence following PAC approval of the re-design. This will entail updating existing Tracking Tool worksheets, adding new worksheets (including inputs from the Compliance Module), updating the navigation system, and updating or creating new back-end Visual Basic code.

Task 8 – Update Tracking Tool Library. This task will update the Tracking Tool’s library of conservation program activities to incorporate the most current information on implementation costs and water savings for conservation activities aimed at reducing residential indoor, landscape, and CII water uses. David Pekelney (A&N) will lead this activity. This task will also develop and add new water loss accounting, leak detection and repair, and pressure management activities to the library. We are currently checking with subject matter experts to add an additional team member to assist in defining water loss life cycle costs.

Task 9 – Update User Guide. Following completion of Tasks 6 and 7, the Tracking Tool’s User Guide will be updated to reflect the changes to the Tracking Tool’s design, functionality, and library.

Testing

Task 10 – Alpha Testing. Once the coding and library updating tasks are finished, the Tracking Tool will be tested for bugs and design flaws by the consultant team and CalWEP/AWE staff. Identified software bugs and design issues will be catalogued and fixes will be documented.

Task 11 – PAC Demonstration. Upon completion of alpha testing, the PAC will be given a demonstration of the updated Tracking Tool. This will be scheduled to align with one of the regular meetings of the California Water Efficiency Partnership, or will be done remotely via the internet to spare the PAC unnecessary travel and time away from work.

Task 12 – Beta Testing. Upon completion of alpha testing the Tracking Tool will be distributed to PAC members for additional testing and feedback. Again, any identified software bugs and design issues will be catalogued and fixes will be documented.

Rollout

Task 13 – Rollout Webinar. When the Tracking Tool is ready for public release, AWE will schedule a rollout webinar for California Water Efficiency Partnership members. The webinar will present the revised functionality of the Tracking Tool and illustrate ways it may be used to evaluate and plan for the new state water use regulations.

Development Team

The development team consists of staff from M.Cubed, A&N Technical Services, and AWE. David Mitchell of M.Cubed will serve as the project manager and will also be the lead on the requirements analysis, design and development tasks. Tom Chesnutt and David Pekelney of A&N Technical Services

will lead the library update and testing tasks. Bill Christiansen of AWE will support the requirements analysis and testing tasks and also will support the rollout tasks. Mary Ann Dickinson will provide general oversight and will be the primary liaison between the development team and the California Water Efficiency Partnership.

Schedule

Completion of the Scope of Work is expected to require 8 to 11 months from the project kick-off:

- Requirements Analysis – 2 months
- Design – 1 to 2 months
- Development – 3 to 4 months
- Testing – 1 to 2 months
- Rollout – 1 month

It is understood that initiation of the project as well as possible changes to the proposed schedule will be governed by the timing and content of state legislation and related regulations establishing the new urban water targets and reporting requirements.

Budget

Task budgets are provided in the following table. The total project cost is \$205,500.

Budget to Update AWE Water Conservation Tracking Tool for New State Urban Water Use Standards

Requirements Analysis	Task Cost
Task 1 PAC meetings	\$7,500
Task 2 User Interviews	\$10,000
Task 3 Documented Requirements Analysis	\$10,000
Design	
Task 4 Preliminary Re-Design	\$15,000
Task 5 Final Re-Design	\$10,000
Development	
Task 6 Compliance Module Coding	\$25,000
Task 7 Tracking Tool Coding	\$45,000
Task 8 Update Tracking Tool Library	\$40,000
Task 9 Update User Guide	\$10,000
Testing	
Task 10 Alpha Testing	\$10,000
Task 11 PAC Demonstration	\$5,000
Task 12 Beta Testing	\$10,000
Rollout	
Task 13 Rollout Webinar	\$5,000
Travel and Project Incidentals	\$3,000
Total Project Cost	\$205,500

ENGINEERING & PLANNING	
Orange County Reliability Study	Spin off work from the Reliability Study to further analyze the Strand Ranch Extraordinary Water Supply program is now in progress.
South Orange County Emergency Service Program	Dudek continues to assist MWDOC and IRWD to determine if the existing IRWD South Orange County Interconnection capacity for providing emergency water to South Orange County can be expanded and/or extended beyond its current time horizon of 2030. Staff from MWDOC, IRWD, OCWD and Dudek met on January 24, 2019 to review the hydraulic modeling of the IRWD system. Dudek is currently incorporating comments into the technical memorandum and the next step is to share the information with the SOC agencies in February.
Strand Ranch Project	MWDOC is using the modeling from the Orange County Reliability Study to evaluate how “extraordinary supplies” from the Strand Ranch Project can be utilized by the MWDOC agencies to provide drought protection over the next 7 to 11 years or longer. The analysis is currently in progress.
MET Evaluation of Regional Storage Portfolio (ERSP)	<p>MET Evaluation of Regional Storage Portfolio (ERSP).</p> <p>Metropolitan’s emergency water storage objective is based on the potential for major earthquake damage to the State Water Project and Colorado River aqueducts that transport imported water supplies to Southern California (following the San Andreas M7.8 ‘Great ShakeOut’ scenario developed by the US Geological Survey).</p> <p>MET has established a Member Agency Workgroup to consider updates to MET’s emergency storage objective, including:</p> <ol style="list-style-type: none"> 1. Updating emergency criteria, 2. Revising the framework for determining emergency storage volume. The new framework would shift from a traditional single equation for determining emergency storage volume, to an updated evaluation that considers various combinations of criteria to determine a storage amount that provides an envelope of alternatives for MET’s emergency storage that could provide reliability during the outage period. 3. Proposed periodic re-evaluation of emergency storage volume to coincide with completion of each new IRP (every 5 years). <p>MET released a White Paper on October 29, 2018 to member agencies for their review and feedback. The paper discusses a methodology for review and update of emergency criteria and re-evaluation of Metropolitan’s emergency storage.</p> <p>Included in the proposed outage period criteria is:</p> <ol style="list-style-type: none"> A. Recognition that an outage on the SWP could exceed previous estimates of six months (now one to two years), and B. Incorporation of increased operational flexibility of the MET system which was demonstrated during the last drought. Some areas in the MET’s service area that normally receive SWP water from the East

	<p>Branch could be served by delivering DVL water to Mills through the Inland Feeder/Lakeview Pipeline intertie.</p> <p>These changes modify the Emergency Outage Criteria from a minimum/maximum outage criteria to an 'effective outage' duration which better represents conditions.</p> <p>A third Workgroup meeting was held November 1, 2018 which continued the discussion on updating emergency storage criteria and re-evaluation of Metropolitan's Emergency Storage Requirements. Based on these discussions, it appears as if MET staff will only be making marginal changes in the existing emergency storage recommendations.</p>
Poseidon Resources	<p>(Nothing new to report)</p> <p>Poseidon continues working with the Santa Ana Regional Water Quality Control Board (SARWQCB) to renew and update its existing National Pollution Discharge Elimination System permit and expects to be in front of the Regional Board in 2019.</p>
SMWD Rubber Dams Project	<p>(Nothing New to Report)</p> <p>SMWD continues to work on additional technical studies to complete the response to comments on the Draft Environmental Impact Report (DEIR).</p>
Doheny Ocean Desalination Project	<p>(Nothing New to Report)</p> <p>South Coast WD released the Doheny Ocean Desalination Project Draft Environmental Impact Report (EIR) on May 17, 2018. A Public Meeting for the EIR was held on June 26, 2018, and the EIR public comment period closed on August 6, 2018. Consultant GHD is currently working on an updated Coastal Hazard Technical Study to address comments received.</p> <p>A Request for Qualifications (RFQ) for a 3rd party legal firm to assist with Design-Build-Operate (DBO) contract development was released and interviews with 5 respondents were held August 22, 2018. The South Coast WD Board is currently in negotiations and anticipates awarding the contract in the near future.</p> <p>South Coast WD staff also submitted a grant application for up to \$20 million for project construction through Bureau of Reclamation 'Water SMART: Desalination Construction Projects under the WIIN Act'. The Bureau of Reclamation expects to contact potential award recipients and unsuccessful applications toward the end of 2018.</p>
Meetings	
	<p>Charles Busslinger has been participating in conference calls hosted by CalDesal in anticipation of the January 2019 Public Scoping Meetings for the Triennial Review of the California Ocean Plan. The review is required by the US EPA. The State Water Board is using the public meetings to develop a list of 'projects' or tasks the State Water Board will address over the next two years. Three scoping meetings were held throughout the State in January 2019 including a January 14th meeting held in Costa Mesa. Charles attended the Costa Mesa meeting along with representatives with South Coast WD, Mesa WD, and West Basin MWD.</p>

	<p>Numerous comments were received concerning revisions to the Desalination Amendment implementation provisions of the Ocean Plan. Members of the environmental community advocated to add ocean acidification, hypoxia (deprivation of adequate oxygen supply) and ‘the newest science available’ to the Plan. Those currently trying to secure the first desalination permit since the Ocean Plan Amendments were adopted 3-½ years ago, advocated for clearer guidance on interpretations of the Amendments (the rules); as some interpretations are not supported by the Ocean Plan Amendments and are making the permit process exceedingly lengthy. The timeline for the triennial review is:</p> <table> <tr> <td>Release of Draft Staff Report & Proposed List of Projects</td><td>May 2019</td></tr> <tr> <td>Formal Written Comments</td><td>June 2019</td></tr> <tr> <td>Public Hearing</td><td>June 2019</td></tr> <tr> <td>Response to Comments</td><td>Sept. 2019</td></tr> <tr> <td>State Water Board Adoption</td><td>Oct. 2019</td></tr> <tr> <td>Submittal to U.S. EPA</td><td>Nov. 2019</td></tr> </table>	Release of Draft Staff Report & Proposed List of Projects	May 2019	Formal Written Comments	June 2019	Public Hearing	June 2019	Response to Comments	Sept. 2019	State Water Board Adoption	Oct. 2019	Submittal to U.S. EPA	Nov. 2019
Release of Draft Staff Report & Proposed List of Projects	May 2019												
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State Water Board Adoption	Oct. 2019												
Submittal to U.S. EPA	Nov. 2019												
	<p>Charles Busslinger participated in the South OC IRWM Project Review Ad Hoc Committee meeting on January 23, 2019. The committee reviewed the 13 projects submitted in response to the November 2018 Call for Projects for Prop 1 IRWM grant funding. \$2.33 million is available to South OC for this funding round with a 2nd round anticipated in 2022. Applicants are currently being afforded the opportunity to make changes to their applications based upon feedback from the Ad Hoc committee prior to final scoring.</p>												
	<p>Charles Busslinger and Karl Seckel participated in a January 24, 2019 meeting to review Dudek’s hydraulic study of IRWD’s system in regards to the South OC Emergency Service Program. See above for details.</p>												
	<p>Karl Seckel attended the OCBC Infrastructure Committee where Bill Hasencamp from MET provided an overview of the Colorado River Drought Contingency Plan issues. The presentation was extremely well received.</p>												
	<p>Karl Seckel and MWDOC Director Sat Tamaribuchi met with UCI Professor and Founder of the Center for Hydrometeorology and Remote Sensing, Soroosh Sorooshian, to discuss the work they have been doing on hydrology and runoff based on satellite data since 1983 (that is the year the satellite data had a good enough resolution to complete the work they do). They are involved in real-time global precipitation statistics for anywhere in the world based on the daily satellite data.</p>												

**Status of Ongoing WEROC Projects
January 2019**

Description	Comments
Coordination with WEROC Member Agencies	<p><i>Ongoing: WEROC, with Michael Baker as the lead consultant, is facilitating 19 agencies through the process of updating the Orange County Water and Wastewater Multi-Jurisdictional Hazard Mitigation Plan. Update: CalOES has completed their review of the Hazard Mitigation Plan and requested a few minor revisions. Francisco Soto is working with the participating agencies and the consultant to address the revisions and re-submit the plan to CalOES and FEMA by February 1, 2019.</i></p> <p>Kelly Hubbard presented to the South Orange County Wastewater Authority (SOCWA) Board on Thursday, January 10 regarding Emergency Fuel Planning. She provided information on what planning has occurred at the state, regional and county level, as well as recommendations on what all local agencies should do for emergency fuel planning and supply.</p> <p>Kelly presented the Draft WEROC Budget to the three Cities and OCWD. She presents the draft numbers annually, along with a summary of projects expected to be completed this fiscal year and expectations for the next fiscal year. It's an opportunity for the funding agencies to ask questions about the budget and suggest any needed programming support. Kelly and Karl Seckel will meet with the other two WEROC funding agencies (Orange County Sanitation District and SOCWA) separately next month.</p>
Training and Programs	<p>Francisco attended the Design Network for Emergency Management workshop at Chapman University. The organizers are graphic artists who have merged emergency management concepts into design in order to develop visually effective emergency information. Workshop topics included Visual Thinking/Visual Language, Iconography, Cognition and Emergency Information, and Technology and User Interface. WEROC is exploring the possibility to work with the organizers to develop visually effective and informative water emergency communication signs.</p>
Coordination with the County of Orange	<p>Kelly attended the January OCEMO meeting at the Operational Area EOC. Director Donna Boston from the Emergency Management Division (EMD) provided an overview of the Emergency Management Division projects and goals for 2019. Other presentation topics included OA Managers Report, Grant Updates, CalOES report, and Sub-committee updates.</p> <p>Kelly attended the Countywide exercise final planning meeting at the City of Newport Beach Emergency Operations Center. The meeting focused on finalizing the details for the January 30th exercise.</p> <p>Francisco attended the Emergency Alert System (EAS) Quarterly Meeting at the Orange County Transportation Authority in the City of Orange. Topics included last</p>

	<p>quarter EAS activations, EAS plan updates, the integration of BLU Alert Codes, and reports from each of the EAS members.</p> <p>Francisco participated in various conference calls for the possible activation of the Holy Fire Debris Flow Plan and the Canyon 2 Debris Flow Plan due to the rain event from January 14-16. The calls detail the current rain forecast and each agency's response actions and concerns for possible debris flows. Trabuco Canyon Water District (TCWD) has infrastructure that can be impacted by the Holy Fire Debris Flow area. TCWD participates in the calls and WEROC staff are aware of their concerns and possible need to coordination should a debris flow occur. There were no significant impacts to water utilities.</p>
Coordination with Outside Agencies	<p>Kelly attended the California Public Utilities Commission (PUC) Hearing titled, "Workshop on Impacts from De-Energization: Focus on First Responders and Local Government" in Calabasas. This was one of two workshops held in the state by the PUC to hear from the local agencies on their concerns with impacts from Public Safety Power Shutoff plans. The Public Safety Power Shutoff (PSPS) Plans give power utilities the ability to proactively shut off power in high fire risk areas when extreme weather conditions present a clear and imminent threat to powerlines. The concern with this planning is potential impacts to emergency notification systems, critical infrastructure, vulnerable populations, and water services. Staff has written a letter to the PUC outlining water utility concerns and recommendations. We are asking for all OC water and wastewater utilities to sign onto the letter. It will be mailed to the PUC by the end of the month.</p>
EOC Readiness	<p>Kelly provided the WEROC EOC Logistics Section Training. Training topics included Roles and Responsibilities, Mutual Aid, Resource Request Process, and general discussion.</p> <p>Francisco & Kelly provided training to the EOC Director (Rob Hunter) and Plans & Intelligence Section Chief (Joe Berg). Training topics included Exercise Overview, Roles and Responsibilities, review of the exercise Situational Summary and Action Plan, and general discussion items.</p> <p>Janine Schunk, Francisco and Kelly have spent several days at the South EOC preparing the facility for the January 30 exercise. Due to the nature of the scenario preparation for this exercise includes pre-developing some messaging, forms, and content on the whiteboards and within WebEOC. This is a great learning tool in itself, as staff continues to refine our processes and procedures throughout the preparation process.</p> <p>Janine successfully participated in the OA and MET Radio Test and WebEOC tests for the month. Janine facilitated the monthly test of the WEROC Radio System.</p> <p>Janine met with an AT&T technician at the South EOC to repair internet connections and to evaluate our bandwidth needs.</p>

Status of Water Use Efficiency Projects

February 2019

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
Smart Timer Rebate Program	MWDSC	Ongoing	Ongoing	<p>In December 2018, 152 residential and 14 commercial smart timers were installed in Orange County.</p> <p>For program water savings and implementation information, see MWDOC Water Use Efficiency Program Savings and Implementation Report.</p>
Rotating Nozzles Rebate Program	MWDSC	Ongoing	Ongoing	<p>In December 2018, 114 rotating nozzles were installed in Orange County.</p> <p>For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.</p>
SoCal Water\$mart Residential Indoor Rebate Program	MWDSC	Ongoing	Ongoing	<p>In December 2018, 257 high efficiency clothes washers and 19 premium high efficiency toilets were installed through this program.</p> <p>For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.</p>
SoCal Water\$mart Commercial Rebate Program	MWDSC	Ongoing	Ongoing	<p>In December 2018, 325 commercial premium high efficiency toilets and 1104 residential premium high efficiency toilets were installed through this program.</p> <p>For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.</p>
Industrial Process/ Water Savings Incentive Program (WSIP)	MWDSC	75%	July 2020	<p>This program is designed for non-residential customers to improve their water efficiency through upgraded equipment or services that do not qualify for standard rebates. Incentives are based on the amount of water customers save and allows for customers to implement custom water-saving projects. This fiscal year, two projects have been completed, which will save over 28 AFY.</p> <p>Total water savings to date for the entire program is 673 AFY and 3,414 AF cumulatively.</p>

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
Turf Removal Program	MWDOC	Ongoing	Ongoing	<p>In January 2019, 42 rebates were paid, representing \$154,566 in rebates paid this month in Orange County. To date, the Turf Removal Program has removed approximately 22 million square feet of turf.</p> <p>For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.</p>
Spray to Drip Conversion Program	MWDOC	Ongoing	Ongoing	<p>This is a rebate program designed to encourage residential and commercial sites to convert their existing conventional spray heads to low-volume, low-precipitation drip technology.</p> <p>To date, 241 residential sites and 63 commercial sites have completed spray to drip conversion projects.</p>
Recycled Water Retrofit Program	MWDSC	100%	September 2018	<p>This program provides incentives for commercial sites to convert dedicated irrigation meters to recycled water. To date, Metropolitan has provided a total of \$545,868.18 in funding to 33 sites irrigating 113 acres of landscape, and MWDOC has paid a total of \$56,950.00 in grant funding to 20 of those sites. The total potable water savings achieved by these projects is 331 AFY.</p>

Orange County

Water Use Efficiency Programs Savings and Implementation Report

Retrofits and Acre-Feet Water Savings for Program Activity

Program	Program Start Date	Retrofits Installed in	Month Indicated		Current Fiscal Year		Overall Program		
			Interventions	Water Savings	Interventions	Water Savings	Interventions	Annual Water Savings[4]	Cumulative Water Savings[4]
High Efficiency Clothes Washer Program	2001	December-18	257	0.74	1,474	14.35	118,019	4,072	30,418
Smart Timer Program - Irrigation Timers	2004	December-18	166	1.45	1,601	109.26	24,325	8,370	55,160
Rotating Nozzles Rebate Program	2007	December-18	114	0.46	2,965	35.56	567,272	2,760	22,276
Commercial Plumbing Fixture Rebate Program	2002	December-18	1,429	4.40	7,172	40.58	100,945	5,153	49,516
Industrial Process/Water Savings Incentive Program (WSIP)	2006	December-18	0	0.00	2	7.31	33	673	3,414
Turf Removal Program ^[3]	2010	January-19	77,358	0.90	501,131	21.49	22,096,209	3,094	13,375
High Efficiency Toilet (HET) Program	2005	December-18	19	0.07	153	6.51	60,256	2,227	19,279
Water Smart Landscape Program [1]	1997						12,677	10,621	72,668
Home Water Certification Program	2013						312	7.339	15.266
Synthetic Turf Rebate Program	2007						685,438	96	469
Ultra-Low-Flush-Toilet Programs ^[2]	1992						363,926	13,452	162,561
Home Water Surveys ^[2]	1995						11,867	160	1,708
Showerhead Replacements ^[2]	1991						270,604	1,667	19,083
Total Water Savings All Programs				8	514,498	235	24,311,883	52,353	449,942

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

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

Turf Removal Interventions are listed as square feet.

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

Item 2d

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

Agency	FY 12/13	FY13/14	FY14/15	FY15/16	FY16/17	FY17/18	FY18/19	Total	Current FY Water Savings Ac/Ft (Cumulative)	Cumulative Water Savings across all Fiscal Years	15 yr. Lifecycle Savings Ac/Ft
Brea	93	115	114	76	57	56	29	1,952	0.28	503.63	1,010
Buena Park	105	106	91	76	54	50	23	1,591	0.17	397.58	823
East Orange CWD RZ	10	8	8	8	3	1	3	196	0.02	53.82	101
El Toro WD	134	121	111	65	47	50	20	1,591	0.19	399.14	823
Fountain Valley	115	102	110	76	65	49	19	2,468	0.17	664.99	1,277
Garden Grove	190	162	165	251	127	87	41	3,691	0.36	948.56	1,910
Golden State WC	265	283	359	260	138	156	59	5,230	0.59	1,344.64	2,706
Huntington Beach	334	295	319	225	180	141	47	8,434	0.48	2,312.06	4,364
Irvine Ranch WD	1,763	1,664	1,882	1,521	1,373	1,203	483	26,352	4.51	6,420.06	13,635
La Habra	82	114	87	66	53	48	23	1,398	0.23	348.12	723
La Palma	34	25	34	29	10	14	4	476	0.04	120.42	246
Laguna Beach CWD	38	37	39	32	19	20	12	964	0.11	253.85	499
Mesa Water	114	86	89	113	80	54	21	2,593	0.23	708.35	1,342
Moulton Niguel WD	442	421	790	688	575	527	191	10,639	1.97	2,556.94	5,505
Newport Beach	116	92	95	66	61	51	26	2,701	0.27	750.36	1,398
Orange	218	163	160	124	80	74	32	4,004	0.33	1,101.76	2,072
Orange Park Acres					-	-	-	12	0.00	4.09	6
San Juan Capistrano	76	73	92	63	33	33	10	1,502	0.09	392.33	777
San Clemente	140	94	141	75	70	85	38	2,743	0.34	710.95	1,419
Santa Margarita WD	553	662	792	466	367	274	115	9,905	1.21	2,477.48	5,125
Seal Beach	31	29	38	23	9	17	5	624	0.04	163.10	323
Serrano WD	13	10	26	8	11	8	-	365	0.00	100.05	189
South Coast WD	89	79	68	43	44	36	18	1,638	0.16	424.08	848
Trabuco Canyon WD	30	45	47	34	28	22	3	823	0.02	212.00	426
Tustin	78	59	80	66	44	49	17	1,678	0.16	448.25	868
Westminster	121	82	109	149	84	65	22	2,673	0.20	696.53	1,383
Yorba Linda	181	167	156	123	56	67	22	3,841	0.24	1,056.30	1,987
MWDOC Totals	5,365	5,094	6,002	4,726	3,668	3,237	1,283	100,084	12.41	25,569.43	19,336
Anaheim	331	285	295	266	213	173	63	10,918	0.63	3,039.61	5,649
Fullerton	200	186	211	165	107	99	72	3,866	0.72	1,000.91	2,000
Santa Ana	163	131	132	259	141	124	56	3,151	0.59	808.11	1,630
Non-MWDOC Totals	694	602	638	690	461	396	191	17,935	1.94	4,848.63	3,465
Orange County Totals	6,059	5,696	6,640	5,416	4,129	3,633	1,474	118,019	14.35	30,418.06	22,801

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

Agency	FY 12/13		FY 13/14		FY 14/15		FY 15/16		FY16/17		FY17/18		FY18/19		FY19/20		FY20/21		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	Res	Comm.	
Brea	9	8	4	0	43	6	20	4	31	4	32	0	20	0	0	0	0	0	183	80	585.16
Buena Park	3	0	0	0	4	10	7	4	10	7	15	3	13	4	0	0	0	0	59	48	184.56
East Orange CWD RZ	2	0	0	0	2	0	1	0	11	1	6	0	1	0	0	0	0	0	32	1	26.86
El Toro WD	7	2	11	0	8	9	9	17	33	8	29	4	20	0	0	0	0	0	164	359	2,729.47
Fountain Valley	3	2	4	0	7	10	13	1	33	12	28	12	22	1	0	0	0	0	141	53	229.97
Garden Grove	5	2	9	0	10	14	13	11	28	0	27	2	24	0	0	0	0	0	152	40	209.31
Golden State WC	9	49	9	25	39	12	35	16	56	37	88	6	48	14	0	0	0	0	361	212	979.10
Huntington Beach	18	33	20	35	19	2	42	12	88	94	70	30	71	59	0	0	0	0	413	357	1,343.55
Irvine Ranch WD	414	135	71	59	67	310	239	207	344	420	416	78	230	82	0	0	0	0	2,415	2,446	13,143.92
La Habra	4	7	2	0	4	7	3	1	12	7	8	0	12	3	0	0	0	0	56	47	237.63
La Palma	1	0	2	0	2	0	3	2	1	0	5	0	2	0	0	0	0	0	17	2	8.34
Laguna Beach CWD	76	2	71	0	86	0	86	1	27	0	11	0	3	0	0	0	0	0	511	20	272.50
Mesa Water	10	2	15	2	17	28	36	12	149	41	49	0	22	55	0	0	0	0	389	209	893.73
Moulton Niguel WD	51	74	40	45	46	95	163	100	236	129	284	33	181	55	0	0	0	0	1,379	889	4,271.85
Newport Beach	242	26	168	75	11	9	28	43	30	12	24	0	15	0	0	0	0	0	1,077	409	2,941.28
Orange	20	24	13	9	18	31	51	13	69	10	61	13	58	26	0	0	0	0	404	204	1,094.84
San Juan Capistrano	14	18	6	11	6	19	20	8	22	8	23	5	14	0	0	0	0	0	259	130	746.15
San Clemente	26	7	28	2	28	24	26	3	37	13	38	41	21	0	0	0	0	0	1,110	415	3,015.21
Santa Margarita WD	53	171	64	93	53	321	189	136	326	221	273	220	142	19	0	0	0	0	1,569	1,611	6,934.81
Santiago CWD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Seal Beach	1	0	1	36	1	12	2	2,446	2	4	5	0	2	0	0	0	0	0	14	2,502	6,804.43
Serrano WD	1	0	0	0	4	0	11	2	4	0	8	0	10	0	0	0	0	0	56	2	18.26
South Coast WD	13	16	8	4	104	73	9	11	7	0	15	2	5	7	0	0	0	0	298	221	1,312.12
Trabuco Canyon WD	6	0	2	0	6	1	16	50	13	3	20	0	19	0	0	0	0	0	142	157	1,063.40
Tustin	8	4	9	1	18	14	33	8	33	23	27	1	25	0	0	0	0	0	195	81	404.49
Westminster	1	1	2	0	13	17	7	1	17	12	22	0	18	0	0	0	0	0	105	44	232.45
Yorba Linda	20	0	12	5	32	2	61	27	72	71	68	10	47	3	0	0	0	0	453	196	989.06
MWDOC Totals	1,017	583	571	402	648	1,026	1,123	3,136	1,691	1,137	1,652	460	1,045	328	0	0	0	0	11,954	10,735	50,672.42

Anaheim	19	10	9	26	7	52	30	34	87	10	66	0	90	68	0	0	0	0	400	525	2,980.95
Fullerton	9	29	8	0	40	26	32	12	53	7	45	0	52	0	0	0	0	0	296	199	1,083.22
Santa Ana	8	19	7	8	9	27	22	26	15	3	16	0	18	0	0	0	0	0	116	100	423.47
Non-MWDOC Totals	36	58	24	34	56	105	84	72	155	20	127	0	160	68	0	0	0	0	812	824	4,487.64

Orange County Totals	1,053	641	595	436	704	1,131	1,207	3,208	1,846	1,157	1,779	460	1,205	396	-	-	-	-	12,766	11,559	55,160
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ROTATING NOZZLES INSTALLED BY AGENCY
through MWDOC and Local Agency Conservation Programs

Agency	FY 12/13			FY 13/14			FY 14/15			FY 15/16			FY 16/17			FY 17/18			FY 18/19			Total Program			Cumulative Water Savings across all Fiscal Years
	Small		Large	Small		Large	Small		Large	Small		Large	Small		Large	Small		Large	Small		Large	Small		Large	
	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	
Brea	65	120	0	84	0	0	157	45	0	74	2,484	0	0	0	0	0	0	0	0	0	0	572	2,749	0	85.79
Buena Park	65	0	0	53	0	0	248	0	0	45	98	0	0	0	0	0	0	0	0	0	0	509	173	2,535	819.21
East Orange	55	0	0	30	0	0	221	0	0	0	0	0	0	0	0	30	0	0	0	0	0	781	0	0	23.32
El Toro	23	6,281	0	56	3,288	0	1,741	28,714	0	730	4,457	0	55	242	0	36	0	0	0	0	0	3,260	43,348	890	1,738.92
Fountain Valley	35	0	0	0	0	0	107	0	0	222	0	0	0	0	0	85	0	0	0	283	0	919	3,157	0	26.33
Garden Grove	95	0	0	80	0	0	88	50	0	110	0	0	55	98	0	52	0	0	0	0	0	855	254	0	40.26
Golden State	257	2,595	0	192	0	0	583	1,741	0	1,088	0	0	207	6,008	0	161	-495	0	35	259	0	3,515	11,096	0	391.95
Huntington Beach	270	0	0	120	0	0	798	1,419	0	1,345	2,836	0	149	3,362	0	-37	0	0	0	0	0	4,001	9,135	2,681	1,433.89
Irvine Ranch	25,018	1,014	0	11,010	4,257	0	1,421	632	0	1,989	5,047	0	335	9,511	0	356	-215	0	0	0	0	46,498	43,325	2,004	5,469.24
La Habra	0	0	0	15	0	0	109	338	0	300	0	0	0	0	0	0	0	0	0	0	0	1,515	55,404	900	375.11
La Palma	0	0	0	0	0	0	0	0	0	46	505	0	0	2,385	0	33	0	0	0	0	0	89	3,163	0	61.83
Laguna Beach	3,596	0	0	2,948	878	0	2,879	1,971	0	1,390	0	0	0	0	0	0	0	0	0	0	0	11,948	2,896	0	465.06
Mesa Water	270	0	0	361	0	0	229	0	0	166	0	0	113	0	0	36	0	0	0	0	0	2,062	302	343	209.38
Moulton Niguel	512	1,385	0	361	227	0	1,596	4,587	0	5,492	1,441	0	153	5,872	0	893	0	0	647	38	0	13,375	20,636	2,945	1,970.31
Newport Beach	25,365	50	0	19,349	6,835	0	460	3,857	0	348	670	0	0	0	0	45	0	0	0	0	0	46,865	16,632	0	2,267.73
Orange	264	0	0	245	120	0	304	668	0	631	91	0	0	0	0	0	0	0	0	0	0	3,133	5,853	0	137.11
San Juan Capistrano	684	30	0	370	0	0	495	737	0	310	593	0	75	123	0	59	0	0	40	1,400	0	5,067	4,543	0	504.70
San Clemente	631	172	0	415	5,074	0	326	0	0	426	0	0	0	0	0	146	0	0	0	0	0	10,062	11,948	1,343	886.42
Santa Margarita	983	0	0	389	0	0	1,207	1,513	0	1,820	837	0	15	0	0	224	0	0	0	0	0	15,387	7,283	611	908.67
Seal Beach	0	0	0	0	0	0	40	5,261	0	0	2,300	0	0	0	0	0	0	0	0	0	0	155	7,561	0	218.61
Serrano	190	0	0	105	0	0	377	0	0	695	0	0	0	0	0	0	0	0	0	0	0	1,907	291	0	109.69
South Coast	435	0	0	70	0	0	4,993	13,717	0	1,421	2,889	0	16	0	0	0	0	0	0	0	0	9,628	18,870	0	755.13
Trabuco Canyon	34	0	0	0	0	0	56	0	0	130	0	0	0	4,339	0	0	0	0	0	0	0	729	4,339	0	186.27
Tustin	378	0	0	329	0	0	408	0	0	317	386	0	65	-341	0	30	0	0	47	0	0	4,491	1,849	0	140.25
Westminster	15	0	0	0	0	0	54	0	0	73	0	0	105	0	0	50	0	0	42	0	0	790	0	0	15.25
Yorba Linda	730	0	0	40	990	0	921	0	0	1,715	0	0	213	0	0	0	0	0	34	0	0	5,824	1,103	500	515.75
MWDOC Totals	59,970	11,647	0	36,622	21,669	0	19,818	65,250	0	20,883	24,634	0	1,556	31,599	0	2,199	-710	0	845	1,980	0	195,668	276,847	14,752	19,756.19

Anaheim	459	813	0	338	0	0	498	712	0	794	5,221	0	147	3,953	0	0	0	0	0	0	0	4,020	49,799	105	1,505.60
Fullerton	119	0	0	107	0	0	684	1,196	0	521	7,015	0	65	3,034	0	0	0	0	140	0	0	2,910	11,309	1,484	823.24
Santa Ana	99	0	0	86	2,533	0	310	0	0	0	1,420	0	0	1,106	0	0	0	0	0	0	0	859	5,752	0	191.08
Non-MWDOC Totals	677	813	0	531	2,533	0	1,492	1,908	0	1,315	13,656	0	212	8,093	0	0	0	0	140	0	0	7,789	66,860	1,589	2,519.93

Orange County Totals	60,647	12,460	0	37,153	24,202	0	21,310	67,158	0	22,198	38,290	0	1,768	39,692	0	2,199	-710	0	985	1,980	0	203,457	343,707	16,341	22,276.11
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COMMERCIAL PLUMBING FIXTURES REBATE PROGRAM^[1]
INSTALLED BY AGENCY
through MWDOC and Local Agency Conservation Programs

Agency	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	Totals	Cumulative Water Savings across all Fiscal Years
Brea	234	0	10	91	734	242	0	1,607	586
Buena Park	5	23	56	591	133	49	0	2,538	1,363
East Orange CWD RZ	0	0	0	0	0	0	0	0	0
El Toro WD	0	212	6	268	35	737	717	2,516	750
Fountain Valley	0	0	1	249	0	895	0	1,767	755
Garden Grove	4	1	167	676	410	0	0	2,451	1,805
Golden State WC	0	1	0	1,008	53	93	0	2,958	2,278
Huntington Beach	104	144	7	783	641	10	0	2,964	1,942
Irvine Ranch WD	1,090	451	725	11,100	5,958	1,599	993	30,458	9,816
La Habra	0	0	0	340	42	0	0	925	664
La Palma	0	0	0	0	509	0	0	675	159
Laguna Beach CWD	0	27	0	0	0	0	0	446	373
Mesa Water	6	0	79	661	782	0	0	4,254	2,545
Moulton Niguel WD	0	0	3	413	281	506	3,434	5,217	1,159
Newport Beach	0	0	566	0	0	0	0	1,834	1,550
Orange	1	271	81	275	2,851	458	512	6,000	2,284
San Juan Capistrano	0	14	0	0	0	0	0	260	457
San Clemente	0	0	1	0	0	0	0	432	444
Santa Margarita WD	0	0	2	90	743	598	506	2,054	368
Santiago CWD	0	0	0	0	0	0	0	0	0
Seal Beach	0	0	0	0	184	278	0	816	519
Serrano WD	0	0	0	0	0	0	0	0	0
South Coast WD	148	0	382	0	0	0	0	1,320	646
Trabuco Canyon WD	0	0	0	0	0	0	0	11	18
Tustin	0	0	75	358	212	2	284	1,688	1,015
Westminster	1	28	0	146	177	25	0	1,163	1,191
Yorba Linda	1	0	0	226	84	338	0	933	684
MWDOC Totals	1,594	1,172	2,161	17,275	13,829	5,830	6,446	75,287	33,368
Anaheim	165	342	463	3,072	309	1,808	361	15,922	8,482
Fullerton	94	0	178	476	621	274	365	3,417	2,028
Santa Ana	16	17	5	1,293	238	582	0	6,319	5,637
Non-MWDOC Totals	275	359	646	4,841	1,168	2,664	726	25,658	16,147
Orange County Totals	1,869	1,531	2,807	22,116	14,997	8,494	7,172	100,945	49,516

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

INDUSTRIAL PROCESS/WATER SAVINGS INCENTIVE PROGRAM

Number of Projects by Agency

Agency	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	Overall Program Interventions	Annual Water Savings[1]	Cumulative Water Savings across all Fiscal Years[1]
Brea	0	0	0	0	0	0	0	0	0	0	0
Buena Park	0	0	0	0	1	0	0	0	2	54	541
East Orange	0	0	0	0	0	0	0	0	0	0	0
El Toro	0	0	0	0	0	0	0	1	1	9	3
Fountain Valley	0	0	0	0	0	1	0	0	1	23	42
Garden Grove	0	0	0	0	1	0	0	0	1	0	1
Golden State	0	0	0	0	0	0	0	0	1	3	32
Huntington Beach	0	2	0	1	2	0	1	0	6	180	701
Irvine Ranch	1	1	1	0	2	1	1	0	10	119	722
La Habra	0	0	0	0	1	0	0	0	1	0	1
La Palma	0	0	0	0	0	0	0	0	0	0	0
Laguna Beach	0	0	0	0	0	0	0	0	0	0	0
Mesa Water	0	0	0	0	0	0	0	0	0	0	0
Moulton Niguel	0	0	0	0	0	0	0	0	0	0	0
Newport Beach	0	0	0	1	0	0	0	0	1	21	86
Orange	0	0	0	0	1	2	1	0	5	97	569
San Juan Capistrano	0	0	0	0	0	0	0	0	0	0	0
San Clemente	0	0	0	0	0	0	0	0	0	0	0
Santa Margarita	0	0	0	0	0	0	0	0	0	0	0
Seal Beach	0	0	0	0	0	0	0	0	0	0	0
Serrano	0	0	0	0	0	0	0	0	0	0	0
South Coast	0	0	0	0	1	1	0	0	2	134	247
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	1	1	20	7
MWDOC Totals	1	3	1	2	9	5	3	2	32	662	2952
Anaheim	0	0	0	0	0	0	0	0	0	0	0
Fullerton	0	0	0	0	0	0	0	0	0	0	0
Santa Ana	0	0	0	0	1	0	0	0	1	11	462
OC Totals	1	3	1	2	10	5	3	2	33	673	3414

[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 12/13		FY 13/14		FY 14/15		FY 15/16		FY 16/17		FY 17/18		FY 18/19		Total Program		Cumulative Water Savings across all Fiscal Years
	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	
Brea	7,605	0	5,697	0	71,981	30,617	118,930	404,411	8,354	479	9,853	27,234	3,180	17,790	228,997	489,997	408.56
Buena Park	0	0	0	0	11,670	1,626	77,127	16,490	3,741	0	4,586	0	1,230	0	98,354	18,116	64.76
East Orange	0	0	1,964	0	18,312	0	27,844	0	0	0	0	0	0	0	48,120	0	30.06
El Toro	4,680	72,718	4,582	0	27,046	221,612	63,546	162,548	13,139	48,019	7,273	42,510	7,437	9,895	132,426	557,302	427.70
Fountain Valley	682	7,524	4,252	0	45,583	5,279	65,232	0	3,679	0	8,631	0	2,849	27,679	132,208	40,482	93.44
Garden Grove	4,534	0	8,274	0	67,701	22,000	177,408	49,226	11,504	0	4,487	0	0	0	287,921	117,403	281.06
Golden State	31,813	3,200	32,725	8,424	164,507	190,738	310,264	112,937	0	0	0	0	0	0	581,902	346,272	636.92
Huntington Beach	9,219	12,437	20,642	0	165,600	58,942	305,420	270,303	9,560	21,534	14,236	6,032	7,937	36,267	561,045	458,004	634.31
Irvine Ranch	32,884	32,384	36,584	76,400	234,905	317,999	782,844	2,675,629	231,483	46,725	86,893	61,037	38,440	130,708	1,455,906	3,355,342	2,696.58
La Habra	0	0	0	0	14,014	1,818	49,691	72,164	0	0	3,003	0	1,504	0	68,212	90,019	99.42
La Palma	0	0	0	0	4,884	0	10,257	59,760	0	0	0	0	0	0	15,141	59,760	42.63
Laguna Beach	2,664	1,712	4,586	226	13,647	46,850	47,614	0	3,059	0	589	0	0	0	75,670	48,788	82.86
Mesa Water	10,667	0	22,246	0	131,675	33,620	220,815	106,896	4,173	77,033	17,373	77,785	1,360	0	415,086	295,334	396.89
Moulton Niguel	11,538	84,123	14,739	40,741	314,250	1,612,845	889,748	1,059,279	220,749	0	98,271	0	73,579	0	1,628,313	2,840,054	2,767.96
Newport Beach	3,548	2,346	894	0	33,995	65,277	76,675	375,404	2,924	0	5,938	6,499	0	35,480	127,428	485,006	342.72
Orange	15,951	8,723	11,244	0	120,093	281,402	289,990	106,487	12,847	2,366	11,956	0	10,320	1,798	485,372	400,776	562.65
San Clemente	16,062	13,165	18,471	13,908	90,349	1,137	215,249	438,963	4,267	0	33,083	7,098	6,500	0	405,483	474,271	524.26
San Juan Capistrano	29,544	27,156	12,106	0	101,195	32,366	197,290	143,315	2,624	40,748	0	0	0	0	365,415	347,277	509.68
Santa Margarita	10,151	11,600	17,778	48,180	211,198	514,198	534,048	550,420	17,010	28,094	62,706	25,000	22,302	23,198	881,640	1,217,651	1,269.27
Santiago	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Seal Beach	3,611	0	0	0	15,178	504	17,349	15,911	1,234	0	752	0	0	0	38,124	16,415	33.87
Serrano	0	0	2,971	0	41,247	0	127,877	4,403	5,450	0	555	0	4,000	0	182,100	4,403	108.45
South Coast	9,429	4,395	15,162	116,719	84,282	191,853	181,102	128,290	14,967	0	13,319	7,806	5,990	0	331,057	465,387	532.10
Trabuco Canyon	1,542	22,440	2,651	0	14,771	0	42,510	88,272	1,465	0	4,788	0	1,536	0	69,535	110,712	111.78
Tustin	9,980	0	1,410	0	71,285	14,137	232,697	33,362	11,173	0	16,926	0	5,941	6,894	349,412	54,393	230.98
Westminster	0	0	0	0	14,040	34,631	71,833	23,902	11,112	0	10,033	0	5,461	0	112,479	58,533	95.92
Yorba Linda	0	0	0	0	112,136	12,702	360,279	116,985	19,420	0	9,529	3,696	11,856	0	524,569	133,383	382.47
MWDOC Totals	216,104	303,923	238,978	304,598	2,195,544	3,692,153	5,493,639	7,015,357	613,934	264,998	424,780	264,697	211,422	289,709	9,601,915	12,485,080	13,367.28

Anaheim	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Fullerton	0	0	0	9,214	0	0	0	0	0	0	0	0	0	0	0	9,214	7.74
Santa Ana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Non-MWDOC Totals	0	0	0	9,214	0	0	0	0	0	0	0	0	0	0	0	9,214	7.74

Orange County Totals	216,104	303,923	238,978	313,812	2,195,544	3,692,153	5,493,639	7,015,357	613,934	264,998	424,780	264,697	211,422	289,709	9,601,915	12,494,294	13,375
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[1] Installed device numbers are listed as square feet

HIGH EFFICIENCY TOILETS (HETs) INSTALLED BY AGENCY

through MWDOC and Local Agency Conservation Programs

Agency	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY 18-19	Total	Cumulative Water Savings across all Fiscal Years
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Brea	0	38	146	154	4	6	0	456	116.31
Buena Park	0	96	153	112	13	3	0	687	215.26
East Orange CWD RZ	0	13	26	24	0	0	0	86	24.09
El Toro WD	133	218	869	264	12	6	6	2,049	611.70
Fountain Valley	0	41	132	220	7	9	1	833	278.76
Garden Grove	0	63	350	363	7	4	0	1,488	474.87
Golden State WC	2	142	794	512	9	11	2	2,803	877.57
Huntington Beach	0	163	1,190	628	4	3	0	2,904	821.99
Irvine Ranch WD	1,449	810	1,777	2,798	638	239	96	17,244	6,027.81
Laguna Beach CWD	0	45	112	81	1	4	0	392	118.10
La Habra	0	37	94	83	5	1	0	591	215.86
La Palma	0	21	59	52	4	2	3	227	66.14
Mesa Water	0	147	162	162	7	3	3	1,624	650.22
Moulton Niguel WD	0	400	2,497	1,939	49	40	11	5,741	1,344.78
Newport Beach	0	49	168	243	11	6	0	731	208.28
Orange	1	142	978	416	17	10	3	2,192	608.94
San Juan Capistrano	0	35	140	202	3	9	2	534	139.85
San Clemente	0	72	225	246	11	6	7	885	256.16
Santa Margarita WD	0	528	997	1,152	114	34	2	3,345	793.98
Seal Beach	2	17	50	69	-1	0	0	857	421.72
Serrano WD	0	2	40	55	3	0	0	121	28.68
South Coast WD	64	102	398	235	11	7	0	1,028	266.55
Trabuco Canyon WD	0	10	108	169	2	3	2	344	77.50
Tustin	0	64	132	201	12	10	4	1,520	589.95
Westminster	0	35	161	359	3	4	0	1,335	460.36
Yorba Linda WD	0	40	280	379	12	8	2	1,261	388.78
MWDOC Totals	1,651	3,330	12,038	11,118	958	428	144	51,278	16,084.22

Anaheim	0	156	1,188	614	70	19	5	5,889	2,193.20
Fullerton	0	61	293	286	14	9	4	1,068	314.09
Santa Ana	0	33	602	293	20	0	0	2,021	687.54
Non-MWDOC Totals	0	250	2,083	1,193	104	28	9	8,978	3,194.82

Orange County Totals	1,651	3,580	14,121	12,311	1,062	456	153	60,256	19,279.04
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WORKSHOP MEETING OF THE
BOARD OF DIRECTORS WITH MET DIRECTORS
MUNICIPAL WATER DISTRICT OF ORANGE COUNTY
18700 Ward Street, Board Room, Fountain Valley, California
February 6, 2019, 8:30 a.m.

AGENDA

PLEDGE OF ALLEGIANCE

ROLL CALL

PUBLIC PARTICIPATION/COMMENTS

At this time members of the public will be given an opportunity to address the Board concerning items within the subject matter jurisdiction of the Board. Members of the public may also address the Board about a particular Agenda item at the time it is considered by the Board and before action is taken.

The Board requests, but does not require, that members of the public who want to address the Board complete a voluntary "Request to be Heard" form available from the Board Secretary prior to the meeting.

ITEMS RECEIVED TOO LATE TO BE AGENDIZED

Determine need and take action to agendize item(s), which arose subsequent to the posting of the Agenda. (ROLL CALL VOTE: Adoption of this recommendation requires a two-thirds vote of the Board members present or, if less than two-thirds of the Board members are present, a unanimous vote.)

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>.

(NEXT RESOLUTION NO. 2080)

PRESENTATION/DISCUSSION/INFORMATION ITEMS

1. INPUT OR QUESTIONS ON MET ISSUES FROM THE MEMBER AGENCIES/MET DIRECTOR REPORTS REGARDING MET COMMITTEE PARTICIPATION

Recommendation: Receive input and discuss the information.

2. WATER SUPPLY CONDITIONS UPDATE

Recommendation: Review and discuss the information presented.

3. PRESENTATION REGARDING STATE WATER PROJECT (SWP) COOPERATIVE OPERATING AGREEMENTS BY METROPOLITAN STAFF

Recommendation: Review and discuss the information presented.

4. CALIFORNIA WATERFIX ACTIVITIES UPDATE

Recommendation: Review and discuss the information presented.

5. MET ITEMS CRITICAL TO ORANGE COUNTY (The following items are for informational purposes only – a write up on each item is included in the packet. Discussion is not necessary unless requested by a Director)

- a. MET's Water Supply Conditions
- b. MET's Finance and Rate Issues
- c. Colorado River Issues
- d. Bay Delta/State Water Project Issues
- e. MET's Ocean Desalination Policy and Potential Participation by MET in the Doheny Desalination Project and in the Huntington Beach Ocean Desalination Project (Poseidon Desalination Project)
- f. Orange County Reliability Projects
- g. East Orange County Feeder No. 2
- h. South County Projects

Recommendation: Discuss and provide input on information relative to the MET items of critical interest to Orange County.

6. METROPOLITAN (MET) BOARD AND COMMITTEE AGENDA DISCUSSION ITEMS

- a. Summary regarding January Board Meeting
- b. Review items of significance for MET Board and Committee Agendas

Recommendation: Review and discuss the information presented.

ADJOURNMENT

Note: 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 accommodations should make the request with adequate time before the meeting for the District to provide the requested accommodations.



INFORMATION ITEM

February 6, 2019

TO: Board of Directors

FROM: Robert Hunter, General Manager

Staff Contact: Kevin Hostert

SUBJECT: WATER SUPPLY CONDITION UPDATE

STAFF RECOMMENDATION

Staff recommends the Board of Directors to review and discuss this information.

REPORT

The 2018-19 Water Year officially began October 1, 2018. Thus far, the Northern California accumulated precipitation (8-Station Index) is reporting **26.1 inches or 99% of normal** as of January 29. In the month of January 2019, accumulated precipitation reached 13.2 inches, which is **4.2 inches above normal** compared to the historical average (As of January 28th). The Northern Sierra Snow Water Equivalent was at 18.2 inches on January 28th, which was **108% of normal** for that day.

As of January 28th Lake Oroville storage is at 39% of total capacity and 60% of normal. As of January 28th San Luis Reservoir has a current volume of 85% of the reservoirs total capacity and is 109% of normal.

The Department of Water Resources (DWR) in January increased the State Water Project (SWP) "Table A" allocation to 15%. This allocation provides Metropolitan with approximately 286,725 AF in SWP deliveries this water year. DWR's approval considered several factors including existing storage in SWP conservation reservoirs, SWP operational regulatory constraints, and the 2019 contractor demands.

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

On the Colorado River system, snowpack is measured across four states in the Upper Colorado River Basin. As of January 28, 2019, snowpack measured at 105% of normal for that date. The ongoing decline in the Colorado River watershed has impacted storage levels in Lake Powell and Lake Mead, which in turn affects the likelihood of surplus or shortage conditions in the future. The Bureau of Reclamation is projecting that there is a 57% chance of a shortage on the Colorado River in 2020, increasing to 68% in 2021.

Attachment: Water Supply Conditions Presentation



Water Supply Conditions

Kevin Hostert, Water Resources Analyst
Municipal Water District of Orange County

February 6th 2019



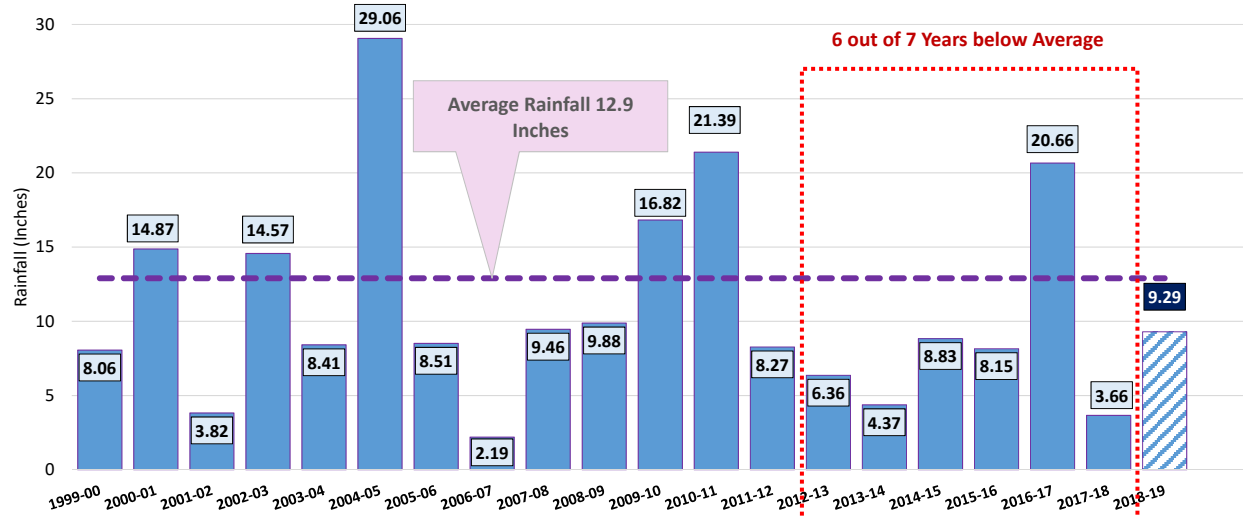
Orange County Weather and Water Supply Conditions

Insight to local weather conditions that affect Orange County's water supply and water demand

Santa Ana Precipitation

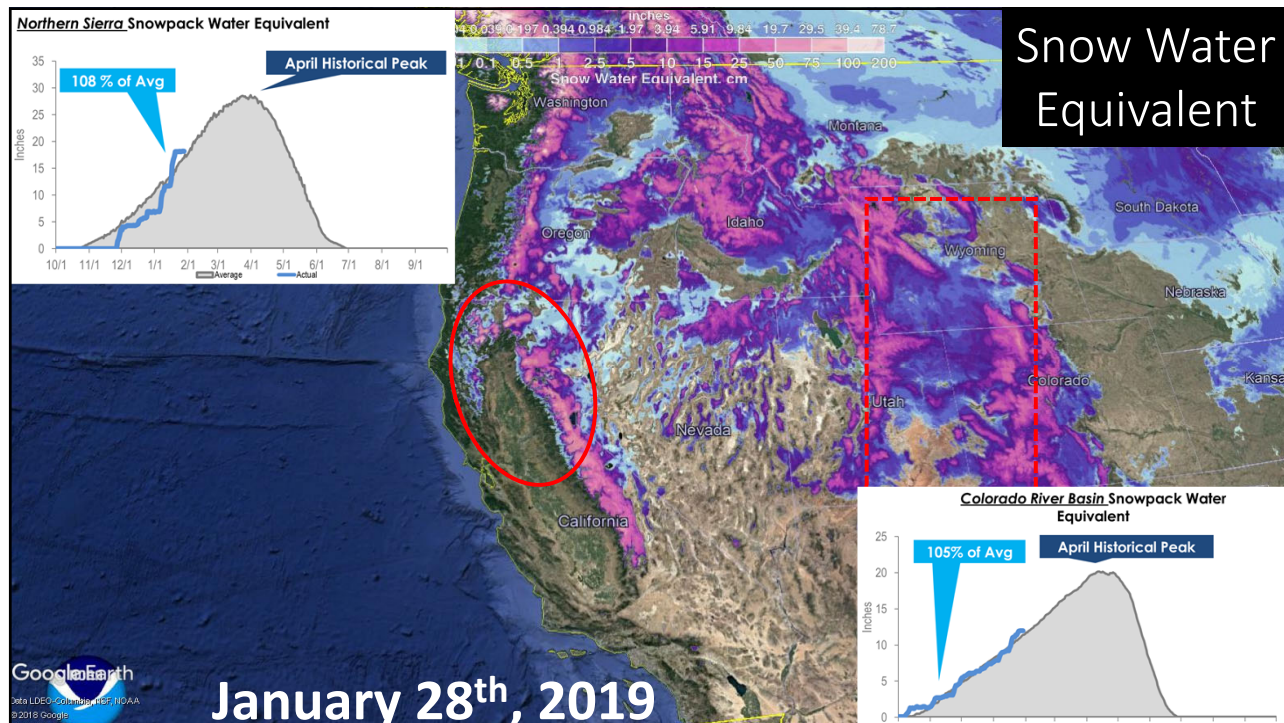
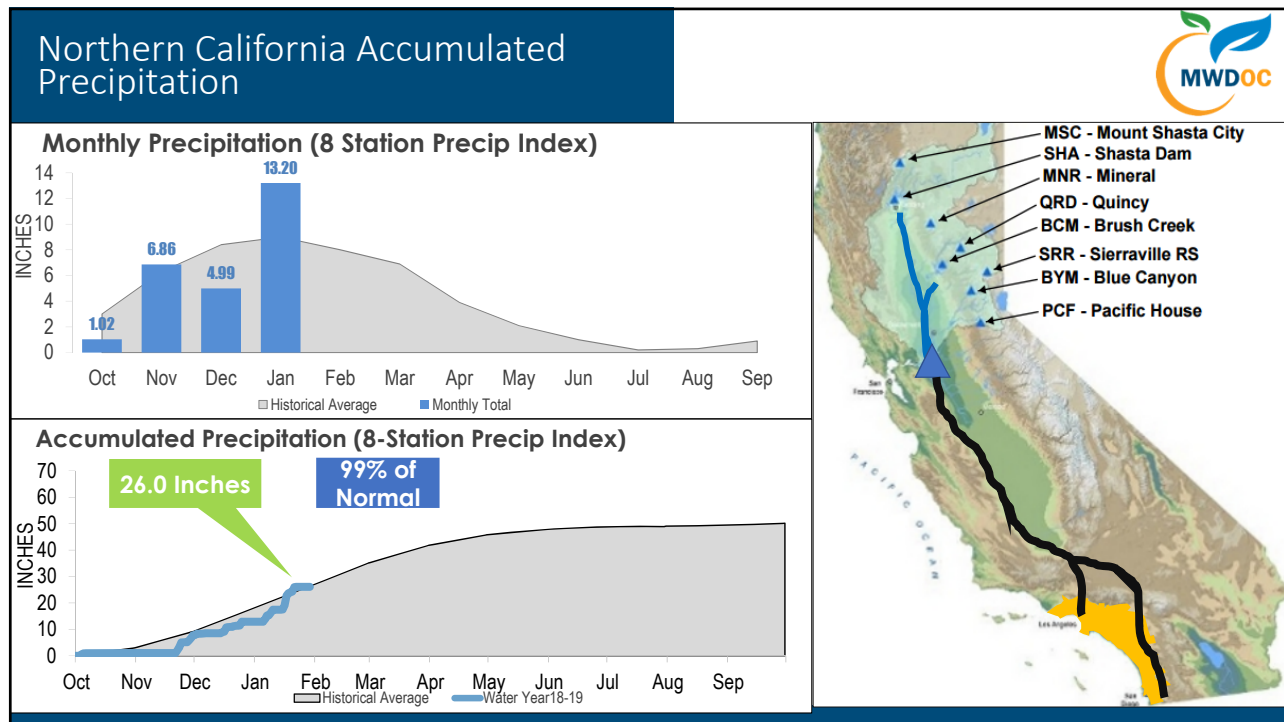


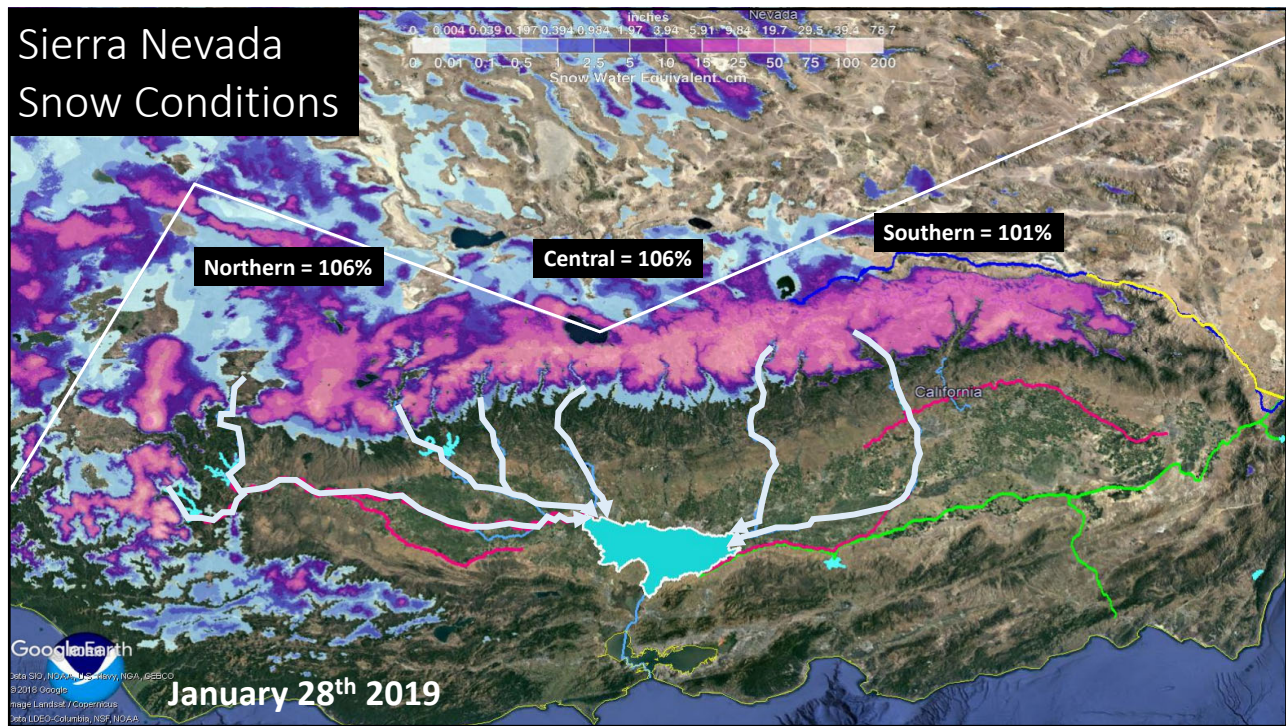
Santa Ana Annual Precipitation Statistics (Fiscal Year July-June)



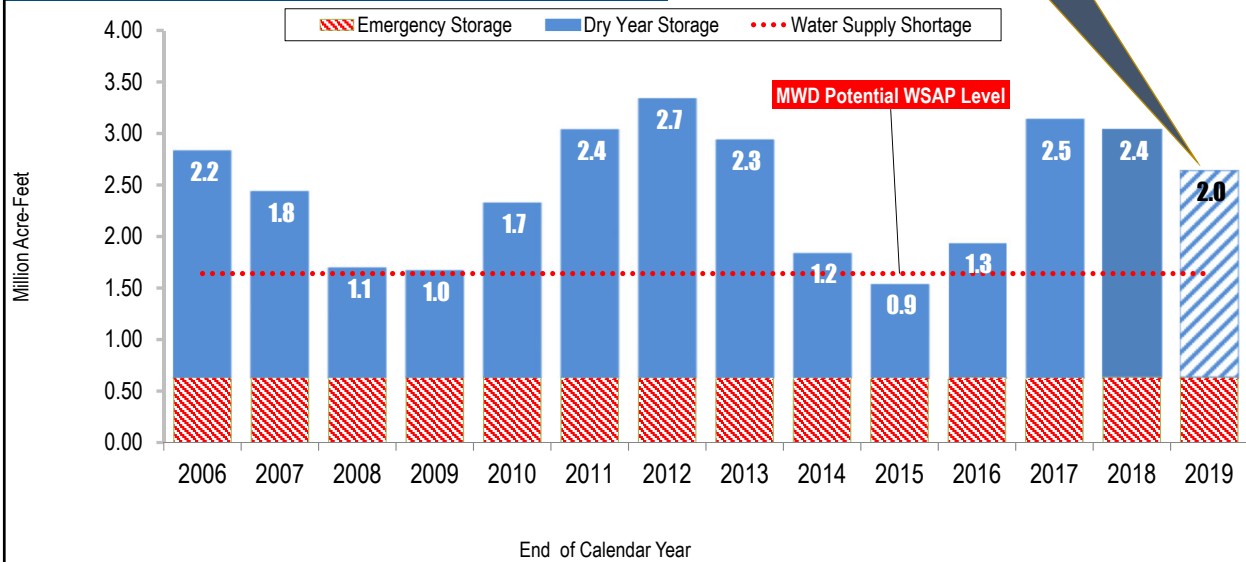
Regional Weather and Water Supply Conditions

Insight to regional weather conditions that affect California's water supply

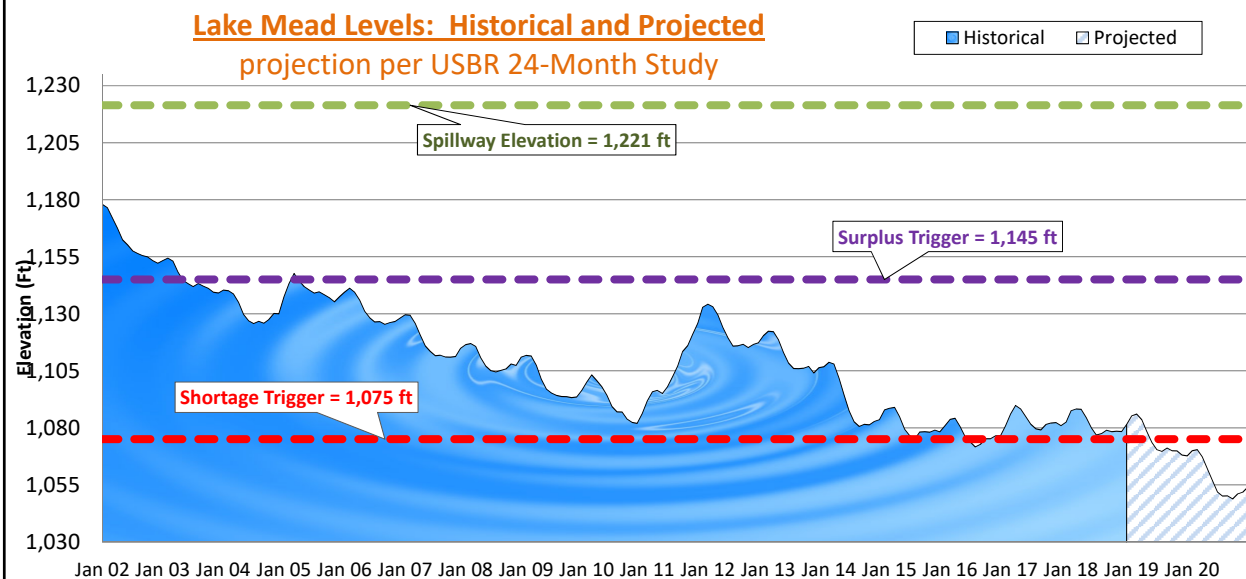


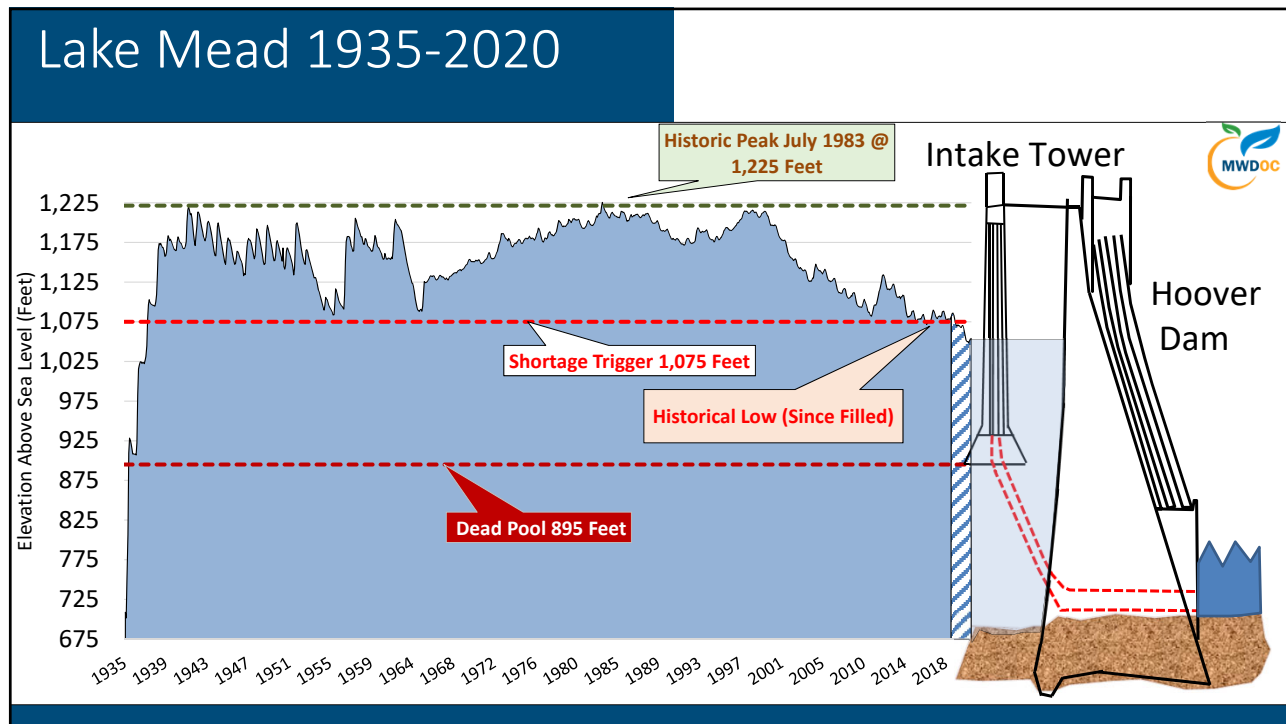


MWD 2019 Estimated Water Storage



Lake Mead Outlook







DISCUSSION ITEM

February 6, 2019

TO: Board of Directors

**FROM: Robert Hunter,
General Manager**

Staff Contact: Harvey De La Torre
Melissa Baum-Haley

**SUBJECT: PRESENTATION REGARDING STATE WATER PROJECT (SWP)
COOPERATIVE AGREEMENTS BY METROPOLITAN STAFF**

STAFF RECOMMENDATION

Staff recommends the Board of Directors review and discuss the information presented.

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

REPORT

On December 12, 2018, the California Department of Water Resources (DWR) and the U.S. Bureau of Reclamation (Reclamation) signed an addendum to the 1986 Agreement between the United States of America and DWR for the Coordinated Operation of the Central Valley Project and the State Water Project. The COA is the mechanism by which DWR and Reclamation allocate water between the Central Valley Project (CVP) and the State Water Project (SWP) while meeting the regulatory requirements.

Within the COA modified agreement, more detailed sharing of responsibility is provided for meeting Sacramento Valley in-basin use as well as applicable of export capacity when exports are constrained.

Budgeted (Y/N): N/A	Budgeted amount: None	Core <input checked="" type="checkbox"/> _X_	Choice <input type="checkbox"/>
Action item amount: N/A		Line item:	
Fiscal Impact (explain if unbudgeted):			

Coordinated Operations Agreement In-Basin Use Obligation Sharing

- 1986 Agreement
 - Sharing percentage 75% CVP | 25% SWP
- Modified Agreement
 - Sharing based on water year type
 - Wet & Above Normal: 80% CVP | 20% SWP
 - Below Normal: 75% CVP | 25% SWP
 - Dry: 65% CVP | 35% SWP
 - Critical: 60% CVP | 40% SWP

In-Basin Use: Legal uses of water in the Sacramento Valley
including water required to meet regulatory requirements

WP&S Committee

Item 6a - Slide 12

January 7, 2019

Additionally, on December 12, 2018, DWR and California Department of Fish and Wildlife Directors Nemeth and Bonham respectively, presented progress on the voluntary agreements to the State Water Resources Control Board (State Board) as an alternative to the State Board's staff proposal requiring unimpaired river flows under the Bay Delta Water Quality Control Plan.

Key outcomes of the voluntary settlement agreements include:

- Integration of flow and non-flow measures
- Includes upstream non-SWP/CVP water users
- System-wide governance & science-based decision making
- Backed by significant and reliable funding mechanisms
- Intend to meet State & Federal water quality requirements

MWDOC has invited Metropolitan staff to provide a presentation to explain the key outcomes of the COA and voluntary settlement agreement, as well as impacts to the SWP and California WaterFix.



DISCUSSION ITEM

February 6, 2019

TO: Board of Directors

**FROM: Robert Hunter,
General Manager**

Staff Contact: Harvey De La Torre
Melissa Baum-Haley

SUBJECT: CALIFORNIA WATERFIX ACTIVITIES UPDATE

STAFF RECOMMENDATION

Staff recommends the Board of Directors review and discuss the information presented.

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

REPORT

Joint Powers Authorities

The Delta Conveyance Design and Construction Authority (DCA) and Delta Conveyance Finance Authority meetings were held on January 17, 2019. At the DCA meeting, the Interim Executive Director, Jill Duerig, provided an update on activities. The Engineering Design Manager, Jacobs, and the geotechnical consultant, Fugro, began developing a plan for 2019 and identified all the boring and cone penetrometer testing locations. Similarly, the real property consultants began engaging in the formation of policies, processes, and procedures that meet regulatory requirements while streamlined where possible.

The following 11 out of the 22 agencies located south of the Delta are members of the Joint Power Authorities:

- Alameda County Water District
- Alameda County Flood Control & Water Conservation District Zone 7

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

- Antelope Valley/East Kern Water District
- Coachella Valley Water District
- Desert Water Agency
- Metropolitan Water District
- Mojave Water Agency
- San Bernardino Valley Municipal Water District
- San Geronio Pass Water Agency
- Santa Clarita Valley Water Agency
- Santa Clara Valley Water District

On January 31, 2019, the DCA held a special meeting to authorize the Board to execute an agreement with Management Partners for professional services of long-term Executive Director.

The next meeting of the DCA and Finance Authority Boards of Directors will be held on Thursday, February 21, 2019.

Coordinated Operation Agreement

On January 16, a coalition of environmental, fishing, and Native American groups led by the Pacific Coast Federation of Fishermen's Association filed suit against the California Department of Water Resources (DWR). The suit, filed in Sacramento Superior Court, challenges DWR's attempt to revamp its 30-year-old Coordinated Operations Agreement (COA) with the federal Bureau of Reclamation to export more water from the Delta.

Opponents argue that DWR's revision of the COA would increase Delta exports when the Delta has the least water available for fish. The lawsuit additionally charges that DWR's COA addendum would violate the Delta Reform Act and the Public Trust Doctrine.

DWR stated no new environmental review as was needed for the COA, issuing an exemption from the California Environmental Quality Act on the grounds that COA was an "ongoing operation" of the State Water Project.

Delta Stewardship Council (DSC)

The DWR preparing a resubmittal of certification to the DSC, expected during 2019. It will be based on substantial evidence needed to amend the appeal process. key issues include:

1. Agencies Reducing reliance on the Delta – the DSC is looking for information from urban water management plans (UWMPs) that quantify a reduction in the reliance on the Delta, whereby, select UWMPs completed in 2015 may need to be amended.
2. Export/Inflow ratio – DWR will need to show substantial evidence to support the conclusion that California WaterFix can be operated to meet the required export/inflow ratio measurements. Updated modeling will need to include more information on the export side of the ratio.

3. Municipal & Industrial chloride standard – meet water quality specified standards within the Delta. Of note, during deep drought periods there can be temporary urgency change conditions. The State Board has the authority to make decisions on whether such a change petition is needed.
4. Utilize the best available science for sea level rise and salinity impact – DWR is modeling out through 2100 as well as incorporating the projected 55-inch sea level rise into the intakes design. This modeling will also need to include the impact of salinity variation.
5. Local land use – more substantial evidence will need to show that socio-economic and community character impacts are being considered.

WaterFix Regulatory and Permit Status

Several regulatory and permitting actions still need to be completed before construction can begin. Many of these outstanding permits will be completed following or as part of the design process lead by the DCA. The attached table provides a brief status update of those which are complete and those which remain on-going/outstanding.

Additional Information














Additional information on the Bay-Delta Issues can be found in *Issue Brief D - Bay Delta/State Water Project Issues* of the Discussion Item regarding Metropolitan Water District items critical to Orange County.







Attachments: (1) California WaterFix Regulatory Schedule and Status Table

California WaterFix Regulatory and Permit Status Table

Several regulatory and permitting actions still need to be completed before construction can begin. Many of these outstanding permits will be completed following or as part of the design process lead by the DCA. The following table provides a brief status update of those which are complete and those which remain on-going/outstanding.

Version January 31, 2019

REGULATORY PROCESSES AND PERMITS		STATUS
1	CALIFORNIA ENVIRONMENTAL QUALITY ACT / NATIONAL ENVIRONMENTAL POLICY ACT (CEQA/NEPA)	
	Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) released on December 22, 2016	
	▶ California Department of Water Resources (DWR) certified Final EIR in compliance with CEQA	
	▶ DWR approved California Waterfix, adopted "CEQA Findings," an MMP and a Statement of Overriding Considerations as part of project approval	
	▶ DWR issued a Notice of Determination on July 21, 2017	
	DWR will Prepare Draft Supplemental EIR	
	Public review and comment on Draft Supplemental EIR	
	DWR will Prepare Final Supplemental EIR	
	U.S. Bureau of Reclamation is expected to issue a Record of Decision, which will also include consideration of final biological opinions issued under the U.S. Endangered Species Act (ESA) Section 7	
2	ENDANGERED SPECIES ACT (ESA) SECTION 7 CONSULTATION	
	A Biological Assessment submitted to the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) and engaged in formal consultation	
	USFWS and NMFS issued final Biological Opinions in June 2017	
3	NATIONAL HISTORIC PRESERVATION ACT (NHPA) SECTION 106 COMPLIANCE	
	A Final Programmatic Agreement (PA) was completed and signed by DWR, the U.S. Army Corps of Engineers (USACE) and State Historic Preservation Officer (SHPO) on March 21, 2017	
	DWR and USACE completed the Draft Programmatic Historic Properties Treatment Plan and forwarded to SHPO and interested parties on July 26, 2017	

	Continued implementation of PA commitments	
4	CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (CDFW) 2081(B) PERMIT	
	An incidental take permit application was submitted to CDFW on October 5, 2016	
	CDFW issued permit on July 26, 2017	
	CDFW issued a clarification memorandum for the California Endangered Species Act ITP Condition of Approval on October 18, 2017	
5	SECTION 401 OF THE CLEAN WATER ACT – WATER QUALITY CERTIFICATION	
	An application for Water Quality Certification was submitted to the State Water Resources Control Board (SWRCB) on September 24, 2015	
	An updated application for Water Quality Certification was submitted to the SWRCB on November 15, 2018	
	A subsequent ruling regarding briefing and other procedural matters will be forthcoming.	
6	CDFW LAKE AND STREAMBED ALTERATION AGREEMENT, SECTION 1602	
	DWR is preparing a permit application for submittal to CDFW	
	CDFW will determine whether to issue permit	
7	U.S. ARMY CORPS OF ENGINEERS (USACE) SECTION 404 PERMIT	
	A Section 404 Permit application was submitted to USACE on September 9, 2015	
	A Compensatory Mitigation Strategy was completed Fall 2016	
	An alternatives analysis will be finalized	
	USACE will determine whether to issue permit	
8	SWRCB CHANGE PETITION	
	A presentation of rebuttal for Part 1 cases-in-chief concluded on July 11, 2017	
	The presentation of sur-rebuttal testimony, and subsequent cross-examination, by parties participating in Part 2 of the California WaterFix water right change petition hearing concluded on October 1, 2018.	

A subsequent ruling regarding briefing and other procedural matters will be forthcoming.



9

DELTA STEWARDSHIP COUNCIL (DSC)



DWR filed a certification of consistency with the Delta Plan to the DSC on July 27, 2018. Nine appeals of that certification were filed.



On December 7, DWR withdrew its certification of consistency. As a result, the DSC dismissed the appeals.



The DWR preparing a resubmittal of certification to the DSC

Expected
2019

10

USACE AUTHORIZATION UNDER SECTION 14 OF THE RIVERS AND HARBORS ACT



Prior to use or alteration of a Civil Works project, DWR will prepare and submit a permit application to USACE (consistent with USACE requirements at 33 USC 408 (Section 408))





DISCUSSION ITEM
February 6, 2019

TO: Board of Directors

**FROM: Robert Hunter,
General Manager**

Staff Contact: Karl Seckel
Harvey De La Torre
Melissa Baum-Haley

**SUBJECT: METROPOLITAN WATER DISTRICT (MET) ITEMS CRITICAL TO
ORANGE COUNTY**

STAFF RECOMMENDATION

Staff recommends the Board of Directors to review and discuss this information.

DETAILED REPORT

This report provides a brief update on the current status of the following key MET issues that may affect Orange County:

- a) MET's Water Supply Conditions
- b) MET's Finance and Rate Issues
- c) Colorado River Issues
- d) Bay Delta/State Water Project Issues
- e) MET's Ocean Desalination Policy and Potential Participation in the Doheny and Huntington Beach Ocean (Poseidon) Desalination Projects
- f) Orange County Reliability Projects
- g) East Orange County Feeder No. 2
- h) South Orange County Projects

Budgeted (Y/N): NA	Budgeted amount: None	Core <input checked="" type="checkbox"/>	Choice <input type="checkbox"/>
Action item amount: N/A	Line item:		
Fiscal Impact (explain if unbudgeted):			

ISSUE BRIEF # A**SUBJECT: MET's Water Supply Conditions****RECENT ACTIVITY**

The 2018-19 Water Year officially began October 1, 2018. Thus far, the Northern California accumulated precipitation (8-Station Index) is reporting **26.1 inches or 99% of normal** as of January 29. In the month of January 2019, accumulated precipitation reached 13.2 inches, which is **4.2 inches above normal** compared to the historical average (As of January 28th). The Northern Sierra Snow Water Equivalent was at 18.2 inches on January 28th, which was **108% of normal** for that day.

As of January 28th Lake Oroville storage is at 39% of total capacity and 60% of normal. As of January 28th San Luis Reservoir has a current volume of 85% of the reservoirs total capacity and is 109% of normal.

The Department of Water Resources (DWR) in January increased the State Water Project (SWP) "Table A" allocation to 15%. This allocation provides Metropolitan with approximately 286,725 AF in SWP deliveries this water year. DWR's approval considered several factors including existing storage in SWP conservation reservoirs, SWP operational regulatory constraints, and the 2019 contractor demands.

On the Colorado River system, snowpack is measured across four states in the Upper Colorado River Basin. As of January 28, 2019, snowpack measured at 105% of normal for that date. The ongoing decline in the Colorado River watershed has impacted storage levels in Lake Powell and Lake Mead, which in turn affects the likelihood of surplus or shortage conditions in the future. The Bureau of Reclamation is projecting that there is a 57% chance of a shortage on the Colorado River in 2020, increasing to 68% in 2021.

With estimated total demands and losses of 1.76 million acre-feet (MAF) and with a 15% SWP Table A Allocation, Metropolitan is projecting that demands will exceed supply levels in CY 2019. Based on this, estimated total dry-year storage for Metropolitan at the end of CY 2019 will go down to 2.0 MAF.

ISSUE BRIEF # B

SUBJECT: MET's Finance and Rate Issues

RECENT ACTIVITY

At the January 2019 Metropolitan Finance and Insurance Committee, no information on water transactions was presented.

ISSUE BRIEF # C**SUBJECT: Colorado River Issues****RECENT ACTIVITY**

Drought Contingency Plan Development

Commissioner Burman addressed the Colorado River Water Users Association annual conference in Las Vegas December 13-15 and described Reclamation's priorities for the Colorado River basin in 2018. In her remarks, Commissioner Burman noted that the Drought Contingency Plan will be the top priority for the upcoming year and that Reclamation is looking for the states to complete their work during that time.

In describing the importance of finalizing work on the Drought Contingency Plan during the upcoming year, the Commissioner noted that the 2007 Shortage Guidelines (Guidelines), alone, are no longer enough to protect the system from the reservoir storage declines and worsening hydrology that have occurred since adoption of the Guidelines and pointed to Reclamation's modeling showing that implementation of both the Lower Basin Drought Contingency Plan and the Upper Basin Drought Contingency Plan together would provide important protection of the reservoirs and power production. The Commissioner urged the states to resolve any outstanding intrastate issues and to reach final agreement on the drought contingency plans.

A fact sheet on the Drought Contingency Plan is attached.

Metropolitan Submits a Modified Water Order to the Bureau of Reclamation

During December, Metropolitan submitted a Request for Revision to Approved Diversions for Calendar Year 2017 to Reclamation seeking approval to divert a total 685,000 acre-feet. Reclamation had approved the diversion of up to 632,676 acre feet of water earlier in 2017. Metropolitan submitted the modified order to:

- Enable Metropolitan to divert and store Imperial Irrigation District's (IID) Excess and Additional Excess Intentionally Created Surplus (ICS), consistent with Metropolitan and IID's storage agreement;
- Include unused Coachella Canal Lining Project mitigation water that Reclamation had not included in its initial approved water order and exchange it with San Diego County Water Authority; and
- Allow Metropolitan to divert water not needed by Coachella Valley Water District consistent the 1989 Approval Agreement.

Earlier this year, Metropolitan received approval to store up to 390,000 acre-feet of ICS in Lake Mead.

Minute 319 Water Exchange Completed

Reclamation sent notice on December 14, 2017 that the United States International Boundary and Water Commission received notification from Mexico that Mexico has provided the United States a total quantity of 124,000 acre-feet in satisfaction of Section III.1 of Minute 319. Pursuant to Minute 319 and the implementing agreements, a portion of this conserved water is converted into Binational ICS. Binational ICS is water that was conserved in Mexico, and the conservation was paid for by Metropolitan, IID, Central Arizona Project and Southern Nevada Water Authority (Local Funding Agencies). Each of the Local Funding Agencies will be credited with the amount of Binational ICS agreed to in the Interim Operating Agreement and Contributed Funds Agreements of 2012. Metropolitan's contributions as a Local Funding Agency entitled it to 47,500 acre-feet of Binational ICS, which will be shared equally with IID pursuant to the terms of a 2013 agreement between Metropolitan and IID regarding Binational ICS generated under Minute 319.

COLLABORATION ON THE COLORADO RIVER: WORKING TOGETHER TO DEVELOP A MORE SUSTAINABLE SUPPLY



The Southwest's reliance on the Colorado River is hard to overstate – 40 million people, 5 million acres of farmland, the economies of seven states and diverse ecosystems and wildlife depend on its water. But that reliance is being challenged as climate change, unprecedented drought and growing demands have caused flows on the Colorado River to drop dramatically and storage levels in the system's two largest reservoirs – Lake Mead and Lake Powell – to do the same. In response, the federal government, states and urban and agricultural water districts that depend on the Colorado River are working together toward a solution. The result is the **Drought Contingency Plan** – a collection of proposed agreements within and among the seven western states in the Colorado River Basin to boost storage levels in Lake Mead and Lake Powell and prevent the reservoirs from reaching critically low levels. The Metropolitan Water District has been a leader in this ongoing collaboration and is committed to working cooperatively within California and beyond to ensure the plan's success.

Supporting the Southwest

Seven states and part of the country of Mexico are dependent on the well-being of the Colorado River. Under the proposed DCP, the Lower Basin states would agree to contribute water to keep water levels higher in Lake Mead. The Upper Basin states gain tools, including coordinated reservoir management and water banking, to maintain higher levels in Lake Powell.



Benefits of Working Collaboratively



Reduces risk of Lake Mead reaching critically low levels that would trigger severe mandatory cuts in the Lower Basin



Secures stability in deliveries, allowing states to develop long-term solutions to structural imbalance on Colorado River



Avoids protracted litigation and political, legislative mandates



Protects power generation at Hoover Dam



Allows Metropolitan access at lower elevations to its conserved water stored in Lake Mead



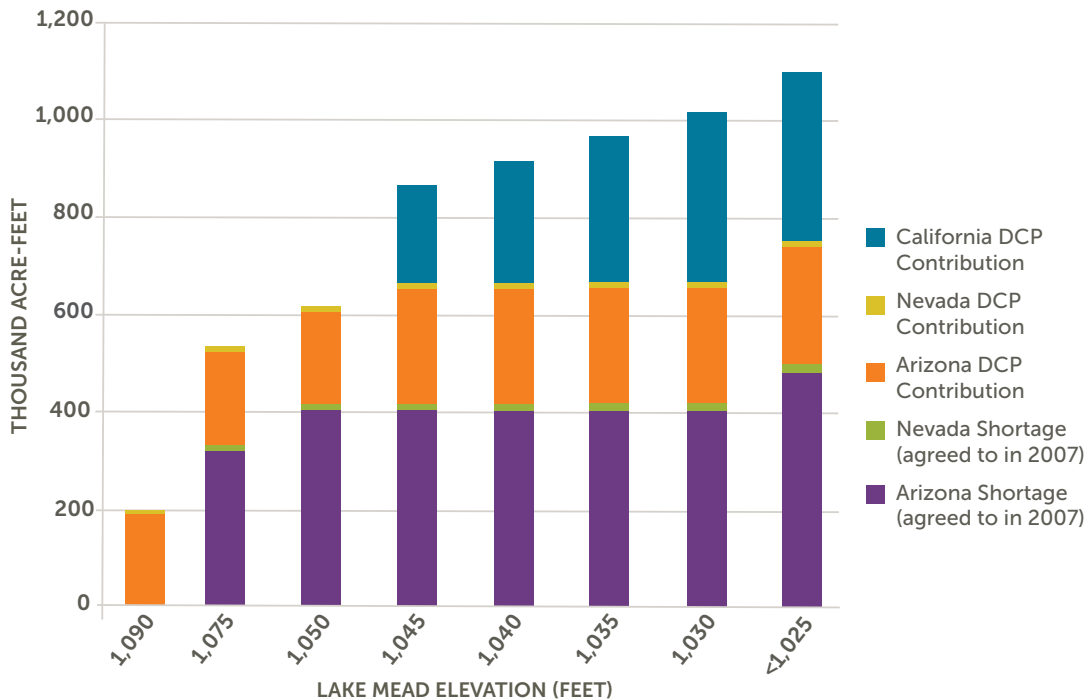
Supports flexibility built into Metropolitan's system reliability, including diverse storage, water transfer and land fallowing programs

Contributing to the Solution

Under a 2007 agreement reached by the seven Colorado River Basin states, if Lake Mead’s level drops to 1,075 feet – about 5 feet below the current level – an official shortage would be declared. That declaration would trigger cuts in water deliveries to Arizona and Nevada. According to the U.S. Bureau of Reclamation, there is

a more than 50 percent chance of Lake Mead reaching shortage level by 2020. Further decline in lake levels would have additional, increasingly severe consequences. If approved, the Drought Contingency Plan would help avoid these larger declines and the significant challenges they would bring.

TOTAL LOWER BASIN CONTRIBUTIONS WITH DCP BY LAKE MEAD ELEVATION



Pending Approval

The proposed DCP needs to be approved by states, water agencies and Congress. Consideration is expected in late 2018 and early 2019.

CALIFORNIA CONTRIBUTION

Under the Proposed DCP:

Lake Mead Level
Below 1,045 feet



California
contribution
200,000-350,000
acre feet/year

Shared
by

Metropolitan Water District
Imperial Irrigation District
Palo Verde Irrigation District
Coachella Valley Water District

More Collaboration on the Horizon

With Colorado River supplies already over-allocated, climate change is expected to exacerbate the imbalance by further decreasing flows on the Colorado River as temperatures warm.

Effective through 2026, the proposed DCP would provide stability while states and water agencies develop longer-term solutions to the existing Colorado River imbalance.

ABOUT METROPOLITAN

The Metropolitan Water District of Southern California is a state-established cooperative of 26 member agencies – cities and public water agencies – that serve nearly 19 million people in six counties. Metropolitan imports water from the Colorado River and Northern California to supplement local supplies and helps its members develop increased water conservation, recycling, storage and other resource management programs.

OUR MISSION

The mission of the Metropolitan Water District of Southern California is to provide its service area with adequate and reliable supplies of high-quality water to meet present and future needs in an environmentally and economically responsible way.



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Page 25 of 38
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ISSUE BRIEF # D

SUBJECT: Bay Delta/State Water Project Issues

RECENT ACTIVITY

Science Activities

Metropolitan staff continued participation in the Collaborative Science and Adaptive Management Program, including participation on the Collaborative Adaptive Management Team. December meetings focused on Delta smelt issues. Metropolitan staff participated in the Delta Smelt Scoping Team process to develop a decision support tool for the Delta Smelt Resiliency Strategy, and develop management questions that would guide development of a longterm monitoring program to inform management actions for Delta smelt. DWR is planning to implement two Delta Smelt Resiliency Strategy actions in 2018 – the Suisun Marsh Salinity Control Gate action and the North Delta food web action. These actions are hypothesized to improve habitat conditions and provide greater access to food resources. Staff is providing input to the monitoring plan for the Suisun Marsh Salinity Gates action and to the comprehensive U.S. Bureau of Reclamation Directed Outflow Project for 2018, which will include monitoring of Delta smelt habitat factors throughout the spring to fall 2018 period.

On December 6, the California Department of Fish and Wildlife announced the selection of 39 projects to receive funding from its Water Quality, Supply and Infrastructure Improvement Act of 2014 (Proposition 1) Restoration Grant Programs. Seven projects were awarded funding in the scientific studies category. Staff assisted in the development and/or offered budgeted financial support for three of seven selected projects. These three projects are focused on the effects that pesticides have on juvenile salmonids that rear on floodplains; juvenile salmon distribution, abundance, and growth in restored Delta marsh habitats; and the impacts that export operations have on juvenile salmon survival, entrainment, and predation mortality.

Delta Flood Emergency Management Plan

DWR is currently testing a revised Emergency Response Tool (ERT) model that has been disaggregated so that various channel closure, pathway or other response scenarios can be simulated independent of the full Delta regional analysis. Testing has been conducted with the California Civil Air Patrol to characterize emergency conditions on the ground, and simulate response scenarios using ERT modeling capabilities.

Sheet pile with up to 120 feet installed length, consisting of large pipe pile and intermediate sheet pile between the pipe segments, is expected to be delivered to the Stockton stockpile site by the second quarter 2018. This piling would be capable of closing the deepest levee breaches and would be a redundant measure to rock closures in emergency conditions. With the pile delivery, stockpiles for purposes of emergency response should be almost complete. DWR plans to stockpile additional rock, bringing the total to more than 400,000 tons or enough to close three major breaches. In addition to stockpiled materials, the stockpile sites include four loading and offloading sites for rock, sheet pile, and other materials.

ISSUE BRIEF # E

SUBJECT: MET's Ocean Desalination Policy and Potential Participation in the Doheny and Huntington Beach Ocean (Poseidon) Desalination Projects

RECENT ACTIVITY

Doheny Desal

The details of this have been moved to briefing Issue H as it pertains only to South Orange County.

Poseidon Huntington Beach

Poseidon continues working with the Santa Ana Regional Water Quality Control Board (SARWQCB) to renew and update its existing National Pollution Discharge Elimination System permit and comply with new regulations (referred to as the Ocean Plan Amendment) which were approved by the State Water Resources Control Board in May 2015.

On October 1, 2018 SARWQCB notified Poseidon that their application for a revised ocean discharge diffuser design, which was required by the Ocean Plan Amendment, was complete. This was the second time the Regional Board notified Poseidon that its application was complete (the previous notification was on August 28, 2017). The Permit Streamlining Act (PSA) requires a responsible agency to approve or disapprove of an application within 180 days. Poseidon maintains that their application is subject to the PSA, while SARWQCB contends that this application is not subject to the PSA.

Subsequently on December 6, 2018 SARWQCB notified Poseidon that Regional Board staff concluded that Poseidon has not adequately demonstrated that the use of slant well technology is infeasible at the Huntington Beach site, despite the previous notifications and meetings with Regional Board staff. Poseidon has rebutted the Regional Board's conclusion in a response letter dated December 11, 2018.

Poseidon expects the SARWQCB to act on its permit in the next three to five months. Assuming approval, Poseidon would then seek a permit from the California Coastal Commission in 2019.

ISSUE BRIEF # F

SUBJECT: Orange County Reliability Projects

RECENT ACTIVITY

Orange County Water Reliability Study

MWDOC staff and CDM Smith have released the final report of the 2018 OC Water Reliability Study which was provided to the Board for a 'receive and file' action on January 16th.

Next Steps

The next steps include the following:

1. Complete additional work on the Carson Project and its reliability implications in Orange County (includes work between MWDOC and OCWD)
2. Complete additional analysis on the Strand Ranch Integrated Water Banking Program using the results of the study. This work is now in progress.
3. Develop a list of items to advocate for at MET with respect to the next MET IRP update based on comments coming out of our study.
4. Complete additional work on systems integration for local water in SOC (includes water quality issues, chloramination facilities, reversing flow of systems, building in redundancies, metering of low flow water, base-loading of projects, etc.).
5. Integrate the results of the recent workshop regarding integration of local projects into the Orange County water system.
6. Work with OCWD on the SARCCUP Project to determine the potential uses of the extraordinary supplies developed through the project and how they can best be used in Orange County.

ISSUE BRIEF # G

SUBJECT: East Orange County Feeder No. 2

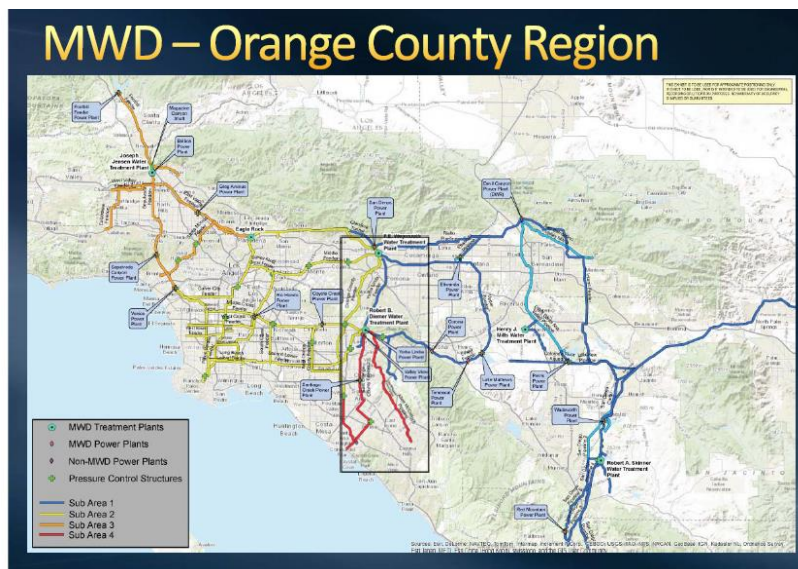
RECENT ACTIVITY

Use of East Orange County Feeder No. 2 for Conveyance of Groundwater and/or Poseidon Water

MWDOC has been meeting with MET staff to discuss various aspects of using the EOCF#2 to convey other sources of local water. This concept can include ocean desalination projects, and/or other local projects such as the groundwater pump-in to the EOCF#2.

On August 31, 2018, MWDOC hosted a Water System Operations and Integration Workshop attended by technical staff from: MET's Water Quality team, MWDOC member agencies, and consultants. The workshop focused on the possible integration of multiple treated water sources into the OC water distribution system; particularly in the lower reaches of EOCF#2. The collaborative discussion identified a number of potential issues for follow-up. Staff and our consultant, Ed Means, are working through the workshop recommendations to develop a plan to address these issues.

On October 17, 2018 MWDOC staff met with members of MET's Facilities Planning team to discuss the capabilities of and experiences with MET's water distribution system model (which is principally a hydraulic model). MWDOC staff began a discussion about the possibilities of leveraging the existing MET model data for inclusion into an OC water distribution model. The OC model concept is envisioned to include distribution pipelines in OC such as EOCF#2, AMP, Joint Regional Water Supply System (JWRSS), and South County Pipeline. The OC model concept would also include a water quality module to assist with the development of solutions to the issues identified during the Water Systems Operations and Integration Workshop. MET staff was generally favorable to the idea of sharing information, and are currently evaluating a number of possible alternatives that will be discussed with MET executive management.



ISSUE BRIEF # H

SUBJECT: South Orange County Projects

RECENT ACTIVITY

Doheny Desal Project

South Coast WD submitted a grant application for up to \$20 million for project construction through Bureau of Reclamation 'Water SMART: Desalination Construction Projects under the WIIN Act'. Applications are currently being reviewed.

South Coast staff and consultants are in the process of responding to comments submitted regarding the EIR for the project. South Coast WD anticipates adopting the response to comments in Spring 2019.

SMWD Trampas Canyon Recycled Water Reservoir

This project involves the construction of a 5,000-acre-foot recycled water storage reservoir and the various complementary facilities to support this reservoir. The construction of the Trampas Canyon Recycled Water Seasonal Storage Reservoir consists of three main components:

- 1) Trampas Canyon Dam (Dam)
- 2) Conveyance facilities to transport recycled water into and out of the Reservoir (Pipelines)
- 3) Trampas Canyon Pump Station (Pump Station)

The construction of the facilities is being completed in three phases:

- 1) Preconstruction/Site Preparation for the Dam and Pump Station Construction
- 2) Dam and Pipelines
- 3) Pump Station

PROJECT STATUS

Preconstruction/Site Preparation

The work to relocate various facilities integral to the existing mining operation was completed in December 2017. The relocation of the high-tension power lines that feed an existing major communication facility was completed in April 2018. The final relocation of AT&T facilities was completed in May 2018, which was the final remaining activity for this phase.

Dam and Pipelines

The Construction Contract was awarded in December 2017 and is approximately 37% complete.

Pump Station

The preliminary design of this facility was resubmitted by AECOM in mid-December for District review and approval. The Design process is likely to continue thru the end of February 2019, and the project will likely be available to start the construction bidding process in March 2019. Completion of the construction is expected to be in February 2020, about 3-4 months ahead of the Reservoir and Dam completion.

San Juan Watershed Project

The Draft Environmental Impact Report (DEIR) public review period was closed for comments on February 23, 2018. Ultimately twenty-one comment letters were received with the major topics of concern being characterized as relating to:

- Steelhead trout migration including the provisions of fish passages
- Impacts on San Juan Creek Lagoon
- Aesthetics and impacts of the various structures that may be required as part of the project on the surrounding neighborhoods
- Sediment transport

Legal review of the draft document has been completed. An approach for addressing the comments was developed amongst the team members with a new schedule also being developed. The additional technical studies of the issues listed above are being performed. The results will be incorporated into the Responses to Comments and brought to the Board for consideration of adopting the EIR.

Other Information on South County Projects:

If any agencies would like to have updates included herein on any projects within your service area, please email the updates to Karl Seckel at kseckel@mwdoc.com.

**Summary Report for
The Metropolitan Water District of Southern California
Special Board Meeting
January 22, 2019**

COMMITTEE CHAIR AND VICE CHAIR APPOINTMENTS (Agenda Item 5A)

Approved Chair and Vice Chair of standing committee appointments for the term commencing on February 1, 2019:

Agriculture and Industry Relations Committee

Director Record was appointed Chair

Director Dick was appointed Vice Chair

Audit and Ethics Committee

Director Ramos was appointed Chair

Director Paskett was appointed Vice Chair

Communications and Legislation Committee

Director Cordero was appointed Chair

Director Kurtz was appointed Vice Chair

Conservation and Local Resources Committee

Director Gold was appointed Chair

Director Abdo was appointed Vice Chair

Engineering and Operations Committee

Director Smith was appointed Chair

Director De Jesus was appointed Vice Chair

Facilities Naming Ad Hoc Committee

Director Morris was appointed Chair

Director Lefevre was appointed Vice Chair

Finance and Insurance Committee

Director Dake was appointed Chair

Director Steiner was appointed Vice Chair

Legal and Claims Committee

Director McKenney was appointed Chair

Director Quiñonez was appointed Vice Chair

Organization, Personnel and Technology Committee

Director Murray was appointed Chair

Director Zurita was appointed Vice Chair

Real Property and Asset Management Committee

Director Hogan was appointed Chair

Director Peterson was appointed Vice Chair

Special Committee on Bay Delta

Director Ackerman was appointed Chair

Director Pressman was appointed Vice Chair

Water Planning and Stewardship Committee

Director Atwater was appointed Chair

Director Kurtz was appointed Vice Chair

THIS INFORMATION SHOULD NOT BE CONSIDERED THE OFFICIAL MINUTES OF THE MEETING.

Board letters related to the items in this summary are generally posted in the Board Letter Archive approximately one week after the board meeting. In order to view them and their attachments, please copy and paste the following into your browser

<http://edmsidm.mwdh2o.com/idmweb/home.asp>

All current month materials, before they are moved to the Board Letter Archive, are available on the public website here: <http://mwdh2o.com/WhoWeAre/archived-board-meetings>



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

MWD MEETING AGENDA

Regular Board Meeting
February 12, 2019
12:00 p.m. – Boardroom

Tuesday, February 12, 2019		
Meeting Schedule		
9:00 AM	L&C	Rm. 2-145
11:00 AM	OP&T	Rm. 2-456
12:00 PM	Board Mtg	Boardroom

MWD Headquarters Building

•

700 N. Alameda Street

•

Los Angeles, CA 90012

1. Call to Order

- (a) Invocation: Waheeda Ali, Associate Engineer,
Engineering Services Group
- (b) Pledge of Allegiance: Director Linda Ackerman, Municipal
Water District of Orange County

2. Roll Call

3. Determination of a Quorum

- 4. Opportunity for members of the public to address the Board on matters within the Board's jurisdiction. (As required by Gov. Code § 54954.3(a))
 - a. Presentation by David Wright, General Manager, Los Angeles Department of Water and Power: \$1.4 million solar incentive program rebate for Joseph Jensen Water Treatment Plant

5. OTHER MATTERS

- A. Approval of the Minutes of the Meeting for January 8, 2019; the Minutes for the Special Board Workshop to Review San Diego County Water Authority Proposal for Settlement of Pending Litigation; and the Special Board Meeting for January 22, 2019 (Copies have been mailed to each Director)
Any additions, corrections, or omissions

- B. Report on Directors' events attended at Metropolitan expense for month of January
- C. Approve committee assignments
- D. Chairwoman's Monthly Activity Report
- E. Induction of new Director Jasmin A. Hall from Inland Empire Utilities Agency
 - (a) Receive credentials
 - (b) Report on credentials by General Counsel
 - (c) File credentials
 - (d) Administer Oath of Office
 - (e) File Oath
- F. Induction of new Director Adan Ortega from the City of Fullerton
 - (a) Receive credentials
 - (b) Report on credentials by General Counsel
 - (c) File credentials
 - (d) Administer Oath of Office
 - (e) File Oath
- G. Induction of new Director Jose Solorio from the City of Santa Ana
 - (a) Receive credentials
 - (b) Report on credentials by General Counsel
 - (c) File credentials
 - (d) Administer Oath of Office
 - (e) File Oath
- H. Nomination and Election of nonofficer members of the Executive Committee for two-year term effective February 12, 2019
- I. Approve Commendatory Resolutions for Directors Peter Beard representing the City of Fullerton, Michael Camacho representing Inland Empire Utilities Agency, and Michelle Martinez representing the City of Santa Ana
- J. Presentation of Commendatory Resolution honoring Randy A. Record for his leadership during his term as Chairman of Metropolitan's Board of Director

6. DEPARTMENT HEADS' REPORTS

- A. General Manager's summary of activities for the month of January
- B. General Counsel's summary of activities for the month of January
- C. General Auditor's summary of activities for the month of January
- D. Interim Ethics Officer's summary of activities for the month of January

7. CONSENT CALENDAR ITEMS — ACTION

- 7-1 Award a contract in an amount not to exceed \$799,170 to ViaTRON Systems, Inc. for conversion of hardcopy documents into electronic images for migration into the planned Enterprise Content Management System; the General Manager has determined the proposed action is exempt or otherwise not subject to CEQA. (OP&T)

END OF CONSENT CALENDAR

8. OTHER BOARD ITEMS — ACTION

- 8-1 Award \$20,975,000 contract to J.F. Shea Construction, Inc., to rehabilitate the Greg Avenue Pump Station; and authorize an agreement with Black & Veatch for a not-to-exceed amount of \$900,000 for engineering services during construction; the General Manager has determined that the proposed actions are exempt or otherwise not subject to CEQA. (E&O)
- 8-2 Award \$16,452,832 contract to Baker Electric, Inc. to replace the 6.9 kV power cables at each Colorado River Aqueduct pumping plant; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA. (E&O)

8-3 Appropriate \$4,212,500, and authorize entering into a project agreement with the Sites Project Authority for participation in the Sites Reservoir 2019 Workplan; the General Manager has determined the proposed action is exempt or otherwise not subject to CEQA. (WP&S)

8-4 Authorize implementation of modifications to the Landscape Transformation Program; the General Manager has determined that these actions are exempt or otherwise not subject to CEQA. (WP&S)

8-5 Authorize the General Manager to acquire up to 732 acres of property located in Riverside County in the Palo Verde Valley; the General Manager has determined that the action is exempt or otherwise not subject to CEQA. (RP&AM)

[Conference with real property negotiators; property identified as Riverside County Assessor's Parcel Nos. 830-050-015; 830-210-005; 830-210-014; 830-220-004; 833-030-030; 833-081-001; 833-081-002; 833-091-001; 833-091-003; 833-091-004; 833-091-005; 833-091-032; 836-050-015; 836-050-017; 836-100-010; 836-100-011; 836-155-018; 857-130-003; 857-130-006; 857-130-010; 857-130-013; 866-040-002; 866-040-003; 866-080-008; 866-120-003; 866-120-004; 869-260-001; agency negotiators: Stephen Vollucci and James Vanden Akker; negotiating parties: Wegis Family, LP and Wey Almond Farms, LLC; under negotiation: price and terms; to be heard in closed session pursuant to Gov. Code Section 54956.8]

8-6 Authorize the General Manager to sell 243 acres on Chipps Island located in Solano County to the Department of Water Resources; the General Manager has determined that this action is exempt from or otherwise not subject to CEQA. (RP&AM)

[Conference with real property negotiators; property identified as Metropolitan Water District Parcel Number BD3033210 (Solano County Assessor's Parcel No. 0090-060-010); agency negotiators: Laura Simonek and Bryan Otake; negotiating party: State of California Department of Water Resources; under negotiation: price and terms; to be heard in closed session pursuant to Gov. Code Section 54956.8]

- 8-7** Authorize partial settlement in San Diego County Water Authority v. Metropolitan Water District of Southern California, et al., San Francisco County Superior Court Case Nos. CPF-10-510830 and CPF-12-512466; the appeal of the 2010 and 2012 actions, Court of Appeal for the First Appellate District Case Nos. A146901 and A148266 and California Supreme Court Case No. S243500; and the petition for extraordinary writ in the 2010 and 2012 actions, Court of Appeal for the First Appellate District Case No. A155310; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA. (L&C) **[Posting Separately]**
[Conference with legal counsel – existing litigation; to be heard in closed session pursuant to Gov. Code Section 54956.9(d)(1)]

9. BOARD INFORMATION ITEMS

- 9-1** Update on Conservation Program
- 9-2** Information on potential credit to enhance in-lieu deliveries to cyclic storage under limited conditions. (WP&S) **[Posting Separately]**

10. FOLLOW-UP ITEMS

11. FUTURE AGENDA ITEMS

12. ADJOURNMENT

NOTE: Each agenda item with a committee designation will be considered and a recommendation may be made by one or more committees prior to consideration and final action by the full Board of Directors. The committee designation appears in parentheses at the end of the description of the agenda item e.g., (E&O, F&I). Committee agendas may be obtained from the Board Executive Secretary.

Writings relating to open session agenda items distributed to Directors less than 72 hours prior to a regular meeting are available for public inspection at Metropolitan's Headquarters Building and on Metropolitan's Web site <http://www.mwdh2o.com>.

Requests for a disability related modification or accommodation, including auxiliary aids or services, in order to attend or participate in a meeting should be made to the Board Executive Secretary in advance of the meeting to ensure availability of the requested service or accommodation.

**MEETING OF THE
BOARD OF DIRECTORS OF THE
MUNICIPAL WATER DISTRICT OF ORANGE COUNTY**
Jointly with the
ADMINISTRATION & FINANCE COMMITTEE
February 13, 2019, 8:30 a.m.
MWDOC Conference Room 101

Committee

Director Thomas, Chair
Director Finnegan
Director Osborne

Staff: R. Hunter, K. Seckel, C. Harris,
K. Davanaugh, H. Chumpitazi

Ex Officio Member: Director Barbre

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

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

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

ITEMS DISTRIBUTED TO THE BOARD LESS THAN 72 HOURS PRIOR TO MEETING --

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

PROPOSED BOARD CONSENT CALENDAR ITEMS

1. TREASURER'S REPORT
 - a. Revenue/Cash Receipt Report – January 2019
 - b. Disbursement Approval Report for the month of February 2019
 - c. Disbursement Ratification Report for the month of January 2019
 - d. GM Approved Disbursement Report for the month of January 2019
 - e. Water Use Efficiency Projects Cash Flow – January 31, 2019
 - f. Consolidated Summary of Cash and Investment – December 2018
 - g. OPEB and Pension Trust Fund monthly statement

2. FINANCIAL REPORT
 - a. Combined Financial Statements and Budget Comparative for the Period ending December 31, 2018
 - b. Quarterly Budget Review

ACTION ITEMS

3. AUTHORIZATION OF TELEPHONE SERVER UPGRADE

DISCUSSION ITEMS

4. FY 2019-20 FIRST DRAFT BUDGET

INFORMATION ITEMS – (THE FOLLOWING ITEMS ARE FOR INFORMATIONAL PURPOSES ONLY – BACKGROUND INFORMATION IS INCLUDED IN THE PACKET. DISCUSSION IS NOT NECESSARY UNLESS REQUESTED BY A DIRECTOR.)

5. CHANGE TO ELECTED OFFICIALS FORUM FORMAT (ANNUAL)
6. CHANGE OF INVESTMENT BROKER FIRM
7. LEGAL AND PROFESSIONAL SERVICES OPEN PURCHASE ORDERS
8. SEMI-ANNUAL DIRECTORS ACTIVITIES REPORT
9. SEMI-ANNUAL OVERTIME REPORT
10. ANNUAL AUTO ALLOWANCE REPORT
11. ANNUAL REVIEW OF COASTAL MUNICIPAL WATER DISTRICT ISSUES
12. DEPARTMENT ACTIVITIES REPORTS
 - a. Administration
 - b. Finance and Information Technology
13. MONTHLY WATER USAGE DATA, TIER 2 PROJECTION, AND WATER SUPPLY INFORMATION

OTHER ITEMS

14. REVIEW ISSUES REGARDING DISTRICT ORGANIZATION, PERSONNEL MATTERS, EMPLOYEE BENEFITS FINANCE AND INSURANCE

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.

REVISED

MEETING OF THE
BOARD OF DIRECTORS OF THE
MUNICIPAL WATER DISTRICT OF ORANGE COUNTY
Jointly with the
PUBLIC AFFAIRS AND LEGISLATION COMMITTEE
February 19, 2019, 8:30 a.m.
Conference Room 101

Committee:

Director Dick, Chair
Director Thomas
Director Osborne

Staff: R. Hunter, K. Seckel, H. Baez,
D. Micalizzi, T. Dubuque, T. Baca

Ex Officio Member: Director Barbre

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PUBLIC PARTICIPATION

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 --

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DISCUSSION ITEMS

1. LEGISLATIVE ACTIVITIES
 - a. Federal Legislative Report (Barker)
 - b. State Legislative Report (BBK)
 - c. County Legislative Report (Lewis)
 - d. Legal and Regulatory Report (Ackerman)
 - e. MWDOC Legislative Matrix
 - f. Metropolitan Legislative Matrix

ACTION ITEMS

2. TRAVEL TO WASHINGTON, DC TO COVER FEDERAL ADVOCACY INITIATIVES
3. TRAVEL TO SACRAMENTO TO COVER STATE ADVOCACY INITIATIVES

4. SB 134 (HERTZBERG) – WATER LOSS PERFORMANCE STANDARDS
5. SB 204 (DODD) – STATE WATER PROJECT: CONTRACTS
6. SUPPORT FOR DIRECTOR BOCKMILLER - ACWA/JPIA EXECUTIVE COMMITTEE
7. ASSOCIATION OF CALIFORNIA WATER AGENCIES/CALIFORNIA MUNICIPAL UTILITIES ASSOCIATION SAFE DRINKING WATER TRUST PROPOSAL
8. THE SMALL SYSTEM WATER AUTHORITY ACT OF 2019

INFORMATION ITEMS (THE FOLLOWING ITEMS ARE FOR INFORMATIONAL PURPOSES ONLY – BACKGROUND INFORMATION IS INCLUDED IN THE PACKET. DISCUSSION IS NOT NECESSARY UNLESS REQUESTED BY A DIRECTOR.)

9. FEBRUARY WATER POLICY DINNER/SPEAKER SERIES (February 21, 2019)
10. OC WATER SUMMIT (May 31, 2019)
11. EDUCATION PROGRAMS UPDATE
12. PUBLIC AFFAIRS ACTIVITIES REPORT

OTHER ITEMS

13. REVIEW ISSUES RELATED TO LEGISLATION, OUTREACH, PUBLIC INFORMATION ISSUES, AND MET

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.

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REVISED

REGULAR MEETING
OF THE BOARD OF DIRECTORS
MUNICIPAL WATER DISTRICT OF ORANGE COUNTY
18700 Ward Street, Board Room, Fountain Valley, California
February 20, 2019, 8:30 a.m.

AGENDA

PLEDGE OF ALLEGIANCE

ROLL CALL

PUBLIC COMMENTS/PARTICIPATION

At this time, members of the public will be given an opportunity to address the Board concerning items within the subject matter jurisdiction of the Board. Members of the public may also address the Board about a particular Agenda item at the time it is considered by the Board and before action is taken. If the item is on the Consent Calendar, please inform the Board Secretary before action is taken on the Consent Calendar and the item will be removed for separate consideration.

The Board requests, but does not require, that members of the public who want to address the Board complete a voluntary "Request to be Heard" form available from the Board Secretary prior to the meeting.

ITEMS RECEIVED TOO LATE TO BE AGENDIZED

Determine need and take action to agendize item(s) which arose subsequent to the posting of the Agenda. (ROLL CALL VOTE: Adoption of this recommendation requires a two-thirds vote of the Board members present, or, if less than two-thirds of the Board members are present, a unanimous vote of those members present.)

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>.

NEXT RESOLUTION NO. 2080

CONSENT CALENDAR (Items 1 to 8)

(All matters under the Consent Calendar will be approved by one motion unless a Board member requests separate action on a specific item)

1. MINUTES

- a. January 2, 2019 Workshop Board Meeting
- b. January 16, 2019 Regular Board Meeting
- c. January 5, 2019 Special Board Meeting

Recommendation: Approve as presented.

2. COMMITTEE MEETING REPORTS

- a. Planning & Operations Committee Meeting: January 14, 2019
- b. Administration & Finance Committee Meeting: January 9, 2019
- c. Public Affairs & Legislation Committee Meeting: January 21, 2019
- d. Executive Committee Meeting: January 17, 2019

- e. MWDOC/OCWD Joint Planning Committee Meeting: January 23, 2019

Recommendation: Receive and file as presented.

3. TREASURER'S REPORTS

- a. MWDOC Revenue/Cash Receipt Register as of January 31, 2019
- b. MWDOC Disbursement Registers (January/February)

Recommendation: Ratify and approve as presented.

- c. Summary of Cash and Investment and Portfolio Master Summary Report (Cash and Investment report) as of December 31, 2018
- d. PARS Monthly Statement (OPEB Trust)
- e. Water Use Efficiency Projects Cash Flow

Recommendation: Receive and file as presented.

4. FINANCIAL REPORT

- a. Combined Financial Statements and Budget Comparative for the Period ending December 31, 2018
- b. Quarterly Budget Review

Recommendation: Receive and file as presented.

5. WATER USE EFFICIENCY RESEARCH PROJECTS

Recommendation: Approve implementation of research projects as outlined in the write up, including: (1) a contribution of \$15,000 to the California Water Efficiency Partnership for the development of Water Use Efficiency Standards Compliance and Water Conservation Tracking Tools; and (2) a professional services contract with Water Systems Optimization, Inc. to conduct Water Balance Validation Research and staff training in an amount not to exceed \$56,000 and conduct Leak Detection Research and staff training in an amount not to exceed \$100,000.

6. AUTHORIZATION OF TELEPHONE SERVER UPGRADE

Recommendation: Authorize the General Manager to enter into a contract with Resilient Communications for the telephone server upgrade for a total cost of \$18,537.72.

7. TRAVEL TO WASHINGTON, DC TO COVER FEDERAL ADVOCACY INITIATIVES

Recommendation: Ratify the travel expenses as reported.

8. TRAVEL TO SACRAMENTO TO COVER STATE ADVOCACY INITIATIVES

Recommendation: Ratify the travel expenses as reported.

End Consent Calendar**ACTION ITEMS****9-1 SB 134 (HERTZBERG) – WATER LOSS PERFORMANCE STANDARDS**

Recommendation: Adopt a support position on SB 134 (Hertzberg).

9-2 SB 204 (DODD) – STATE WATER PROJECT: CONTRACTS

Recommendation: Adopt an oppose position on SB 204 (Dodd).

9-3 SUPPORT FOR DIRECTOR BOCKMILLER - ACWA/JPIA EXECUTIVE COMMITTEE RES. NO. _____

Recommendation: Adopt a concurring nomination resolution for Director Fred Bockmiller from Mesa Water District to be a candidate for the Association of California Water Agencies Joint Powers Insurance Authority (ACWA/JPIA) Executive Committee.

9-4 ASSOCIATION OF CALIFORNIA WATER AGENCIES/CALIFORNIA MUNICIPAL UTILITIES ASSOCIATION SAFE DRINKING WATER TRUST PROPOSAL

Recommendation: Adopt a “support in concept” position on the Association of California Water Agencies/California Municipal Utilities Association Safe Drinking Water Trust proposal.

9-5 THE SMALL SYSTEM WATER AUTHORITY ACT OF 2019

Recommendation: Adopt a “support in concept” position on the Small System Water Authority Act of 2019.

INFORMATION CALENDAR (All matters under the Information Calendar will be Received/Filed as presented following any discussion that may occur)

10. GENERAL MANAGER'S REPORT, FEBRUARY 2019 (ORAL AND WRITTEN)

Recommendation: Receive and file report(s) as presented.

11. MWDOC GENERAL INFORMATION ITEMS

- a. Board of Directors - Reports re: Conferences and Meetings
- b. Requests for Future Agenda Topics

Recommendation: Receive and file as presented.

CLOSED SESSION ITEMS

12. PUBLIC EMPLOYEE PERFORMANCE EVALUATION

Title: General Manager

Government Code Section 54957

13. CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION

Significant exposure to litigation pursuant to paragraph (2) of subdivision (d) of Section 54956.9: (one case)

ADJOURNMENT

Note: 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 contacting 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.



MUNICIPAL WATER DISTRICT OF ORANGE COUNTY AGENCIES MANAGERS MEETING

Street Address:
18700 Ward Street
Fountain Valley, California 92708

Mailing Address:
P.O. Box 20895
Fountain Valley, CA 92728-0895

(714) 963-3058
Fax: (714) 964-9389
www.mwdoc.com

Brett R. Barbre
President
Joan C. Finnegan
Vice President
Larry D. Dick
Director
Wayne S. Osborne
Director
Megan Yoo Schneider
Director
Sat Tamaribuchi
Director
Jeffery M. Thomas
Director
Robert J. Hunter
General Manager

MEMBER AGENCIES

City of Brea
City of Buena Park
East Orange County Water District
El Toro Water District
Emerald Bay Service District
City of Fountain Valley
City of Garden Grove
Golden State Water Co.
City of Huntington Beach
Irvine Ranch Water District
Laguna Beach County Water District
City of La Habra
City of La Palma
Mesa Water District
Moulton Niguel Water District
City of Newport Beach
City of Orange
Orange County Water District
City of San Clemente
City of San Juan Capistrano
Santa Margarita Water District
City of Seal Beach
Serrano Water District
South Coast Water District
Trabuco Canyon Water District
City of Tustin
City of Westminster
Yorba Linda Water District

LOCATION: MWDOC's Fountain Valley office is located at 18700 Ward St, and the entrance/exit is about ¼ mile south of Ellis Ave. The nearest freeway access is Euclid at the 405. Parking is available to the east of the MWDOC/OCWD Admin offices (follow driveway from Ward St to parking areas).

WHEN: Thursday, February 21, 2019 from 10:30 am to noon.

DRAFT AGENDA

1. Opportunity to add and discuss items not already listed.

Page #

2. Discussion Items:

- 2-1. MWDOC Draft Budget
- 2-2. Changes to the Turf Removal Program

3. WEROC Items:

- 3-1. Critical Infrastructure Act Requirements, Deadlines, and Support
- 3-2. Discussion: Public Safety Power Shutoff (Follow-up)
- 3-3. Proposed Amendment to SCAQMD Rule 1470 for Emergency Generators

4. Legislative Items:

- 4-1. Water Tax Proposal and Alternative Legislative Options

5. Information Items:

- 5-1. Water Supply Update
- 5-2. State Water Resources Control Board Appointments
- 5-3. California Water Fix Update
- 5-4. Colorado River Issues Update

6. Report Items:

- 6-1. Monthly GM Report
- 6-2. Legislative Reports
- 6-3. WEROC Matrix
- 6-4. Grant Funding Opportunities

7. Reminders

- 7-1. Policy Dinner February 21, 2019

8. Next meeting will tentatively be held March 21, 2019.

Lunch will be provided immediately following the meeting.

Polly Welsch

From: MWDOC <info@mwdoc.ccsend.com> on behalf of MWDOC <tbaca@mwdoc.com>
Sent: Thursday, January 31, 2019 12:31 PM
To: Polly Welsch
Subject: PLEASE JOIN US! February 21, 2019, MWDOC's Water Policy Forum & Dinner



2019 WATER POLICY *Forum & Dinner*

2019 Speaker Series: **Bay Delta Initiatives**





Featured Speakers

KATHY COLE

Former State Legislative Representative
Metropolitan Water District of Southern CA
&

CURT SCHMUTTE

Renowned Delta Expert and
Owner, Curt Schmutte Consulting

The Municipal Water District of Orange County (MWDOC) invites you to join us for a **Water Policy Forum & Dinner, Thursday, February 21, 2019**. The first of our 2019 Speakers Series focusing on water supply in California's three unique water regions, Northern, Central, and Southern California. Each region has distinct challenges and opportunities, and all effect our local water supplies here in Orange County.

Esteemed Colleagues,

Newly elected Governor, Gavin Newsom comes into office with supermajorities in both houses of the legislature and with California enjoying a \$30 billion budget surplus. He also inherits a State Water Project that is in precarious shape. Salt water intrusion, sea level rise, native fish habitat, agricultural needs and environmental interests have created an unreliable water delivery system, a deteriorating ecosystem and political football for decades.

The California WaterFix is the prescribed cure for the fragile Bay Delta. Championed by former Governor Jerry Brown, WaterFix is one of the highest profile infrastructure projects in the nation, essential to secure clean water supplies for 25 million people, businesses and agriculture. However, the project did not cross the finish line before Governor Brown's term ended. What does this mean for the fate of the twin tunnels? Governor Newsom has mentioned favoring a "scaled down version" of the project. Some believe that would only derail the WaterFix. This is just one of many critical water policy issues facing the state.

Join us on Thursday, February 21, for a very special Water Policy Forum & Dinner, the first of our 2019 Speaker Series. We will begin in the North, as renowned Delta expert, Curt

REGISTER NOW!

THURSDAY

February 21st
5:30 PM - 8:00 PM

THE WESTIN SOUTH COAST PLAZA

*686 Anton Boulevard
Costa Mesa, CA 92626*

RESERVED TABLES ARE AVAILABLE!

*Reserved tables (with
company logo) are
available for 8 guests
at a cost of \$750.*

Contact Traci Muldoon:

(714) 593-5004

tmuldoon@mwdoc.com

Schmutte will look at the instability of the Delta and what's at risk if investments are not made. Kathy Cole, the longtime State Legislative Representative, for Metropolitan Water District of Southern California, will forecast the new administration's water agenda and what recent appointments mean for future regulations.

We look forward to seeing you there!

Sincerely,



Brett R. Barbre
Board President
Municipal Water District of Orange County

RESERVE A TABLE!

STAY CONNECTED

www.MWDOC.com



Registration is now available for \$90 per person.* This includes the pre-dinner reception (cash bar), three-course dinner (choice of entree), and self-parking.

**Register by Friday, February 15th for the early registration rate!*

Municipal Water District of Orange County | 18700 Ward Street, Fountain Valley, CA 92708

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**LOCAL AGENCY FORMATION COMMISSION
ORANGE COUNTY**

2677 North Main Street, Suite 1050
Santa Ana, CA 92705
(714) 640-5100 ♦ FAX (714) 640-5139

REGULAR MEETING AGENDA

**Wednesday, February 13, 2019
8:15 a.m.**

**Planning Commission Hearing Room
Hall of Administration
333 W. Santa Ana Blvd.
10 Civic Center Plaza, Santa Ana, CA 92701**

Any member of the public may request to speak on any agenda item at the time that item is being considered by the Commission.

- 1. CALL THE MEETING TO ORDER**
- 2. PLEDGE OF ALLEGIANCE – COMMISSIONER FISLER**
- 3. ROLL CALL**
- 4. ANNOUNCEMENT OF SUPPLEMENTAL COMMUNICATIONS
(Received After Agenda Distribution)**
- 5. APPROVAL OF MINUTES**

a.) [November 14, 2018 – Regular Commission Meeting](#)

6. PUBLIC COMMENT

This is an opportunity for members of the public to address the Commission on items not on the agenda, provided that the subject matter is within the jurisdiction of the Commission and that no action may be taken on an off-agenda item(s) unless authorized by law.

7. CONSENT CALENDAR

a.) [Appointment Process for OC LAFCO Expiring Terms and Vacant Seat](#)

The Commission will receive an update on the appointment process for the board member seats that have expiring terms or are vacant for 2019.

b.) [OC LAFCO Professional Services Agreement Update](#)

The Commission will receive the annual update on the current professional services agreements.

c.) Recognition of Dedicated Service of Former Commissioner Todd Spitzer

The Commission will adopt a resolution recognizing former Commissioner Todd Spitzer for his service on the OC LAFCO Board.

8. PUBLIC HEARING

None

9. COMMISSION DISCUSSION AND ACTION

a.) OC LAFCO FY 2018-2019 Work Plan Mid-Year Update

The Commission will receive a mid-year update on the FY 2018-2019 Work Plan.

b.) Legislative Quarterly Report

The Commission will receive a report on legislation of LAFCO interest anticipated for the first year of the new two-year (2018-2020) legislative session.

c.) OC LAFCO Update to Personnel Policies and Procedures

The Commission will consider proposed updates to the Personnel Policies and Procedures.

d.) Election of LAFCO Officers for 2019

The Commission will elect an OC LAFCO Chair and Vice-Chair for 2019.

10. COMMISSIONER COMMENTS

This is an opportunity for Commissioners to comment on issues not listed on the agenda, provided that the subject matter is within the jurisdiction of the Commission. No discussion or action may occur or be taken, except to place the item on a future agenda if approved by Commission majority.

11. EXECUTIVE OFFICER'S REPORT

Executive Officer's report on upcoming events and activities of the Executive Officer since last meeting.

- Special District OC LAFCO Apportionment
- Presentation at ACC-OC Newly Elected Officials' Orientation – January 10
- Presentation at ISDOC Quarterly Meeting – January 31
- City of San Juan Capistrano Utility System Transfer Update

12. INFORMATIONAL ITEMS & ANNOUNCEMENTS

a.) 2019 Strategic Plan Workshop

The Commission will hold its Annual Strategic Plan Workshop on Wednesday, March 13, 2019 at the Orange County Transportation Authority (OCTA), Conference Room 08 located at 550 South Main Street in the City of Orange. The workshop is scheduled for 8:15 a.m. to 1:00 p.m. and will be facilitated by William Chiat, President of the Alta Mesa Group. The workshop will include a discussion of the Commission's goals, accomplishments and opportunities. The workshop is a public meeting and there will be an opportunity for public comment at the beginning of the workshop.

13. CLOSED SESSION

None

14. ADJOURNMENT OF REGULAR COMMISSION MEETING

NOTICE REGARDING ITEMS DISTRIBUTED TO THE COMMISSION LESS THAN 72 HOURS PRIOR TO THE LAFCO REGULAR MEETING:

Pursuant to Government Code Section 54957.5 public records that relate to open session agenda items that are distributed to a majority of the Commission less than seventy-two (72) hours prior to the meeting will be available to the public at Orange County LAFCO offices at 2677 North Main Street, Suite 1050, Santa Ana, CA 92705 during regular business hours. These records when possible will also be made available on the OC LAFCO website at <http://www.oclafco.org>.

NOTICE: *State law requires that a participant in an OC LAFCO proceeding who has a financial interest in a decision and who has made a campaign contribution of more than \$250 to any commissioner in the past year must disclose the contribution. If you are affected, please notify the Commission's staff before the hearing.*

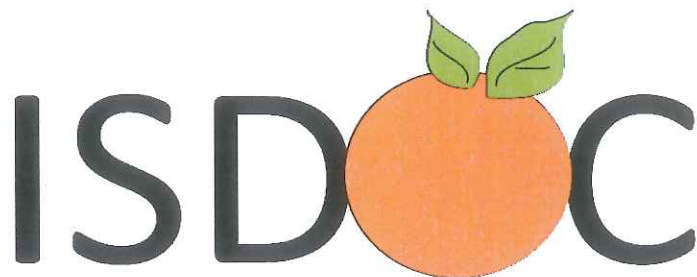
OC LAFCO Agendas and supporting documentation are available on the Internet at <http://oclafco.org>.

Polly Welsch

From: Heather Baez <HBaez@mwdoc.com>
Sent: Tuesday, January 22, 2019 10:37 AM
To: Polly Welsch
Subject: FW: Reminder ISDOC Quarterly Luncheon - January 31, 2019

From: ISDOC <info@mwdoc.ccsend.com> **On Behalf Of** ISDOC
Sent: Thursday, January 10, 2019 11:37 AM
To: Heather Baez <HBaez@mwdoc.com>
Subject: Reminder ISDOC Quarterly Luncheon - January 31, 2019

Having trouble viewing this email? [Click here](#)



Independent Special Districts of Orange County

ISDOC Quarterly Luncheon - January 31, 2019

When

Thursday, January 31, 2019 from
11:30 AM to 1:00 PM PST

[Add to Calendar](#)

Where

MWDOC/OCWD Joint
Boardroom
18700 Ward Street
Fountain Valley, CA 92708

Dear Heather,

Please join us for our first **Quarterly Luncheon Meeting of the Independent Special Districts of Orange County (ISDOC)** for 2019 on **Thursday, January 31, 2019 from 11:30 a.m. - 1:00 p.m.**

**The Mission, Goals and Role of
Orange County LAFCO**

featuring guest speaker...

Carolyn Emery
OCLAFCO Executive Officer



[Driving Directions](#)

Connect with ISDOC



Like us on Facebook

Follow us on **twitter**

As mandated by the Cortese-Knox-Hertzberg Act, California's Local Agency Formation Commissions (LAFCOs) were formed to study governmental agencies -- including cities and special districts -- in an effort to ensure the efficient delivery of public services.

OC LAFCO Executive Officer, Carolyn Emery, will provide an overview of the organization, including its mission, goals and role, as well as OC LAFCO's interrelationship with the Independent Special Districts of Orange County and the Special Districts Selection Committee.

Additionally, Ms. Emery will discuss various OC LAFCO programs and projects, and provide a status update of the organization's FY19 Workplan, including the: current cycle of Municipal Service Reviews (MSRs); shared services program; Orange County's "islands" and Disadvantaged Unincorporated Communities (DUCs); and, considerations for the future governance of South Orange County.

We kindly request that you register in advance so we can provide our caterer with an accurate meal count.

This month's menu features a "Build Your Own" Taco Bar! Cost for the luncheon is \$17. Please register by Friday January 25, 2019 for the \$17 rate. Lunch is \$20 thereafter.

Come hear from our great speaker, network with your fellow Special District members, and learn something new. We hope to see you on January 31st!

Register today!

Cost: \$17*

*Registration fee will increase to \$20 after January 25th

[Register Now!](#)

For additional information regarding this event, please contact [Heather Baez](#) at (714) 593-5012.

Sincerely,

Sandra Jacobs

President

Independent Special Districts of Orange County

Independent Special Districts of Orange County, 18700 Ward Street, Fountain Valley, CA 92708

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Executive Committee Meeting

Tuesday, February 5, 2019

7:30 a.m.

Municipal Water District of Orange County, Conference Room 101

AGENDA

Mailing Address

P.O. Box 20895
Fountain Valley, CA 92728

Meeting Location

MWDOC/OCWD
18700 Ward Street
Fountain Valley, CA 92708

(714) 963-3058
(714) 964-5930 fax

www.mwdoc.com/isdoc

Executive Committee

President
Hon. Sandra Jacobs
Santa Margarita Water District

1st Vice President
Hon. Mark Monin
El Toro Water District

2nd Vice President
Hon. Arlene Schafer
Costa Mesa Sanitary District

3rd Vice President
Hon. Mary Aileen Matheis
Irvine Ranch Water District

Secretary
Hon. William "Bill" Green
South Coast Water District

Treasurer
Hon. Joan C. Finnegan
Municipal Water District of Orange County

Immediate Past President
Hon. James Fisler
Mesa Water District

Staff Administration

Heather Baez
Municipal Water District of Orange County

Christina Hernandez
Municipal Water District of Orange County

I. Welcome – 7:30

II. Approval of Minutes

- Consider approval of the minutes for the January 8, 2019 meeting

III. Public Comments - 7:35

IV. Old Business - 7:40

V. New Business – 7:45

VI. Treasurer's Report – Joan Finnegan – 7:50

- Receive, discuss and file January Treasurer's Report

VII. CSDA Report – Bill Nelson/Arlene Schafer – 7:55

- Receive, discuss and file the CSDA Report

VIII. LAFCO Report – Doug Davert/Jim Fisler – 8:00

- Receive, discuss and file the LAFCO report

IX. ACWA Report – Sandra Jacobs – 8:05

- Receive, discuss and file the ACWA report

X. OCCOG Report – Mike Schaefer – 8:10

XI. Subcommittee Reports – 8:15

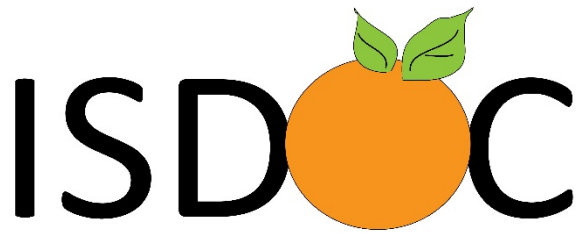
- Programs (Mark Monin)
 - Discuss feedback from January 31 program and programs and speakers for March 28, June 27 and October 24, 2019 quarterly membership meetings.
- Membership (Arlene Schafer)
- Legislative (Mary Aileen Matheis)
 - Discuss and consider taking action on proposed legislation of interest to Special Districts.

XII. President and Committee Member Announcements and Comments – 8:25

XIII. Adjourn – 8:30

Next Executive Committee Meeting: Tuesday, March 5, 2019

Next ISDOC Quarterly Meeting: March 28, 2019



Independent Special Districts of Orange County

ISDOC Executive Committee

January 8, 2019

Minutes

I. Welcome

President Sandra Jacobs called the meeting to order at 7:00 a.m.

Sandra Jacobs, President (SMWD)

Mark Monin, 1st Vice President (ETWD)

Arlene Schafer, 2nd Vice President (CMSD)

Mary Aileen Matheis, 3rd Vice President (IRWD)

Joan Finnegan, Treasurer (MWDOC)

Jim Fisler, Past President (Mesa Water/LAFCO)

Others Present:

Bill Nelson (OCCD/CSDA)

Chris Palmer (CSDA)

Bill Green (SCWD)

Lisa Ohlund (EOCWD)

Doug Davert (EOCWD/LAFCO)

Mike Schaefer (CMSD)

Mike Gaskins – (ETWD)

Heather Baez (MWDOC)

Christina Hernandez (MWDOC)

Jody Brennan (SCWD)

II. Minutes

1. The minutes from the December 4, 2018 meeting of the Executive Committee were reviewed. Upon a motion by 2nd Vice President Arlene Schafer and second by Mike Schaefer the minutes were unanimously approved.

III. Public Comments

None

IV. Old Business

1. LAFCO Dues: President Sandra Jacobs proposed reconvening the Ad Hoc Committee to review alternative membership fee structures. Unanimous vote to reconvene the ad hoc committee.
- V. New Business
1. President Sandra Jacobs announced that Bill Green, South Coast Water District, submitted a letter of interest for the vacant position of Secretary. The appointment of Bill Green will follow the passage and submittal of a resolution from South Coast Water District which is being addressed at their January 10, 2019 Board meeting.
- VI. Treasurer's Report
1. As of January 8, 2019, there is a balance of \$12,471.47 in the ISDOC account. There was discussion on ways to use the funds to benefit the membership. Several options were discussed including funding members to attend/participate in state level legislative opportunities, a reserve fund for any potential litigation, offering a complimentary Quarterly Luncheon and using the funds to encourage youth participation (scholarship).
- VII. CSDA Report
1. 2nd Vice President Arlene Schafer reported there was no activity in December.
 2. Chris Palmer of CSDA reported he is now just representing the Southern California CSDA network and announced that the CSDA Annual Conference this year will be held in Anaheim. 2019 is the 50th Anniversary of CSDA.
- VIII. LAFCO Report
1. Doug Davert reported the December, 2018 and January, 2019 meetings of OC LAFCO were cancelled. The next meeting will be held on February 13, 2019.
- IX. ACWA Report
1. President Sandra Jacobs reported on progress with regards to the ACWA JPIA insurance group and an investment of funds with a separate Board of Directors.
- X. OCCOG Report
1. Mike Schaefer reported there was no OCCOG meeting in December, 2018.
- XI. Subcommittee Reports
1. Programs: Mark Monin reported on the 2019 ISDOC Quarterly Luncheons as follows:
 - a. January 31, 2019 - the speaker will be Carolyn Emery, OC LAFCO.
 - b. March 28, 2019 – speaker has not yet been confirmed – possibly Supervisor Bartlett
 - c. June 27, 2019 – possible speaker is Sanjay Guar, Raftelis.

- d. October 24, 2019 – still determining a speaker
- 2. Membership: Arlene Schafer reported a few districts had not yet paid their dues
- 3. Legislative: Mary Aileen Matheis reported that the legislature is just coming into session this week. Continuing issues for the 2019 legislature will be the Water Tax and the California Water Plan.

XII. President and Committee Member Announcements and Comments

- 1. Mary Aileen Matheis stated her concern about having a member agency that is dissatisfied with ISDOC. Doug Davert shared the same concerns. This primarily was directed to Yorba Linda Water District and what we can do to help.
- 2. Arlene Schafer stated she would like to see the continuation of Special Districts and small Districts highlighted at the Quarterly Luncheons.
- 3. President Sandra Jacobs reported the Executive Committee will continue to meet on a monthly basis in 2019. She thanked Heather Baez and Christina Hernandez of MWDOC for their assistance and thanked Bill Green for filling the position of Secretary.

XIII. Adjourn

The meeting was adjourned at 8:33 and the next meeting will be held on February 5, 2019 at 7:30.



AGENDA

Friday, February 1, 2019
7:30 a.m. - 9:00 a.m.
Doors open at 7:00 a.m.

OCWD/MWDOC JOINT BOARD ROOM
18700 Ward Street, Fountain Valley

Mailing Address

P.O. Box 8300
Fountain Valley, CA 92708

Meeting Location

18700 Ward Street
Fountain Valley, CA 92708

(714) 378-3200
(714) 963-0291 fax

www.ocwd.com/news-events/events/waco
www.mwdoc.com/waco

Officers

Chair

Hon. Jim Atkinson
Mesa Water District

Vice Chair

Hon. Cathy Green
Orange County Water District

Staff Contacts

Alicia Dunkin
Orange County Water District

Heather Baez

Municipal Water District of Orange County

Pledge of Allegiance

Announcements & Introductions

- Jim Atkinson, Mesa Water District

Reports

- Association of California Water Agencies (ACWA) Report – Crystal Nettles, Orange County Water District
- Metropolitan Water District of Southern California Report – Linda Ackerman, Metropolitan Water District of Southern California

Program: Ocean Plastic: Causes, Threats and Response

- Steve Weisberg, Executive Director, Southern California Coastal Water Research Project Authority
- Shelly Moore, Scientist, Southern California Coastal Water Research Project Authority

Adjourn

.....

Next WACO Meeting

Friday, March 1, 7:30 a.m. @ OCWD/MWDOC Joint Boardroom

Next WACO Planning Committee Meeting

Tuesday, February 19, 7:30 a.m. @ MWDOC 101

Stay Connected with WACO on
Facebook, Twitter, and YouTube!



/orangecountywater



@waco_h2o



/orangecountywater



WACO Planning Committee
Tuesday, February 19, 2019
7:30 A.M.

AGENDA

ACTION ITEMS

Mailing Address

P.O. Box 20895
Fountain Valley, CA 92728

Meeting Location

18700 Ward Street
Fountain Valley, CA 92708

(714) 378-8232
(714) 963-0291 fax

www.mwdoc.com/waco
www.ocwd.com/news-events/events/waco

Officers

Chair

Hon. Jim Atkinson
Mesa Water District

Vice Chair

Hon. Cathy Green
Orange County Water District

Staff Contacts:

Alicia Dunkin
Orange County Water District

Heather Baez
Municipal Water District of Orange County

1. Provide direction on March 1 meeting
Salton Sea speaker is not available until June. Fred O'Callaghan assisting staff in finding speaker for March.
 - Option A) Invite Duane Waliser from JPL to speak about atmospheric rivers
 - Option B) Invite Greg Woodside or other staff to speak
1. Confirm details of April 5 meeting, The Truth About Bottled Water
 - Questions you'd like the speaker to address at meeting
 - Speaker interested in selling his book at meeting. Thoughts?
 - Speaker interested in bringing different bottles of water to taste test. Thoughts?

DISCUSSION ITEMS

1. Additional meeting topics to consider in 2019, as selected at last month's planning meeting (July-December)
 - OCWD/MWDOC year-end report (July 2019)
 - Disadvantaged communities follow up
 - Snowpack update
 - Jeff Severinghaus, Forecast Informed Reservoir Operations
 - What do unimpaired flows mean to agencies in the north?
 - Vector control
 - OC health care agency
2. Feedback of February meeting
 - Steve Weisberg and Shelly Moore, SCCWRP

INFORMATIONAL ITEMS

1. Confirmation of April 5 speaker
 - Michael Cervin, Author, Our World of Water
 - Topic: The Truth About Bottled Water
2. Confirmation of May 3 speaker
 - Doug Chaffee, Orange County Supervisor
 - Topic: TBD
3. Confirmation of June 7 speaker
 - Phil Rosentrater, General Manager, Salton Sea Authority
 - Topic: Salton Sea



Stay Connected with WACO
on Facebook, Twitter and YouTube!

ADJOURN



AGENDA

Quarterly Utility Coordination Meeting

Wednesday, February 27, 2019 – 10:00 A.M. - 11:00 A.M.

City of Lake Forest City Hall

El Toro Conference Room (1st Floor)

1. Introductions
2. City Projects (Taylor Abernathy)
 - a. Street Sidewalk Rehab
 - Current Status – Request for advertisement, anticipate bidding in Mar 2019
 - b. Santiago Canyon Road Safety Improvements
 - Current Status – County Lead Project, Anticipate Construction End of 2019
 - c. 2019 Citywide Roadway Improvement Project
 - Dimension Drive Street Improvements
 - Civic Center Drive Street Improvements
 - Portola Parkway Street Improvements
 - Serrano Summit – Civic Center Drive Roadway and Signal Improvements
 - Serrano Summit – Civic Center Drive Landscaping Improvements
 - TCWD Dimension Drive Driveway Improvements
 - i. Current Status – Out to bid, Anticipate Construction starting May 2019
 - d. Ridge Route Landscaping Phase 3
 - Current Status – In Construction
 - e. Portola Park
 - Current Status – Finalizing Design, Anticipate bidding in Mar/Apr 2019
 - f. I-5 Interchange Signs
 - Current Status – In Design, Anticipate Construction June 2019
 - g. Raised Median Improvements and Repairs
 - Current Status – In Design, Anticipate Construction June 2019
 - h. Bake Parkway Trabuco/ Irvine (Ultimate)
 - Current Status – In Design, Anticipate Design and R/W by end of FY18/19; Construction TBD
 - i. El Toro Road and Portola/ Santa Margarita
 - Current Status – Receiving Proposals from Consultants, Anticipate Design and R/W by end of FY18/19; Construction TBD
 - j. 7 Year Street Overlay / Slurry Program - (Taylor Abernathy)
 - Next Slurry Seal Zones:
 - Zone C (FY19-20)
 - Zone G (FY20-21)
 - Zone F (FY21-22)
 - k. 7 Year Street Overlay / Slurry Program - (Taylor Abernathy)
 - Resurfacing Project Locations:

- i. Slurry Seal Zone B – Anticipate completion mid-Mar
 - Upcoming Resurfacing Project Locations:
 - i. Trabuco Road from Lake Forest Drive to Peachwood (pending approval as a CCO to Zone B)
 - I. Civic Center Planning (Taylor Abernathy)
 - Rough Grading complete
 - Parking Deck complete
 - Civic Center Drive Improvements – In construction
 - Buildings - In construction
3. Development Activity in Lake Forest (Doug Erdman)
- a. Portola Center (930 total homes)
 - Northwest – (81 Lots) – Grading, Streets, Model Homes
 - South – (626 Lots) - Grading, home building
 - Northeast – (223 Lots) - Grading
 - Street Improvements – Sidewalks, Curb/Gutter, GRR Medians
 - b. Shea Baker (2,392 homes total) –Six tracts under construction
 - c. Serrano Summit – Phase 1 Rough Grading under construction
 - d. Peachwood is now called Teresina – Mass Grading underway
4. Blanket/Annual Permits (Doug Erdman) The City still requires notification if you are doing work, even if it is under the blank or annual permits.
- a. Notification Forms
 - b. 24 hour minimum notice required
 - c. Job tracking not provided
5. Traffic Control Requirements related to Encroachment Permits (Dave Rogers)
- a. Use of WATCH Manual, or Joint Utilities Manual, or CATTCH requires submitting location map and plan number(s) to be used
6. Sidewalk Inspection / Utility Lids (Matt Reagan)
- a. Damaged utility lids identified in sidewalk hazard inspection.
Public Works Inspector to coordinate with utilities on replacements
7. Pavement Moratorium (Taylor Abernathy)
- a. City's Pavement Moratorium is included in all Encroachment Permits
 - b. A list of streets that are under moratorium are:
 - Slurry Seals
 - i. Zones A (8/2016),

- ii. Zone D (11/2017), and
- iii. Zone E (4/5/2018)
- Arterial Streets
 - i. Alton Parkway (Portola to Rancho South) (8/2017)
 - ii. Portola Parkway (Alton to El Toro Road) (7/2017)
 - iii. Bake Parkway (Portola to Lake Forest) (12/2014)
 - iv. Los Alisos (I-5 to easterly City Limit) (12/2014)
 - v. El Toro Road (Bridger to I-5) (12/2014)

8. Status reports on projects from utility companies; new projects/project updates

a. **AT&T –**

b. **COX Communications –**

c. **El Toro Water District –**

d. **Irvine Ranch Water District –**

e. **Southern California Gas Company –**

f. **Southern Calif. Edison Company –**

g. **Trabuco Canyon Water District –**

6. Next Meeting (05/29/19) at 10:00 a.m.

DATES TO REMEMBER

FEBRUARY/MARCH 2019

1. Feb 27 – Mar 1 – Urban Water Institute Conference (Palm Springs)
2. Mar 1 – DISTRICT OFFICE CLOSED
3. Mar 1 – 7:30 a.m. – WACO
4. Mar 1 – 8:00 a.m. – Elected Officials Board Tour (ETWD)
5. Mar 4 – 8:30 a.m. – MWDOC Planning/Operations Meeting
6. Mar 4 – 1:30 p.m. – SOCWMA Management Committee Meeting (LH Council Chambers)
7. Mar 5 – 7:30 a.m. – RRC Meeting
8. Mar 5 – 7:30 a.m. – ISDOC Executive Committee Meeting
9. Mar 5 – 10:30 a.m. – SOCWA Finance Committee Meeting
10. Mar 6 – 8:30 a.m. – MWDOC/MET Directors Workshop
11. Mar 7 – 8:30 am. – SOCWA Board Meeting
12. Mar 8 – 11:30 a.m. – Chair/GM Meeting
13. Mar 13 – 8:30 a.m. – MWDOC Admin/Finance Committee Meeting
14. Mar 14 – 8:30 a.m. – SOCWA Engineering Committee Meeting
15. Mar 15 – DISTRICT OFFICE CLOSED
16. Mar 17-19 – WaterReuse Annual Conference (Garden Grove)
17. Mar 18 – 8:30 a.m. – MWDOC Public Affairs Meeting
18. Mar 19 – 7:30 a.m. – WACO Planning Committee Meeting
19. Mar 20 – 7:30 a.m. – Agenda Review Meeting
20. Mar 20 – 8:30 a.m. – MWDOC Board Meeting
21. Mar 20 – 11:30 a.m. – OCWA Luncheon
22. Mar 21 – 8:00 a.m. – SAC Meeting
23. Mar 22 – 7:30 a.m. – Budget Committee #1 Meeting
24. Mar 22 – 11:30 a.m. – Chair/GM Meeting
25. Mar 26 – 7:30 a.m. – Regular Engineering/Finance Committee Meetings

26. Mar 26 – 10:30 a.m. – SOCWA Special Finance Committee Meeting
27. Mar 28 – 7:30 a.m. – Regular Board Meeting
28. Mar 28 – 11:30 a.m. – ISDOC Quarterly Luncheon Meeting
29. Mar 29 – DISTRICT OFFICE CLOSED
30. Mar 29 – 8:00 a.m. – TV-6 (Gaskins)

Carry-Over Pending Matters

1. Cyber Security
2. System Vulnerability
3. Update District policies for contracting and purchasing. The goal is to document defensible, transparent, justifiable contracting and purchasing practices that are practical to implement.

EL TORO WATER DISTRICT

Glossary of Water Terms

Accumulated overdraft: The amount of water necessary to be replaced in the intake area of the groundwater basin to prevent the landward movement of ocean water into the fresh groundwater body.

Acre-foot, AF: A common water industry unit of measurement. An acre-foot is 325,851 gallons, or the amount of water needed to cover one acre with water one foot deep. An acre-foot serves annual needs of two typical California families.

ACWA: Association of California Water Agencies.
A statewide group based in Sacramento that actively lobbies State and Federal Government on water issues.

Advanced treatment: Additional treatment processes used to clean wastewater even further following primary and secondary treatment. Also known as tertiary treatment.

AFY: Acre-foot per year.

Alluvium: A stratified bed of sand, gravel, silt, and clay deposited by flowing water.

AMP: Allen McCulloch pipeline.

Major pipeline transporting treated water to water districts between Yorba Linda, where it starts to El Toro Water District reservoir, where it terminates.

Annexation: The inclusion of land within a government agency's jurisdiction.

Annual overdraft: The quantity by which the production of water from the groundwater supplies during the water year exceeds the natural replenishment of such groundwater supplies during the same water year.

Aqueduct: A man-made canal or pipeline used to transport water.

Aquifer: An underground geologic formation of rock, soil or sediment that is naturally saturated with water; an aquifer stores groundwater.

Arid: Dry; deserts are arid places. Semi-arid places are almost as dry as a desert.

Artesian: An aquifer in which the water is under sufficient pressure to cause it to rise above the bottom of the overlying confining bed, if the opportunity is provided.

Artificial recharge: The addition of surface water to a groundwater reservoir by human activity, such as putting surface water into recharge basins. (See also: groundwater recharge and recharge basin.)

AWWA American Water Works Association
Nationwide group of public and private water purveyors and related industrial suppliers.

Base flow: The portion of river surface flow which remains after deduction of storm flow and/or purchased imported water.

Bay-Delta: The Sacramento-San Joaquin Bay-Delta is a unique natural resource of local, state and national significance. The Delta is home to more than 500,000 people; contains 500,000 acres of agriculture; provides habitat for 700 native plant and animal species; provides water for more than 25 million Californians and 3 million acres of agriculture; is traversed by energy, communications and transportation facilities vital to the economic health of California; and supports a \$400 billion economy.

BIA: Building Industry Association.

Biofouling: The formation of bacterial film (biofilm) on fragile reverse osmosis membrane surfaces.

Biosolids: Solid organic matter recovered from a sewage treatment process and used especially as fertilizer.

BMP: Best Management Practice. An engineered structure or management activity, or combination of these, that eliminates or reduces adverse environmental effects.

Brackish water: A mixture of freshwater and saltwater.

Brown Act: Ralph M. Brown Act enacted by the State legislature governing all meetings of legislative bodies. Also known as the Open Meeting requirements.

Canal: A ditch used to move water from one location to another.

CASA: California Association of Sanitation Agencies The sanitation equivalent of ACWA concerned solely with issues affecting the treatment and disposal of solid waste and wastewater.

CEQA: California Environmental Quality Act.

CERCLA: Comprehensive Environmental Response, Compensation and Liability Act. This federal law establishes the Superfund program for hazardous waste sites. It provides the legal basis for the United States EPA to regulate and clean up hazardous waste sites, and if appropriate, to seek financial compensation from entities responsible for the site.

CFS: Cubic feet per second.

Chloramines: A mixture of ammonia and chlorine used to purify water.

Clarify: To make clear or pure by separation and elimination of suspended solid material.

Coagulation: The clumping together of solids so they can more easily be settled out or filtered out of water. A chemical called aluminum sulfate (alum) is generally used to aid coagulation in water treatment and reclamation.

Coastkeepers: A non-profit organization dedicated to the protection and preservation of the marine habitats and watersheds of Orange County through programs of education, restoration, enforcement and advocacy.

Colored water: Groundwater extracted from the basin that is unsuitable for domestic use without treatment due to high color and odor exceeding drinking water standards.

Condensation: The process of water vapor (gas) changing into liquid water. An example of condensation can be seen in the tiny water droplets that form on the outside of a glass of iced tea as warmer air touches the cooler glass.

Confined aquifer: An aquifer that is bound above and below by dense layers of rock and contains water under pressure.

Conjunctive use: Storing imported water in a local aquifer, in conjunction with groundwater, for later retrieval and use.

Contaminate: To make unclean or impure by the addition of harmful substances.

CPCFA: California Pollution Control Financing Authority. State agency providing funds for wastewater reclamation projects.

Crisis:

1. **a:** The turning point for better or worse **b:** a paroxysmal attack of pain, distress, or disordered function **c:** an emotionally significant event or radical change of status in a person's life <a midlife crisis>
2. The decisive moment (as in a literary plot)
3. **a:** An unstable or crucial time or state of affairs in which a decisive change is impending; *especially* : one with the distinct possibility of a highly undesirable outcome <a financial crisis> **b:** a situation that has reached a critical phase

CTP Coastal Treatment Plant

CWPCA California Water Pollution Control Association. A 7000 member non-profit educational organization dedicated to water pollution control.

Dam: A barrier built across a river or stream to hold water.

Decompose: To separate into simpler compounds, substances or elements.

Deep percolation: The percolation of surface water through the ground beyond the lower limit of the root zone of plants into a groundwater aquifer.

Degraded water: Water within the groundwater basin that, in one characteristic or another, does not meet primary drinking water standards.

Delta: Where the rivers empty; an outlet from land to ocean, also where the rivers deposit sediment they carry forming landforms.

Delta Vision: Delta Vision is intended to identify a strategy for managing the Sacramento-San Joaquin Delta as a sustainable ecosystem that would continue to support environmental and economic functions that are critical to the people of California.

Demineralize: To reduce the concentrations of minerals from water by ion exchange, distillation, electro-dialysis, or reverse osmosis.

De-nitrification: The physical process of removing nitrate from water through reverse osmosis, microfiltration, or other means.

Desalting (or desalination): Removing salts from salt water by evaporation or distillation. Specific treatment processes, such as reverse osmosis or multi-stage flash distillation, to demineralize seawater or brackish (saline) waters for reuse. Also sometimes used in wastewater treatment to remove salts other pollutants.

Desilting: The physical process of removing suspended particles from water.

Dilute: To lessen the amount of a substance in water by adding more water.

Disinfection: Water treatment which destroys potentially harmful bacteria.

Drainage basin: The area of land from which water drains into a river, for example, the Sacramento River Basin, in which all land area drains into the Sacramento River. Also called catchment area, watershed, or river basin.

Drought: A prolonged period of below-average precipitation.

DPHS: California Department of Public Health Services. Regulates public water systems; oversees water recycling projects; permits water treatment devices; certifies drinking water treatment and distribution operators; supports and promotes water system security; provides support for small water systems and for improving technical, managerial, and financial (TMF) capacity; provides funding opportunities for water system improvements.

DVL: Diamond Valley Lake. Metropolitan's major reservoir near Hemet, in southwestern Riverside County.

DWR: California Department of Water Resources. Guides development/management of California's water resources; owns/operates State Water Project and other water facilities.

Endangered Species: A species of animal or plant threatened with extinction.

Endangered Species Act of 1973 (ESA): The most wide-ranging of the dozens of United States environmental laws passed in the 1970s. As stated in section 2 of the act, it was designed to protect critically imperiled species from extinction as a "consequence of economic growth and development untended by adequate concern and conservation.

Ecosystem: Where living and non-living things interact (coexist) in order to survive.

Effluent: Wastewater or other liquid, partially or completely treated or in its natural state, flowing from a treatment plant.

Evaporation: The process that changes water (liquid) into water vapor (gas).

Estuary: Where fresh water meets salt water.

Evapotranspiration: The quantity of water transpired (given off), retained in plant tissues, and evaporated from plant tissues and surrounding soil surface. Quantitatively, it is expressed in terms of depth of water per unit area during a specified period of time.

FCH Federal Clearing House – Environmental Review/Processing

FEMA Federal Emergency Management Agency

Filtration: The process of allowing water to pass through layers of a porous material such as sand, gravel or charcoal to trap solid particles. Filtration occurs in nature when rain water soaks into the ground and it passes through hundreds of feet of sand and gravel. This same natural process of filtration is duplicated in water and wastewater treatment plants, generally using sand and coal as the filter media.

Flocculation: A chemical process involving addition of a coagulant to assist in the removal of turbidity in water.

Forebay: A reservoir or pond situated at the intake of a pumping plant or power plant to stabilize water level; also, a portion of a groundwater basin where large quantities of surface water can recharge the basin through infiltration.

Gray water reuse: Reuse, generally without treatment, of domestic type wastewater for toilet flushing, garden irrigation and other non-potable uses. Excludes water from toilets, kitchen sinks, dishwashers, or water used for washing diapers.

Green Acres Project (GAP): A 7.5 million gallons per day (MGD) water reclamation project that serves tertiary treated recycled water to irrigation and industrial users in Costa Mesa, Fountain Valley, Huntington Beach, Newport Beach, and Santa Ana.

God Squad: A seven-member committee that is officially called the "Endangered Species Committee". Members consist of Secretary of the Interior, the Secretary of Agriculture, the Secretary of the Army, the Chairman of the Council of Economic Advisers, the Administrator of the National Oceanic and Atmospheric Administration and one individual from the affected state. The squad was established in 1978 by an amendment to the 1973 Endangered Species Act (ESA). It has only been called into action three times to deal with proposed federal agency actions that have been determined to cause "jeopardy" to any listed species. Such actions may receive an exemption from the ESA if five members of the committee determine that the action is of regional or national significance, that the benefits of the action clearly outweigh the benefits of conserving the species and that there are no reasonable and prudent alternatives to the action.

Groundwater: Water that has percolated into natural, underground aquifers; water in the ground, not water puddled on the ground.

Groundwater basin: A groundwater reservoir defined by the overlying land surface and the underlying aquifers that contain water stored in the reservoir. Boundaries of success-ively deeper aquifers may differ and make it difficult to define the limits of the basin.

Groundwater mining: The withdrawal of water from an aquifer in excess of recharge over a period of time. If continued, the underground supply would eventually be exhausted or the water table could drop below economically feasible pumping lifts.

Groundwater overdraft: The condition of a groundwater basin in which the amount of water withdrawn by pumping exceeds the amount of water that recharges the basin over a period of years during which water supply conditions approximate average.

Groundwater recharge: The action of increasing groundwater storage by natural conditions or by human activity. See also: Artificial recharge.

Ground Water Replenishment System (GWRS): A joint project of the Orange County Water District and the Orange County Sanitation District that will provide up to 100,000 acre-feet of reclaimed water annually. The high-quality water will be used to expand an existing underground seawater intrusion barrier and to replenish the groundwater basin underlying north and central Orange County.

Groundwater table: The upper surface of the zone of saturation (all pores of subsoil filled with water), except where the surface is formed by an impermeable body.

GPM: Gallons per minute.

Ground Water Replenishment System (GWRS): Orange County Water District's state-of-the-art, highly advanced, waste-water treatment facility.

Hydrologic balance: An accounting of all water inflow to, water outflow from, and changes in water storage within a hydrologic unit over a specified period.

Hydrologic cycle: The process of water constantly circulating from the ocean, to the atmosphere, to the earth in a form of precipitation, and finally returning to the ocean.

Imported water: Water that has originated from one hydrologic region and is transferred to another hydrologic region.

Inflatable rubber dams: Designed to replace temporary sand levees that wash out during heavy storm flow, the dams hold back high-volume river flows and divert the water into the off-river system for percolation.

Influent: Water or wastewater entering a treatment plant, or a particular stage of the treatment process.

Irrigation: Applying water to crops, lawns or other plants using pumps, pipes, hoses, sprinklers, etc.

JPIA Joint Powers Insurance Authority. A group of water agencies providing self-insurance to members of the ACWA.

LAIF Local Agency Investment Fund. Statewide pool of surplus public agency money managed by State Treasurer.

Leach: To remove components from the soil by the action of water trickling through.

MAF: Million acre feet.

MCL: Maximum contaminant level set by EPA for a regulated substance in drinking water. According to health agencies, the maximum amount of a substance that can be present in water that's safe to drink and which looks, tastes and smells good.

MET: Metropolitan Water District of Southern California.

MGD: Million gallons per day.

Microfiltration: A physical separation process where tiny, hollow filaments members separate particles from water.

Microorganism: An animal or plant of microscopic size.

MWD: Metropolitan Water District of Southern California.

MWDOC: Municipal Water District of Orange County. Intermediate wholesaler between MWD and 27 member agencies including ETWD.

Non-point source pollution: Pollution that is so general or covers such a wide area that no single, localized source of the pollution can be identified.

NPDES National Pollution Discharge Elimination System

OCBC: Orange County Business Council.

OCEMA Orange County Environmental Management Agency

OCWD: Orange County Water District.

Opportunity:

1. A favorable juncture of circumstances.
2. A good chance for advancement or progress .

Organism: Any individual form of life, such as a plant, animal or bacterium.

PCM Professional Community Management, Inc. Property Management company providing services to Laguna Woods Village and other homeowner associations.

Perched groundwater: Groundwater supported by a zone of material of low permeability located above an underlying main body of groundwater with which it is not hydrostatically connected.

Percolation: The downward movement of water through the soil or alluvium to the groundwater table.

Permeability: The capability of soil or other geologic formations to transmit water.

Point source: A specific site from which waste or polluted water is discharged into a water body, the source of which is identified. See also: non-point source.

Potable water: Suitable and safe for drinking.

PPB: Parts per billion.

Precipitation: Water from the atmosphere that falls to the ground as a liquid (rain) or a solid (snow, sleet, hail).

Primary treated water: First major treatment in a wastewater treatment facility, usually sedimentation but not biological oxidation.

Primary treatment: Removing solids and floating matter from wastewater using screening, skimming and sedimentation (settling by gravity).

Prior appropriation doctrine: Allocates water rights to the first party who diverts water from its natural source and applies the water to beneficial use. If at some point the first appropriator fails to use the water beneficially, another person may appropriate the water and gain rights to the water. The central principle is beneficial use, not land ownership.

Pumping Plant: A facility that lifts water up and over hills.

Recharge: The physical process where water naturally percolates or sinks into a groundwater basin.

Recharge basin: A surface facility, often a large pond, used to increase the infiltration of surface water into a groundwater basin.

Reclaimed wastewater: Wastewater that becomes suitable for a specific beneficial use as a result of treatment. See also: wastewater reclamation.

Reclamation project: A project where water is obtained from a sanitary district or system and which undergoes additional treatment for a variety of uses, including landscape irrigation, industrial uses, and groundwater recharge.

Recycling: A type of reuse, usually involving running a supply of water through a closed system again and again. Legislation in 1991 legally equates the term "recycled water" to reclaimed water.

Reservoir: A place where water is stored until it is needed. A reservoir can be an open lake or an enclosed storage tank.

Reverse osmosis: (RO) A method of removing salts or other ions from water by forcing water through a semi-permeable membrane.

RFP Request for Proposal

Riparian: Of or on the banks of a stream, river, or other body of water.

RO: Reverse osmosis. See the listing under "reverse osmosis."

R-O-W Right-of-way

Runoff: Liquid water that travels over the surface of the Earth, moving downward due to gravity. Runoff is one way in which water that falls as precipitation returns to the ocean.

RWQCB Regional Water Quality Control Board. State agency regulating discharge and use of recycled water.

Safe Drinking Water Act (SDWA): The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and ground water wells. (SDWA does not regulate private wells which serve fewer than 25 individuals.) SDWA authorizes the United States Environmental Protection Agency (US EPA) to set national health-based standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water. US EPA, states, and water systems work together to make sure that these standards are met.

Safe yield: The maximum quantity of water that can be withdrawn from a groundwater basin over a long period of time without developing a condition of overdraft, sometimes referred to as sustained yield.

SAFRA Santa Ana River Flood Protection Agency

Salinity: Generally, the concentration of mineral salts dissolved in water. Salinity may be measured by weight (total dissolved solids - TDS), electrical conductivity, or osmotic pressure. Where seawater is known to be the major source of salt, salinity is often used to refer to the concentration of chlorides in the water.

SAWPA: Santa Ana Watershed Project Authority.

SCADA Supervisory Control and Data Acquisition

SCAP Southern California Alliance of Publicly. Newly formed group of public agencies seeking reasonable regulation of sewer industry.

SCH State Clearing House – Environmental Review/Processing

Seasonal storage: A three-part program offered by Metropolitan Water District of Southern California:

STSS (Short Term Seasonal Storage) financially encourages agencies with local groundwater production capabilities to produce a higher percentage of their demand in the summer from their local groundwater supplies, thus shifting a portion of their demand on the MWD system from the summer to winter;

LTSS (Long Term Seasonal Storage) financially encourages retail agencies to take and store additional amounts of MWD water above their normal annual demands for later use; Replenishment Water provides less expensive interruptible water that is generally available and used to increase the operating yield of groundwater basins.

Seawater intrusion: The movement of salt water into a body of fresh water. It can occur in either surface water or groundwater basins.

Seawater barrier: A physical facility or method of operation designed to prevent the intrusion of salt water into a body of freshwater.

Secondary treatment: The biological portion of wastewater treatment which uses the activated sludge process to further clean wastewater after primary treatment. Generally, a level of treatment that produces 85 percent removal efficiencies for biological oxygen demand and suspended solids. Usually carried out through the use of trickling filters or by the activated sludge process.

Sedimentation: The settling of solids in a body of water using gravity.

Settle: To clarify water by causing impurities/solid material to sink to a container's bottom.

Sewer: The system of pipes that carries wastewater from homes and businesses to a treatment plant or reclamation plant. Sewers are separate from storm drains, which is a system of drains and pipes that carry rain water from urban streets back to the ocean. Overwatering your yard can also cause water to run into the streets and into storm drains. Storm drain water is not treated before it is discharged.

SigAlert: Any unplanned event that causes the closing of one lane of traffic for 30 minutes or more, as opposed to a planned event, like road construction, which is planned.

SJBA San Juan Basin Authority

Sludge: The solids that remain after wastewater treatment. This material is separated from the cleaned water, treated and composted into fertilizer. Also called biosolids.

SOCWA South Orange County Wastewater Authority. Regional Joint Powers Authority formed for collection and treatment of sewerage (previously known as AWMA/SERRA/SOCRA). SOCWA member agencies:

CSC – City of San Clemente

CSJC – City of San Juan Capistrano

CLB – City of Laguna Beach

ETWD – El Toro Water District

EBSD – Emerald Bay Service District

IRWD – Irvine Ranch Water District

MNWD – Moulton Niguel Water District

SCWD – South Coast Water District

SMWD – Santa Margarita Water District

TCWD – Trabuco Canyon Water District

SRF State Revolving Fund

Storm Drain: The system of pipes that carries rain water from urban streets back to the ocean. Overwatering your yard can also cause water to run into the streets and into storm drains. Storm drain

water is not treated before it is discharged. Storm drains are separate from sewers, which is a separate system of pipes to carry wastewater from homes and businesses to a treatment plant or reclamation plant for cleaning.

Storm flow: Surface flow originating from precipitation and run-off which has not percolated to an underground basin.

SWP: State Water Project. An aqueduct system that delivers water from northern California to central and southern California.

SWRCB State Water Resources Control Board

TDS: Total dissolved solids. A quantitative measure of the residual minerals dissolved in water that remain after evaporation of a solution. Usually expressed in milligrams per liter.

Tertiary treatment: The treatment of wastewater beyond the secondary or biological stage. Normally implies the removal of nutrients, such as phosphorous and nitrogen, and a high percentage of suspended solids.

THM: Trihalomethanes. Any of several synthetic organic compounds formed when chlorine or bromine combine with organic materials in water.

TMA: Too many acronyms.

TMDL: Total maximum daily load; A quantitative assessment of water quality problems, contributing sources, and load reductions or control actions needed to restore and protect bodies of water.

Transpiration: The process in which plant tissues give off water vapor to the atmosphere as an essential physiological process.

Turbidity: Thick or opaque with matter in suspension; muddy water.

Ultraviolet light disinfection: A disinfection method for water that has received either secondary or tertiary treatment used as an alternative to chlorination.

VE Value Engineering

VOC: Volatile organic compound; a chemical compound that evaporates readily at room temperature and contains carbon.

Wastewater: Water that has been previously used by a municipality, industry or agriculture and has suffered a loss of quality as a result.

Water Cycle: The continuous process of surface water (puddles, lakes, oceans) evaporating from the sun's heat to become water vapor (gas) in the atmosphere. Water condenses into clouds and then falls back to earth as rain or snow (precipitation). Some precipitation soaks into the ground (percolation) to replenish groundwater supplies in underground aquifers.

Water rights: A legally protected right to take possession of water occurring in a natural waterway and to divert that water for beneficial use.

Water-use Efficiency: The water requirements of a particular device, fixture, appliance, process, piece of equipment, or activity.

Water year (USGS): The period between October 1st of one calendar year to September 30th of the following calendar year.

Watermaster: A court appointed person(s) that has specific responsibilities to carry out court decisions pertaining to a river system or watershed.

Water Reclamation: The treatment of wastewater to make it suitable for a beneficial reuse, such as landscape irrigation. Also called water recycling.

Watershed: The total land area that from which water drains or flows to a river, stream, lake or other body of water.

Water table: The top level of water stored underground.

WEF Water Environment Federation. Formerly – Water Pollution Control Federation (WPCF). International trade group advising members of sewage treatment techniques and their effect on the environment.

Weir box: A device to measure/control surface water flows in streams or between ponds.

Wellhead treatment: Water quality treatment of water being produced at the well site.

Wetland: Any area in which the water table stands near, at, or above the land surface for a portion of the year. Wetlands are characterized by plants adapted to wet soil conditions.

Xeriscape: Landscaping that requires minimal water.