

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

Jointly with the

**PLANNING & OPERATIONS COMMITTEE**

January 3, 2022, 8:30 a.m.

**Due to the current state of emergency related to the spread of COVID-19 and pursuant to Government Code Section 54953(e), MWDOC will be holding this Board and Committee meeting by Zoom Webinar and will be available by either computer or telephone audio as follows:**

**Computer Audio:** You can join the Zoom meeting by clicking on the following link:

<https://zoom.us/j/8828665300>

**Telephone Audio:** (669) 900 9128 fees may apply  
(877) 853 5247 Toll-free

**Webinar ID:** 882 866 5300#

**P&O Committee:**

Director Yoo Schneider, Chair  
Director Nederhood  
Director Seckel

Staff: R. Hunter, J. Berg, V. Osborn,  
H. De La Torre, T. Dubuque,  
D. Micalizzi, H. Baez, T. Baca

Ex Officio Member: Director Tamaribuchi

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

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

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

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

**PRESENTATION ITEM**

1. SAWPA SANTA ANA RIVER WATERSHED WEATHER MODIFICATION PILOT PROGRAM

**ACTION ITEM**

2. APPROVAL OF RESOLUTION DESIGNATING AUTHORIZED AGENTS FOR FY20 GRANT TRANSFER AGREEMENTS FOR HOMELAND SECURITY GRANTS AND EXECUTION OF TRANSFER AGREEMENT

3. AUTHORIZATION TO CONTRACT WITH CUSTOMER METER ACCURACY TESTING COMPANIES

### DISCUSSION ITEMS

4. UPDATE ON COVID-19 (ORAL REPORT)
5. FOLLOW-UP ON DECEMBER WATER USE EFFICIENCY STANDARDS UPDATE
6. ADMINISTRATION BUILDING CONSTRUCTION UPDATE

**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.)

7. UPDATE REGARDING AMERICA'S WATER INFRASTRUCTURE ACT (AWIA)
8. LOCAL LEGISLATIVE ACTIVITIES
  - a. County Legislative Report (Lewis)
  - b. Legal and Regulatory Report (Ackerman)
9. FEBRUARY 23<sup>RD</sup> WATER POLICY DINNER FEATURING STATE WATER RESOURCES CONTROL BOARD CHAIR, JOAQUIN ESQUIVEL
10. MWDOC CHOICE SCHOOL PROGRAMS UPDATE
11. STATUS REPORTS
  - a. Ongoing MWDOC Reliability and Engineering/Planning Projects
  - b. WEROC
  - c. Water Use Efficiency Projects
  - d. Public and Government Affairs
12. WATER AND WASTEWATER WORKFORCE NEEDS ASSESSMENT
13. REVIEW OF ISSUES RELATED TO PLANNING OR ENGINEERING PROJECTS, WEROC, WATER USE EFFICIENCY, FACILITY AND EQUIPMENT MAINTENANCE, WATER STORAGE, WATER QUALITY, CONJUNCTIVE USE PROGRAMS, EDUCATION, PUBLIC AFFAIRS PROGRAMS AND EVENTS, PUBLIC INFORMATION PROJECTS, PUBLIC INFORMATION CONSULTANTS, DISTRICT FACILITIES, and MEMBER-AGENCY RELATIONS

### ADJOURNMENT

**NOTE:** At the discretion of the Committee, all items appearing on this agenda, whether or not expressly listed for action, may be deliberated, and may be subject to action by the Committee. On those items designated for Board action, the Committee reviews the items and makes a recommendation for final action to the full Board of Directors; final action will be taken by the Board of Directors. Agendas for Committee and Board meetings may be obtained from the

District Secretary. Members of the public are advised that the Board consideration process includes consideration of each agenda item by one or more Committees indicated on the Board Action Sheet. Attendance at Committee meetings and the Board meeting considering an item consequently is advised.

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



**PRESENTATION/DISCUSSION ITEM**  
January 3, 2022

**TO:**           **Planning & Operations Committee**  
                    (Directors Yoo Schneider, Nederhood, Seckel)

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

**SUBJECT:**    **Santa Ana River Watershed Weather Modification Pilot Program**

**STAFF RECOMMENDATION**

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Staff recommends the Planning & Operations Committee: Receive and discuss the presentation, and take action as appropriate.

**COMMITTEE RECOMMENDATION**

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Committee recommends (To be determined at Committee Meeting)

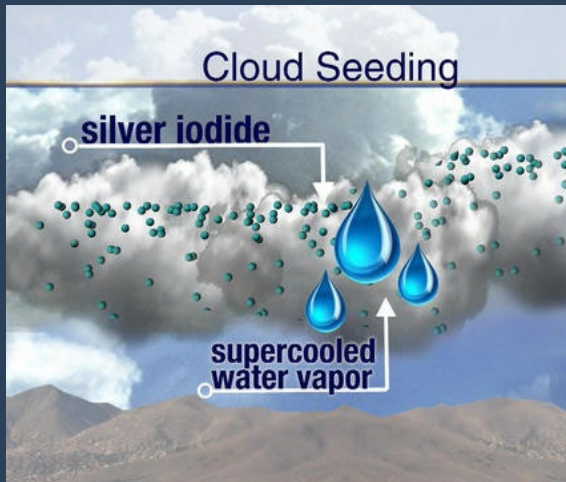
**SUMMARY**

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Mr. Mark Norton, Water Resources & Planning Manager of the Santa Ana River Watershed Project Authority (SAWPA) will be presenting information regarding a proposed pilot program for the Santa Ana River Watershed Weather Modification Program. The presentation is attached.

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





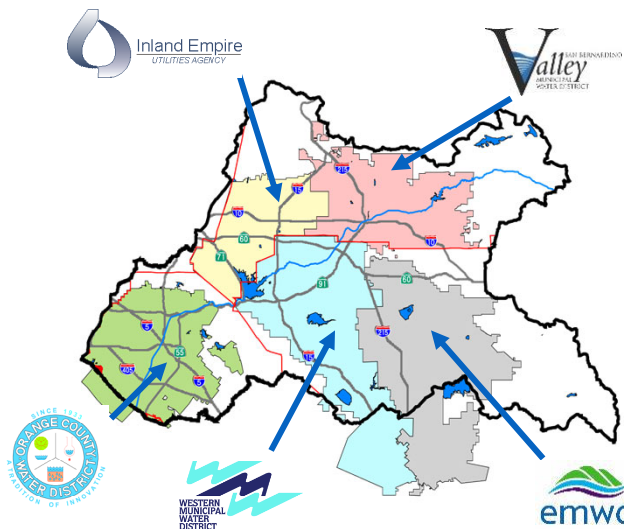
Source: CBS News

## Santa Ana River Watershed Weather Modification Pilot Program

Mark Norton PE  
Water Resources & Planning Manager  
Santa Ana Watershed Project Authority

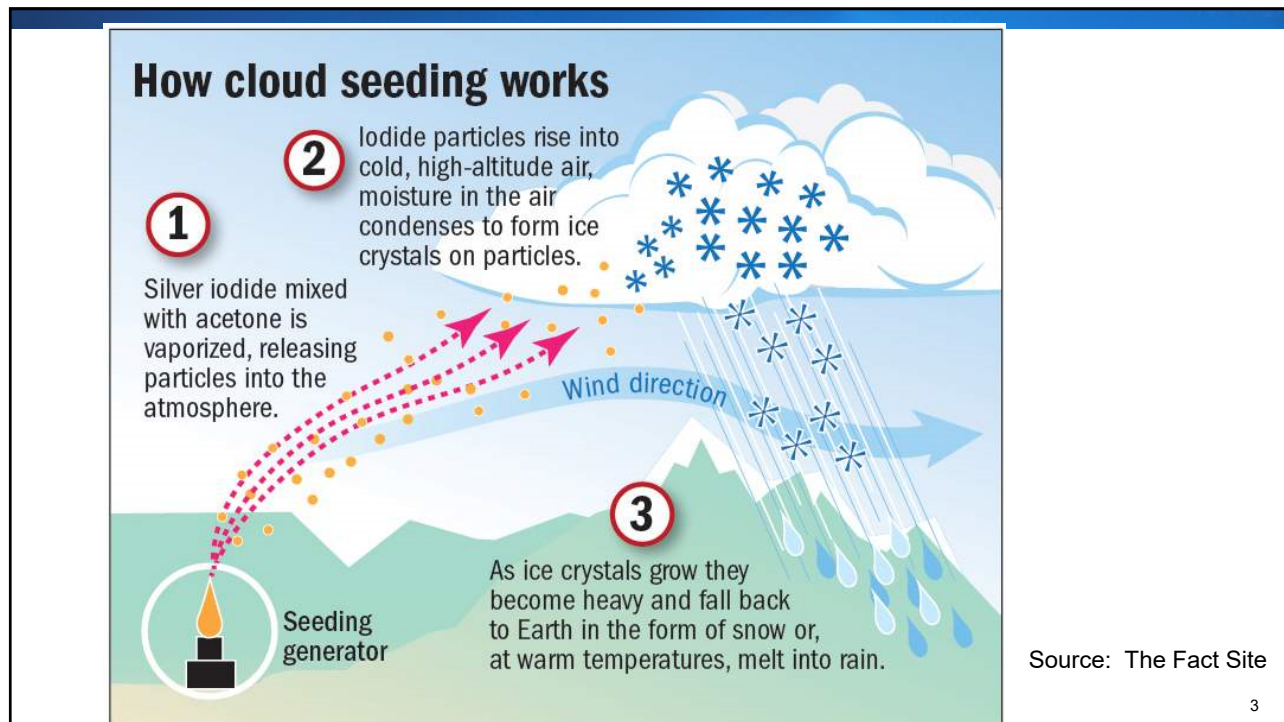


## SAWPA: Joint Powers Authority with five Member Agencies



### Stakeholders:

- 97 Water-related Agencies
- 4 Counties
- 63 Cities
- State, environmental, and regulatory agencies
- Federal agencies
- Other special districts
- Special interest groups



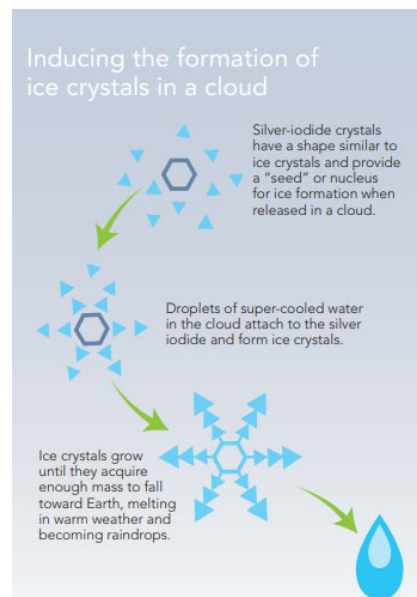
## Cloud Seeding History

### Background

- Physics is well known
- Started in the U.S. in the 1940s
- Challenges: Overselling, limited science
- Misconceptions remain

### Recent Advances

- Weather forecasting
- Computing / Modeling
- Seeding methods
- Scientific validation studies

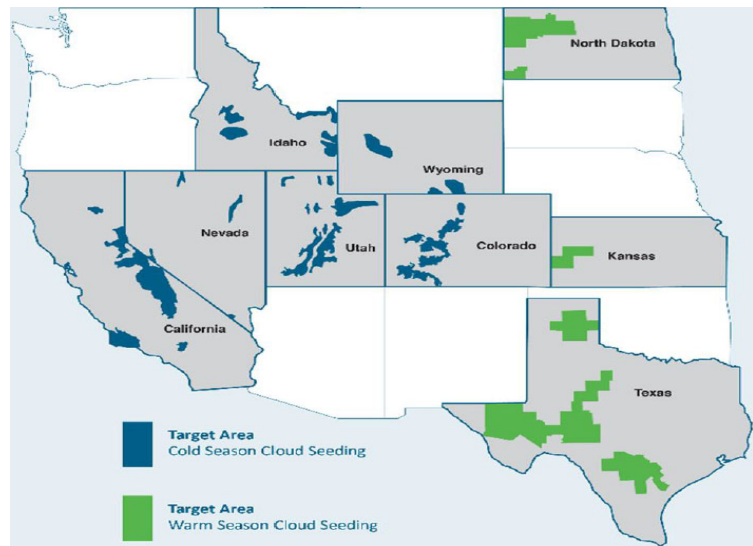


Source: North American Weather Modification Council

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## U.S. Projects

- ◆ Cold Season Cloud Seeding Leaders
  - CA, CO, ID, UT, WY, NV
- ◆ Applications
  - Power Utilities (hydropower)
  - Ski areas
  - Water Resource Agencies
  - Irrigation Districts
- ◆ California Projects
  - Santa Barbara County
  - San Luis Obispo
  - Sacramento Municipal Water District
- ◆ CA DWR
  - Cloud seeding is a "safe and effective means of augmenting local water supplies."



Source: North American Weather Modification Council

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## Ground Based Seeding Methods

### CNG's (Cloud Nuclei Generators)



- ◆ Ideal for orographic lift (winds caused by land barriers)
- ◆ Create a continuous plume
- ◆ Inexpensive to install and operate

### AHOGS (Automated High Output Ground Seeding) Systems



- ◆ Ideal for strong convective storm attributes (turbulence)
- ◆ Delivers higher concentration of silver iodide
- ◆ Operated remotely – rapid release

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## Licensing and Permitting

- Operators are licensed and carry liability insurance
- Suspension criteria turns off program during high precip/flood conditions
- Though no CA state permit required, CEQA mitigated negative declaration will be conducted
- There have been no successful legal challenges to any operation in US for over 50 years



## Potential Environmental Effects

- Silver iodide is not soluble or biologically available
- 50 years of physical, biological, aquatic, soils and vegetation studies found:
  - Subtle or indiscernible effects
  - Potentially beneficial (more runoff)
- Strong studies with credible results and regulations reflect recent research



## Potential Health Effects

- Silver Iodide (AgI)
  - Not been measured above background
- Human effects
  - No effects found in 50 years
  - More silver exposure in tooth fillings
  - More iodine in table salt on food
- Concentrations
  - EPA drinking water quality 0.1 mg/L
  - U.S. Public Health Service level 0.05 mg/L
  - Seeded rainfall is 0.1 mcg/L or 1000 times less than EPA standard



## Why consider cloud seeding in the Santa Ana River Watershed?

Precipitation – and flows in the Santa Ana River – have been trending down

- Cloud seeding increases precipitation (with an emphasis as snow in upper elevations)
- Produces a local supply
- Potential to reduce the use of imported water

Dry years and droughts occur

- Cloud seeding works in both dry and wet years

Cost effective

- Costs for 8%-11% increase in streamflow is a fraction of the cost of imported water

Supports local water storage

- Natural infiltration
- Takes advantage of existing stormwater capture infrastructure

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## Santa Ana River Watershed Weather Modification Pilot Program

Feasibility Study (2020)

CEQA and Ground Seeding  
Siting (2021-2022)

Outreach and Public  
Engagement (2021-2025)

Prop 1 Round 2 Grant  
Application (2022)

4-Year Pilot Study (2022-  
2025)



Feasibility Study (2020)

<https://sawpa.org/latest-info/watershed-cloud-seeding-feasibility-study/>

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## Feasibility Study Outcomes

Ground Based Seeding  
Dispersion Model

4 seeding areas:

- NW
- NE
- SW
- SE

Included a number of  
ground sites in each  
area



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## Projected Increases in Precipitation and Streamflow (annual averages)

### Ground Only Seeding:

Target Area	Seasonal Precip. Increase (inches)	Percent Increase	Avg. Natural Streamflow (AF)	Streamflow Increase (AF)	Percent Increase
NW	0.41	3.5%	25,000	2,043	8.2%
NE	0.49	4.1%	65,000	4,330	6.7%
SW	0.59	3.7%	5,000	447	9.0%
SE	0.49	4.5%	10,000	1,373	13.7%
TOTAL w/ Ground Only			105,000	8,193	7.8%

Remember this  
number.

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## "Annual" Cost Estimates for Pilot – Ground Based Seeding

	Rate	Frequency	
<b>Annual Operations</b>			
Set Up	\$ 33,500	1	\$ 33,500
Take Down	\$ 24,000	1	\$ 24,000
Reporting	\$ 10,000	1	\$ 10,000
<b>Monthly Operations</b>			
Fixed Services	\$ 24,500	5	\$ 122,500
<b>Variable Items (timed expenses are billed on a per hour basis)</b>			
Ground Flares	\$ 110	60	\$ 6,600
Generator Run Time	\$ 19.50	600	\$ 11,700
Flight Time	\$ 375	N/A	-
Aerial Flares	\$ 110	N/A	-
<b>TOTAL</b>			<b>\$ 208,300</b>
<b>COST PER ACRE-FOOT</b>			<b>\$ 25.42</b>
<b>Benefit to Cost</b>			<b>10.03</b>

**Cost per acre-foot (AF) =**  
Total Program Cost / Estimated AF  
produced

$$\$208,300 / 8,193 \text{ AF} = \$25.42 \text{ per AF}$$

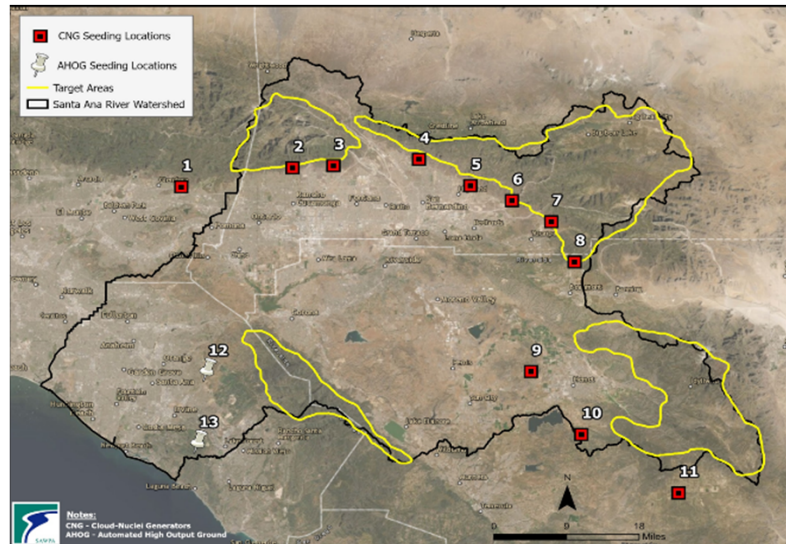
**Benefit to Cost Ratio =**  
Cost of Untreated Imported Water per  
AF / Cost of Cloud Seeding per AF

$$\$255 \text{ per AF} / \$25.42 = 10.03$$

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## Purpose of Weather Modification Pilot Program

- Verify increases in precipitation
  - Compare Target areas to Control areas
  - 3-4 years needed
- Evaluate increases by areas in watershed
- Benefit/Cost evaluation
- Review of operations
- Review of suspension criteria
- Address permitting



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## Pilot Program Schedule

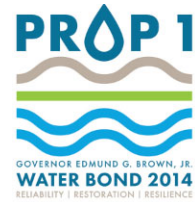
Program Element	2020	2021	2022	2023	2024	2025	2026
Feasibility Study							
Outreach: Local Cost Share for Prop 1 Round 2 Grant							
Ground Seeding Site Analysis							
CEQA							
Prop 1 Round 2 Grant Application							
Pilot Program							
Outreach/Public Engagement							

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## Pilot Program – Next Steps

- SAWPA Commission has authorized:
  - Study of Ground Based Seeding Unit Sites and Access
  - CEQA Mitigated Negative Declaration
- Prepare proposal for Prop 1 Round 2 Grant (IRWM)
  - DWR grant to cover 50% of pilot program
- Outreach is essential
  - Briefings to agencies and the public in the watershed
  - CEQA public meetings
- Cost share for Grant
  - Opportunities for support from interested agencies



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# Thank You!

Mark Norton PE  
[mnorton@sawpa.org](mailto:mnorton@sawpa.org)  
 951.354.4221

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**ACTION ITEM**  
January 19, 2022

**TO:** Board of Directors

**FROM:** **Planning & Operations Committee**  
(Directors Yoo Schneider, Nederhood, Seckel)

Robert Hunter, General Manager                      Staff Contact: Vicki Osborn

**SUBJECT:** **Approval of Resolution Designating Authorized Agents for FY20 Grant Transfer Agreements for Homeland Security Grants and Execution of Transfer Agreement**

**STAFF RECOMMENDATION**

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Staff recommends that the Board of Directors approve the execution of the 2020 Grant Transfer Agreement with the City of Anaheim as the Local Urban Area Security Initiative (UASI) Administrator. Staff also recommends the Board give approval to the WEROC Director of Emergency Management and the General Manager as designated Authorized Agents for FY 2020 Homeland Security Grants and authority to execute any subsequent agreements related to the Homeland Security Grants. Staff will come back to the Board for a purchase award in the event the award is greater than \$25,000.

**COMMITTEE RECOMMENDATION**

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Committee recommends (To be determined at Committee Meeting)

**SUMMARY**

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In Orange County, all UASI funds are administered through either Santa Ana or Anaheim as part of the Anaheim/Santa Ana Urban Area (ASAUUA) and additional Homeland Security Grants are administered by the County of Orange. The Municipal Water District of Orange County (MWD OC) and the Water Emergency Response Organization of Orange County (WEROC) has been awarded 2010 Homeland Security Grants Funds for use in training

Budgeted (Y/N): N	Budgeted amount: N/A	Core __	Choice __
Action item amount:		Line item:	
Fiscal Impact (explain if unbudgeted): This is a request to approve participation in UASI/Homeland Security Grant Programs. Actual projects over \$25,000 will be brought back to the Board for review and approval.			

costs and may be awarded additional monies for regional projects. More information will be provided about these projects in a future staff report as warranted.

In order to receive 2020 UASI grant funds and future Homeland Security Grant funds, the District must designate by resolution at least one authorized agent for this grant. Staff recommends that the board approve two authorized agents by title – the General Manager and the WEROC Director of Emergency Management. The recommendation to designate two authorized agents by title is to allow the greatest flexibility in the grant funding management.

The Board has taken similar action in regards to Homeland Security Funds and Urban Areas Security Initiative (UASI) funds. Attached is the 2020 UASI grant agreement. Additionally, attached is a resolution approving the authorized agents. By signing this agreement, the district would also be eligible for other grants opportunities throughout the 2020 UASI Grant cycle, should a project present itself as a good opportunity that may meet national homeland security goals.

Since 2006, WEROC has obtained \$1,047,294.00 in grants funding to support projects and training.

WEROC remains active with the UASI group and seeks funding when there is discretionary funds available to the Operational Area.

**Attachments**

1. UASI FY 2020 Transfer Agreement
2. Resolution approving execution of transfer agreement and designation of two authorized agents

AGREEMENT

SUB-RECIPIENT: MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

City Contract Number \_\_\_\_\_

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## EXHIBITS

Exhibit A	CalOES FY2020 Grant Assurances
Exhibit B	Certification Regarding Debarment, Suspension and Other Responsibility Matters
Exhibit C	Certification Regarding Lobbying

AGREEMENT FOR TRANSFER OR PURCHASE OF EQUIPMENT/SERVICES OR FOR  
REIMBURSEMENT OF TRAINING COSTS  
FOR FY2020 URBAN AREAS SECURITY INITIATIVE (UASI)

BETWEEN  
THE CITY OF ANAHEIM  
AND MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

THIS AGREEMENT is made and entered into this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between the CITY OF ANAHEIM, a municipal corporation (the "CITY"), and MUNICIPAL WATER DISTRICT OF ORANGE COUNTY (the "SUB-RECIPIENT" or "Contractor").

W I T N E S S E T H

WHEREAS, CITY, acting through the Anaheim Police Department in its capacity as a Core City for the Anaheim/Santa Ana Urban Area under the FY2020 Urban Areas Security Initiative, has applied for, received and accepted a grant entitled "FY 2020 Urban Areas Security Initiative" from the federal Department Of Homeland Security (DHS), Federal Emergency Management Agency (FEMA), through the State of California Governor's Office of Emergency Services (CalOES), to enhance countywide emergency preparedness (the "grant"), as set forth in the grant guidelines and assurances that are incorporated to this Agreement by reference and located at:

"U.S. Department of Homeland Security "Fiscal Year 2020 Homeland Security Grant Program (HSGP) Notice of Funding Opportunity (NOFO)"  
[https://www.fema.gov/sites/default/files/2020-08/fema\\_homeland-security-grant-program-nofo\\_fy-2020.pdf](https://www.fema.gov/sites/default/files/2020-08/fema_homeland-security-grant-program-nofo_fy-2020.pdf)

California Office of Emergency Services "FY2020 Homeland Security Grant Program: California Supplement to Federal Program Guidance and Application Kit"  
<https://www.caloes.ca.gov/GrantsManagementSite/Documents/FY%202020%20HSGP%20State%20Supplement.pdf>

Copies of the grant guidelines shall be retained in the Anaheim/Santa Ana Grant Office.

WHEREAS, this financial assistance is administered by the CITY OF ANAHEIM ("CITY") and is overseen by the California Governor's Office of Emergency Services ("CalOES"); and

WHEREAS, this financial assistance is being provided to address the unique equipment, training, planning, and exercise needs of large urban areas, and to assist them in building an enhanced and sustainable capacity to prevent, respond to, and recover from threats or acts of terrorism; and

WHEREAS, the Anaheim/Santa Ana Urban Area (“ASAUA”) consists of 34 cities in Orange County, including the City of Anaheim and the City of Santa Ana, the County of Orange, Santa Ana Unified School District Police, California State University, Fullerton, University of California, Irvine, Municipal Water District of Orange County, and the Orange County Fire Authority; and

WHEREAS, the Office of Grants Management (“OGM”) awarded a FY2020 UASI Grant of \$5,056,750 (“Grant Funds”) to the CITY OF ANAHEIM, as a Core City, for use in the ASAUA; and

WHEREAS, the CITY has designated the Chief of Police, or his designee and the Anaheim Police Department, Emergency Management Director (“UASI Grant Office”) to provide for terrorism prevention and emergency preparedness; and

WHEREAS, the UASI Grant Office now wishes to distribute FY2020 UASI Grant Funds throughout the ASAUA, as further detailed in this Agreement (“Agreement”) to MUNICIPAL WATER DISTRICT OF ORANGE COUNTY (“SUB-RECIPIENT”) and others;

WHEREAS, the CITY and SUB-RECIPIENT are desirous of executing this Agreement as authorized by the City Council and the Chief of Police which authorizes the CITY to prepare and execute the Agreement.

NOW, THEREFORE, IT IS MUTUALLY AGREED AS FOLLOWS:



I  
INTRODUCTION

§101. Parties to the Agreement

The parties to this Agreement are:

- A. The CITY, a municipal corporation, having its principal office at 425 South Harbor Boulevard, Anaheim, CA 92805; and
- B. MUNICIPAL WATER DISTRICT OF ORANGE COUNTY, a municipal corporation, P.O. Box 20895, Fountain Valley, CA 92708-4736

§102. Representatives of the Parties and Service of Notices

- A. The representatives of the respective parties who are authorized to administer this Agreement and to whom formal notices, demands and communications shall be given are as follows:

- 1. The representative of the City of Anaheim shall be, unless otherwise stated in the Agreement:

Richard LaRochelle, Lieutenant  
Anaheim Police Department  
425 South Harbor Boulevard  
Anaheim, CA. 92805  
Phone: (714) 765-3833  
Fax: (714) 765-1616  
rlarochelle@anaheim.net

- 2. The representative of MUNICIPAL WATER DISTRICT OF ORANGE COUNTY shall be:

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Sub Recipient Name: \_\_\_\_\_

Sub Recipient Address: \_\_\_\_\_

City \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_

- B. Formal notices, demands and communications to be given hereunder by either party shall be made in writing and may be effected by personal delivery or by registered or certified mail, postage prepaid, return receipt

requested and shall be deemed communicated as of the date of mailing.

- C. If the name of the person designated to receive the notices, demands or communications or the address of such person is changed, written notice shall be given, in accord with this section, within five (5) business days of said change.

§103. Independent Party

SUB-RECIPIENT is acting hereunder as an independent party, and not as an agent or employee of the CITY OF ANAHEIM. No employee of SUB-RECIPIENT is, or shall be an employee of the CITY OF ANAHEIM by virtue of this Agreement, and SUB-RECIPIENT shall so inform each employee organization and each employee who is hired or retained under this Agreement. SUB-RECIPIENT shall not represent or otherwise hold out itself or any of its directors, officers, partners, employees, or agents to be an agent or employee of the CITY OF ANAHEIM.

§104. Conditions Precedent to Execution of This Agreement

SUB-RECIPIENT shall provide copies of the following documents to the CITY OF ANAHEIM, unless otherwise exempted.

- A. Grant Assurances in accordance with section 413C of this Agreement attached hereto as Exhibit A and made part hereof.
- B. Certifications Regarding Ineligibility, Suspension and Debarment as required by Executive Order 12549 in accordance with Section 413A12 of this Agreement and attached hereto as Exhibit B and made a part hereof.
- C. Certifications and Disclosures Regarding Lobbying in accordance with Section 413A4 of this Agreement and attached hereto as Exhibit C and made a part hereof. SUB-RECIPIENT shall also file a Disclosure Form at the end of each calendar quarter in which there occurs any event requiring disclosure or which materially affects the accuracy of the information contained in any Disclosure Form previously filed by SUB-RECIPIENT.

## II TERM AND SERVICES TO BE PROVIDED

### §201. Time of Performance

The term of this Agreement shall commence on 8/31/2021 and end on 3/31/2023 or upon the final disbursement of all of the Grant Amount (as defined in Section 301) and any additional period of time as is required to complete any necessary close out activities. Said term is subject to the provisions herein.

### §202. Use of Grant Funds

- A. CITY may, a) transfer to SUB-RECIPIENT, equipment or services purchased with grant funds and in accordance with grant guidelines set forth above; or, b) reimburse SUB-RECIPIENT for purchase of authorized equipment, exercises, services or training upon receiving prior written approval from CITY or its designee and in accordance with grant guidelines and in full compliance with all of the SUB-RECIPIENT'S purchasing and bidding procedures. SUB-RECIPIENT shall specify the equipment, services, exercises and training to be purchased using the Application for Project Funding. A paper copy of this document will be provided to SUB-RECIPIENT by CITY. In addition, a compact disc with a copy of the document will be provided to SUB-RECIPIENT by CITY. If additional copies of the document are needed, SUB-RECIPIENT may contact the Anaheim Grant Coordinator and it will be provided.
- B. SUB-RECIPIENT shall provide any reports requested by the CITY regarding the performance of the Agreement. Reports shall be in the form requested by the CITY, and shall be provided in a timely manner.
- C. SUB-RECIPIENT shall provide the CITY a copy of its most current procurement guidelines and follow its own procurement requirements as long as they meet the minimum federal requirements. Federal procurement requirements for the FY2020 UASI Grant can be found at 2 Code of Federal Regulations (CFR) Part 200 "Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards."
- D. The Authorized Equipment List (AEL) is a list of the allowable equipment which may be purchased pursuant to this Agreement and is located at <https://www.fema.gov/authorized-equipment-list>, and incorporated to this Agreement by reference. A copy of the AEL shall be retained in the Anaheim/Santa Ana Grant Office. Unless otherwise stated in program guidance any equipment acquired pursuant to this Agreement shall meet all mandatory regulations and/or DHS-adopted standards to be eligible for purchase using grant funds.

Any equipment acquired or obtained with Grant Funds:

1. Shall be made available under the California Disaster and Civil Defense Master Mutual Aid Agreement in consultation with representatives of the various fire, emergency medical, hazardous materials response services, and law enforcement agencies within the jurisdiction of the applicant;
2. Shall be consistent with needs as identified in the National Priorities and Core Capabilities, the State Homeland Security Strategy and the Anaheim/Santa Ana Urban Area and Orange County Operational Area Homeland Security Grants Strategy, the Threat Hazard Identification and Risk Assessment (THIRA), the State Preparedness Report; and deployed in conformance with those plans;
3. Shall be made available pursuant to applicable terms of the California Disaster and Civil Defense Master Mutual Aid Agreement and deployed with personnel trained in the use of such equipment in a manner consistent with the California Law Enforcement Mutual Aid Plan or the California Fire Services and Rescue Mutual Aid Plan;
4. Shall be subject to the requirements of Title 2 CFR Part 200.313 and 200.314. For the purposes of this subsection, "Equipment" is defined as nonexpendable property that is not consumed or does not lose its identity by being incorporated into another item of equipment, which costs \$5,000 or more per unit, or is expected to have a useful life of one (1) year or more.
5. Shall be used by SUB-RECIPIENT in the program or project for which it was acquired as long as needed, whether or not the project or program continues to be supported by Federal funds. When no longer useful for the original program or project, the Equipment may be used in other activities currently or previously supported by a Federal agency.
6. Shall be made available for use on other projects or programs currently or previously supported by the Federal Government, providing such use will not interfere with the work on the projects or program for which it was originally acquired. First preference for other use shall be given to other programs or projects supported by the awarding agency.
7. Shall be recorded on a ledger. The record shall include: (a) description of the item of Equipment, (b) serial number or other identification number, (c) the source of funding for the property (including FAIN); (d) who holds the title, (e) date of acquisition; (f) the per unit acquisition cost of the Equipment, (g) percentage of federal participation in the project costs for the Federal award under which the property was acquired, (h) location, and (i) use and

condition of Equipment, and (j) ultimate disposition data including the date of disposal and sale price of the property. Records must be retained pursuant to 2 CFR Part 200.313.

8. All equipment obtained under this Agreement shall have an ASUA identification decal affixed to it, and, when practical, shall be affixed where it is readily visible.
  9. A physical inventory of the Equipment shall be taken and the results reconciled with the Equipment records at least once every two years. Inventory shall also be taken prior to any UASI, State or Federal monitor visits.
  10. SUB-RECIPIENT shall exercise due care to preserve and safeguard equipment acquired with grant funds from damage or destruction and shall provide regular maintenance and such repairs for said equipment as necessary, in order to keep said equipment continually in good working order. Such maintenance and servicing shall be the sole responsibility of SUB-RECIPIENT, who shall assume full responsibility for maintenance and repair of the equipment throughout the life of said equipment.
  11. SUB-RECIPIENT shall identify a Point-of-Contact (POC) to be responsible for all Equipment prior to the receipt of the item(s). POC will serve as the custodian of the Equipment. SUB-RECIPIENT shall notify the CITY of any change in the POC and assume the responsibility of advising the new custodian of all UASI grant program guidelines and requirements.
  12. SUB-RECIPIENT shall contact the ASUA Grant Office prior to initiating the disposition process. Disposal of equipment shall be conducted pursuant to 2 CFR Part 200.313. The ASUA will contact the awarding agency for disposition instructions, if necessary, prior to any action being taken.
- E. Any training paid pursuant to this Agreement shall conform to the guidelines as listed in FY2020 Homeland Security Grant Program, as set forth above. All training expenses must be pre-authorized by CalOES at <https://www.caloes.ca.gov/CaliforniaSpecializedTrainingInstituteSite/Documents/HSG%20Funds%20Tracking%20Number%20Request%20Form.pdf>. A catalogue of Grantor approved and sponsored training courses is available at <https://cdp.dhs.gov/>.
- F. Any exercise paid pursuant to this Agreement shall conform to the guidelines as listed in FY2020 Homeland Security Grant Program, as set forth above. Detailed Homeland Security Exercise and Evaluation Program Guidance is available at <https://www.fema.gov/media-library/assets/documents/32326>.
- G. Any planning paid pursuant to this Agreement shall conform to the guidelines

as listed in FY2020 Homeland Security Grant Program, as set forth above.

- H. Any organizational activities paid pursuant to this Agreement shall conform to the guidelines as listed in FY2020 Homeland Security Grant Program, as set forth above.

### III PAYMENT

#### §301. Payment of Grant Funds and Method of Payment

- A. CITY may, a) transfer to SUB-RECIPIENT, equipment or services purchased with grant funds; or, b) reimburse SUB-RECIPIENT for the purchase of authorized equipment, exercises, services or training upon receiving prior written approval from CITY or its designee and in accordance with grant guidelines and in full compliance with all of the SUB-RECIPIENT'S purchasing and bidding procedures. SUB-RECIPIENT shall specify the equipment, exercises, services or training to be purchased using the Application for Project Funding. A copy of this document will be provided to SUB-RECIPIENT by CITY. If additional copies of the document are needed, SUB-RECIPIENT may contact the Anaheim Grant Coordinator and it will be provided. Funds may be used for planning, exercises, organizational and training activities, and the purchase of equipment as described in Section 202 above.
- B. SUB-RECIPIENT shall provide invoices to the CITY requesting payment and all supporting documentation. Each reimbursement request shall be accompanied by the Reimbursement Request for Grant Expenditures detailing the expenditures made by SUB-RECIPIENT as authorized by Section 202 above. Each reimbursement request shall be submitted to the Anaheim UASI Grant Office. For equipment for which SUB-RECIPIENT is requesting reimbursement, all appropriate back-up documentation must be attached to the reimbursement form, including invoices, proof of payment, packing slips, and Equipment Reimbursement Worksheet. For training reimbursements, SUB-RECIPIENT must include a copy of any certificates issued or a copy of the class roster verifying training attendees, proof that a CalOES tracking number has been assigned to the course, timesheets and payroll registers for all training attendees, receipts for travel expenses related to the training, and Training Reimbursement Worksheet. For regional project reimbursements, SUB-RECIPIENT must include approval from the lead agency for all submitted invoices.
- C. Payment of final invoice shall be withheld by the CITY until the SUB-RECIPIENT has turned in all supporting documentation and completed the requirements of this Agreement.
- D. It is understood that the CITY makes no commitment to fund this Agreement beyond the terms set forth herein.
- E. Funding for all periods of this Agreement is subject to the continuing availability to the CITY of federal funds for this program. The Agreement may be terminated immediately upon written notice to SUB-RECIPIENT of a loss or reduction of federal grant funds.



#### IV STANDARD PROVISIONS

##### §401. Construction of Provisions and Titles Herein

All titles or subtitles appearing herein have been inserted for convenience and shall not be deemed to affect the meaning or construction of any of the terms or provisions hereof. The language of this Agreement shall be construed according to its fair meaning and not strictly for or against either party. The word "Sub-recipient" herein and in any amendments hereto includes the party or parties identified in this Agreement. The singular shall include the plural. If there is more than one Sub-recipient as identified herein, unless expressly stated otherwise, their obligations and liabilities hereunder shall be joint and several. Use of the feminine, masculine, or neuter genders shall be deemed to include the genders not used.

##### §402. Applicable Law, Interpretation and Enforcement

Each party's performance hereunder shall comply with all applicable laws of the United States of America, the State of California, and the CITY. This Agreement shall be enforced and interpreted under the laws of the State of California and the CITY.

If any part, term or provision of this Agreement shall be held void, illegal, unenforceable, or in conflict with any law of a federal, state or local government having jurisdiction over this Agreement, the validity of the remaining portions of provisions shall not be affected thereby.

##### §403. Integrated Agreement

This Agreement sets forth all of the rights and duties of the parties with respect to the subject matter hereof, and replaces any and all previous agreements or understandings, whether written or oral, relating thereto. This Agreement may be amended only by a written instrument executed by both parties hereto.

##### §404. Excusable Delays

In the event that performance on the part of any party hereto shall be delayed or suspended as a result of circumstances beyond the reasonable control and without the fault and negligence of said party, none of the parties shall incur any liability to the other parties as a result of such delay or suspension. Circumstances deemed to be beyond the control of the parties hereunder shall include, but not be limited to, acts of God or of the public enemy; insurrection; acts of the Federal Government or any unit of State or Local Government in either sovereign or contractual capacity; fires; floods; epidemics; quarantine

restrictions; strikes, freight embargoes or delays in transportation; to the extent that they are not caused by the party's willful or negligent acts or omissions and to the extent that they are beyond the party's reasonable control.

§405. Breach

Except for excusable delays, if any party fails to perform, in whole or in part, any promise, covenant, or agreement set forth herein, or should any representation made by it be untrue, any aggrieved party may avail itself of all rights and remedies, at law or equity, in the courts of law. Said rights and remedies are cumulative of those provided for herein except that in no event shall any party recover more than once, suffer a penalty or forfeiture, or be unjustly compensated.

§406. Prohibition Against Assignment or Delegation

SUB-RECIPIENT may not, unless it has first obtained the written permission of the CITY:

- A. Assign or otherwise alienate any of its rights hereunder, including the right to payment; or
- B. Delegate, subcontract, or otherwise transfer any of its duties hereunder.

§407. Permits

SUB-RECIPIENT and its officers, agents and employees shall obtain and maintain all permits and licenses necessary for SUB-RECIPIENT performance hereunder and shall pay any fees required therefore. SUB-RECIPIENT further certifies to immediately notify the CITY of any suspension, termination, lapses, non-renewals or restrictions of licenses, certificates, or other documents.

§408. Bonds

SUB-RECIPIENT must purchase a performance bond for any equipment item over \$250,000 or any vehicle (including aircraft or watercraft) financed with homeland security funds. SUB-RECIPIENT must provide a copy of performance bond to CITY no later than the time of reimbursement.

§409. Indemnification

To the fullest extent of the law, SUB-RECIPIENT agrees to indemnify, defend, and hold harmless the City of Anaheim, its officers, agents, employees, representatives and designated volunteers from and against any and all claims, demands, defense costs, or liability of any kind or nature arising out of or resulting from, or any way connected with SUB-RECIPIENT'S acts, errors or omissions in the performance of SUB-RECIPIENT'S services or use of grant funds under the terms of this Agreement.

#### §410. Conflict of Interest

- A. SUB-RECIPIENT covenants that none of its directors, officers, employees, or agents shall participate in selecting, or administering any subcontract supported (in whole or in part) by Federal funds where such person is a director, officer, employee or agent of the subcontractor; or where the selection of subcontractors is or has the appearance of being motivated by a desire for personal gain for themselves or others such as family business, etc.; or where such person knows or should have known that:
1. A member of such person's immediate family, or domestic partner or organization has a financial interest in the subcontract;
  2. The subcontractor is someone with whom such person has or is negotiating any prospective employment; or
  3. The participation of such person would be prohibited by the California Political Reform Act, California Government Code §87100 et seq. if such person were a public officer, because such person would have a "financial or other interest" in the subcontract.
- B. Definitions:
1. The term "immediate family" includes but is not limited to domestic partner and/or those persons related by blood or marriage, such as husband, wife, father, mother, brother, sister, son, daughter, father in law, mother in law, brother in law, sister in law, son in law, daughter in law.
  2. The term "financial or other interest" includes but is not limited to:
    - a. Any direct or indirect financial interest in the specific contract, including a commission or fee, a share of the proceeds, prospect of a promotion or of future employment, a profit, or any other form of financial reward.
    - b. Any of the following interests in the subcontractor ownership: partnership interest or other beneficial interest of five percent or more; ownership of five percent or more of the stock; employment in a managerial capacity; or membership on the board of directors or governing body.
- C. The SUB-RECIPIENT further covenants that no officer, director, employee, or agent shall solicit or accept gratuities, favors, anything of monetary value from any actual or potential subcontractor, supplier, a party to a sub agreement, (or persons who are otherwise in a position to benefit from the actions of any officer, employee, or agent).
- D. The SUB-RECIPIENT shall not subcontract with a former director, officer, or employee within a one year period following the termination of the relationship

between said person and the Contractor.

- E. Prior to obtaining the CITY'S approval of any subcontract, the SUB-RECIPIENT shall disclose to the CITY any relationship, financial or otherwise, direct or indirect, of the SUB-RECIPIENT or any of its officers, directors or employees or their immediate family with the proposed subcontractor and its officers, directors or employees.
- F. For further clarification of the meaning of any of the terms used herein, the parties agree that references shall be made to the guidelines, rules, and laws of the SUB-RECIPIENT, State of California, and Federal regulations regarding conflict of interest.
- G. The SUB-RECIPIENT warrants that it has not paid or given and will not pay or give to any third person any money or other consideration for obtaining this Agreement.
- H. The SUB-RECIPIENT covenants that no member, officer or employee of SUB-RECIPIENT shall have interest, direct or indirect, in any contract or subcontract or the proceeds thereof for work to be performed in connection with this project during his/her tenure as such employee, member or officer or for one year thereafter.
- I. The SUB-RECIPIENT shall incorporate the foregoing subsections of this Section into every agreement that it enters into in connection with this project and shall substitute the term "subcontractor" for the term "SUB-RECIPIENT" and "sub subcontractor" for "Subcontractor".

#### §411. Restriction on Disclosures

Any reports, analysis, studies, drawings, information, or data generated as a result of this Agreement are to be governed by the California Public Records Act (California Government Code Sec. 6250, et seq.).

#### §412. Statutes and Regulations Applicable To All Grant Contracts

##### A. Compliance With Grant Assurances

To obtain the Grant Funds, the Grantor required an authorized representative of the CITY to sign certain promises regarding the way the Grant Funds would be spent ("Grant Assurances"), attached hereto as Exhibit A. By signing these Grant Assurances, the CITY became liable to the Grantor for any funds that are used in violation of the grant requirements. SUB-RECIPIENT shall be liable to the Grantor for any funds the Grantor determines SUB-RECIPIENT used in violation of these Grant Assurances. SUB-RECIPIENT shall indemnify and hold harmless the CITY for any sums the Grantor determines SUB-RECIPIENT used in violation of the Grant Assurances.

- B. SUB-RECIPIENT shall comply with all applicable requirements of state, federal, county and SUB-RECIPIENT laws, executive orders, regulations, program and

administrative requirements, policies and any other requirements governing this Agreement. SUB-RECIPIENT shall comply with state and federal laws and regulations pertaining to labor, wages, hours, and other conditions of employment. SUB-RECIPIENT shall comply with new, amended, or revised laws, regulations, and/or procedures that apply to the performance of this Agreement. These requirements include, but are not limited to:

1. Office of Management and Budget (OMB) Circulars

SUB-RECIPIENT shall comply with 2 Code of Federal Regulations (CFR) Part 200 (Uniform Administrative, Cost Principles, and Audit Requirements for Federal Awards).

2. Single Audit Act

If Federal funds are used in the performance of this Agreement, SUB-RECIPIENT shall adhere to the rules and regulations of the Single Audit Act, 31 USC Sec. 7501 et seq.; Title 2 Code of Federal Regulations, Part 200, Subpart F Audit Requirements; and any administrative regulation or field memos implementing the Act. When reporting under on the FY2020 UASI Grant Program under the Single Audit Act, SUB-RECIPIENT shall use Catalog of Federal Domestic Assistance (CFDA) Program Number 97.067 "Homeland Security Grant Program"; Grant Identification Number 2020-0095; and identify the City of Anaheim as the Pass-Through.

3. Records Maintenance

Records, in their original form, shall be maintained in accordance with requirements prescribed by the CITY with respect to all matters covered on file for all documents specified in this Agreement. Original forms are to be maintained on file for all documents specified in this Agreement. Such records shall be retained for a period of three (3) years after the CITY receives notification of grant closeout from CalOES, and after final disposition of all pending matters. "Pending matters" include, but are not limited to, an audit, litigation or other actions involving records. The CITY may, at its discretion, take possession of, retain and audit said records. Records, in their original form pertaining to matters covered by this Agreement, shall at all times be retained within the County of Orange unless authorization to remove them is granted in writing by the CITY.

4. Subcontracts and Procurement

SUB-RECIPIENT shall comply with the federal and SUB-RECIPIENT standards in the award of any subcontracts. For purposes of this Agreement, subcontracts shall include but not be limited to purchase agreements, rental or lease agreements, third party agreements, consultant service contracts and

construction subcontracts.

SUB-RECIPIENT shall ensure that the terms of this Agreement with the CITY are incorporated into all Subcontractor Agreements. The SUB-RECIPIENT shall submit all Subcontractor Agreements to the CITY for review prior to the release of any funds to the subcontractor. The SUB-RECIPIENT shall withhold funds to any subcontractor agency that fails to comply with the terms and conditions of this Agreement and their respective Subcontractor Agreement.

5. Civil Rights

SUB-RECIPIENT shall comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681- 1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) The Age Discrimination act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation act of 1970 (P.L. 91-616) as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601, et seq.), as amended, relating to non-discrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; (j) the requirements of any other nondiscrimination statute(s) which may apply to the application; and (k) P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.

6. Telecommunications (2 CFR 200.216)

SUBRECIPIENT will comply with FEMA Policy 405-143-1, Prohibitions on Expending FEMA Award Funds on Covered Telecommunication Equipment or Services (Interim), which prohibits grant recipients and subrecipients from obligating or expending loan or grant funds to procure or obtain, extend or renew a contract to procure or obtain, or to enter into a contract (or

extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system.

### C. Statutes and Regulations Applicable To This Particular Grant

SUB-RECIPIENT shall comply with all applicable requirements of state and federal laws, executive orders, regulations, program and administrative requirements, policies and any other requirements governing this particular grant program. SUB-RECIPIENT shall comply with new, amended, or revised laws, regulations, and/or procedures that apply to the performance of this Agreement. These requirements include, but are not limited to:

1. Title 2 Code of Federal Regulations (CFR) Part 200; EO 12372; Department of Justice (DOJ) Office of Judicial Programs (OJP) Office of the Comptroller, U.S. Department of Homeland Security, Preparedness Directorate Financial Management Guide; U.S. Department of Homeland Security, Office of Grants and Training, FY 2020 Homeland Security Grant Program –Notice of Funding Opportunity; ODP WMD Training Course Catalogue; and DOJ Office for Civil Rights.

Standardized Emergency Management System (SEMS) requirements as stated in the California Emergency Services Act, Government Code Chapter 7 of Division 1 of Title 2, § 8607.1(e) and CCR Title 19, §§ 2445-2448.

Provisions of 44 CFR applicable to grants and cooperative agreements, including Part 18, Administrative Review Procedures; Part 20, Criminal Justice Information Systems; Part 22, Confidentiality of Identifiable Research and Statistical Information; Part 23, Criminal Intelligence Systems Operating Policies; Part 30, Intergovernmental Review of Department of Justice Programs and Activities; Part 35, Nondiscrimination on the Basis of Disability in State and Local Government Services; Part 38, Equal Treatment of Faith-based Organizations; Part 42, Nondiscrimination/Equal employment Opportunities Policies and Procedures; Part 61, Procedures for Implementing the National Environmental Policy Act; Part 63, Floodplain Management and Wetland Protection Procedures; Part 64, Floodplain Management and Wetland Protection Procedures; Federal laws or regulations applicable to federal Assistance Programs; Part 69, New Restrictions on Lobbying; Part 70, Uniform Administrative Requirements for Grants and Cooperative Agreements (including sub-awards) with Institutions of Higher Learning, Hospitals and other Non-Profit Organizations; and Part 83, Government- Wide Requirements for a Drug Free Workplace (grants).

2. Travel Expenses

SUB-RECIPIENT as provided herein may be compensated for SUB-RECIPIENT'S reasonable travel expenses incurred in the performance of this Agreement, to include travel and per diem, unless otherwise expressed. Travel including in-State and out-of-State travel shall not be reimbursed without prior written authorization from the UASI Grant Office.

SUB-RECIPIENT'S travel and per diem reimbursement costs shall be reimbursed based on the SUB-RECIPIENT'S travel policies and procedures. If SUB-RECIPIENT does not have established travel policies and procedures, SUB-RECIPIENT'S reimbursement rates shall not exceed the amounts established under 5 U.S.C 5701-11, ("Travel and Subsistence Expenses; Mileage Allowances"), or by the Administrator of General Services, or by the President (or his or her designee) pursuant to any provisions of such subchapter must apply to travel under federal awards (48 CFR 31.205-46(a)).

3. Noncompliance

SUB-RECIPIENT understands that failure to comply with any of the above assurances may result in suspension, termination or reduction of grant funds, and repayment by SUB-RECIPIENT to CITY of any unlawful expenditures.

§413. Federal, State and Local Taxes

Federal, State and local taxes shall be the responsibility of SUB-RECIPIENT as an independent party and not as a CITY employee.

§414. Inventions, Patents and Copyrights

A. Reporting Procedure for Inventions

If any project produces any invention or discovery (Invention) patentable or otherwise under title 35 of the U.S. Code, including, without limitation, processes and business methods made in the course of work under this Agreement, the SUB-RECIPIENT shall report the fact and disclose the Invention promptly and fully to the CITY. The CITY shall report the fact and disclose the Invention to the Grantor. Unless there is a prior agreement between the CITY and the Grantor, the Grantor shall determine whether to seek protection on the Invention. The Grantor shall determine how the rights in the Invention, including rights under any patent issued thereon, will be allocated and administered in order to protect the public interest consistent with the policy ("Policy") embodied in the Federal Acquisition Regulations System, which is based on Ch. 18 of title 35 U.S.C. Sections 200, et seq. (Pub. L. 95-517, Pub. L. 98-620, 37 CFR part 401); Presidential Memorandum



on Government Patent Policy to the Heads of the Executive Departments and Agencies, dated 2/18/1983); and Executive Order 12591, 4/10/87, 52 FR 13414, 3 CFR, 1987 Comp., p. 220 (as amended by Executive Order 12618, 12/22/87, 52 FR 48661, 3 CFR, 1987 Comp., p. 262). SUB-RECIPIENT hereby agrees to be bound by the Policy, and will contractually require its personnel to be bound by the Policy.

B. Rights to Use Inventions

CITY shall have an unencumbered right, and a non-exclusive, irrevocable, royalty- free license, to use, manufacture, improve upon, and allow others to do so for all government purposes, any Invention developed under this Agreement.

C. Copyright Policy

1. Unless otherwise provided by the terms of the Grantor or of this Agreement, when copyrightable material ("Material") is developed under this Agreement, the author or the CITY, at the CITY'S discretion, may copyright the Material. If the CITY declines to copyright the Material, the CITY shall have an unencumbered right, and a non-exclusive, irrevocable, royalty- free license, to use, manufacture, improve upon, and allow others to do so for all government purposes, any Material developed under this Agreement.
2. The Grantor shall have an unencumbered right, and a non-exclusive, irrevocable, royalty-free license, to use, manufacture, improve upon, and allow others to do so for all government purposes, any Material developed under this Agreement or any Copyright purchased under this Agreement.
3. SUB-RECIPIENT shall comply with all applicable requirements in the Code of Federal Regulations related to copyrights and copyright policy.

D. Rights to Data

The Grantor and the CITY shall have unlimited rights or copyright license to any data first produced or delivered under this Agreement. "Unlimited rights" means the right to use, disclose, reproduce, prepare derivative works, distribute copies to the public, and perform and display publicly, or permit others to do so; as required by 48 CFR 27.401. Where the data are not first produced under this Agreement or are published copyrighted data with the notice of 17 U.S.C. Section 401 or 402, the Grantor acquires the data under a copyright license as set forth in 48 CFR 27.404(f)(2) instead of unlimited rights. (48 CFR 27.404(a)).

E. Obligations Binding on Subcontractors

SUB-RECIPIENT shall require all subcontractors to comply with the obligations of this section by incorporating the terms of this section into all subcontracts.

§415. Minority, Women, And Other Business Enterprise Outreach Program

It is the policy of the CITY to provide minority business enterprises (MBEs), women business enterprises (WBEs) and all other business enterprises an equal opportunity to participate in the performance of all SUB-RECIPIENT contracts, including procurement, construction and personal services. This policy applies to all Contractors and Sub-Contractors.

V  
DEFAULTS, SUSPENSION, TERMINATION, AND AMENDMENTS

§501. Defaults

Should SUB-RECIPIENT fail for any reason to comply with the contractual obligations of this Agreement within the time specified by this Agreement, the CITY reserves the right to terminate the Agreement, reserving all rights under state and federal law.

§502. Amendments

Any change in the terms of this Agreement, including changes in the services to be performed by SUB-RECIPIENT and any increase or decrease in the amount of compensation which are agreed to by the CITY and SUB-RECIPIENT shall be incorporated into this Agreement by a written amendment properly executed and signed by the person authorized to bind the parties thereto.

SUB-RECIPIENT agrees to comply with all future CITY directives, or any rules, amendments or requirements promulgated by the CITY affecting this Agreement.

VI  
ENTIRE AGREEMENT

§601. Complete Agreement

This Agreement contains the full and complete Agreement between the two parties. Neither verbal agreement nor conversation with any officer or employee of either party shall affect or modify any of the terms and conditions of this Agreement.

§602. Number of Pages and Attachments

This Agreement is executed in three (3) duplicate originals, each of which is deemed to be an original. This Agreement includes twenty-two (22) pages and three (3) Exhibits which constitute the entire understanding and agreement of the parties.

IN WITNESS WHEREOF, the City and MUNICIPAL WATER DISTRICT OF ORANGE COUNTY have caused this Agreement to be executed by their duly authorized representatives on the date first set forth above.

ATTEST:

CITY OF ANAHEIM, a municipal Corporation  
of the State of California

By: \_\_\_\_\_  
Theresa Bass  
Clerk of the Council

By: \_\_\_\_\_  
Jorge Cisneros  
Chief of Police

SUB-RECIPIENT  
MUNICIPAL WATER DISTRICT OF  
ORANGE COUNTY  
DUNS No. 08-7380721

APPROVED AS TO FORM:

By: \_\_\_\_\_

By: \_\_\_\_\_  
Kristin Pelletier  
Sr. Asst. City Attorney

Printed Name \_\_\_\_\_

Title  
\_\_\_\_\_

APPROVED AS TO FORM

By: \_\_\_\_\_

Printed Name \_\_\_\_\_

Title  
\_\_\_\_\_

## EXHIBIT A

### California Governor's Office of Emergency Services FY2020 Grant Assurances (All HSGP Applicants)

**As the duly authorized representative of the Applicant, I hereby certify** that the Applicant has the legal authority to apply for federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay any non-federal share of project cost) to ensure proper planning, management, and completion of the project described in this application, within prescribed timelines.

**I further acknowledge that the Applicant is responsible for reviewing and adhering to all requirements within the:**

- (a) Applicable Federal Regulations (see below);
- (b) Federal Program Notice of Funding Opportunity (NOFO);
- (c) Federal Preparedness Grants Manual;
- (d) California Supplement to the NOFO; and
- (e) Federal and State Grant Program Guidelines.

#### **Federal Regulations**

Government cost principles, uniform administrative requirements, and audit requirements for federal grant programs are set forth in Title 2, Part 200 of the Code of Federal Regulations (C.F.R.). Updates are issued by the Office of Management and Budget (OMB) and can be found at <http://www.whitehouse.gov/omb/>.

**State and federal grant award requirements are set forth below. The Applicant hereby agrees to comply with the following:**

#### **1. Proof of Authority**

The Applicant will obtain proof of authority from the city council, governing board, or authorized body in support of this project. This written authorization must specify that the Applicant and the city council, governing board, or authorized body agree:

- (a) To provide all matching funds required for the grant project and that any cash match will be appropriated as required;
- (b) Any liability arising out of the performance of this agreement shall be the responsibility of the Applicant and the city council, governing board, or authorized body;
- (c) Grant funds shall not be used to supplant expenditures controlled by the city council, governing board, or authorized body;
- (d) Applicant is authorized by the city council, governing board, or authorized body to apply for federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-federal share of project cost, if any) to ensure proper planning, management and completion of the project described in this application; and
- (e) Official executing this agreement is authorized by the Applicant.

This Proof of Authority must be maintained on file and readily available upon request.

## **2. Period of Performance**

The period of performance is specified in the Award. The Applicant is only authorized to perform allowable activities approved under the award, within the period of performance.

## **3. Lobbying and Political Activities**

As required by Section 1352, Title 31 of the United States Code (U.S.C.), for persons entering into a contract, grant, loan, or cooperative agreement from an agency or requests or receives from an agency a commitment providing for the United States to insure or guarantee a loan, the Applicant certifies that:

- (a) No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.
- (b) If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions.
- (c) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

The Applicant will also comply with provisions of the Hatch Act (5 U.S.C. §§ 1501- 1508 and §§ 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with federal funds.

Finally, the Applicant agrees that federal funds will not be used, directly or indirectly, to support the enactment, repeal, modification or adoption of any law, regulation or policy without the express written approval from the California Governor's Office of Emergency Services (Cal OES) or the federal awarding agency.

## **4. Debarment and Suspension**

As required by Executive Orders 12549 and 12689, and 2 C.F.R. § 200.213 and codified in 2 C.F.R. Part 180, Debarment and Suspension, the Applicant will provide protection against waste, fraud, and abuse by debarring or suspending those persons deemed irresponsible in their dealings with the federal government. The Applicant certifies that it and its principals, recipients, or subrecipients:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;
- (b) Have not within a three-year period preceding this application been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction; violation of federal or state

Initials \_\_\_\_\_

- antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (2)(b) of this certification; and
  - (d) Have not within a three-year period preceding this application had one or more public transaction (federal, state, or local) terminated for cause or default.

Where the Applicant is unable to certify to any of the statements in this certification, he or she shall attach an explanation to this application.

### **5. Non-Discrimination and Equal Employment Opportunity**

The Applicant will comply with all state and federal statutes relating to non-discrimination, including:

- (a) Title VI of the Civil Rights Act of 1964 (Public Law (P.L.) 88-352 and 42 U.S.C. § 2000d et. seq.) which prohibits discrimination on the basis of race, color, or national origin and requires that recipients of federal financial assistance take reasonable steps to provide meaningful access to persons with limited English proficiency (LEP) to their programs and services;
- (b) Title IX of the Education Amendments of 1972, (20 U.S.C. §§ 1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex in any federally funded educational program or activity;
- (c) Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794), which prohibits discrimination against those with disabilities or access and functional needs;
- (d) Americans with Disabilities Act (ADA) of 1990 (42 U.S.C. §§ 12101- 12213), which prohibits discrimination on the basis of disability and requires buildings and structures be accessible to those with disabilities and access and functional needs;
- (e) Age Discrimination Act of 1975, (42 U.S.C. §§ 6101-6107), which prohibits discrimination on the basis of age;
- (f) Public Health Service Act of 1912 (42 U.S.C. §§ 290 dd—2), relating to confidentiality of patient records regarding substance abuse treatment;
- (g) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. § 3601 et seq.), relating to nondiscrimination in the sale, rental or financing of housing as implemented by the Department of Housing and Urban Development at 24 C.F.R. Part 100. The prohibition on disability discrimination includes the requirement that new multifamily housing with four or more dwelling units—i.e., the public and common use areas and individual apartment units (all units in buildings with elevators and ground-floor units in buildings without elevators)— be designed and constructed with certain accessible features (See 24 C.F.R. § 100.201);
- (h) Executive Order 11246, which prohibits federal contractors and federally assisted construction contractors and subcontractors, who do over \$10,000 in Government business in one year from discriminating in employment decisions on the basis of race, color, religion, sex, sexual orientation, gender identification or national origin;
- (i) Executive Order 11375, which bans discrimination on the basis of race, color, religion, sex, sexual orientation, gender identification, or national origin in hiring and employment in both the United States federal workforce and on the part of government contractors;
- (j) California Public Contract Code § 10295.3, which prohibits discrimination based on domestic partnerships and those in same sex marriages;



- (k) DHS policy to ensure the equal treatment of faith-based organizations, under which all applicants and recipients must comply with equal treatment policies and requirements contained in 6 C.F.R. Part 19;
- (l) California's Fair Employment and Housing Act (FEHA) (California Government Code §§12940, 12945, 12945.2), as applicable. FEHA prohibits harassment and discrimination in employment because of ancestry, familial status, race, color, religious creed (including religious dress and grooming practices), sex (which includes pregnancy, childbirth, breastfeeding and medical conditions related to pregnancy, childbirth or breastfeeding), gender, gender identity, gender expression, sexual orientation, marital status, national origin, ancestry, mental and physical disability, genetic information, medical condition, age, pregnancy, denial of medical and family care leave, or pregnancy disability leave, military and veteran status, and/or retaliation for protesting illegal discrimination related to one of these categories, or for reporting patient abuse in tax supported institutions;
- (m) Any other nondiscrimination provisions in the specific statute(s) under which application for federal assistance is being made; and
- (n) The requirements of any other nondiscrimination statute(s) that may apply to this application.

## **6. Drug-Free Workplace**

As required by the Drug-Free Workplace Act of 1988 (41 U.S.C. § 701 et seq.), the Applicant certifies that it will maintain a drug-free workplace and a drug-free awareness program as outlined in the Act.

## **7. Environmental Standards**

The Applicant will comply with state and federal environmental standards, including:

- (a) California Environmental Quality Act (CEQA) (California Public Resources Code §§ 21000- 21177), to include coordination with the city or county planning agency;
- (b) CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, §§ 15000- 15387);
- (c) Federal Clean Water Act (CWA) (33 U.S.C. § 1251 et seq.), which establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters;
- (d) Federal Clean Air Act of 1955 (42 U.S.C. § 7401) which regulates air emissions from stationary and mobile sources;
- (e) Institution of environmental quality control measures under the National Environmental Policy Act (NEPA) of 1969 (P.L. 91-190); the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA; and Executive Order 12898 which focuses on the environmental and human health effects of federal actions on minority and low-income populations with the goal of achieving environmental protection for all communities;
- (f) Evaluation of flood hazards in floodplains in accordance with Executive Order 11988;
- (g) Executive Order 11514 which sets forth national environmental standards;
- (h) Executive Order 11738 instituted to assure that each federal agency empowered to enter into contracts for the procurement of goods, materials, or services and each federal agency empowered to extend federal assistance by way of grant, loan, or contract shall undertake such procurement and assistance activities in a manner that will result in effective enforcement of the Clean Air Act and the Federal Water Pollution Control Act Executive Order 11990 which requires preservation of wetlands;
- (i) The Safe Drinking Water Act of 1974, (P.L. 93-523);
- (j) The Endangered Species Act of 1973, (P.L. 93-205);

- (k) Assurance of project consistency with the approved state management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.);
- (l) Conformity of Federal Actions to State (Clear Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.);
- (m) Wild and Scenic Rivers Act of 1968 (16 U.S.C. § 1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.

The Applicant shall not be: 1) in violation of any order or resolution promulgated by the State Air Resources Board or an air pollution district; 2) subject to a cease and desist order pursuant to § 13301 of the California Water Code for violation of waste discharge requirements or discharge prohibitions; or 3) determined to be in violation of federal law relating to air or water pollution.

#### **8. Audits**

For subrecipients expending \$750,000 or more in federal grant funds annually, the Applicant will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and Title 2 of the Code of Federal Regulations, Part 200, Subpart F Audit Requirements.

#### **9. Access to Records**

In accordance with 2 C.F.R. § 200.336, the Applicant will give the awarding agency, the Comptroller General of the United States and, if appropriate, the state, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award. The Applicant will require any subrecipients, contractors, successors, transferees and assignees to acknowledge and agree to comply with this provision.

#### **10. Conflict of Interest**

The Applicant will establish safeguards to prohibit the Applicant's employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.

#### **11. Financial Management**

False Claims for Payment - The Applicant will comply with 31 U.S.C §§ 3729-3733 which sets forth that no subrecipient, recipient, or subrecipient shall submit a false claim for payment, reimbursement or advance.

#### **12. Reporting - Accountability**

The Applicant agrees to comply with applicable provisions of the Federal Funding Accountability and Transparency Act (FFATA) (P.L. 109-282), specifically (a) the reporting of subawards obligating \$25,000 or more in federal funds and (b) executive compensation data for first-tier subawards. This includes the provisions of FFATA, which includes requirements for executive compensation, and also requirements implementing the Act for the non-federal entity at 2 C.F.R. Part 25 Financial Assistance Use of Universal Identifier and Central Contractor Registration and 2 C.F.R. Part 170 Reporting Subaward and Executive Compensation Information.

#### **13. Whistleblower Protections**

The Applicant also must comply with statutory requirements for whistleblower protections at 10 U.S.C. § 2409, 41 U.S.C. § 4712, and 10 U.S.C. § 2324, 41 U.S.C. § 4304 and § 4310.

#### **14. Human Trafficking**

The Applicant will comply with the requirements of Section 106(g) of the Trafficking Victims Protection Act of 2000, as amended (22 U.S.C. § 7104) which prohibits grant award recipients or a subrecipient from: (1) engaging in trafficking in persons during the period of time that the award is in effect; (2) procuring a commercial sex act during the period of time that the award is in effect; (3) using forced labor in the performance of the award or subawards under the award.

#### **15. Labor Standards**

The Applicant will comply with the following federal labor standards:

- (a) The Davis-Bacon Act (40 U.S.C. §§ 276a to 276a-7), as applicable, and the Copeland Act (40 U.S.C. § 3145 and 18 U.S.C. § 874) and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§ 327-333), regarding labor standards for federally-assisted construction contracts or subcontracts, and
- (b) The Federal Fair Labor Standards Act (29 U.S.C. § 201 et al.) as they apply to employees of institutes of higher learning (IHE), hospitals and other non-profit organizations.

#### **16. Worker's Compensation**

The Applicant must comply with provisions which require every employer to be insured to protect workers who may be injured on the job at all times during the performance of the work of this Agreement, as per the workers compensation laws set forth in California Labor Code §§ 3700 et seq.

#### **17. Property-Related**

If applicable to the type of project funded by this federal award, the Applicant will:

- (a) Comply with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of federal participation in purchase;
- (b) Comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires subrecipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more;
- (c) Assist the awarding agency in assuring compliance with Section 106 of the
- (d) National Historic Preservation Act of 1966, as amended (16 U.S.C. § 470), Executive Order 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §469a-1 et seq.); and
- (e) Comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. § 4831 and 24 CFR Part 35) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.

#### **18. Certifications Applicable Only to Federally-Funded Construction Projects**

For all construction projects, the Applicant will:

- (a) Not dispose of, modify the use of, or change the terms of the real property title or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the federal awarding agency directives and will include a covenant

- in the title of real property acquired in whole or in part with federal assistance funds to assure nondiscrimination during the useful life of the project;
- (b) Comply with the requirements of the awarding agency with regard to the drafting, review and approval of construction plans and specifications; and
  - (c) Provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progressive reports and such other information as may be required by the assistance awarding agency or State.

**19. Use of Cellular Device While Driving is Prohibited**

Applicants are required to comply with California Vehicle Code sections 23123 and 23123.5. These laws prohibit driving motor vehicle while using an electronic wireless communications device to write, send, or read a text-based communication. Drivers are also prohibited from the use of a wireless telephone without hands-free listening and talking, unless to make an emergency call to 911, law enforcement, or similar services.

**20. California Public Records Act and Freedom of Information Act**

The Applicant acknowledges that all information submitted in the course of applying for funding under this program, or provided in the course of an entity's grant management activities that are under Federal control, is subject to the Freedom of Information Act (FOIA), 5 U.S.C. § 552, and the California Public Records Act, California Government Code section 6250 et seq. The Applicant should consider these laws and consult its own State and local laws and regulations regarding the release of information when reporting sensitive matters in the grant application, needs assessment, and strategic planning process.

**HOMELAND SECURITY GRANT PROGRAM (HSGP) –  
PROGRAM SPECIFIC ASSURANCES / CERTIFICATIONS**

**21. Acknowledgment of Federal Funding from DHS**

All recipients must acknowledge their use of federal funding when issuing statements, press releases, requests for proposals, bid invitations, and other documents describing projects or programs funded in whole or in part with federal funds.

**22. Activities Conducted Abroad**

All recipients must ensure that project activities carried on outside the United States are coordinated as necessary with appropriate government authorities and that appropriate licenses, permits, or approvals are obtained.

**23. Best Practices for Collection and Use of Personally Identifiable Information (PII)**

DHS defines personally identifiable information (PII) as any information that permits the identity of an individual to be directly or indirectly inferred, including any information that is linked or linkable to that individual. All recipients who collect PII are required to have a publically-available privacy policy that describes standards on the usage and maintenance of PII they collect. Recipients may also find the DHS Privacy Impact Assessments: Privacy Guidance and Privacy template a useful resource respectively.

**24. Copyright**

All recipients must affix the applicable copyright notices of 17 U.S.C. §§ 401 or 402 and an acknowledgement of U.S. Government sponsorship (including the award number) to any work first produced under federal financial assistance awards.

**25. Duplication of Benefits**

Any cost allocable to a particular federal financial assistance award provided for in 2 C.F.R. Part 200, Subpart E may not be charged to other federal financial assistance awards to overcome fund deficiencies, to avoid restrictions imposed by federal statutes, regulations, or federal financial assistance award terms and conditions, or for other reasons. However, these prohibitions would not preclude recipients from shifting costs that are allowable under two or more awards in accordance with existing federal statutes, regulations, or the federal financial assistance award terms and conditions.

**26. Energy Policy and Conservation Act**

All recipients must comply with the requirements of 42 U.S.C. § 6201 which contain policies relating to energy efficiency that are defined in the state energy conservation plan issued in compliance with this Act.

**27. Federal Debt Status**

All recipients are required to be non-delinquent in their repayment of any federal debt. Examples of relevant debt include delinquent payroll and other taxes, audit disallowances, and benefit overpayments. See OMB Circular A-129.

**28. Fly America Act of 1974**

All recipients must comply with Preference for U.S. Flag Air Carriers: (air carriers holding certificates under 49 U.S.C. § 41102) for international air transportation of people and property to the extent that such service is available, in accordance with the International Air Transportation Fair Competitive Practices Act of 1974 (49 U.S.C. § 40118) and the interpretative guidelines issued by the Comptroller General of the United States in the March 31, 1981, amendment to Comptroller General Decision B- 138942.

**29. Hotel and Motel Fire Safety Act of 1990**

In accordance with Section 6 of the Hotel and Motel Fire Safety Act of 1990, all Applicants must ensure that all conference, meeting, convention, or training space funded in whole or in part with federal funds complies with the fire prevention and control guidelines of the Federal Fire Prevention and Control Act of 1974, as amended, 15 U.S.C. § 2225a.

**30. Non-supplanting Requirement**

All recipients who receive federal financial assistance awards made under programs that prohibit supplanting by law must ensure that federal funds do not replace (supplant) funds that have been budgeted for the same purpose through non- federal sources.

**31. Patents and Intellectual Property Rights**

Unless otherwise provided by law, recipients are subject to the Bayh-Dole Act, Pub. L. No. 96-517, as amended, and codified in 35 U.S.C. § 200 et seq. All recipients are subject to the specific requirements governing the development, reporting, and disposition of rights to inventions and patents resulting from financial assistance awards located at 37 C.F.R. Part 401 and the standard patent rights clause located at 37 C.F.R. § 401.14.

**32. SAFECOM**

All recipients who receive federal financial assistance awards made under programs that provide emergency communication equipment and its related activities must comply with the SAFECOM Guidance for Emergency Communication Grants, including provisions on technical standards that ensure and enhance interoperable communications.

**33. Terrorist Financing**

All recipients must comply with Executive Order 13224 and U.S. law that prohibit transactions with, and the provisions of resources and support to, individuals and organizations associated with terrorism. Recipients are legally responsible to ensure compliance with the Order and laws.

**34. Reporting of Matters Related to Recipient Integrity and Performance**

If the total value of the recipient's currently active grants, cooperative agreements, and procurement contracts from all federal assistance offices exceeds \$10,000,000 for any period of time during the period of performance of this federal financial assistance award, you must comply with the requirements set forth in the government-wide Award Term and Condition for Recipient Integrity and Performance Matters located at 2 C.F.R. Part 200, Appendix XII, the full text of which is incorporated here by reference in the award terms and conditions.

**35. USA Patriot Act of 2001**

All recipients must comply with requirements of the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act (USA PATRIOT Act), which amends 18 U.S.C. §§ 175–175c.

**36. Use of DHS Seal, Logo, and Flags**

All recipients must obtain permission from their DHS Financial Assistance Office, prior to using the DHS seal(s), logos, crests or reproductions of flags or likenesses of DHS agency officials, including use of the United States Coast Guard seal, logo, crests or reproductions of flags or likenesses of Coast Guard officials.

**IMPORTANT**

The purpose of the assurance is to obtain federal and state financial assistance, including any and all federal and state grants, loans, reimbursement, contracts, etc. The Applicant recognizes and agrees that state financial assistance will be extended based on the representations made in this assurance. This assurance is binding on the Applicant, its successors, transferees, assignees, etc. Failure to comply with any of the above assurances may result in suspension, termination, or reduction of grant funds.

All appropriate documentation, as outlined above, must be maintained on file by the Applicant and available for Cal OES or public scrutiny upon request. Failure to comply with these requirements may result in suspension of payments under the grant or termination of the grant or both and the subrecipient may be ineligible for award of any future grants if the Cal OES determines that any of the following has occurred: (1) the recipient has made false certification, or (2) violates the certification by failing to carry out the requirements as noted above.

All of the language contained within this document must be included in the award documents for all subawards at all tiers. All recipients are bound by the Department of Homeland Security Standard Terms and Conditions 2020, Version 10.1, hereby incorporated by reference, which can be found at: <https://www.dhs.gov/publication/fy15-dhs-standard-terms-and-conditions>.

**The undersigned represents that he/she is authorized to enter into this agreement for and on behalf of the Applicant.**

Subrecipient: \_\_\_\_\_

Signature of Authorized Agent: \_\_\_\_\_

Printed Name of Authorized Agent: \_\_\_\_\_

Title: \_\_\_\_\_ Date: \_\_\_\_\_

## EXHIBIT B

### CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS

Applicants should refer to the regulations cited below to determine the certification to which they are required to attest. Applicants should also review the instructions for certification included in the regulations before completing this form. Signature of this form provides for compliance with certification requirements under the applicable CFR covering New Restrictions on Government-wide Debarment and Suspension (Nonprocurement). The certification shall be treated as a material representation of fact upon which reliance will be placed when the Agency determines to award the covered transaction or cooperative agreement.

As required by Executive Order 12549, Debarment and Suspension, and implemented under the applicable CFR, for prospective participants in covered transactions, as defined in the applicable CFR

A. The applicant certifies that it and its principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, sentenced to a denial of Federal benefits by a State or Federal court, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three-year period preceding this application been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal State or local) with commission of any of these offenses enumerated in paragraph (1) (b) of this certification; and
- (d) Have not within a three-year period preceding this application had one or more public transactions (Federal, State or local) terminated for cause or default; and

B. Where the applicant is unable to certify to any of the statements in this certification, he or she shall attach an explanation to this application.

\_\_\_\_\_  
Authorized Agent Signature

Address: \_\_\_\_\_

\_\_\_\_\_  
Printed or Typed Name

\_\_\_\_\_  
Title



## **INSTRUCTIONS FOR CERTIFICATION**

1. By signing and submitting this document, the prospective recipient of Federal assistance funds is providing the certification as set out below.
2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective recipient of Federal assistance funds knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
3. The prospective recipient of Federal assistance funds shall provide immediate written notice to the person to whom this agreement is entered, if at any time the prospective recipient of Federal assistance funds learns that its certification was erroneous, when submitted or has become erroneous by reason of changed circumstances.
4. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549.
5. The prospective recipient of Federal assistance funds agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
6. The prospective recipient of Federal assistance funds further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transactions," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the List of Parties Excluded from Procurement or Non Procurement Programs.
8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
9. Except for transactions authorized under Paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

## EXHIBIT C

### CERTIFICATION REGARDING LOBBYING

#### **Certification for Contracts, Grants, Loans and Cooperative Agreements**

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form LLL "Disclosure Form to Report Lobbying" in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.
4. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Subrecipient, as identified below, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Subrecipient understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

AGREEMENT NUMBER: \_\_\_\_\_

\_\_\_\_\_  
CONTRACTOR/BORROWER/AGENCY

\_\_\_\_\_  
NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE

**RESOLUTION NO.**

**MUNICIPAL WATER DISTRICT OF ORANGE COUNTY  
WATER EMERGENCY RESPONSE ORGANIZATION OF ORANGE COUNTY  
(WEROC)  
AUTHORIZATION FOR FEDERAL FINANCIAL ASSISTANCE  
PROVIDED BY THE FEDERAL DEPARTMENT OF HOMELAND SECURITY**

WHEREAS, The Municipal Water District of Orange County (MWDOC) manages the Water Emergency Response Organization of Orange County (WEROC) Program on behalf of the organization's 36 signatories.

WHEREAS, WEROC has been designated by the County of Orange as the water and wastewater Operational Area coordination entity for the purpose of assisting the county's water and wastewater utilities with disaster preparedness, prevention, response, recovery, and mitigation.

WHEREAS, MWDOC desires to keep the WEROC emergency operations centers, communications equipment and other such supplies in good working order and to date with the current technological abilities of the Operational Area.

WHEREAS, MWDOC also desires to keep its program and volunteer staff trained in current emergency management practices and required levels of training according to the National Incident Management System and the California State Emergency Management System.

WHEREAS, MWDOC also desires to ensure eligibility for project and training funding that may become available throughout the year.

WHEREAS, MWDOC has and will continue to submit grant applications to the Homeland Security Grant Program to continue to enhance the capabilities of the WEROC program, its staff and its member agencies.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Municipal Water District of Orange County that the Water Emergency Response Organization of Orange County (WEROC) Director of Emergency Management, or the MWDOC General Manager, is hereby authorized to execute for and on behalf of the Municipal Water District of Orange County, a public entity established under the laws of the State of California, any actions necessary for the purpose of obtaining federal financial assistance provided by the federal Department of Homeland Security and sub-granted through the County of Orange or the Cities of Anaheim and Santa Ana as the Administrators for Fiscal Year Grant 2020.

Said Resolution was adopted, on roll call, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

I hereby certify that the foregoing is a true and correct copy of Resolution No. \_\_\_\_\_ adopted by the Board of Directors of Water District at its meeting held on.

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MARIBETH GOLDSBY  
District Secretary  
Municipal Water District of Orange County



**ACTION ITEM**  
January 19, 2022

**TO:** Board of Directors

**FROM:** **Planning & Operations Committee**  
(Directors Yoo Schneider, Nederhood, Seckel)

Robert Hunter  
General Manager

Staff Contact: J. Berg  
Director of Water Use Efficiency  
R. Davis  
Water Loss Control Programs Supervisor

**SUBJECT:** **Authorization to Contract with Customer Meter Accuracy Testing Companies**

**STAFF RECOMMENDATION**

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Staff recommends the Board of Directors authorize the General Manager to enter into five-year contracts with McCall's Meters, Inc. and Westerly Meter Service Company to provide meter accuracy testing services to retail water agencies throughout Orange County as part of MWD OC's Water Loss Control Shared Services Program.

**COMMITTEE RECOMMENDATION**

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Committee recommends (To be determined at Committee Meeting)

**SUMMARY**

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In December 2018, the Board adopted the Water Loss Control Shared Services Business Plan and authorized staff to begin offering a variety of shared services to water agencies throughout Orange County. Staff has completed a request for proposals process that identified two companies that provide volumetric customer water meter accuracy testing services.

**DETAILED REPORT**

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The Water Loss Control Shared Services Business Plan includes meter accuracy testing as one of the services available to participating retail agencies. Customer water meter test

<b>Budgeted (Y/N):</b> N/A	<b>Budgeted amount:</b> N/A	<b>Core</b> __	<b>Choice</b> <u>X</u>
<b>Action item amount:</b> Five-year Term		<b>Line item:</b> 70	
<b>Fiscal Impact (explain if unbudgeted):</b> Customer meter testing services will be paid by agencies accessing this shared service.			

results inform the assessment of customer metering inaccuracies within the American Water Works Association (AWWA) Water Audit (M36), the quantification of Apparent Losses, and Apparent Loss management program design. Meter accuracy test results will more clearly delineate the volumes of real losses from apparent losses and allow the retailer to take more informed and strategic actions to minimize these losses.

Water Systems Optimization (WSO) will assist agencies in establishing a random representative sample of meters to be tested. The representative sample will include the age, manufacturer, model, and throughput of water in the sales meter population. The targeted number of sales meters to be tested for each agency ranges from a minimum of 30 meters for a small agency to 0.5% of all sales meters for a large agency. As of 2020, four agencies have participated in the Customer Meter Accuracy Shared Service. A total of 1347 small and large meters have been tested as shown in Tables 1 and 2 below.

**Table 1**  
**Small Meter Testing**

Agency	2017	2018	2019	2020
Mesa Water	0	306	643	0
City of Orange	170	0	0	0
South Coast	0	47	54	54
Trabuco Canyon	0	0	44	0
Total	170	353	741	54

**Table 2**  
**Large Meter Testing**

Agency	2017	2018	2019	2020
Mesa Water	0	0	19	0
South Coast	4	0	0	6
Total	4	0	19	6

Meter testing services encompass small meters (3" and smaller) and large meters (4" and larger). Small meters will be removed and placed on a mobile test bench or transported to a testing facility. Large meters will be tested in-situ. Both small meters and large meters will be tested at a minimum of three flow rates that represent a low flow rate, an intermediate flow rate, and a high flow rate. Small meter flow rates will be drawn from AWWA Manual M6: *Water Meters – Selection, Installation, Testing, and Maintenance*. Small meter tests must be conducted for a duration sufficient to ensure a quantity of throughput that minimizes test uncertainty. Large meter test flow rates will be selected based on each meter's consumption history and flow distribution profile. In the absence of this information, large meter test flow rates will be drawn from Manual M6. Large meter tests will also be conducted for a duration sufficient to ensure a quantity of throughput that minimizes test uncertainty.

MWDOC's role in providing this shared service is to select and contract with meter accuracy testing companies and to coordinate testing services with agencies. Retail agencies accessing these services will pay all costs charged by meter testing contractors, along with an administrative fee to MWDOC for coordination of these services. MWDOC's administrative fee is \$346 per batch of meters tested and provides for staff time for coordination and supervision of meter testing services.

Staff prepared a Request for Proposals (RFP) describing the desired meter accuracy testing services. The RFP was released on December 1, 2021 and required proposals to be submitted by December 15, 2021. Staff received two proposals by the deadline. Both contractors offered common pricing structure, which are summarized in Table 3. Both contractors have provided customer meter accuracy testing services to retailers through the MWDOC Shared Services Program for the past 5 years. They have each provided reliable and accurate service and maintained positive working relationships with retail staff. For these reasons, the Staff concluded that both contractors are well qualified to provide meter testing services.

**Table 3**  
**Summary of Meter Accuracy Testing Fees**

	McCall's	Westerly
<b>Small Meter Testing</b>		
5/8 - 1 in.	\$ 45.00	\$ 30.00
1 1/2 in. and up	\$60 to \$65 (1)	\$ 70.00
3 in. Turbine	\$ 80.00	--
<b>Large Meter Testing (in-situ)</b>		
3 in and up.	\$225 (2)	\$ 200.00
<b>Rates for attending meetings</b>	\$125/day	\$150/hr. + mileage

(1) Fixed rate of \$60 for non-turbine meters and \$65 for turbine meters.

(2) Requires a minimum of 4 meters per day; If less than 4 tests, a portal to portal fee of \$125 will be charged.

Staff recommends the Board of Directors authorize the General Manager to enter into five-year contracts with McCall's Meters, Inc. and Westerly Meter Service Company to provide Customer Meter Accuracy Testing Services to retail water agencies throughout Orange County. Contracting with two companies will give agencies a choice of contractors for meter accuracy testing services and will maximize the availability of meter accuracy testing services. Because staff does not have a firm count of meters to be tested over the next five years a "not to exceed" amount is not included in the proposed Board authorization. Rather, staff is requesting authorization for a term of five-years for these services which is consistent with the contracting requirements contained in the District's Administrative Code.

## BOARD OPTIONS

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### Option #1

- Staff recommends the Board of Directors authorize the General Manager to enter into five-year contracts with McCall's Meters, Inc. and Westerly Meter Service Company to provide Customer Meter Accuracy Testing Services to retail water agencies throughout Orange County as part of MWDOC's Water Loss Control Shared Services.

**Fiscal Impact:** None

**Business Analysis:** This recommendation is consistent with the Water Loss Control Shared Services Business Plan adopted by the Board in December 2018.

### Option #2

- Do not facilitate Customer Meter Accuracy Testing Services for retail agencies.

**Fiscal Impact:** Will require agencies to invest considerable staff time to conduct Request for Proposals processes to hire meter accuracy testing contractors.

**Business Analysis:** This recommendation is not consistent with the Water Loss Control Shared Services Business Plan adopted by the Board in December 2018.

## STAFF RECOMMENDATION

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### Option #1





**COMMITTEE DISCUSSION ITEM**

January 3, 2022

**TO:**           **Planning & Operations Committee**  
(Directors Yoo Schneider, Nederhood, Seckel)

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

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

**SUBJECT:**    **Follow-up on December Water Use Efficiency Standards Update**

**STAFF RECOMMENDATION**

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Staff recommends the Planning & Operations Committee review and discuss this follow-up report.

**COMMITTEE RECOMMENDATION**

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Committee recommends (To be determined at Committee Meeting)

**SUMMARY REPORT**

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At the December 2021 Planning & Operations Committee meeting, staff provided the Committee with a detailed update on the evolving Water Use Efficiency standards framework promulgated in 2018 by Senate Bill 606 and Assembly Bill 1668. Following that presentation and discussions between staff and some Board members about the standards framework a few clarifications would be helpful to enhance the boards understanding of the framework.

**DETAILED REPORT**

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At the January 3, 2022 Planning & Operations Committee Meeting, staff will provide the attached presentation clarifying the following four items:

1. Who approves the standards and methodologies recommendations?
2. What have been staffs efforts to help shape the standards framework?
3. What is the schedule for:
  - a. Adoption of standards?

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

- b. Implementation of standards?
4. What are MWDOC's next steps?

Additionally, a variety of stakeholder comment letters are attached for your review that capture a broad range of concerns and recommendations for refinements to the proposed standards.



## Making Conservation a California Way of Life *Conservation Framework Standards Update*



Joe Berg, Director of Water Use Efficiency  
Planning and Operations Committee Meeting

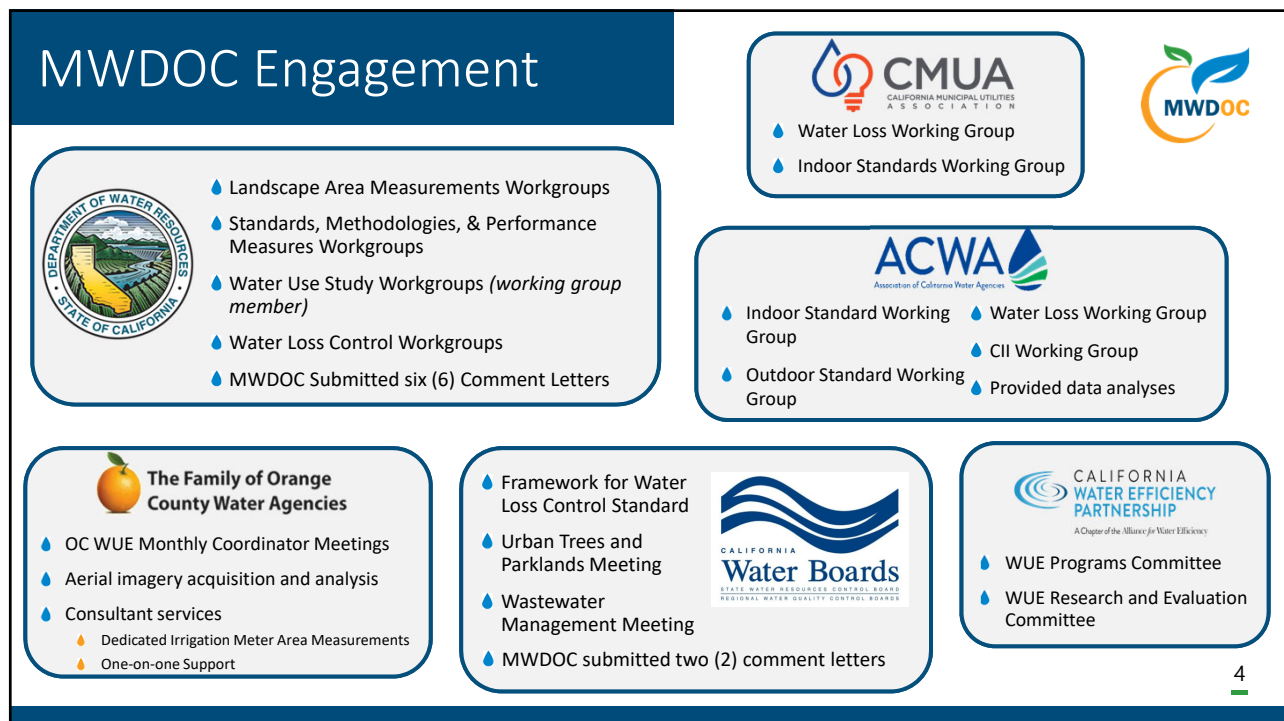
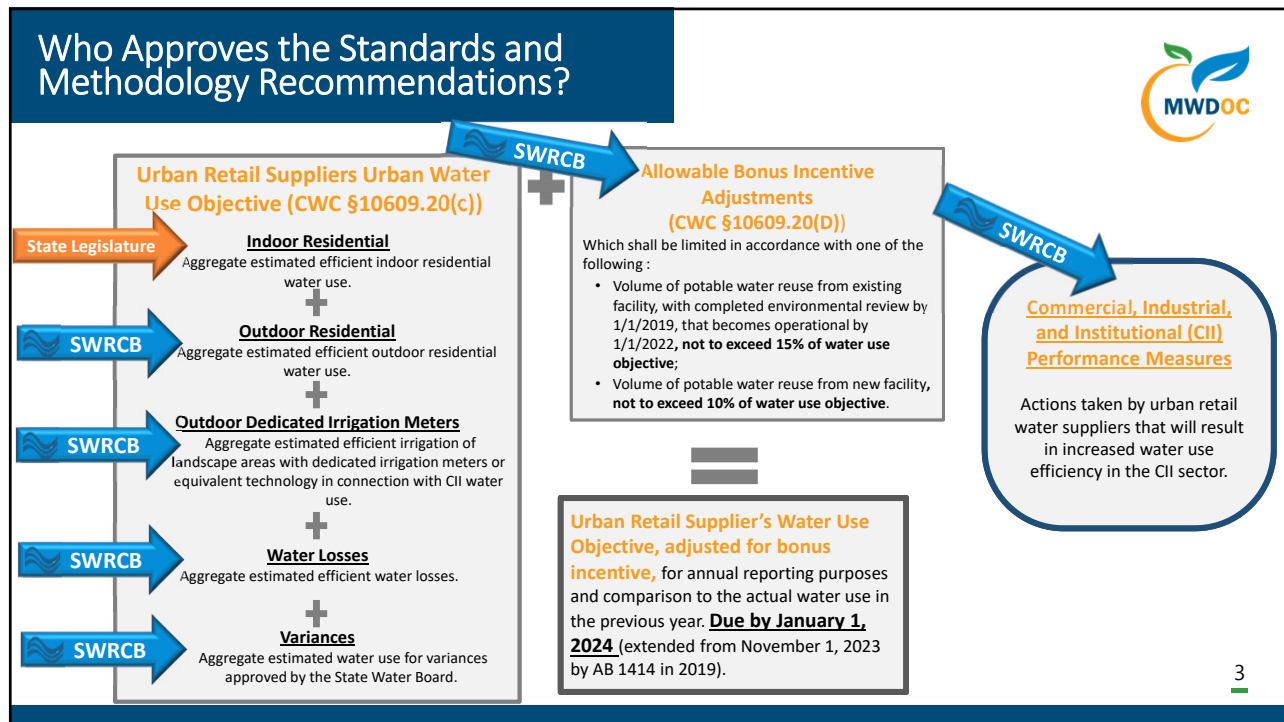
January 3, 2021

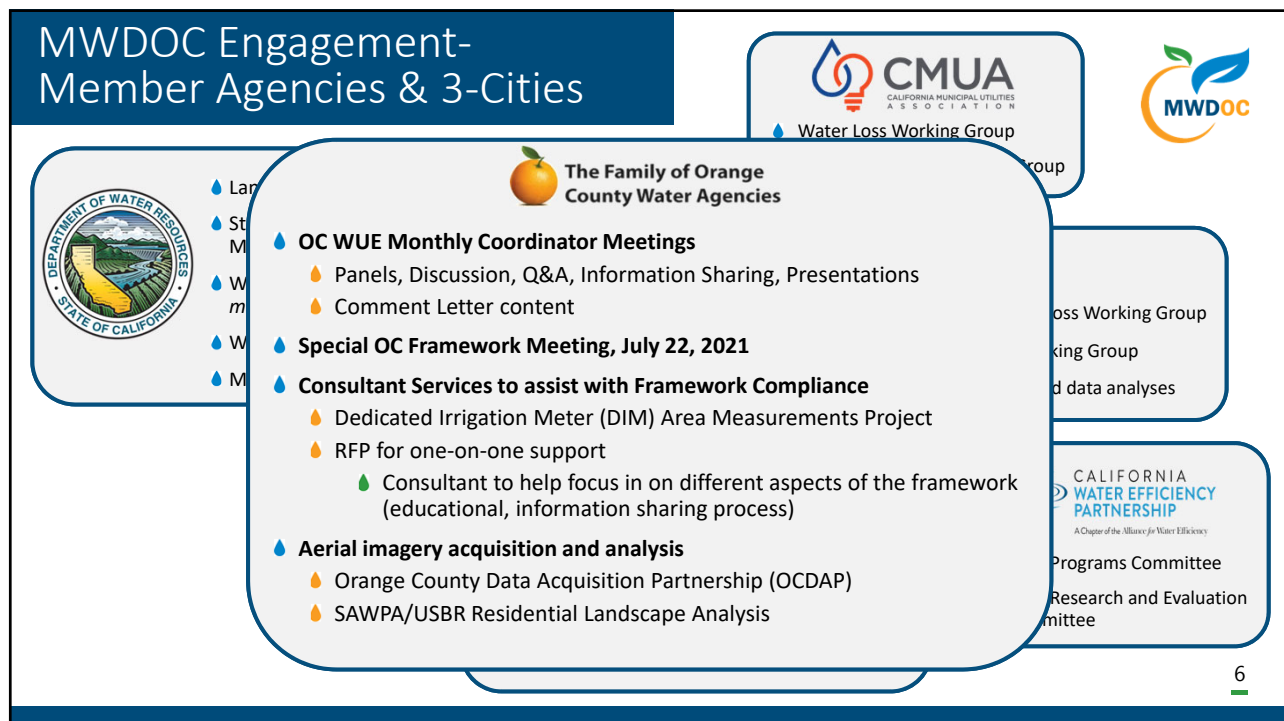
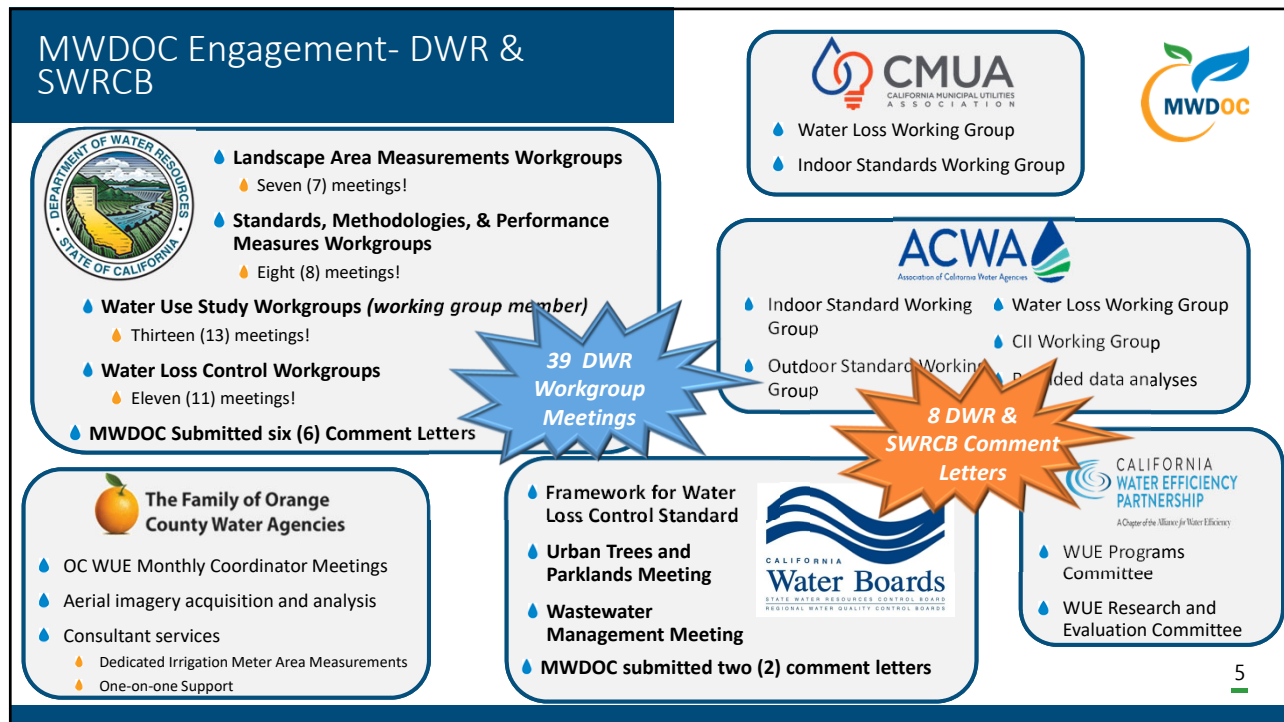
### Presentation Content



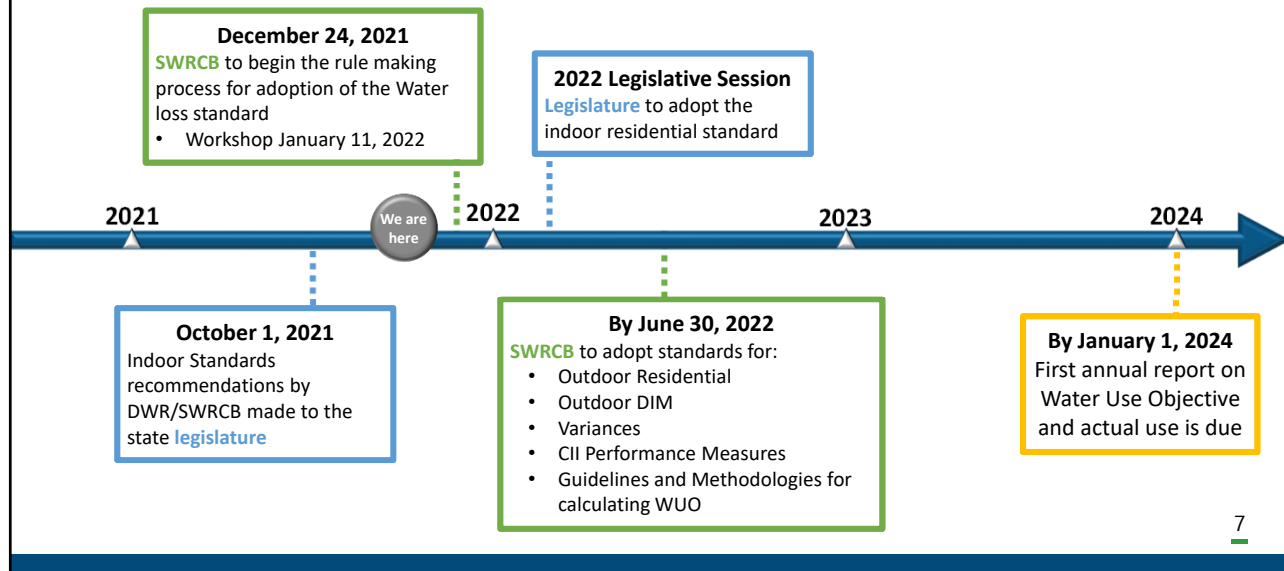
- 01 Who approves DWR's recommended standards & methodologies?
- 02 What have been staffs efforts to help shape the standards framework?
- 03 Schedules
  - 💧 Standards & Methodologies Adoption
  - 💧 Implementation
- 04 What are MWD OCs Next Steps?



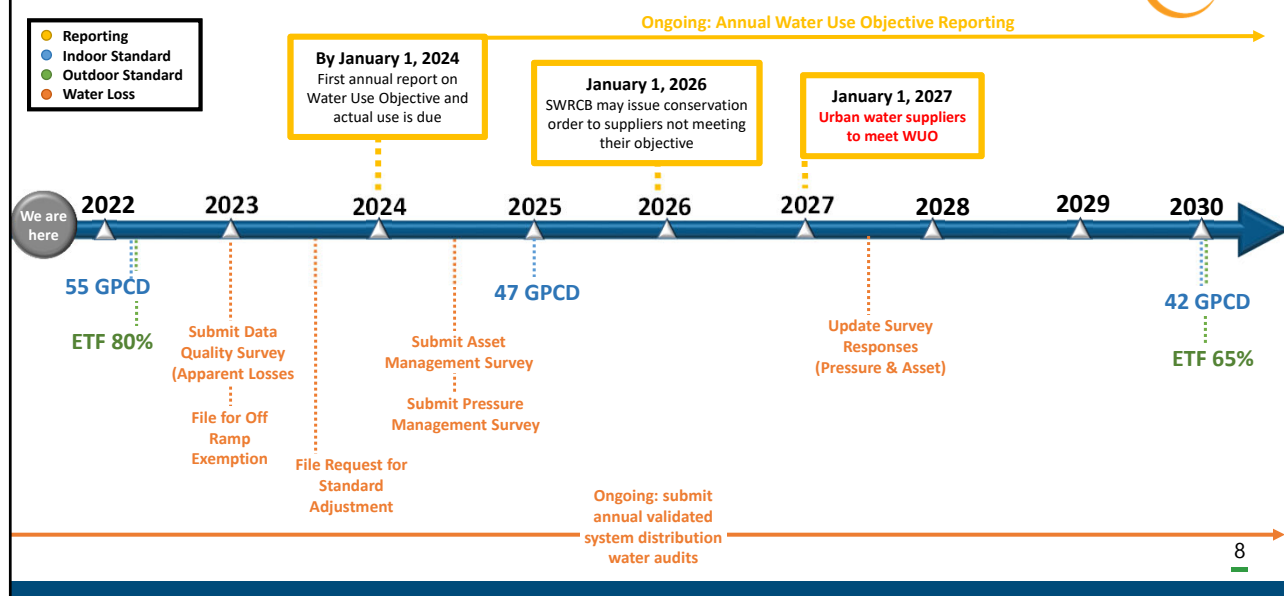




## Schedule for Adoption



## Schedule for Implementation



## Next Steps

- 💧 Continue engagement w/ State Agencies
  - 🔥 Provide comments during rule making processes
  - 🔥 Participate in working groups
- 💧 Monitor and shape potential legislation
- 💧 Continue to collaborate with stakeholders & associations
- 💧 Continue to support retailers agencies
  - 🔥 Host meetings and workshops, disseminate information
  - 🔥 Provide tools to assist with compliance
    - 🌱 Consultant Services, WUE Staff
  - 🔥 Offer WUE Programs & procure grant funding



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Thank you for your attention.  
Please **let us know** if you have questions.

### Joe Berg

Director of Water Use Efficiency

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November 24, 2021

[WUEStandards@water.ca.gov](mailto:WUEStandards@water.ca.gov)

Water Use Efficiency Branch  
California Department of Water Resources  
P.O. Box 942836  
Sacramento, CA 95814

RE: Water Conservation Legislation Comments

Dear Water Use Efficiency Branch,

The Association of California Water Agencies (ACWA), California Municipal Utilities Association (CMUA) and California Water Association (CWA) appreciate the opportunity to submit written comments to the California Department of Water Resources (DWR) on the recently released Water Conservation Legislation material. ACWA represents over 460 local public water agencies that supply water for domestic, agricultural, and industrial uses to over 90 percent of California's population. CMUA represents over 50 water agencies that deliver water to nearly 75 percent of Californians. CWA represents water agencies that provide drinking water to just over 15 percent of the State and are subject to the jurisdiction of the California Public Utilities Commission. ACWA, CMUA and CWA's public agency members are entrusted with the responsibility of supplying the public with safe and reliable drinking water and will be tasked with implementing and complying with *Making Water Conservation a Way of Life*.

ACWA, CMUA and CWA look forward to continuing to collaborate with DWR to address the following input prior to finalizing recommendations to the State Water Resources Control Board. Our comments include input on the:

- A. Guidance and Methodologies
- B. Outdoor Residential Water Use Standard Draft Recommendation
- C. Commercial Outdoor Landscape Area with DIM Standard Recommendation

#### **A. Guidance and Methodologies**

ACWA, CMUA and CWA strongly encourage the State to consider the resources necessary for water suppliers to successfully implement the Water Conservation Legislation. Partnership between local water agencies and the State to secure additional funding to support incentive and education programs necessary to catalyze water savings will be essential for water agencies to cost-effectively meet their water use objectives. Additionally, ACWA, CMUA and CWA strongly encourage the State to provide technical assistance to water suppliers that are not meeting their targets, but may be eligible to receive variances and are struggling to apply.



## B. Outdoor Residential Water Use Standard Draft Recommendation

### 1) ACWA, CMUA and CWA Appreciate DWR Staff's Coordination and Consideration of Stakeholder Comments.

ACWA, CMUA and CWA appreciate DWR staff's coordination with public water agencies in developing the Outdoor Residential Water Use Standard Draft Recommendation (Draft Outdoor Recommendation). As noted in DWR's Draft Outdoor Recommendation, "stakeholder comments and suggestions of the provisional standard were considered in revising the [Draft Outdoor Recommendation] and designing a new approach that addressed the immediate impacts on retail water suppliers and improved long-term outlook for water conservation."<sup>1</sup>

ACWA, CMUA and CWA expressed significant concerns with DWR's June 30, 2021 provisional recommendation of an evapotranspiration factor (ETF) of 0.7. Our concerns were that the 0.7 provisional recommendation would not be feasible for suppliers to meet, would not support existing and healthy landscapes, would have unintended consequences, excluded relevant and credible data, and was based on a design standard (MWELO) rather than a performance standard. DWR staff met with ACWA, CMUA, CWA and our members over the past several months to better understand and vet these concerns.

ACWA, CMUA and CWA continue to have concerns with the revised Draft Outdoor Recommendation and the challenges that many agencies will incur to meet the initial ETF of 0.8 and an ETF of 0.65 by 2030. However, we appreciate DWR's consideration of our input, as reflected in the revised Draft Outdoor Recommendation.

### 2) We Are Concerned that an ETF of 0.65 by 2030 is not Feasible and Strongly Urge DWR to Modify its Recommendation to set the ETF of 0.65 by 2035, or a Later Date.

We do not believe achieving an ETF of 0.65 by 2030, as DWR is currently proposing, would be feasible. DWR's recommendation is inconsistent with its own findings presented at the October 25, 2021 Standards, Methodologies and Performance Measures Working Group Meeting, that an "ETF of 0.7 is not supported,"<sup>2</sup> based on real-world data for existing CII landscape water use efficiency for some efficient water suppliers, and preliminary study data from UC Davis. While the data presented was for CII DIM landscapes, residential landscapes are usually smaller and therefore more difficult to irrigate as efficiently. Additionally, residential landscapes are less likely to be professionally managed, and as a result do not perform as efficiently as CII landscapes. Absent significant advancements in cost-effective irrigation technology and costly upgrades to existing landscapes that would be necessary, it is unclear why the proposed ETF of

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<sup>1</sup> Outdoor Residential Water Use Standard Draft Recommendation. California Department of Water Resources. Nov. 15, 2021. Page 4.

<sup>2</sup> Standards, Methodologies and Performance Measures Working Group PPT. California Department of Water Resources. Oct. 25, 2021. Slide 46.

0.65 would be feasible by 2030. Further, we note that the 2018 legislation intended for DWR to propose a single standard for outdoor residential use and outdoor irrigation of landscape areas with dedicated irrigation meters in connection with CII water use for water suppliers to calculate their objective water use by January 1, 2024. The legislation did not envision a phased-in approach, as proposed by DWR.

Should DWR continue with a proposed phased-in approach, **we urge DWR to provide additional time for water suppliers to meet the significantly reduced standard of 0.65 ETF.** As noted, we believe reducing outdoor use to meet an ETF of 0.65 by 2030 is infeasible and would result in unintended impacts, including to healthy landscapes and disadvantaged communities (see Comment 5). The recommendation should provide for at least an additional five years, or at a later more appropriate date. It is likely that the outdoor residential water use will not be the only element that water suppliers will need to focus on to achieve their water use objective. The additional time requested could enable water suppliers and the State to secure the funding needed for landscape retrofits, build partnerships and allow for necessary technology advancements that would support a responsible shift from a 0.8 to 0.65 ETF. **We note that this change in date would still satisfy the SB X7-7 legislative requirement.**

3) The Assumption of a 0.8 Irrigation System Efficiency Is Not Realistic.

ACWA and CMUA provided additional data and outlined significant concerns in our August 17, 2021 comment letter regarding the assumption of a 0.8 irrigation efficiency (IE). **0.8 IE does not reflect the reality of IE in existing landscapes or how landscapes perform over time.** ACWA and CMUA recommended that an outdoor residential water use efficiency standard be based on an IE that ranges from 0.55 to 0.65. Our recommendation was based on accumulated data from water purveyors on actual irrigation system and performance through the various landscape programs implemented over ten plus years, recently completed field studies by UC Davis (Evapotranspiration Adjustment Factor Study (Agreement #4600008156)), and data by the Irrigation Association. We believe that the 0.55 to 0.65 range more appropriately reflects actual irrigation performance measured in the field and supports irrigation manufacturer specifications.

DWR's Draft Outdoor Recommendation indicated "IE was assigned based on MWEL's IE numbers for spray heads and drip systems. Average ETF was then calculated."<sup>3</sup> ACWA, CMUA and CWA remain concerned that this is an aspirational and infeasible assumption that does not reflect real-world data and presents a skewed expectation of what is feasible. As noted above in Comment 2, DWR's own analysis reached the same conclusion. We encourage DWR to

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<sup>3</sup> Outdoor Residential Water Use Standard Draft Recommendation. California Department of Water Resources. Nov. 15, 2021. Page 4.

reconsider and include the data presented in ACWA and CMUA's August 17, 2021 comment letter.

4) ACWA, CMUA and CWA Note Additional Ongoing Concerns with the Draft Outdoor Recommendation.

The Draft Outdoor Recommendation of a 0.8 ETF from 2023 – 2029 and 0.65 ETF by 2030 would impose significant challenges to many water suppliers that are ultimately responsible for complying with the Water Conservation Legislation. We have encouraged DWR to develop a Draft Outdoor Recommendation that considers real-world performance of irrigation systems and existing landscapes to ensure a standard that is feasible and implementable for the millions of existing landscapes in California. Many of the concerns that we have expressed throughout the development of the Draft Outdoor Recommendation remain and should be addressed prior to DWR finalizing its recommendation to the State Water Resources Control Board.

- Recognition of Existing Housing Stock: DWR should recognize that 80 percent of California's housing stock was built prior to the establishment of MWEL0 in 1993 and these existing residential landscapes were not conceived or built to perform to the design standards found in MWEL0. Of the 20 percent of homes that have been built since MWEL0 has been in place, MWEL0 only applies to developer installed landscaping, which is usually the front yard, and often not applicable to back-yards.
- Recognition of Water Suppliers' Limited Authority: DWR's recommendation must recognize that most water suppliers do not have land use authority and cannot directly control land-use decisions at the parcel level. Water suppliers only have the ability to offer financial incentives. However, ACWA, CMUA and CWA are concerned that compliance with the Draft Outdoor Recommendation requires significant customer investment and behavior changes that water suppliers cannot control. Additionally, absent from the discussion is the availability of State funding and technical assistance to support any Outdoor Recommendation, which will be essential to help customers reduce residential outdoor water use.
- Accurate Quantification of Existing Landscapes: DWR excluded existing landscape data that was outside of the range of a 0.1 to 1.0 ETF. ACWA, CMUA and CWA raised concerns that the exclusion of this data has skewed the reality of existing landscapes and urged DWR to include all applied water data in its analysis. Including the omitted data will provide a more accurate baseline to inform the Draft Outdoor Recommendation.

- Differentiation between Design and Performance: ACWA, CMUA and CWA have expressed strong concerns that DWR based the proposed Draft Outdoor Recommendation on MWELO design standards, rather than the *principles of MWELO* as directed in Water Code Section 10609.9. MWELO standards are intended for use in the technical design of landscapes and are not performance standards. A number of factors affect actual landscape performance: the designs must be installed exactly according to plans and landscapes must be well maintained over time in order to achieve performance that is close to initial design over time. DWR has no enforcement authority to ensure that MWELO is implemented as intended. It is inappropriate for DWR to propose an outdoor standard for water suppliers based on unenforced design standards over which they generally have no authority. The outdoor standard should be based on landscape performance standards and factor in cost-effectiveness and implementation feasibility. The cost to upgrade the majority of existing landscapes into compliance with the MWELO technical design standards in order to be able to comply with the Draft Outdoor Standard far exceeds the cost-effectiveness to water suppliers and property owners.

5) DWR Should Minimize the Potential for Adverse Unintended Impacts.

It is important that DWR, in setting the Draft Outdoor Standard, and those implementing it, discuss and minimize the potential unintended consequences. As proposed, ACWA, CMUA and CWA note the potential to adversely impact shade trees and disproportionately impact disadvantaged communities.

- Shade Trees: ACWA, CMUA and CWA are concerned that residents, in an effort to reduce their outdoor water use, will under-water or fallow their landscape, which would adversely impact shade trees. If done over multiple months and years, this chronic stress would weaken trees and make them more susceptible to opportunistic diseases. Shade trees offer significant benefits to communities, including improved air quality, mitigating urban heat island effects, cooling benefits, and improved quality of housing and communities. Shade trees are one of our best resources to address climate change. If enough parcels in a contiguous area under-water or fallow their landscapes, this would significantly impact shade trees and the benefits their canopies provide.
- Disadvantaged Communities – Individual Parcels: The implementation of DWR's Draft Outdoor Recommendation is intended to apply to a water supplier in the aggregate; however, compliance will require outdoor water use efficiency improvements at the individual parcel level. Water suppliers estimate that landscape renovation can cost between \$5-30 per square foot. To comply with the standard, water suppliers will need to offer incentives and rebates to incentive landscape change. The cost-effectiveness of landscape renovation programs for water suppliers is typically in the \$1-2 per square

foot range. Property owners would need to cover any difference. There is the potential that landowners who can afford to make a landscape change will utilize incentive programs that all ratepayers, including those in disadvantaged communities, must fund through their increasing rates. This issue may become more pronounced as more residents and landowners in disadvantaged communities might not be able to cover the cost of landscape upgrades and as a result fallow landscapes to help achieve water savings.

- **Disadvantaged Communities – Landscape Area Methodology:** DWR’s proposed calculation of what constitutes landscaped area unintentionally and disproportionately affects disadvantaged communities. As proposed, only 20 percent of a water purveyors “Irrigable Not Irrigated” (INI) landscape area is eligible to be added to “Irrigable Irrigated” (II) landscape to make up that water purveyor’s total landscape area. As discussed above, for landowners who have decided to under-water their landscapes and let their lawns go brown, 80 percent of their landscaped area has been discounted by DWR and is not considered into an agency’s total outdoor water use standard. This issue becomes even more pronounced in the future as more in disadvantaged communities might fallow landscapes, as previously described. The additional brown lawns and fallowed landscapes would increase a community’s INI landscape area, meaning that for every square foot a community lets its lawns go brown, DWR would only acknowledge 0.2 square feet in return.

**ACWA, CMUA and CWA recommend that DWR use a map of disadvantaged communities designated by CalEPA at the census block or tract level to better understand how the clustering of single-family residential parcels designated as having high INI align and spatially correlate with the DAC layers.** Additionally, DWR should track this analysis into the future to see how and where INI areas change. If over time INI area expands in DAC communities, these areas would not have prior landscaped areas recognized as such by DWR.

- **Cost of Water/ Affordability:** Proposition 218 prohibits public agencies from charging one class of ratepayers more than the cost of providing service in order to provide water service to another class of customers at a lower, subsidized rate. The State should carefully consider and ensure that the Draft Outdoor Standard would not require water suppliers provide financial incentives beyond what is cost-effective, as those costs will be passed on to ratepayers and limit water agencies’ ability to fund other essential water reliability and infrastructure projects and programs that could more effectively prepare for climate change impacts.

6) The Inclusion of Effective Precipitation Will Further Challenge Feasibility and Create Uncertainty.

ACWA, CMUA and CWA are concerned with the inclusion of effective precipitation in the Draft Outdoor Standard, which results in reductions to the proposed ETFs. DWR's Draft Outdoor Recommendation proposed a reduction of up to 25 percent for effective precipitation. Enacting legislation does not require the inclusion of effective precipitation. DWR is directed to include it only as necessary. Water Code 10609.16 directs that "The guidelines and methodologies shall address, *as necessary*, all of the following... Incorporating precipitation data and climate data into estimates of an urban retail water supplier's outdoor irrigation budget for its urban water use objective." It should be noted that MWELO does not require effective precipitation be used in determining efficient outdoor use; it is optional. We recommend effective precipitation be omitted from the Draft Outdoor Recommendation.

7) Alternative Data Requirements Should be Modified to Allow for "Public Process," rather than Require a Public Hearing.

Water Code Section 10609(b)(2)(D) provides for the use of alternative sources of data if alternative sources are shown to be as accurate as, or more accurate than, the data provided by the Department. The Draft Outdoor Recommendation proposed some general requirements to allow agencies to use alternative data. ACWA, CMUA and CWA are concerned with the requirements "Water supplier's Board of Director's Resolution, or its equivalent," is required to "approve the use of alternative data, after conducting at least one public hearing."<sup>4</sup> DWR should modify this requirement to allow the use of alternative sources of data through a public process, rather than a public hearing. The requirement to hold public hearings would impose additional administrative burdens on water suppliers that are not necessary to achieving the goal of ensuring high quality data.

### C. Commercial Outdoor Landscape Area with DIM Standard Recommendation

1. DWR's Recommended Threshold for Converting to DIM is Problematic.

ACWA, CMUA and CWA recognize that Water Code Section 10609.1 requires DWR to establish a threshold recommendation for converting to dedication irrigation meters (DIM) and to evaluate and recommend technologies that could be used in lieu of requiring DIMs. To inform a recommendation, on April 12, 2021, ACWA submitted *Recommendations for CII Performance Measures and Conversion of Mixed CII Meters* to DWR requesting CII performance measures that focus on actions that will result in actual water savings and are cost-effective. ACWA noted

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<sup>4</sup> Outdoor Residential Water Use Standard Draft Recommendation. California Department of Water Resources. Nov. 15, 2021. Page 5.

the following concerns and challenges with establishing a threshold recommendation for converting CII mixed use meters (MUM) to DIMs:

- Failure to guarantee water savings: The action of converting a CII MUM does not guarantee water savings. It simply serves as a tool to allow property owners and suppliers to track irrigation water use. To achieve water savings, additional investments and water savings behavior is essential, such as procurement of professional water management services, on-site water audits, opting into a web-based platform for tracking usage to a water budget, etc.
- Cost-effectiveness of water savings: The conversion of CII MUM is frequently cost ineffective for CII customers without an incentive. Water agencies that incentivize splitting a CII meter, have found that customers often do not take advantage of the program. Often the return on investment for the agency measured as the avoided cost of water does not merit the project installation. This is due to the offset of significant costs to split the meter.
- Feasibility and complexity of converting meters: Retrofitting an existing CII facility presents significant challenges. Each meter conversion project is unique and has site-specific constraints. Existing piping configuration, hardscape, and other obstructions can add excessive cost or deem the conversion infeasible. Potential complexities that may make meter conversion infeasible include customer property side irrigation layout and potential tie-ins, unavoidable obstruction such as mature trees and existing buildings, service lateral delivery adequacy, and local/municipal requirements.
- Additional financial burden for customers: Retrofitting an existing CII facility with an additional water meter will require the customer to begin paying additional “fixed charges.” Fix charges range in cost based on the size of the water meter, and adding an additional meter will result in a customer paying what could be up to two times the amount than they would have for a single meter.

At its October 25, 2021, Stakeholder Meeting, DWR presented on its preliminary recommendations and findings recharging CII landscape area. ACWA, CMUA and CWA appreciated DWR’s consideration of stakeholder input and DWR’s recognition that “difficulties may exist when converting MUM to DIM,” including “that it may not be feasible to implement DIMs or a DIM-equivalent technology” and “DIMs or a DIM-equivalent technology may not be a cost-effective option.”<sup>5</sup> Additionally, we appreciated that DWR recognized that, “the function of a DIM is to provide measurements for water use.” In-lieu technologies qualified here may not need to provide the same function of a DIM (unlike DIM-equivalent technologies) but should **address the end goal of efficient use of water**. This is consistent with the language in Water

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<sup>5</sup> Standard for CII Landscape Irrigation with Dedicated Meters and two related BMPs. Department of Water Resources. October 25, 2021. Page 6.



Code Section 10609.10(b)(2) that the implementation of the technology will result in increased water use efficiency for CII landscape.

However, **ACWA, CMUA and CWA have significant concerns with DWR's proposed recommendation of 20,000 square feet of irrigated landscape area as the threshold for CII MUM conversion to DIM or Equivalent Technology.** We are concerned that 20,000 square feet would not be a cost-effective threshold and would create undue burden on waters suppliers and CII customers. Installation of DIM meters are not often shown to be cost-effective for irrigated landscapes of 20,000 square feet, even when irrigation reductions are estimated between 10 and 20 percent. Rather, some feasibility studies have shown that positive return on investments for agencies can be achieved, even after providing capital cost offsets, when irrigated area approaches an acre, water savings are anticipated between 10 and 20 percent, and where only a single lateral tie-in to the meter is warranted. Further, based on the "Estimated Cumulative CII Potential Landscape Area Distribution" chart presented by DWR on October 25, 2021, the cumulative total of potential CII landscape area increases only slightly by approximately 0.1 % when CII size threshold is lowered to 20,000 square feet from an acre (43,560 ft<sup>2</sup>).

2. ACWA, CMUA and CWA Recommend Alternative for a Threshold for Converting to DIM.

ACWA, CMUA and CWA have provided an alternative proposal for a threshold recommendation for converting to DIMs for DWR's consideration. We believe that this approach would achieve DWR's goal to increase water use efficiency but would provide a more cost-effective and flexible pathway to compliance to water suppliers and CII customers. We would like to discuss this alternative with DWR staff prior to DWR finalizing its recommendation to the State Water Board.

The recommendation includes the five steps outlined below, with the goal to measure progress towards water use efficiency. **The alternative would set a threshold for converting MUMs (Threshold MUMs) as (1) parcels that are two acres or greater, (2) that are irrigating an acre (43,560 ft<sup>2</sup>) or greater and (3) with water use greater than the outdoor water use efficiency standard.** A diagram of this proposal can be found in Appendix A of this letter.

- Step 1: Water suppliers to locate and identify all MUM and associated parcels.  
*Deliverable: Water suppliers to provide DWR a list of MUMs and the size of associated parcels to DWR by 2024.*
- Step 2: Water suppliers to measure the landscape area for all MUM parcels over two acres. *Deliverable: Water suppliers to provide DWR with the associated landscape area by 2027.*
- Step 3: Water suppliers, relying on the measurements developed in Step 2, would identify MUMs irrigating one acre or greater. For these meters, water suppliers would estimate the annual outdoor water use and compare it with the outdoor water use



efficiency standard. MUMs with an outdoor water use greater than the outdoor water use efficiency standard shall be considered the “Threshold MUMs.” *Deliverable: Water Suppliers to provide DWR a list of Threshold MUMs by 2030.*

- Step 4: Water suppliers to develop a Compliance Plan for Threshold MUMs. The Compliance Plan would identify how a water supplier would, by 2035, reduce water demand of Threshold MUMs to meet the water use efficiency standard by converting to DIMs, a DIM Equivalent Technology, or through In-Lieu Technologies. *Deliverable: Water suppliers to submit Compliance Plan to DWR by 2030.*
- Step 5: Water suppliers to annually report on Threshold MUM compliance for MUM compliance and progress towards meeting the standard. Every five years, agencies will reevaluate water use of the MUMs identified in Step 3 to determine and update Threshold Mums. *Deliverable: Water suppliers to report to DWR annually after 2030.*

Any MUMs that cannot be converted to a DIM should fall under the same best management practices (BMPs) provisions for all other CII customers. Water agencies would then work with those customers to reduce water usage, implement BMPs as appropriate, and take further action consistent with DWR’s CII standards.

3. CII Classification: Make State Data Available to Water Suppliers and Changes to Frequency of Reclassifying Customer Data.

4.3 of the *Recommendation and Performance Measure for CII Water Use Classification System* would require urban retail agencies to periodically review and update their CII water use classifications. This process likely will require each water supplier to procure updated business listing data with NAICS codes. This data would then be used to update business classifications. There are dozens of business listing data providers and data quality can vary greatly among providers. ACWA, CMUA and CWA request that DWR provide this business listing data for the entirety of California. This would allow water suppliers to rely on the same high-quality dataset and avoid needing to procure this information separately.

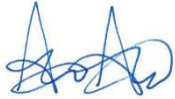
Additionally, the requirement 4.3.1 would require significant labor every two years to reclassify customer data. ACWA, CMUA and CWA recommend changing this updating requirement to every five years instead of every two years.

ACWA, CMUA and CWA appreciate the opportunity to provide input to DWR on this effort. Please do not hesitate to contact me at [ChelseaH@acwa.com](mailto:ChelseaH@acwa.com) or (916) 441-4545 if you have any questions regarding our input.

Sincerely,



Chelsea Haines  
Regulatory Relations Manager  
Association of California Water Agencies



Andrea Abergel  
Senior Regulatory Advocate  
California Municipal Utilities Association



Jennifer Capitolo  
Executive Director  
California Water Association

CC:           The Honorable Karla Nemeth, Director, California Department of Water  
              The Honorable Joaquin Esquivel, Chair, State Water Resources Control Board  
              Mr. Ryan Bailey, Water Use Efficiency Branch Manager, Department of Water  
              Resources  
              Mr. Dave Eggerton, Executive Director, Association of California Water Agencies  
              Ms. Cindy Tuck, Deputy Executive Director for Government Relations,  
              Association of California Water Agencies,

## Appendix A

### ACWA, CMUA and CWA Recommended Alternative - CII Mixed Use Meter Conversion Requirements

**Step 1:** Water suppliers to locate and identify all MUMs and associated parcels.

**Deliverable:** Provide list of MUMs and size of associated parcels to DWR by 2024.

#### "Threshold MUMs"

Parcel > 2 acres  
+  
Irrigating > 1  
acre  
+  
Water Use >  
WUE Standard

**Step 2:** Water suppliers to measure the landscape area for all MUM parcels > 2 acres.

**Deliverable:** Provide associated landscape area to DWR by 2027.

#### Abbreviations:

MUM = Mixed  
use meter

DIM =  
Dedicated  
irrigation meter

WUE = Water  
use efficiency

**Step 3:** Water suppliers (using Step 2 data) to identify MUM irrigating > 1 acre. Compare estimated outdoor water use to the outdoor WUE standard.

**Deliverable:** Provide a list of "Threshold MUMs" and comparison of outdoor water use to outdoor WUE standards by 2030.

**Step 4:** Water suppliers to develop Compliance Plan for "Threshold MUMs" to reduce water demand to meet the WUE Standard by converting to DIM, DIM Equivalent Technology, or In-Lieu Technologies.

**Deliverable:** Submit Compliance Plan to DWR by 2030.

**Step 5:** Water suppliers to annually report on "Threshold MUM" progress toward meeting the WUE standard. Every 5 years, suppliers to reevaluate and update "Threshold MUMs."

**Deliverable:** Provide Compliance Plan to DWR by 2035.



THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

Office of the General Manager

November 23, 2021

Mr. Ryan Bailey  
Water Use Efficiency Branch  
Department of Water Resources  
P.O. Box 942836  
1416 9th St.  
Sacramento, CA 95814

Dear Mr. Bailey:

Response to DWR's Draft Water Conservation Legislation Recommendations

The Metropolitan Water District of Southern California (Metropolitan) recognizes the efforts of the California Department of Water Resources (DWR) to draft the Water Conservation Legislation Recommendations (Draft Recommendations) for the State Water Resources Control Board (SWRCB) and Legislature. Metropolitan is supportive of the *Making Conservation a California Way of Life* legislation, and is submitting comments focusing on the feasibility for urban water suppliers to comply with components of the Draft Recommendations along with other considerations that should be addressed before formal adoption.

**The Outdoor Residential Water Use Standard (ORWUS)**

Several stakeholders and urban water retailers expressed concern that an initial outdoor water use standard based on a supplier level evapotranspiration factor (ETF) of 0.8 declining to 0.65 by 2030 was unattainable. The implicit assumptions and methodology implied that most agencies are currently or will be within an achievable range for compliance. This proposed water use objective was based on assumptions for efficiency measures that may fall short of optimal performance due to human and mechanical factors.

Urban water suppliers will likely need to attain substantial turf replacement to meet these standards without sufficient financial resources or enforcement methods. Such levels of turf replacement would place a significant administrative and economic burden on urban water suppliers. In addition, the need to enforce turf replacement to achieve these goals would place a burden on underserved communities. DWR and SWRCB should revisit this concern or, at least, consider financial support for program implementation.

**Variances**

The proposed flexibility for urban water use suppliers to apply for variances is appreciated. However, agencies with lower technical or managerial capacity may lack the ability to conduct surveys and site assessments required to support a variance application. A streamlined process

Mr. Ryan Bailey  
Page 2 of 2  
November 23, 2021

would benefit both the urban water use supplier that applies for a variance and the State departments reviewing the requests.

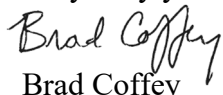
In addition to refining the application requirements for variances, it is important that DWR and the SWRCB consider special uses of water cumulatively rather than individually with respect to the significance threshold required to obtain a variance. When assessed independently, a special use of water may fall just short of a significance threshold and may not capture the effects on an urban water supplier's demand. When all variances are assessed together, the extent of impact that special uses have on a supplier's demand become clearer to which a more accurate allowance may be appropriated to alleviate special uses on demand.

### **The CII Classification System**

Creating a statewide CII classification system is a considerable undertaking given the variety of classifications that now exists within the billing systems of the State's nearly 400 urban water use suppliers. Many suppliers will have issues conforming to this system because they lack the necessary information to recategorize their CII customers. Urban water use suppliers generally do not have immediate access to documentation such as land-use records or business permits needed to confirm the correct category. This lack of information will also have consequences for maintaining the integrity of the CII classification system as changes in property ownership or business operations occur over time. We recommend that agencies classify properties with a design similar to the DWR proposal that works for their circumstances and submit it for approval.

In sum, Metropolitan appreciates DWR's efforts to develop the Draft Recommendations and recommends that DWR revisit the areas of concern that we raised before the standards are provided to the Legislature.

Very truly yours,



Brad Coffey  
Manager, Water Resources Management

JAM:vsm

cc: T. Blair  
K. Donhoff  
K. Guerrero  
R. Jay  
B. McDonnell  
L. McPhail  
J. Morgutia



November 24, 2021

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East Orange County Water District  
El Toro Water District  
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City of Garden Grove  
Golden State Water Co.  
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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  
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

Water Use Efficiency Branch  
Department of Water Resources  
P.O. Box 942836  
1416 9th St, Sacramento, CA 95814

Subject: Water Conservation Legislation Comments

Dear Water Use Efficiency Branch,

The Municipal Water District of Orange County (MWD OC) appreciates the opportunity to provide comments to the California Department of Water Resources (DWR) regarding the Draft Water Conservation Legislation Recommendations presented by DWR on November 16 & 17, 2021.

MWD OC provides imported water service to 3.2 million residents through 27 retail water suppliers throughout Orange County. MWD OC also leads implementation of a broad variety of water use efficiency programs regionally, on behalf of our water agencies. The Water Code recognizes that our members, local urban retail water suppliers, have the primary responsibility of meeting standard-based water use targets. However, because of our regional role as an imported water wholesaler and lead agency implementing water use efficiency programs we are very concerned with the indoor standard, as proposed and wish to convey the following comments collaboratively, developed in partnership with our member agencies.

Our comments include significant areas of concern along with recommendations that make the standards more attainable, while ultimately meeting the proposed standards as well as responses to the four items DWR requested Discussion & Feedback on at the October 25 Standards, Methodologies and Performance Measures Workgroup Meeting.

Significant Areas of Concern include:

1. The Evapotranspiration Adjustment Factor (ETF) schedule is too aggressive for residential and commercial landscapes and should be extended, especially because the UC Cooperative Extension Study commissioned by DWR, concluded that existing large landscapes could not achieve an ETF of 0.65. To achieve the proposed ETF of 0.65 by 2030 will require significant investments in efficiency improvements of consumers' irrigation equipment, plant palate, knowledge and practices. Water agencies can influence and even accelerate efficiency improvements by offering incentive programs for things like Smart Irrigation Timers, Turf Removal, Low-Precipitation Rate Sprinkler Nozzles and Spray Irrigation Conversions to Drip Irrigation. In fact, MWD OC has been implementing these programs since 2004 (more than 17 years) and

we intend to continue implementation of these programs indefinitely but we are at the mercy of the customers to participate.

**Using our Smart Irrigation Timer Rebate Program as an example, there is a substantial amount of time that is required to implement such programs.** Since 2004, 17,542 single-family homes have participated in the Smart Timer Rebate Program. That represents 3.9% of the single-family homes in the MWDOC service area. That translates to 0.002% of single-family homes in the MWDOC service area per year of program implementation. We have only seen a small portion of homes participate in the Smart Timer Rebate Program.

**Using our Turf Removal Rebate Program as another example, there is a substantial amount of time that is required to implement such programs.** Since 2010, 10,096 single-family homes have participated in the Turf Removal program. That represents only 2.2% of the single-family homes in the MWDOC service area. That translates to 0.002% of the single-family homes in the MWDOC service area per year of program implementation. These homes have removed 10,080,823 square feet of turf grass at a total cost of more than \$63.8 million. MWDOC Turf Removal rebate incentives total more than \$38 million, excluding staff time to process rebates. With these significant investments of time and energy, we still have only seen a small portion of homes participate in the Turf Removal Rebate Program.

Orange County has demonstrated a unwavering commitment to offer all consumers a comprehensive menu of irrigation efficiency programs for more than 17 years, but these programs take time to implement and we cannot require consumers to participate.

**We ask DWR to consider a more gradual, glide path, to ultimately land on an ETF of 0.65 as presented in the table below.** At the November Workgroup meeting, DWR staff acknowledged that the proposed 0.65 ETF was considered to be the ultimate standard and maximum level attainable for landscape water efficiency. A more gradual glide path will allow for continually increasing water savings throughout the extended glide path and provide many more water suppliers an opportunity to effectively comply with the standard.

Year	Current DWR Proposed Standard	MWDOC Recommended Standard
2023	0.80	0.80
2030	0.65	0.75
2035		0.70
2040		0.65

- 
2. The threshold for Converting Mixed Use Meters (MUM) to Dedicated Irrigation Meters (DIM) needs to be based on what is locally cost effective to avoid financial harm to urban water suppliers and MUM customers. As stated by DWR staff at the November Workgroup Meeting, the proposed threshold of 20,000 square feet of irrigated area is a straw proposal and intended to initiate stakeholder discussion and revision. It is MWDOC's opinion that the threshold should be based on what is cost effective to convert from MUM to DIM. The California Urban Water Conservation Council, now the California



Water Efficiency Partnership (CalWEP), developed a comprehensive economic model called the BMP 1.3 Mixed Use Meter Feasibility Worksheet that evaluates the cost effectiveness of these conversions. Results of this model are indicating that landscapes of one acre and larger start to become cost effective depending on the complexities of the site. As a result, we recommend the following:

- a. Urban Water Suppliers utilize the Mixed Use Meter Feasibility Worksheet (MUMFW) for metered service areas with one acre of irrigated area and larger. When the MUMFW shows it is cost effective, water suppliers will convert those sites to DIM. Agencies could start using the calculator on the largest sites, those most likely to be cost effective MUM to DIM conversions. Eventually, as they use the calculator to analyze smaller and smaller sites there will be a point of diminishing returns and the threshold at which site conversion is no longer cost effective. This approach allows for a systematic way of managing the effort and staff time to evaluate and prioritize MUM to DIM conversions.
- b. For sites less than one acre and for sites not shown to be cost effective to convert to DIM using the MUMFW, water suppliers will offer “equivalent Technologies” known to produce water savings. These technologies should include, but not be limited to, Smart Irrigation Timers, Turf Removal Rebates, Spray to Drip Irrigation Rebates, and Low Volume Sprinkler Nozzle Rebates.

Comments regarding DWR’s requested October 25 Workgroup Meeting Discussion & Feedback items:

1. *Can the CII-DIM standard be implemented on the same recommended schedule being proposed for the ORWUS? (0.8 in 2023 and 0.65 in 2030)*

No, the schedule does not provide sufficient time for agencies to measure, review and finalize CII-DIM measurements by the end of 2023. Assuming the Water Board adopts the Standards by July, 2022, water suppliers will have less than 18 months to finalize measurements for all CII-DIMs and calculate their Water Use Objective. This is especially true for agencies with large numbers of DIMs. Smaller cities will have an especially difficult time due to their limited staffing and technical resources. Once measurements have been finalized, our member agencies have estimated that they will need approximately 6 months to compile and match their water use data to measured landscape area, and calculate their Water Use Objective.

**We suggest a phased approach, such as measuring a minimum of 25 percent of CII-DIMs each year so that 100 percent of CII-DIMs are measured and included in the Water Use Objective within 4 years or by 2027.**

Additionally, the ET adjustment factors for ORWUS and CII-DIM should be the same and scaled down on the same schedule to minimize confusion and simplify Water Use Objective calculations. We support the expanded definition of Special Landscaped Area (SLA), however Fuel Modification Zones at the urban and wildland interface should be added to SLA since they are required to be vegetated and irrigated for public safety and protection of property. Urban water suppliers can easily identify these areas by working with their local fire authorities who have already mapped these areas and conduct regular



inspections to ensure these fuel modification zones are being properly maintained.

2. *As currently proposed, in-lieu technologies need to demonstrate increased water efficiency for CII outdoor landscape use and this can be accomplished with combining additional PMBs, procedures and practices. Any additions/subtractions/modifications to this view? Are there additional concepts of in-lieu technologies we should include in consideration?*

Our observation is that the first option will be limited to a small but potentially growing number of agencies that have the political will of their governing boards to implement Budget-Based Rates.

The second option is feasible and could save water based on MWDOC's experience implementing our Landscape Performance Certification Program that included an irrigation audit and monthly performance monitoring. Water savings was achieved so long as the urban water supplier can maintain the appropriate contact information for the ever-changing critical parties, such as HOA Board members, property managers, and landscape maintenance contractors; we call these critical parties the loop of accountability and without their active participation, initial savings following intervention by the water provider is easily lost.

**The last option, "Equipment replacement or retrofit for enhanced function and performance" is reasonable and the option that the majority of agencies can and are currently implementing.** However, water agencies cannot require customer participation in these programs; it will be up to the consumers to voluntarily participate.

3. *For meeting the CII DIM standard in the timetable specified, what assistance programs(s) may need to be in place?*

We believe the following assistance will be very beneficial to the majority of urban water suppliers and help achieve compliance with the WUE Standards:

- a. Funding for:
  - i. Consultant services to build internal data gathering and warehousing in billing and GIS systems to help streamline annual reporting
  - ii. Technical Assistance which may include area measurement consultant services
  - iii. High resolution aerial imagery and LiDAR for mapping of DIM and MUM meters.
4. *Should water use on exempt landscapes be reported as part of the CII-DIM or just documented in the Annual UWUO Report?*

Since exempt landscapes are not included as part of the UWUO, there should not be a reporting requirement. Urban water suppliers will already be burdened with such a significant amount of detailed reporting annually, the State should not overly complicate or unnecessarily increase reporting requirements by including any sort of reporting on exempt landscapes.

Again, we appreciate the opportunity to provide comments regarding the proposed outdoor standards for CII and MUM landscape meters. Should you have any questions regarding these comments, I welcome phone calls at (714) 593-5008 or e-mail to [jberg@mwdoc.com](mailto:jberg@mwdoc.com).

Sincerely,

A handwritten signature in cursive script that reads "Joseph Berg".

Joseph M. Berg  
Director of Water Use Efficiency



Directors

Edward J. "Ted" Costa

Marty Hanneman

Kenneth H. Miller

Dan Rich

Pamela Tobin

General Manager

Paul Helliker

November 24, 2021

Water Use Efficiency Branch  
California Department of Water Resources  
P.O. Box 942836  
Sacramento, CA 95814

Sent via email to: [WUEStandards@water.ca.gov](mailto:WUEStandards@water.ca.gov)

RE: Water Conservation Legislation Comments

Dear Water Use Efficiency Branch:

Thank you for the opportunity to provide comments on the materials presented in the recent sessions on proposed Department of Water Resources (DWR) recommendations on methodologies for the State Water Resources Control Board (Board) to adopt water use efficiency standards. We appreciate the hard work and long hours that DWR staff and consultants have dedicated to this effort – which is a complex undertaking, given the diversity of California's climate zones and urban development patterns.

Fortunately, as the data presented by DWR at the November 12 session showed, existing use patterns are well below the 2020 statewide conservation target mandated by 2009's SB X7-7. As noted at that session, the 2020 SB X7-7 target is the minimum efficiency that must be achieved by the 2022 water use efficiency standards to be adopted by the Board. Within our own retail service area at San Juan Water District, 2020 use was 9% below our 2020 SB X7-7 target, and was 16% below 2013 use levels, which is also a comparison often used, that is related to the 2015 urban water conservation regulations. San Juan continues to be focused on assisting its customers to use water efficiently. We support the development of effective new standards that were statutorily authorized, are feasible, and that meet the goal of the 2018 conservation legislation of achieving at least the requirements of SB X7-7.

San Juan supports the comments provided by the Association of California Water Agencies, the California Municipal Utilities Association and the California Water Association, dated November 24, 2021. The comments provided below complement the comments from these associations and provide more detail on certain topics.

### Intent of 2018 Legislation

The intent of the 2018 conservation legislation (AB 1668 and SB 606) was to ensure the efficient use of water in existing and planned urban development. See specifically Section

10609(a) of the Water Code. As DWR notes in its “Basic Framework for Setting the Residential Outdoor Standard” dated August 25, 2021,

“The 2018 water conservation legislation did not direct DWR to adopt policies to influence already installed plant palettes.” (p. 9)

Given this direction from the Legislature, any proposed standards that would require retrofits of existing landscapes go beyond the scope authorized in the statute. Furthermore, water suppliers do not have the legal authority to mandate any such retrofits, so any such standards proposed by DWR that would require such retrofits will be unenforceable by water suppliers.

### **Future Changes in Standards**

The 2018 legislation includes phased standards for indoor water use, starting with 55 gpcd, and dropping to 52.5 gpcd and 50 gpcd in 2025 and 2030, respectively. There is no authority provided in statute for DWR to propose, nor for the Board to adopt, any other phased standards – Section 10609.2 clearly states that the Board shall adopt by June 30, 2022 standards for outdoor residential use, outdoor irrigation of landscape areas with dedicated irrigation meters in connection with CII water use, and a volume for water loss. These standards are to be used by water suppliers to calculate by January 1, 2024 their water use objective, and then report annually thereafter on how their annual water deliveries comport with that objective. In fact, the Legislature explicitly reserved only to itself the authority to direct the Board to adopt any potential future changes to the 2022 standards—see Water Code 10609(b)(4)(C), specifying “one-time only” to adopt standards in 2022.

Not only is DWR’s proposed 2030 Evapotranspiration Factor (ETF) of 0.65 unachievable, as further discussed below, it also fails to comport with the direction given by the Legislature to allow for a one-time only standard in 2022. DWR’s rationale for the phased-in approach appears to be described on pages 3 and 4 of their document entitled “revised outdoor Residential Water Use Standard” dated October 21, 2021, including these statements:

“First, it reduces the number of suppliers that need to cut back outdoor water use and the amount by which they need to cut back starting in 2023... Second, the phase-in approach will address stakeholders’ comment that the outdoor water use standard needs to ramp down over time as suppliers adjust their water use and make water conservation a California way of life.”

As noted above, current water use already meets the goal defined in the 2018 legislation, so there is no basis for recommending a mandate for any water user to cut back even more starting in 2023, nor for proposing standards that ramp down over time. More importantly, such a ramp-down beyond the 2022 standards is not within the current statutory authority conferred on DWR and the Board by the Legislature.

### **Draft DWR Recommendation for Outdoor Water Use Standard in 2022**

The Association of California Water Agencies (ACWA) and the California Municipal Utilities Association (CMUA) provided extensive comments about the proposed outdoor standards

for residential and commercial landscapes on August 17, 2021, specifically addressing the ETF proposed by DWR. Those comments remain germane to the latest revision proposed by DWR. Specifically, DWR's estimate of the efficiency of irrigation systems is significantly overstated, as evidenced by the many examples of field studies provided by ACWA and CMUA, which demonstrate that, even with newly-installed irrigation systems, efficiencies are 25-40% lower than estimated by DWR. ACWA and CMUA recommended that DWR revise its proposed ETF to 1.0, and that recommendation still pertains to the latest proposal by DWR of an ETF of 0.8 in 2022.

The practical consequence of DWR recommending and the Board adopting an outdoor standard based on an ETF of 0.8 would be that residential and commercial landscape customers of water suppliers would face the need to retrofit their landscapes to reduce their plant factors (e.g., install a combination of hardscape and drought-tolerant plants), which is costly to do, and which was never intended by the 2018 legislation. ACWA and CMUA are providing information in their current comment letter about the costs of such landscape retrofits, and the small amount of funding that water suppliers can justify offering for such projects.

### **Variances**

DWR proposes a limitation on the use of variances, by defining the "material effect" to specify that each variance meet a minimum threshold of 5% of the supplier's water use objective before the Board should consider approval of the variance. There is no mechanism proposed by DWR for suppliers to combine the amounts of their variance requests such that the total additional supply provided by the variances would be greater than 5% of the use objective, even if the total requested by the variances far exceeds an additional 5%. Given that DWR has proposed to delete the uses for which variances are defined from the supplier's baseline calculation of its water use objective, this further limitation is arbitrary and unwarranted.

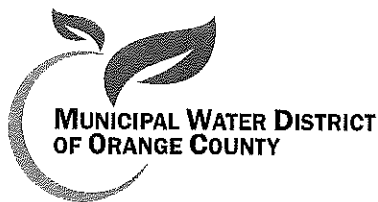
DWR also proposes to recommend that the Board not approve a variance request for ponds and lakes that sustain wildlife, unless the waterbody is required to be maintained "per regulatory requirement". This requirement, which is not proposed by DWR to be applied to other water features which are allowed to be included in baseline water use objectives, is also arbitrary and unwarranted – and could result in loss of important habitat value.

Thank you again for the opportunity to provide these comments.

Sincerely,



Paul Helliker  
General Manager



November 6, 2017

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Golden State Water Co.  
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Irvine Ranch Water District  
Laguna Beach County Water District  
City of La Habra  
City of La Palma  
Mesa Water District  
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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

Max Gomberg  
Climate and Conservation Manager  
State Water Resources Control Board  
P.O. Box 100  
Sacramento, CA 95812-0100

**Subject:** Two Years of Validated Distribution System Water Balance Results

Dear Max:

I'm glad you were able to attend the Association of California Water Agencies October 17 Regulatory Summit focusing on Water Loss Control. Your thoughts on setting the volumetric water loss standard called for by SB 555 were insightful and appreciated, especially your acknowledgement that "one size does not fit all."

Later in the day, I shared the results of two years of Validated Distribution System Water Balance work done by 16 retail water agencies in Orange County. A copy of this presentation is attached for your review. Since 2015, the Municipal Water District of Orange County (MWDOC) has been implementing a regional water loss control program in partnership with our retail water agencies. Our program includes two components.

The first component was to establish a Water Loss Control Work Group (Work Group) for all 32 retail water agencies in the county. The Work Group provides a forum for information sharing, problem solving, and education on a variety of water loss control topics. This Work Group meets bi-monthly. One of the first things the Work Group did was to establish a mission statement of "Striving to achieve an economically Optimized Level of Water Loss." Our next meeting is scheduled for November 14, 2017 at MWDOC.

The second component was one-on-one technical assistance from Water Systems Optimization, Inc. to complete validated water balances, component analysis of real and apparent losses, leak detection, and the development of economically optimized leakage management programs customized for each retail agency. Since 2015 sixteen agencies have now completed two consecutive validated water balances. All of these water balances have been Level I validated and most have been Level II validated with specific activities like raw billing data, validation, analysis, and pro-rating.

We have learned a lot over the past two years:

- Beginning a comprehensive water loss control program is expensive. Water agencies in Orange County have invested more than \$550,000 to establish long-term cost-effective water loss control programs. Agencies are now in the process of committing additional investments for the third year of this effort, which will focus on component analysis of real losses and water loss control program design.

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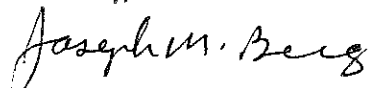
- Developing a reliable water balance with actionable results is an iterative process that requires year to year improvements of data sources. Once a dependable water balance is produced, which usually requires a couple years, agencies then progress to component analysis to quantify real loss volume including background leakage, unreported leakage and reported leakage. This too requires significant time and cost to conduct production and sales meter accuracy testing, assess leak repair records, log system pressures, and perhaps conduct pilot leak detection. The water audit may be fairly accurate – however, an agency could not drill down deep enough into the data to accurately identify where targeted real water loss intervention strategies are appropriate unless they do a component analysis, nor could they prioritize intervention strategies based on the associated water loss volume and cost, in order to design a data-driven water loss control program. This is especially true of component analysis of real losses: technical and economic opportunities for leakage reduction simply cannot be identified without first understanding each agency's **unique** leakage profile.
- The comparison of Year I and Year II results for the Infrastructure Leakage Index (ILI) and Gallons Per Connection Per Day for individual agencies shows significant variability for most agencies. Though the variation is explicable – most agencies acquired better data, identified and corrected database inconsistencies, or incorporated recent instrument test results – this variability is of great concern considering the State Water Board is tasked with establishing a volumetric water loss control standard with only three years of validated water balance data. We look forward to a third year of validated water balance results for these agencies in the third quarter of 2018 to see if this variability persists. We believe that a minimum of five years of validated water balance data should be used to establish the volumetric standard to allow for correction of data issues and decreased variability of performance indicators.
- Data validity grades and scores do not consistently correlate with the feasibility of water audit results. As a result, we conclude that the data validity grades serve as a useful tool for considering operational practices, but do not reliably capture audit accuracy. Furthermore, many of our agencies are capped in the data validity scores they can receive, since the operational practices related to water imported are actually those of wholesale agencies (e.g the Metropolitan Water District of Southern California). Sometimes, improving data validity grades requires significant investment but doesn't actually improve the accuracy of a water audit; other times, data validity improvements do truly produce better insight into water loss performance.

- Data validity scores for the Orange County agencies show less variability from year to year than ILI or gallons per connection per day metrics. That said, some agencies have relatively good, actionable data validity scores, but their ILI is not realistic or within industry norms. More work needs to be done to refine the water balance results to achieve a realistic ILI. Furthermore, a handful of agencies may legitimately experience leakage slightly below or approximating their system's modeled technical minimum. However, this will require verification of leakage in the field to assert with confidence. Additionally, any small (and likely unavoidable) uncertainty in their water audits will manifest as a proportionally large margin of error around the ILI, occasionally producing sub-1.0 ILIs.
- As the group moves toward cost-justified water loss target-setting and water loss control program design, it is becoming clear that each agency will pursue a unique goal based on its leakage profile, cost of water, and infrastructure. As a result, some agencies will necessarily tolerate greater volumes of leakage than others, given their specific anticipated return on investment in water loss control.
- The Technical Assistance Program (TAP) funded by the State Water Board was a good start to begin establishing consistently validated water balances throughout the state. Note that a standardized Level 1 validation methodology was not published until early 2017. MWDOC's earlier audits followed a process that informed the Level 1 method published by the WRF – there were differences in depth of data review and data grading. However, without this same TAP framework for all three years of data that will be used to establish the volumetric standard, the result will be based on inconsistent or even faulty data.

The variability of performance indicators calculated from initial water balances should be considered when setting the volumetric water loss standard called for by SB 555. An interim standard, based on three years of data, might be a viable option. Once the variability diminishes, a final standard could be adopted. Lastly, state funding for the continuation of TAP (Wave Four) will help to insure the quality and consistence of the water balance results and therefore the best available data as the basis for setting the water loss standard.

I hope you found this information to be helpful. Should you have any questions, please give me a call at (714) 593-5008.

Sincerely,



Joseph M. Berg

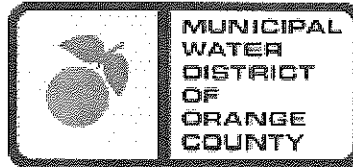
Director of Water Use Efficiency

Cc: Kartiki Naik, Water Resource Control Engineer, SWRCB  
Sue Mosburg, California Water Loss Control Collaborative Chair, CA-NV AWWA



# OC Water Loss Control Program

*Striving to Achieve an Economically Optimized Level of Water Loss*



October 17, 2017

Association of California Water Agencies Regulatory Summit 2017

Water Loss Detection and Control Technologies Panel

Joe Berg, Director of Water Use Efficiency

## MWDOC Water Loss Control Program Overview

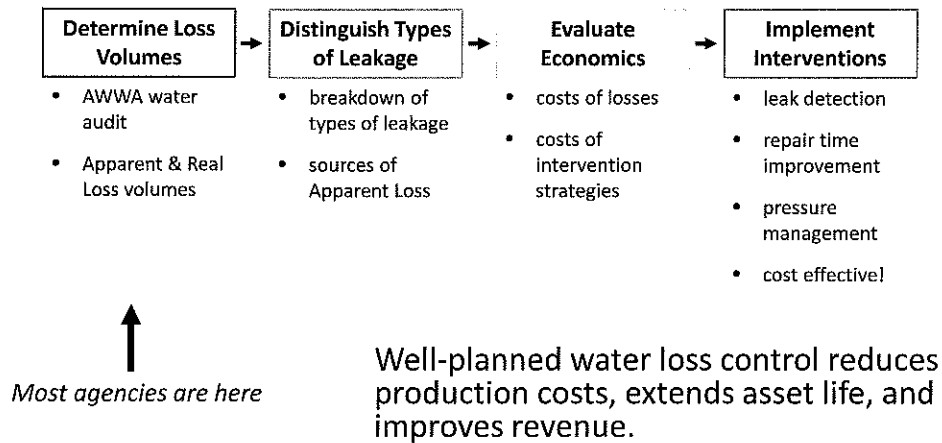
### One-on-One Technical Assistance

- Choice-based; funded by 16 participating retail agencies
- Water Systems Optimization
  - Water Balance, Component Analysis, Leak Detection and Reporting
- Sales Meter Accuracy Testing
  - McCall's Meter's, Inc. and Westerly Meter Service Company

### OC Water Loss Control Work Group

- Core-based; funded through MWDOC's general fund
- Bi-monthly Work Group Meetings for all OC water agencies
- Focus on elevating knowledge of water loss control
- Leak detection equipment grant Project Advisory Committee

## Water Auditing and Water Loss Control

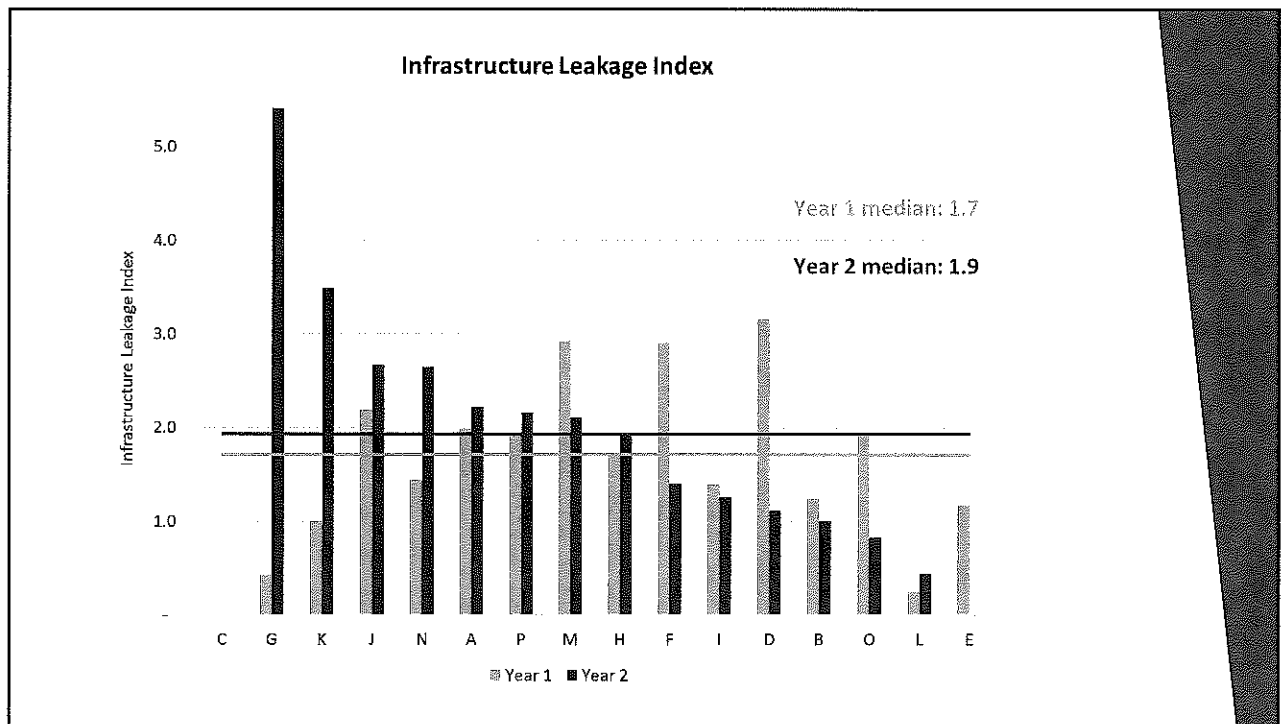
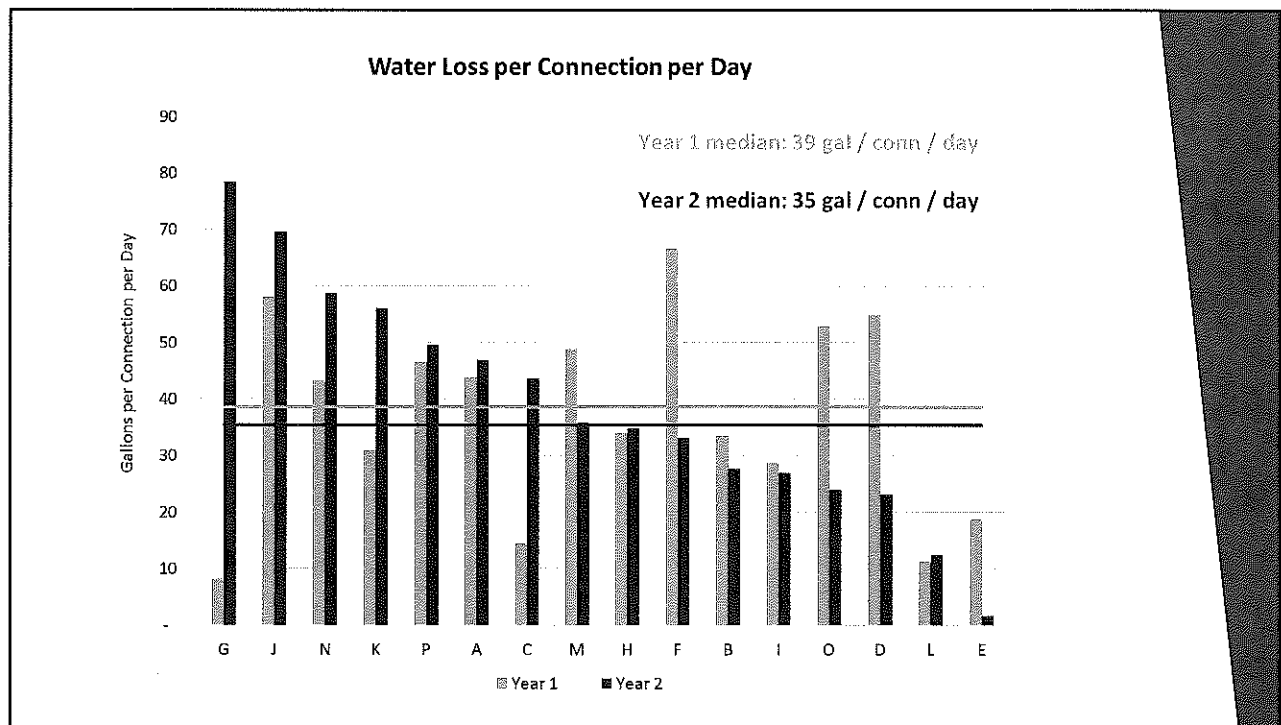


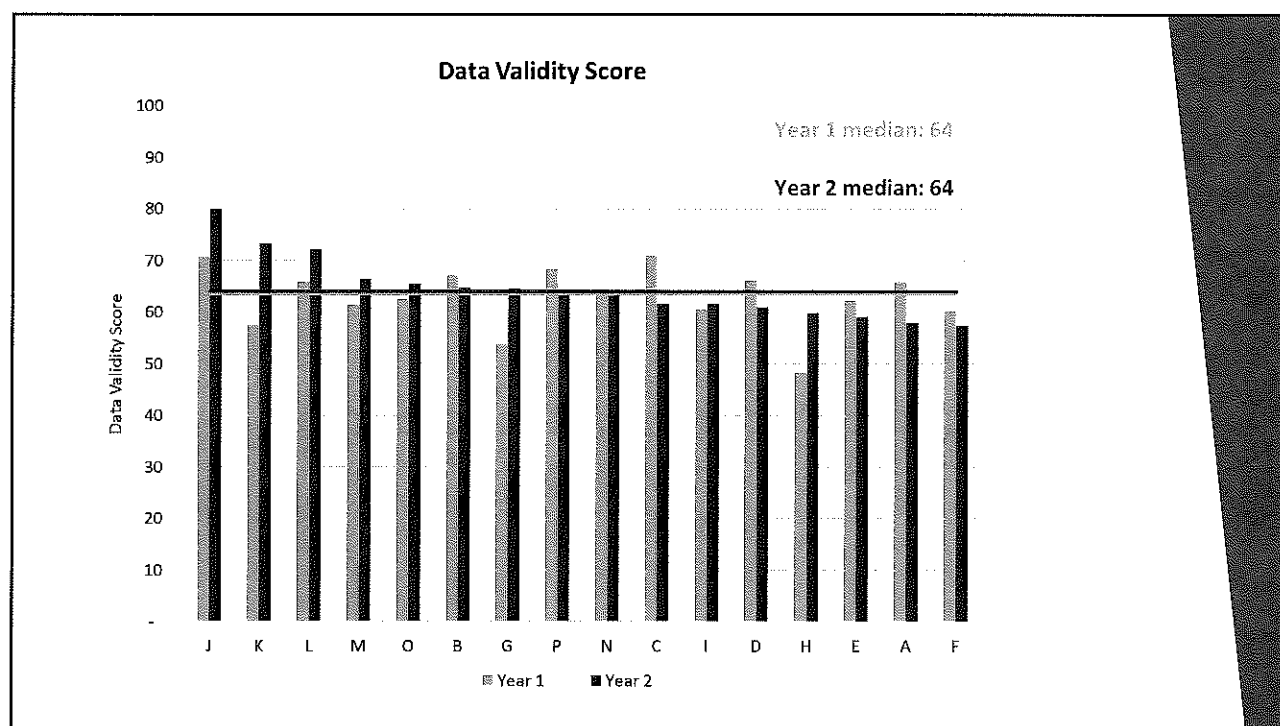
## Year 2 Water Balance Results

16 agencies participated in year 1 and year 2

*7 agencies tested customer meters*

**9,900 AF of water loss valued at \$9.7M**





## Year 1 to Year 2 Changes

Half of the audits didn't change (either data or outcomes).

Changes in the other half:

- Source meter accuracy – measured and incorporated
- Meter register units – corrected
- AMI data issues – solved
- True leakage reduction – PRVs rebuilt

## Customer Meter Accuracy

Why do customer meters degrade?

*meter technology*

*accumulated throughput*

*age*

*manufacturer*

*installation*

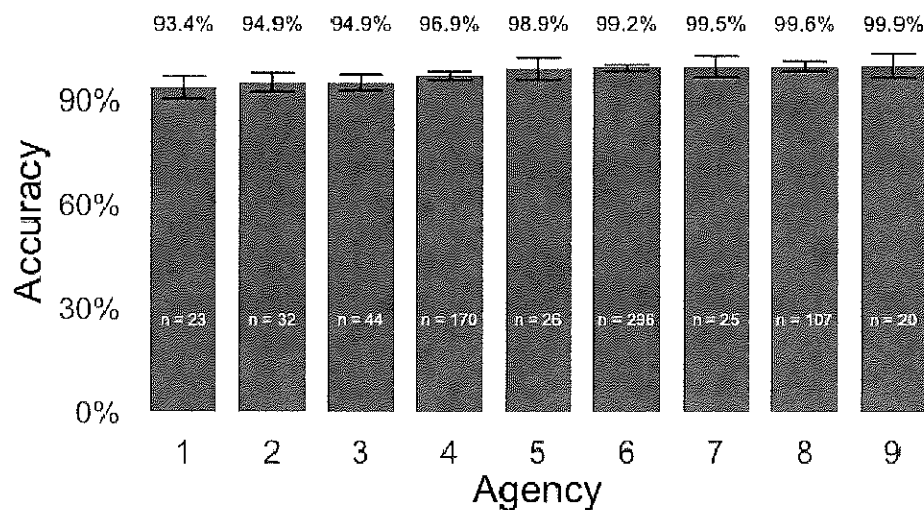
*customer use patterns*

*water quality*

*pressure*

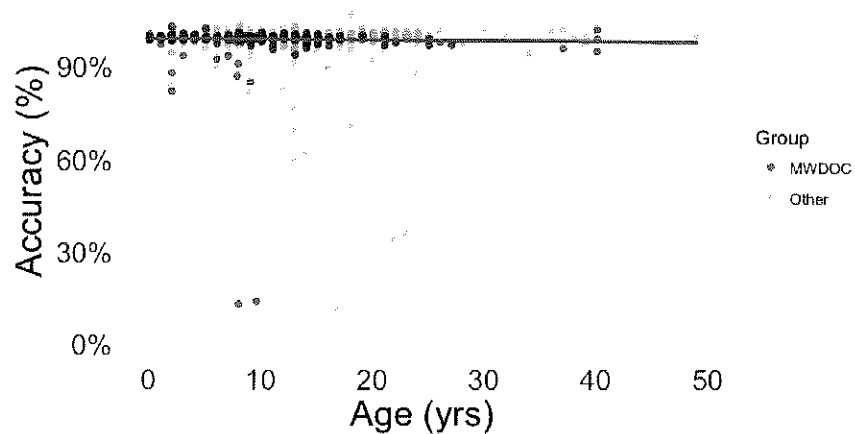
*tampering*

## Small Meter Test Results



\*Simple averages, no excluded results

## Small Meter Test Results



n = 2352

## Small Meter Test Results

### So what does this mean?

- Small sample sizes are a starting point but need to be built upon over time.
- Throughput and age are not reliable predictors for accuracy degradation.
- Meter performance appears to be utility-specific.

## Small Meter Test Results

Why should I test customer meters?

- **Large meters** – to maintain revenue
- **Small meters** – to:
  - Study meters slated for replacement
  - Achieve higher data validity scores
  - Consider population performance *if enough tests are conducted (250+)*

## Year 3 Planning

Upcoming:

- 2018 water audit compilation and validation
- Sales and Production meter accuracy testing
  - Large sales meter testing (especially for revenue maximization)
- Component Analysis of Real Losses
  - to establish specific leakage profiles and determine recoverable leakage (technically, cost-effectively)
- Water loss control program design
- Leak Detection Equipment Lending Library
- 2019-2020 performance targets – SB555 and EO “Conservation as a California Way of Life”

## Year 3 Planning

Goal: every agency...

- Has a flexible, customized leakage management program (monitoring and/or intervention)
- Can defend the extent of investment in water loss control to DWR/SWRCB
- Understands water loss control better than peers!

*Striving to Achieve an Economically Optimized Level of Water Loss*

## Questions and Answers





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El Toro Water District

Emerald Bay Service District

City of Fountain Valley

City of Garden Grove

Golden State Water Co.

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Irvine Ranch Water District

Laguna Beach County Water District

City of La Habra

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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

April 17, 2017

Submitted Electronically: WUE@water.ca.gov

Mr. Todd Thompson, P.E.

Water Use Efficiency

California Department of Water Resources

P.O. Box 942836

Sacramento, CA 94236

**Subject:** Comments on Adoption of Regulations Regarding Water Loss Audits and Water Loss Control Reporting

Dear Mr. Thompson:

The Municipal Water District of Orange County (MWDOC) appreciates the opportunity to provide comments on the adoption of regulations regarding Water Loss Audits and Water Loss Control Reporting. MWDOC actively participated in the Regulations stakeholder group, and supports the California Department of Water Resources (Department) collaboration.

The proposed regulations would require all urban retail water suppliers to conduct annual water loss audits, validate the accuracy of the data used in those audits, and submit them to the Department for review and website posting.

In preparation for compliance with SB 1420 and the proposed regulations (SB 555), MWDOC established an Orange County Water Loss Control Workgroup that includes all 32 urban water suppliers in the County. This workgroup meets bimonthly and is supported by water loss control experts from Water Systems Optimization, Inc. In 2015 all suppliers in Orange County completed water balances using the AWWA Water Audit Methodology. The majority of these water balances were Level II validated. Many of these suppliers completed a second water balance in 2016, again with at least Level II validation. Today, all suppliers are in the process of completing their water balances to be submitted by October 1, 2017. Through these efforts we have learned:

- To be better informed about the operational efficiency of distribution systems, an iterative process is required that includes annual water balances that build on data quality and availability year to year. Each year's water balance should inform improvements to next year's water balance. As a result, we are concerned that the water balance data used from 2017 and 2018 submittals will be insufficient to develop performance standards by 2019. More time is needed to develop better informed standards. We recommend

extending the performance standards timeframe to at least 2020 to allow for four annual submittals of water balance data from urban water suppliers.

- Many Orange County agencies are now in the process of conducting component analysis studies to quantify real and apparent losses, allowing agencies to make well informed “business case decisions” on reducing these losses and improving their data validity scores. This, too, requires a significant amount of time. For example, agencies will need to develop leak volume quantification, timeliness of repair data, and systematic meter accuracy data to complete a well-informed component analysis.

MWDOC supports the Department’s objectives in the Regulations to create a robust methodology to address water loss audit reporting and validation. To that end, MWDOC submits the following four comments:

**1. Validated Water Loss Audit Acceptance Criteria -**

Section 700.5 Audit Reporting Requirements, subsection (b) (4) lists the chief financial officer, the chief engineer, or the general manager as individuals authorized to sign the Water Loss Audit Certification Statement. These titles are generally utilized by water districts, not cities who provide water service. The list should be expanded to include individuals such as city manager, utilities manager, director of public works, or water system manager as individuals authorized to sign the Water Loss Audit Certification Statement.

**2. American Water Works Association Methodology -**

MWDOC agrees it is important to update the Regulations when the American Water Works Association (AWWA) updates the M36 Manual. However, the Department should also consider updating the Regulations when the AWWA Water Audit Software is updated as urban water suppliers will use this software to submit their water loss audit data to the Department. The timing of the software updates could impact the Senate Bill 555 schedule.

**3. Continuation of the Water Loss Technical Assistance Program (TAP) -**

As mentioned above, to develop a solid understanding of the operational efficiency of water distributions systems, an iterative process over several years is required. As a result, MWDOC recommends that state agencies consider continuing the Water Loss TAP an additional year to assist suppliers with the 2018 submittal.

The proposed Technical Qualifications for a Water Audit Validator requires either a contractor currently working in the CA-NV AWWA Water Loss TAP or a person who has

conducted a minimum of 30 Level I audit validations in accordance with the Water Research Foundation Standard 4639 Water Audit Validation. This results in a very limited number of people qualified to validate water balances, and demand for these services will be high. For these reasons, some suppliers will be at risk of not being able to acquire these services under the current proposal. Continuation of the Water Loss TAP will ensure consistency of validations for at least two years and that these validation services will be available to all suppliers.

#### **4. Credit for Previous Water Loss Control Efforts -**

Section 700.5 Audit Reporting Requirements, subsection (b) (2) requires suppliers, beginning in 2018, to provide "information identifying steps taken by the water supplier in the preceding year to increase the validity of data entered into the final audit, reduce the volume of apparent losses, and reduce the volume of real losses." This section should allow for inclusion of improvements made by the water supplier up to five years prior to 2018, instead of only the previous year to allow full credit for early implementation.

Due to the proactive efforts by MWDOC and its retail water suppliers to establish the Orange County Water Loss Control Workgroup and voluntarily conduct validated water balances since 2015, essential improvements have been, and will continue to be, implemented that increase the validity of data and reduce apparent and real losses. Many of the improvements will have been instituted well before October 1, 2017 and, under the current proposal, will not be reportable for the 2018 water balance submittal.

Expanding the time period for improvements made acknowledges that some measures, such as implementation of component analysis studies and sales meter accuracy testing data, takes multiple years to complete. Early implementers should be able to document their progress.

We look forward to continuing our engagement with the Department to ensure regulations support and improve the water loss reporting process, and reach the State's goal to "Eliminate Water Waste." Thank you for your consideration of our comments. Should you have any questions, please contact Joe Berg at (714) 593-5008 or by e-mail at [jberg@mwdoc.com](mailto:jberg@mwdoc.com).

Sincerely,



Robert J. Hunter  
General Manager





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Serrano Water District  
South Coast Water District  
Trabuco Canyon Water District  
City of Tustin  
City of Westminster  
Yorba Linda Water District

June 2, 2017

Submitted Electronically: WUE@water.ca.gov

Mr. Todd Thompson, P.E.  
Water Use Efficiency  
California Department of Water Resources  
P.O. Box 942836  
Sacramento, CA 94236

**Subject:** Comments on Adoption of Regulations Regarding Water Loss Audits and Water Loss Control Reporting

Dear Mr. Thompson:

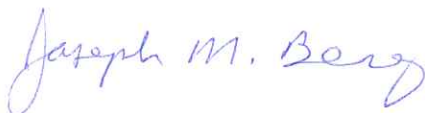
The Municipal Water District of Orange County (MWDOC) appreciates the careful consideration the Department of Water Resources has given stakeholder comments on the first draft of the Water Loss Audits and Water Loss Control Reporting regulation. The proposed regulations would require all urban retail water suppliers to conduct annual water loss audits, validate the accuracy of the data used in those audits, and submit them to the Department for review and website posting. As these regulations near completion, we submit our final comments on the updated regulations:

- Sections 700.2, 700.4 and 700.5 refer to "version 5.0" of the AWWA Free Water Audit Software. We appreciate the revision made to clarify the regulation updates would be triggered "upon an AWWA next generation update of its related Free Audit Software (e.g., after the version 6.0 release)." However, despite this directive in 700(c), the specific reference to "5.0" creates a technical barrier for California utilities to use any future minor updates to the software released in version 5.1 (up to version 5.x), which could include bug fixes or functional improvements. We recommend replacing "version 5.0" and "v5.0" with "version 5" or "v5" respectively, in Sections 700.2, 700.4, and 700.5.
- Section 700.3(b) (2)(D) was revised by insertion of the phrase "customer meter accuracy derivations, including..." By inserting the word "customer" this revision is inconsistent with the original, appropriate subject of "supply meter[s]". Further, to require documentation on the "derivation of meter accuracy" is inconsistent with the Water Research Foundation (WRF) Project #4639, which requires meter testing documentation but not how the data was used to calculate an error adjustment. We recommend striking out the newly added text "...customer meter accuracy derivations, including..."

- Section 700.5(a) (2) & (3) – We support providing the option for each water system to select either fiscal or calendar year for reporting. The current draft appears to allow for audits that are other than the “previous fiscal year” as of October 1, as required by SB 555 and allows fiscal information pulled from a different period than the water volume information represents. Allowing for financial incongruence is inconsistent with the M36, and has the potential to skew the economic value attached to real and apparent losses. The M36 does not require that a cost input be from audited financial statements. The data validity grade assigned with this element of water audit depends only upon frequency of financial auditing as a business practice. We recommend reestablishing the prior version of 700.5(a) and removing new sub items (1), (2) & (3): “The report shall include data spanning 12 consecutive months for either the previous calendar year or the water supplier’s fiscal year.”
- A change was made throughout the draft regulation to consistently use the term Data Validity Score. This is not appropriate. The Data Validity Score is a measure of the overall trustworthiness of the data entered into the audit, and is a composite value calculated from multiple Data Grading Values. Data Grading Values are the specific grades (on a scale of 1 – 10) applied to each input component. Replace “Data Validity Score” with “Data Grading Values” as appropriate throughout.

We look forward to continuing our engagement with the Department to ensure regulations support and improve the water loss reporting process, and reach the State’s goal to “Eliminate Water Waste.” Thank you for your consideration of our comments. Should you have any questions, please contact me at (714) 593-5008 or by e-mail at [jberg@mwdoc.com](mailto:jberg@mwdoc.com).

Sincerely,



Joseph M. Berg  
Director of Water Use Efficiency





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City of Westminster  
Yorba Linda Water District

October 25, 2019

Jeanine Townsend, Clerk to the Board  
Via: [commentletters@waterboards.ca.gov](mailto:commentletters@waterboards.ca.gov)  
State Water Resources Control Board  
P.O. Box 100  
Sacramento, CA 95812-200

#### Subject: Comment Letter – Water Loss Regulations

Dear Chair Esquivel,

We thank you for the opportunity to comment on the proposed framework for water loss performance standards as presented by State Water Resources Control Board (Water Board) staff at the September 23, 2019 stakeholder workshop. We appreciate the effort Water Board staff has made over the past eighteen months to develop the framework. **This is an important undertaking that deserves the proper time and attention necessary to get it done right.**

Provided below are general comments on the proposed framework and our responses to Focused Discussion Items that Water Board staff requested stakeholder input on.

#### General Comments:

We have the following concerns and recommendations:

1. Value of Water Loss: The state is proposing to value water loss at the retail unit cost of water. Water Board staff indicated this was a simple approach that included Capital Improvement Program (CIP) investments which, results in a higher long-term valuation of water loss. We believe this is problematic for the following reasons:
  - a. Some agencies receive a considerable amount of revenue from property taxes. These property taxes have the effect of artificially lowering the retail unit cost of water.
  - b. Agencies split charges on the water bill between fixed charges and variable charges. Some agencies prefer high variable (retail unit charge) charges while other agencies prefer high fixed charges. Higher variable charges send a stronger financial message to encourage efficient water use. Higher fixed charges result in improved revenue stability.
  - c. CIPs include a broad variety of investments to maintain facilities and therefore water supply reliability. Not all CIP investments relate to water loss recovery. For example, wastewater related

projects, pump station rehab, SCADA monitoring, and upgrading switchgear are included in an CIP but do not result in water loss recovery. Including the entire CIP will overvalue recovered water.

We recommend valuing recovered water using the variable production cost and the domestic water supply components of the CIP that are directly related to water loss recovery. This approach increases the complexity of the calculation but, is a much more accurate valuation of water loss recovery.

2. Model Data: The data necessary to populate the model is excessive, overly burdensome, and in many cases, simply not available. Only two of the 10 Urban Retail Water Suppliers (URWS) pilot participants were able to gather all data requested by UC Davis, which demonstrates the difficulty of obtaining the necessary data. The UC Davis team indicated to pilot study participants that without “utility-specific” data, the model could not be relied upon to develop appropriate utility-specific individual standards. According to the UC Davis team, there was significant variation in data and system profiles among the 10 pilot agencies, making a “one size fits all” model unreliable.

We recommend sufficient time be included in the process to gather needed information to populate the model. In some cases this may require significant time to develop and put processes in place to collect necessary data. For example, in order to conduct a Component Analysis, reported leaks and leak repair data is needed. If an agency is not currently collecting and maintaining this information a process to collect the data is needed and time to repair a sufficient number of leaks is needed to generate a population of data to include in the Component Analysis.

We also recommend that agencies have the ability to use locally derived inputs whenever available and not required to rely on state provided default values. This will give agencies the choice to rely on default values or to develop more robust model results that are specific to their local conditions.

3. Peer Review: We believe the use of default values and profiles to fill in data gaps in the Water Board’s proposed economic model will result in setting inappropriate performance standards for most URWS. We recommend that prior to the adoption of the regulations, to improve confidence in the finalized model, the model be peer reviewed and beta-tested for setting standards and calculating intervention strategies. A peer review by academia, economists, and water loss subject matter experts will ensure the appropriate metrics are considered, and a beta test will ensure that formulas and weighting are done in an appropriate manner. Multiple URWS that have tested the economic model have cited concerns with data entry fields that link incorrectly. We also recommend that a comparison be done of the UC Davis model and the State Board’s model, along with a justification for changes.

### **Focused Discussion Items for Stakeholder Input:**

Water Board staff requested specific input by asking for stakeholder responses to the following questions.

**Preventive Pipe Replacement** - What is the most effective way to incorporate the costs and benefits associated with preventative pipe replacement as one of the approaches for improving water loss control?

Response: Water loss is rarely the only factor when determining the feasibility of pipe replacement. CIP pipe replacements are a service life and cost issue. Pipes can last 20 to 80 years or more depending on the materials, quality of construction and installation, soil types, stray electrical currents from other nearby facilities, damages due to projects that cross the pipeline, etc.

It's also important to note that pipe replacement is not the only solution to reducing water loss. Today, there are a variety of alternatives such as lining and coating that can be used to rehabilitate pipelines that are less invasive and potentially at a lower cost than replacement.

We recommend a combination of high losses, component analysis and condition assessment to guide decisions for pipeline rehabilitation or replacement. This allows for a stepped approach to evaluating the feasibility of rehabilitation or replacement. A component analysis validates real loss volumes. Condition assessments can be helpful in determining if the useful life of a pipeline has been reached and provides an indication of whether or not the rehabilitation and repair (R & R) of pipelines needs to be increased.

**Leak Detection Surveys** - We are seeking input on considerations for cost-effective and reasonable frequencies for conducting system-wide leak detection surveys, and the number of miles that can typically be surveyed in one year based on leak detection and repair efforts that are already carried out by URWS's.

Response: It should be noted that the optimal cycle for an agency to perform a full system leak survey can be highly variable from agency to agency. That said, the default value of a full system leak survey every three years is a reasonable starting point. The information gathered, coupled with a Component Analysis and economic evaluation, can then be used to develop an informed, cost effective and customized leak survey cycle for each agency.

Recognizing the process to determine an appropriate cycle for leak detection is an iterative one, we recommend the process starts with a Water Balance and Component Analysis that the agency is confident in. This is the top-down look at water loss. The next step is for the agency to conduct a leak survey, repair leaks, measure leak rates for every repairs, and track repair costs. This information becomes the basis of a cost/benefit analysis of leak detection and repair, and for determining an appropriate system-wide cycle for future leak surveys. This bottom-up look at water loss also helps to validate the results of the Water Balance. This process is a standard industry practice for defining an appropriate system wide leak survey cycle.



**Improbable Loss Levels** - We would like stakeholder input on alternate approaches to establish the veracity of improbably low levels of real losses.

Response: Real losses, as calculated in the AWWA Water Balance for California agencies, appear to be lower than other parts of the United States. Results from the national Water Audit Data Initiative show that when compared to California's 2017 reports, California URWS median real losses are 40% less than utilities across the nation.<sup>1 2</sup> As a result, California agencies should not be compared to agencies outside the state. We recommend California utilities be measured against California based data.

Based on Water Board staff proposal, agencies with a three-year average loss (2017, 2018 and 2019) less than 20 gallons per connection per day will receive Information Orders giving them an opportunity to provide supporting documentation justifying lower losses. In Orange County, 12 URWS will be issued Information Orders. This represents 41 percent of retail urban water suppliers in Orange County. Our concern with this is the state's ability to efficiently process Information Orders for 41 percent of URWS state-wide. We recommend a California based threshold be established which will likely reduce the percentage of Information Orders to a more manageable amount.

**Lessons Learned** - Have you learned anything from recent water loss detection and reduction actions that staff should consider for revising the model?

Response: In Orange County we are experiencing significant difficulty measuring actual leakage rates for individual leaks during the repair process. The vast majority of leaks simply cannot be measured. As a result, the majority of leakage rates are estimated. This estimation issue will result in inherent uncertainty in the model results and cost effectiveness of the leak survey and leak repair. The model and process should recognize this reality and include provisions and additional time for obtaining missing or improved gpm measurement data.

Thank you for considering our concerns. We believe the proposed process should include time for additional data gathering and analysis that will result in calculating water loss standards that are better supported and accepted by URWS. Should you have any questions, please call me at (714) 593-5026.

Sincerely,



Robert J. Hunter  
General Manager

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<sup>1</sup> <https://www.awwa.org/Resources-Tools/Resource-Topics/Water-Loss-Control>

<sup>2</sup> [The Water Audit Data Initiative: Five Years and Accounting](#)



**DISCUSSION ITEM**

January 3, 2022

**TO: Planning & Operations Committee**  
(Directors Yoo Schneider, Nederhood, Seckel)

**FROM: Robert Hunter, General Manager**

Staff Contact: Charles Busslinger

**SUBJECT: Administration Building Construction Update**

**STAFF RECOMMENDATION**

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

**COMMITTEE RECOMMENDATION**

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Committee recommends (To be determined at Committee Meeting)

**SUMMARY**

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The MWDOC Administration Building Seismic Retrofit and Remodel Project is substantially complete as of December 2021. This report is to update the Board on construction progress.

**DETAILED REPORT**

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On October 21, 2020, the Board authorized the award of a construction contract with Optima RPM, Inc. for the MWDOC Administration Building Seismic Retrofit and Remodel Project. The project involves seismic improvements and remodeling of the administration building including improvements for the building to serve as a backup WEROC emergency operations center. The remodel also addresses current space inefficiencies with the existing floor plan to provide additional workspaces within the building.

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

## Project Status

Construction is substantially complete and all city inspections have been approved as of December 2021. Key items addressed during the remodel include:

- Asbestos mitigation during the demolition of drywall.



*Asbestos Mitigation and Monitoring During Demolition*

- Seismic improvements along the walls to roof connections and structural reinforcement to all four corners of the building.



*Bent Plates and Structural Brackets Attached to Interior Wall*



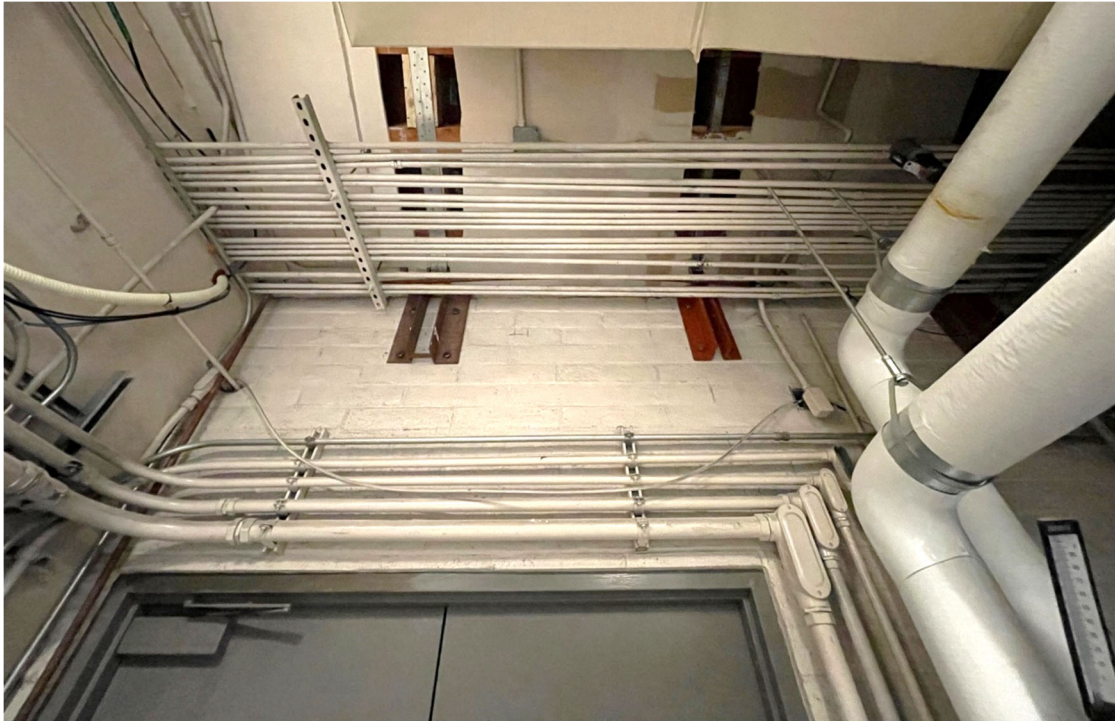


*Structural Reinforcement to Southwest Interior Corner of Building*



*Wood Reinforcement and Strapping in the Southeast Corner of the Building*





*Strapping in the Mechanical Room*

- Electrical improvements to bring the system up to code and rebalance the building electrical load. The improvements addressed all electrical deficiencies and allows for future electrical additions.



*Upgraded Main Switchboard for the MWDOC Building*

- Title 24 Lighting Code Compliance (new lights, energy management system, emergency lighting system with battery backup).



*New Battery System for Emergency Lighting System*

- Improvements to floor plan efficiency including additional workspaces.



*North Open Office Area*





*Southwest Open Office Area*



*Southeast Open Office Area*

- Modifications to the west side restrooms to meet ADA accessibility requirements.



*New ADA Accessible Restrooms*

- Modifications to ADA parking spaces per ADA requirements.



*Restriped ADA Parking Spaces and Upgraded Truncated Domes to meet ADA Requirements*



- Improvements to Conference Room 101, which serve multiple purposes/functions including Board/Committee Room, Classroom for WEROC training, and backup WEROC emergency operations room.



*Updated Conference Room 101*

- Relocation of Conference Room 102 adjacent to the main lobby. Conference Room 102 to also serve as an emergency operations Policy/Break out conference room.



*New Conference Room 102*

- New MWDOC entryway doors that meet both ADA & Fire Code compliance includes 100 door cycle battery backup system.



*New ADA/Fire Code Compliant Lobby Doors (MWDOC Side)*





*New ADA/Fire Code Compliant Lobby Doors (Lobby Side)*

- New ADA accessible door push plates and 100 door cycle backup battery system for main entrance lobby doors.



*Updated ADA Compliant Main Entrance Lobby Doors*





*Updated ADA Compliant Main Entrance Lobby Doors*

- New seismic fortified and sound resistant glass walls/doors



*Glass Walls/Door for Newly Created Conference Room 103*



*Glass Walls/Doors for New Director's Office (Right) and Open Office Area (Left)*



*Glass Walls/Doors for New Breakout Room (Right Room)*





*Glass Walls/Doors for New Breakout Room (Left Room)*

- Additional sound mitigation measures throughout the office including installing separating walls up to the ceiling for certain offices and the installation of sound resistant vinyl and insulation between walls.
- New ergonomic furniture for all offices and workstations.



*New Furniture in Private Offices*



*New Furniture in Workstations*

- Installation of window fragment retention film on all exterior glass.



*All Windows Received Fragment Retention Film*

- Updated plumbing including hydro jetting the sewer lines and installing a new service clean out.



- HVAC improvements to address COVID including higher efficiency filters (MERV 13) throughout the building and the installation of a bipolar ionization system.

## Project Budget & Cost Tracking

Table 1 below provides a summary of all construction related costs over the course of the project.

Table 1 - Total Construction Related Costs		
A	Original Construction Contract Scope	\$ 1,606,878
B	Initial Construction Contingency	\$ 321,266
C	Additional Construction Contingency (Authorized 7/21/21)	\$ 171,438
D	Construction Management, Design Support, Inspections, Monitoring, Move Management (See Table 2 for further breakdown)	\$ 700,542
	<b>Total Costs</b>	<b>\$ 2,800,124</b>

\*Note that the contingency fund above was utilized for all additional construction related costs not included in the original bid. These costs may include costs for additional construction management, design support, inspections, and monitoring services.

Table 2 further breaks down all costs under Item D associated with Construction Management, Design Support, Inspections & Monitoring.

Table 2 - Construction Management, Design Support, Inspections & Monitoring (Breakdown from Item D)	
Owner's Representative Services	\$ 385,031
Architectural, Interior Design and Engineering Support Services	\$ 239,769
Construction Related HVAC Support	\$ 17,729
Asbestos Monitoring and Reporting Services	\$ 22,320
Building Management Support Services	\$ 6,449
Deputy Inspector Services	\$ 10,294
Fire Alarm Support Services	\$ 18,950
	<b>\$ 700,542</b>

Table 3 provides a breakdown of all other building remodel related costs.

Table 3 - Other Building Remodel Related Costs	
Audio/Video and I.T.	\$ 83,872
Furniture	\$ 516,996
Glass Walls/Doors	\$ 111,686
	<b>\$ 712,554</b>





**INFORMATION ITEM**

January 3, 2022

**TO: Planning & Operations Committee**  
(Directors Yoo Schneider, Nederhood, Seckel)

**FROM: Robert Hunter, General Manager**

Staff Contact: Vicki Osborn

**SUBJECT: UPDATE REGARDING AMERICA'S WATER INFRASTRUCTURE ACT (AWIA)**

**STAFF RECOMMENDATION**

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Staff recommends the Planning & Operations Committee to hear presentation made by WEROC and the CEO of Herndon Solutions Group (HSG).

**COMMITTEE RECOMMENDATION**

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Committee recommends (To be determined at Committee Meeting)

**SUMMARY**

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WEROC launched an effort to facilitate a joint RFP and contract with participating WEROC member agencies to address the requirements of America's Water Infrastructure Act (AWIA). On October 23, 2018, Congress signed into law the American Water Infrastructure Act (AWIA) (S.3021, Law 115-270). Per Section 2013 of Title II, the AWIA requires utilities to conduct a Risk and Resilience Assessment (RRA) of their community water systems and develop a corresponding Emergency Response Plan (ERP).

- 26 Agencies participated in the Phase 1 Crosswalk Compliance.
- 24 agencies participated in the Phase 2 Risk and Resilience Assessments and Phase 3 Emergency Response Plans.
- All agencies successfully self-certified both their Risk and Resilience Assessment and Emergency Response Plans with EPA by the regulatory date.

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

Over the course of this project, WEROC worked closely with its consultant, Herndon Solutions Group (HSG) to support and provide services to all participating agencies. With the COVID19 Pandemic, changes to the contractual scope of work was made in order to address the challenges with the pandemic while fulfilling the agencies regulatory requirements.

Herndon Solutions Group (HSG) has been a professional organization throughout this process by providing expertise and knowledge assisting each agencies with different needs throughout this process.

The presentation attached and being presented at the P&O Committee meeting will highlight the process, milestones achieved, deliverables provided and outline some of the areas in which this process will be simpler and smoother next time based on the areas we highlighted together as opportunities to improve upon.

Attachment 1: AWIA Presentation Slides



# WEROC/MWDOC AWIA Project Briefing

P&O Committee January 2022



# Project Overview

## BioTerrorism Act & AWIA



BioTerrorism Act 2002		America's Water Infrastructure Act (AWIA) of 2018
Vulnerability Assessment (VA)	→	Risk and Resilience Assessment (RRA)
Terrorism or Intentional Act	→	All-Hazard Approach
Submit VA to Environmental Protection Agency (EPA)	→	Submit Letter to EPA
Emergency Response Plan (ERP)	→	Prepare/Update and Submit Letter to EPA
	★	Directs EPA to Recognize Voluntary Consensus Standards
	★	Directs EPA to Provide Baseline Threat Information

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## AWIA §3021



(AWIA §3021) Community Water Systems must conduct an RRA and create an ERP. Both must be updated every 5 years.

ASSESS RISK	DEVELOP A PLAN	CERTIFY COMPLIANCE
<b>An RRA should:</b>	<b>An ERP should include:</b>	<b>The certification letter to EPA should include:</b>
<ul style="list-style-type: none"> <li>Consider malevolent threats and natural hazards that may impact mission continuity.</li> <li>Assess asset resilience: source water, treatment and distribution, automated systems, materials, and supplies.</li> <li>Prioritize actions and strategies for malevolent threats and natural hazards.</li> </ul>	<ul style="list-style-type: none"> <li>Strategies, plans, and procedures to improve system resilience.</li> <li>Actions that lessen the impact or improve response and recovery from an incident.</li> </ul>	<ul style="list-style-type: none"> <li>Identity of the community water system.</li> <li>Date of certification.</li> <li>Statement that the utility has conducted, reviewed, or revised the RRA or ERP.</li> </ul>

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## Compliance Schedule



Population Served	RRA Due Date	Status	ERP Due Date	Status
>100,000	March 31, 2020	✓	September 30, 2020	✓
50,000 – 99,999	December 31, 2020	✓	June 30, 2021	✓
3,301 – 49,999	June 30, 2021	✓	December 30, 2021	✓

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## Getting the Project Started



- 2019 Discussion on our OC approach AWIA
- Decision:
  - Single contract and reimbursement concept in a manner similar to completion of the Urban Water Management Plans
- Initially 29 of the 32 water utilities in OC indicated their interest
- WEROC received 7 proposals
  - Ranging from about \$4 million to about \$10 million combined for 28 agencies
- The final contract prices for each phase were dependent on final Participating Agency commitment

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## Contract Awarded



- This project and contract allowed agencies to opt in or out of each phase of service at their choice and therefore is an elective service being offered by WEROC and MWDOC.
- Contract awarded on July 17, 2019 to Herndon Solutions Group (HSG) in an amount up to, with a not to exceed of \$4.4 million, depending on how many of our agencies participated in the process.



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## Participating Agency Breakdown



Tier 1	Tier 2	Tier 3

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## Technical Approach



AWIA Compliance Crosswalk	RRAs	ERPs
<ul style="list-style-type: none"> <li>• Compliance Assessment with AWIA Requirements</li> </ul>	<ul style="list-style-type: none"> <li>• J100 Assessments/ PARRE Tool</li> <li>• Standard Operating Procedures (SOP)</li> <li>• 3 Workshops*</li> </ul>	<ul style="list-style-type: none"> <li>• Workshops*</li> <li>• Update/Write ERPs</li> <li>• Executive Summary Preparation</li> <li>• Agency Training</li> </ul>

\*Workshops were significantly different than planned due to COVID.

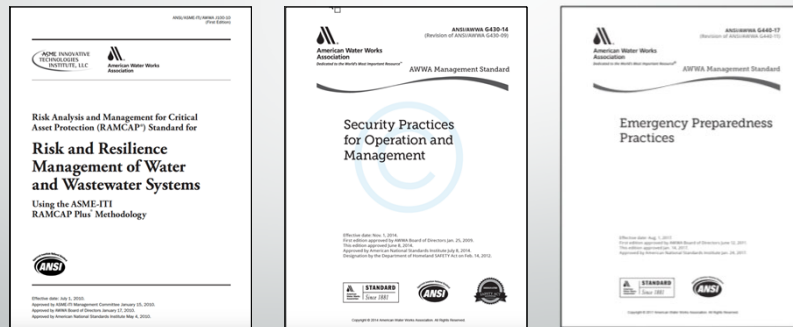
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## Phase 1 AWIA Crosswalk

## AWIA Crosswalk

Core Voluntary Standards (American Water Works Association [AWWA] Standards) Supporting AWIA Compliance



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## AWIA Crosswalk (cont'd)



Supplemental standards, requirements, and guidance (examples):

- Standardized Emergency Management System (SEMS)/National Incident Management System (NIMS)
- State Water Resources Control Board, Division of Drinking Water Emergency Response Plan Guidance for Public Drinking Water Systems (i.e., notification guidance)
- AWWA M19 Emergency Planning for Water and Wastewater Utilities

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## AWIA Crosswalk (RRA Example)



Plan/Program Elements	Reference	Location	Status	Comments
<b>AWIA Sec. 2013 (a)</b>				
<b>Risk and Resilience Assessment (RRA)</b>				
Each community water system serving a population of greater than 3,300 persons shall assess the risks to, and resilience of, its system. Such an assessment shall include:				
i. The risk to the system from malevolent acts and natural hazards; ii. The resilience of the pipes and constructed conveyances, physical barriers, source water, water collection and intake, pretreatment, treatment, storage, and distribution facilities, electronic, computer, or other automated systems (including the security of such systems) which are utilized by the system; iii. The monitoring practices of the system; iv. The financial infrastructure of the system; v. The use, storage, or handling of various chemicals by the system; and vi. The operation and maintenance of the system.				
The assessment may include an evaluation of capital and operational needs for risk and resilience management for the system.				
<b>Overall</b>				
1.	Has the agency developed a RRA (historically referred to as a vulnerability assessment [VA]) in the last 5 years?	AWIA Sec. 2013 (a)(1) J100 Section 4.0 G430-14, Section 4.4 G440-17, Section 4.4	2020 RRA -2019 Orange County Regional Water and Wastewater Hazard Mitigation Plan  <b>Met</b>	This is the first RRA for MWD0C. The utility completed this RRA and certified its completion on or before March 31, 2020.

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## AWIA Crosswalk (ERP Example)




<b>AWIA Sec. 2013 (b)</b>				
<b>Emergency Response Plan (ERP)</b>				
The following requirements are from AWIA Sec. 2013: No later than six months after certifying completion of its RRA, each system must prepare or revise, where necessary, an emergency response plan that incorporates the findings of the assessment. The plan shall include:				
1. Strategies and resources to improve the resilience of the system, including the physical security and cybersecurity of the system; 2. Plans and procedures that can be implemented, and identification of equipment that can be utilized, in the event of a malevolent act or natural hazard that threatens the ability of the community water system to deliver safe drinking water; 3. Actions, procedures, and equipment which can obviate or significantly lessen the impact of a malevolent act or natural hazard on the public health and the safety and supply of drinking water provided to communities and individuals, including the development of alternative source water options, relocation of water intakes and construction of flood protection barriers; and 4. Strategies that can be used to aid in the detection of malevolent acts or natural hazards that threaten the security or resilience of the system.				
<b>Overall</b>				
1.	Has the agency's ERP been reviewed in the last 5 years?	AWIA Sec. 2013 G430-14, Section 4.5 CA HSC Sec8607 CalOES EOP Crosswalk #35, 36	WEROC EOP, March 2018 Update  <b>Yes</b>	The current, approved version is dated March 2018.
2.	Does the agency demonstrate a commitment to security and emergency preparedness?	G430-14, Section 4.1 G440-17, Section 4.1 M19, Chapter 3	WEROC EOP, March 2018 Update  <b>Yes</b>	Having the EOP, in addition to the frequent training and exercises conducted by the WEROC Emergency Manager (dedicated position) indicates a strong commitment to security and emergency preparedness.

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# Phase 2

## Risk and Resilience Assessments (RRAs)



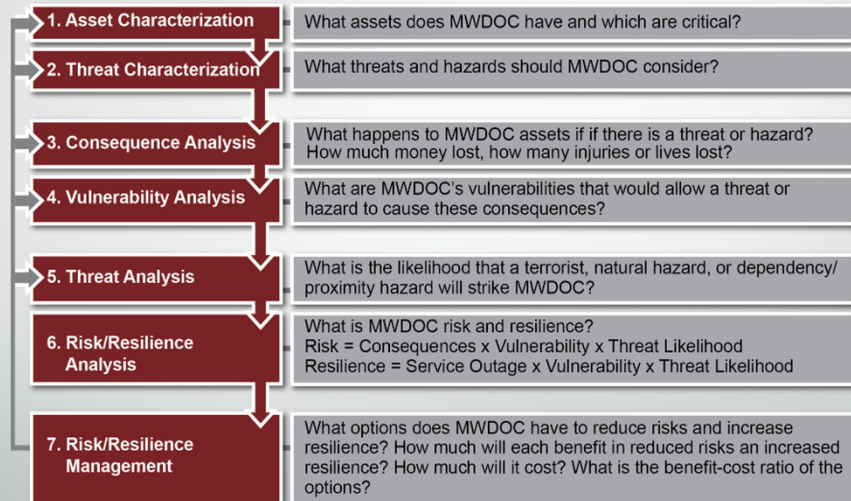
## RRA Components



- Assets
- Threats (frequencies)
- Countermeasures

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## RRA Steps



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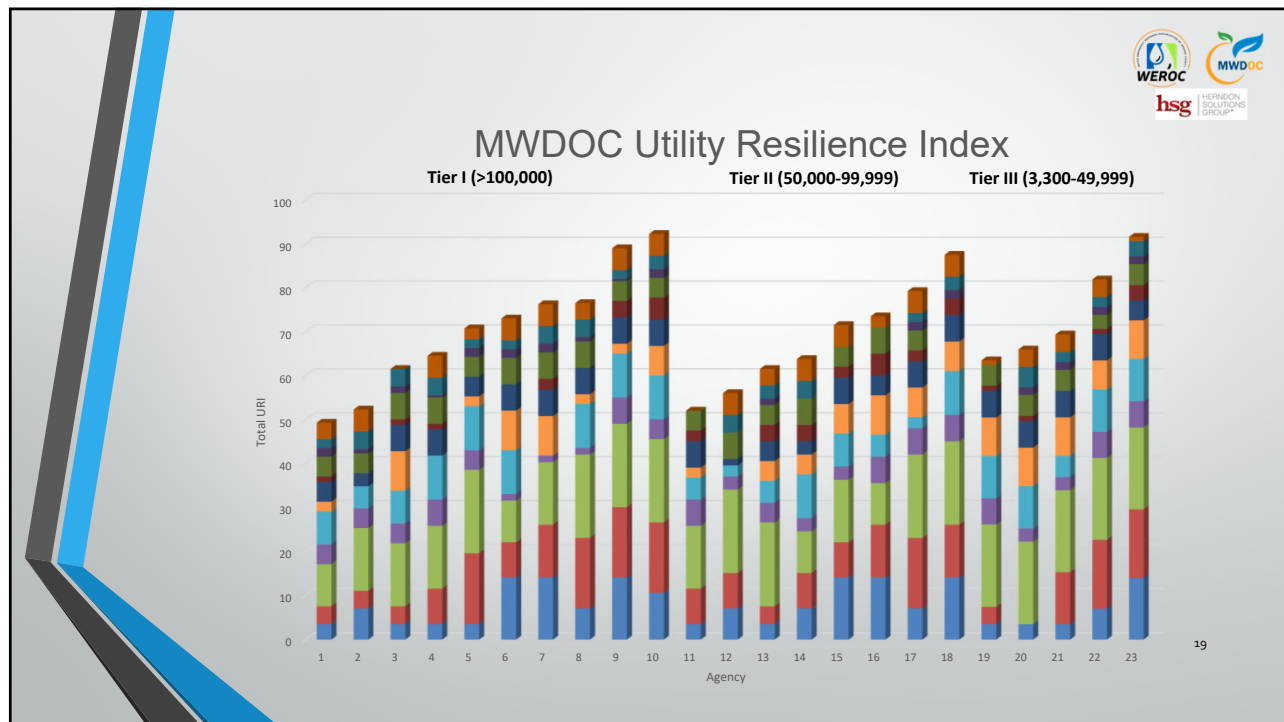
## AWIA Compliance Table (RRA Example)



Table 1-1. RRA Compliance Summary

AWIA Requirement	How Met
1. Risk to the system from malevolent acts and natural hazards.	The AWWA J100 Standard was applied through nine virtual workshops plus elicitation from City experts. The malevolent acts and natural hazards analyzed are described in Sections 5.2 and 5.7. Top risk results are outlined in Table 5-9.
2. Resilience of the pipes and constructed conveyances; physical barriers; source water; water collection and intake; pretreatment, treatment, storage, and distribution facilities; and electronic, computer, or other automated systems (including the security of such systems) used by the system.	The AWWA J100 Standard was applied through nine virtual workshops and elicitation from City experts. The results of these workshops are shown through the top risk results in Table 5-9. In addition, cyber resilience was examined through application of the AWWA Cybersecurity Guidance Assessment Tool. Results from the cyber assessment are described in Section 4.0 and Table 4-2.
3. Monitoring practices of the system.	The City has a complete Supervisory Control and Data Acquisition (SCADA) system monitoring flow rates and water levels within the water system that can be operated manually by trained personnel. A discussion of cyber threats related to the City's SCADA system is provided in Section 4.0.
4. Financial infrastructure of the system.	The AWWA J100 Standard was applied through nine virtual workshops plus elicitation from City experts. In addition, application of the Utility Resilience Index (URI) also helped analysis of fiscal reliance. The results of these workshops and the URI assessment are outlined in Section 5.8, Tables 5-9 and 5-10.
5. Use, storage, or handling of various chemicals by the system.	The City did not report any use, storage, or handling of various chemicals by the system.
6. Operation and maintenance of the system.	The AWWA J100 Standard was applied through nine virtual workshops plus elicitation from City experts. See Section 5.8 and Table 5-10 for discussion and results of the City's Operational Resilience Index (ORI).

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## RRA Database

Database is held in the PARRE software tool.

- All consequences, vulnerabilities, threat likelihoods, risks, and Utility Resilience Index (URI) scores are contained in PARRE.
- Data is held securely
- Agency Access

# PARRE™


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# Phase 3 Emergency Response Plans (ERPs)

## AWIA Compliance Table (ERP Example)



AWIA Requirement	How Met	References
Strategies and resources to improve the resilience of the system, including the physical security and cybersecurity of the system.	<p>As an operational plan, this ERP is designed to guide response and recovery activities in the context of existing agency capabilities. However, the ERP is designed to align with strategic plans to mitigate the impacts of identified hazards and threats and improve system resilience. These plans include:</p> <ul style="list-style-type: none"> <li>• 2020 Water System RRA</li> <li>• 2015 Urban Water Management Plan (UWMP)</li> <li>• 2019 Orange County Water and Wastewater Hazard Mitigation Plan</li> <li>• Water Division 2019 Report on Water Quality Relative to Public Health Goals</li> <li>• 2016 City Emergency Operations Plan (EOP)</li> </ul> <p>This ERP includes procedures to support identification and documentation of new strategies through development of post-incident/exercise after-action reports and an appendix intended to capture and track strategies for inclusion in updated mitigation strategies.</p>	<p><i>For additional detail see:</i></p> <ul style="list-style-type: none"> <li>• 8.4 Hazard Mitigation Attachment J: Hazard Mitigation</li> </ul>
Plans and procedures that can be implemented and identification of equipment that can be used in the event of a malevolent act or natural hazard that threatens the ability of the community water system to deliver safe drinking water.	<p>The ERP Basic Plan serves as an overarching framework to guide Water Division response and recovery actions. The ERP is designed to be an all-hazards plan that supports coordination and communication no matter the hazard or threat. The Basic Plan is supported by a series of Incident Annexes (IAs) that provide additional guidance specific to the unique hazards and threats of concern to the City including development of a new Cyber IA.</p> <p>The ERP includes procedures to use existing agency resources as well as processes to request support through the City Emergency Operations Center (EOC), Water Emergency Response Organization of Orange County (WEROC), and mutual aid partners via California Water/Wastewater Agency Response Network (CalWARN).</p>	<p><i>For additional detail see:</i></p> <ul style="list-style-type: none"> <li>• 5.7 Resource Management Incident Annex 2: Cyber</li> </ul>

## Executive Summary – for CUPA

### Certified Unified Program Agency



- *Community water systems shall to the extent possible coordinate with local emergency planning committees established under the Emergency Planning and Community Right-To-Know Act of 1986...*
- Original Intent & Deliverable:
  - Provide a single, executive summary for each entity
  - Meet with the CUPA
- Because of COVID:
  - Provide a single, executive summary for submittal to the CUPA
  - Cities can adapt if their fire department serves as the CUPA

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## Summary

## Overall Agency Participation



- At the end of the project:
  - 23 of 31 agencies completed all 3 phases
  - Agencies that did not participate:

Anaheim (City)	Laguna Beach County	Orange County Water District
Golden State Water Co	La Palma (City)	Yorba Linda Water District
Laguna Beach (City)	Mesa Water District	San Juan Capistrano **

\*\* San Juan Capistrano pulled out due to merger with SMWD

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## Project Value Added (Examples)



- Increase URI Score
  - ICS 700/800 training
  - Succession planning
  - Resource typing (NOTE: AWWA is getting ready to release a new toolkit)
- Consider integrating the “AWIA” approach into design projects (i.e., don’t design and retrofit)
- Conduct a tabletop exercise (TTX) on your revised ERP (at least annually)
- Hot wash “day-to-day” large incidents and document how the ERP was used and opportunities for improvement

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## Challenges & Opportunities



- Change Orders based on conversation with former MWDOC Staff
- COVID
- Loss of WEROC Part-Time Staff who oversaw this Project
- Agencies did not advise on challenges until far along in the process
- First time for this project and with multiple Level of Effort Tiers (Low, Med, High) with open flexibility impacted expectations, outcomes.
- Did I mention COVID

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## More Project Lessons Learned



- RRA
  - Provide data collection template regardless of availability of information
- ERP
  - Perform a secondary crosswalk against industry "best in class" ERP structure – integrate initial crosswalk and secondary crosswalk into LOR
  - Schedule/Review Option (i.e., review in sections)
- Integrate Regional Planning Gaps
  - Identify ERP element that would benefit all WEROC agencies (i.e., emergency drinking water supply, fuel contingency planning, etc.)
  - Consider lack of and/or over commitment of the same, regional source

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## Overall Positives



- Great learning Experience
- HSG **Very Professional**
- RRA Tools will be useful for the Hazard Mitigation Plan Revision
- Next time will be easier for all agencies involved

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## When Do we Get to Do This Again?



Population Served	Tier	Renewal Date*
>100,000	I	March 30, 2025
50,000-99,999	II	December 31, 2025
3,301-49,999	III	June 30, 2026

### RRA Compliance Dates

### ERP Compliance Dates

Population Served	Tier	Renewal Date*
>100,000	I	September 30, 2025
50,000-99,999	II	June 30, 2026
3,301-49,999	III	December 31, 2026



\*Adjust based on actual submittal date of previous RRA & ERP.

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Questions?



# The County of Orange Report

Prepared for the MWD OC P&O Committee

## *Farewell Edition*

December 27, 2021  
by Lewis Consulting Group



### **New Congressional and Legislative Maps Adopted**

#### **Let the Dominos Fall . . .**

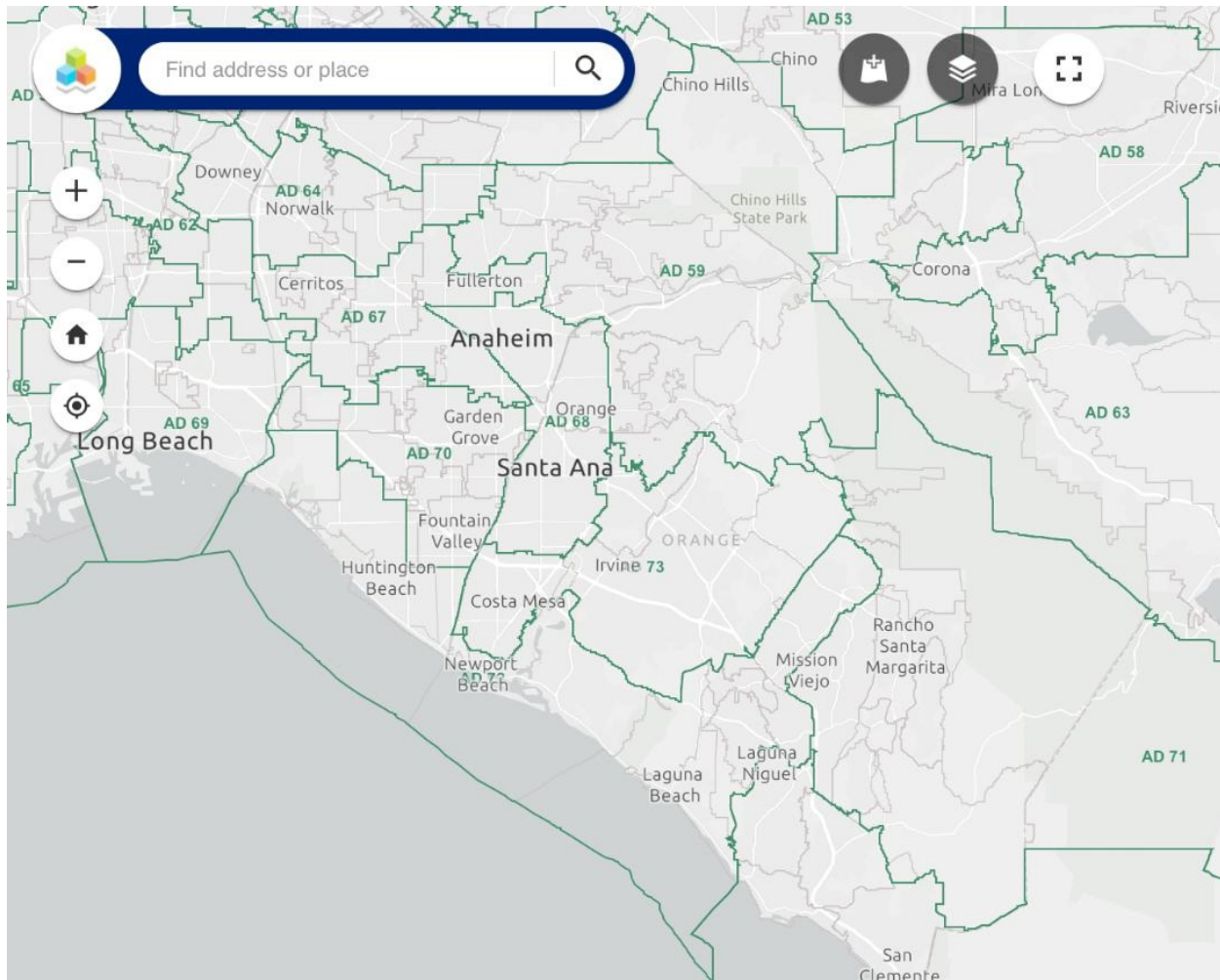
Californians were treated to an early holiday present as the Independent Redistricting Commission released finalized maps prior to Christmas, instead of waiting for the December 27<sup>th</sup> deadline. The new lines have created political jousting with incumbents moving into brand new districts.

Some of the immediate and notable political consequences include Congresswoman Young Kim leaving most of her old district behind and moving to the new 40<sup>th</sup> C.D. which includes the Chino Hills and Yorba Linda portions of her “old district” but also adds much of Orange County’s most Republican cities. By doing that, Congresswoman Michelle Steel can move to a new district which includes the Little Saigon area, but also includes Los Angeles County’s Cerritos and Hawaiian Gardens before curving around to include much of Fullerton. That move leaves a largely coastal district for Congresswoman Katie Porter which includes Huntington Beach, Costa Mesa and the more liberal enclaves of Irvine and Laguna Beach. Michelle Steel and Katie Porter will face stiff general election competition. Among other recent political recalculations, Assemblywoman Janet Nguyen will seek election to a new State Senate District. Assemblyman Tom Daly will attempt to prolong his political career by seeking re-election in the central heart of Orange County, a heavily Hispanic district enclave by Santa Ana and Anaheim and current County Supervisor Lisa Bartlett will run for a South County State Senate seat.

### **New Maps Dilute Orange County’s Political Representation**

In the last few decades, the emphasis on map compactness along with preserving the integrity of cities and counties has been de-prioritized in favor of more minority districts. At one time the goal was to keep counties whole if possible and if not, minimize County boarder crossings to two - once in and once out. That is now past history.

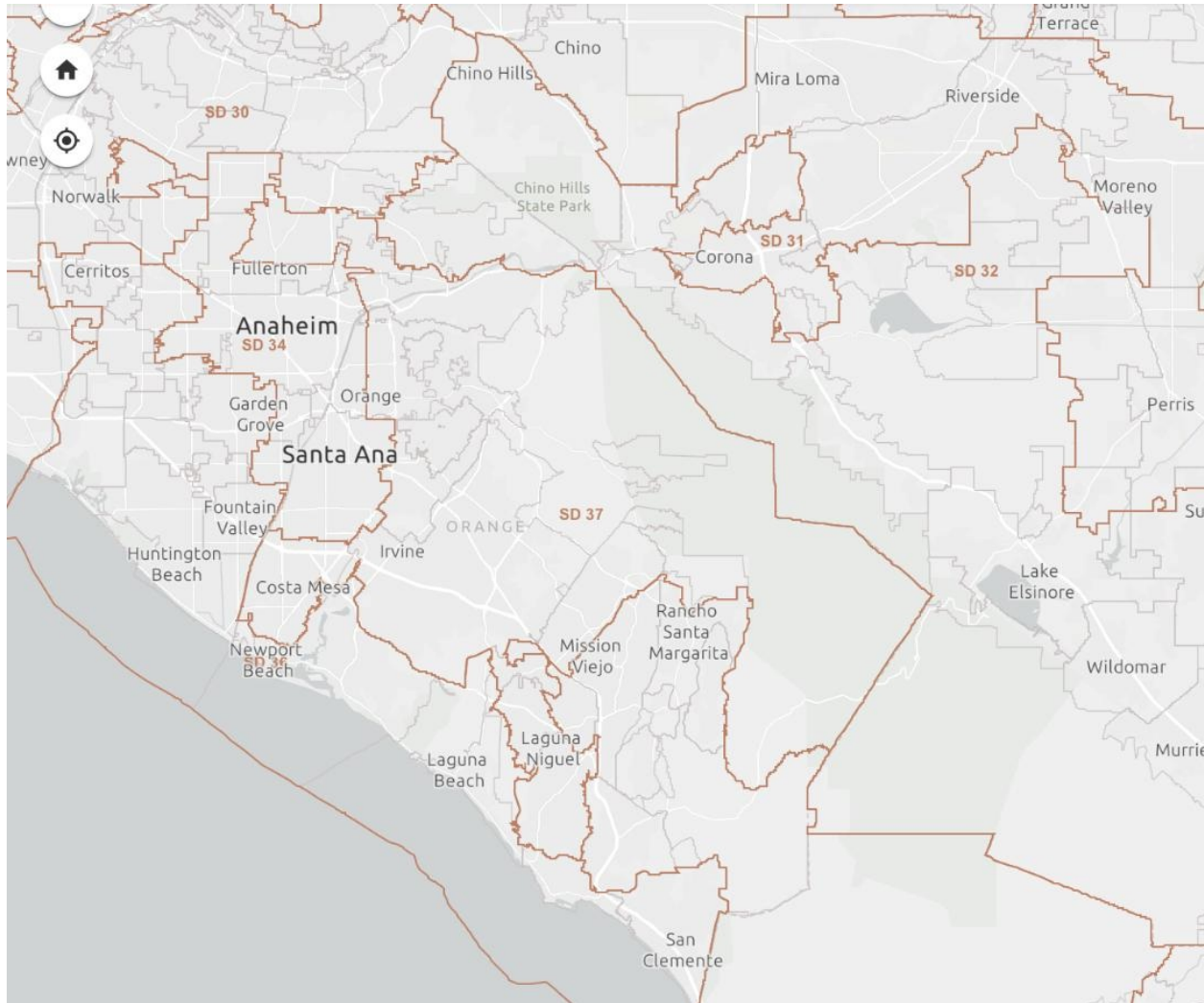
## Orange County Assembly Map



Under the new Assembly map, the City of La Habra is lopped off and combined into a Los Angeles County district. In another district, the cities of Mission Viejo and Rancho Santa Margarita are combined into a Riverside County district with the cities of Murrieta and Temecula. Lastly, the cities of Dana Point, San Juan Capistrano and San Clemente are placed into a San Diego County district with Oceanside and Vista.



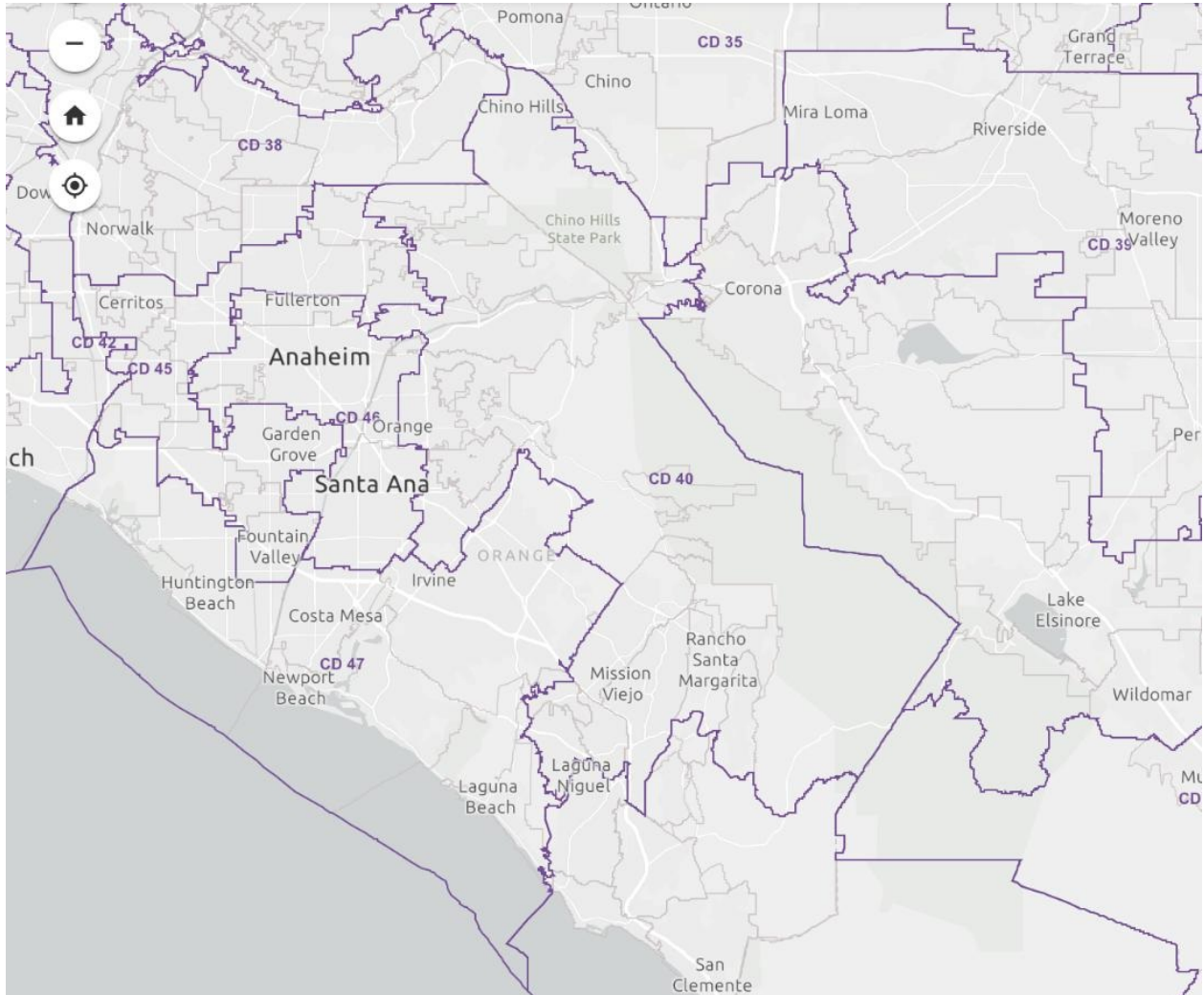
## Orange County State Senate Map



In the new State Senate lines, the City of Brea is placed in a Los Angeles County district, Yorba Linda is placed in a Riverside County district that includes Norco, Murrieta, and Temecula. Much of inland South Orange County is attached to a San Diego County district which nearly stretched to Mission Bay.



## Orange County Congressional Map



In the Congressional lines, a Los Angeles County district swallows up La Habra. Also Dana Point, San Juan Capistrano and San Clemente are attached to a San Diego County district that runs south to Del Mar.

## State Redistricting Favors Democrats

The State "Independent" Redistricting Commission managed to create more minority districts in California, but it also designed maps that look surprisingly like a Democrat gerrymander. According to the Cook Political Report, it's "a huge win for Dems, all 42 of their incumbents get double digit Biden seats (two are merged to California's seat loss). Meanwhile, five of California's 11 GOP incumbents get more vulnerable." The approved legislative lines appears to lock in democrat super majorities in both houses for the decade to come.

For those wondering how an independent Commission can create such seemingly partisan lines, check out this [2011 ProPublica article](https://www.propublica.org/article/how-democrats-fooled-californias-redistricting-commission) on the last redistricting.

<https://www.propublica.org/article/how-democrats-fooled-californias-redistricting-commission>

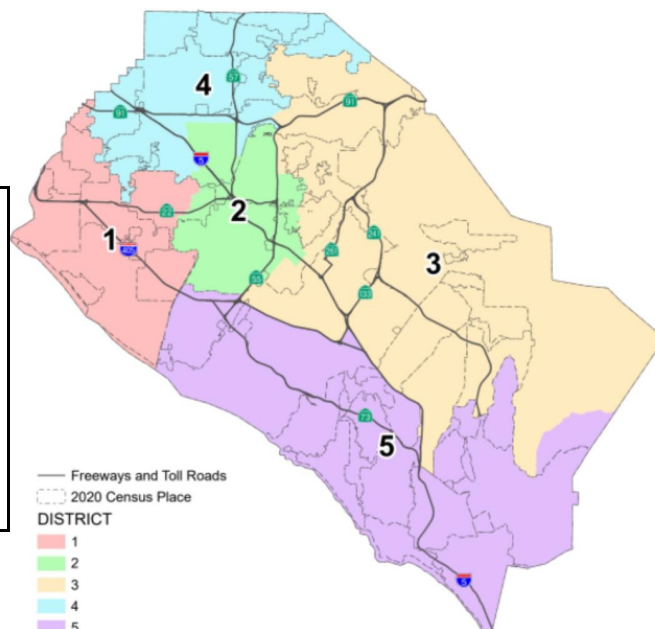
Has history repeated itself?



### SHORT TERM CONSEQUENCES

Supervisors Districts 2, 4, and 5 will be on the ballot in 2022. If Supervisor Chaffee is re-elected in District 4, Supervisor Foley wins election again in newly configured District 5 and a Hispanic Democrat emerges as expected from District 2, Democrats will hold their first Board majority in decades. District 5 should emerge as the major partisan battleground.

### NEW SUPERVISOR MAP



**DARK IN DECEMBER.** The next scheduled meeting of the Commission will be Wednesday, January 12, 2022 at 8:15 a.m. at the Planning Commission Hearing Room - Hall of Administration (HOA) located at 333 W. Santa Ana Blvd., 10 Civic Center Plaza, Santa Ana.

## Orange County COVID-19 Update

ORANGE COUNTY COVID-19 STATS	12/27/2021 <sup>^^</sup>	AS OF 11/29/2021
CUMULATIVE CASES TO DATE	329,025	312,623
CUMULATIVE DEATHS TO DATE	5,877	5,710
DEATHS REPORTED TODAY	13	35
CUMULATIVE TESTS TO DATE	6,100,603	5,777,916
TESTS REPORTED TODAY	96,337	40,763
CASES CURRENTLY HOSPITALIZED	282 *	181 *
CASES CURRENTLY IN ICU	66	43
CUMULATIVE RECOVERED TO DATE	307,898 *	300,879 *

\* = INCLUDES **ICU** CASES

<sup>^^</sup> = INCLUDES DATA FROM THE CHRISTMAS HOLIDAY WEEKEND



### Public Policy Institute of California - a Survey of Californians and Their Economic Well Being

Questions and Responses conducted from  
October 12–October 31, 2021  
2,292 California adult residents questioned  
Margin of error  $\pm 3.2\%$  at 95% confidence level for  
total sample

Do you approve or disapprove of the way that Governor Newsom is handling the issues of jobs and the economy?

61% approve  
38% disapprove  
1% don't know

Do you think the American Dream—that if you work hard you'll get ahead—still holds true, never held true, or once held true but does not anymore?

37% still holds true  
16% never held true  
47% once held true but does not anymore

When children today in California grow up, do you think they will be better off or worse off financially than their parents?

36% better off  
63% worse off  
1% don't know

Do you favor or oppose a government policy to make college tuition free at both public two-year and four-year colleges?

65% favor  
35% oppose

Would you favor or oppose a government policy to eliminate college debt?

60% favor  
40% oppose

Do you favor or oppose increasing government funding so that child care programs are available for more lower-income working parents?

76% favor  
24% oppose

Would you favor or oppose the government offering a health insurance plan, similar to Medicare, that Americans can choose to purchase instead of private insurance?

77% favor  
23% oppose

Would you favor or oppose the federal government providing a guaranteed income, sometimes called a "Universal Basic Income," of about \$1,000 a month for all adult citizens, whether or not they work?

48% favor  
52% oppose

How big of a problem is racism in the US today? Is it a big problem, somewhat of a problem, a small problem, or not a problem at all?

46% big problem  
34% somewhat of a problem  
12% small problem  
7% not a problem at all

Was there a time in the last twelve months when you felt you were treated unfairly at your place of work because of your racial or ethnic background?

9% yes  
91% no

Are you registered as a Democrat, a Republican, another party, or are you registered as a decline-to-state or independent voter?

46% Democrat  
24% Republican  
2% another party  
27% decline-to-state/independent

Do you think of yourself as closer to the Republican Party or Democratic Party?

33% Republican Party  
63% Democratic Party  
3% neither  
1% don't know

## California's Christmas Present

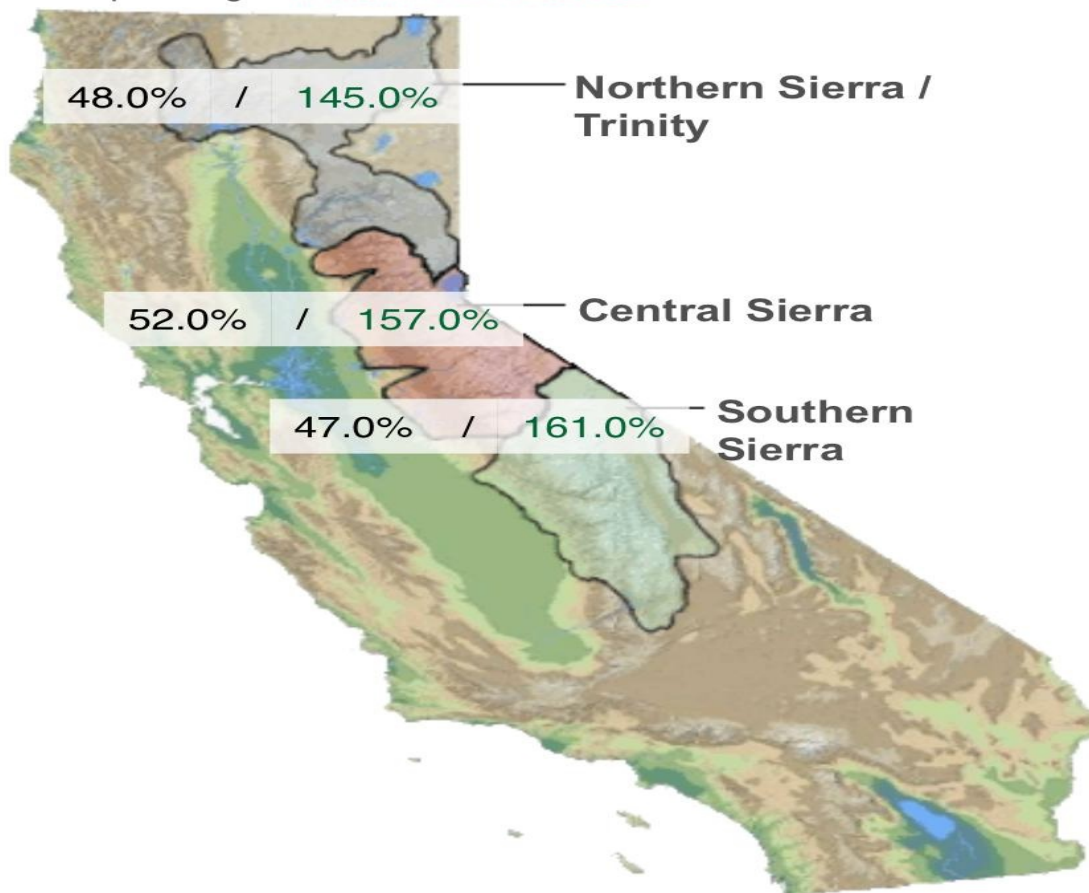
Giving proof to the variability of weather, California's December deluge has brought copious amounts of snow to the Sierra range and has made a significant impact on California's drought status. It has also raised doubt about the permanent drought theory. This major storm has also occurred during a mild La Nina, making it even more spectacular.

## Snow Water Equivalents (inches)

**Provided by the California Cooperative Snow Surveys**

**Data For: 27-Dec-2021**

% Apr 1 Avg. / % Normal for this Date



## Upper Colorado River Basin

**For December 27th, 2021**

**Snowpack is 107% of avg**

**Total Precip is 116.00% of avg**



# ACKERMAN CONSULTING

## Legal and Regulatory

January 3, 2022

1. **Lakes Shrinking:** Much work has been done studying changes in ocean levels, trends and activity. Much less has been done regarding the lakes on the planet. The International Atomic Energy Agency, a former branch of the UN, recently completed an isotope study of the world's lakes. Their conclusion was that the majority of lakes are shrinking due to evaporation and some may go extinct over time. Many lakes are unable to compensate for water lost by evaporation due to reduced amounts of water coming in to fill the lakes. Isotope hydrology uses chemistry and nuclear science to reveal the history and changes to our lakes. Think of it as a high tech study or tree rings. About 20% of lake inflow is lost to evaporation and 10% of the world's lakes show extreme losses. The study included 91 countries and 1257 lakes. A visit to the Great Salt Lake will show this study in action.
2. **Shower Wars:** Various recent administrations have taken different views on how much water you should use when you take a shower. While there is a shower head standard of 2.5 gallons per minute, the standards for how many heads could be used has been changing. Obama said one. Trump said more than one ok. Biden returned to one. This will probably not make it to the Supreme Court!
3. **PFAS Ocean Fallout:** The popular theory used to be that PFAS that ended up in the ocean was going to be OK. The particles would eventually be diluted over time and all would be good. Aerosol samples from Norway has shown that PFAS can become air borne very easily. After that, wind can transport them miles inland to be deposited on the ground. That is in addition to those that get deposited on the beach through normal wave action. This boomerang effect is concerning to costal drinking water sources and general contamination. The exact extent of the fallout is still being analyzed. This study was conducted by Stockholm University.
4. **Climate Uncertainty:** The Pacific Northwest National Laboratory, a US Department of Energy lab in Richland, Washington, has been studying climate uncertainty and modelling issues. They have noticed significant variances in models and explanations for them. They have also studied nature and its continuous variations over extended time periods. Ocean patterns which drive much of our climate have cycles like El Nino and La Nina. These seem to be naturally occurring and are many times difficult to predict. Using our now vast computer power and modelling capability assisted their effort. Their conclusion was that 70% of uncertainty in the use of models was due to natural climate cycles. They attribute the remaining 30% to human or other influences. Thus, when all our modelling is fully analyzed, it will still have an uncertainty factor of 70% or more based on what mother nature decides.
5. **More PFAS Cures:** Recent Congressional hearings have pointed out more possible solutions for PFAS. Supercritical water oxidation (Batelle) breaks down and destroys down the PFAS. It uses high heat (700°F), high pressure and sodium hydroxide to accomplish the task. They have a 99% success rate. Other companies are also



developing this technology, 374Water of Durham and Aquarden Technologies. Additional approaches include thermal technologies which use incineration methods and alkali reactors such as sodium hydroxide. All these methods seem to be effective. Cost effective commercial scales are the next threshold. Some of the committee discussion actually considered continued use of the carbon fluorine materials since it seems a cure is in sight. There was substantial push back because of the potential environmental and health risks. Also, many of the original users and producers of PFAS products have reduced or eliminated their use.

6. **Colorado Snow:** Scientists are telling us not to worry about Colorado's lack of snow. Even though the Rockies are off to a slow start this year, Open Snow's Joel Gatz claims that thus far we are about ½ way there. Many times in the last 20 years we have been in a similar position and bounced back by season end. La Nina cycles do not typically influence the Mountain West. Their best snow usually occurs later near April. The current storms will certainly help. Wet snow usually is the tipping point making snowpack more important than snowfall.
7. **Space Helps Algae:** Algae blooms are becoming a larger problem in water world. Particularly, the more toxic ones which can cause harm to humans. The cost of clean up and health services is over \$4 billion per year in the US. Identifying the good from the bad algae is very difficult due to the thousands of species of cyanobacteria (algae). The US Geological Survey is working on ways of monitoring this from space. Interpreting satellite images will soon help us determine where intervention is required. More satellite launches are slated with the technology to identify and monitor the blooms which will make treatment on earth more cost effective.
8. **UCSD Recreates Ocean:** Interaction between the ocean and the atmosphere are known to be controlling elements in weather conditions throughout the world. Knowing how to analyze data and recognize changing conditions will be critical to long term weather and water predictions. However, ocean study is difficult due to wave action, storms and the many other variables involved with large bodies of water. UCSD Scripps is trying to help solve the issue. They will be building a \$4 million water tank/aquarium which can recreate conditions normally occurring in nature. Cloud creation and interaction with the ocean is a critical component. This new project can study everything from the tropics to the north pole. They will be able to create clouds and study them relative to the ocean. A continuing debate is whether clouds help to cool the earth and trap heat and make things worse. Actually, clouds do both in different circumstances. Depending what type of droplets are formed and what is happening in the ocean at the time. This tank can also replicate 4 foot waves and winds up to 60 miles per hour. UCSD got a grant from the National Science Foundation for \$2.8 million and is financing the rest themselves. The scientists have joked that someday you will come to work in shorts and the next day in polar parkas. Quite an outstanding project that may be able to increase our weather database greatly.
9. **More Satellite Help:** A new satellite is being planned to study surface water and ocean currents around the world. The Surface Water and Ocean Topography (SWOT) mission is one year out from launch. The group includes NASA, France's space agency, Canada's space agency and the UK space agency. The SUV size satellite will monitor ocean, lake and river waters tracking volume and location. The brain of the unit is being made at JPL and the launch will be from Vandenberg. The rest of the parts are being made in all member countries and put together here. Team members are working at all four sites. Cal Tech is managing the project for NASA. Sounds like the A-Team for brain power and should be interesting to follow.

10. **Colorado Groundwater:** USGS has completed a study on Upper Colorado River Basin groundwater. This basin covers parts of Colorado, Wyoming, Utah, Arizona and New Mexico. This study looked at baseflow which is the transfer of groundwater into streams. This action account for about 50% of annual streamflow in the Upper Basin. Their modelling estimates a 29% decline in baseflow by 2050. Different models/assumptions were used in their report. The base cause was evapotranspiration. That is loss of water from evaporation from water and transpiration from land mass. Drought conditions and low reservoir clearly make this issue worse.



**INFORMATION ITEM**

January 3, 2022

**TO: Planning & Operations Committee**  
(Directors Yoo Schneider, Nederhood, Seckel)

**FROM: Robert Hunter, General Manager**

Staff Contact: Damon Micalizzi

**SUBJECT: February 23<sup>rd</sup> Water Policy Dinner Featuring State Water Resources Control Board Chair, Joaquin Esquivel**

**STAFF RECOMMENDATION**

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Staff recommends the Public Affairs & Legislation Committee: Receive and file the report.

**COMMITTEE RECOMMENDATION**

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Committee recommends (To be determined at Committee Meeting)

**DETAILED REPORT**

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Joaquin Esquivel, Chair of the State Water Resources Control Board, will serve as MWDOC's featured speaker at our next Water Policy Dinner. The event will be held at the Westin Hotel in Costa Mesa on Wednesday, February 23<sup>rd</sup>.

Esquivel was appointed to the State Water Resources Control Board by Governor Jerry Brown in March 2017 and designated as chair by Governor Gavin Newsom in February 2019. Previously, he served as assistant secretary for federal water policy at the California Natural Resources Agency in the governor's Washington, D.C. office. For more than eight years before that, Esquivel worked for U.S. Senator Barbara Boxer of California, most recently as her legislative assistant covering agriculture, water, oceans, and nutrition. He also served as the director of information and technology.



**INFORMATION ITEM**

January 3, 2022

**TO: Planning & Operations Committee**  
(Directors Yoo Schneider, Nederhood, Seckel)

**FROM: Robert Hunter, General Manager**

Staff Contact: Sarah Wilson

**SUBJECT: MWDOC Choice School Programs Update**

**STAFF RECOMMENDATION**

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

**COMMITTEE RECOMMENDATION**

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Committee recommends (To be determined at Committee Meeting)

**SUMMARY**

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The Municipal Water District of Orange County (MWDOC) K-12 Choice School Program contractors—Shows That Teach and Orange County Department of Education's Inside the Outdoors—continue to book live, interactive water lessons for the 2021/22 school year.

Also included in this report is a preview of scheduled visits for the months of January and February 2022. MWDOC Choice School Program contractors update the shared Google Calendar so that participating member agencies are able to view the virtual sessions in their service area as they are booked. Please note that the shared Google Calendar is updated frequently, and will always have the most accurate information. Visits are subject to change due to school and teacher availability. Login information for the shared Google Calendar is available upon request.

**DETAILED REPORT**

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All MWDOC Choice School Programs incorporate hands-on interaction, pre- and post-program activities, and opportunities for family and community engagement. Presentations

<b>Budgeted (Y/N): Y</b>	Budgeted amount: \$430,221	Core <u>  </u>	Choice <u>X</u>
<b>Action item amount:</b>	Line item: 63-7040		
<b>Fiscal Impact (explain if unbudgeted):</b>			

are offered to schools as either in-person or virtual. Included in this report is a detailed breakdown of each program's progress including teacher feedback, video links, and more.



**MWDOC Choice Elementary School  
Program (grades K-2)  
January 3, 2022**

Shows That Teach offers Orange County students in grades K-2 fun and informative assemblies that use music, humor, and audience participation to engage students in water-centric topics such as the water cycle, water supply resources, and using water wisely. This interactive program also includes hands-on pre- and post-activities that encourage students to reflect on their relationship with water. This program is offered either in person or virtually to K-2 students combined. Multiple classrooms and grade levels can participate simultaneously.

**COMPLETED PARTICIPATION TO DATE:**

Totals reflect the number of presentations *completed* and students seen since the start of the 2021-2022 school year.

- **In-person presentations hosted:** 21
- **Virtual presentations hosted:** 26
- **Total number of students seen:** 8,148
- **Presentations have been completed in the following service areas:** City of Anaheim, City of Brea, El Toro Water District, City of Fullerton, City of Garden Grove, City of Huntington Beach, City of La Habra, City of La Palma, Moulton Niguel Water District, City of Orange, City of San Clemente, City of Santa Ana, Santa Margarita Water District, South Coast Water District, Trabuco Canyon Water District, City of Tustin, City of Westminster

**SCHEDULED PARTICIPATION TO DATE:**

Totals reflect the number of presentations currently *scheduled* and students expected to participate in the upcoming months of the 2021-2022 school year.

- **In-person presentations scheduled:** 6
- **Virtual presentations scheduled:** 6
- **Total number of students expected:** 1,170
- **Upcoming presentations have been scheduled in the following service areas:** City of Buena Park, El Toro Water District, City of Garden Grove, City of Huntington Beach, City of Orange, City of Santa Ana, Santa Margarita Water District

**ADDITIONAL PROGRAM DETAILS AND MEASUREMENTS:**

**A video clip from a live virtual presentation to Santiago Elem in Santa Ana:**

[https://drive.google.com/file/d/1TE-RCdC0RKpJf\\_tU1RNE3XE95a7VsFs6/view?ts=61a6b8bd](https://drive.google.com/file/d/1TE-RCdC0RKpJf_tU1RNE3XE95a7VsFs6/view?ts=61a6b8bd)



A video clip from a live IN-PERSON presentation at Our Lady of Fatima Academy in San Clemente:

<https://drive.google.com/file/d/1WUG7ikWyFmNvuj7CiyofxjGjmr8XsOLu/view?ts=61b8c7f2>



**MWDOC Choice Elementary School  
Program (grades 3-5)**  
January 3, 2022



Orange County Department of Education's Inside the Outdoors offers Orange County students in grades 3-5 interactive, grade-specific lessons that engage students in valuable instruction on the history of California water, local climate and water sources, and how to use water efficiently. Each session includes student prompted interaction, demonstrations, and pre- and post-activities that guide students to examine how access to a reliable source of drinking water is important to every community. Participating students and their families also receive resources that complement the topics covered during the classroom session. This program is offered either in person or virtually to students in grades 3-5.

- 💧 **3rd Grade:** Compare and describe diverse weather and climate data and explore personal choices to protect our local water resources.
- 💧 **4th Grade:** Identify the key role water plays in California's history including the growth and expansion of towns and cities.
- 💧 **5th Grade:** Examine existing water management solutions and determine ways to protect the quality and quantity of water.

**COMPLETED PARTICIPATION TO DATE:**

Totals reflect the number of presentations *completed* and students seen since the start of the 2021-2022 school year.

- 💧 **In-person presentations hosted:** 0
- 💧 **Virtual presentations hosted:** 17
- 💧 **Total number of students seen:** 1,361
- 💧 **Presentations have been completed in the following service areas:** City of Anaheim, City of Santa Ana, City of Buena Park, City of Huntington Beach

**SCHEDULED PARTICIPATION TO DATE:**

Totals reflect the number of presentations currently *scheduled* and students expected to participate in the upcoming months of the 2021-2022 school year.

- 💧 **In-person presentations scheduled:** 93
- 💧 **Virtual presentations scheduled:** 22
- 💧 **Total number of students expected:** 9,015
- 💧 **Upcoming presentations have been scheduled in the following service areas:**
  - City of Anaheim
  - City of Garden Grove
  - City of Huntington Beach
  - City of Buena Park
  - City of La Palma
  - City of Fountain Valley
  - City of Santa Ana
  - City of Fullerton
  - City of Orange

- City of Tustin
- Moulton Niguel WD
- Santa Margarita WD
- City of San Clemente
- City of Brea

### **ADDITIONAL PROGRAM DETAILS AND MEASUREMENTS:**

To date, OCDE/ITO has received interest from the following schools and is working with teachers to schedule those presentations:

- Five (5) schools in the City of Fullerton
- One (1) school in the City of La Habra
- One (1) school in the City of Orange
- Three (3) schools in the City of Santa Ana
- Two (2) school in the City of Anaheim
- Two (2) school in the City of Brea
- One (1) school in El Toro Water District service area
- One (1) school in the City of Fountain Valley
- One (1) schools in the City of Buena Park
- Two (2) school in the City of Huntington Beach
- Four (4) schools in the City of Garden Grove
- Two (1) schools in the City of San Clemente
- One (1) school in Santa Margarita WD service area
- One (1) school in South Coast WD service area

Once scheduled, the shared calendar of visits will be updated.

Most schools that have shown interest, or have been scheduled, will have three grades (3-5) participating for three assemblies each.



**MWDOC Choice Middle and High  
School Programs (grades 6-12)**  
January 3, 2022



Orange County Department of Education's Inside the Outdoors offers Orange County students in grades 6-12 grade-specific classroom sessions that guide students to investigate challenges faced by water providers and identify sources of human impact on the quality, quantity, and availability of water in their communities. Each session includes student prompted interaction, demonstrations, and pre- and post-activities that engage students in developing solutions to real-world problems. Participating students also have the opportunity to engage in field study or volunteer days of service to receive credit toward their required service hours. This program is offered either in person or virtually to students in grades 6-12.

- ◆ **6<sup>th</sup>-8<sup>th</sup> Grade:** Students analyze water samples to identify sources of potential pollution and form strategies to monitor or minimize pollution.
- ◆ **9<sup>th</sup>-12<sup>th</sup> Grade:** Students collect and analyze data to explore the role of the Sacramento-San Joaquin Delta and its connection to our local water resources.

**COMPLETED PARTICIPATION TO DATE:**

Totals reflect the number of presentations *completed* and students seen since the start of the 2021-2022 school year.

**Middle School Program (grades 6-8)**

- ◆ **In-person presentations hosted:** 0
- ◆ **Virtual presentations hosted:** 0
- ◆ **Total number of students seen:** 0
- ◆ **Presentations have been completed in the following service areas:** 0

**High School Program (grades 9-12)**

- ◆ **In-person presentations hosted:** 0
- ◆ **Virtual presentations hosted:** 0
- ◆ **Total number of students seen:** 0
- ◆ **Presentations have been completed in the following service areas:** N/A

**SCHEDULED PARTICIPATION TO DATE:**

Totals reflect the number of presentations currently *scheduled* and students expected to participate in the upcoming months of the 2021-2022 school year.

**Middle School Program (grades 6-8)**

- ◆ **In-person presentations scheduled:** 2
- ◆ **Virtual presentations scheduled:** 4
- ◆ **Total number of students expected:** 155
- ◆ **Upcoming presentations have been scheduled in the following service areas:**
  - City of Tustin
  - City of Anaheim

### High School Program (grades 9-12)

- ◆ In-person presentations scheduled: 4
- ◆ Virtual presentations scheduled: 0
- ◆ Total number of students expected: 119
- ◆ Upcoming presentations have been scheduled in the following service areas:
  - City of Anaheim
  - City of San Clemente

### ADDITIONAL PROGRAM DETAILS AND MEASUREMENTS:

To date, OCDE/ITO has received interest from the following schools and is working with teachers to schedule those presentations:

- ◆ Three (2) school in the City of Anaheim service area
- ◆ One (1) school in the City of Brea service area
- ◆ One (1) school in El Toro WD service area

Once scheduled, the shared calendar of visits will be updated.

With middle schools and high schools in Orange County, it takes more time to coordinate outside programs for their students. That is due to limited instructional time teachers have in these grades, as well as having multiple classes that require scheduling.

Mon	Tue	Wed	Thu	Fri
3	4	5	6	7
				3-5 City of Huntington Beach
10	11	12	13	14
K-2 ETWD San Joaquin Elem K-2 HUNTINGTON BEACH Ada K-2 ORANGE Olive Elem @	3-5 City of Santa Ana - Rosita	3-5 City of Garden Grove - 9-12 City of Anaheim - K-2 ORANGE West Orange	3-5 City of Fullerton - 3-5 City of La Palma - Los K-2 GARDEN GROVE Christ K-2 HUNTINGTON BEACH	
17	18	19	20	21
		3-5 City of Fountain Valley -		3-5 City of Santa Ana -
24	25	26	27	28
	3-5 City of Garden Grove - K-2 SANTA ANA Diamond	3-5 City of Santa Ana - Adams K-2 SMWD Ambuehl Elem @	3-5 City of Garden Grove -	3-5 City of Garden Grove - K-2 BUENA PARK Buena Park K-2 ORANGE Chapman Hills K-2 SANTA ANA Carver Elem
31	1	2	3	4
	3-5 City of Santa Ana -	3-5 City of Fullerton - K-2 HUNTINGTON BEACH		

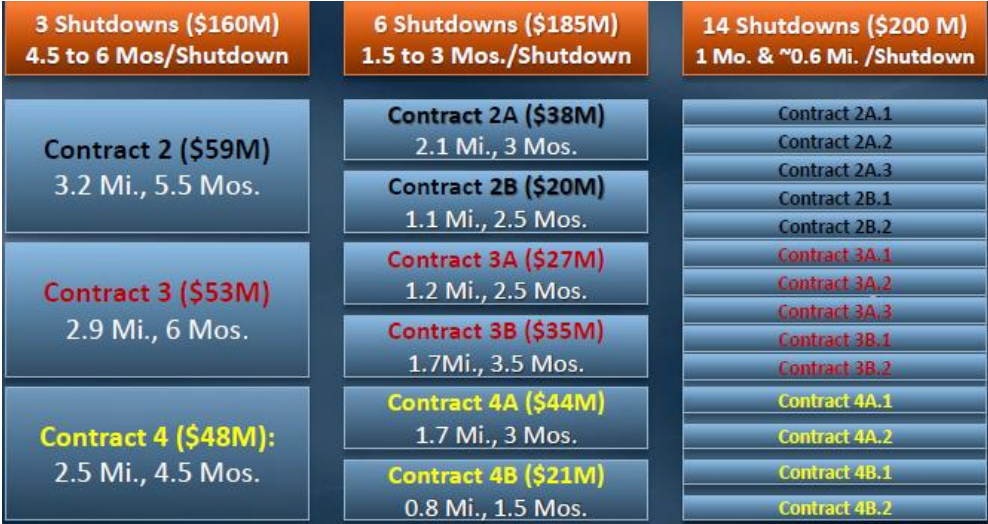


Mon	Tue	Wed	Thu	Fri
31	1 3-5 City of Santa Ana -	2 3-5 City of Fullerton - K-2 HUNTINGTON BEACH	3	4
7 3-5 City of Anaheim - Barton	8 3-5 City of Fullerton - Maple 3-5 City of Huntington Beach	9	10 3-5 City of Fullerton - Acacia	11 3-5 City of Huntington Beach
14	15 3-5 City of Fullerton - Fern	16 3-5 City of Garden Grove -	17 3-5 Orange - West Orange	18 3-5 City of Garden Grove -
21	22	23	24	25
28	1 3-5 City of Anaheim - Sunkist 3-5 City of Santa Ana - Carver	2 3-5 Fountain Valley - 6-8 City of Tustin - St. Jeanne	3 3-5 Garden Grove - Crosby	4 3-5 - Santa Ana - El Sol

<b>ENGINEERING &amp; PLANNING</b>	
<b>East Orange County Feeder No. 2 (EOCF#2) Emergency Pilot Program</b>	Staff and Means Consulting continue to work with Metropolitan (MET) on defining and phasing a scope of work for emergency pump-in of local water supplies into EOCF #2 under MET Admin Code 4519: Emergency Deliveries of Member Agency Water Supplies in Metropolitan's System. The program is intended to enhance water supply reliability in the event of a prolonged emergency. As indicated previously, this is a multi-year effort. The intended outcome of this effort is a set of guidelines for MET member agencies to use to establish their own emergency pump-in programs to MET's system. Hazen & Sawyer is also providing technical assistance for this effort.
<b>Economic Benefit Studies and Modeling Work to Quantify the Benefits of Local Projects in the Context of MET's 2020 Integrated Resources Plan (IRP)</b>	<p>MWDOC staff continues working with the Brattle Group and CDM Smith on the Economic Benefits Studies. The studies will be useful in helping MWDOC and our agencies better understand the reliability benefits provided by potential supply investments at both the MET level and at the Orange County level by quantifying their economic benefits. The studies are looking at two main sectors of the economy: Residential and Business sectors. The benefits are being quantified by looking at the 'avoided costs' of water shortages to both of these sectors of the economy.</p> <p>Wallace Walrod, economist for Orange County Business Council and sub-consultant for the Brattle Group, is leading the business portion of the economic benefit studies and is surveying the business community to determine how they might be impacted by both emergency water shortages (i.e. earthquakes) which are severe shorter-term shortages; and by longer-term and less severe shortages (i.e. droughts).</p> <p>Cal State University, Fullerton's Social Science Research Center (CSUF) has completed surveys of over 400 Orange County businesses. Dr. Walrod and Dr. Boarnet are currently analyzing the data and preparing a report. A presentation of business survey results is anticipated at P&amp;O Committee once the data has been analyzed.</p> <p>The residential impact analysis is being conducted by David Sunding of the Brattle Group, using available residential information.</p>
<b>Reliability Study Update</b>	Staff are working with CDM Smith on an update to the reliability study. The update will look at a total of 5 scenarios that include recent information including uncertainty about the Delta Conveyance Project and more recent Climate Change impact information. The update will incorporate the latest demand forecasts from the 2020 Urban Water Management Planning efforts, update project cost information, and include updated information from MET's 2020 IRP process. Staff participated in a meeting with MET staff and CDM Smith on September 25, 2021 to discuss supply projections for the State Water Project and the Colorado River Aqueduct as they relate to the reliability study update.

	Staff anticipates the update to be completed in early 2022. Staff will then bring the study results to the Board for discussion.
<b>Doheny Ocean Desalination Project</b>	<p>South Coast Water District (SCWD) continues to develop the Doheny Ocean Desalination Project. SCWD is currently working through multiple due diligence items to move the project forward including; permitting, plant sizing and siting, financing, and project delivery method. SCWD anticipates having all necessary permits by the end of the 1st Quarter of 2022 and estimates an on-line date of early 2026, if approved by the SCWD Board.</p> <p>On July 22, 2021, SCWD conducted its 7<sup>th</sup> workshop on the SCWD Integrated Water Resources Plan (IWRP). Included in that plan was consideration of a strategy for various options for the Doheny Ocean Desalination Project. The SCWD Board approved an adaptive management strategy which includes proceeding with efforts to secure partners for a 5 MGD Doheny Ocean Desalination Project. If SCWD is unsuccessful in securing partners SCWD will proceed with construction of a smaller 2 MGD project that does not have future expansion capabilities.</p> <p>SCWD held a Special Board Meeting on September 2, 2021 to discuss the financial implications of the project. Clean Energy Capital (CEC) presented a water cost analysis for the project where CEC presented cost projections for a 2 MGD project with an estimated 1<sup>st</sup> year water cost of \$1,928/AF in 2021\$, and a 5 MGD project with an estimated 1<sup>st</sup> year water cost of \$1,479/AF in 2021\$. The SCWD Board actions included accepting the water cost analysis; initiating a Public Outreach Program supporting the implementation of the project; re-engaging with task-related consultants for the development of necessary contract activities; and authorizing the SCWD General Manager to develop a partnership education plan to pursue and secure partnerships with local agencies to realize the cost savings a 5 MGD project provides.</p> <p>SCWD anticipates an update on the third party hydrogeology study of the San Juan Basin in January 2022.</p>
<b>Poseidon Resources Huntington Beach Ocean Desalination Project</b>	<p>On April 29, 2021, the Santa Ana Regional Water Quality Control Board (SARWQCB) conditionally renewed Poseidon's permit governing the seawater intake and waste discharges. The SARWQCB order requires Poseidon to minimize negative impacts on marine life by directing them to undertake a series of mitigation measures and prohibiting the intake of seawater and the discharge of concentrated brine until certain conditions are met.</p> <p>The next step for Poseidon includes seeking permits from the California Coastal Commission (CCC), which is anticipated to occur during the first quarter of 2022.</p>

<p><b>Shutdowns</b></p>	<p><b>Diemer Water Treatment Plant</b></p> <p>MET is planning to repair a chlorine diffuser pipe at the Diemer WTP which requires a seven-day full-plant shutdown. Shutdown dates are being evaluated by MET staff at this time.</p> <p><b>Orange County Feeder</b></p> <p>MET is planning to reline and replace valves in a section of the Orange County Feeder from Bristol Ave to Corona Del Mar – this is the last section of this 80-year-old pipeline to be lined.</p> <p>MET has delayed the relining project and has proposed new shutdown dates of September 15, 2022 through June 15, 2023.</p> <p><b>Orange County Feeder Extension</b></p> <p>MET is planning to reline 300-linear feet of the OC Feeder extension affecting the City of Newport Beach, IRWD and LBCWD. MWDOC and the City are meeting with MET staff to review details of the Traffic Control Plan.</p> <p>MET has delayed the relining project by one year and has proposed new shutdown dates of June 16, 2023 through July 10, 2023.</p> <p><b>Orange County Reservoir (OC Feeder)</b></p> <p>The decommissioning of the Orange County Reservoir has been rescheduled to March 20, 2022 through March 25, 2022. This work will affect the cities of Brea and La Habra.</p> <p><b>Lake Mathews Facility Shutdown</b></p> <p>MET is planning rehabilitation work on Lake Mathews facilities from March 14, 2022 through March 23, 2022. Work on Lake Mathews will affect downstream untreated lines. The following agencies will be affected during the shutdown: OCWD, YLWD, Serrano WD, IRWD, TCWD, ETWD, SMWD, MNWD, and the City of San Clemente.</p> <p><b>Allen-McColloch Pipeline</b></p> <p>MET has completed 50% of the preliminary design of the AMP PCCP rehabilitation and is expected to be complete with the design by 2023. Preliminary design work currently underway includes identifying priority reaches, developing access locations, conducting geotechnical assessments, modeling a surge analysis, conducting real property assessments, identify permitting requirements and development of a feeder isolation plan. A draft project schedule will be developed at the completion of preliminary design. Rehabilitation of individual reaches will be based on the ongoing condition assessments, priorities, and shutdown scheduling.</p> <p>The first working group meeting with the impacted AMP agencies and MET was held on September 28, 2021. MET presented several options in their construction approach to completing the relining of the AMP. Each option</p>
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	<p>includes multiple shutdowns with varying lengths and costs as shown in the graphic below.</p>  <p>Additional working group meetings will be held to discuss the feasibility of each option.</p>
<b>Meetings</b>	
	MWDOC staff along with ABS Consulting, IDS Group and Optima RPM participated in several construction progress meetings in the month of December regarding the admin building seismic retrofit and remodel. Meetings concerning close-out and final punch list items are being held.
	Rob Hunter, Charles Busslinger and Chris Lingad held a meeting with Wallace Walrod and Marlon Boarnet on November 30, 2021 to discuss the analysis of the business survey for the economic benefits studies.
	Chris Lingad attended a meeting held by the UCI Civil Environmental Engineering Affiliates program on the topic of Water Recycling: Process, Politics, and Implementation on December 1, 2021.
	Charles Busslinger and Vicki Osborn attended the December 9, 2021 kick off meeting of the design phase of the replacement Emergency Operations Center. 30% plans and cost estimates are anticipated in March 2022 to inform the FY 2022-23 budget discussions; and final design is estimated to be completed in September 2022.
	Charles Busslinger attended the Santiago Aqueduct Commission meeting on December 9, 2021.
	Charles Busslinger attended a meeting on December 9, 2021 at Newport Beach regarding resolution of traffic control concerns for the upcoming OC Feeder shutdown. The OC Feeder shutdown is scheduled for September 15, 2022 to June 15, 2023.

	Charles Busslinger met with Hazen on December 15, 2021, to refine the scope of work for the EOCF#2 Pilot Program.
	Charles Busslinger held a meeting with David Sunding, Wallace Walrod, and Marlon Boarnet on December 21, 2021 to discuss the economic benefit studies. Analysis is proceeding on both business and residential impacts and results are anticipated in late January 2022.
	Charles Busslinger and Kevin Hostert attended a meeting with CDR and LAFCO on December 20, 2021 regarding member agency boundaries. MWDOC is working with all stakeholders on GIS boundary file discrepancies to improve consistency across GIS data sets for all stakeholders.
	Charles Busslinger attended the CDR Management Oversight Committee meeting on December 21, 2021. CDR is looking to replace its aging computer server with a virtual server contract that better meets its needs for storage, and security.

# General Manager Report

## WEROC Status Report

### December 2021

#### COVID-19 (CORONA VIRUS) COORDINATION

- WEROC is tracking the new variant Omicron which appears more contagious than previous strains of the virus, infecting more people who are fully vaccinated but the illness is less severe for those fully vaccinated. The county has reported that unvaccinated people are accounting for 87% of those hospitalized and 88% of ICU patients.
- During the time period of 12/24 – 12/26, the county reported 6,475 positive COVID Cases, 282 cases hospitalized, 88 of those in ICU, and 13 deaths. WEROC will provide updated figures during the oral report at the P&O Committee meeting.
- WEROC continues to monitor the CDC, State and County for changing information and is sharing information with agencies.
- WEROC continues to support agencies with COVID-19 related questions and guidance needs.
- WEROC continues to hold bi-weekly conference calls on Tuesdays with member agencies, as requested by the agencies to continue to support the sharing of information.
- On 12/13, WEROC distributed CDPH information on the mask mandate issued for indoor use regardless of vaccination status between 12/15/21 – 1/15/22.
- On 12/15, the County Health Officer Order was updated pointing to the CDPH guidance and ETS:
  - Masks are required for all individuals in all indoor public settings, regardless of vaccination status from December 15, 2021, through January 15, 2022 (surgical masks or higher-level respirators are recommended).
  - In workplaces, employers are subject to the Cal/OSHA COVID-19 Emergency Temporary Standards (ETS) or in some workplaces the Cal/OSHA Aerosol Transmissible Diseases (ATD) Standard and should consult those regulations for additional applicable requirements.



- On 12/16 CDPH finally provided a definition for indoors regarding the mask requirement applies to all workplaces, regardless of whether or not they serve the public, or are open to the public. WEROC shared this information with all agencies .
- On 12/16, the California Standards Board approved the revised version of the COVID-19 prevention ETS. This amendment will be in effect until April 14, 2022. Vicki was on this call and also reports CalOSHA is working on a final standard to be in place at that time.

With the approval of the updated ETS, the rule also requires employers in the state to:

- Evaluate how to maximize indoor ventilation with outdoor air; the highest level of filtration efficiency compatible with existing systems; and whether the use of portable or mounted high efficiency particulate air (HEPA) filtration units, or other air-cleaning systems, would reduce the risk of COVID-19 transmission.
- Establish procedures for investigating and responding to workplace COVID-19 infections.
- Make COVID-19 testing available at no cost during paid time for employees who had a close contact in the workplace with a diagnosed or suspected case of COVID-19.
- Provide a program of instruction and training about COVID-19; the company's prevention program; and any federal, state, or local COVID-19 benefits.
- Provide face coverings for employees who are not fully vaccinated, and ensure face coverings are worn indoors and in vehicles.
- The exception to the return-to-work criteria for employers with critical staffing shortages would be omitted.
- The 24 hour Notice to Exposed employee now requires inclusion of the cleaning plan with the notification.

The ETS requires employers to exclude COVID-19 cases from the workplace and employees who have had close contact. However, the added these exceptions:

- Fully vaccinated employees who wear a face covering and maintain a 6-foot distance from others for 14 days after the last date of close contact;
- COVID-19 cases returning to work who have remained free of symptoms for 90 days after the initial onset of COVID-19, as long as they wear a face covering and maintain a 6-foot distance from others for 14 days after the last date of close contact; *and*

- COVID-19 cases returning to work who never developed symptoms if they wear a face covering and maintain a 6-foot distance from others for 14 days after the last date of close contact.
- On 12/21 during the WEROC bi-weekly call, WEROC discussed with the agencies the items above. In addition, WEROC reported on the current status of the OSHA/Federal vaccine or testing COVID 19 mandate for large businesses over 100 employees. The lower federal appeals court in the 4 district in Ohio, allowed the OSGHA rule to go into effect as scheduled in January. On January 7<sup>th</sup>, the Supreme Court will hear arguments on this mandate n January 7<sup>th</sup> and make a decision. Once made WEROC will share information with agencies, especially the eight (8) WEROC member agencies this impacts.
- Daniel distributed the testing kits WEROC ordered on behalf of the nine agencies. On 12/22 WEROC provided kits to 2 additional agencies out of its inventory. As a request of the holidays, agencies have been looking for rapid kits which are currently in high demand with the holidays and traveling. WEROC has procured an inventory for emergency, immediate use, and also placed an order for SOCWA. WEROC will be coordinating another resource request for the saliva kits in conjunction with participating member agencies.

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## **DECEMBER INCIDENTS/EVENTS (NON-COVID)**

\*\*The following are events in which WEROC provided information and/or coordination

- Oil Spill 10/2 Pipeline P00547 Incident (still on going)
- Seal Beach Oil Sheen (separate event)
- December Rain Events/Bond Fire Debris Flow Coordination Call (4) Events

Vicki can provide an additional oral update to WEROC activities specific to each event as required/requested.

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## **COORDINATION/PARTICIPATION WITH MEMBER AGENCIES AND OUTSIDE AGENCIES MEETINGS OUTSIDE OF PROGRAMS AREAS**

- On 12/1, the WEROC team attended the Orange County Emergency Management Organization (OCEMO) meeting. The December meeting had a presentation of the OCEMO awards highlighting the good work done by members within Orange County and results of the OCEMO leadership election for 2022. Vicki has been elected at the OCEMO chair for 2022.

- On 12/8, Vicki completed the UASI Cyber Survey which is a requirement in order to qualify for federal grant funding.
  - On 12/9, Vicki attended the SOCWA Board Meeting in support of the three board items covering the OA Agreement, 800 Mhz agreement and the AlertOC agreement.
  - On 12/9, Vicki attended the Regional Public Safety Power Shut off briefing and Access and Functional Needs planning workshop conducted by SDGE.
  - On 12/10, Vicki attended the National Weather Service Webinar on the outlook for December.
  - On 12/13, Vicki attended the Standardized Emergency Management System Refresh Project planning meeting. This group is working on updating the SEMS regulations and actions required during an emergency event including notification, coordination and specifically looking closer at recovery.
  - On 12/21, Vicki attended the CalWarn Board Meeting. Focus of the meeting was on leadership role changes, operations Plan, Cyber issues, Covid and the member meeting in the spring.
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## PLANNING AND PROGRAM EFFORTS

- America's Water Infrastructure Act (AWIA) Project - All agencies required to submit their ERPs on December 31<sup>st</sup> were successful. Vicki submitted the AWIA letter to the Orange County Certified Unified Program Agency (CUPA) on behalf of the agencies who are served by the OC CUPA. A copy of the letter was also provided to the cities who fall under a different governing board/ for hazardous materials. Vicki will be presenting on the AWIA project at the January P&O meeting with HSG to recap the project and the final steps of the project.
- AlertOC - Janine continues as the Project Manager work on obtaining the AlertOC MOUs from the participating agencies. Janine has collected all the agreements from the agencies participating and provided a copy to the County. Janine will be scheduling training for the users to begin in the 1<sup>st</sup> quarter of 2022.
- 800 Mhz Radio Agreement – Daniel continues to assist agencies with questions and the process for executing Joint Agreement for the Operation, Maintenance, and Financial Management of the Orange County 800 Megahertz Countywide Coordinated Communications System. This is the system which fulfills the WEROC

radio system and the MWDOC board approved the agreement at the last board meeting. The County of Orange has requested WEROC to assist with tracking down and getting agencies to sign the agreement. The County has a change in the project manager so Daniel is working with the new assigned manager to bring the water agency information up to date.

- Cyber Security - Daniel continues to share cyber information received from the OCIAC and DHS with member agencies. On 12/20 Daniel attended a webinar focusing on the new emergency threat and vulnerability known as the apache log4j. Daniel shared this information with the WEROC Cyber Taskforce (which include the MWDOC IT point of contact) including highlights from the meeting and resources agencies could use in regards to this cyber threat. Vicki completed the MWDOC Cyber Event After Action Report and submitted the report to the General Manager. Vicki continues to update the Incident Action plan from the August event.

WEROC Emergency Operations Center Project/Funding - On 12/9, Vicki attended with Charles the ETWD Filtration Plant and WEROC EOC kickoff meeting. The design project schedule and needs moving forward were discussed.

On 12/14 Vicki received noticed that they extended the deadline from 12/31 to 1/21/2022 for the 2021 Hazard Mitigation Funding Notice of Interest applications. Vicki has been working on the NOI grant application for the EOC project. Construction is an allowable cost for this grant, however there is some rules which must followed here are a couple of examples (1) ground breaking on construction cannot be started until an award letter is received following the submission of the full application including a Business Cost Analysis (BCA), Award letters are scheduled to be released towards the end of March tentatively but with the application extension this will most likely be delayed until a later date TBD (2) this is a match grant and funding cannot be from other federal funding sources. Vicki will brief the board as warranted.

- Other Coordination topics discussed and planning efforts outside of COVID conducted on the Bi-Weekly coordination calls during December included:
  - Cyber
  - Drought
  - Training
  - OCFA Project

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## TRAINING AND EXERCISES

- No training occurred during the month of December

**Status of Water Use Efficiency Projects  
December 2021**

<b>Description</b>	<b>Lead Agency</b>	<b>Status % Complete</b>	<b>Scheduled Completion or Renewal Date</b>	<b>Comments</b>
<b>Smart Timer Rebate Program</b>	MWDSC	Ongoing	Ongoing	In November 2021, 156 residential and 26 commercial smart timers were installed in Orange County.  To date, 32,191 smart timers have been installed through this program.
<b>Rotating Nozzles Rebate Program</b>	MWDSC	Ongoing	Ongoing	In November 2021, 104 rotating nozzles were installed in Orange County.  To date, 571,713 rotating nozzles have been installed through this program.
<b>SoCal Water\$mart Residential Indoor Rebate Program</b>	MWDSC	Ongoing	Ongoing	In November 2021, 174 high efficiency clothes washers and 12 premium high efficiency toilets were installed in Orange County.  To date, 125,131 high efficiency clothes washers and 60,795 high efficiency toilets have been installed through this program.
<b>SoCal Water\$mart Commercial Rebate Program</b>	MWDSC	Ongoing	Ongoing	In November 2021, no commercial devices were installed in Orange County.  To date, 111,402 commercial devices have been installed through this program.
<b>Industrial Process/ Water Savings Incentive Program (WSIP)</b>	MWDSC	Ongoing	Ongoing	This program is designed to improve water efficiency for commercial customers through upgraded equipment or services that do not qualify for standard rebates. Incentives are based on the amount of water customers save and allow for customers to implement custom water-saving projects.  Total water savings to date for the entire program is 1,284 AFY and 6,337 AF cumulatively.

<b>Description</b>	<b>Lead Agency</b>	<b>Status % Complete</b>	<b>Scheduled Completion or Renewal Date</b>	<b>Comments</b>
<b>Turf Removal Program</b>	MWDOC	Ongoing	Ongoing	In November 2021, 12 rebates were paid, representing \$45,541.04 in rebates paid this month in Orange County.  To date, the Turf Removal Program has removed approximately 23.7 million square feet of turf.
<b>Spray to Drip Rebate Program</b>	MWDOC	Ongoing	Ongoing	In November 2021, 8 rebates were paid, representing \$7,602.50 in rebates paid this month in Orange County.  To date, the Spray to Drip Program has converted approximately 1.4 million square feet of standard spray irrigation to drip irrigation.
<b>Recycled Water Retrofit Program</b>	MWDSC	Ongoing	Ongoing	This program provides incentives to commercial sites for converting dedicated irrigation meters to recycled water.  To date, 182 sites, irrigating a total of 1,672 acres of landscape, have been converted. The total potable water savings achieved by these projects is 3,687 AFY and 18,242 AF cumulatively.

**Public & Governmental Affairs Activities Report****November 30, 2021 – December 28, 2021**

<b>Member Agency Relations</b>	<p>Public Affairs Staff:</p> <ul style="list-style-type: none"> <li>• Prepared and sent the 2022 Water Awareness Poster Contest Media Kit to MWDOC member agency public affairs representatives and education coordinators</li> <li>• Coordinated member agency outreach for the Metropolitan Water District of Southern California's annual Solar Cup competition</li> <li>• Forwarded an email to the MWDOC Public Affairs Workgroup from the Water Emergency Response Organization regarding a Cybersecurity &amp; Infrastructure Security Agency guide for protecting social media accounts</li> </ul> <p>Government Affairs Staff:</p> <ul style="list-style-type: none"> <li>• Circulated the monthly Grants Tracking and Acquisition report</li> </ul>
<b>Community Relations</b>	<p>Public Affairs Staff:</p> <ul style="list-style-type: none"> <li>• Met with the president of the Wyland Foundation to discuss hosting the 2022 National Mayor's Challenge in Orange County</li> </ul> <p>Governmental Affairs Staff:</p> <ul style="list-style-type: none"> <li>•</li> </ul>
<b>Education</b>	<p>Public Affairs Staff</p> <ul style="list-style-type: none"> <li>• Participated in the bi-weekly California Environmental Literacy Initiative (CAELI) Green Career Innovation Hub</li> <li>• Participated in the CAELI Leadership Council's quarterly meeting</li> <li>• Participated in the monthly Metropolitan Water District of Southern California's (Metropolitan) Education Coordinator's meetings</li> <li>• Co-hosted two water workshops for high school teachers sponsored by the Water Energy Education Alliance (WEEA) and Metropolitan. "Solving Water Problems in the 21<sup>st</sup> Century" and "Get in the Water: CTE Careers with a future" were led by Alison Loukeh &amp; Associates.</li> <li>• Met with California Environmental Education Foundation (CEEF) to discuss how they can best support WEEA</li> <li>• Met with Big Picture Learning and Harbor Freight Fellows to discuss potential collaboration on workforce development initiatives</li> <li>• Collaborated with Orange County Department of Education's Inside the Outdoors to provide local water content and resources for students participating in the <a href="#">Academic Pentathlon</a> (middle school) and <a href="#">Academic Decathlon</a> (high school). The theme for this year is "Water: A Most Essential Resource."</li> <li>• Provided WEEA participants with an opportunity to serve as judges of the <a href="#">2021-22 U.S. Academic Decathlon</a> at the request of the San Bernardino County Superintendent of Schools Alliance for Education and Los Angeles Department of Water and Power</li> <li>• Collaborated with Shows That Teach to offer a <a href="#">10-video series</a> that was promoted to all Orange County schools regardless of</li> </ul>



	<p>their eligibility for the MWDOC Choice School Programs. Topics include: the importance of water to our everyday lives, water supply, water quality, and more.</p> <ul style="list-style-type: none"> <li>• Worked with Santa Margarita Water District and contractors to transition MWDOC Choice School Program offerings from City of San Juan Capistrano</li> <li>• Provided City of Orange with information regarding MWDOC Choice School Programs</li> </ul>
<b>Media Relations</b>	<p>Public Affairs Staff</p> <ul style="list-style-type: none"> <li>• Prepared and distributed December issue of MWDOC eCurrents newsletter</li> <li>• Prepared and distributed content for social media</li> <li>• Composed and distributed a news release announcing Board Reorganization</li> <li>• Met with the OC Register regarding Drought</li> <li>• Attended California Association of Public Information Officer's "Why Should Your Agency be on TikTok?" webinar</li> </ul>
<b>Special Projects</b>	<p>Public Affairs Staff:</p> <ul style="list-style-type: none"> <li>• Met with Baywork, IEWorks, and Metropolitan to discuss their participation in an upcoming project with the Centers of Excellence initiated by WEEA</li> <li>• Made several database contact list updates</li> <li>• Began preparations for the 2022 OC Water Summit</li> <li>• Invited and confirmed Joaquin Esquivel, to serve as keynote speaker for February 23, 2022 Water Policy Forum</li> <li>• Attended the California Department of Water Resources Water Wednesday seminar</li> <li>• Participated in Cascade's Strategy Bootcamp</li> <li>• Participated in Metropolitan's Public Information Officer meeting</li> <li>• Met with University of California Master Gardeners of Orange County to plan the next round of water-wise garden tips videos</li> <li>• Met with RMG Communications to discuss hosting a webinar on Diversity, Equity, &amp; Inclusion for the California Association of Public Information Officials</li> </ul> <p>Governmental Affairs Staff:</p> <ul style="list-style-type: none"> <li>• Along with Charles Busslinger, met with Deborah Diep of CDR to discuss MWDOC redistricting numbers</li> <li>• Staffed the ISDOC Executive Committee meeting</li> <li>• Staffed the WACO monthly meeting featuring speaker Dr. Michael Gunson of JPL</li> <li>• Staffed the WACO Planning meeting</li> </ul>

<b>Legislative Affairs</b>	<p>Governmental Affairs Staff:</p> <ul style="list-style-type: none"> <li>• Participated in the ACWA Federal Affairs Committee meeting</li> <li>• Attended the ACWA Fall Conference in Pasadena, joining the following sessions: <ul style="list-style-type: none"> <li>* Opening Breakfast honoring Larry McKenney</li> <li>* End of the Pipe Discussions: Securing San Diego’s Water Supply</li> <li>* Drought Campaigns that Get Results</li> <li>* Federal Affairs Forum</li> </ul> </li> <li>• Met with Lana Haddad from MWD to discuss messaging zero allocation from the SWP to elected officials offices</li> <li>• Participated in the ACWA ornamental turf workgroup (12/6)</li> <li>• Responded to Congressman Levin’s office on State Water Project allocations at its effect on south Orange County</li> <li>• Attended the ACWA Working Group on indoor water use</li> <li>• Attended the Colorado River Water Users Association annual conference in Las Vegas, joining the following sessions” <ul style="list-style-type: none"> <li>* Colorado River Board of California meeting</li> <li>* Change for Better: Multiple Approaches to Improving Water Supply Forecasting</li> <li>* Current and Projected Conditions in the Colorado River Basin: Hydrology Report</li> <li>* Reclamation Leadership Perspective: Challenges and Opportunities</li> <li>* Change of Plans: Addressing Challenges</li> <li>* Changing Habits: Adapting Through Innovative Strategies</li> <li>* Embracing Change: The Path Forward</li> </ul> </li> <li>• Participated in the ACWA Turf Working Group (12/20)</li> </ul>



**INFORMATION ITEM**

January 3, 2022

**TO:**           **Planning & Operations Committee**  
(Directors Yoo Schneider, Nederhood, Seckel)

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

Staff Contact: Tiffany Baca

**SUBJECT:   WATER AND WASTEWATER WORKFORCE NEEDS ASSESSMENT**

**STAFF RECOMMENDATION**

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

**COMMITTEE RECOMMENDATION**

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Committee recommends (To be determined at Committee Meeting)

**SUMMARY**

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For nearly a year, the Municipal Water District of Orange County (MWD OC or District) Public Affairs (PA) staff has been in discussions with the [Centers of Excellence for Labor Market Research \(COE\)](#) to conduct a statewide water and wastewater workforce needs assessment. Recently, COE approved the project and assigned two (2) regional directors to collect and assemble the data and prepare the final report, one each from Orange County and San Diego. The [Water Energy Education Alliance \(WEEA\)](#) – administered by MWD OC and facilitated by MWD OC PA – will serve as the advisory for the project, coordinating with water and wastewater agencies across Southern California and throughout the state. The project is expected to take approximately one (1) year to complete with no financial obligation to water and wastewater agencies statewide.

**DETAILED REPORT**

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

Over the next decade, the number of California residents aged 65 and older is expected to double, reaching 8.6 million. As the last of the Baby Boomers reach retirement age, senior citizens are by far the fastest-growing demographic, and many of those impending retirements will directly impact the water, wastewater, and energy industry sector. Coupled with job losses and early retirements on the rise due to impacts associated with COVID-19, water and wastewater agencies are mobilizing to do more than simply brace for the “Silver Tsunami.”

In May 2020, the MWDOC Board of Directors approved the District to assume leadership of WEEA from the California Environmental Education Foundation (CEEF). WEEA is a growing collaborative of over 55 education, water, wastewater, and energy industry leaders representing the counties of Orange, Los Angeles, Inland Empire, and San Diego. This thriving, engaged coalition works together to identify workforce gaps and share ideas, strategies, and successes for building sustainable career pathways to water, wastewater, and energy sector jobs.

Over the past year and a half, it has become increasingly clear that despite ground-level motivation, timely, relevant workforce data isn’t readily available to stimulate the urgency needed to support and prioritize building new, sustainable learning pathways. As such, MWDOC PA staff contacted the COE statewide director to begin discussions about the value of a statewide water and wastewater workforce needs assessment. Over the last decade, a few California regions have either collected their own data or have had a needs assessment performed by the COE for their independent areas. However, previous data has become rapidly outdated due to the recent pandemic, a movement towards creating green jobs, and a growing commitment to providing equitable and inclusive access to job training and employment opportunities.

Recently, the COE approved WEEA’s request, adding the water and wastewater workforce needs assessment project to their roster of statewide or multi-region projects. The COE is a grant-funded technical assistance supplier that supports California community colleges by providing customized data on high-growth, emerging, and economically-critical industries and occupations. The project will be undertaken with no financial obligation to water and wastewater agencies.

To provide accurate workforce data to the COE for their assessment, WEEA will serve as the primary advisory, collaborating with educational institutions and water and wastewater agencies across the Southland, including all 27 MWDOC member agencies. Additionally, WEEA has invited three other influential regional collectives to the initial discussion with the COE; [BAYWORK](#), a consortium of 43 Bay Area water and wastewater utilities, [IEWorks](#), a collective of 7 water and wastewater agencies in the Inland Empire, and the Metropolitan Water District of Southern California (Metropolitan). Responding to the urgent need for workforce development solutions, Metropolitan is WEEA’s most prominent sponsor and has recently advanced Dr. Adrian Hightower to serve as the agency’s Manager for Workforce Development. His new assignment with access to more resources and continued support will be instrumental in completing the project.

The project is anticipated to take approximately one year to complete. MWDOC PA will provide progress reports as pre-determined milestones are achieved throughout the year.