

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

Jointly with the
PLANNING & OPERATIONS COMMITTEE

April 2, 2018, 8:30 a.m.
MWDOC Conference Room 101

P&O Committee:

Director Osborne, Chair
Director Tamaribuchi
Director Yoo Schneider

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

Ex Officio Member: Director Barbre

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

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

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

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

PRESENTATION / DISCUSSION

1. UPDATE BY IRWD ON STRAND RANCH RELIABILITY PLANNING

ACTION ITEMS

2. AWARD OF CONSULTANT CONTRACT FOR THE SOC INTERCONNECTION STUDY
3. APPROVAL OF WEROC EMERGENCY OPERATIONS PLAN
4. WATER LOSS AUDIT VALIDATION RESEARCH

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

5. UPDATE ON SMWD RELIABILITY PLANNING

6. STATUS REPORTS

- a. Ongoing MWDOC Reliability and Engineering/Planning Projects
- b. WEROC
- c. Water Use Efficiency Projects
- d. Water Use Efficiency Programs Savings and Implementation Report

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

ADJOURNMENT

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

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



Item No. 1

DISCUSSION ITEM

April 2, 2018

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

FROM: Robert Hunter, General Manager

Staff Contact: Karl Seckel

SUBJECT: Update by IRWD on Strand Ranch Reliability Planning

STAFF RECOMMENDATION

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

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

Paul Cook, General Manager of IRWD and Paul Weghorst, Executive Director of Water Policy for IRWD will be in attendance to provide an overview and update on their Strand Ranch and other Water Banking Operations. They will also provide an update on their proposal to the California Water Commission under the Water Storage Investment Program and will discuss a conceptual proposal for MWDOC and Orange County agencies to participate in a drought protection reliability program.

If available at the time of publication, the presentation will be attached. Otherwise it will be emailed and posted separately.

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



ACTION ITEM

April 18, 2018

TO: Board of Directors

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

Robert Hunter, General Manager

Staff Contact: Karl Seckel

SUBJECT: Award of Consultant Contract for the SOC Interconnection Study

STAFF RECOMMENDATION

Staff recommends the Board of Directors authorize the General Manager to enter into a contract with Dudek on a time and materials basis not to exceed \$244,250 to work with IRWD, MWDOC and the SOC Agencies on the potential for expansion or extension of the existing Emergency Services Agreement for the SOC Interconnection.

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

The amount of capacity IRWD has committed to provide under the existing Emergency Services Agreement varies by the time of year and diminishes over time, dropping to zero by 2030. MWDOC, IRWD and the SOC agencies are interested in understanding if the capacity can be expanded or extended over a longer period of time, which is the purpose of the study. Overall the commitment to the work is a shared responsibility between MWDOC, IRWD and the South Orange County (SOC) agencies. The work process is almost identical to the 2006 Study of the SOC Interconnection whereby MWDOC funded the consultant's time (Tetra Tech in 2006) but IRWD contributed their staff time towards the effort. The overall goal of the study is to work together to bring about regional solutions to emergency needs while providing mutual benefit.

MWDOC has \$80,000 funding available in this year's budget and sufficient funds in next year's budget to cover the remaining proposed expenses.

| | | | |
|---|-------------------------------------|------------------------------------|-----------|
| Budgeted (Y/N): Y | Budgeted amount: \$80,000 this year | Core ✓ | Choice __ |
| Action item amount: | | Line item: Programs 21 & 23 - 7010 | |
| Fiscal Impact (explain if unbudgeted): Remainder to come from next year's budget 21-7010 | | | |

DETAILED REPORT

Municipal Water District of Orange County (MWDOC) has been working with its agencies on water supply and water system (emergency) planning criteria for a number of years. Based on the previous work completed the criteria recommended for targeting emergency water needs is to plan for the Metropolitan Water District of Southern California (MET) system to be out of water for up to 60 days and the second criteria is that agencies should be planning on being without the electrical grid for a minimum of one week. Local agencies have the flexibility to adjust these criteria based on their own evaluation of the abilities of their local system. The overall purpose of studying the South County Interconnection is to evaluate the ability of Irvine Ranch Water District (IRWD) to supply emergency water to South Orange County (SOC) during emergency situations under various demand scenarios over time as demands build in IRWD.

The South County Interconnection Agreement, aka the 2006 Emergency Services Agreement, is an existing agreement that requires IRWD, to the best of its ability, to deliver potable water to the SOC agencies during times of MET outages. SOC agencies invested about \$25 million in 2008 and 2009 to provide the capability to move approximately 30 cubic feet per second (cfs) of capacity from the IRWD Zone 1 system through the IRWD system and into the Joint Transmission Main or the Aufdenkamp Transmission Main. The amount of capacity IRWD has committed to provide under the agreement varies by the time of year and diminishes over time, dropping to zero by 2030. MWDOC, IRWD and the SOC agencies are interested in understanding if the capacity can be expanded or extended over a longer period of time, which is the purpose of the study.

The study will examine constraints that can be identified that limit the ability of IRWD to supply emergency water to SOC and propose solutions to those constraints as part of the study findings. Furthermore, IRWD is looking to expand its groundwater resources capabilities by 12,500 AFY by the year 2025. The study will also examine the potential use of the East Orange County Feeder No. 2 (EOCF#2) as a potential conveyance method for conveying the groundwater to the IRWD service area and also to the SOC agencies.

The hydraulic model of the IRWD water system is complicated and large. It contains more than 45,000 pipes, 162 pumps, 39 tanks, and 36 valves each with settings and controls. Trouble shooting this model to generate useable and accurate results takes expert modeling skills combined with an in-depth understanding of IRWD's system operations to generate valid information. In this manner, the consultant selected and the IRWD engineering and operations staff will be working together to ensure a valid outcome.

It may appear that MWDOC is funding 100% of the costs of the study, but this is not the case. With respect to the study effort, the following should be noted:

1. Overall the commitment to the work is a shared responsibility, almost identical to the 2006 Study whereby MWDOC funded the consultant's time (Tetra Tech in 2006) but IRWD contributed their staff time towards the effort.
2. IRWD staff has already conducted portions of the analysis on their own time and drafted the initial scope of work. MWDOC contributed to the scope of work and the two agencies have worked together in seeking consultants to provide assistance. Any consultant hired need to have experience on IRWD's hydraulic model and will require assistance from IRWD staff.
3. The prior work done by IRWD was at the cost of their own staff time and consulting assistance to conduct initial runs to provide to the consultant MWDOC hires. The

main reason for doing this is that IRWD will be turning over their hydraulic model and driver files to the consultant and it should save our consultant time and result in a more robust outcome; the consultant has initial runs to calibrate to for QC purposes.

4. Since the water system is IRWD's, they will be providing the technical and operational support to MWDOC's consultant along the way. This is very staff intensive work. In addition, IRWD takes time to corroborate the consultant's hydraulic conclusions to make sure they will work. This is a high level of QC undertaken by IRWD.
5. IRWD staff, along with MWDOC staff will be involved in all meetings and report preparation in a collaborative manner.
6. IRWD staff will be providing to the consultant, concepts on where IRWD will seek to secure an additional groundwater production of 12,500 AF per year by 2025 (17 cfs or 27 mgd). This is additional work IRWD will be conducting at their cost but the movement of the additional groundwater will have the potential to enhance the SOC Interconnection capability.
7. The overall goal of the study is to work together to bring about regional solutions to emergency needs while providing mutual benefit. Sharing the cost efforts, as was done in the 2006 study funded by MWDOC, is what is being proposed. After the costs and concepts are outlined, it is still a decision by each agency whether or not to move forward with any projects.

MWDOC completed and issued the RFP to five pre-qualified consultants on Feb 23, 2018. Proposals were received from three consultants:

- Dudek
- Stantec
- West Yost

The proposals were reviewed and evaluated by IRWD staff and MWDOC staff. All three proposals fully met the requirements of the RFP and were all well prepared and similar in hours and expenses. Via the evaluation process it is recommended that the study contract be awarded to Dudek.

The schedule for the work is as follows:

- Recommendation to MWDOC P&O Committee Apr 2, 2018
- Notice of Award (MWDOC Board) Apr 18, 2018
- Notice to Proceed Apr 25, 2018
- Workshop #1 Jun 27, 2018
- Workshop #2 Aug 8, 2018
- DRAFT Report Sept 5, 2018
- Final Report Oct 17, 2018

MWDOC has \$80,000 in funding available in this year's budget and sufficient funds in next year's budget to cover the remaining projected expenses.



ACTION ITEM

April 18, 2018

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

FROM: Robert Hunter
General Manager

Staff Contact: Francisco Soto, WEROC Emergency Coordinator

SUBJECT: WEROC Emergency Operations Plan Resolution

STAFF RECOMMENDATION

Staff recommends the MWDOC Board of Directors review and approve the revised WEROC Emergency Operations Plan.

COMMITTEE RECOMMENDATION

(To be determined at the Committee Meeting)

SUMMARY

The Water Emergency Response Organization of Orange County (WEROC) Emergency Operations Plan (EOP) was last updated in 2011 and required significant revisions. Revision of the EOP is a key factor for ensuring readiness for disaster response and recovery. Emergency Operation Plans should be updated yearly for frequently changed information (i.e. phone numbers and contacts), and revised every two years for larger concepts (i.e. lessons learned and new hazards). EOP revisions are required by the State Office of Emergency Services in accordance with the National Incident Management System (NIMS) and the California Standardized Emergency Management System (SEMS). The revised WEROC EOP will be distributed for comment to WEROC's Member Agencies and other response partners, and will be presented at the May 1st WEROC Quarterly Emergency Coordinators meeting. No significant changes are expected, including the State's review, which may take several months.

| | | | |
|---|---------------------|---------|-----------|
| Budgeted (Y/N): NA | Budgeted amount: NA | Core __ | Choice __ |
| Action item amount: \$0 | Line item: | | |
| Fiscal Impact (explain if unbudgeted): The plan was updated by staff. | | | |

DETAILED REPORT

The EOP is designed to include the State-mandated Standardized Emergency Management System (SEMS), the concepts and principles set forth in the Federally mandated National Incident Management System (NIMS), the Incident Command System (ICS), and responsibilities of the County of Orange Operational Area (OA), and will reflect valuable input by WEROC Member Agencies, Metropolitan Water District of Southern California (MET), and other response partners.

The EOP reflects several major changes in WEROC's planning and response operations. These include new Member Agency and MWDOC Emergency Proclamation procedures, a revised Emergency Operations Center (EOC) organizational structure, alignment with the Hazard Mitigation Plan, a newly developed EOC Action Plan which provides the framework for EOC staff to respond to emergencies, inclusion of emergency purchasing authorities, and it has been condensed in a user friendly format.

The EOP also includes threat specific annexes which address the primary hazards identified in the Risk Assessment of the Hazard Mitigation Plan. These annexes include hazard specific response actions that should be taken in addition to those actions addressed in the EOP and EOC position guides. Hazards which are not identified in the annexes were not created because WEROC's role in response mirrors that of other hazards.

Furthermore, Staff met with a Finance Recovery expert to clarify and discuss issues related to Special District Emergency Declaration, Public Assistance reimbursement claims, and MWDOC's emergency purchasing authority. Once clarified, these concepts were discussed with MWDOC management and incorporated into the plan as appropriate.

In addition to these major revisions, there are additional updates to the Plan that include but are not limited to: Notification and Activation Protocols used for WEROC EOC activation, staff procedures, and inclusion of corrective actions from past exercises and actual events, and current County OA EOC operations. It is important to note that the WEROC EOP is written to assist the staff responding to the WEROC EOC. This plan is not intended to be a response guide for the WEROC Member Agencies. It is our assumption that each Member Agency has an internal EOP and policies for response. The EOP will be provided to the WEROC Member Agencies for comment at this time and will be presented at the WEROC Member Agencies Emergency Services Coordinator Quarterly Meeting on May 1, 2018.

The WEROC EOP will be presented to the Planning and Operations Committee at the April 2, 2018 meeting. The Board will be given an opportunity to review the document and provide comments for inclusion into the plan on April 18, 2018. The plan is being brought to the Board for review and approval.



WEROC EMERGENCY OPERATIONS PLAN (EOP)

Revised March 2018



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QUICK REFERENCE

How To Use This Document?

Personnel who are assigned a responsibility in this plan should have a working knowledge of the functions and actions described throughout. All WEROC Emergency Operations Center (EOC) staff should refer to this document before and throughout a response for guidance in WEROC EOC activation, response, and deactivation procedures. When WEROC EOC staff arrive to the WEROC EOC during an emergency, locate your specific position guide or the WEROC Emergency Operations Plan (EOP). If WEROC EOC staff are at home/work/car, they should refer to the WEROC Auto-Pack or Safety Center mobile application for information on activation, reporting, response, and functional duties and responsibilities.

What To Do With This Document?

The WEROC Emergency Manager will provide a current copy of the EOP to WEROC EOC staff. All WEROC EOC staff are responsible for familiarizing themselves with the contents of this EOP. During an emergency, EOC staff should know where the EOP is located and how to use it. It is important to familiarize staff with the EOP's location and contents through review and exercises.

What is an EOC?

An Emergency Operations Center, or EOC, is a central command and control facility responsible for carrying out the principles of emergency preparedness and emergency management, or disaster management functions at a strategic level in an emergency situation. The WEROC EOC is responsible for assessing the overall condition and status of the Orange County regional water distribution and wastewater collection systems including MET facilities serving Orange County. Additionally, the WEROC EOC collects and analyzes damage assessments, obtains resource requests, and procures resources that are needed by member agencies to respond and recover from the event.

When will I need to report to the WEROC EOC?

The EOC can be activated during an emergency situation that can result from both natural and man-made causes. Types of emergencies include earthquake, fire, flood, water contamination, power outages and dam failure. Not every incident affecting water utilities will activate the EOC. The magnitude and scale of an incident can vary widely and many can be handled within the parameters of an agency's usual policies and procedures. It is when an agency's daily operating procedures or resources are not sufficient to cope with an emergency that the WEROC EOC may be activated. For specific criteria on when to report to the EOC, see EOC Activation.

- *Automatic Activation:* Significant events (i.e. earthquake), will most likely result in an Automatic Activation.
- *Manual Activation:* Notification is provided by a member agency, the OA, MET, the Media, the DDW (potable water), or the Regional Water Quality Control Board (Wastewater) of an event. These events may result in manual activation in which staff are notified to respond to the EOC.
- *Standby for Activation:* Advanced notification of an event or possible need, such as a winter storm or an emergency replacement of a waterline. WEROC EOC will monitor the situation, and if deemed necessary, WEROC will notify EOC staff to respond to the EOC.



How Do I Respond To An Emergency?

- Be prepared - have a personal emergency plan and an emergency kit ready and accessible.
- Make sure your family is safe.
- Determine whether the emergency requires you to respond to the EOC (automatic or by notification) See EOC Activation.
- Once you determine that activation is required, reference the WEROC Auto-Pack, Safety Center mobile Application for EOC maps and start-up actions upon arrival to the designated EOC.

For more specific instructions refer to the EOC Activation Section (Page 24).

Do I Have To Report For Duty?

As public employees, MWDOC staff are, by law, Disaster Service Workers (DSW). If a “Local Emergency” is declared during normal work hours, staff will be expected to remain at work to respond to the emergency needs of our water utilities. If a “Local Emergency” is declared outside of normal work hours, employees may be called back to work.

Some WEROC EOC Staff have opted to sign a volunteer agreement with WEROC to volunteer their time to the WEROC EOC during emergencies. These individuals may be composed of member agency staff, private partners, and non-governmental organizations. Volunteer EOC Staff are expected to check in with their agency first for approval to respond to WEROC, and have agreed to respond as long as their own agency is not impacted.

If WEROC EOC staff are unable to report to their assigned location as a result of the event, they should immediately contact the WEROC primary contact or alternate to update them on their status and to receive further instructions. For more information on notification and reporting policies refer to EOC Activation section of the plan.

Whether reporting directly to WEROC or to another agency’s EOC or location, WEROC EOC staff need to check-in with the WEROC Emergency Manager or alternate during an emergency to notify WEROC of their status.

Where Do I Go To Report For Duty?

WEROC maintains two functional EOC’s; the South EOC (SEOC) and alternate (MWDOC Administration building). When the EOC is activated, WEROC EOC staff are to report to the WEROC SEOC unless informed otherwise. The location will be determined based on the condition and function of each building. Maps and addresses to the EOC’s are located in **Attachment I**.

What Hours Will I Be Working?

During emergencies, shifts may be extended to 13 hours. Depending on the event, length of shifts may vary. Shift schedules will be developed by the EOC Director for events requiring an extended period of response. Employees will be discouraged from working shifts longer than 13 hours without an appropriate rest period as it leads to fatigue and other safety concerns.



ACRONYMS

| | |
|---------|--|
| CAL EPA | California Environmental Protection Agency |
| CPRI | Critical Priority Risk Index |
| CPUC | California Public Utilities Commission |
| DDW | Division of Drinking Water |
| DPH | Department of Public Health |
| DSW | Disaster Service Worker |
| DWR | Department of Water Resources |
| EAS | Emergency Alert System |
| EOC | Emergency Operations Centers |
| EOP | Emergency Operations Plan |
| EPA | Environmental Protection Agency (Federal) |
| ESF | Emergency Support Functions |
| FEMA | Federal Emergency Management Agency (Federal) |
| IAP | Incident Action Plan |
| IC | Incident Commander |
| ICP | Incident Command Post |
| ICS | Incident Command System |
| IDE | Initial Damage Estimates |
| JIC | Joint Information Center |
| JIS | Joint Information System |
| MA | Member Agency |
| MET | Metropolitan Water District of Southern California |
| MMAA | Master Mutual Aid Agreement |
| MWDOC | Municipal Water District of Orange County |
| NEOC | WEROC North Emergency Operations Center |
| NGO | Non-Governmental Organization |
| NIMS | National Incident Management System (Federal) |
| NOAA | National Oceanic and Atmospheric Administration |
| OA | Operational Area |
| OCHCA | Orange County Health Care Agency |
| OCEMO | Orange County Emergency Management Organization |
| OES | Office of Emergency Services |
| PDA | Preliminary Damage Assessment |
| PIO | Public Information Officer |
| REOC | Regional Emergency Operations Center (Cal OES) |
| RWQCB | Regional Water Quality Control Boards |
| SEMS | Standardized Emergency Management System |
| SEOC | WEROC South Emergency Operations Center |
| SOC | State Operations Center (Cal OES) |
| SONGS | San Onofre Nuclear Generating Station |
| SOP | Standard Operating Procedures |
| SWRCB | State Water Resource Control Board |
| UC | Unified Command |
| WEROC | Water Emergency Response Organization of Orange County |



FORWARD

FORWARD

The Water Emergency Response Organization of Orange County (WEROC) Emergency Operations Plan (EOP) is designed to be flexible enough to be used in all emergencies and will facilitate response and short-term activities. The goals of this plan are to outline a strategy to prepare for, respond to, and recover from an emergency or disaster that affects the Orange County water and wastewater agencies and the population served by them. As part of this strategy, this plan will:

- Establish activation protocols of the WEROC Emergency Operation Centers (EOC)
- Identify authorities and assign responsibilities for planning and response activities
- Identify the scope of hazards which will guide the specific response activities
- Outline response actions that will be taken by WEROC EOC staff
- Identify other agencies and organizations with which planning and emergency response activities should be coordinated
- Identify the role of the WEROC EOC in coordinating response efforts during an emergency impacting Orange County water and wastewater agencies
- Outline the process of assisting with the dissemination of emergency information and instructions to the public
- Describe the resources available to support EOC operations
- Provide the basis for ongoing training of EOC and member agency staff

During a major emergency or disaster, the enclosed procedures and EOC position binders at each EOC provide guidance for each function to be performed.



RESOLUTION NO. 2067

A RESOLUTION OF THE MUNICIPAL WATER DISTRICT OF ORANGE COUNTY ADOPTING THE REVISED WEROC EMERGENCY OPERATIONS PLAN

WHEREAS, The Municipal Water District of Orange County (MWDOC) established the goal of developing and maintaining an emergency plan; and

WHEREAS, The California Code of Regulation Section 2401 has since established the Standardized Emergency Management System (SEMS), and the President of the United States in Homeland Security Directive (HSPD)-5, directed the Secretary of the Department of Homeland Security to develop and administer a National Incident Management System (NIMS), both of which standardize response to emergencies involving multiple jurisdictions or agencies; and

WHEREAS, Government Code Section 8607 required all political subdivisions to be in compliance with SEMS by December 1, 1996, to be eligible for reimbursement of emergency response personnel costs and now pursuant to the President's Executive Order, Homeland Security Directive (HSPD)-5, local governments are required to establish the NIMS as the standard for incident management by September 30, 2007; and

WHEREAS, with this revised emergency plan MWDOC continues to conform to State SEMS and Federal NIMS guidelines for emergency plan compliance; and

WHEREAS, MWDOC has determined that it is in the District's best interest and benefit to maintain a current emergency plan that meets emergency management best practices.

NOW, THEREFORE, BE IT RESOLVED the Board of Directors of Municipal Water District of Orange County hereby adopts the WEROC Emergency Operations Plan, dated March 2018.

Said resolution supersedes Resolution ____ and was adopted on _____, by the following roll call:

| | |
|----------|-----------|
| AYES: | Directors |
| NOES | None |
| ABSENT: | Directors |
| ABSTAIN: | None |

I hereby certify the foregoing is a true and correct copy of Resolution No. ____ adopted by the Board of Directors of Municipal Water District of Orange County, at its meeting held on

_____.

Maribeth Goldsby, Board Secretary
Municipal Water District of Orange County



APPROVAL AND IMPLEMENTATION

PLAN APPROVAL AND IMPLEMENTATION

The Municipal Water District of Orange County Board of Directors will review and approve the plan as the administrative agency of the WEROC Program.

PLAN MODIFICATION

The EOP is a living document, subject to revision based on agency reorganization, new laws, experience with exercises, and actual disasters. The EOP will be reviewed annually to ensure that plan elements are valid and current. The EOP will be modified as required based on deficiencies identified during drills, exercises or actual occurrences. Changes in agency structure and emergency response procedures will also be considered in the EOP revisions. All WEROC water utilities are invited to review the plan and provide comments.

WEROC is responsible for making revisions to the EOP that will enhance the conduct of response and recovery operations.

Revisions to the plan will be presented to the MWDOC Board every three years for approval.



INTRODUCTION

PURPOSE

This Plan determines the actions to be taken by WEROC EOC staff to reduce the loss of water and wastewater infrastructure; to respond effectively to a disaster; and to coordinate recovery operations in the aftermath of any emergency involving extensive damage to Orange County water and wastewater utilities.

PLAN ORGANIZATION

The plan is organized into three elements, as well as companion documents which are incorporated into the EOP:

- **Basic Plan.** The Basic Plan contains information on the overall organizational and operational concepts relative to response and recovery.
- **Appendices.** The Appendices provide supplemental reference information.
- **Hazard Specific Annexes.** Hazard Specific Annexes provide specific information and procedures for responding to hazards that may affect Orange County water utilities.

SCOPE

The EOP has been designed to serve the growing needs of water and wastewater utilities. It is important that the EOP be flexible enough to use in all emergencies. This plan not only meets that need but will also improve the effectiveness and efficiency of the response and short-term recovery activities. It is intended as an overview of emergency management for the WEROC organization and is not a detailed operational document. WEROC water and wastewater utilities will be referred to as “Member Agencies” from here on out.

Intended Audience

The intended audience of this EOP is the staff that supports the WEROC EOCs, the WEROC OA EOC Liaison position, as well as any other position in which a person is serving on behalf of the WEROC organization. This plan is also a reference for the managers, staff and elected officials of the member agencies, the OA, and other coordinating partners. An EOP Distribution List is available as **Attachment D**.

SITUATION OVERVIEW

This section describes the county and a number of potential hazards that could affect the county water infrastructure within Orange County upon their occurrence, which would warrant the activation of this plan.

Community Profile, Geography, and Nature Features

From a regional perspective, Orange County, like the rest of Southern California, is heavily dependent upon imported water supplies. Approximately fifty (50%) percent of the total water consumed within Orange County comes from distant sources outside the County. This imported



water is conveyed via the Colorado River and State Water Project aqueducts which travel 242 and 444 miles, respectively, to reach urban Southern California.

The other 50% of water consumption is mostly supplied by groundwater pumped from the vast underground aquifer located below north and central Orange County. The groundwater supply resources in Orange County result from the existence of the following three groundwater basins: Orange County Water District's Groundwater Basin, the La Habra Groundwater Basin, California Domestic Water Company supplies from the main San Gabriel Basin, and San Juan Capistrano Groundwater Basin (San Juan Basin Authority). The Orange County Basin is by far the largest groundwater basin in the County.

Orange County's wastewater infrastructure has very extensive regional infrastructure, as well as locally managed collections systems. Key components of the regional infrastructure includes the reception of wastewater from outside of Orange County via the Santa Ana Regional Interceptor and pipeline, the transmission of treated wastewater to the ocean, and the conversion of 100 million gallons per day of treated wastewater into water used for groundwater recharge via the Ground Water Recovery System. Orange County Sanitation District manages the regional systems and treatment within the northern portion of the County. The South Orange County Wastewater Authority is a Joint Powers Authority that serves the southern portion of the County.

The imported and local water, along with wastewater and storm water, flows through an intricate network of pipes and mains, which are susceptible to damage from natural as well as man-made disasters.

Threats and Hazards

A hazard analysis has indicated that Orange County is at risk from hazards associated with both natural and manmade events. Natural hazards have historically had the largest effect on Orange County and are likely to continue to affect the County; consequently, the process of identifying these hazards includes determining whether or not the hazard has occurred previously. Manmade hazards occur less frequently in the County, but are a priority in water/wastewater security management as the threat of terrorism and technological hazards grow. Through research and experience, 19 potential natural and manmade hazards have been identified as threats to the County.

The Critical Priority Risk Index (CPRI) is used to prioritize hazards that may affect OC and provides a standardized numerical value for each hazard so they can be ranked. CPRI scores were calculated as part of our hazard mitigation planning process by using five categories; probability, impact, special extent, warning time, and duration. Each category is assigned a numerical value (1-4) depending on how the hazard will impact the specific category. Once the numbers for each hazard are calculated, the hazards are organized from highest to lowest priority. The following table taken from the 2018 WEROC Hazard Mitigation Plan ranks each identified hazard that can potentially impact OC water and wastewater infrastructure.



Table 1: Critical Priority Risk Index

| HAZARD RANKING WORKSHEET - Orange County Regional Water & Wastewater MJHMP | | | | | DATE: 7/26/2017 | |
|--|-------------|----------|----------------|-------------------|-----------------|-------------------------------|
| Hazard Type | Probability | Impact | | | Total Score | Hazard Planning Consideration |
| | | Location | Primary Impact | Secondary Impacts | | |
| Power Outage | 4 | 3 | 4 | 4 | 57.60 | High |
| Wildfire | 4 | 3 | 3 | 4 | 52.00 | High |
| Seismic Hazards - ground shaking | 3 | 3 | 4 | 4 | 43.20 | High |
| Seismic Hazards - liquefaction | 3 | 3 | 4 | 4 | 43.20 | High |
| High Winds/Santa Ana | 4 | 4 | 2 | 1 | 40.80 | Medium |
| Drought | 4 | 4 | 1 | 1 | 35.20 | Medium |
| Dam/Reservoir Failure | 2 | 3 | 4 | 4 | 28.80 | Medium |
| Flood | 3 | 3 | 2 | 1 | 25.80 | Medium |
| EQ Fault Rupture | 2 | 1 | 4 | 2 | 18.40 | Medium |
| Landslide/Mudflow | 2 | 2 | 2 | 3 | 18.00 | Medium |
| Contamination | 1 | 2 | 3 | 4 | 11.40 | Low |
| Human-caused Hazards - terrorism (shooting, explosive) | 1 | 1 | 3 | 3 | 8.80 | Low |
| Human-caused Hazards - HazMat | 1 | 1 | 2 | 3 | 7.40 | Low |
| Urban Fire | 1 | 1 | 2 | 1 | 5.40 | Low |
| Geo Hazards - land subsidence | 1 | 1 | 1 | 2 | 5.00 | Low |
| Geo Hazards - expansive soils | 1 | 1 | 1 | 2 | 5.00 | Low |
| Tsunami | 1 | 1 | 1 | 1 | 4.00 | Low |
| Climate Change | 1 | 1 | 1 | 1 | 4.00 | Low |
| Coastal Storm & Erosion | 1 | 1 | 1 | 1 | 4.00 | Low |

PLANNING ASSUMPTIONS

Certain assumptions were used during the development of this plan. These assumptions are associated with emergency management operations in preparation for, response to, and recovery from major emergencies. The assumptions provide context, requirements, and situational realities that must be addressed in plan development and emergency operations. The following assumption apply to this plan:

- Priority will be given to protecting public health; this includes restoration of fire suppression, potable water delivery and wastewater collection.
- Allocation of water will require a public request for emergency conservation based on the circumstances of the event. It could range from 0% to 50% or more in specific areas.
- WEROC is primarily responsible for coordinating resources and establishing a central communication point for all of WEROC member agencies.
- WEROC will utilize SEMS/NIMS in emergency response operations.
- WEROC and its signatories will commit their own resources to a reasonable degree before requesting mutual aid assistance.



CONCEPTS OF OPERATION

WEROC RESPONSIBILITIES

WEROC is organized on the basis that each member agency is responsible for developing its own EOP in accordance with SEMS, NIMS, and Public Health Security and Bioterrorism Preparedness and Response Act of 2002 to meet specific emergency needs within its service area. In turn, WEROC will coordinate the exchange of resources for member agencies, and if necessary, for MET, the Orange County Operational Area, and other appropriate outside agencies. In the event of a major regional disaster, WEROC would perform but not limit itself to the following functions:

1. Activate the EOC
2. Notify all EOC staff
3. Send a water liaison to the OA EOC and ICP (if needed)
4. Assess overall condition of water supply system, including availability, quantity and quality of MET and member agency water supplies
5. Assess overall condition of the wastewater collection systems, including operability of treatment systems
6. Identify resource and coordination needs of member agencies
7. Collect Initial Damage Estimate (IDE) reports
8. Quantify available Mutual Aid and private resources and secure as necessary
9. Request resources
10. Determine optimal use of resources
11. Establish response and repair priorities
12. Recommend water allocation schemes, if required
13. Maintain liaison with MET, OA EOC and outside agencies
14. Document all actions taken
15. Prepare After Action Reports
16. Implement Corrective Actions

PHASES OF EMERGENCY MANAGEMENT

WEROC recognizes four primary phases of emergency management which relate to a Federal, State, Region, County, City, or Special Districts activities before, during, and after an emergency or disaster has occurred. These include:

- Preparedness
- Response
- Recovery
- Mitigation/Prevention

Preparedness

Preparedness activities, programs, and systems are those that exist prior to an emergency and are used to support and enhance response to an emergency or disaster. Planning, training, and exercises are among the activities conducted under this phase.



WEROC and its member agencies participate in developing procedures and checklists describing how each will respond to an emergency. Such preparedness measures will provide coordination and communications within WEROC, member agencies and other jurisdictions. Elements addressed in these procedures/checklists include:

- Personnel notification rosters and a method for implementation.
- Designation of a WEROC representative to report to the OA EOC during an emergency to advise decision makers and coordinate the member agency's response effort with other responding entities.
- Reporting of appropriate information (staffing, damage assessments, water quality issues, evacuation status, chemical exposure, etc.) to both WEROC and water agency EOCs during an emergency.
- Providing Mutual Aid support to member agencies.

In addition to the above procedures, ongoing actions to be accomplished during this phase include but are not limited to:

- Review and update of Emergency Plans.
- Training of WEROC EOC and member agency staff.
- Inspection and maintenance of critical facilities, including EOC's.
- Regularly scheduled drills and test exercises.
- Recruitment of additional EOC staff, as needed.
- Identification resources

Response

Response involves activities and programs designed to address the immediate and short-term effects of the onset of an emergency or disaster that helps to reduce affects to water infrastructure and speeds recovery. Response activities include alert and notification, EOC activation, direction and control, mutual aid, etc.

The nature of WEROC's emergency operations will depend on the characteristics and requirements of the situation. WEROC and member agency's EOC/DOC will be activated as required to respond to a specific situation and each will operate according to the provisions of their emergency plans. Priority will be given to the following operations:

- Law and Fire will be conducting evacuation and/or rescue operations as required, and implementing health and safety measures.
- Assessing and evaluating the emergency situation.
- Assembling, allocating, and positioning personnel and equipment.
- Disseminating emergency public information as appropriate.
- Protecting, controlling and allocating vital resources.
- Restoring or activating essential facilities and systems.
- Stabilize water and wastewater systems with temporary measures or actions



Recovery

Recovery is the phase that involves restoring systems to normal. Short-term recovery actions are taken to assess damage and return vital life-support systems to minimum operating standards; long-term recovery actions may continue for many years.

Mitigation/Prevention

Mitigation activities are those that either prevent the occurrence of an emergency or reduce the district's vulnerability in ways that minimize the adverse impact of a disaster or other emergency. Mitigation is a best practice that can protect lives and save money. MWDOC and nineteen additional WEROC member agencies came together to produce the Orange County Regional Water and Wastewater Multi-Hazard Mitigation Plan, which is scheduled to be approved by FEMA in August 2018. The Mitigation Plan outlines the natural and man-made threats that can impact the agencies included in the plan, as well as identified specific mitigation projects per agency and then prioritized those projects. The Mitigation Plan provides eligibility for federal pre-disaster and post-disaster mitigation grant funding for the included agencies. For more information, the Orange County Regional Water and Wastewater Multi-Hazard Mitigation Plan is available at www.ocweroc.com

STANDARDIZED EMERGENCY MANAGEMENT SYSTEM (SEMS) AND NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS) RESPONSE LEVELS

Both SEMS and NIMS recognize local jurisdictions as the first line of response for emergency preparedness and response. As stated in the National Response Framework (NRF):

“The responsibility for responding to incidents, both natural and manmade, begins at the local level with individuals and public officials in the County, City or town affected by the incident.”

The Standardized Emergency Management System (SEMS) defines special districts and cities as local governments. During an incident, water and wastewater utilities are responsible for managing the response effort within their service areas. WEROC would provide communication and coordination of information, multi-agency coordination, and mutual aid resources to water and wastewater agencies impacted upon request, and automatically for larger events affecting multiple agencies.

The adoption of NIMS, the national policy that is complementary to the SEMS, and the adoption of the SEMS create an organized system of information flow which can avoid duplication of requests for assistance and ensure a more coordinated and timely response to the effects of a disaster. The SEMS response levels, the federal role, and other key coordinating partners for water and wastewater utilities are described below, along with a chart (Figure 1: WEROC EOC Organization Chart) showing the WEROC Organization within these SEMS/NIMS reporting levels.

The **WEROC Resource Communication Protocol** graphic on page 59 demonstrates the coordination response levels discussed below, including the traditional SEMS response levels,



NIMS, and other coordinating partners important to the water industry. In some instances, primarily localized incidents, local water agencies may coordinate directly with higher response levels, rather than following the traditional SEMS levels of communications and response. However, during incidents in which multiple water utilities are impacted all water utilities are expected to follow traditional SEMS levels of communication (these are indicated with bolder arrows).

The following is an example of how SEMS/NIMS is intended to work in a major disaster with damage in multiple Operational Areas (Counties). It is assumed that appropriate emergency declarations have been made:

Field Response Level: Field crews within affected agencies respond, as feasible, using the Incident Command System. Incident Command Posts (ICP) may be established at various sites throughout the disaster area. The member agencies may set up an ICP or may integrate into a Multi-Agency ICP. Resources are requested via dispatch centers, Department Operations Centers (DOC), and EOCs.

Local Government Level (Local Agency EOC): Local Governments assess capability and report their status to the Operational Area EOC. Water utilities report their status to the WEROC EOC. Local governments mobilize all available resources, establish EOC priorities, allocate available resources to support the field response, and request assistance (through WEROC for Water utilities) from the Operational Area. Water utilities would notify WEROC of any damage to their service areas while responding with available agency crews / resources. Water utilities may choose to provide staff to the WEROC EOC as a liaison for their agency if they feel it necessary or beneficial.

Water Emergency Response Organization of Orange County (WEROC): WEROC is responsible for coordinating the Orange County water and wastewater community information and mutual aid status with the OA EOC. WEROC EOCs are staffed with representatives from member agency Mutual Aid EOC Staff, MWDOC Staff, and volunteers with technical expertise. Assignments to either South EOC or alternate location is based upon the event and the integrity of the building. All pre-assigned EOC Staff have been dedicated by their respective employers to report to WEROC EOC.

In addition to the EOC Staff members assigned to the WEROC EOC, WEROC has assigned staff as a WEROC EOC Liaison to report to the OA EOC located on Loma Ridge or the ICP (if needed). When the OA EOC is activated, this position will report to the Public Works Branch Director at the OA EOC to be briefed on the present situation along with other liaison representatives, e.g. Red Cross. They will serve as liaison between WEROC and OA EOC operations following a disaster.

The DDW will respond to the WEROC EOC to coordinate directly with water utilities, as well as WEROC, to ensure water quality standards are being addressed. WEROC may also coordinate with other entities as needed, such as non-profits, businesses, and non-water utilities.



County Operational Area (OA) Level: All political subdivisions have been organized into Operational Areas by the county to ensure coordination, communication, resource allocation, and to avoid duplication in the response effort. The County OA activates its EOC and notifies the California Office of Emergency Services (CalOES) Southern Regional Administrator. The OA EOC assesses the situation (based in part from damage assessment reports received from WEROC and through face-to-face communication with the WEROC Liaison at the OA EOC) and reports information to the Southern Regional Emergency Operations Center (REOC). The OA EOC coordinates available resources, requests additional mutual aid resources through the EOC and provides overall situation reports to local government (through WEROC for Water utilities).

Regional Level: The CalOES Southern Regional Administrator activates the Regional Emergency Operations Center (REOC) and notifies the State Operations Center (SOC). REOC staff locates and mobilize resources available within the region and from state agencies. Additional resources are requested through the State Operations Center. REOC monitors the situation and updates the State Operations Center (SOC).

WEROC will also directly coordinate with additional regional organizations. The first agency and organization is MET and its Member Agency Response System (MARS); providing direct regional potable member agency coordination. The other two organizations are the California Utilities Emergency Association (CUEA) and the California Water/Wastewater Agency Response Network (CalWARN); providing, respectively, a liaison to many California utilities, and mutual aid coordination with water and wastewater utilities across the State.

State Level: State Operations Center (SOC) is activated and state agency representatives are requested to staff the SOC. SOC coordinates state agency response and mobilization of mutual aid resources from unaffected regions. SOC may direct activation of other CalOES REOC's to assist in resource mobilization. State agency department operations centers are activated, as applicable. Federal assistance is requested, if needed. SOC continuously monitors situation.

Federal Level: At the time that an incident is determined to be an event of National Security, the Federal Emergency Management Agency and the Department of Homeland Security become actively involved in the response and recovery of that incident. Federal support will be coordinated from a Joint Federal Office (JFO) that will be set up at the local level in support of the incident. Federal Emergency Support Functions (ESFs) will be staffed to support specific areas of expertise in the response.

Continuity of Government

A major disaster or national security emergency could result in the death or injury of key government officials and/or the partial or complete destruction of established seats of government, and public and private records essential to continued operations of government. Government at all levels is responsible for providing continuity of effective leadership, authority and adequate direction of emergency and recovery operations. The California Government Code Section 8643(b) and the Constitution of California provide the authority for state and local government to reconstitute itself in the event incumbents are unable to serve. A detailed description of MWDOC's Continuity of Operations Plan can be found in a separate document called 2017 MWDOC Continuity of Operations Plan.



ROLES AND RESPONSIBILITIES

WEROC EOC Personnel

The WEROC EOC is staffed with assigned MWDOC personnel and representatives from member agencies and consultants. WEROC has partnered with special districts, private and government organizations to supplement EOC staff and provide technical expertise at the EOC during emergencies. Some WEROC member agencies have designated personnel to staff the WEROC EOC when requested by WEROC.

Designated WEROC EOC Personnel

MWDOC has assigned EOC personnel that will respond to the EOC when activated. When responding to the EOC, staff must have their agency issued identification or government identification, closed toed shoes, and personal belonging. EOC staff have been given a WEROC Auto Pack (details can be found on page 33) to assist with key contacts, EOC maps, and EOC activation procedures.

Mutual Aid EOC Personnel

Member Agencies may provide staff to the WEROC EOC if their service area has not been affected and assistance is needed to staff WEROC EOC positions and provide technical expertise. WEROC will contact the unaffected Member Agencies to determine if staff can be allocated through mutual aid to the WEROC EOC.

Private EOC Volunteers

WEROC has volunteer personnel from various private sector organizations who have technical expertise. As staff become available, we will incorporate them into the EOP. Volunteers will be sworn in as Disaster Service Workers and will be protected as an employee for workers compensation and other liabilities.

Member Agencies

Member Agencies will provide damage assessment reports and resource requests to the WEROC EOC. In a significant event, water utilities may send a liaison to the WEROC EOC.

Private Sector

Private sector organizations play a key role before, during, and after an emergency. First, they must provide for the welfare and protection of their employees in the workplace. In addition, WEROC must work seamlessly with businesses that provide water, power, communication networks, transportation, security, and numerous other services upon which both response and recovery are particularly dependent.

Nongovernmental Organizations

Nongovernmental organizations (NGOs) play an important roles before, during, and after an emergency. For WEROC, NGOs such as California Water/Wastewater Agency Network and the American Water Works Association are vital partners in supporting and promoting statewide emergency preparedness, disaster response, and mutual assistance process for public and private water and wastewater utilities.



NOTIFICATION AND MOBILIZATION

EMERGENCY OPERATIONS

All WEROC EOC responders are pre-assigned to report to the WEROC Primary EOC unless notified otherwise. This plan recognizes that emergency functions requiring specific technical knowledge by EOC staff, i.e. Engineers, Water Quality, and Operators, will generally parallel their normal day-to-day functions. It is also desirable to assign other EOC staff and available personnel to EOC functions with tasks and responsibilities similar to their daily operations, i.e. accounting staff assigned to Finance/Administration EOC functions.

However, in a disaster it may be necessary to draw on the basic capabilities of people, and assign them to areas of greatest need. Day-to-day functions that do not contribute directly to the disaster response effort may be suspended for the duration of the disaster. Actions normally required of those functions will be redirected to accomplish the emergency tasks at hand.

Ongoing training and cross training of both WEROC EOC Staff and Member Agency personnel is critical to maintaining a high level of confidence in performing specific duties in response to a disaster. Training opportunities provided to staff include, but are not limited to, EOP orientations, ICS trainings, SEMS/NIMS trainings, and participation in WEROC hosted Tabletop and Functional Exercises.

ALERT AND WARNING SYSTEMS

Warning is the process of alerting agencies and the general public to the threat of imminent danger. Depending upon the nature of the threat and the population group at risk, warnings can originate at any level of government. Success in saving lives and property is dependent upon timely dissemination of warning and emergency information to persons in threatened areas. There are various mechanical systems in place, described below, whereby an alert or warning may originate or be disseminated.

National Oceanic and Atmospheric Administration (NOAA)

NOAA is an American scientific agency within the United States Department of Commerce that focuses on the conditions of the oceans and the atmosphere. NOAA warns of dangerous weather, charts seas, guides the use and protection of ocean and coastal resources and conducts research to provide understanding and improve stewardship of the environment.

United States Geological Survey (USGS)

The USGS provides science about the natural hazards that threaten lives and livelihoods; the water, energy, minerals, and other natural resources we rely on; the health of our ecosystems and environment; and the impacts of climate and land-use change. The USGS provides a free Earthquake Notification Service (ENS) that can send automated notification emails when earthquakes happen in your area. Additionally, the USGS provides Water Alerts service which sends e-mail or text (SMS) messages when certain parameters, as measured by a USGS real-time data-collection station, exceed user-definable thresholds.



Orange County Operational Area Notification

The OA is WEROC's primary link to information about pending emergency conditions. The OA maintains constant communications with CalOES, which notifies the OA of any warnings it receives or becomes aware of. CalOES is considered to be the primary agency for receipt of notification of pending or occurring events from all sectors of response, including the California Department of Public Health, Homeland Security, InfraGard, etc. The State will then use a variety of redundant systems to communicate threat and warning information to the OA. In turn, the OA will notify WEROC and all Orange County jurisdictions using any available means of communication (reverse dial systems, phone, fax, email, radio, etc.).

PUBLIC INFORMATION

The public's response to any emergency is based on an understanding of the nature of the emergency, the potential hazards, the likely response of emergency services and knowledge of what individuals and groups should do to increase their chances of survival and recovery.

Public awareness and education prior to any emergency is crucial to successfully protect the public during and after the emergency. Pre-disaster awareness and education programs must be viewed as equal in importance to all other preparations for emergencies and receive an adequate level of planning. These programs must be coordinated among local, state and federal officials to ensure their contribution to emergency preparedness and response operations.

Community Outreach

Throughout the year, WEROC partners with member agencies to bring awareness to emergencies that may impact the water utilities. This plan encourages WEROC and member agencies to utilize community outreach opportunities to inform residents and business owners of the County's emergency procedures and the community's personal preparedness techniques. Alert OC allows WEROC and water utilities to notify their customers of potential emergencies impacting their water supply as well as offer resources to help alleviate the problem.

Social Media

WEROC maintains a Facebook and Twitter account to keep member agencies and the public informed of events and current news affecting water systems. During an emergency, WEROC will use these social media platforms to notify users of water quality issues, alternative water information, and recovery information. Find WEROC on Facebook or Twitter using @OCWEROC.

Emergency Alert System (Television and/or Radio Broadcast)

The Emergency Alert System (EAS) is a national public warning system that requires broadcasters, cable television systems, wireless cable systems, satellite digital audio radio service (SDARS) providers, and direct broadcast satellite (DBS) providers to provide the communications capability to the President to address the American public during a national emergency. The system also may be used by state and local authorities to deliver important emergency information, such as AMBER alerts and weather information targeted to specific areas.



The President has sole responsibility for determining when the EAS will be activated at the national level, and has delegated this authority to the director of FEMA. FEMA is responsible for implementation of the national-level activation of the EAS, tests, and exercises. The National Weather Survey develops emergency weather information to alert the public about imminent dangerous weather conditions.

Message priorities under Part 73.922(a) of the FCC's rules are as follows:

Priority One.....Presidential Messages (carried live)
Priority Two.....Operational (Local) Area Programming
Priority Three.....State Programming
Priority Four.....National Programming and News

Examples of emergencies identified by the Orange County OA which may warrant EAS activation by the broadcast industry include: large water quality notifications, earthquake, serious fires, heavy rains and flooding, widespread power failures, severe industrial accidents, and hazardous material accidents. The context of any emergency broadcast transmitted on EAS should be of concern to a significant segment of the population of Orange County. The message must be a voice message, it may be prerecorded and it must originate from the Sheriff's Communications Center.

The Orange County Sheriff's Department, while not the originator of the EAS material, is responsible for verifying the content and authenticity of the information and is the entity in charge to broadcast EAS messages. Local broadcast stations have the right to edit or use any or all of an EAS broadcast, but are not required to broadcast the messages.



EOC ACTIVATION

EOC ACTIVATION

The WEROC Emergency Manager or Emergency Coordinator, is the primary contact for WEROC emergencies. Notification may come from a WEROC member agencies, the OA, MET, NOAA and others. Upon receipt of the emergency notification, the Emergency Manager or alternate will communicate with the MWDOC General Manager or alternate to determine appropriate response actions.

If WEROC or MWDOC management receive notification of a disaster, he/she will contact the other Managers (and vice-versa) by telephone. Contact telephone numbers are listed in **Attachment F: WEROC Key Contacts List**. The Activation Decision Steps below provide the WEROC guidance for determining conditions warranting EOC Activation and Notification

The increasing levels of action taken by WEROC are as follows:

- Standby – Assistance remotely
- County Liaison – Send a WEROC representative to the OA
- Support – Send a WEROC representative to either:
 - The Incident Command Post
 - Member Agency DOC
- Full EOC Activation - WEROC EOC activated

The WEROC EOC can be activated in the following methods:

- *Automatic Activation:* Significant events (i.e. earthquake) that impact communication or power infrastructure. These events will most likely result in an Automatic Activation.
- *Manual Activation:* Notification is provided by a member agency, the OA, MET, the Media, or the DDW or RWQCB.
- *Standby for Activation:* WEROC will receive advanced notification of an event or possible need, such as a winter storm or an emergency replacement of a waterline. Given the information, WEROC staff will actively monitor the event and activate the EOC if needed. After a determination is made by MWDOC management and WEROC to activate, EOC staff will be contacted to report to the EOC.

Automatic Activation

WEROC EOC staff will automatically report to the EOC without being notified at any time under the following conditions:

- Following a **magnitude 5.0 or larger** earthquake within Orange County
- An earthquake outside of Orange County strong enough to disrupt public phone systems or cause visible damage, or other large regional event.



Manual Activation

The WEROC EOC will be activated under the following conditions:

- When an earthquake or other event creates damage near MET facilities (outside of Orange County) which may affect Orange County's water supply. WEROC and MWDOC management will determine whether to activate based on MET damage assessment reports.
- Following an earthquake or other emergency such as a fire, flood or power outage affecting one or more WEROC Water utilities, WEROC will activate when requested by any Member Agency.
- Staff will be notified of the activation through AlertOC, Phone, or email.

Stand By For Activation

WEROC EOC staff will standby pending activation under the following conditions:

- An earthquake **less than M5.0** occurs within Orange County and there is damage or suspected damage to the water distribution system in Orange County. WEROC and the EOC director will determine if activation is required.
- When a **magnitude 5.0 or larger** earthquake occurs anywhere within MET's service area (outside of Orange County) and damage to MET facilities is unknown.
- Advanced notification of an event or possible need by NOAA, Orange County OA, CalOES, Member Agency, or MET.
- WEROC EOC Manager will make the decision to activate based upon information received from appropriate Operational Area, MET, WEROC staff, and/or Member Agency personnel after a disaster.
- Includes monitoring and minor coordination.

When an earthquake occurs in Southern California outside of Orange County, WEROC will be concerned about MET facilities that deliver imported water into Orange County. Those MET facilities include the following:

- Diemer Filtration Plant in Yorba Linda
- Lower Feeder from Lake Mathews to Diemer
- Lake Mathews Outlet Facilities
- Weymouth Filtration Plant in La Verne
- Orange County Feeder from the Weymouth Plant to Orange County
- Yorba Linda Feeder between the Weymouth and Diemer Plants
- Colorado River Aqueduct
- State Water Project
- Diamond Valley Lake and Associated Infrastructure
- Baker Treatment Plant
- East Orange County Feeder No.2
- Allen McColloch Pipeline (AMP)
- Santiago Lateral

Note: A map of these facilities can be found at each WEROC EOC



WEROC EOC ACTIVATION DECISION STEPS

Below are steps to be considered when WEROC and MWDOC management determine whether or not to activate the WEROC EOC. Following these steps, there is additional information that can be used to assess if activation is required.

1. Categorize Incident

Using information gathered from one or more sources, the WEROC Primary Contact or Alternate will categorize the incident:

- Natural Disasters
- Manmade Disaster
- Terrorist Threat
- Terrorist Physical Attack

2. Initial Determination of Situation

WEROC and MWDOC management will make an initial determination of the situation based upon:

- Scope and severity of the incident
- Damage to affected agency(s)
- Potential impacts to other agencies and surrounding infrastructure
- Potential impacts to Metropolitan's facilities
- Potential impacts to the County
- Potential requests for mutual aid from affected member agencies

3. WEROC Activation Level

WEROC and MWDOC management will determine the appropriate level of WEROC activation.

- Standby – WEROC monitors, receives and relays information.
- County Liaison - WEROC Liaison at County Operational Area EOC
- Support – WEROC provides a support role to a Utility activation.
- EOC Activation - EOC partially or fully staffed

Operational Area Activation Levels

When the OA EOC is activate their levels of activation are as follows:

- Level 3 (Type III) Low Level Activation
- Level 2 (Type II) Moderate Level Activation
- Level 1 (Type I) High Level Activation

4. Groups That Will Be Notified

When the EOC is activated, at a minimum, the following groups should be notified. Notifications should also be made to the following agencies if activation was not needed.

- WEROC EOC Staff
- Affected Water Utilities



- Metropolitan's EOC at Eagle Rock
- Operational Area Emergency Operations Center (OA EOC)
- Division of Drinking Water
- Health Care Agency
- California Department of Public Health

Once the decision has been made to activate, the EOC will be activated and EOC staff will be notified. Following the determination of activation, the WEROC Emergency Manager or alternate will make an announcement over the WEROC Radio at the EOC and WEROC EOC Staff will be contacted using the EOC Activation Notification Protocols.

EOC ACTIVATION NOTIFICATION PROTOCOL

The following is a standard notification protocol to be used once it is determined that the EOC will be activated. At times, concurrent notification of multiple groups should be utilized when there is available staff to do so. The EOC Director determines which groups should be contacted and the priority of each group's notification.

Key Partner Notifications

Following an event or if notified of a potential emergency situation, partner agencies should be contacted to: inform them of the situation, activation status of the EOC, known damage or impacts, or resource needs. The following agencies should be notified by the EOC Director or alternate when determined necessary:

- WEROC EOC Staff
- Affected Member Agencies
- Nearby Member Agencies
- Metropolitan's EOC at Eagle Rock
- Operational Area Emergency Operations Center (OA EOC)
- Regulatory Agencies (**Attachment L**)

WEROC EOC Staff Notification

The following steps assume a full activation. If the activation is partial, then only those staff members who are identified will be notified. The WEROC emergency manager or alternate will notify EOC staff of activation. Either of the following forms of communication can be utilized until the EOC staff member is reached and has confirmed:

- WEROC will utilize AlertOC as the primary means to notify EOC staff of activation. Staff will receive a phone call, text, and/or email to inform staff of various situations and any actions expected. The system uses a voting mechanism that allows recipients to confirm receipt of the message.
- Email all EOC staff of the situation and actions expected of them. The email should utilize the Message Options button to indicate: high importance, sensitivity level if security incident, and if a reply is requested. The email should request a read receipt in order for the EOC to track who has received the message.



- Staff members should be assigned to call staff and direct them to the designated EOC. Both staff members track messages left and successful contacts.
- Tracking of messages includes: date, time and with whom the message was left
- Successful contacts includes: date, time, and estimated time of arrival
- One hour later, compare email receipts and both tracking pages to determine which staff members should be called again to confirm notification of the event. Make any remaining phone calls needed.

Staff notifications should include:

- Situation Status
- Activation Status
- Report Location
- Safety Instructions
- Shift length
- Expected Action

WEROC Member Agency Notification

The following steps assume the need to contact all member agencies. The EOC Director should assign at least one staff member to Member Agency Notification. Either of the following forms of communication can be utilized until the Member Agency is reached:

- WEROC will utilize AlertOC (Email, phone call, text message) as the primary means to notify member agencies of EOC activation.
- Using WEROC EOC Phone Book or Safety Center Application, email or call affected water utilities to inform them of the situation and expected actions. The email should utilize the Message Options button to indicate: high importance, sensitivity level if it is a security incident, reply requested, and request a read receipt for this message. The text or voice message should include:
 - Why the notification is being made?
 - Who has been effected?
 - What action is being requested?
 - Has your agency been affected?
- Assigned staff member should then utilize the WEROC radio to provide an update of the emergency situation and the EOC activation status. Conduct a member agency roll call utilizing the WEROC radio in order to track who heard the announcement.
- Compare any email receipts to the radio roll call to determine which agencies should be called individually to confirm notification of the event. Make remaining phone calls utilizing the Member Agency Emergency Contacts List found in the WEROC EOC Phone Book or Safety Center Application



EMERGENCY PROCLAMATIONS

The California Emergency Services Act (Chapter 7 of Division 1 of Title 2 of the Government Code), hereafter referred to as the Act, provides the basic authorities for conducting emergency operations following a proclamation of Local Emergency, State of Emergency or State of War Emergency by the Governor and/or appropriate local authorities, consistent with the provisions of the Act. Although the Act refers to cities and counties proclaiming emergencies, it does not exclude districts from the practice. It is a necessary and important step for special districts to proclaim a local disaster for both the purposes of financial purchasing power (California Code, Public Utilities Code 12753), as well as for the use of some mutual aid agreements.

Member Agency Emergency Declaration

Each member agency should have emergency declaration procedures that are activated during emergencies that activate procedures outside of normal operations. When deciding whether to declare an emergency, the agency can use the local emergency procedures on the next page as a guidance. A member agency should declare an emergency when:

- Impacts to public health exist or are possible
- Long term water or wastewater system outages occur or are expected
- Activating the EOC and/or running an ICP
- Impacts to hospitals or schools exist or are possible
- Need for resources or support

The internal emergency declaration should trigger cost tracking procedures for FEMA reimbursement. The emergency declaration helps support the agency's purchasing ordinance policy to make purchases and contract in accordance with state and federal regulations during an emergency. Emergency purchasing authority guidelines can be found on page 52 of the Resource Management section. Member agencies should notify WEROC and the OA of the local emergency as soon as a significant problem arises. Additional notifications should be made to the appropriate regulatory agency.

MWDOC Emergency Declaration

When WEROC is informed that a Member Agency has declared an emergency, WEROC will analyze the extent of the situation, if justified, will ask the MWDOC Board of Directors to declare an emergency. The MWDOC Board of Directors declaration should be made for the purpose of:

- Activate internal emergency purchasing authority which will enable MWDOC to enter into contracts, make purchases, and request mutual aid, that otherwise would not be available without the official declaration. Emergency purchasing authority guidelines can be found in the Resource Management Section.
- Gaining support from stakeholders
- Expending and tracking EOC resources for disaster recovery

WEROC should inform the OA that the member agency and MWDOC have declared an emergency and request the OA to proclaim a local emergency on behalf of the member agency. This action should trigger internal cost tracking procedures for FEMA reimbursement in the case that a state or federal emergency declaration is made. Emergency Purchasing Authority procedures can be found in the Resource Management section.



When informing the OA of the emergency, the member agency and/or WEROC should provide justification for the declaration by providing:

- An overview of the issue
- Potential or current impacts to public health
- Potential or current impacts to water distribution or wastewater collection
- Resources needed to resolve the issue
- A timeline to resolve the issue

The internal emergency declaration should trigger cost tracking procedures for FEMA reimbursement in the case that a state or federal emergency declaration is made. For situational awareness, the appropriate agencies should be notified of the situation.

Local Emergency (Operational Area Emergency Declaration)

A Local Emergency proclaimed by the designated official must be ratified by the elected body within seven days. The governing body must review the need to continue the proclamation at least every fourteen days until the Local Emergency is terminated. The Local Emergency must be terminated by resolution as soon as conditions warrant. Proclamations are normally made when there is an actual incident, threat of disaster, or extreme peril to the safety of persons and property within a jurisdiction, caused by natural or man-made situations.

The proclamation of a Local Emergency provides the governing body with the legal authority to:

- If necessary, request that the Governor proclaim a State of Emergency.
- Promulgate or suspend orders and regulations necessary to provide for the protection of life and property, including issuing orders or regulations imposing a curfew within designated boundaries.
- Exercise full power to provide mutual aid to any affected area in accordance with local ordinances, resolutions, emergency plans, or agreements.
- Request that state agencies and other jurisdictions provide mutual aid.
- Require any local official or employee to provide emergency services support.
- Requisition necessary personnel and materials from any local department or agency.
- Obtain vital supplies and equipment and, if required, immediately commandeer the same for public use.
- Impose penalties for violation of lawful orders.
- Conduct emergency operations without incurring legal liability for performance, or failure of performance. (Note: Article 17 of the Emergency Services Act provides for certain privileges and immunities.)

State Emergency Services Act

A State of Emergency may be proclaimed by the Governor when:

- Conditions of disaster or extreme peril exist which threaten the safety of persons and property within the state caused by natural or man-made incidents.
- The Governor is requested to do so by local authorities.
- The Governor finds that local authorities are inadequate to cope with the emergency.



When the Governor proclaims a State of Emergency, the following conditions apply:

- Mutual aid shall be rendered in accordance with approved emergency plans when the need arises in any county, or city and county for outside assistance.
- The Governor shall, to the extent deemed necessary, have the right to exercise all police power vested in the state by the Constitution and the laws of the State of California within the designated area.
- Jurisdictions may command the aid of citizens as deemed necessary to cope with an emergency.
- The Governor may suspend the provisions of orders, rules, or regulations of any state agency and any regulatory statute or statute prescribing the procedure for conducting state business.
- The Governor may commandeer or make use of any private property or personnel (other than the media) in carrying out the responsibilities of their offices.
- The Governor may promulgate, issue, and enforce orders and regulations deemed necessary.

Presidential Declaration of Emergency or Major Disaster

Definitions

Major disaster: A major disaster is defined as "any natural catastrophe (including any hurricane, tornado, storm, high water, wind driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, or drought), or, regardless of cause, any fire, flood, or explosion, in any part of the U.S. which in the determination of the President causes damage of sufficient severity and magnitude to warrant major disaster assistance under this Act to supplement the efforts and available resources of States, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby."

Emergency: An emergency is defined as "any occasion or instance for which, in the determination of the President, Federal assistance is needed to supplement state and local efforts and capabilities to save lives and to protect property and public health and safety, or to lessen or avert the threat of a catastrophe in any part of the U.S."

Process

In order for the President to declare a federal major disaster or emergency, the Governor of California must submit the following:

- Local Jurisdiction Emergency Declaration
- The California State of Emergency Proclamation

The Governor's written request for federal assistance must also include:

1. Certification of implementation of the State Emergency Plan
2. Description of how the disaster caused needs beyond state/local capabilities
3. A description of state/local resources already committed



4. Preliminary estimates of supplementary federal assistance needed
5. Certification of compliance with cost-sharing requirements of the Stafford Act

Basis for Request

The situation is of such severity and magnitude that effective response is beyond the capabilities of the state and affected local governments, and federal assistance under the Stafford Act is necessary to supplement the efforts and available resources of the state, affected local governments, disaster relief organizations, and compensation by insurance. The Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) (Public Law 100-707) is a United States federal law designed to bring an orderly and systemic means of federal natural disaster assistance for state and local governments in carrying out their responsibilities to aid citizens.

(For more information on the Stafford Disaster Relief and Emergency Assistance Act visit www.fema.gov/library/stafact)



EOC OPERATIONS

EOC OPERATIONS

WEROC EOC staff shall report to the EOC following an automatic trigger or upon notification by WEROC or designee. The WEROC Liaison to the Operational Area (OA) will report directly to the OA EOC and upon arrival make contact (by WEROC Radio, cell phone or telephone) with the WEROC EOC. If the WEROC OA EOC Liaison has not contacted the WEROC EOC within an adequate amount of time following WEROC activation, additional WEROC Staff will be dispatched by the EOC Director to the OA EOC.

WEROC Auto-Pack

WEROC EOC staff are provided an Auto-Packs to keep in their vehicles to assist them in case an event occurs while they are out of the office or after hours that requires EOC activation. The Auto-Pack contains important contact information, maps to the WEROC and OA EOC's and general EOC Activation Protocols (can also be found on page 24 of this plan) so that staff are prepped and have access to vital information that will assist them throughout the process of reporting to the WEROC EOC.

Safety Center Phone Application

The Safety Center Phone Application (Apple and Android) allows users access to timely emergency response information. WEROC staff can assist EOC or MWDOC staff to gain access to the application. The application allows users to access:

- Emergency contact information
- Emergency Operations Plan
- Continuity of Operations Plan
- AlertOC user guide and login information
- WebEOC user guide and login information

EOC LOCATIONS

WEROC maintains two EOC's. The Primary EOC is in the City of Mission Viejo near the cross streets of Los Alisos Boulevard and Trabuco Road. The Alternate EOC is in the MWDOC Administration Offices in the City of Fountain Valley. Additionally, WEROC maintains a facility with limited resources in the City of Orange that can be used as a satellite facility. Maps and addresses to the EOCs are available in **Attachment I: EOC Maps**.

Readiness of the EOCs is the responsibility of WEROC staff. When the use of an alternate EOC site becomes necessary, EOC staff will be instructed to relocate to the alternate EOC site (Fountain Valley or Orange). If the primary EOC is unusable before its activation, staff members will be asked to report directly to the alternate EOC site in Fountain Valley.



GENERAL EOC START UP ACTIONS

When activated, the WEROC EOC will assess the overall condition/status of the Orange County's water distribution and wastewater collection systems, including, regional facilities serving Orange County. Preliminary contact will be made with each agency including MET to determine:

1. If member agency facilities have been damaged
2. Impacts of damages to community
3. Whether any assistance is required
4. Resource Needs
5. Water/wastewater system status updates
6. Facilities threatened
7. Usable water storage levels
8. Pumping capabilities
9. Any deficiencies in service due to damage to member agencies

Following the activation of the EOC, the EOC Director will work with the Intelligence Unit to monitor the situation using WebEOC, email, phone, MARS Radio, and the OA Radio System.

WebEOC

Web Based Emergency Operations Center (WebEOC) is a web-based information management system that is used by all OA signatories and county departments to providesusers a single access point for the collection and dissemination of emergency or event-related information such as, position logs, significant events, logistical requests, press releases, and staffing. Additionally, the user has the ability to provide status updates to include: Initial Damage Estimates, Casualties, Proclamations, Utilities Outages, Evacuations, Mass Care Centers, Road Closures, Infrastructure, Advisories/Press releases, DOC status, Potable and waste Water. Note: WebEOC is not a communication tool, it is an information gathering platform.

WEROC EOC ORGANIZATION AND RESPONSIBILITIES

The following pages is a description of each EOC Section. The WEROC EOC organization chart is visually represented in Figure 1: WEROC EOC Organization Chart.



| EOC Organization | |
|---|---|
| Management Section | Responsible for overall WEROC emergency policy and coordination through the joint efforts of WEROC EOC Management Staff, Rumor Control, Public Inquiries, Identification of Safety Officer, Facility Security, Agency Liaison, and State/federal activity coordination. This section includes the EOC Director, Public Information Officer, Legal Advisor, and liaisons from outside agencies such as MET, the Operational Area (OA), and WEROC Water utilities. |
| Planning and Intelligence Section | Responsible for collecting, evaluating, disseminating intelligence and information; developing the EOC Action Plan in coordination with other functions; and maintaining documentation, advanced planning, Technical Services, Action Planning, and Demobilization Planning. Communication and coordination is part of the Planning and Intelligence Function and shall be established between the WEROC EOCs, WEROC member agencies, the OA, SWRCB, MET and other appropriate resource agencies. |
| Logistics Section | Responsible for managing all requests made of WEROC for logistical support by WEROC member agencies during a disaster operation, including the facilitation of mutual aid, Transportation Support, Personnel, Supply and Procurement, Resource Tracking, and IT Support, |
| Finance and Administration Section | Responsible for managing all financial aspects of the disaster operation, including the tracking of hours, compensation claims, Purchasing, Cost Recovery, contracts, and Travel Request forms and claims. |

Note: WEROC does not have an Operations Section as part of its EOC structure because the agency is not responsible operations in the field. Operations are conducted by the member agencies in the field and their Department Operations Center.

Chain of Command

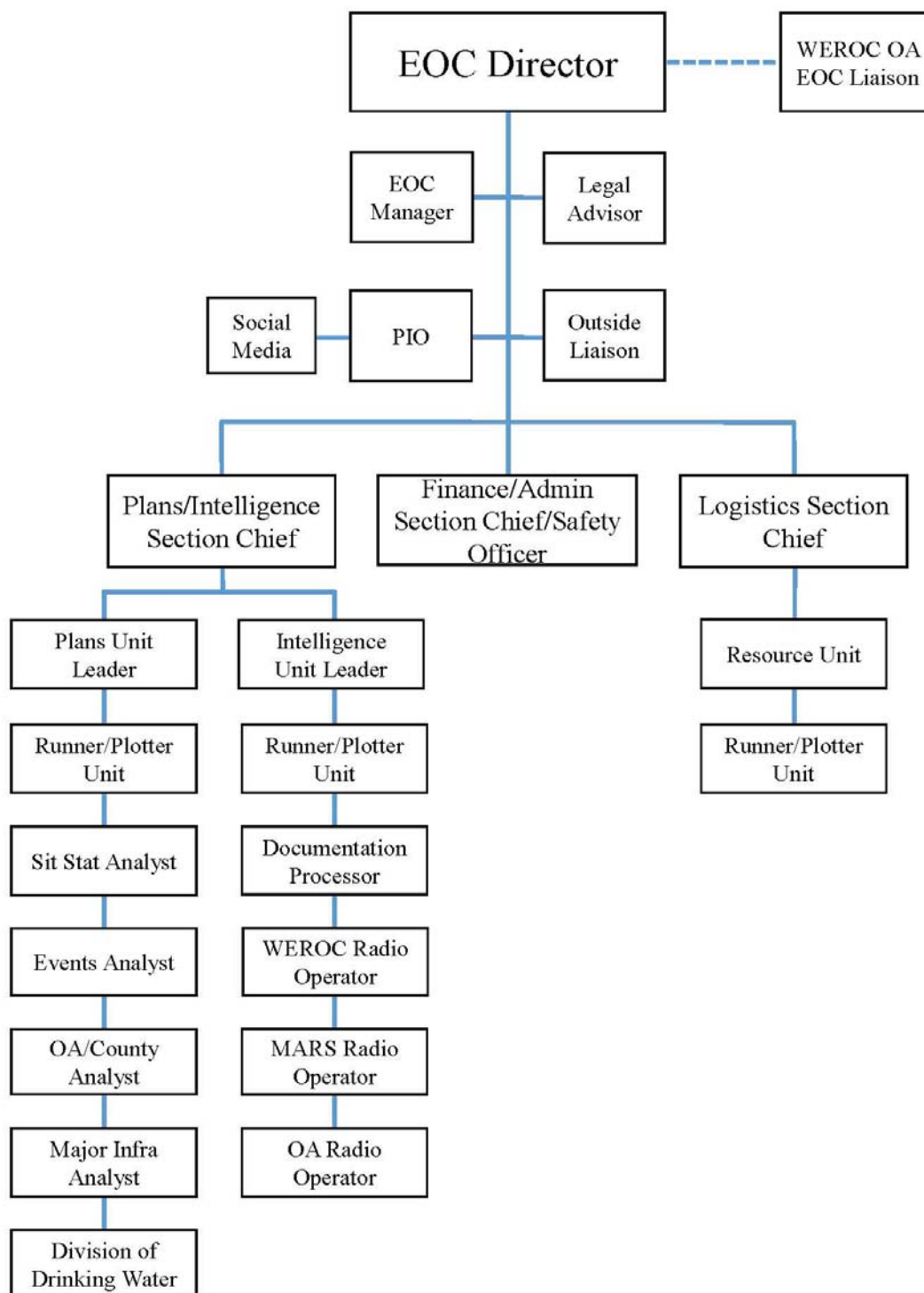
The first WEROC Staff member to arrive at the EOC will start making the EOC operational. In accordance with ICS, the most qualified EOC management staff member to arrive will exercise overall EOC management responsibility until relieved by the next qualified management staff member. This will be done in the following order:

1. EOC Director
2. EOC Manager
3. Planning/Intelligence Chief
4. Logistics Chief
5. Finance/Administration Chief / Safety Officer

As additional WEROC Staff arrive, a more permanent and expanded EOC organization will begin to identify these initial tasks in a more formal manner, i.e. using functional checklists and the EOC action plan (See position binders in each EOC)



FIGURE 1: EOC ORGANIZATION CHART





EOC SECTION RESPONSIBILITIES AND REPORTING PROCEDURES

Responsibilities for each WEROC Function are listed below. EOC Staff assigned to a specific function should review the checklist for that function found in each EOC position binder in the EOC. In addition staff should review and become familiar with the other checklists in the event that a reassignment of functions is required. It is WEROC's intent to provide opportunities for cross-training in all EOC functional positions to maintain a high level of staff preparedness.

| Management Section | |
|-----------------------------------|---|
| EOC Director | Responsible for the overall emergency management, policies and coordination of the WEROC EOC. Manage WEROC EOC activity and develop EOC priorities and objectives in the EOC Action Plan (IAP). Approve the demobilization plan for the WEROC EOC provided by Planning and Intelligence. This position utilized WebEOC. |
| EOC Manager | Facilitate the overall functioning of the EOC by providing guidance and technical expertise to the Director and Section Chiefs during EOC operations. Ensure that the mission of WEROC is achieved through the communications and coordination of the EOC. This positions is privy to the tools and resources available at the EOC. This position utilizes WebEOC. |
| Legal Advisor | Responsible for assessing WEROC and Member Agency risks resulting from the emergency. This function provides professional counsel to the EOC Director regarding emergency actions, liability, legal procedures and possible legal eventualities. Coordination and communication may be accomplished by phone and e-mail; however the position may attend EOC meetings with EOC Director and Management to achieve closer coordination. |
| Public Information Officer | Provide assistance and coordination to WEROC member agencies for public and media outreach and serves as the dissemination point for all public information released from the WEROC EOC to the affected area(s) throughout the operational period. A PIO Liaison may be assigned to the OA EOC if the OA JIC is activated or the OA hotline in support of water operations. May act as the JIC coordinator for water issues. This position utilizes WebEOC. |
| Social Media | Reports to the Public Information Officer and has the responsibility of monitoring social media, reporting new information, and posting approved information using WEROC social media accounts. |
| WEROC OA EOC Liaison | Reports to the OA EOC Public Works Director. This function is located at the Operational Area (OA) EOC and serves as the on-site liaison to the OA as a representative of WEROC and all water/wastewater agencies affected by the disaster. This function utilizes WebEOC. |
| Outside Agency Liaison | Reports to the EOC Director. This function serves as the liaison of the affected agency. Responsible for coordinating resources between WEROC and the member agency. |



| Planning Section (Part of Planning & Intelligence Section) | |
|---|---|
| Planning/ Intelligence Chief | Exercise overall responsibility for the coordination of activities within the Planning & Intelligence Section. This section is responsible for gathering, analyzing, evaluating, displaying, and disseminating emergency information and is made up of the Planning Unit and Intelligence Unit. This section maintains information and intelligence on the current and forecasted situation. The Planning Section plays an integral part in developing the EOC Action Plan, prepares and documents incident maps, maintaining documentation for the overall event, and gathers and disseminates information and intelligence critical to the incident. Responsible for creating the water and wastewater Situation Summary Report. This function utilizes WebEOC. |
| Planning Unit Leader | Manage the Planning Unit that is responsible for gathering, analyzing, evaluating, displaying, and disseminating emergency information. Based upon information gathered, the Unit formulates and forwards planning recommendations to the Planning and Intelligence Chief and all other affected EOC sections. The Planning Unit Leader also routes information from the Intelligence Unit Leader to the appropriate Planning Unit function to be displayed and maintained on EOC whiteboards. This function utilizes WebEOC. |
| Situation Status Analyst | Responsible for collecting and following up on general situation status regarding WEROC member agencies. The Situation Status Analyst uses a variety of methods to collect situational information, once collected the information is to be organized and displayed on the Situation Status Whiteboard, which will be continuously updated to provide all WEROC EOC staff with general situational awareness. This function utilizes WebEOC. |
| Events Analyst | Responsible for collecting, evaluating, and tracking, and following up on member agency events of significance during the course of an incident. This position analyzes information it processes and assists the Planning Unit Leader with advanced planning. Additionally, ensures the events board is updated regularly. This function utilizes WebEOC. |
| OA/County Analyst | Collect and analyze disaster information related to overall OA/County operations and significant events. Be aware that although events may not be directly related to water and wastewater, indirect effects have the potential to significantly affect the operations or recovery of Orange County water and wastewater systems. Summarize and forward significant findings to the Planning Unit Leader and other EOC staff, as needed. This function utilizes WebEOC. Responsible for maintain the OA/County events board updated. |
| Major Infrastructure Analyst | Collect and analyze damage assessment information to identify issues related to major water and wastewater infrastructure in Orange County. Determine the likely impacts of damage to the Orange County water and wastewater system. Summarize and forward significant findings to the Planning Unit Leader and other EOC staff, as needed. Responsible for major infrastructure board. This function utilizes WebEOC. |



| | |
|-----------------------------------|---|
| Division of Drinking Water | This function serves as the representative from the DDW. Responsible for coordinating resources and providing guidance to member agencies. This function utilizes WebEOC. |
|-----------------------------------|---|

| Intelligence Unit (Part of Planning & Intelligence Section) | |
|--|---|
| Intelligence Unit Leader | This function reports to the Planning and Intelligence Chief and is responsible for collecting, evaluating, and designating responsibility of all incoming messages to the WEROC EOC. This function utilizes WebEOC. |
| WEROC/OA/MARS Radio Operators | Facilitates all emergency radio communications between WEROC EOC, member agencies, County OA EOC, and MET's EOC. The amount of radio staff will depend on the amount of radio traffic. |
| Runner Unit | Reports to the Intelligence Unit Leader and is responsible for ensuring a timely and smooth flow of written information between all EOC functions, especially the radio room. |
| Plotter Unit | Reports to the Intelligence Unit Leader and is responsible for providing an updated visual picture and situation status of the disaster for the EOC Director and staff on the white boards and projector. Assigned to sections as needed. |
| Documentation Processor | During the initial phases of activation, the Documentation Processor assists: the Situation Status, Events, OA/County, and Major Infrastructure Analyst to collect and organize information. Throughout all phases of activation, the Documentation Processor must review the EOC message flow process and offer critiques on procedures to improve the overall EOC system. Creates the official record of activities for the EOC by collecting, organizing, and documenting all EOC communications throughout the operational period in the Documentation Log and event binder |

| Logistics Section | |
|--------------------------|---|
| Logistics Chief | Manage all resource requests made by member agencies and provide logistical support to the WEROC EOC operations. This includes tracking resources and determining resource request priorities. Ensure all resource requests are organized and clearly displayed on the WEROC EOC Resource Request board. This function utilizes WebEOC. |
| Resource Unit | Identify and coordinate resources identified through resource requests made by member agencies. Provide logistical support to WEROC EOC Staff during WEROC EOC operations. Ensure all resource requests are organized and displayed on the WEROC EOC Resource Request board. |



| Finance and Administration Section | |
|--|---|
| Finance and Administration Chief/Safety Officer | Manage all WEROC EOC related financial aspects of the disaster operation. This includes maintenance of personnel and equipment time records; providing payments to vendors for supplies and equipment usage; and for determining the cost considerations or various alternative strategies associated with incident planning. Additionally tracks member agency IDE information and collection, and acts as the safety officer for the EOC. As the safety officer, assess and anticipate hazardous or unsafe conditions and recommend measures for assuring personnel safety. Ensure all emergency response personnel follow and demonstrate appropriate safety precautions during an emergency. This function utilizes WebEOC. |

Required Forms

Each position at the EOC has a designated position guide to assist personnel throughout the response and recovery phase. Each folder is equipped with documents, checklist, contact information, and supplemental resources each position will need fulfill their role. The folders are designed to be all inclusive, but staff are encouraged to utilize other means that may not be in the function guides to complete their task if necessary. The position guides include:

- General Start Up/Deactivation Procedures
- WEROC Organizational Chart
- WEROC EOC Functional Descriptions
- Job Action Checklist
- Important Contact Information
- Location of Supplies Within the EOC
- General Forms i.e. Activity Log
- Function Specific Forms
- Function Specific Resources

All forms identified above are also available in electronic format by utilizing the USB drive attached to your position guide basket and back up hard copies are available in the position binders.

EOC ACTION PLAN

EOC Action Plans (EAP) provide framework for EOC staff to respond to the situation by providing them with the objectives and the steps required to complete them. EAPs not only provide direction, but also serve to provide a basis for measuring achievement of objectives and overall system performance. EAPs are an important management tool that involves a process for identifying priorities and objectives for emergency response or recovery efforts. EAP's also provides documentation of the priorities, associated tasks, and the personnel assigned to perform the tasks within the EOC.

The EAP is a living document prepared based on the best available information at the time of the planning meeting. EAPs are developed for a specified operational period that may range from a few hours to 24 hours. The operational period is determined by first establishing a set of priority



actions that need to be performed. A reasonable time frame is then established for accomplishing those actions. The EAPs need not be complex, but should be sufficiently detailed to guide EOC elements in implementing the priority actions. For the initial response, the format may be limited to a well-prepared outline for an oral briefing. For most incidents that will span multiple operational periods, the plan will be developed in writing according to ICS procedures.

EOC ACTION PLAN ELEMENTS

The EAP template and sample can be found within the Planning and Intelligence position binders. Below is a brief explanation of what information is requested on that template.

Operational Period: Period of time in which EOC Staff will meet the stated objectives. Typically, during the first day of a major emergency or disaster, change is rapid, thus EOC Management may set the operational period to last only a few hours. Later, change is less rapid and the operational period may expand to cover a number of days.

EOC Objectives: Stated objective(s) the EOC should accomplish within the operational period. Example objectives for the initial stages of EOC activation for a major earthquake include:

- Establish emergency communications with Metropolitan, Orange County Operational Area, and WEROC Water utilities
- Update Situation Status board with each agencies communication resources and availability
- Receive summary of all water and wastewater damages, support needs, and impacts to surrounding communities
- Identify and prepare most likely anticipated resource requests from member agencies

Operational Priorities: List priorities in order of importance (note: the order of priorities may change based on the disaster situation).

Actions Needed: List the steps necessary to accomplish the objectives e.g. Analyze, Coordinate, Formulate, Monitor, etc.

Resources Needed: List Personnel, Equipment, and Supplies, along with the costs associated with those resources. Create a schedule that outlines what kinds of resources are required, how many, where and when. Logistics will order resources based on the EOC Action Plan. The ICS 213 Resource Request form is used to request resources, the form contains the following information:

- Mission Name and Detailed Description
- Requesting Agency Information
- Deployment Information
- Estimated Costs



Support Needed: List the various partner agencies the WEROC EOC will require the support of in order to meet operational objectives.

The EAP process should involve the EOC Director and Section Chiefs along with other appropriate EOC staff and other agency representatives as needed. The Planning/Intelligence Section is responsible for development of the EOC IAP and for facilitation of EOC action planning meetings. Planning meetings will not be delayed in anticipation of future information. A sample EAP can be found within each of the positions of the Planning Unit. The planning process for the first EAP will begin upon the activation of the WEROC EOC and will consist of the following steps:

Planning Process

1. Gather, record, analyze, and display situation and resource information in a manner that ensures a clear picture of the magnitude, complexity, and potential impact of the incident **(Planning Section with input from General Staff)**.
2. Conduct a briefing with management section and section chiefs on the situation and status of resources **(Planning Section)**.
3. Formulate and prioritize measurable EOC objectives that conform to the legal obligations and management objectives of WEROC as it relates to the response. **(EOC Director with consultation from General Staff and others)**.
4. Identify reasonable alternative strategies that will accomplish overall incident objectives to determine the most appropriate strategy for the situation at hand **(EOC Director with consultation from General Staff and others)**.
5. Develop evaluation criteria to include public health and safety factors, estimated costs, and various environmental, legal, and political considerations **(EOC Director with consultation from General Staff and others)**.
6. Determine the direction and the specific resource, reserves, and support requirements for implementing the selected strategy for one operational period. I.e. assign responsibilities and staffing **(Planning Section)**.
7. Specify known or expected resources and facilities that may be needed by each member agencies to support their response needs. **(Logistics Section)**.
8. Place orders for resources, facilities, and overhead personnel **(Logistics Section)**.
9. Draft and approve the EOC IAP **(EOC Director, Planning Section)**.
10. Distribute the approved EOC IAP to all EOC sections for implementation **(Planning Section)**.
11. Compare planned progress with actual progress **(Planning Section)**.
12. Track deviations that occur from the EOC IAP and emerging information to include in the first step of the process for modifying the current plan or developing the plan for the subsequent operational period **(Planning Section)**.



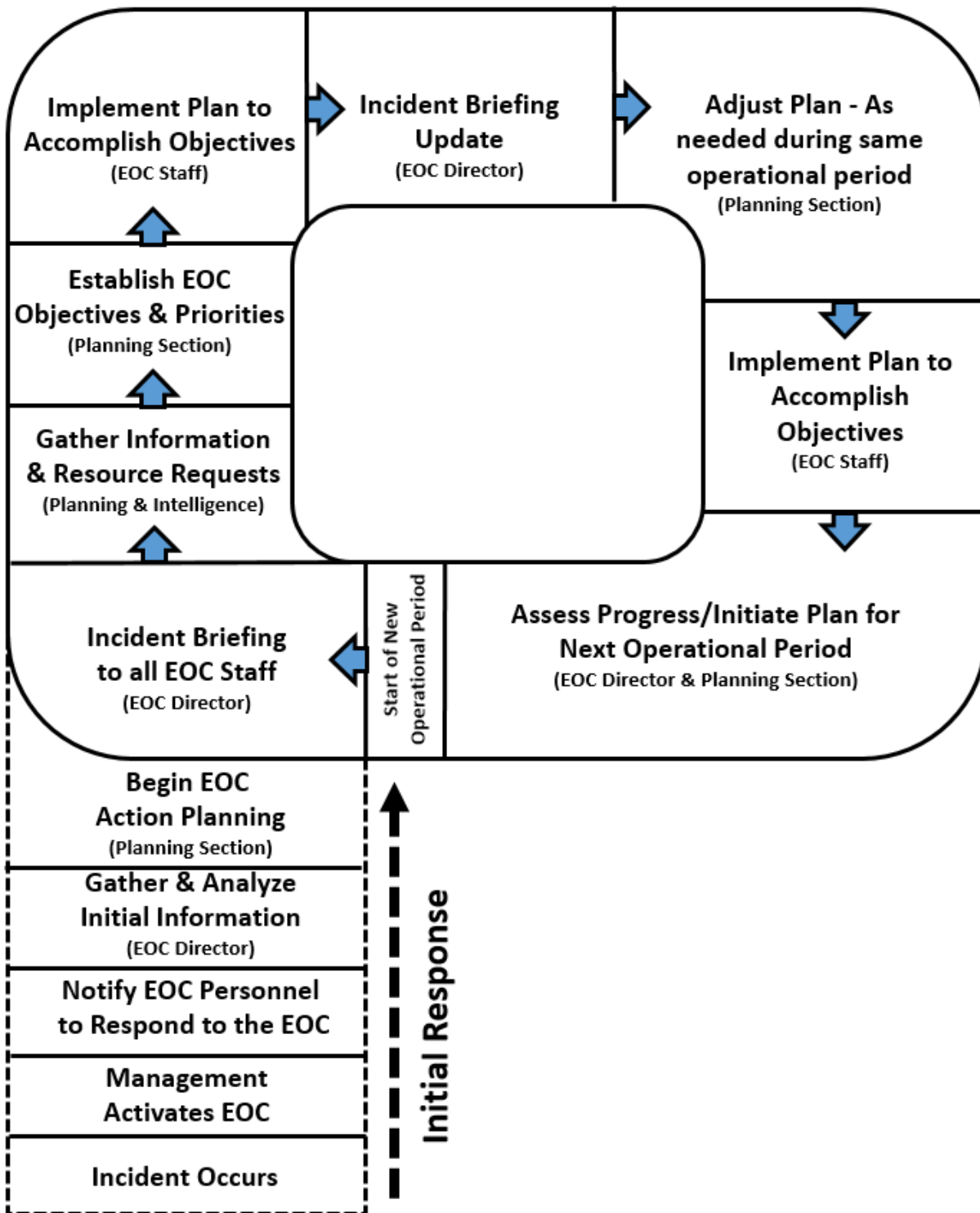
A sample EAP can be found within the position guide at the EOC. The first EAP is for the first operational period (12 hours) that the EOC has been activated. The second and subsequent EAPs should be developed and approved prior to the next operational period.

The planning process should provide the following:

- Current information that accurately describes the incident situation and resource status
- Predictions of the probable course of events
- Alternative strategies to attain critical incident objectives
- An accurate, realistic EOC IAP for the next operational period



Figure 1: EOC Action Planning Cycle





COMMUNICATIONS

The WEROC EOC's have established multiple forms of communications for use during activation. The traditional forms of communication available are landline phones, cellular phones, satellite phones, a fax line and three separate radio communication systems (WEROC, MARS, OA1). In addition to those, the WEROC EOC's have wireless internet capability, Gmail accounts, and the use of WebEOC.

Telephone, Cellular Phone, Fax, and Satellite Phones

Each EOC has six hardline phones, staff cellular phones, one fax machine, and a satellite phone. All phone lines have the capability to call out, transfer calls, and call waiting.

Government Emergency Telecommunications Services/Wireless Priority Service

WEROC staff and both EOC's utilize Government Emergency Telecommunications Service (GETS). GETS is a federally sponsored program that provides government first responders with priority service for landline telecommunications. A GETS card has been issued to all managerial staff, each position in the Planning Section, Logistics Section, and Finance Section, and to both the Emergency Manager and Coordinator. Wireless Priority Service (WPS) is intended to be used in an emergency or crisis situation when the wireless network is congested and the probability of completing a normal call is reduced. All staff can add to their personal phone. A list of active participants is available in **Attachment N**.

AlertOC

AlertOC is a mass notification system designed to inform Orange County residents and businesses of imminent emergencies and protective actions. By registering with AlertOC, time-sensitive voice messages, text messages, and emails from the County, WEROC, or member agencies can be sent to those who live or work in the county. Text messages may also be sent to cell phones, e-mail accounts and hearing impaired receiving devices.

MWDOC may use the system as an internal notification tool to notify staff of imminent or on going emergencies. Additionally, if requested by a member agency, WEROC may send out notifications to the public on behalf of the member agency. If WEROC EOC staff are unsure how to use AlertOC, they may contact the Operational Area EOC to send out a message on the agency's behalf. MWDOC staff with the responsibility to send out notifications have been pre-identified by the general manager.

WhatsApp

WhatsApp is a phone application (Apple or Android) that allows the sending of text messages and voice calls, as well as video calls, images and other media, documents, and user location. The application runs from a mobile device though it is also accessible from desktop computers; the service uses standard cellular mobile numbers. This application allows users with different phone software to easily create and connect to group text messages.



Internet and Email

Both EOC's have internet service with wireless connectivity available. Email accounts have been established for all EOC positions and are listed in position binders as needed. Additionally, any laptop brought to the EOC with wireless capabilities should be able to connect to the service.

WebEOC Operations

During emergencies WEROC and all government agencies in OC use WebEOC as a crisis information management system for real-time information sharing. WebEOC is a software program for electronically sharing disaster information among the WEROC Water utilities, and from WEROC to the Operational Area or with other jurisdictions. WebEOC is accessed through the internet and is thereby accessible from any device with internet access (running Internet Explorer 6.0 or higher) as long as the user has an appropriate username and password. The system is used for, but not limited to:

- Situation status reports for all government agencies
- Monitoring and posting significant events
- Monitoring who is supporting the response, accessing their contact information, and tracking response actions
- Reporting IDEs
- Central location for public information

WebEOC should not be relied upon for up to date information. It is always best to communicate directly to receive a confirmation than to assume an agency is using WebEOC.

RADIO COMMUNICATION

The WEROC EOC's have three radio systems available for different communication purposes: OA1, MARS, and WEROC. In accordance with NIMS policies, WEROC will only use standard speech communications, rather than any type of codes such as Ten-Code. All three radio systems conduct regular radio checks to ensure operability and user knowledge of systems. Practicing proper emergency radio procedures is necessary to ensure that radio operation is an automatic response and to reduce confusion. It is encouraged that a runner or designee assist the radio operator by acting as a second listener to ensure that communications are not misinterpreted. Below is a description of the three radio systems that are utilized at the EOC.

Operational Area One Radio (OA1 Radio)

The OA1 Radio allows the WEROC EOC to communicate with the Operational Area and City EOC's on the OA1 frequency. This frequency is monitored 24/7 by the Sheriff's Control One and can also be overheard by all OA1 Member cities EOCs. As such, they can serve as back-up communications with other jurisdictions if the other jurisdictions are first prompted to continuously monitor the frequency. The Orange County Sheriff's Emergency Management conducts a monthly test of the system. For OA1 Radio operations guidance, refer to the OA Radio System Standard Operations Procedure which is available in the Radio Unit Position Guide.



Metropolitan Member Agency Response System (MARS) Radios

The MARS Radio System provides an emergency communications network for all MET water utilities. Within Orange County, MARS radio units are located at the Diemer Filtration Plant in Yorba Linda, both WEROC EOCs, and the cities of Anaheim, Fullerton and Santa Ana. All three cities have agreed to coordinate emergency response operations through WEROC.

For MARS Radio System operation guidance, refer to the Member Agency Response System Operations Manual, which includes standard operations procedures for the radio system. Copies of the Manual are located in both WEROC EOCs in the Radio Unit Position Guide in each EOC has a copy of the MARS manual for reference.

WEROC 800 MHz Radio System

WEROC's emergency radio system provides an emergency communications network for all WEROC member agencies, Diemer Filtration Plant, DDW, and the OA EOC. The system includes a "WEROC Channel" within the current 800 MHz system, with WEROC and its agency's as "Participating Agencies." WEROC's specific channel has the capacity to be connect with other operations, such as fire, law, public works, etc. at the time of a disaster as needed. Each EOC is equipped with a control station and one portable radio. If all other communication systems are inoperable and an emergency which requires immediate attention occurs, the red button on the radio can be pushed for immediate assistance.

STAFF SAFETY

Ensuring the safety of EOC staff is of utmost importance. The Safety Officer is responsible for addressing all potential hazards within the EOC and responding to any staff who requires medical attention. Protocols for medical attention are listed in detail in the Safety Officer Position guide.

Staff Resources

Each EOC is stocked with: first aid/trauma kits (located in the WEROC office and near the East MWDOC employee entrance), an automatic external defibrillator, sleeping bags, cots, meals ready to eat, drinking water, and hygiene products.

Injuries

Any injury which occurs during working hours will be treated as a workers compensation injury. If medical attention is needed, but is not an emergency, the staff member can be taken to any of the designated clinics or the patients preferred doctor.

Family Notifications

In stressful and fast pace situations, injuries can occur. If a staff member is seriously injured or perishes while on duty, the MWDOC General Manager or alternate will be charged with notifying the staff member's emergency contact. Emergency contact information can be found in the WEROC Staff Information binder located at each EOC. If while on duty an EOC staff member sustains a non-life threatening injury, the Safety Officer will notify the individual's emergency contact. Injury Forms are located in the Safety Center application and in the Safety Officer Position guide and should be utilized to document each incident.



Unauthorized Personnel

Intruders may pose a threat to EOC staff. Doors and access gates to the EOC should remain closed at all times while the EOC is activated. The EOC doors are equipped with panic push bars to allow for easy exit in case of an emergency. The assigned Safety Officer will be in charge of allowing authorized personnel access to the EOC as well as denying access to non-authorized personnel. Unauthorized personnel will be asked to leave the premises and informed that law enforcement will be called if they do not get off the property.

OPERATIONAL PERIODS

The Planning/Intelligence Section will be responsible for establishing formal shifts and staffing schedules. Depending on the circumstance, shifts can last up to but should never exceed 13 hours. It is important to stick to these schedules during EOC activation. Many EOC personnel may want to stay “on-duty” despite the pending end of their shift. Personnel need to be allowed to relax and decompress and should feel confident that appropriate personnel are taking their places.

Shift Transition

Shifts should overlap by at least a half an hour to give the outgoing personnel an opportunity to debrief incoming personnel and to allow time to transition. To sustain continuity from shift to shift, this transition period is required. The incoming person is the one who releases the person they are replacing. The person going off shift cannot leave until the incoming person is ready to assume the role. The Finance/Administration Chief is responsible for ensuring personnel submit time cards and ensuring any staff leaving the EOC are in a physically and mentally safe position to drive home.

ADMINISTRATION AND FINANCE

Administration

The administration function manages all administrative, financial, and cost analysis aspects of the incident. Initially, this work may be done in the EOC, but after the EOC is deactivated the activities can also be conducted from MWDOC. Additionally, this function will be in charge of tracking IDE’s from member agencies.

EOC Documentation

During EOC activation, the administration function during an event is a support role and requires proper and accurate documentation of all actions taken. This function coordinates with other sections in the EOC and/or departments to collect the necessary documentation pertaining to the incident for cost recovery purposes. This function also acts as a liaison with other disaster assistant agencies and coordinates the recovery of costs as allowed by law. The documentation gathered must be maintained and becomes official record of the event in order to pass an audit. Accurate and timely documentation is essential to financial recovery for the WEROC and its water utilities.



Finance

WEROC may be reimbursed from ACWA JPIA Insurance, California Disaster Assistance Act, or Stafford Act for disaster-related expenses. Accurate record keeping will assist the recovery process for the said expenses after an incident. Recommended Finance Practices for Stafford Act Public Assistance should be adhered to. All EOC cost are tracked by activity codes, activity codes are located in the Finance and Administration Position Guide

Vital Record Retention

State and federal governments require detailed information to support claims for reimbursement. Funding will be approved or denied based upon the information supplied by applicant agencies. Documentation supporting all costs claimed will be required, and all information must relate back to the original source records. The following guidelines should be followed when documenting disaster-related reimbursable expenses:

- Costs and reimbursements associated with emergency operations should be segregated from normal operation expenses.
- Separate records should be maintained for each vehicle and piece of heavy equipment used for emergency operations.
- Vehicle and equipment documentation should include the miles and/or hours operated by location and by operator.
- Vehicle operating expenses should include fuel, tires, tubes, and maintenance.
- Regular and overtime labor costs should be compiled separate from vehicle and/or equipment expenses.
- Equipment documentation should include exactly where the equipment was used and for what; hours and minutes used; and the name of the equipment operator if applicable.
- Revenues and subsidies for emergency operations must be subtracted from any costs claimed.
- Requisitions, purchase orders, and invoices must be maintained for all supplies, materials and equipment expenses claimed should be tracked by project or job site.
- Cost for supplies and materials must include documentation of exactly where resources were used and for what purpose.
- All non-competitive procurements must be justified and follow the agency's finance policies.

Expenditure tracking should commence in any occurrence of an incident that requires expense of labor, equipment used, materials, and other expenses. The Incident Commander(s), EOC Director and EOC staff are responsible for maintaining written records of all disaster-related staff time, requests for supplies, equipment and contract personnel, and receipts for emergency purchases of supplies, equipment and other disaster-related expense.

The Finance Section will compile reports, including total expenditures by Public Assistance category. The Finance Section Chief will submit a summary report on total costs to the EOC Director as requested. This information will be used for state and federal disaster assistance applications. The expenditure data and documentation is vital to state and federal agencies for requesting financial assistance during and after the incident.



MWDOC owns the records, and has the responsibility and liability for their management, and an obligation to direct employees how they are to manage their records; therefore, MWDOC has created various policies and procedures to retain records in the event of a disaster. MWDOC uses Laserfiche to manage and store vital records. This system is maintained by MWDOC's Record Coordinator. At the completion of each shift and the event, all records should be submitted to the Section Chiefs who will then submit the records to the Finance Section Chief.



RESOURCE MANAGEMENT

WEROC considers the development of a comprehensive resource management strategy a priority. Mutual assistance should only be requested once the agency's own resources are reasonably depleted and private company (purchase, lease, or rent) resources have been exhausted. The WEROC EOC is responsible for managing response resource and will allocate resources for the greater good of the incidents recovery.

MEMBER INTERAGENCY COOPERATION

The WEROC Indemnification Agreement (**Attachment A**) is a mutual assistance agreement between member agencies that outlines cost and liabilities associated with mutual assistance request, but it does not cover response cost reimbursement. It is recommended that reimbursement cost be decided between member agencies prior to any equipment or personnel being transferred. WEROC will assist the coordination of mutual aid resources in the event that various agencies are impacted or need assistance.

Small Scale Emergencies

Depending upon the size and type of emergency affecting member agencies, it may not be necessary to fully activate the WEROC EOC. Emergencies confined to a specific small area (s) e.g. system failure, flooding, rural/urban fires, etc., may only require the DOC activation of the member agency(s) affected by the emergency. In these situations where only one or two agencies are impacted, the member agency affected may request assistance directly from another agency. (However, the requesting agency should always notify WEROC of these activities). In most cases, much of the resources required will come from inventories within our member agencies. WEROC would standby and monitor radio communications, or activate the EOC if requested to do so. Any member agency may request WEROC EOC activation in support of their activities.

Large Scale Emergencies

Local Emergency (No State or Federal Declaration) – When member agencies require assistance that does not warrant an emergency, they look to neighboring member agencies for assistance.

State and/or Federal Declaration Reimbursement for Mutual Assistance Response – The following process should be taken if using Public Assistance Reimbursement from a State and/or federally declared disaster. The Requesting Agency will pay for any incurred costs regardless which of the reimbursement methods below are used.

1. Responding Agency bills Requesting Agency for response costs
2. Requesting agency submits those costs through the FEMA Public Assistance process

When either process is initiated, the agency should follow the recovery documentation process found on page 64. It is up to the member agencies to come to terms on how the equipment or staff time will be reimbursed.



EMERGENCY PURCHASING AUTHORITY

The following information has been referenced from the FEMA 44 C.F.R. § 13.36 (August 2014) and the FEMA Field Manual for Public Assistance Grantee and Sub-grantee Procurement Requirements under 44 C.F.R PT.13 and 2 C.F.R PT. 215. All agencies should be familiar with State and federal purchasing and contract regulations as they relate to water and wastewater, public works processes and disaster finance processes. The following is not a complete explanations of disaster financial processes, eligibility or regulations.

Vendor Contracts

Emergency Work (Temporary Repairs)

During a public exigency or local emergency where a temporary repair is needed to restore water services and avoid issues to public health, member agencies may contract directly with a vendor and bypass the competitive bidding process of a permanent repair. This work can only include FEMA Category A: Debris Removal and B: Emergency Protective Measures under the Public assistance reimbursement process. If needed, WEROC may facilitate the purchasing contracts for member agencies in order to expedite the process and maintain public health. During extreme circumstances, MWDOC may consider to directly contract with a third party for services, with the caveat that MWDOC will not be eligible for FEMA reimbursement. It is recommended that WEROC request that the local health officer declare a public health emergency prior to MWDOC entering any contracts in order to build a case for the purchase and increase the odds of qualifying for FEMA reimbursement.

Noncompetitive Procurements: Procurement through solicitation of a proposal from only one source or inadequate competition. May be used only when: (a) Full and open competition is infeasible, and either (i) Item available only from single source; or (ii) Public exigency/emergency; or (iii) Awarding agency authorizes; or (iv) After solicitation of a number of sources, competition is determined inadequate; and (b) cost analysis is performed to determine cost reasonableness

Small Purchase Procedures: May use small purchase procedures for procurements under simplified acquisition threshold (SAT) \$150,000. This type of procurement is often accomplished by inviting vendors to submit three quotes, which the buyer then evaluates and makes an offer

Permanent Work

During an emergency where a permanent repair is needed to restore water and wastewater services and avoid issues to public health, member agencies must obtain three separate quotes if the total amount for the work performed is between \$3,500 and \$150,000. If the work exceed \$150,000, the agency must enter a competitive sealed bid process (lowest price bid). Member agencies may complete a Request for Proposal process for architectural or engineering consultation services which is categorized as Category C-G under the Public Assistance reimbursement process.



MWDOC Purchasing Authority

Under the MWDOC Administration Code §1307, the MWDOC Board of Directors has authorized the General Manager to expend non-budgeted District funds to meet an emergency that adversely affects, directly or potentially, the ability of the District to perform its services; which puts District property or personnel in jeopardy; or which may jeopardize the health or property of the community and its residents. Per the Administration Code, Chapter 8, Exhibit A the expenditure of those funds are allowed as follows; up to \$100,000 with a purchase order/agreement or contract to be ratified by the Board at the next meeting, or if over \$100,000 the general manager must present an agreement or contract to the Board for approval. The General Manager shall determine that an emergency exists and shall inform the Board of the emergency, at the earliest opportunity, the steps taken and expenditures incurred to respond and recover.

Member Agency Purchasing Authority

Each member agency should establish an emergency purchasing authority ordinance that is activated when the agency declares an emergency. If an agency is conducting temporary repairs, the agency is allowed to use their internal emergency purchasing procedures as long as it meets the FEMA emergency categories on page 52, and do not have to adhere to federal procurement standards. When the temporary repair is transitioned to a permanent repair, the agency must adhere to federal procurement standards.

Damage Repairs

The entity who owns the damaged infrastructure is in charge of coordinating and paying for the repair cost. Given that damaged infrastructure may affect water distribution to various agencies, it is important for agencies to develop disaster specific agreements that give other agencies the authority during an emergency, to repair infrastructure that is not typically maintained by that agency on a daily basis. During an extreme circumstance when an agency's resources are depleted, this concept can expedite the restoration of water distribution and help ensure that agencies involved are reimbursed given a state or federal emergency declaration. Agreements for maintenance and repair should specifically state who is responsible for those cost and repairs during an emergency response and recovery. The above process will ensure that FEMA public assistance reimbursements are appropriately distributed.

Member agencies who jointly own infrastructure and use roads that might belong to public works or other agencies and need to access the property for safety reasons, should be asked by the owner of such property to make a mutual aid request to the agency willing to conduct the debris removal or temporary repairs.

In limited circumstances, FEMA may determine that emergency protective measures conducted on private property are eligible under the PA Program if:

- The immediate threat is widespread, affecting numerous homes and businesses in a community such that it is a threat to the health and safety of the general public in that community;
- The Applicant has legal authority to perform the work; and
- The Applicant obtained rights-of-entry and agreements to indemnify and hold harmless the Federal Government.



MUTUAL AID

California participates in a statewide mutual aid system that is designed to ensure additional resources are provided to jurisdictions whenever their own resources are exhausted. The basis for the system is the California Disaster and Civil Defense Master Mutual Aid Agreement (MMAA). The agreement requires all government agencies in California to provide aid to each other during an emergency. Under specific conditions, federal and state monies may be appropriated to reimburse public agencies that aid other jurisdictions. Mutual aid is only eligible for reimbursement for temporary repairs and emergency protective measures, and not for permanent repairs. If other agreements, memoranda and contracts are used to provide assistance for consideration, the terms of those documents may affect disaster assistance eligibility and local entities may only be reimbursed if funds are available.

The Master Mutual Aid Agreement (MMAA) requires a Declaration of Emergency from a city, county, or state, and is coordinated through the SEMS system. WEROC will facilitate through the OA on behalf of its member agencies.

Emergency Managers Mutual Aid (EMMA) – The purpose of EMMA is to provide trained EOC personnel from unaffected areas to support local jurisdictions, OA's and regional emergency operations during proclaimed emergencies.

Emergency Water Allocation

Emergency water allocation procedures specified by suppliers will be considered a priority. Water allocation recommendations made by WEROC will be based on:

- Firefighting requirements
- Potential threat to life or property directly related to water supply
- Health and safety considerations
- Water demand by member agencies and the status of their supply

If reallocation of water is needed, WEROC will take the following steps to ensure that the health and safety of the community is maintained:

- Evaluate impacted agencies. water supply, and supply needed
- Coordinate with all member agencies for capability to adjust source supply
- Coordinate movement of available water supply source via:
 - MET and joint agency pipelines, interties, and emergency connections;
 - including closing MET connections to non-impacted agencies with alternate water supply
 - Request and deploy water trailers

Mutual Aid Coordination

Formal mutual aid requests will follow specified procedures and are processed through pre-identified mutual aid coordinators. Mutual aid requests will follow discipline-specific chains (e.g., fire, law enforcement, emergency manager, etc.) from one level of government to the next per SEMS protocols. The mutual aid coordinator receives the mutual aid request and coordinates the provision of resources from within the coordinator's geographic area of responsibility. In the event resources are unavailable at one level of government, the request is forwarded to the next higher level of



government to be filled. These levels are listed below in order from the lowest to the highest level of government.

- **Member Agency Requests:** Requests for resources originate from the Member Agency and are managed by the Incident Commander (IC). If the IC is unable to obtain the resource through existing local channels, the request is elevated to the water utilities DOC. If the DOC is unable to locate the resource, the request will be sent to the WEROC EOC.
- **WEROC Request:** WEROC will work with unaffected member agencies to obtain needed resources. If WEROC is unable to obtain the resource from an unaffected member agency, WEROC will contact the OA for support.
- **Operational Area Requests:** The OA is a composite of its political subdivisions, (i.e. municipalities, contract cities, special districts and county agencies). The OA Mutual Aid Coordinator assesses the availability of resources within the OA and fulfills the resource request based upon that assessment. In the event resources are unavailable at the OA level, the request is forwarded to the responsible Regional Mutual Aid Coordinator to be filled.
- **Region Level Requests:** The state is geographically divided into six Mutual Aid Regions. Each Mutual Aid Region is comprised of multiple Operational Areas and has a Regional Mutual Aid Coordinator. The Regional Mutual Aid Coordinator is granted the authority to coordinate the mutual aid response of discipline-specific resources within the Region to support a mutual aid request by a jurisdiction also within the Region. In the event resources are unavailable at the Region level, the request is forwarded to the State Mutual Aid Coordinator to be filled.
- **State Level Requests:** On behalf of the Governor, the Secretary of Cal OES has the responsibility for coordination of state mutual aid resources in support of local jurisdictions during times of emergency. The Secretary will analyze and coordinate the request by forwarding the request to an unaffected REOC or tasking an appropriate state agency to fill the need.
- **Interstate Mutual Aid:** Mutual aid may also be obtained from other states. California is a member of the Interstate Emergency Management Assistance Compact (EMAC), a congressionally ratified organization that provides form, structure and procedures for rendering emergency assistance between states. After a State of Emergency Declaration, California can request and receive reimbursable assistance through EMAC for other member states quickly and efficiently without issues of liability. The Secretary of Cal OES and the states' EMAC Coordinator are responsible for facilitating requests for assistance pursuant to EMAC.
- **Federal Assistance:** When resources are not available within the state or through existing agreements with other states, California may request assistance from the federal government. Requests for federal assistance during an emergency will be coordinated through the State Operations Center (SOC).



Requests for Resources

When local resources are exhausted and additional resources are required, resource requests will follow an established process for ordering, tracking, mobilizing and demobilizing.

For the WEROC EOC, the Logistics Section Chief will initiate requests. Requests will be prepared by the EOC Logistics Unit using WEROC Resource Request Form or the ICS 213RR Resource Request Form which are to be submitted to the OA EOC by email. The logistics unit is expected to immediately follow up the request with a phone call to ensure that the request was received. The logistics section will continue to monitor the status of the resource request until it has been fulfilled or it is no longer needed.

Resource requests must include the following information:

- Clearly describe the current situation
- Describe the requested resources with as much detail as possible; including supporting concepts such as staffing and fuel
- Specify the type or nature of the service the resource(s) will provide; including criticality and impacts
- Provide delivery location with a common map reference
- Provide local point of contact at delivery location with primary and secondary means of contact
- Provide the name of the requesting agency and/or OA Coordinator contact person
- Indicate time frame needed and an estimate of duration
- Resource requests involving personnel and/or equipment with operators will need to indicate if logistical support will be provided by requesting agency, (e.g., food, shelter, fuel and reasonable maintenance)

The Resource Request form found in the Logistics Position Guide is used to request resources, the form contains the following information:

- Incident Name and Resource Request Number
- Detailed Description of the Resource
- Requesting Agency Information
- Deployment Information
- Estimated Costs

Once the request is coordinated, approved, and resources deployed, the Logistics Unit, in coordination with the Planning Section, is responsible for tracking the resources through demobilization.

Use of Mutual Aid Resources

Each WEROC Member Agency agrees to abide by the following guidelines:

- WEROC will ensure coordination of resources between the OA, member agencies, and outside agencies.



- Mutual Aid resources will be requested through the WEROC EOC or alternate when more than two agencies are impacted.
- Personnel and equipment such as backhoes, graders, portable generators, pumps, valves, coupling, pipe segments, etc., will be made available to requesting WEROC water utilities when the resources is not anticipated to be needed by the providing WEROC member agency.
- Member agencies are responsible for verifying which mutual aid agreement is being utilized at the time of the response and are responsible for understanding the terms of that agreement. Additional information about several mutual aid agreements can be found in the Mutual Aid Matrix on page 60-61.
- Mutual Aid Resources include but are not limited to personnel and equipment.
- Any agency to agency mutual aid request will be reported to WEROC.

It is of utmost importance that WEROC water utilities follow policies and procedures established by SEMS/NIMS utilizing the WEROC, California WARN, and the OA mutual aid agreements. It is understandable that water utilities may want to directly contact neighbor agencies requesting aid; however this is not recommended as all messages should be forwarded to WEROC as the point of dissemination for all water and wastewater agencies. Doing so reduces the spread of false information, duplication of information/requests, and other problematic issues resulting from cross communication.

The WEROC Resource Communication Protocol (Figure 2) describes the path used to access mutual aid from WEROC and other support agencies.

Reimbursement for Use of Mutual Aid Resources

It is important for agencies utilizing mutual aid agreements to fully understand each agreement of which they are signatory and to know which is being used during each transaction of resources with consideration that not all mutual aid agreements reimburse equally, if at all. Potential reimbursement for Mutual Aid Resources (i.e. equipment, supplies, and labor) used by an agency during a major emergency or disaster will be made when the emergency period has ended, according to the following guidelines:

All equipment, labor, and compensation must be documented in writing using the Public Assistance Forms to expedite the reimbursement process..

- Equipment operating costs, as determined by the providing agency will be reimbursed by the requesting agency. Such operating cost should be pre-established by an agency rate sheet, and must not exceed current rate charges by established rental agencies for comparable equipment.
- Agencies supplying equipment operator (s) will be reimbursed for the full amount of the operator' salary plus benefits.
- Supplies used during a major emergency or disaster will be replaced and/or the costs of replacement paid by the requesting agency. All supply / material costs must be documented in writing to expedite the reimbursement process.
- Equipment will be returned to the providing agency in the same condition as when borrowed. If not, requesting agency will pay to restore said equipment.



- Reimbursement for labor costs (including overtime) will be determined by the agencies involved in accordance with normal reimbursement policy.

All WEROC water utilities should document all repair transactions performed following a disaster. It is recommended that all pertinent information regarding equipment costs, labor, supplies, etc., be documented to validate and expedite any requests for mutual aid reimbursement and for reimbursement of agency personnel costs (during the emergency period) by the State Office of Emergency Services. One of the most common reasons for failure to obtain reimbursement from Federal / State Disaster Assistance Agencies is the lack of adequate documentation.

Documenting a disaster simply means providing evidence or proof of what happened. Photographs of damage provide the most irrefutable evidence. Take pictures of damage to facilities, repair work, and completed restorations. Also, keep careful records of expenditures i.e. equipment, supplies, labor.

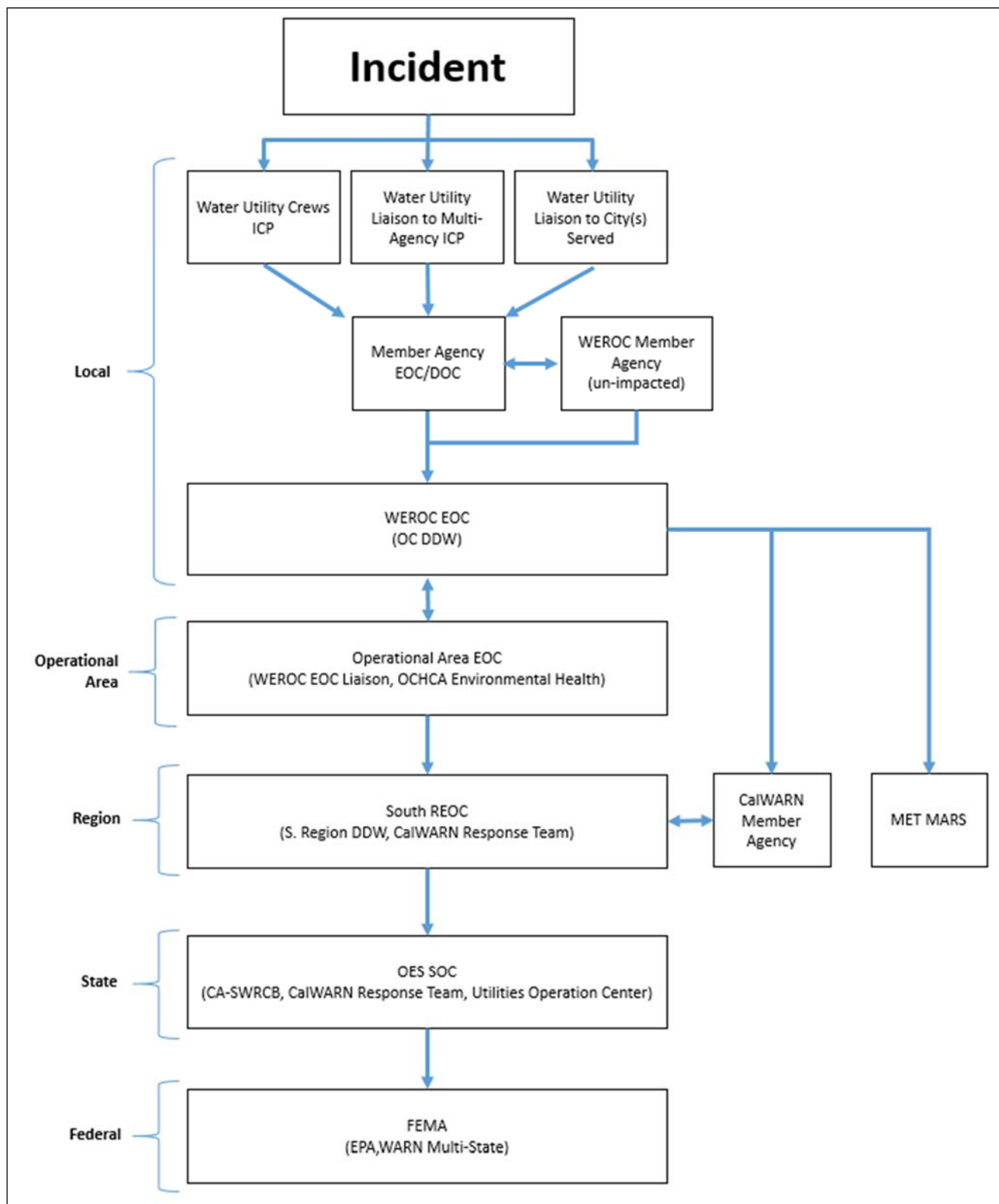
Federal and State agencies require a complete audit trail from the decision to purchase goods, to proof of payment, and proof that the work was completed. If an agency cannot provide proof that money was spent, that agency may not be reimbursed for expenditure.

The following steps should ensure that you have adequate documentation:

1. Photograph damage and subsequent repairs
2. Document all damages and repairs
3. Clip and file press reports
4. Record all expenditures
5. Document staff/volunteer response hours on timesheets; all hours including non-response hours.
6. Document all pertinent conversations about specific damages and/or repairs to damaged facilities
7. Save all receipts, invoices, statements, and any other relevant paperwork for services rendered by a contractor or vendor.



Figure 2: WEROC Resource Communication Protocol



Water Emergency Response Organization of Orange County
WEROC Emergency Operations Plan
 March 2018



Table 2: Mutual Aid Matrix

| Mutual Aid Matrix | | | | | | | |
|---|---|---|---|---|---|--|---|
| TITLE | Type | MEMBERSHIP | ADMINISTRATION | AUTHORITY | RELEASE OF LIABILITY | REIMBURSEMENT OF EXPENSES | NOTES |
| Master Mutual Aid Agreement | Mutual Aid/ Assistance | State of California; all counties, Cities, and public agencies in California who have signed agreement. Signed by Gov. Earl Warren in 1950. | For planning, State of California Office of Emergency Services (OES); Mutual Aid Regional Advisory Committee (MARAC) at regional level. In emergency, REOC (Regional Emergency Operations Center) has major authority; could go to SOC (State Operations Center). | Agreement has been codified by inclusion in California Emergency Services Act; further codified in Petris Bill (1993). Once a disaster has been declared, participation is mandatory, subject to not overly depleting specific agency resources. | Not expressly identified, but covered by the state's Disaster Service Worker Policy | No, unless otherwise expressly provided by agencies. Cost may be recoverable from State or Federal Govt. if disaster funds are approved. Reimbursement of response related costs requires SEMS compliance. | Follows SEMS Resource Request Structure |
| California Water Agency Response Network – Cal WARN | Mutual Assistance | California water and wastewater agencies that have signed agreement. | State Steering Committee State Chair, and associated organizations. | Signed Agreement : During a localized incident, agencies respond and coordinate directly. During larger incidents, agencies are asked to coordinate through the regional chairs. | YES | YES | Any participating agency can request assistance directly from any other participating water agency. Agreement provides for arbitration of disputes. |
| Member Agency Response System - PARS | Mutual Aid | Member Agencies of MET who have signed agreement. | Metropolitan Water District | Signed Agreement, declared disaster information. | YES | Not specifically provided in agreement, but assumed | Offers communications on a dedicated radio system. |
| WEROC | Mutual Assistance / Coordinating Entity | Member Agencies of WEROC who have signed agreement. | MWDOC | Signed Agreement: During a localized incident, agencies respond and coordinate directly. During larger incidents, agencies are asked to coordinate through the regional chairs | YES | Not specifically provided in Agreement. | Offers communications on a dedicated radio system. |



Water Emergency Response Organization of Orange County
WEROC Emergency Operations Plan
 March 2018

| Mutual Aid Matrix | | | | | | | |
|---|----------------------|---|---|--|---|--|---|
| TITLE | Type | MEMBERSHIP | ADMINISTRATION | AUTHORITY | RELEASE OF LIABILITY | REIMBURSEMENT OF EXPENSES | NOTES |
| Orange County Operational Area (Orange County Emergency Management Organization). | Coordinating Entity | All political subdivisions within the geographic boundaries of the County who have signed the agreement. | Orange Co. Operational Area Executive Board, Council, and Sub-Committees. | Signed Agreement: During declared disaster of local area, each agency retains authority. | YES | NA | Organizes all public emergency response agencies in providing a coordinated response to disasters. Comm. link to State. |
| Public Works Mutual Aid Agreement (PWMAA) | Mutual Aid Agreement | All who have signed agreement | LADPW | During a localized incident, agencies respond and coordinate directly. During larger incidents, agencies are asked to coordinate through the SEMS structure at the REOC. | Requesting party indemnifies the assisting party. | Requesting party pays all direct, indirect, administrative and contracted costs the assisting party incurred as a result of providing assistance within 60 days of receiving a detailed invoice. | |
| California Utilities Emergency Association (CUEA) Utility Operations Center - UOC | Coordinating Entity | Power, Telephone, Gas, Water, Wastewater, Pipelines (Petroleum) utilities that have applied for membership and paid dues. | Administered by board of public & private agencies. CUEA establishes institutional arrangements & facilitates mutual aid agreements, staffs the utilities desk at the State Operations Ctr. | unknown | NO | NO | CUEA staffs the UOC in time of disaster. CUEA or UOC matches up agencies offering and requesting mutual aid. |



EOC DEACTIVATION

EOC deactivation can occur for several reasons, including but not limited to the incident no longer requiring coordination, or the possible movement of operations from one EOC to the other. Deactivation can occur in phases to match the pace of an incident, so that as less coordination is required, the EOC staffing matches that demand. Special considerations should be determined for staff assigned to alternate locations such as the OA EOC, OA JIC, or field ICP. Due to the nuances of deactivation, it is important that the Planning Unit create a Deactivation Plan that encompasses all these considerations well in advance.

Recommendation: Deactivate in phases. It is more efficient and cost effective to deactivate personnel as they are no longer needed

Once the decision to deactivate is made, the EOC Director and Planning Unit should brief all EOC staff of the Deactivation Plan. The briefing should include, but is not limited to:

- Concluding information regarding the event
- What remains to be done
- What resources are required to meet EOC objectives
- Phased deactivation
- How long it will take to meet the objectives
- Duties and assignments that may continue following deactivation
- The restoration and return of resources
- Order in which staff will be released and proper checkout procedures
 - Volunteer staff should be released first
- Documentation required prior to closing the EOC

Some staff may be designated to respond to and relieve staff at another location such as a member agency's EOC, WEROC EOC's, or the OA EOC. The EOC staff should be briefed on their re-assignment and the location they are to report to.

The EOC Manager will assist the EOC Director and Section Chiefs in the deactivation process by utilizing the deactivation plan. Each staff member should refer to the Deactivation section within their function checklists as a guideline, as well as any specific actions that the EOC Director has assigned. The WEROC Manager is responsible for securing the facility once staff has departed and ensuring its readiness for a future activation.



RECOVERY

Recovery is the phase that involves restoring systems to normal. Short-term recovery actions are taken to assess damage and return vital life-support systems to minimum operating standards; long-term recovery actions may continue for many years. Recovery objectives are established during the EOC Action Planning process.

Recovery Organization

The recovery period has major objectives which may overlap with response objectives, including:

- Re-establishment of essential public services.
- Permanent restoration of public and private property.
- Identification of residual hazards.
- Plans to mitigate future hazards.
- Recovery of costs associated with response and recovery efforts.

Damage Assessments

Initial damage assessments will be gathered by the utilities and reported to WEROC. Damage assessment is the process of identifying and quantifying damages that occur as a result of an incident. The objective of the damage assessment is to provide situational awareness to the EOC about the state of critical and essential functions to help facilitate the move from response into recovery. It also facilitates the decision to appropriately direct resources and teams. As a component of the damage assessment, agencies also determine IDE which are used as the initial basis to justify or determine state or federal assistance.

Damage assessment is conducted in two phases outlined below:

- **Initial Damage Assessment (IDA)** – This assessment begins during the response phase and helps to determine life safety issues, identify hardest hit areas, and to estimate the damaged infrastructure within the jurisdiction. The initial damage assessment determines whether more detailed damage assessments are necessary and identifies certain areas where continued efforts should be concentrated. This includes an IDE, an estimated cost for emergency response actions, temporary measures and permanent repairs. These are educated estimates that are needed as soon as possible during the response, and are updated as information becomes available.
- **Preliminary Damage Assessment (PDA)** – This assessment is done to verify the initial damage assessment during the recovery phase (especially for state/federal assistance). A FEMA/State team will usually visit local jurisdictions and view their damage first-hand to assess the scope of damage and estimate repair costs. The assessment also identifies any unmet needs that may require immediate attention.

Unsafe structures will be evacuated immediately, hazardous conditions secured, and occupied buildings will be posted as Unsafe, Restricted Use or Inspected, as indicated. This should be verified by building inspectors or Safety Assessment Program teams.



Recovery Documentation Process

When an agency declares an emergency, the documentation process must be initiated using the following forms to track all associated cost (the forms are also available on the WEROC Google Drive):

- Mutual Aid For Hire or Mutual Assistance Cost Reimbursement Agreement
- EMMA Expense Reconciliation Log
- Member Agency Building Inspector Mutual Aid Daily Expense Report Envelope
- Mutual Aid Request Checklist
- EMMA Documentation Requirements Letter
- Mutual Aid Log For Expense Tracking

Incident Sites

If an agency incurs damage in various locations, each location must be documented as a separate event/project.



AFTER ACTION REPORT

After-Action Reports

Following deactivation, the completion of an After Action Report and a Corrective Action Plan is not only considered a best practice, but is also a component of SEMS and NIMS. Responsibility for the preparation of the report and plan is usually delegated to the WEROC Emergency Services Manager in coordination with other jurisdictions, agencies or department personnel. This process should always include the input of the EOC staff and should take into consideration any feedback provided by member agencies or any outside coordinating partners.

WEROC will use an After Action Report and Corrective Action Plan that will be used after each exercise and actual event. In general, the After Action Report includes the following concepts:

- Executive summary
- Description of the incident
- Discussion of response including a summary chronology of significant events
- Agencies involved in the response
- Mutual aid requested and provided
- Recovery activities to date
- Lessons learned
- Corrective actions
- Conclusions and recommendations for improvement

The Corrective Action Plan takes the lessons learned and recommendations for improvements and assigns each concept a timeframe for making that improvement and a person that will be responsible to ensure that it is accomplished.

The After Action Report and Corrective Action Plan will be made available to WEROC member agencies, OC OA, CalOES, DDW, RWQCB and FEMA. As a general rule, the report and plan will be considered a public document, unless otherwise required for security purposes. Any restrictions on the report and plan will be determined by the WEROC Emergency Manager and the EOC Director.

The CAL OES After-Action Report can be found in **Attachment K**.

Recovery Disaster Assistance

- *Stafford Act – Public Assistance* – Provides aid in the wake of a major disaster to State and local Government to help communities recover.
- *Hazard Mitigation Grant Program Section 404* – Funding can be used to fund structural and non-structural projects, and a facility does not need to be damaged to use these funds.
- *Hazard Mitigation Grant Program Section 406* – Funding is used to restore the parts of a facility that were damaged during a disaster, and the restoration must provide protection from subsequent events.



- *California Disaster Assistance Act (CDAA)* – CDAA authorizes the Director of OES to administer a disaster assistance program that provides financial assistance from the state for costs incurred by local governments as a result of a disaster event.
- *Small Business Disaster Reform Act* – Assistance for private businesses to obtain the best available collateral for a disaster loan of up to \$200,000 relating to damage to or destruction of the property of, or economic injury to, a small business.
- *Catastrophic Event Memorandum Account* – The purpose of this account is to allow utilities to recover the incremental costs incurred to repair, restore or replace facilities damaged during a disaster declared by the appropriate federal or state authorities.



TRAINING AND EXERCISES

The WEROC Emergency Manager and Coordinator are responsible for coordination and scheduling of training and exercising of this plan. WEROC will conduct regular exercises of this plan to train all necessary EOC and member agency staff in the proper response to disaster situations.

An exercise is a simulation of a series of emergencies for identified hazards affecting a jurisdiction. During these exercises, emergency response organizations are to respond as though a real emergency had occurred. The public will be made aware of these exercises through normal media communications to eliminate confusion of a real event. WEROC will follow the recommended training cycle of trainings, tabletop exercises, and functional exercises with the goal of completing this cycle on an annual basis. Training and exercises are considered mandatory trainings for all MWDOC staff assigned to the WERO EOC.

The plan will be evaluated through actual use, trainings, and exercises. The results of the evaluations will be gathered and reviewed by the Emergency Manager and Coordinator. The Coordinator is responsible for making revisions to the Emergency Operations Plan that will enhance the conduct of response and recovery operations. The Emergency Coordinator will prepare, coordinate, publish and distribute any necessary changes to the plan to all EOC staff, member agencies and other agencies as shown on the Distribution List in **Attachment D**. The Emergency Coordinator will also review documents that provide the legal basis for emergency planning to ensure conformance to SEMS/NIMS requirements and modify as necessary.

The appropriate SEMS/NIMS/ICS training, e.g. IS-100 Basic Incident Command System and IS-700 National Incident Management System, or the equivalent, will be provided to all EOC staff appropriate with individual responsibilities. Exercises will be conducted utilizing the concepts and principles of the SEMS/NIMS.

WEROC maintains a matrix of EOC Staff Required Trainings. The matrix indicates which trainings each WEROC EOC function is required to complete.



ATTACHMENTS

| | |
|----------------------|--|
| Attachment A: | VEPO Indemnification Agreement |
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| Attachment G: | WEROC EOC Phone Book Table of Contents |
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ATTACHMENT A: VEPO INDEMNIFICATION AGREEMENT

ORANGE COUNTY VOLUNTEER EMERGENCY PREPAREDNESS ORGANIZATION

INDEMNIFICATION AGREEMENT

This indemnification agreement is entered into on the ____ day of _____, 2005, by and between Municipal Water District of Orange County (MWDOC), Coastal Municipal Water District (Coastal), Orange County Water District (OCWD), and the undersigned participants in the Orange County Volunteer Emergency Preparedness Organization (VEPO), (All parties are collectively referred to as "VEPO Participants".), pursuant to California Government Code §895.4.

WHEREAS, VEPO was formed in 1983 by the Orange County water community for the purposes of coordinating an emergency response by all Orange County water agencies in the event of an earthquake, flood, fire, or other regional disaster; and

WHEREAS, to accomplish this purpose each of the VEPO Participants has or will contribute the use of certain of its facilities and equipment and the services of certain of its personnel, both in preparation for an emergency and in response to any emergency situation pursuant to an Emergency Response Plan prepared by VEPO; and

WHEREAS, the VEPO Participants desire to indemnify and hold each other harmless from any liability for injury or property damage incurred by any VEPO Participant or its employees, officers or agents or to third parties in the course of or as a result of their participation in VEPO activities;



NOW, THEREFORE, in consideration of the mutual promises and covenants herein, the VEPO

Participants agree as follows:

1. VOLUNTARY PARTICIPATION

Neither this Agreement, nor the VEPO Emergency Response Plan creates, or shall be deemed to create, any contractual or implied duty on the part of any signatory to provide, or attempt to provide, any real property, structures, facilities, tools, vehicles, equipment, machinery, materials, personal property or personnel to any other VEPO Participant or third party. No signatory shall be liable for its failure to provide, or attempt to provide, assistance to any other party. It is the intent of the parties that assistance under the VEPO Emergency Response Plan be provided on a strictly voluntary basis, and that no joint venture be created.

2. LIABILITY FOR JOINING

Notwithstanding Government Code S895.2, it is the intent of the signatories to this Agreement that there shall be no liability assumed by, or imposed upon, any signatory solely by reason of such signatory executing the VEPO Emergency Response Plan or this Agreement."

In the event of any liability, claim, demand, action or proceeding of whatever kind or nature arising out of the rendering of assistance through VEPO, the parties involved in rendering or receiving assistance through VEPO agree to indemnify and hold harmless, to the fullest extent allowed by law, each signatory to the VEPO Emergency Response Plan whose only involvement, in the transaction or occurrence which is the subject of such claim, action, demand or other proceeding, is the execution and approval of the VEPO Emergency Response Plan and this Agreement. Such indemnification shall include indemnity for all claims, demands, liability,



damages and costs, including reasonable attorneys' fees and other costs of defense, for personal injury and property damage and is not waived as a result of the uninvolved party's negligent or willful failure to respond in accordance with the VEPO Emergency Response Plan.

3. COVENANT NOT TO SUE OTHER PARTICIPANTS

Each VEPO Participant agrees to assume the entire risk of loss and to indemnify and hold each of the remaining VEPO Participants harmless from any and all claims, liability, or damages for personal injury or property damage incurred by that VEPO Participant or its agents, employees or officers as a result of any defect or dangerous condition of any real property, structures, facilities, tools, vehicles, equipment, machinery, materials, personal property or other items supplied or contributed for the use of VEPO by itself or any other VEPO Participant. The right to indemnification shall not be barred by the passive negligence of the VEPO Participant which supplies or contributes the real or personal property for use by VEPO, including, but not limited to, the failure to warn of or take action to correct any defect or dangerous condition if the defect or dangerous condition was not the result of active negligence on the part of that VEPO Participant or its agents, employees or officers.

4. COVENANT TO INDEMNIFY OTHER PARTICIPANTS AGAINST CLAIMS BY THIRD PARTIES

Each VEPO Participant agrees to assume the entire risk. of loss and to indemnify and hold each of the remaining VEPO Participants harmless from any and all claims, demands, liabilities, costs and damages (including reasonable attorneys' fees and costs of defense) for personal injury or property damage incurred by any third person, or entity, not a party to this Agreement as a result of any defect or dangerous condition of any real property, structures, facilities, tools, vehicles,



equipment, machinery, materials, personal property or other items, supplied or contributed for the use of VEPO by that VEPO Participant.

5. COVENANT TO INDEMNIFY OTHER PARTICIPANTS FOR ACTS OF OFFICERS AND EMPLOYEES

Except as provided in Paragraph 6 hereof, while carrying out their functions and activities under the Emergency Response Plan, each agent, employee and officer of a VEPO Participant shall continue to act within the scope and duties of his employment or relationship with that VEPO Participant and shall not be deemed to be, or act in the capacity of, an agent, employee or officer of VEPO or of any of the remaining VEPO Participants. Except as provided in Paragraph 6 hereof, each VEPO Participant agrees to assume the entire risk of loss and to indemnify and hold the remaining VEPO Participants harmless from any and all claims, liabilities or damages for personal injury incurred by any VEPO Participant, its officers, employees or agents or any third person, not a party to this Agreement as a result of the active negligence or intentional, willful or malicious acts of that VEPO Participant's officers, employees, or agents while engaged in carrying out their duties, functions or activities pursuant to the VEPO Emergency Response Plan.

6. EMPLOYEE CLAIMS.

Any employee, officer or agent of a VEPO Participant who is acting under the direction, supervision or control of an employee, officer or agent of another VEPO Participant pursuant to the VEPO Emergency Response Plan shall, except as otherwise provided under Labor Code §§3600.2 through 3600.6, be considered to be the special employee of the VEPO Participant which is directing, supervising or controlling the activity and the general employee of his or her regular employer while engaged in carrying out duties, functions or activities pursuant to the



VEPO Emergency Response Plan. The special employer, if any, and general employer, shall indemnify and hold all other VEPO Participants harmless from any and all claims, liabilities or damages for personal injury incurred by such officers, employees or agents while engaged in carrying out their duties, functions or activities pursuant to the VEPO Emergency Response Plan, notwithstanding any passive negligence of other VEPO Participants.

It is the intent of the parties that personnel made available through VEPO be insured against loss or injury through the Workers Compensation insurance of those who controlled and directed their work through VEPO.

7. COVENANT TO MAINTAIN INSURANCE OR SELF-INSURE

Each VEPO Participant agrees to obtain and maintain insurance policies naming the remaining VEPO Participants as additional insureds or participate in a self-insurance pool, or maintain a reasonably adequate self-insurance fund as appropriate for general liability, workers' compensation, automobile and property owners' liability which will cover all activities, personnel, vehicles, equipment, real property, tools, machinery and personal property of that VEPO Participant while engaged in the VEPO Program. The ability to respond in damages shall be in the following minimum amounts:

- a. General Liability (including bodily injury): \$1,000,000 per occurrence.
- b. Workers' Compensation: \$200,000 per occurrence
- c. Automobile Coverage: Compliance with Vehicle Code Section 16430 for vehicles owned or leased by the VEPO Participant.
- d. Property Owner's Liability, if applicable: \$1,000,000 per occurrence



8. ARBITRATION

The parties to this Agreement acknowledge that in the event of a claim for personal injury or property damage arising out of a VEPO activity, it would probably be in the best interests of the VEPO Participants and their insurers to submit the issue, of which VEPO Participant or Participants has the ultimate duty to indemnify the others, to binding arbitration and that the party or parties determined to be ultimately responsible conduct the defense of the claim on behalf of the other VEPO Participant defendants in the event of a lawsuit.

It is the intent of the parties to encourage the use of binding arbitration to effectuate the terms of this Agreement whenever possible. Therefore, each VEPO Participant agrees that, as soon as possible after receiving notice of any claim arising out of a VEPO activity, that VEPO Participant will notify all VEPO Participants in writing of the existence of the claim or potential claim.

Upon receipt of notice of a claim or potential claim arising out of a VEPO activity from a claimant or another VEPO Participant, each VEPO Participant, which is not self-insured, will notify its insurance carrier of the existence of the claim and of the terms of this Agreement. If the insurance carriers of VEPO Participants and self-insured VEPO Participants agree to submit the issue of the obligation to indemnify under this Agreement to binding arbitration, the parties hereto agree not to object to arbitration.

Nothing herein shall be construed as a consent or undertaking on the part of any insured VEPO Participant to pay all or any portion of the costs of arbitration or other costs which it would not otherwise be obligated to pay under its insurance policy in the absence of this Agreement.



9. EXECUTION IN COUNTERPARTS

This Agreement shall be executed by each VEPO Participant in duplicate originals, each of which shall be considered an original Agreement. This Agreement shall not become effective as to any VEPO Participant until all VEPO Participants have executed this Agreement and have delivered an executed original to the VEPO Coordinator who will provide each VEPO Participant with a photocopy of all executed signature pages and a list of all Participants. Prior to the admission of any additional agencies to the VEPO Program, such agency shall be required to execute this Agreement and comply with this provision.

10. SUCCESSORS AND ASSIGNS

This Agreement shall be binding upon and inure to the benefit of the original Participants and all parties who may subsequently enter into this Agreement, and their officers, agents, employees, successors and assigns. The names of the VEPO Participants, all of which are signatories to this Agreement, are and shall be set forth on the list attached hereto as Exhibit "A" and incorporated herein by reference. Additional Participants may be added to the list from time to time upon execution of this Agreement and compliance with Paragraph 5 hereof. Such additions shall automatically constitute an amendment of this Agreement without further action by existing Participants and shall not void or invalidate this' Agreement.

11. MARS PROGRAM

It is the understanding and intention of the VEPO Participants that the VEPO program will be coordinated with the MARS program established by Metropolitan Water District of Southern



California and that the terms and conditions hereof shall apply with equal force and effect to activities performed under the MARS program.

12. CAPTIONS

The Captions heading the various paragraphs of this Agreement are for convenience only and shall not be considered to limit, expand, or define the contents of the respective paragraphs.

IN WITNESS WHEREOF, each of the VEPO Participants has caused this instrument to be executed by its authorized agent or official evidencing the consent of the legislative body hereto.

DATED: _____
COUNTY _____
ATTEST: _____

MUNICIPAL WATER DISTRICT OF ORANGE
(MWDOC)

By

DATED:

ATTEST: _____

By



EXHIBIT "A"

VEPO PARTICIPANTS

This list constitutes a complete list of VEPO Participants (We will obviously need to adjust this list as well, as I would need to remove or change the titles of some agencies.)

- City of Anaheim
- City of Brea
- City of Buena Park
- City of Fountain Valley
- City of Fullerton
- City of Garden Grove
- City of Huntington Beach
- City of La Habra
- City of La Palma
- City of Newport Beach
- City of Orange
- City of San Clemente
- City of San Juan Capistrano
- City of Santa Ana
- City of Seal Beach
- City of Tustin
- City of Westminster
- East Orange County Water District
- El Toro Water District
- Golden State Water Company
- Irvine Ranch Water District
- Laguna Beach County Water District
- Mesa Water District
- Moulton Niguel Water District
- Municipal Water District of Orange County
- Orange County Sanitation District
- Orange County Water District
- Santa Margarita Water District
- Serrano Water District
- South Coast Water District
- South Orange County Wastewater Authority
- Trabuco Water District
- Yorba Linda Water District



ATTACHMENT B: MEMBER AGENCY MUTUAL AID MEMBERSHIP

| Agency | WEROC | CalWARN | CA Public Works | MARS/MET | OC OA/OCEMO | CA Master Mutual Aid | CUEA * |
|--------------|-------|---------|-----------------|----------|-------------|----------------------|--------|
| Anaheim | X | X | X | X | X | X | X |
| Brea | X | | X | | X | X | |
| Buena Park | X | | X | | X | X | |
| EOCWD | X | | | | X | X | |
| ETWD | X | | | | X | X | |
| Emerald Bay | | | | | X | X | |
| FV | X | | X | | X | X | |
| Fullerton | X | | X | X | X | X | |
| GG | X | | X | | X | X | |
| GSWC | X | X | | | | | X |
| HB | X | | X | | X | X | |
| IRWD | X | | | | X | X | |
| Laguna Beach | X | | X | | X | X | |
| La Habra | X | | | | X | X | |
| La Palma | X | | X | | X | X | |
| LBCWD | X | X | | | X | X | |
| Mesa CWD | X | X | | | X | X | |
| MNWD | X | | | | X | X | |
| MWDOC | X | X | | X | X | X | X |
| Newport | X | | X | | X | X | |
| Orange | X | | X | | X | X | |
| OCSD | X | | | | X | X | |
| OCWD | X | X | | | X | X | |
| San Clemente | | | X | | X | X | |
| San Juan Ca. | X | X | X | | X | X | |
| Santa Ana | X | | X | X | X | X | |
| SMWD | X | | | | X | X | |
| Seal Beach | X | | X | | X | X | |
| Serrano WD | X | | | | X | X | |
| SCWD | X | X | | | X | X | X |
| SOCWA | X | | | | | X | |
| Trabuco CWD | X | | | | X | X | |
| Tustin | | | X | | X | X | |
| Westminster | X | X | X | | X | X | |
| YLWD | X | X | | | X | X | |



ATTACHMENT C: AUTHORITIES AND REFERENCES

The following authorities and references establish:

- The legal basis (statutes, ordinances, executive orders, regulations, proclamations) for emergency operations.
- The basis for delegation of emergency authority, i.e., enabling measures sufficient to ensure that specific emergency-related legal authorities can be exercised by water agency management or their designated successors.

The California Emergency Plan, promulgated in accordance with provisions of the Act, provides statewide authorities and responsibilities and describes the functions and operations of government at all levels during extraordinary emergencies, including war. Section 8568 of the Act states in part that “the State Emergency Plan shall be in effect in each political subdivision of the state, and the governing body of each political subdivision shall take such action as may be necessary to carry out the provisions thereof.”

The WEROC Emergency Plan is, therefore, considered to be an extension of the State Emergency Plan.

AUTHORITIES

The following provide emergency authorities for conducting and/or supporting emergency operations. When dictated by the situation, additional ordinances or other emergency regulations will be enacted by the WEROC Executive Board on behalf of its water utilities.

Federal

- Homeland Security Act of 2002.
- Homeland Security Presidential Directive/HSPD 5, Management of Domestic Incidents.
- Homeland Security Presidential Directive/HSPD 8, National Preparedness.
- U.S. Department of Homeland Security (USDHS) National Incident Management System (NIMS).
- U.S. Department of Homeland Security (USDHS) National Response Plan (NRP).
- Presidential Directives 39 and 62 which direct primary terrorism investigative authority to U.S. Department of Justice/FBI.

State

- California Emergency Services Act (Chapter 7 of Division 1 of Title 2 of the Government Code)
- Government Code 8607(a), and California Code of Regulations, Title 19, Division 2, Chapter 5, NDAA, Section 2900(y) Special Districts, and Sections 2400-2450 (Standardized Emergency Management System - SEMS)
- Water Code, Division 1, Chapter 2, Article I, Section 128 (California Department of Water Resources - Flood Fighting)



REFERENCES

State

- California State Emergency Plan
- California Master Mutual Aid Agreement
- Government Code, Title I, Division 4, Chapter 8, Sections 3100-3109:
 - 1) Declares all public employees to be disaster service workers
 - 2) Defines disaster service worker
 - 3) Defines public employees (excludes aliens)
 - 4) Describes Loyalty Oath requirements

Local

- County of Orange Resolution, November 28, 1950, adopting the California Master Mutual Aid Agreement
- Orange County Volunteer Emergency Management Organization (VEPO) Indemnification Agreement, December 19, 1994 by and between Municipal Water District of Orange County (MWDOC)
- Operational Area Agreement of the County of Orange and Political Subdivisions (to include Special Districts) October 3, 1995
- A Resolution of the Orange County Volunteer Emergency Preparedness Organization (VEPO) adopting the revised (1997) WEROC Emergency Plan
- Orange County Emergency Operations Plan (2014).



ATTACHMENT D: EOP DISTRIBUTION LIST

| WEROC EOC RESPONDERS | | |
|-----------------------------|-----------|--|
| DATE | ISSUED TO | WEROC Function Title |
| | | EOC Director |
| | | EOC Manager |
| | | Legal Advisor |
| | | PIO |
| | | Social Media |
| | | WEROC OA EOC Liaison |
| | | Planning & Intelligence Section Chief |
| | | Finance & Administration Section Chief |
| | | Logistics Section Chief |
| | | Planning Unit Leader |
| | | Runner/Plotter Unit (3) |
| | | Situation Status Analyst |
| | | Events Analyst |
| | | OA/County Analyst |
| | | Major Infrastructure Analyst |
| | | Division of Drinking Water |
| | | Intelligence Unit Leader |
| | | WEROC Radio Operator |
| | | MARS Radio Operator |
| | | OA Radio Operator |
| | | Resource Unit |



| WEROC MEMBER AGENCIES | | |
|------------------------------|------------------|---|
| DATE | ISSUED TO | MEMBER AGENCY |
| | | City of Anaheim |
| | | City of Brea |
| | | City of Buena Park |
| | | City of Fountain Valley |
| | | City of Fullerton |
| | | City of Garden Grove |
| | | City of Huntington Beach |
| | | City of Laguna Beach |
| | | City of La Habra |
| | | City of La Palma |
| | | City of Newport Beach |
| | | City of Orange |
| | | City of San Clemente |
| | | City of San Juan Capistrano |
| | | City of Santa Ana |
| | | City of Seal Beach |
| | | City of Tustin |
| | | City of Westminster |
| | | East Orange County Water District |
| | | El Toro Water District |
| | | Golden State Water Company |
| | | Irvine Ranch Water District |
| | | Laguna Beach County Water District |
| | | Mesa Water District |
| | | Moulton Niguel Water District |
| | | Municipal Water District of Orange County |
| | | Orange County Sanitation District |
| | | Orange County Water District |
| | | Santa Margarita Water District |
| | | Serrano Water District |
| | | South Coast Water District |
| | | South Orange County Wastewater Authority |
| | | Trabuco Water District |
| | | Yorba Linda Water District |



| OTHER AGENCY RECIPIENTS | | | |
|-------------------------|-----------|--------------------|---------------------------|
| DATE | ISSUED TO | AGENCY | Agency Position |
| | | OES | Southern Region OES |
| | | OC OA | OA/EOC Manager |
| | | MET | Operations System Manager |
| | | MET | Emergency Coordinator |
| | | Health Care Agency | Emergency Coordinator |



ATTACHMENT E: RECORD OF REVISIONS

| DATE | SECTION REVISED | REVISED BY |
|-------------|--------------------------------------|-------------------|
| 7/08 | Complete Reorganization of Plan. | Kelly Hubbard |
| 9/11 | Updated various sections of the Plan | Kelly Hubbard |
| 3/18 | Complete Reorganization of Plan | Francisco Soto |
| | | |
| | | |
| | | |
| | | |



ATTACHMENT F: WEROC KEY CONTACTS LIST

| | | |
|----------------|------------------------|----------------------|
| Kelly Hubbard | Office: (714) 593-5010 | Cell: (714) 715-0283 |
| Francisco Soto | Office: (714) 593-5032 | Cell: (323) 868-5970 |
| Karl Seckel | Office: (714) 593-5024 | Cell: (714) 423-3361 |
| Rob Hunter | Office: (714) 593-5026 | Cell: (404) 557-5107 |

WEROC EOC's

| | | |
|------------------------------|---|---------------------|
| South EOC | Office: (949) 455-4493 | Fax: (714) 455-4492 |
| SEOC Facility Contact (ETWD) | Office: (949) 837-7050 | Alt: (949) 837-0660 |
| North EOC | Office: (714) 288-8200 | Fax: (714) 288-8206 |
| NEOC Facility Contact (MET) | Richard Ford - Cell: (714) 577-5080 | |
| Alt. EOC (MWDOC) | Office: (714) 593-5010 | Fax: (714) 964-9389 |
| MWDOC Facility Contact | 24hrs OCWD Contact - Cell: (714) 653-2417 | |

ORANGE COUNTY OPERATIONAL AREA

| | | |
|-------------------------|----------------|----------------------------|
| Main Line (Admin Desk) | (714) 628-7054 | |
| Staff Directory | (714) 628-7055 | |
| 24 Hrs. Emergency Line | (714) 628-7008 | |
| EOC-During Activation | (714) 628-7060 | |
| EOC Liaison | (714) 628-7153 | EOCLiaison@ocsd.org |
| Fax (Special Districts) | (714) 628-7154 | |
| Public Works Branch | (714) 628-7128 | EOCPublicWorksOps@ocsd.org |
| WEROC EOC Liaison | (714) 628-7187 | |

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

| | | |
|----------------------------|------------------------|------------------------|
| Diemer Plant | Office: (714) 528-7237 | Alt: (714) 528-7261 |
| MET EOC Eagle Rock (24hrs) | | Office: (800) 555-5911 |
| MET Control Center | | Office: (323) 681-4010 |
| Water Quality Hotline | | Office: (800) 354-4420 |

STATE OFFICE OF EMERGENCY SERVICES REGION I

| | | |
|--------------|------------------------|---------------------|
| Los Alamitos | Office: (562) 795-2900 | Fax: (562) 795-2963 |
|--------------|------------------------|---------------------|



ATTACHMENT G: WEROC EOC PHONE BOOK TABLE OF CONTENTS

Additional Contact Lists

There are additional contact lists available in the WEROC EOCs. These lists were not included in the plan due to their high rate of change or confidentiality of information. The following lists are available in the WEROC EOC Phone Book:

- WEROC Staff Lists
- Member Agency Contact Information
- WEROC Radio System Participant List
- OES & FEMA Contacts
- MARS Emergency Response Coordinator Information
- OCEMO Phonebook
- California Water/Wastewater Agency Response Network (CalWARN) Contact List
- California Utilities Emergency Association (CUEA) Contact List
- Water Quality Emergency Contacts And Testing Labs
- California Licensed Water Hauler List
- Media Contact List

There are three copies in each WEROC EOC, one copy in the WEROC Coordinators Office, and one copy each with the WEROC Alternate Responder and the MWDOC Assistant General Manage



ATTACHMENT H: WEROC EOC FORMS TABLE OF CONTENTS

Forms and documents related to WEROC EOC emergency response are available to staff in the WEROC EOCs. These documents were not included in the plan because many of the forms are currently under revision and also to make the forms easily accessible. The following forms are available in the WEROC EOC Forms Binder:

- WEROC- EOC Section/Unit Activity Log
- WEROC- EOC Staff Registration Form
- WEROC- EOC Damage Assessment Form #1
- WEROC- EOC Damage Assessment Form #2
- O.A. Request for Jurisdiction Initial Incident Impact Report
- O.A. Jurisdictional Status Report to the O.A.
- Sample- Agency Damage Assessment Report Form
- Sample-Facilities Damage Checklist Form
- Sample-Agency Radio Message Form
- Water Quality Advisory Forms
- Water Quality Notices
- OES After Action/Corrective Action Report Template
- Incident Action Plan Template
- Change of Shift Briefing Form
- Mutual Aid For Hire or Mutual Assistance Cost Reimbursement Agreement
- EMMA Expense Reconciliation Log
- Member Agency Building Inspector Mutual Aid Daily Expense Report Envelope
- Mutual Aid Request Checklist
- EMMA Documentation Requirements Letter
- Mutual Aid Log For Expense Tracking

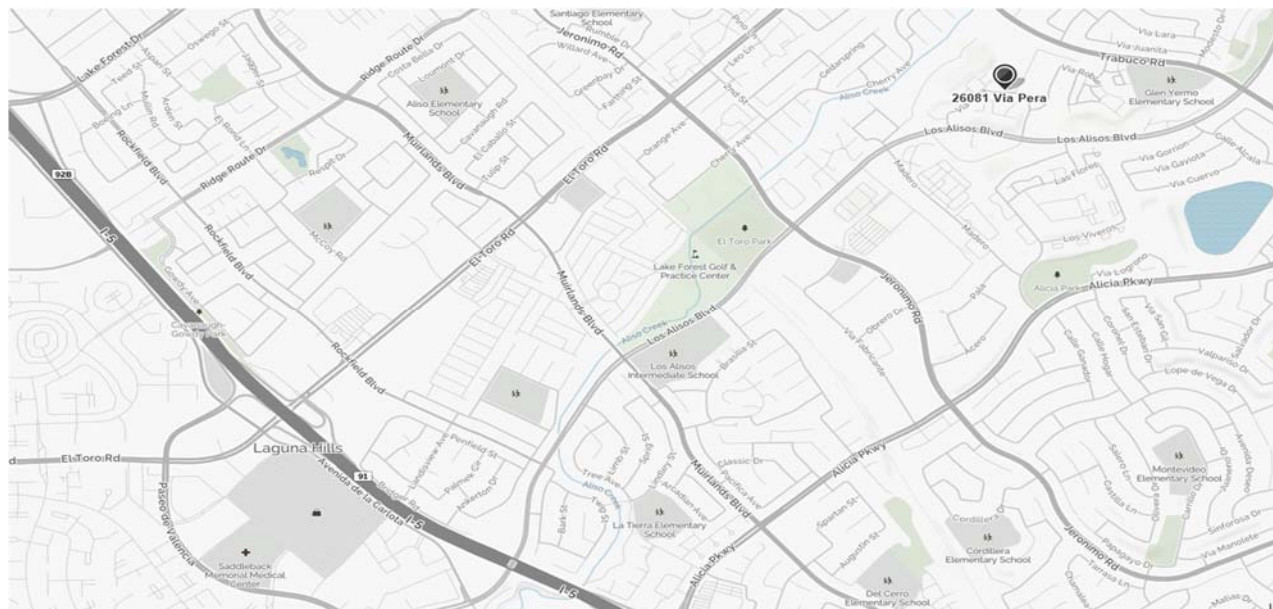
There is one copy in each WEROC EOC near the Finance and Administration function desks and one copy in the WEROC Coordinators Office



ATTACHMENT I: EOC MAPS

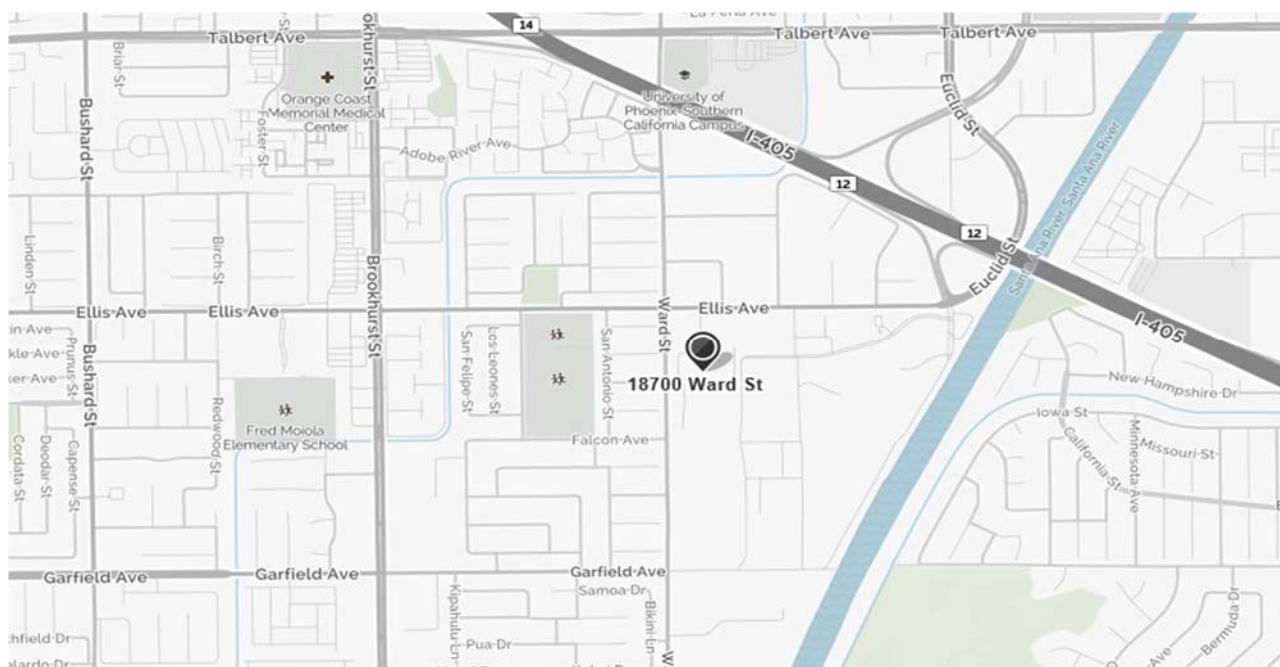
WEROC South EOC

Address: 26081 Via Pera. Mission Viejo, CA 92691 Phone: (714) 455-4493
 (At El Toro Water District's Prothero Filtration Plant, behind condos)



WEROC Alternate EOC

Address: 18700 Ward St. Fountain Valley, CA 92728 Phone: (714) 593-5032
 (At WEROC Office inside MWDOC. Report to South EOC unless instructed otherwise))





ATTACHMENT J: GLOSSARY

The glossary contains definitions of terms commonly used in the Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS). Becoming familiar with these terms will assist WEROC EOC Staff and individual member agency personnel in performing their specific function throughout the disaster operational period.

A

Action Plan

The plan prepared in the EOC containing the emergency response objectives of a SEMS level i.e. State, County, Local (City or Special District), and reflecting overall priorities and supporting activities for a designated period. The Plan is prepared by the Planning / Intelligence Chief with support from Management & Section Chiefs. Once completed, the Plan is executed by the Operations Chief.

Activation

The necessary action(s) taken by the EOC Director(s) in making an EOC operational i.e. for WEROC, in support of Orange County water agencies responding to a major emergency or disaster, or by one or more agencies in support of their own agency's response.

After Action Report

A report covering EOC activities / response actions, application of SEMS, modifications to plans and procedures, training needs, and recovery operations i.e. For WEROC, this report is prepared by the WEROC Emergency Services Coordinator with assistance from the EOC Management and Section Chiefs.

American Red Cross

A federally chartered volunteer agency that provides disaster relief to individuals and families. Major responsibilities include providing lodging, food, clothing, and registration and inquiry service.

Area Command (AC)

Area Command is an organization established (1) to oversee the management of multiple incidents that are being handled by an Incident Command System (ICS) organization or (2) to oversee the management of large or multiple incidents to which several Incident Management Teams have been assigned. Area Command has the responsibility to set overall strategies and priorities, allocate critical resources according to priorities, ensure that incidents are properly managed, and ensure that objectives are met and strategies followed. Area Command becomes Unified Area Command when incidents are multi-jurisdictional Area Command may be established at an emergency operations center facility or at some location other than an incident command post.

Auto Pack

A resource for WEROC EOC staff to use during emergencies, it contains important contact information, maps to the WEROC EOC's, functional duties and responsibilities, and general EOC activation protocols.



C

California Emergency Council

The official advisory body to the Governor on all matters pertaining to statewide emergency preparedness.

California Emergency Organization

Civil government organized and augmented or reinforced during an emergency by auxiliaries, volunteers, persons pressed into service, the private sector, and community based organizations.

Chain of Command

A series of management positions in order of authority.

Check-in

The process whereby pre-assigned EOC Staff “officially report in” to their EOC location for briefing and to assume a specific function following activation of the EOC.

Checklist

A list of actions taken by an element of the emergency organization in response to a particular event or situation.

Concept of Operations

A general notion of the methods agencies use to organize their response to disasters (such as mutual aid and the Standardized Emergency Management System). Disasters typically progress through identifiable phases and certain responses are appropriate during each of these phases.

Contamination

Deposits of radioactive or other toxic materials that occur on the surfaces of structures, area, objects, people’s bodies, flora, and fauna.

Contingency Plan

A sub or supporting plan which deals with one specific type of emergency, its probable effect on the jurisdiction, and the actions necessary to offset these effects.

Coordination

This can be either Multi-agency or Interagency. This process is found at all SEMS levels and is the most efficient and cost effective way to meet specific objectives in support of the disaster response.

D

Damage Survey Report

Under 206.202 of CFR 44, a Damage Survey Report is prepared by an inspection team. The team is accompanied by an authorized local representative who is responsible for representing the applicant and insuring that all eligible work and costs are identified. A Damage Survey Report Data Sheet (FEMA Form 90-91) is prepared for each site with damage over a specified amount established by regulation.

Deactivation

The process of closing down EOC operations. This may be accomplished as one action or a series of actions i.e. section by section within the EOC by authority of the EOC Director. Deactivation will be initiated based upon the status of the disaster operation and water agency support needs.



Disaster

A sudden calamitous emergency event bringing great damage loss or destruction over a wide area affecting the entire population of one or more counties.

Disaster Field Office (DFO)

A central facility established by the Federal Coordinating Officer within or adjacent to an affected area. DFOs are used to coordinate and control State and Federal efforts which support disaster relief and recovery operations.

Disaster Service Worker

Any persons registered with a disaster council or State OES to provide disaster service without pay. Disaster service workers include public employees, registered volunteers, and person pressed into service during an emergency by persons authorized to command such services.

Disaster Support Area

A special facility where disaster relief resources can be received, stockpiled, allocated, and dispatched. A separate portion of the area may be used to receive and provide emergency treatment to casualties and for their transfer to adequate medical care facilities.

Documentation Unit

Functional unit within the Planning/Intelligence Section of the EOC responsible for collecting, recording and safeguarding all documents relevant to the EOC operational period.

E

Emergency

A condition of extreme peril to the safety of persons and/or property caused by such conditions as fire, flood, hazardous material incident, sudden and severe energy shortage, etc. This condition may affect one or more water agencies but would not be considered on the level of a disaster.

Emergency Operations Center (EOC)

A location from which centralized emergency management can be performed. EOC facilities are established by an agency or jurisdiction to coordinate the overall agency or jurisdictional response and support to an emergency or disaster.

Emergency Management

The provision of overall operational control or coordination of emergency operations at each level of the California Emergency Organization, whether by the actual direction of field forces or by the coordination of joint efforts of governmental and private agencies.

Emergency Manager

An individual duly appointed by State agencies, counties, cities and counties, and cities of the State of California, in accordance with State authority, adopted ordinance, by resolution as provided for by ordinance, or section §26622 of the Government Code, (based on what I found this would be the only section for 26622) who is responsible for administering State law and local ordinances relating to emergency management. The provisions of this article shall become operative only upon their adoption by a resolution passed by unanimous vote of the board of supervisors thereof at a regular meeting at which all members are present. Such resolution may be repealed by the board of supervisors at any time by a three-fifths vote.



Emergency Operations

Those actions taken during the emergency period to protect life and property, care for the people affected, and temporarily restore essential community services.

Emergency Operations Center

A centralized location from which emergency operations can be directed and coordinated.

Emergency Plan

The Plan that each agency or jurisdiction has developed and maintains for responding to appropriate hazards.

Emergency Response Agency

Any organization responding to an emergency, or providing mutual aid support to such an organization, whether in the field, at the scene of an incident, or to an emergency operations center.

Emergency Response Personnel

Personnel involved with an agency's response to an emergency.

Emergency Services Coordinator

The individual within each jurisdiction that is delegated the day-to-day responsibility for the development and maintenance of all emergency management coordination efforts. During WEROC EOC activation, this individual serves as EOC Manager

EOC Director

The individual responsible for all response activities within the assigned EOC throughout the operational period.

F

Federal Agency (Federal definition)

Any department, independent establishment, Government Corporation, or other agency of the Executive Branch of the Federal Government, including the United States Postal Service, but not the American Red Cross.

Federal Assistance (Federal definition)

Aid to disaster victims or State or local governments by federal agencies under the provisions of the Federal Disaster Relief Act (P.L. 93-288), the Stafford Act (see Stafford Act) and other statutory authorities of federal agencies. The Federal Disaster Relief Act, PL 93-288, was amended by the Stafford Act which was signed into law November 23, 1988.

Federal Disaster Relief Act: see **Stafford Act**.

Federal-State Agreement

A legal document entered into between the State and the federal government following a Presidential Declaration of an Emergency or Major Disaster. Executed by the Governor, acting for the State, and the Federal Emergency Management Agency (FEMA) Regional Director, acting for the Federal Government, the agreement shall contain the necessary terms and conditions consistent with the provisions of applicable laws, executive orders and regulations, as required and set forth by the type and extent of federal assistance to be provided.



Finance /Administration Section

One of the five primary functions found at all SEMS levels which is responsible for all costs and financial considerations associated with an agency's disaster operation.

Function

Describes the activity involved, e.g., "the Operations function" for the five major EOC levels (Management, Operations, Planning/Intelligence, Logistics, and Finance/Administration) used in the Incident Command System (ICS).

H

Hazard

Any source of danger or element of risk to people or property.

Hazardous Material

A substance or combination of substances which, because of quantity, concentration, physical, chemical, radiological, explosive, or infectious characteristics, poses a substantial present or potential danger to humans or the environment. Generally, such materials are classed as explosives and blasting agents, flammable and nonflammable gases, combustible liquids, flammable liquids and solids, oxidizers, poisons, disease-causing agents, radioactive materials, corrosive materials, and other materials including hazardous wastes.

Hazardous Material Incident

Any release of a material (during its manufacture, use, storage, or transportation) which is capable of posing a risk to health, safety, and property. Areas at risk include facilities that produce, process, transport, or store hazardous material, as well as all sites that treat, store, and dispose of hazardous material.

Homeland Security Presidential Directive/ HSPD-5

Establishes a single, comprehensive national incident management system (later to become NIMS).

I

Incident Action Plan (IAP)

An oral or written plan containing general objectives reflecting the overall strategy for managing an incident. It may include the identification of operational resources and assignments. It may also include attachments that provide direction and important information for management of the incident during one or more operational periods. As referenced in the WEROC Emergency Plan, the Incident Action Plan refers to the field level or incident site plan.

Incident Commander (IC)

The individual responsible for the command of all functions at the field response level.

Incident Command Post (ICP)

The location at which the primary command functions are executed. The ICP may be collocated with the incident base i.e. water district admin. headquarters or other incident base or other incident facilities.

Incident Command System (ICS)

The nationally used standardized on-scene emergency management concept specifically designed to respond to single or multiple incidents without being hindered by jurisdictional boundaries.



This system allows for facilities, equipment, personnel, procedures and communications to operate within a common organizational structure which is understood by all participants, in managing the incident.

Incident Objectives

Statements of guidance and direction for planning appropriate actions to be taken in response to the disaster situation(s). They are based on realistic expectations of what can be accomplished when all allocated resources have been effectively deployed. The EOC action plan utilizes incident objectives in formulating strategies and the movement of resources.

J

Joint Information Center (JIC)

A facility established to coordinate all incident-related public information activities. It is the central point of contact for all news media at the scene of the incident. Public information officials from all participating agencies should collocate at the JIC.

Joint Information System (JIS)

Integrates incident information and public affairs into a cohesive organization designed to provide consistent, coordinated, timely information during crisis or incident operations. The mission of the JIS is to provide a structure and system for developing and delivering coordinated interagency messages; developing, recommending, and executing public information plans and strategies on behalf of the incident commander (IC); advising the IC concerning public affairs issues that could affect a response effort; and controlling rumors and inaccurate information that could undermine public confidence in the emergency response effort.

Jurisdiction

The range or sphere of authority. Public agencies have jurisdiction at an incident related to their legal responsibilities and authority for incident mitigation. Jurisdictional authority at an incident can be political / geographical (e.g., special district, city, county, state or federal boundary lines), or functional (e.g., police department, health department, etc.)

Jurisdictional Agency

The agency having jurisdiction and responsibility for a specific geographical area, or a mandated function.

L

Liaison

A member of the EOC Management Staff responsible for coordinating with representatives from cooperating and assisting agencies i.e. designated WEROC EOC Staff serve as liaison at the County Operational Area (O.A.) EOC.

Local Emergency (State definition)

The duly proclaimed existence of conditions of disaster or of extreme peril to the safety of persons and property within the territorial limits of a county, city and county, or city, caused by such conditions as air pollution, fire, flood, storm, epidemic, riot, earthquake, or other conditions which are, or are likely to be, beyond the control of the services, personnel, equipment, and facilities of a political subdivision and require the combined forces of other political subdivision to combat.



Local Government (Federal definition)

Any county, city, village, town, district, or other political subdivision of any state, any Indian tribe or authorized tribal organization, or Alaskan native village or organization that includes any rural community or incorporated town or village or any other public entity for which an application for assistance is made by a state or political subdivision thereof.

Local Government Emergency Planning Guidance

A document which lays a foundation for emergency response planning for counties, cities, as well as other political subdivisions.

Logistics Section

One of the five primary functions found at all SEMS levels responsible for identifying and providing services and materials needed in support of the operation.

M

Major Disaster (Federal)—see also Emergency

Any hurricane, tornado, storm, flood, high water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, drought, fire, explosion, or other catastrophe which in the determination of the President, causes damage of sufficient severity and magnitude to warrant major disaster assistance under the Federal Disaster Relief Act.

Master Mutual Aid Agreement

The California Disaster and Civil Defense Master Mutual Aid Agreement made and entered into by and among the State of California, its various department and agencies, and the various political subdivision of the State. The agreement provides for support of one jurisdiction by another.

Media

All means of providing information and instructions to the public, including radio, television, and newspapers.

Mitigation

Pre-event planning and other actions which lessen the effects of potential disasters. (See also Comprehensive Emergency Management).

Mutual Aid

Mutual Aid occurs when two or more parties (or agencies) agree to furnish resources, services, personnel, facilities, etc., to each other in support of the emergency or disaster response. Mutual Aid among agencies is best carried out when pre-disaster Mutual Aid Agreements are prepared, specifying what resources are on hand, how they will be made available to the requesting agency, reimbursement costs involved, etc.

Mutual Aid Agreement

An agreement authorized under the Emergency Services Act, in which two or more parties agree to furnish resources and facilities and to render services to each and every other party of the agreement to prevent and respond to any type of disaster or emergency.

Mutual Aid Region

A subdivision of the State emergency services organization established to coordinate mutual aid and other emergency operations.

Multi-Agency or Inter-Agency Coordination (MAC)



The participation of agencies and disciplines involved at any level of the SEMS organization working together in a coordinated effort to facilitate decisions for overall emergency response activities.

N

National Incident Management System (NIMS)

A system mandated by HSPD 5 that provides a consistent nationwide approach for Federal, State, local, and tribal governments; the private-sector, and nongovernmental organizations to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity. To provide for interoperability and compatibility among Federal, State, local, and tribal capabilities, the NIMS includes a core set of concepts, principles, and terminology. HSPD 5 identifies these as the ICS; multiagency coordination systems; training; identification and management of resources (including systems for classifying types of resources); qualification and certification; and the collection, tracking, and reporting of incident information and incident resources.

National Response Plan (NRP)

The National Response Plan is an all-discipline, all-hazards plan that establishes a single, comprehensive framework for the management of domestic incidents. It provides the structure and mechanisms for the coordination of Federal support to State, local and tribal incident managers and for exercising direct Federal authorities and responsibilities.

National Warning System (NWS)

The federal portion of the civil defense warning system, used to disseminate warning and other emergency information from the warning centers or regions to warning points in each state.

O

Office of Emergency Services (OES)

Part of the Governor's office, the primary State agency responsible for the coordination and administration of statewide operations to support emergency mitigation, preparedness, response, and recovery activities within California.

Operational Area (OA)

An intermediate level of the state emergency organization, consisting of a county and all political subdivisions within the county area.

Operational Duties

Pre-assigned tasks (usually in checklist form) to be performed by a specific function / unit at the incident or in the EOC, in response to the emergency or disaster.

Operational Period

The period of time scheduled for execution of a given set of operation actions as specified in the Incident or EOC Action Plan. Operational Periods can be of various lengths, although usually not over 24 hours.

Operations Section

One of the five primary functions found at all SEMS levels. This Section is responsible for all tactical operations at the incident or for the coordination of operational activities at an EOC. It may be supported by branches or units with specific technical expertise as needed in response to the emergency situation.



P

Plan

As used by OES, an emergency management document which describes the broad, overall jurisdictional response to potential extraordinary emergencies or disasters.

Planning / Intelligence Section

One of the five primary functions found at all SEMS levels. Responsible for the collection, evaluation, and dissemination of information related to the emergency or disaster, and for the preparation and documentation of Incident or EOC Action Plans. This Section may include Situation Status i.e. Runners & Plotters, Communications, and Documentation units.

Political Subdivision (California Emergency Services Act definition)

Any city, city and county, county, district, or other local government agency or public agency authorized by law.

Public Information Officer (PIO)

The function at field or EOC level that is responsible for preparing public information releases and interacting with the media throughout the operational period. At the WEROC EOC level, this function provides assistance to the WEROC water utilities in their public information efforts.

R

Regional Emergency Operations Center

The Regional Emergency Operations Center is the first level facility of the Office of Emergency Services to manage a disaster. It provides a single consistent emergency support staff operating from a fixed facility, whose staff are responsible to the needs of the operational areas and coordinates with the State Operations Center.

Robert T. Stafford Disaster Relief and Emergency Assistance Act, P.L. 93-288 as amended

Gives the President broad powers to supplement the efforts and available resources of state and local governments in carrying out their responsibilities to alleviate suffering and damage resulting from declared emergencies and major disasters.

S

Safety Center

A phone application administered by WEROC that allows EOC staff access to timely contact information, plans and procedures, AlertOC and WebEOC user guides, and instructions that are readily available and can be utilized during emergencies.

Safety Officer

The function at the field or EOC level responsible for monitoring and assessing safety hazards or unsafe conditions, and for developing measures for ensuring personnel safety. At the EOC level, this function reports directly to the EOC Director but may coordinate duties with other functions. This function may have additional staff assigned to it.

Search

Systematic investigation of an area or premises to locate persons trapped, injured, immobilized, or missing.



Security Officer

The function at the field or EOC level responsible for maintaining a security perimeter, handling EOC staff check-in/check-out procedures and other related duties as assigned by the Incident Commander or EOC Director during the operational period. If necessary and practical, this function may be combined with the Safety Officer function. It may also have additional staff assigned to it.

Section

The organization level responsible for a major functional area within the EOC, i.e., Operations, Planning/Intelligence, Logistics, Finance/Administration.

Special Districts

A unit of local government i.e. Water, School, Sanitation, Cemetery Districts, etc. These districts are part of the State Emergency Organization and as such, coordinate with the Orange County Operational Area (O.A.) and all political subdivisions i.e. incorporated Cities, in supporting disaster preparedness and response activities.

Stafford Act

Robert T. Stafford Disaster Relief and Emergency Assistance Act, PL 100-707, signed into law November 23, 1988; amended the Disaster Relief Act of 1974, PL 93-288. This Act constitutes the statutory authority for most Federal disaster response activities especially as they pertain to FEMA and FEMA programs.

Standard Operating Procedures

A set of instructions having the force of a directive, covering those features of operations which lend themselves to a definite or standardized procedure. Standard operating procedures support an annex by indicating in detail how a particular task will be carried out.

Standardized Emergency Management System (SEMS)

A system required by California Government Code for managing response to multi-agency and multi-jurisdictional emergencies in California. SEMS consists of five organizational levels which are activated as necessary: Field Response, Local Government, Operational Area, Region, and State.

Start-up Actions

These can be either general, or specific to a particular function at the incident or in the EOC. General Start-up Actions are those taken by the first personnel to arrive. Specific Start-up Actions are those related to a particular function.

State Agency (State definition)

Any department, division, independent establishment, or agency of the executive branch of the State government.

State Coordinating Officer

The person appointed by the Governor to coordinate and work with the federal coordinating officer.

State Emergency Plan

The State of California Emergency Plan, as approved by the Governor, which serves as the basis for statewide emergency planning and response.



U

Unified Command (UC)

An application of ICS used when there is more than one agency with incident jurisdiction or when incidents cross political jurisdictions. Agencies work together through the designated

Unit

An organizational element having functional responsibility at the incident or in the EOC. Units operate under the direction of a Section Chief.

V

Volunteer Emergency Preparedness Organization (VEPO)

Original name of the Water Emergency Response Organization of Orange County.



ATTACHMENT K: AFTER-ACTION REPORT QUESTIONNAIRE

| # | Response/Performance Assessment Questions | Yes | No | Comments |
|-----|--|-----|----|----------|
| 1. | Were procedures established and in place for responding to the disaster? | | | |
| 2. | Were procedures used to organize initial and ongoing response activities? | | | |
| 3. | Was the ICS used to manage field response? | | | |
| 4. | Was Unified Command considered or used? | | | |
| 5. | Was the EOC and/or DOC activated? | | | |
| 6. | Was the EOC and/or DOC organized according to SEMS? | | | |
| 7. | Were sub-functions in the EOC/DOC assigned around the five SEMS functions? | | | |
| 8. | Were response personnel in the EOC/DOC trained for their assigned position? | | | |
| 9. | Were action plans used in the EOC/DOC? | | | |
| 10. | Were action planning processes used at the field response level? | | | |
| 11. | Was there coordination with volunteer agencies such as the Red Cross? | | | |
| 12. | Was an Operational Area EOC activated? | | | |
| 13. | Was Mutual Aid requested? | | | |
| 14. | Was Mutual Aid received? | | | |
| 15. | Was Mutual Aid coordinated from the EOC/DOC? | | | |
| 16. | Was an inter-agency group established at the EOC/DOC level? Were they involved with the shift briefings? | | | |
| 17. | Were communications established and maintained between agencies? | | | |
| 18. | Was the public alert and warning conducted according to procedure? | | | |
| 19. | Was public safety and disaster information coordinated with the media through the JIC? | | | |
| 20. | Were risk and safety concern addressed? | | | |



| # | Response/Performance Assessment Questions | Yes | No | Comments |
|-----|---|-----|----|----------|
| 21. | Did event use Emergency Support Function (ESFs) effectively and did ESF have clear understanding of local capability? | | | |
| 22. | Was communications inter-operability an issue? | | | |

Additional Questions

23. What response actions were taken by your agency? Include such things as mutual aid, number of personnel, equipment and other resources. *Note: Provide statistics on number of personnel and number/type of equipment used during this event. Describe response activities in some detail*

24. As you responded, was there any part of SEMS/NIMS that did not work for your agency? If so, how would (did) you change the system to meet your needs?

25. As a result of your response, did you identify changes needed in your plans or procedures? Please provide a brief explanation

26. As a result of your response, please identify any specific areas needing training and guidance that are not covered in the current SEMS Approved Course of Instruction or SEMS Guidelines.

27. If applicable, what recovery activities have you conducted to date? Include such things as damage assessment surveys, hazard mitigation efforts, reconstruction activities, and claims filed.



Additional Comments

Potential Corrective Actions

Identify issues, recommended solutions to those issues, and agencies that might be involved in implementing these recommendations. Address any problems noted in the SEMS/NIMS Function Evaluation.

Indicate whether issues are an internal agency specific or have broader implications for emergency management.

(Code: I= Internal; R =Regional, for example, OES Mutual Aid Region, Administrative Regions, geographic regions, S=Statewide implications)

| Code | Issue Problem Statement | or | Corrective Action/Improvement Plan | Agency/Depts. to be Involved | Point of Contact Name/Phone | Estimated Date of Completion |
|------|-------------------------------|----|--|---------------------------------|-----------------------------------|------------------------------------|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |



ATTACHMENT L: WATER AND WASTEWATER REGULATORY AGENCIES

FEDERAL

Center for Environmental Health – Protects people from toxic chemicals by working with communities, consumers, workers, government, and the private sector to demand and support business practices that are safe for public health and the environment.

Food and Drug Administration (FDA) – Responsible for protecting the public health by ensuring the safety, efficacy, and security of human and veterinary drugs, biological products, and medical devices; and by ensuring the safety of our nation's food supply, cosmetics, and products that emit radiation. The FDA regulates water trailers and bottled water.

STATE

State Water Resource Control Board (SWRCB) – The SWRCB is one of six branches of the California Environmental Protection Agency. It ensures the quality of California's water resources and drinking water for the protection of the environment, public health, and all beneficial uses, and to ensure proper water resource allocation and efficient use. SWRCB has regulatory authority for protecting the water quality of nearly 1,600,000 acres (6,500 km²) of lakes, 1,300,000 acres (5,300 km²) of bays and estuaries, 211,000 miles (340,000 km). The SWRCB coordinates the state's nine Regional Water Quality Control Boards (RWQCB).

- **Regional Water Quality Control Boards (RWQCB)** – Serves as the frontline for state and federal water and wastewater pollution control efforts of rivers and streams, and about 1,100 miles (1,800 km) of exquisite California coastline. California is broken into 9 regional boards.
- **Department of Water Resources (DWR)** – Manages state-owned water infrastructure, such as dams, reservoirs and aqueduct. DWR works with other agencies to benefit the State's people and to protect, restore and enhance the natural and human environments.
- **Division of Drinking Water (DDW)** – Regulates public water systems; oversees water recycling projects; permits water treatment devices; supports and promotes water system security; and performs a number of other functions.

LOCAL

Orange County Health Care Agency (HCA) – Coordinates and oversees water quality for Orange County by issuing well permits and managing the county's Cross Connection Prevention Program. Additionally, HCA monitors for sewage spills and works with the sanitary district to ensure the sewage is contained and/or issues public notices for wastewater spills in beaches and harbors.



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARDS

(Orange County's boundaries fall on Region 8 and 9)

NORTH COAST REGION (1)

www.waterboards.ca.gov/northcoast
5550 Skylane Blvd., Suite A
Santa Rosa, CA 95403
E-mail: info1@waterboards.ca.gov
Tel: (707)576-2220
Fax: (707)523-0135

SAN FRANCISCO BAY REGION (2)

www.waterboards.ca.gov/sanfranciscobay
1515 Clay Street, Suite 1400
Oakland, CA 94612
E-mail: info2@waterboards.ca.gov
Tel: (510)622-2300
Fax: (510)622-2460

CENTRAL COAST REGION (3)

www.waterboards.ca.gov/centralcoast
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401
E-mail: info3@waterboards.ca.gov
Tel: (805)549-3147
Fax: (805)543-0397

LOS ANGELES REGION (4)

www.waterboards.ca.gov/losangeles
320 W. 4th Street, Suite 200
Los Angeles, CA 90013
E-mail: info4@waterboards.ca.gov
Tel: (213)576-6600
Fax: (213)576-6640

CENTRAL VALLEY REGION (5)

www.waterboards.ca.gov/centralvalley
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670
E-mail: info5@waterboards.ca.gov
Tel: (916)464-3291
Fax: (916)464-4645

Fresno Branch

1685 E Street
Fresno, CA 93706
Tel: (559)445-5116
Fax: (559)445-5910

Redding Branch

364 Knollcrest Drive, Suite 205
Redding, CA 96002
Tel: (530)224-4845
Fax: (530)224-4857

LAHONTAN REGION (6)

www.waterboards.ca.gov/lahontan
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150
E-mail: info6@waterboards.ca.gov
Tel: (530)542-5400
Fax: (530)544-2271

Victorville Branch

15095 Amargosa Road - Bldg 2, Ste 210
Victorville Ca 92394
Tel: (760)241-6583
Fax: (760)241-7308

COLORADO RIVER BASIN REGION (7)

www.waterboards.ca.gov/coloradoriver
73-720 Fred Waring Dr., Suite 100
Palm Desert, CA 92260
E-mail: info7@waterboards.ca.gov
Tel: (760)346-7491
Fax: (760)341-6820

SANTA ANA REGION (8)

www.waterboards.ca.gov/santaana
3737 Main Street, Suite 500
Riverside, CA 92501-3348
E-mail: info8@waterboards.ca.gov
Tel: (951)782-4130
Fax: (951)781-6288

SAN DIEGO REGION (9)

www.waterboards.ca.gov/sandiego
2375 Northside Drive, Suite 100
San Diego, CA 92108
E-mail: info9@waterboards.ca.gov
Tel: (619)516-1990
Fax: (619)516-1994

(Map with specific locations can be found on the next page)



Figure 1: California Regional Water Quality Control Board Map

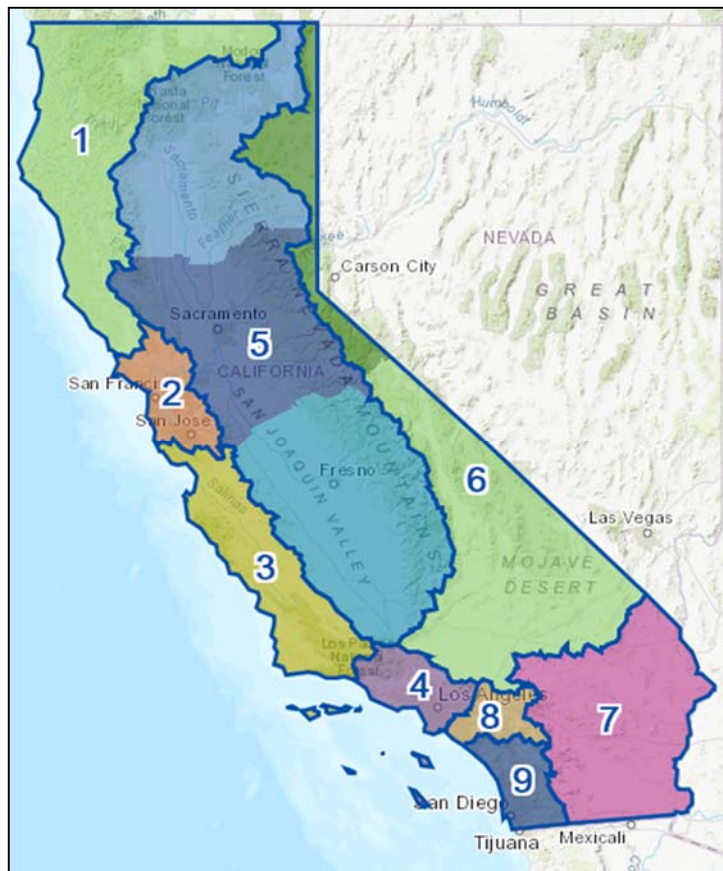
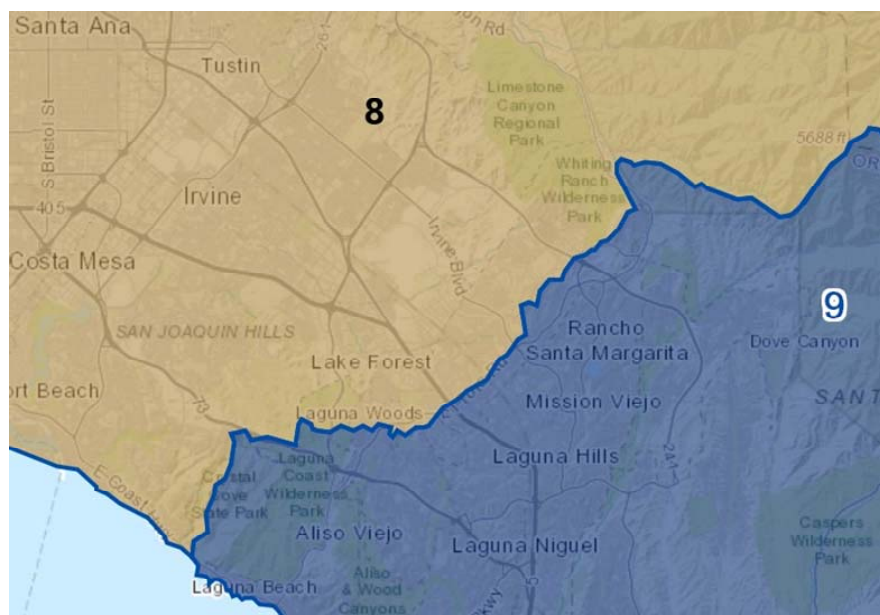


Figure 2: Border between Region 8 and 9 in Orange County map





ATTACHMENT M: HAZARD SPECIFIC EQUIPMENT

This list is available in the Logistics Chief and Resource Unit Position Binder

| Hazard Specific Equipment Resource Request | | | |
|--|---|-----------------------------------|------------------|
| Category | Item | Specifications | Other |
| Chemicals | <input type="checkbox"/> Chlorine | Type: | Amount: |
| | <input type="checkbox"/> Salt | | Amount: |
| | <input type="checkbox"/> Sodium Hypochlorite | | Amount: |
| Debris Removal Equipment | <input type="checkbox"/> Front Loader | | |
| | <input type="checkbox"/> Trucks and Trailer | | |
| | <input type="checkbox"/> Trained Operator Needed | | |
| Emergency Lighting | <input type="checkbox"/> Lighting | Needed for: | |
| | Type of power: Generator or Battery Fuel Type: | | |
| | <input type="checkbox"/> Extra Batteries | Type: | |
| Food/Water | <input type="checkbox"/> Food Supply | | Number of staff: |
| | <input type="checkbox"/> Water for staff | 1 gallon per person per day | Number of staff: |
| | <input type="checkbox"/> Sodium Hypochlorite | 1 gallon per person per day | Number of staff: |
| Fuel Trucks/Carrier | <input type="checkbox"/> Fuel Type | Diesel Gasoline Propane | # of Gallons: |
| | <input type="checkbox"/> Licensed Driver | | |
| | <input type="checkbox"/> Mount Type | Trailer Truck | |
| Hose | <input type="checkbox"/> For Potable Water | | Amount: |
| | <input type="checkbox"/> For Wastewater | | Amount: |
| Laboratory Analysis/Services | <input type="checkbox"/> Water Quality Sample Kit | Delivery Address: | |
| | <input type="checkbox"/> Laboratory Identified | Where: | |
| Misc. | <input type="checkbox"/> Medication/ Vaccination | Yes No | |
| | <input type="checkbox"/> Comfort stations | | |
| | <input type="checkbox"/> Temporary facilities | Type: | |
| | <input type="checkbox"/> Conference Call Line | Yes No | |
| | <input type="checkbox"/> Office furniture | Type: Amount: | |
| Portable Generator | Fuel Type: | Diesel Gasoline Propane | |
| | Pumping Capacity | Gallons Per Minute: | |
| | Hitch Size | 1 7/8 inch 2 inch | |
| | Connection | | |
| | Vehicle Needed to Haul Generator? | Yes No | |
| Portable Temporary Pumps | Type of water | Potable Wastewater | |
| | Pumping Capacity | Gallons Per Minute: | |
| | Required Power | Kilowatts (KW): | |
| | Connection | | |
| | | | |



| Hazard Specific Equipment Resource Request | | | |
|--|--|---|---------|
| Category | Item | Specifications | Other |
| Responder Equipment | <input type="checkbox"/> Non-permeable gloves | Amount: | |
| | <input type="checkbox"/> First Aid Kits | Amount: | |
| | <input type="checkbox"/> Hard Hats | Amount: | Amount: |
| | <input type="checkbox"/> Safety glasses | Amount: | Amount: |
| | <input type="checkbox"/> Other Equipment | Type: | Amount: |
| Safety Equipment | <input type="checkbox"/> Emergency Lighting | | Amount: |
| | <input type="checkbox"/> Temporary Fencing | | Amount: |
| | <input type="checkbox"/> Traffic Control Equipment | Type: | Amount: |
| | <input type="checkbox"/> Sanitation Supplies | (N95 Mask, Vinyl Gloves, Eye protection, Hand Sanitizer, Surface Sanitizer) | Amount: |
| | <input type="checkbox"/> Other Equipment | Type: | Amount: |
| SCADA System | <input type="checkbox"/> Temporary Telemetry Stations | | |
| Shoring Equipment | <input type="checkbox"/> Trencher | Operator: Yes No | Amount: |
| | <input type="checkbox"/> Excavator | Operator: Yes No | Amount: |
| | <input type="checkbox"/> Shields | | Amount: |
| Staffing | <input type="checkbox"/> Administrative | | Amount: |
| | <input type="checkbox"/> Water Quality Tester | | Amount: |
| | <input type="checkbox"/> Reverse Dial System | | Amount: |
| | <input type="checkbox"/> Maintenance Operator Supervisor | Class: | |
| | <input type="checkbox"/> Maintenance Operator | Class: | |
| | <input type="checkbox"/> Reverse Dial System | | |
| | <input type="checkbox"/> Door Hanger/ Notification | | Amount: |
| Water Distribution System | <input type="checkbox"/> Coupling | Type: Size: | Amount: |
| | <input type="checkbox"/> Valves | Type: | Amount: |
| | <input type="checkbox"/> Reservoir/tank covers/crack sealers/ sealant | Type: | Amount: |
| | <input type="checkbox"/> Pipe | Type: Size: | Amount: |
| | <input type="checkbox"/> Pipe segments | Type: Size: | Amount: |
| Water Haulers | <input type="checkbox"/> Holding Capacity | How many gallons? | Amount: |
| | <input type="checkbox"/> Potable Water Wastewater | | Amount: |
| | <input type="checkbox"/> Licensed Driver? | | Amount: |
| | <input type="checkbox"/> Connections | Size: | Amount: |

**ATTACHMENT N: GETS CARD SUBSCRIPTIONS**

| Last Name | First Name | Title | Card Number |
|------------------|--------------------------|------------------------------|-------------|
| SEOC | Legal Advisor | Legal Advisor | 42425011 |
| Alt EOC | Legal Advisor | Legal Advisor | 78178253 |
| SEOC | | Extra Position 1 | 64499089 |
| SEOC | | Extra Position 2 | 85317524 |
| SEOC | | Extra Position 3 | 81714458 |
| Alt EOC | DIRECTOR | EOC DIRECTOR | 82299670 |
| Alt EOC | LOGISTICS | NEOC LOGISTICS | 49966847 |
| Alt EOC | MAIN LINE | MAIN LINE | 67033680 |
| Alt EOC | MANAGER | NEOC MANAGER | 67536619 |
| Alt EOC | MULTI AGENCY COORDINATOR | NEOC MULTI AGENCY COORD. | 04183057 |
| Alt EOC | PLANS | NEOC PLANS | 98372056 |
| Berg | Joseph | Dir. of Water Use Efficiency | 27325704 |
| Berg | Joseph | Dir. of Water Use Efficiency | WPS |
| De La Torre | Harvey | Associate General Manager | 84540562 |
| HUBBARD | KELLY | WEROC PROGRAMS MANAGER | 90079535 |
| HUBBARD | KELLY | WEROC PROGRAMS MANAGER | WPS |
| Hunter | Robert | General Manager | 91731047 |
| SEOC | SEOC | MULTI AGENCY COORDINATOR | 27388687 |
| MWDOC COOP | | MWDOC COOP BORG | 54203490 |
| MWDOC COOP | | MWDOC COOP FINANCE/IT | 08686273 |
| MWDOC COOP | | MWDOC COOP MGT & POLICY | 73428580 |
| NEOC | FINANCE | NEOC FINANCE | 64927153 |
| NEOC | PIO | NEOC PIO | 93106944 |
| NEOC | WEROC ICP LIAISON | WEROC ICP LIAISON | 14338959 |
| Seckel | Karl | Assistant General Manager | 38475093 |
| Seckel | Karl | Assistant General Manager | WPS |
| SEOC | DIRECTOR | SEOC DIRECTOR | 02114807 |
| SEOC | FINANCE | SEOC FINANCE | 70383429 |
| SEOC | LOGISTICS | SEOC LOGISTICS | 75740299 |
| SEOC | MAIN LINE | SEOC MAIN LINE | 36465899 |
| SEOC | MANAGER | SEOC MANAGER | 69411554 |
| SEOC | PIO | SEOC PIO | 84182290 |
| SEOC | PLANS | SEOC PLANS | 29637844 |
| SEOC | WEROC ICP LIAISON | WEROC ICP LIAISON | 89985434 |
| Soto | Francisco | Emergency Coordinator | 86648362 |
| Soto | Francisco | Emergency Coordinator | WPS |
| WEROC OA LIAISON | | WEROC OA LIAISON | 91311027 |



ATTACHMENT O: WEROC PLANS AND MEMBER AGENCY TEMPLATES

WEROC Plans

- WEROC Emergency Operations Plan
 - Hazard Specific Annexes
 - EOC Position Checklist
- WEROC Hazard Mitigation Plan
- Business POD Plan
- Water POD Plan
- Power Plan

WEROC Templates

- Business POD Plan
- Chemical Supply Distribution Plan
- Power Outage Plan
- Water POD Plan
- Unknown Water Contaminant Plan

MWDOC Plans

- Continuity of Operations Plan

Joint Agency Plans

- Joint Information Center Plan
- Water & Fire Coordination Template
- Water Procurement and Distribution Plan
- OA Dam Failure Response Plan
- OCFA Wildland and Urban Interface Plan
- Water POD Plan (Future Plan)



HAZARD SPECIFIC ANNEXES

The following hazard annexes were identified as high priority in the risk assessment. Various other hazards were also identified in the risk assessment but it was determined that the response to those hazards mirrors that of other hazards.

- Annex 1: Earthquake
- Annex 2: Tsunami
- Annex 3: Flood/Dam Failure
- Annex 4: Pandemic
- Annex 5: Power Outage
- Annex 6: Nuclear Release
- Annex 7: Unknown Water Contaminant
- Annex 8: Wildfire



ANNEX 1: EARTHQUAKE

Planning Assumptions

1. The EOC will be automatically activated following a M5.0 or greater earthquake within Orange County, or when an earthquake outside of Orange County strong enough to disrupt public phone systems or cause visible damage
2. Communications infrastructure could be damaged, causing disruption in landline, telephone, cellular telephone, radio, internet, and other communication services
3. Transportation infrastructure could be damaged and in limited operation, potentially hampering response operations and staff reporting to the EOC
4. Vital infrastructure such as potable water supplies, sewer, electrical power, natural gas lines can be compromised
5. Local response partners may not be available for hours, or even days following the event

Earthquake Checklist

In addition to the procedures in the base plan and position guides, this checklist should be used following an earthquake.

- ☐ Determine whether communication systems are operable
- ☐ Determine the location and extent of the earthquake using resources such as the USGS website
- ☐ Determine which member agencies and/or pipelines could have the greatest potential impacts based on epicenter
- ☐ Communicate with potentially impacted member agencies and/or MET to determine extent of damage
- ☐ Determine if EOC activation is necessary. See Activation Decision Steps located in the WEROC EOP. (if the EOC was automatically activated, disregard this item)
- ☐ If the EOC is activated, follow the EOC Activation protocols on page 24
- ☐ Inform member agencies that WEROC is in the process of activating the EOC

Earthquake Resources

1. Monitor AM radio (e.g. 600 AM) and TV for reports of damage and areas impacted
2. Monitor Web EOC for reports of damage and areas impacted – <https://webeoc.ocsd.org/eoc7/>
3. USGS – <https://earthquake.usgs.gov/> Use the USGS website to determine the epicenter and magnitude of the earthquake (If internet service is down, the EOC should be activated.)
4. Earthquake Map – <https://earthquake.usgs.gov/earthquakes/map/>
5. Fault Maps of Orange County – Located at each EOC
6. Richter scale & Modified Mercalli Intensity Scale (Figure 1)

Notification Considerations

WEROC staff should verify that the following response partners or regulatory agencies are notified:

- DDW
- HCA
- Control 1 (OA)
- Fire Department



Figure 1: Richter scale & Modified Mercalli Intensity Scale

| Descriptor | Richter Scale | Magnitude Intensity | WEROC EOC Activated? | Description |
|------------|----------------|---------------------|---|--|
| Very Minor | 1.0-3.0 | I | No | I. Not felt except by a very few under especially favorable conditions. |
| Minor | 3.0-3.9 | II-III | No | II. Felt only by a few persons at rest, especially on upper floors of buildings. III. Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated. |
| Light | 4.0-4.9 | IV-V | No | IV. Felt indoors by many, outdoors by few during the day. Some awakened at night. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably. V. Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop. |
| Moderate | 5.0-5.9 | VI-VII | Yes, Only if within OC | VI. Felt by all, many frightened. Some heavy furniture moved; a few cases of fallen plaster. Damage slight. VII. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken. |
| Strong | 6.0-6.9 | VIII-IX | Yes, If within OC or disrupts communication channels or disrupts MET services | VIII. Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, and walls. Heavy furniture overturned. IX. Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations. |
| Major | 7.0-7.9 | X-I | Yes, If within OC or disrupts communication channels or disrupts MET services | X. Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent. XI. Few, if any (masonry) structures remain standing. Bridges destroyed. Rails bent greatly. |
| Great | 8.0 and Higher | XII > | Yes, If within OC or disrupts communication channels or disrupts MET services | XII. Damage total. Lines of sight and level are distorted. Objects thrown into the air. |



ANNEX 2: TSUNAMI

Planning Assumptions

1. The tsunami will impact member agencies located near the coast
2. The EOC will be automatically activated following a M5.0 or greater earthquake within Orange County, an earthquake outside of Orange County strong enough to disrupt public phone systems or cause visible damage, or other large regional event
3. WEROC and member agencies may have several hours to prepare for a distant tsunami
4. There may be a disruption to water and sewer lines
5. Local evacuations may cause traffic gridlock, requiring a law enforcement escort
6. Power outage may occur and communication systems may be damaged
7. WEROC will distribute all the information from the OA to the Member Agencies

Tsunami Checklist

In addition to the procedures in the base plan and position guides, this checklist should be used before or following a tsunami.

Pre-Event

- ☐ The OA Liaison will send a message to WEROC of a potential Tsunami and conference call information
- ☐ Participate in OA conference call and notify agencies of potential impacts and OA recommendations
- ☐ The following agencies are in potential tsunami zones:
 - City of Seal Beach
 - City of Huntington Beach
 - City of Newport Beach
 - City of Laguna Beach
 - City of Dana Point
 - City of San Clemente
 - Laguna Beach County Water District
 - South Coast Water District
 - Emerald Bay Service District
 - Orange County Sanitation District (Boat and Harbor Operations)
 - South Orange County Wastewater Authority
- ☐ Inform agencies if evacuations are needed
- ☐ Recommend that agencies isolate or shut off their system before evacuations
- ☐ Determine if EOC activation is necessary. See Activation Decision Steps in the WEROC EOP

Post Event

- ☐ Determine whether communication systems are operable



- ☐ Communicate with potentially impacted member agencies and/or MET to determine extent of damage
- ☐ If not yet activated, determine if EOC activation is necessary. See Activation Decision Steps in the WEROC EOP
- ☐ If EOC is determined, follow the EOC Activation protocols on page 24 of the EOP
- ☐ Inform member agencies that WEROC is in the process of activating the EOC
- ☐ Monitor AM radio (e.g. 600 AM) and TV for reports of damage and areas impacted
- ☐ Monitor WebEOC for reports of damage and areas impacted

Tsunami Resources

- *Types of Tsunamis*
 - Near Source Tsunamis: A near source tsunami (local) is one that can hit the coast within minutes following an offshore geological event. This type of locally generated tsunami is possible at many points along the Southern California coast and provides little time for warning the population and less time for evacuation
 - Distant Source Tsunamis: A distant source tsunami is one that may be generated by a very large earthquake in remote areas of the Pacific Ocean, such as the Cascadia Subduction Zone near Eureka which is considered by experts as the most threatening. Since distant tsunamis, such as from Cascadia, may take several hours to reach the Southern California coast following the event, they allow time for warnings to be issued to give coastal residents time to evacuate
- *Tsunami Alerts* - There are four levels of tsunami alerts that are issued by the West Coast/Alaska Tsunami Warning Center. These alerts should be sent to all potentially impacted member agencies upon notification:
 - Tsunami Warning means a potential tsunami with significant widespread inundation is imminent or expected
 - Tsunami Advisory means there is the threat of a potential tsunami, which may produce strong currents or waves dangerous to those in or near the water
 - Tsunami Watch is issued to alert emergency management officials and the public of an event that may later impact the watch area
 - Tsunami Information Statement is issued to inform emergency management officials and the public that an earthquake has occurred, or that a tsunami warning, watch or advisory has been issued for another section of the ocean. Tsunami preparedness and response efforts can utilize preparedness and response efforts for flood hazards, including public education programs, warning, evacuation and other measures



- *Potential Inundation and Evacuation Zone* - WEROC has identified the area to be effected in the event that the County is threatened by a Tsunami. This Zones are depicted in the Tsunami Inundation map located at both EOCs
- *Tsunami Warning System* - <http://ntwc.arh.noaa.gov/>

Notification Considerations

WEROC staff should verify that the following response partners or regulatory agencies are notified:

- Regional Water Quality Control Board
- MET
- Cal WARN
- HCA



ANNEX 3: FLOOD/DAM FAILURE

Planning Assumptions

1. Extreme floods could damage communications infrastructure causing disruption in landline, telephone, cellular telephone, radio, Internet, and other communication services
2. Water utilities structures may be damaged requiring resources to recover
3. Floods might limit transportation of resources, potentially hampering response operations
4. Floods may result in damage to critical infrastructure, loss of utilities (gas, water, electricity)
5. Effective prediction and warning systems have been established that make it possible to anticipate flooding occurrences. However, severe weather conditions may occur with little or no warning
6. Water and wastewater infrastructure within flood control channels could be impacted
7. A dam or reservoir failure can result from a number of manmade or natural hazards
8. A dam/reservoir failure may trigger a large flooding event

Flood/Dam Failure Checklist

- ☐ Inform agencies of projected rainfall and flooding concerns
- ☐ During persistent heavy rain fall, contact dam/reservoir owner to obtain an overview of the situation
 - Confirm notifications have been made
 - Gather situation status summary
- ☐ Review OA Dam Plan and agency specific Dam Plan with inundation maps
- ☐ *EOC Activation Protocol*

The following table should be used when determining WEROC's EOC activation level. Based on the current conditions and threat to member agencies, some stages might trigger a greater response.

| Flood Watch Stages | | WEROC Response |
|--------------------|--|---|
| Stage 1 | Light to moderate rain | Standby/Monitor |
| Stage 2 | Moderate to Heavy Rain | Standby/Monitor |
| Stage 3 | Continuation of heavy rain – High threat of damage. | Standby/Monitor/Check-in with Member Agencies |
| Stage 4 | Member agencies report that there is a threat to infrastructure – (Local Emergency may be declared) | Support/County Liaison/Potentially Activate EOC |
| Stage 5 | Heavy damage potential – Damage to member agencies infrastructure (Local Emergency Declared) | EOC Activation/County Liaison |
| Stage 6 | Damage beyond OA Resources and impacting various member agencies. Significant damage to member agencies infrastructure/Loss of water (State of Emergency Declared) | EOC Activation/County Liaison |
| Stage 7 | Damage beyond state resources (Presidential Declaration) | EOC Activation/County Liaison |



- ☐ Ensure all information is received by the OA EOC
- ☐ Contact potentially impacted agencies to record impacts and resource needs
- ☐ If needed, coordinate debris removal for member agencies

Flood/Dam Failure Resources

- Monitor radio (e.g. 600 AM) and TV for reports of damage and areas impacted.
- OC Public Works Watershed & Costal Resources – 714-834-5173
- OC Public Works Rain Fall and Weather Data –
<http://www.ocwatersheds.com/rainrecords/rainfalldata> .jj
- National Weather Service, San Diego Office – 858-675-8700,
<http://w2.weather.gov/climate/index.php?wfo=sgx>
- National Weather Service Radar -
<https://radar.weather.gov/ridge/radar.php?rid=nkx&product=N0R&overlay=11101111&loop=no>

Notification Considerations

WEROC staff should verify the following response partners or regulatory agencies are notified:

- Operational Area EOC – 714-628-7008
- OC Public Works – 714-834-2300
- OC Public Works DOC (when activated) – 714-955-0200 or 714-955-0333
- Army Corps of Engineers – 202-761-1001



ANNEX 4: PANDEMIC

Planning Assumptions

1. A pandemic in any given community will last about eight to twelve weeks
2. Organizations will be provided guidance and/or direction by federal, state, and/or local governments regarding current pandemic status in the area
3. Activation of each agency's COOP including MWDOC, may be required
4. A pandemic flu is not a water-borne virus, it will have no direct effect on water quality. Other pandemics could be water borne
5. Staff absenteeism will rise due to personal illness, family member illness, community mitigation measures, quarantines, school, childcare, or business closures, public transportation disruptions, or fear of exposure to ill individuals, as well as first responder, National Guard, or military reserve obligations
6. Each WEROC member agency is responsible for taking the necessary steps and precautions they deem appropriate for the situation. WEROC and its member agencies should take into consideration information released by the State Department of Public Health and the Orange County Health Care Agency
7. When antivirals and vaccines become available, they will be allocated according to the WEROC Business POD Plan

Pandemic Checklist

In addition to the procedures in the base plan and position guides, this checklist should be used for an imminent or real-time pandemic

- ☐ Monitor the approaching pandemic through the OCHCA, CDC, and/or CDPH
- ☐ Enact pre-pandemic mitigation strategies and encourage member agencies to do the same
- ☐ Employees/Disaster Service Workers (DSW) should be reminded of their obligation to report to work during a pandemic
- ☐ Determine if a virtual work or EOC environment is appropriate and favored, ensure all technological methods are available and utilized
- ☐ Determine the appropriate EOC activation level and operational periods based on the incident.
- ☐ If the decision is made to activate the WEROC EOC, the EOC Activation and Notification Protocol located in the WEROC EOP will be utilized
- ☐ Participate in the periodic conference calls hosted by the OA EOC
- ☐ Provide member agencies and MWDOC staff with informational material
- ☐ Provide the necessary resources to ensure member agencies sustain a safe working environment
- ☐ Encourage member agencies to only allow essential functions to report for work and to have a plan and description on how those essential functions will be carried out through a prolonged period
- ☐ Utilize the Public Information Officer to ensure public is informed of the current situation and any protective actions related to water or wastewater
- ☐ Coordinate public messaging related to water and wastewater safety
- ☐ Monitor for health situation reports, medical bulletins and press releases
 - o review and verified information



- distribute to appropriate personnel
- Maintain contact with OA and member agencies to ensure situation status is timely, accurate and shared
- When medications become available, activate the WEROC Business POD Plan

Pandemic Resources

- *Alert Phases*
The designation of phases, including decisions on when to move from one phase to another, is made by the Director General of WHO. A diagram of the phases is located in figure 1 below. These phases are defined as follows:

Phase 1 - no viruses circulating among animals reported to cause infections in humans.
Phase 2 - animal influenza virus circulating among domesticated or wild animals is known to have caused infection in humans, and is therefore considered a potential pandemic threat.
Phase 3 - animal or human-animal influenza reassortant virus has caused sporadic cases or small clusters of disease in people, but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks.
Phase 4 - characterized by verified human-to-human transmission of an animal or human-animal influenza reassortant virus able to cause “community-level outbreaks.” Phase 4 indicates a significant increase in risk of a pandemic but does not necessarily mean that a pandemic is a foregone conclusion.
Phase 5 - characterized by human-to-human spread of the virus into at least two countries in one WHO region. Declaration of Phase 5 is a strong signal that a pandemic is imminent and that the time to finalize the organization, communication, and implementation of the planned mitigation measures is short.
Phase 6 – Pandemic phase characterized by community level outbreaks in at least one other country in a different WHO region in addition to the criteria defined in Phase 5. Designation of this phase will indicate that a global pandemic is under way.
Post-peak period – The post-peak period signifies that pandemic activity appears to be decreasing; however, it is uncertain if additional waves will occur and countries will need to be prepared for a second wave.
Post-pandemic period - At this stage, it is important to maintain surveillance and update pandemic preparedness and response plans accordingly. An intensive phase of recovery and evaluation may be required.
- OCHCA’s Pandemic Influenza Preparedness and Response Plan
- WEROC Business POD Plan

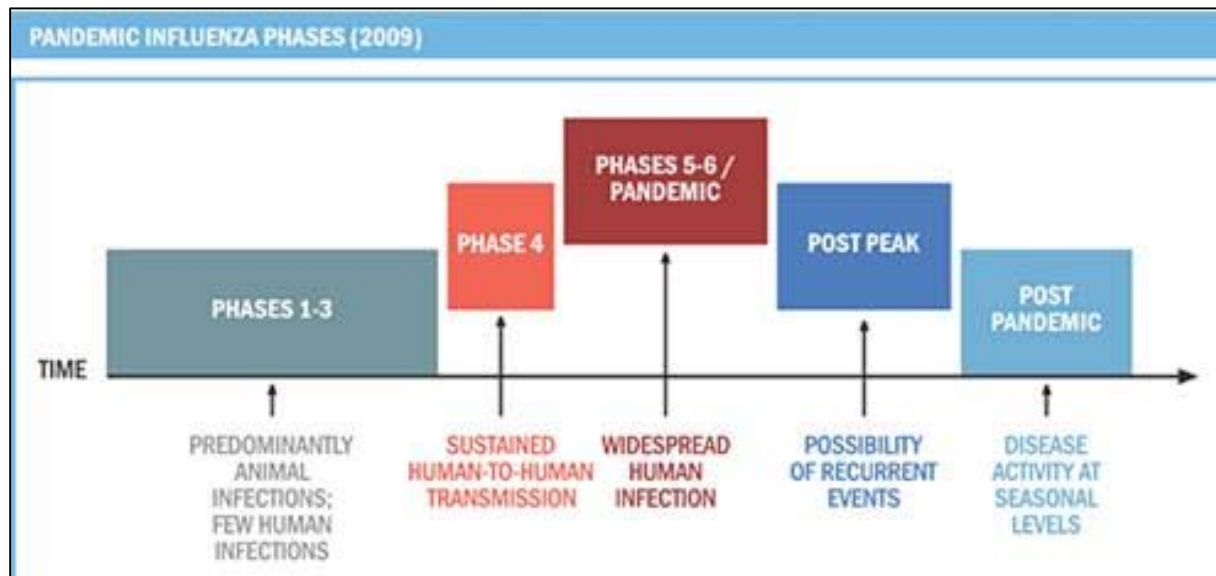
Notification Considerations

WEROC staff should verify the following response partners or regulatory agencies are notified:

- DDW
- SWRCB
- HCA



Figure 1 World Health Organization Pandemic Influenza Phases





ANNEX 5: POWER OUTAGE

Planning Assumptions

1. Many member agencies lack adequate back-up power sources to rely upon during power outages and other emergencies
2. Energy disruptions are unpredictable and may occur for a variety of reasons. A local, countywide, or regional power outage may occur at any time
3. There are environmental events that significantly increase the possibility of a power outage, such as extreme temperatures, wind storms and rain storms
4. A power outage will may disrupt WEROC and/or MWDOC operations
5. During active fires, the power company will de-energize power lines in the fire zone
6. There will be fuel coordination needs for power generators
7. Energy within Orange County is mostly controlled by non-governmental entities; therefore the County of Orange has no legal authority over how the energy resources supplied by these entities are distributed or the priority for restoration in the event of a power disruption

Power Outage Checklist

In addition to the procedures in the base plan and position guides, this checklist should be used for a power outage.

- ☐ Determine power outage perimeter by requesting an official briefing from the OA and/or the power utility or using the power outage resources below
- ☐ The OA EOC may conduct a conference call after a CAISO Stage 3 Emergency or during a widespread power outage
- ☐ Monitor WebEOC to obtain a situational overview of the power outage
- ☐ Contact affected member agencies, if without power, determine:
 - If backup systems are available or needed
 - The duration on which backup systems can continue to operate
 - Frequency of fuel needed
 - How much fuel is needed
 - Resource needs to withstand the duration of the power outage
- ☐ Maintain contact with OA and member agencies to ensure situation status is timely, accurate and shared
 - Send a WEROC representative to the OA EOC (if needed)
- ☐ Work with the affected member agency to determine if water quality notifications are needed
- ☐ If it is decided to activate WEROC EOC, the WEROC EOC Activation Notification Protocol located in the WEROC EOP should be utilized

Power Failure Resources

- Monitor radio (e.g. 600 AM) and TV for reports of damage and areas impacted.
- WEROC Power Plan
- Member Agency Power Plan
- SCE Outage Map- <https://www.sce.com>



- SDG&E Outage Map - <https://www.sdge.com/residential/customer-service/outage-center/outage-map>
- California Energy Emergency Response Plan, California Energy Commission
- **CAISO Alert Levels**
When a significant imbalance between the supply and demand for electricity occurs, Cal-ISO may issue an Alert, a Warning, or a Stage 1, 2, or 3 Emergency. Table #1 outlines the CAISO Notifications

Table 1# CAISO Notifications

| CAISO Notifications | |
|----------------------------|---|
| Alert | Cal-ISO informs power utility that operating reserves in the day-ahead market are forecasted at less than 7%, but plans to serve all customers unless loads are significantly higher or resources are lost. |
| Warning | Cal-ISO informs power utility that operating reserves in the hour-ahead market are forecasted at less than 7%, but plans to serve all customers unless loads are significantly higher or resources are lost. |
| Emergency Stage 1 | Cal-ISO informs power utility that operating reserves are less than 7% in real time or are unavoidable. Consumers are urged to reduce their use of electricity voluntarily to avoid more severe conditions. |
| Emergency Stage 2 | Cal-ISO informs power utility that operating reserves are less than 5% in real time or are unavoidable. Cal-ISO can order the power utility to curtail interruptible load ("voluntary interruptions"). These voluntary interruptions are intended to prevent more severe conditions. |
| Emergency Stage 3 | Cal-ISO informs power utility that operating reserves are less than 1.5% in real time or are unavoidable. Cal-ISO can order the power utility to curtail firm load ("involuntary interruptions"). If ordered to curtail firm load, the power utility will implement CPUC-approved rotating outage plans in which controlled service interruptions (of about one hour) are rotated among groups of customers. These outages are intended to prevent more severe imbalance conditions, such as a total system collapse, and will be implemented until the Cal-ISO notifies the power utility that the emergency has passed. |

Notification Considerations

WEROC staff should verify the following response partners or regulatory agencies are notified:

- SDG&E
- SCE
- CAISO
- Army Corps of Engineers, Emergency Power Planning and Response Teams, 213-452-3440+
- Generator Rental Companies
- Fuel Supply Companies



ANNEX 6: NUCLEAR RELEASE (SONGS)

Planning Assumptions

1. An emergency at SONGS may occur without warning at any time of day or night.
2. There are five Hazmat teams in Orange County (Anaheim, Huntington Beach, OCFA (2), HCA) that provide 24 hours-a-day staffing for emergency responses and are dispatched by 911 operations
3. Responding agencies will need to provide information to reduce public concern about the incident and response activities

Risk Assessment

During a Nuclear Power Plant “General” Emergency, an atmospheric release of radioactive material (or "plume") could be dispersed inland by prevailing winds causing a number of exposed sources of drinking water to become contaminated. Several sizable reservoirs within the County qualify as exposed sources. They include: helm

Domestic

- Big Canyon Reservoir (owned by City of Newport Beach)
- Santiago Reservoir a.k.a. Irvine Lake (operated by Serrano WD and jointly owned by Irvine Ranch WD and Serrano WD)
- Walnut Canyon Reservoir (owned by City of Anaheim)

Irrigation (landscape & agriculture)

- Bonita Reservoir (operated by Irvine Company)
- Laguna Reservoir (owned by the Irvine Company)
- Lambert Reservoir (owned by the Irvine Company)
- Oso Reservoir (owned by Santa Margarita WD)
- Rattlesnake Reservoir (operated by Irvine Ranch WD)
- San Joaquin Reservoir (operated by Irvine Ranch WD)
- Sand Canyon Reservoir (operated by Irvine Ranch WD)
- Syphon Reservoir (owned by the Irvine Company)

MET also has exposed sources of drinking water i.e. Diamond Valley Lake, Diemer Filtration Plant, Lake Mathews, Mills Filtration Plant, Lake Perris, Lake Skinner, and Skinner Filtration Plant. These exposed sources are not found in the 10-mile Emergency Planning Zone found on the SONGS Emergency (Evacuation) Planning Zone Map, but do lie within the 50-mile Public Education (Monitoring) Zone surrounding the SONGS facility found on the California Public Utility Commission’s SONGS Emergency Planning Zone Map (D-12-3).

SONGS Emergency Plan Information

To facilitate WEROC response to a nuclear release at SONGS, the SONGS Emergency Plan Information insert is available to WEROC staff in both WEROC EOCs. Two sections which will help WEROC staff form a basic understanding of response to a SONGS incident are found below. The Event Code Designation briefly describes response codes used by SONGS staff. Key Phone



Numbers list the different entities that would be involved in and affected by an incident involving SONGS.

Other information not shown here but found on the full insert includes the following: Unusual Event, Alert, Site Area Emergency, and General Emergency descriptions, and Abbreviations. To view the full SONGS Emergency Plan Information insert refer to the checklist found in the WEROC EOC function binders.

Event Code Designation:

The event code comprises three characters (*i.e.* A1-2, D2-1, etc.) which designate the event category, the emergency class, and the emergency action level, respectively.

| Event Categories | |
|-------------------|--|
| A | Uncontrolled release of radioactivity |
| B | Loss of reactor coolant system inventory |
| C | Reactor core degradation or overheating |
| D | Loss of plant safety equipment |
| E | Disasters (natural or manmade) |
| F | Security contingency |
| G | Miscellaneous |
| Emergency Classes | |
| 1 | Unusual Event: Potential degradation of plant safety. No offsite response required. |
| 2 | Alert: Actual or potential significant degradation of plant safety. A radioactive release will be small fraction of EPA limits. |
| 3 | Site Area Emergency: Actual or likely failures of plant functions needed for protection of the public. A radioactive release not expected to exceed EPA limits. |
| 4 | General Emergency: Actual or imminent substantial plant damage. A radioactive release can be expected to exceed EPA limits. |

SONGS Key Phone Numbers:

| | | |
|------------------------------------|----------|----------------|
| Orange County | 24 Hrs | (714) 628-7008 |
| San Diego County | 24 Hrs | (619) 565-3490 |
| San Clemente* | Work Hrs | (949) 361-6100 |
| San Juan Capistrano* | Work Hrs | (949) 443-6337 |
| Dana Point* | Work Hrs | (949) 248-3500 |
| CA State Parks | Work Hrs | (949) 492-8412 |
| Camp Pendleton | Work Hrs | (760) 725-6419 |
| | Off Hrs | (760) 725-5617 |
| American Red Cross | 24 Hrs | (714) 481-5300 |
| CA Highway Patrol | 24 Hrs | (858) 467-3333 |
| Capistrano Unified School District | Work Hrs | (949) 489-7276 |
| | Off Hrs | (949) 493-2748 |



| | | |
|--|--------|----------------|
| Governor's OES | 24 Hrs | (800) 852-7550 |
| SCE Switchboard/Corporate Communications | 24 Hrs | (800) 621-8516 |
| SCE Telecom Trouble Desk (Sirens) | 24 Hrs | (949) 587-5500 |
| *Off hours contact (714) 628-7008 | | |

Potential Impacts

A serious meltdown at SONGS would result in a massive release of radioactivity that could immediately kill more than 100,000 people in South County and northern San Diego County and ultimately cause hundreds of thousands of injuries. However, the circumstances and geographic features in the vicinity of potential incidents vary greatly. Incidents may occur over a very large geographic area or at fixed facilities where there are opportunities for development of site-specific contingency plans.

The area affected by radioactive release is determined by:

- The amount of radiation released from the plant.
- Wind direction and speed.
- Weather conditions.

In the event that any open sources of water were to become contaminated from radioactive fallout, they would need to be isolated from the regional distribution system until water quality tests could be performed. In this situation, WEROC would coordinate information flow with Calif. State Office of Drinking Water; Metropolitan; and Orange County Health Care Agency (HCA) through the County Operational Area (O.A.) EOC.

In addition to the initial damage a nuclear incident may trigger one or more secondary events, such as: explosions, radioactive fallout, fires, power failures, dam failures, transportation disruptions, accidents, overpass failures, building collapse, fuel shortages, food and/or water supply contamination or disruption of distribution systems.

Notification Considerations

WEROC staff should verify the following response partners or regulatory agencies are notified:

- SONGS
- Local Police Departments
- CDPH
- OCHCA



ANNEX 7: UNKNOWN WATER CONTAMINANT

Planning Assumptions

1. The affected member agency will determine if the threat is significant enough to warrant the activation of the unknown water contaminant annex
2. Agency response to an unknown contaminant in the water system should follow the water sampling response guidelines in the Emergency Water Quality Sample Kit (EWQSK)
3. There are five Hazmat teams in Orange County (Anaheim, Huntington Beach, OCFA (2), HCA) that provide 24 hours-a-day staffing for emergency responses and are dispatched by 911 operations
4. Do not use water for any purpose including, firefighting

Unknown Water Contaminant Checklist

In addition to the procedures in the base plan and position guides, this checklist should be used during an unknown water contaminant response.

- ☐ Receive a complete debrief from the affected member agency to include but not limited to:
 - Site location
 - How they came to the conclusion of a potential contaminant in their system
 - Area of containment (if possible)
 - The length of time the potential contaminant has been present
 - Whether a perimeter has been established to keep people of the hot zone
 - Has the DDW been contacted
- ☐ Remind the member agency of the SOP and walk them through the procedures
- ☐ Contact the following agencies and inform them of the situation (if needed by the member agency)
 - DDW
 - Control 1 – OA
 - Hazmat
 - OCIAC
 - Local Law Enforcement
 - HCA
- ☐ Dispatch a WEROC staff member to the affected member agency ICP or EOC
- ☐ Consider the support needs of the impacted agency
- ☐ Consider the activation of the EOC. If it is decided to activate the WEROC EOC, the WEROC EOC Activation Procedures are located in the WEROC EOP

Roles and Responsibilities

Division of Drinking Water (DDW)

When notified of a potential Unknown Water Contaminant, the DDW will respond to the incident location with three Emergency Water Quality Sample Kits (EWQSK).

Hazmat Team

The Hazmat team will be responsible for working with the affected agency to physically take the samples from the contaminated water source



Law Enforcement

Responsible for transporting the samples to Richmond Laboratory.

Unknown Water Contaminant Resources

- Member agency Unknown Contaminant SOP Template
- Water Trailer SOP
- Water POD SOP

Notification Considerations

WEROC staff should verify the following response partners or regulatory agencies are notified:

- DDW
- Control 1
- OCHCA
- OCFA
- CalWARN
- CDPH



ANNEX 8: WILDFIRE

Planning Assumptions

1. Wildfires could damage communications infrastructure causing disruption in landline, telephone, cellular telephone, radio, Internet, and other communication services
2. Water utilities structures may be damaged requiring resources to recover
3. Wildfires may result in damage to infrastructure, loss of utilities (gas, water, electricity), and street closures that hamper response operations
4. Several water and wastewater entities with critical facilities in close proximity to areas of very high to extreme fire threat include: Orange, Yorba Linda Water District, Santa Margarita Water District, Moulton Niguel Water District, Trabuco Canyon Water District, Irvine Ranch Water District, Brea, San Clemente, San Juan Capistrano, Anaheim, Serrano Water District, Emerald Bay Service District, Laguna Beach County Water District, and the Metropolitan District of Southern California's Diemer Water Filtration Plant.
5. Fire suppression efforts take a toll on water agencies as it requires massive amounts of water, which may lead to pressure loss and low water storage levels
6. Sediments, ash effluents, and fire suppression chemicals can contaminate the water system through open waterways and storage facilities to cause water quality degradation

Wildfire Checklist

- ☐ Check City or OCFA twitter page for up to date information on the fire
- ☐ Determine which agencies could or have impacts and inform them of the situation
 - Atlas Maps are available at both EOC's to determine potentially impacted agencies
- ☐ If a member agency loses power to infrastructure, see Power Outage Annex
- ☐ If infrastructure is threatened by the fire contact the OA EOC Operations Section Chief or OA Liaison, or OA EOC general line to inform them of the situation. Make sure you provide:
 - Location of threatened infrastructure (GPS coordinates or Pin drop from mobile phone)
 - Impacts if the structure was destroyed
- ☐ Dispatch a WEROC staff member to the ICP and/or OA EOC. (If needed)
 - Ensure transportation routes are safe before dispatching staff
- ☐ Consider the support needs of the impacted agency
- ☐ Consider the activation of the EOC. If it is decided to activate the WEROC EOC, the WEROC EOC Activation procedures are located in the WEROC EOP
 - Use the EOC Staffing Map to ensure EOC staff are not in the impacted area
 - If EOC staff are in the impacted area, inform staff member

Wildfire Resources

1. Cal Fire - <http://www.fire.ca.gov/>
2. Incident Information System (Fire Maps) - <https://inciweb.nwcg.gov/state/5/#>
3. Fire/Police Amateur Live Radio - <http://www.broadcastify.com/listen/std/6>
4. Water Districts and City Boundaries Map – http://cehtp.org/page/water/water_system_map_viewer



Notification Considerations

WEROC staff should verify the following response partners or regulatory agencies are notified:

- OCFA
- Control 1 – OA
- DDW
- RWQCB
- HCA

RESOLUTION NO. 2067

**A RESOLUTION OF THE MUNICIPAL WATER DISTRICT OF ORANGE COUNTY
ADOPTING THE REVISED WEROC EMERGENCY OPERATIONS PLAN**

WHEREAS, The Municipal Water District of Orange County (MWDOC) established the goal of developing and maintaining an emergency plan; and

WHEREAS, The California Code of Regulation Section 2401 has since established the Standardized Emergency Management System (SEMS), and the President of the United States in Homeland Security Directive (HSPD)-5, directed the Secretary of the Department of Homeland Security to develop and administer a National Incident Management System (NIMS), both of which standardize response to emergencies involving multiple jurisdictions or agencies; and

WHEREAS, Government Code Section 8607 required all political subdivisions to be in compliance with SEMS by December 1, 1996, to be eligible for reimbursement of emergency response personnel costs and now pursuant to the President's Executive Order, Homeland Security Directive (HSPD)-5, local governments are required to establish the NIMS as the standard for incident management by September 30, 2007; and

WHEREAS, with this revised emergency plan MWDOC continues to conform to State SEMS and Federal NIMS guidelines for emergency plan compliance; and

WHEREAS, MWDOC has determined that it is in the District's best interest and benefit to maintain a current emergency plan that meets emergency management best practices.

NOW, THEREFORE, BE IT RESOLVED the Board of Directors of Municipal Water District of Orange County hereby adopts the WEROC Emergency Operations Plan, dated March 2018.

Said resolution was adopted on April 18, 2017, by the following roll call:

| | |
|----------|-----------|
| AYES: | Directors |
| NOES | None |
| ABSENT: | Directors |
| ABSTAIN: | None |

I hereby certify the foregoing is a true and correct copy of Resolution No. 2067 adopted by the Board of Directors of Municipal Water District of Orange County, at its meeting held on April 18, 2017.

Maribeth Goldsby, Board Secretary
Municipal Water District of Orange County



ACTION ITEM

April 18, 2018

TO: Board of Directors

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

Robert Hunter
General Manager

Staff Contact: Joe Berg
Director of Water Use Efficiency

SUBJECT: Water Loss Audit Validation Research

STAFF RECOMMENDATION

Staff recommends the Board of Directors authorize the General Manager to enter into a professional services agreement with Water Systems Optimization, Inc. to provide independent water loss audit report validation services for member agencies, using budgeted research funds of \$52,000.

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

Staff is proposing to establish a MWD OC water loss audit validation process for 2018 to maintain the same independent validation consistency we have achieved in 2016 and 2017. Staff will share our results with the State Water Resources Control Board (Water Board), who is charged with establishing performance standards for the volume of water losses. MWD OC's research will help the Water Board develop a state-wide policy that is based on superior quality and consistently derived local data. Our observations will summarize the differences between MWD OC's three-years of consistent data versus the broader state-wide data set that is relying on two different validation approaches. This effort will benefit member agencies as a core research program within our existing Water Loss Control

| | | | |
|---|---------------------------|--------------------|------------------|
| Budgeted (Y/N): Yes | Budgeted amount: \$75,000 | Core <u>X</u> | Choice <u> </u> |
| Action item amount: \$52,000 | | Line item: 35-7040 | |
| Fiscal Impact (explain if unbudgeted): This project is proposed to be funded with budgeted research funds. | | | |

Technical Assistance Program in partnership with Water Systems Optimization, Inc. and utilizes budgeted MWDOC funds

DETAILED REPORT

Senate Bill 555 requires each urban retail water supplier, on or before October 1, 2017 and by October 1 of each year thereafter, to submit a completed and validated water loss audit report for the previous calendar or fiscal year, as prescribed by rules adopted by the Department of Water Resources (DWR). The bill also requires:

- DWR to post all validated water loss audit reports on its internet website in a manner that allows for comparisons across water suppliers and to make these reports available for public viewing.
- DWR to provide technical assistance to guide urban retail water suppliers' water loss detection programs.
- the Water Board, no earlier than January 1, 2019 and no later than July 1, 2020, to adopt rules requiring urban retail water suppliers to meet performance standards for the volume of water losses.
- the Water Board to contribute up to \$400,000, using funds available for the 2016–17 fiscal year, toward procuring water loss audit report validation assistance for urban retail water suppliers (only 2017).

In response to this legislation, in October 2015 the MWDOC Board authorized staff to begin a Water Loss Control Technical Assistance Program for its member agencies. Water Systems Optimization, Inc. (WSO) was retained to assist agencies with water loss audit development and validation, component analysis of real losses, meter accuracy testing, and leak detection. Because of this, Orange County agencies are significantly ahead of all other agencies in the state with regard to knowledge and understanding of distribution system water loss. Orange County agencies have two consecutive validated water loss audit reports (2016 and 2017), while nearly all other agencies have just one validated water loss audit (2017).

What is a Water Audit Validation? According to the Water Research Foundation *Level 1 Water Audit Validation: Guidance Manual*, "water audit validation is the process of examining water audit inputs to improve the water audit's accuracy and document the uncertainty associated with the water audit data." Notably, WSO was the lead researcher on this Water Research Foundation report. Though water audit validation can be conducted at three distinct levels of rigor, all water audit validation efforts share two common goals. First, the water audit validation aims to identify and appropriately correct for inaccuracies in water audit data and application of methodology. Secondly, the water audit validation aims to evaluate and communicate the uncertainty inherent in the water audit data.

For 2017, the Water Board funded a state-wide Technical Assistance Program that provided water loss audit report validation for all urban water suppliers in the state, including agencies throughout Orange County. This process established the first state-wide validated water loss audit report dataset. The Technical Assistance Program is no longer available, as it was only offered for the first year of SB 555 requirements.

SB 555 charged DWR with providing technical assistance to guide urban retail water suppliers' water loss detection programs, including water loss audit report validation.

According to the DWR Guidelines, water loss audit reports must be validated by an independent individual that was not involved in compiling the audit report.

Beyond 2017, DWR has defined two paths individuals can take to become a water loss audit report validator:

1. Show proof of validating a minimum of ten water loss audit reports, or
2. Become a Certified Water Loss Audit Validator through the California-Nevada Chapter of the American Water Works Association (Cal-Nev AWWA) Water Audit Validator Certification Program.

Today, because water loss audit validation is so new, very few individuals/consultants have validated a minimum of ten water loss audit reports.

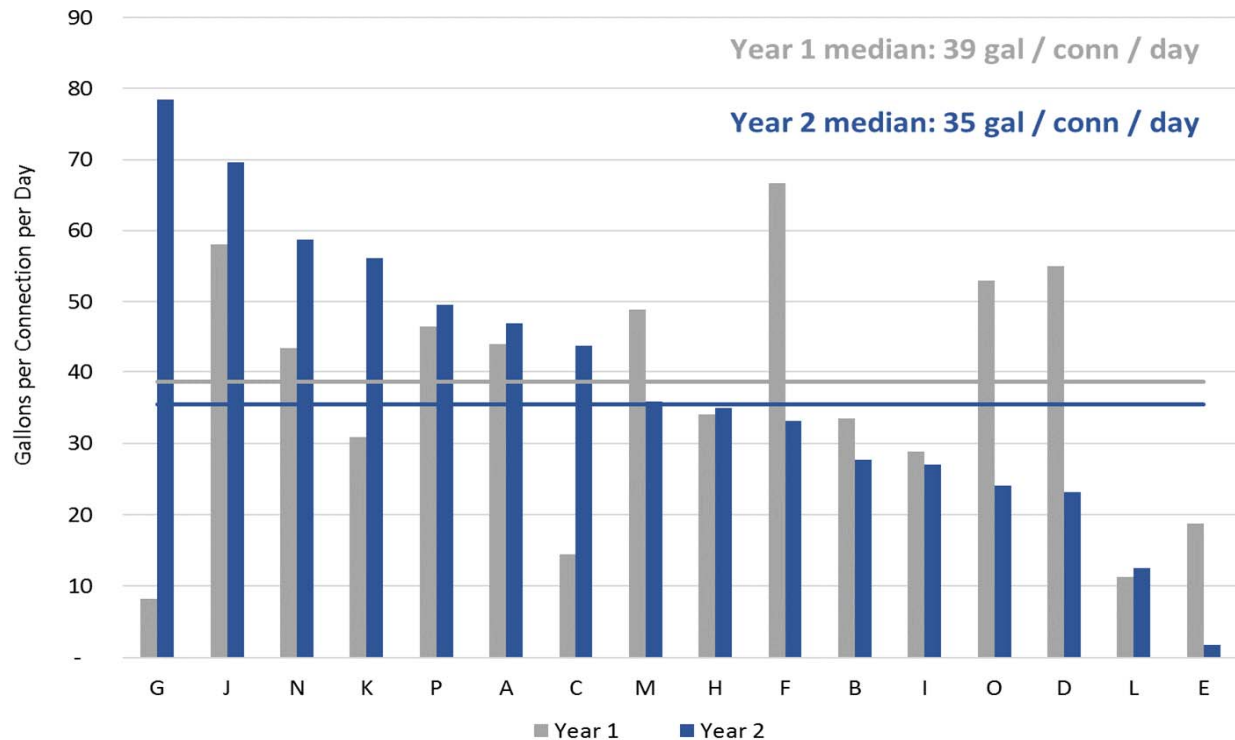
DWR selected Cal-Nev AWWA to develop the Water Audit Validator Certification Program due to its long term success in administering similar programs for backflow, cross connection treatment, and distribution certifications. The Cal-Nev AWWA has convened a Water Audit Validation Certification Committee. Joe Berg is an active member of this committee. This committee is nearing the end of the process of developing a Water Audit Validator Certification Program. This Water Audit Validator Certification Program is scheduled to begin in April 2018, though dates have not yet been published. The price of Certification training registration is anticipated to be approximately \$2,000 per person. Those who successfully complete the coursework and pass a test will be eligible to validate water loss audits and sign certification forms to be submitted with the water loss audit to DWR.

On March 9, 2018, Water Board staff began the stakeholder process of developing rules requiring urban retail water suppliers to meet performance standards for the volume of water loss. This was the first of four stakeholder meetings the Water Board plans to hold. At this meeting, Water Board staff revealed that they will base these performance standards on as little as two years of validated water loss audit data. This represents a significant area of concern for MWDOC staff. Not only is the Water Board planning to set the standards on a very limited data set (two years), but they are also planning to use two different validation processes. The 2017 validation process was funded by the Water Board and utilized two consultants working very closely to validate water audit reports for all urban water suppliers in the state. This provided a common validation approach and, therefore, a very consistent data set. Starting in 2018, all other validations will be done by a broader group of validators, including consultants and water agency staff who complete the Cal-Nev AWWA Water Audit Validator Certification. As a result, the variability of water balance validations will increase significantly from year to year and may result in the standard being set based upon poor quality data.

At the conclusion of the second year of MWDOC's Water Loss Control Technical Assistance Program, staff presented the water loss audit results to the Water Board staff who are leading the process to set the water loss volume standard by the July 1, 2020 deadline. A key takeaway for Water Board staff was the variability of data from Year 1 to Year 2. For example, in Figure 1, half of the agencies (G, N, K, C, F, O, D, and E) have significantly different results for Water Loss per Connection per Day between Year 1 and 2. These differences are driven by the data used to compile the Water Loss Audit. Each year

an agency compiles a water loss audit report, they identify data improvements to be made for the subsequent water loss audit report. Over time, questionable or suspicious data are improved, leading to water loss audit results that are more reliable and consistent from year to year.

Figure 1
Water Loss per Connection per Day



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

MWDOC's Water Loss Control Technical Assistance Program has positioned our staff and member agencies for success due to deeper knowledge of water loss and a consistent, independently-validated water loss audit data set. Staff is proposing to extend our water loss audit report validation for 2018 to all member agencies as a Core program using MWDOC budgeted research funds. This will allow Orange County's data to be validated consistently for a third consecutive year. The results of this three-year data set will be shared with Water Board staff with the intent to use this data to better inform the standards setting process.

Twenty-six of MWDOC's member agencies are considered urban water suppliers and are therefore required to have their water loss audit reports independently validated (EOCWD and Serrano do not serve 3,000 connections or 3,000 acre feet per year and are not subject to SB555). Staff discussed this research effort with WSO and negotiated a discounted fixed cost of \$2,000 per agency. The total cost for this research effort would be \$52,000¹. WSO was amenable to the discounted rate because they will work with a larger number of agencies and the data will have value to the Water Boards standard setting process.

Staff recommends the Board of Directors authorize the General Manager to enter into a professional services agreement with Water Systems Optimization, Inc. to provide independent water loss audit report validation services for member agencies, using budgeted research funds of \$52,000. Staff recommends this research effort as it will provide Water Board staff with more consistent and extensive water loss audit data as they work to establish volumetric water loss standards for urban water suppliers.

¹ MWDOC technical assistance program includes water loss audit validation by WSO at a fixed cost of \$2,500 per retail agency. In 2016, this cost was paid by some, but not all, retail agencies.



INFORMATION ITEM

April 2, 2018

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

FROM: **Robert Hunter, General Manager**

Staff Contact: Karl Seckel

SUBJECT: Update on SMWD Reliability Planning

STAFF RECOMMENDATION

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

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

Attached is a presentation provided by SMWD staff at a Strategic Planning meeting held on March 7. This was the second of two meetings discussing an approach to future projects for the District. The meeting was attended by about 30 people including Rob Hunter, Karl Seckel and MWDOC Director Megan Yoo Schneider. Staff is of the belief that MWDOC's Directors and P&O Committee may have an interest in the SMWD discussions, so staff is providing an overview.

SMWD has estimated their total ultimate potable demands at about 24,000 AF and have developed a goal of trying to meet 30% of those potable needs from local supplies. SMWD outlined seven programs that will expand their recycled water supplies by about 4,450 AF per year and will develop local potable water supplies in the amount of about 8,000 AF per year to meet their goals. Each of the programs can have multiple phases or projects involved. Each of the programs were outlined in the workshop materials and they discussed the components, potential funding, cost of the water, proposed schedule and Pros and Cons for proceeding with each. The following table provided at the workshop provides an overview of their approach.

| | | | |
|---|------------------|------------|-------------|
| Budgeted (Y/N): | Budgeted amount: | Core ____ | Choice ____ |
| Action item amount: | | Line item: | |
| Fiscal Impact (explain if unbudgeted): | | | |

| | Program | Description | Amount of Water |
|----------|------------|--|-----------------|
| Recycled | 1 | Expand the 3A Plant and convert RSM to recycled water | 2,250 |
| | 2 | San Clemente intertie | 2,200 |
| | | Total | 4,450 |
| Potable | 3 | City of San Juan Capistrano Supply | 1,274 |
| | 5 | Convert RSM Mutual Water to potable | 2,500 |
| | 3 | Phase 1 rubber dams in San Juan Watershed | 560 |
| | 3 and/or 6 | Potable reuse through Phase 2 and/or 3 of San Juan Watershed and/or Direct Potable Reuse | 2,666 |
| | 7 | Doheney desal | 1,000 |
| | | Total | 8,000 |

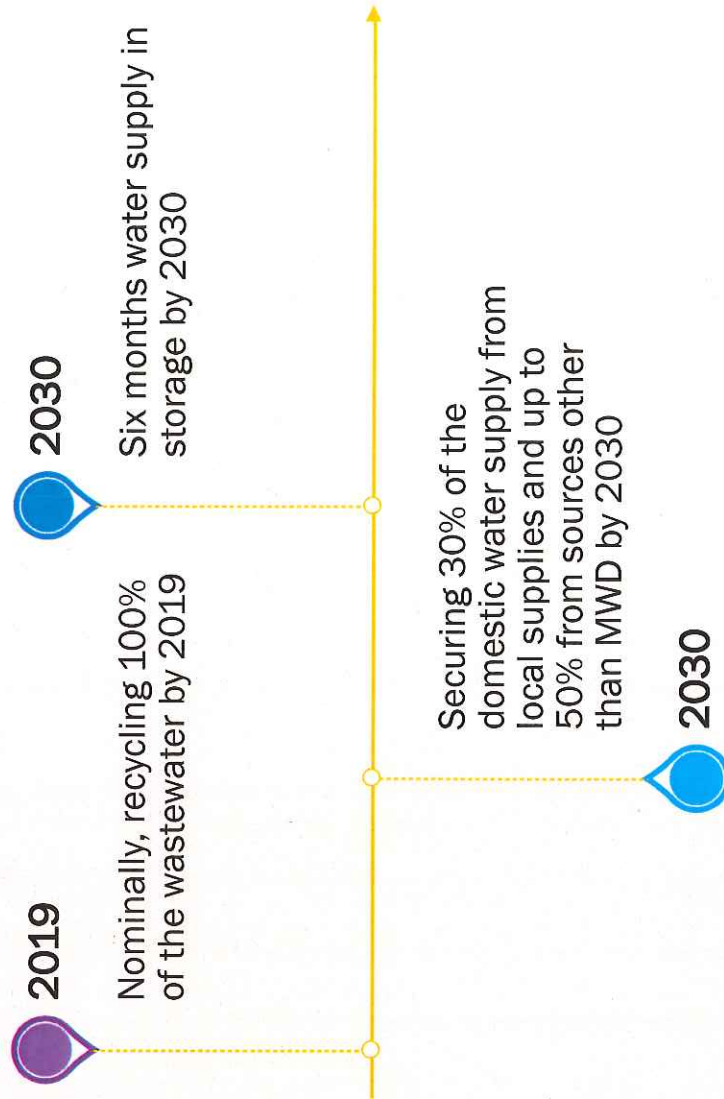
The ultimate action provided by the SMWD Board at the conclusion was one of a directional nature and not an absolute. The Board approved staff continuing to move in the direction of implementation of these projects, while keeping the Board informed. Staff noted that all of these projects would require work to move them forward and it is possible that projects would fall off of the list or others could be added to the list or the anticipated yields could increase or decrease as work proceeds and as additional information becomes available on the costs and constraints of the various projects. The overall costs and affordability of the projects would also continue to be studied.

Attached is the slide presentation from the March 7 workshop.

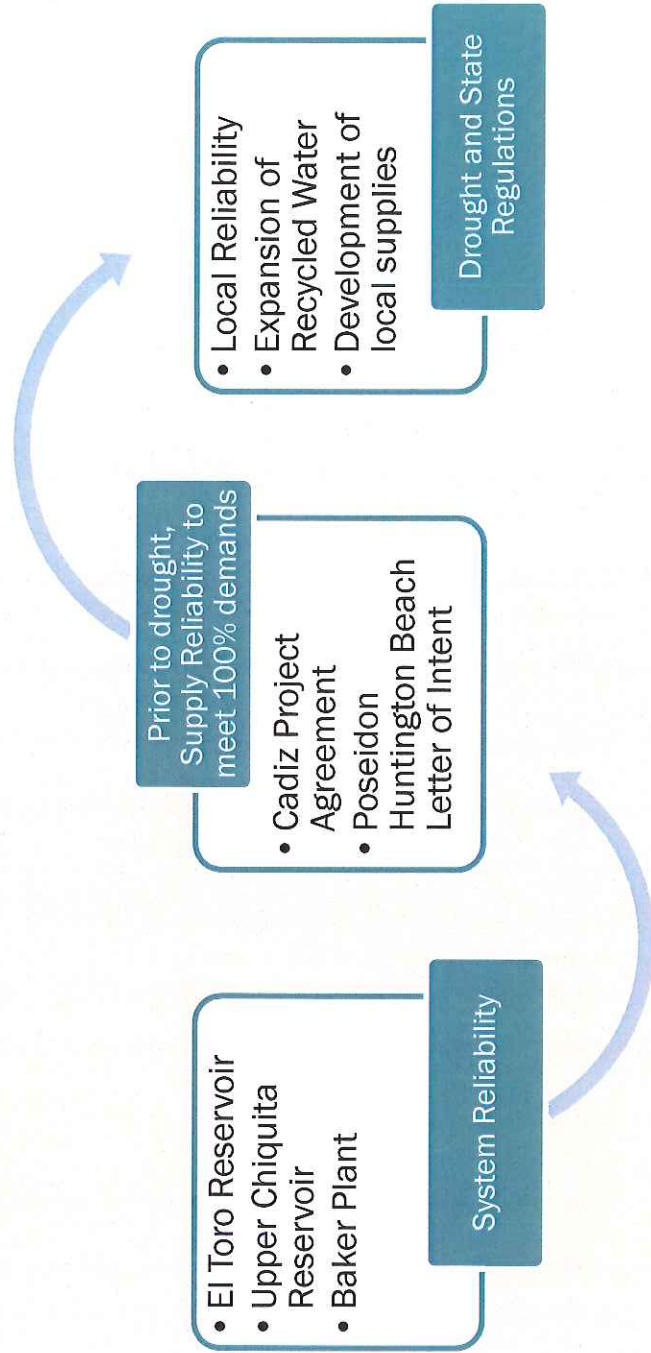
STRATEGIC PLAN WORKSHOP

Development of Local Supplies
March 7, 2018

Current Strategic Goals

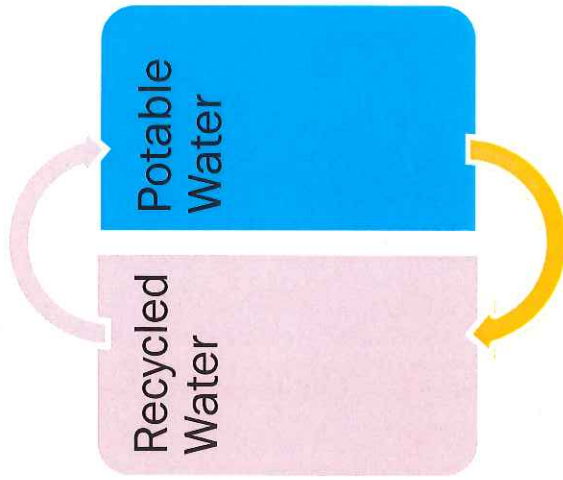


Our path to this point...



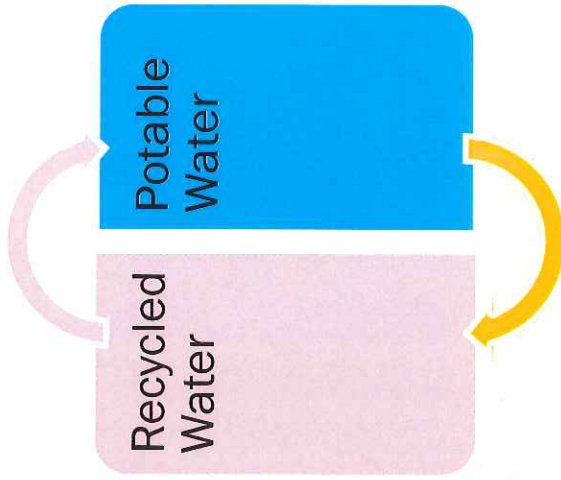
Recent Planning

- Expand the use of recycled water
 - Historic uses: Mission Viejo, Ladera, Talega
 - New uses: Coto de Caza, Califia, Palmia, Lake Mission Viejo and RMV Villages
 - Use available water including urban return flows, RMV Mutual Water Company, Chiquita, Oso Creek, 3A and IRWD supplies
 - Planned use: RSM, Las Flores, Hidden Ridge
- Requires additional supply to meet demand
 - Trampas Reservoir
 - 3A Expansion
- Expansion of recycled water provides opportunity for local potable supplies



Recent Planning

- Develop local water supplies
 - *Capture stormwater*
 - San Juan Basin Authority Groundwater Optimization Plan
 - *Local groundwater*
 - RMV Mutual
 - City of San Juan Capistrano
 - *Potable Reuse*
 - *Doheny Desalination*
- Use of RMV Mutual and Potable Reuse require expansion of recycled system
 - *Trampas Reservoir*
 - *3A Expansion*
 - *City of San Clemente*
 - *Remove Hydraulic Restrictions between Chiquita & Oso Creek Systems*



Program I, Recycled Water

Recommendation: Authorize Expansion & Conversions

- Final step in 100% recycling along with Trampas Reservoir
- Eliminates secondary effluent ocean disposal except for nominal amount
- Eliminates participation in LAWRP and potential future costs
- May reduce costs of upgrades to the Latham Plant and reduces annual operating costs
- Produces recycled water for conversion of RSM
- Proposed to be funded by ID 3 and 4A General Obligation Bond Sale, \$34 million
 - Average \$181/parcel/
- Reduces imported water demand, water costs will be substantially less than MWD over life of the project

Mission Viejo Flows

| Treatment Plants | Daily Flow (MGD) | | Annual Recycled Water (AF) | |
|------------------|------------------|------|----------------------------|-------|
| | 2018 | 2020 | 2018 | 2020 |
| Los Alisos WRP | 0.67 | 0.00 | 0 | 0 |
| 3A WRP | 0.13 | 2.24 | 131 | 2,258 |
| Oso Creek WRP | 1.71 | 1.71 | 1,724 | 1,724 |
| Latham Plant | 1.44 | 0.00 | 0 | 0 |
| Total | 3.95 | 3.95 | 1,855 | 3,982 |
| Ocean Outfall(s) | 2.11 | 0.00 | 2,563 | 400 |

Program II, Talega

Recommendation: Continue Agreement Development

- Send Talega wastewater to City of San Clemente Water Reclamation Plant
 - *Reduces odor control expenses*
 - *Reduces odor potential*
 - *Avoids forcemain replacement*
 - *Improves tertiary effluent quality at Chiquita WRP*
- Install intertie between District and City for recycled water
 - *Minimum flow will be return of SMWD wastewater as recycled water*
 - *Maximum flow will be underutilized City recycled water based on cost*
 - Opportunity for potable reuse
 - Possible offset for converting RMVMWC to potable water
 - *Provide City with opportunity to participate in Trampas and Potable Reuse projects*

Program III, Groundwater in San Juan Basin
Recommendation: Continue City of San Juan
Capistrano Annexation Discussion

- Acquire 50% of the City of San Juan Capistrano Ground Water Recovery Plant though annexation of City's utility department
 - Projected average flow of 1,274 AFY with potential of 2,900 AFY without expansion of the plant
 - Meets 16% of our reliability goal
 - Provides control of local resource and potential expansion of recycled water distribution
 - Costs will be equal to or less than MWD in 2026 based on average production

| | Program | Description | Amount of Water (AFY) |
|----------|------------|--|-----------------------|
| Recycled | 1 | Expand the 3A WRP and Convert RSM to Recycled Water | 2,250 |
| | 2 | San Clemente Intertie | 2,200 |
| | | Total | 4,450 |
| Potable | 3 | City of San Juan Capistrano Supply | 1,274 |
| | 5 | Convert RMV Mutual Water to Potable | 2,500 |
| | 3 | Phase I Rubber Dams in San Juan Watershed | 560 |
| | 3 and/or 6 | Potable Reuse through Phase 2 and/or 3 of San Juan Watershed and/or Direct Potable Reuse | 2,666 |
| | 7 | Doheny Desal | 1,000 |
| | | Total | 8,000 |

| | Program | Description | Amount of Water (AFY) |
|----------|------------|--|-----------------------|
| Recycled | 1 | Expand the 3A WRP and Convert RSM to Recycled Water | 2,250 |
| | 2 | San Clemente Interlie | 2,200 |
| | Total | | 4,450 |
| Potable | 3 | City of San Juan Capistrano Supply | 1,274 |
| | 5 | Convert RMV Mutual Water to Potable | 2,500 |
| | 3 | Phase I Rubber Dams in San Juan Watershed | 560 |
| | 3 and/or 6 | Potable Reuse through Phase 2 and/or 3 of San Juan Watershed and/or Direct Potable Reuse | 2,666 |
| | 7 | Doheny Desal | 1,000 |
| | Total | | 8,000 |

Program V, Upper San Juan Basin
Recommendation: Preliminary Design And Project Development
For First Phase Of RMV Mutual Water Treatment Plant

- Existing agreement to purchase up to 2,500 AF of untreated groundwater from RMV Mutual Water Company for supplementing the recycled water system
 - Current year is 560 AF
 - Amount increases based on development, with completion of PA 2 the amount is 811 AF.
- Ground water is under the influence of surface water requiring surface water treatment
 - Low in salts
 - May require additional iron and manganese removal
- Phase one is proposed to be 811 AF and future expansion to full 2,500 AF
 - Development may provide for indirect potable reuse through groundwater recharge

Program III, Groundwater in San Juan Basin
Recommendation: Complete CEQA, Authorize
Final Design And Permitting Of Phase I Of
The SJW Project

- With annexation of the City of San Juan Capistrano utilities, installation of the first phase of the SJW Project provides an additional average of 560 AFY
 - EIR is under preparation with comments received from public
 - Helps reduce the unit cost for production of water at the GWRP
 - By 2036 cost is projected to be less than MWD
- Stepped approach provides for off-ramps
 - Finalize the design and permitting
 - Obtain funding through bond sale, grants, and/or MWD LRP

| | Program | Description | Amount of Water (AFY) |
|----------|------------|--|-----------------------|
| Recycled | 1 | Expand the 3A WRP and Convert RSM to Recycled Water | 2,250 |
| | 2 | San Clemente Intertie | 2,200 |
| | Total | | 4,450 |
| Potable | 3 | City of San Juan Capistrano Supply | 1,274 |
| | 5 | Convert RMV Mutual Water to Potable | 2,500 |
| | 3 | Phase I Rubber Dams in San Juan Watershed | 560 |
| | 3 and/or 6 | Potable Reuse through Phase 2 and/or 3 of San Juan Watershed and/or Direct Potable Reuse | 2,666 |
| | 7 | Doheny Desal | 1,000 |
| | Total | | 8,000 |

| Program | Description | Amount of Water (AFY) |
|----------|---|-----------------------|
| Recycled | 1 Expand the 3A WRP and Convert RSM to Recycled Water | 2,250 |
| | 2 San Clemente Intertie | 2,200 |
| | Total | 4,450 |
| Potable | 3 City of San Juan Capistrano Supply | 1,274 |
| | 5 Convert RMV Mutual Water to Potable | 2,500 |
| | 3 Phase I Rubber Dams in San Juan Watershed | 560 |
| | 3 and/or 6 Potable Reuse through Phase 2 and/or 3 of San Juan Watershed and/or Direct Potable Reuse | 2,666 |
| | 7 Doheny Desal | 1,000 |
| | Total | 8,000 |

Program III and/or VI, Potable Reuse Recommendation: Continue Research On Treatment Alternatives And Groundwater Recharge Alternatives

- With expansion of the recycled water system we have the opportunity for reuse
- Research project for cost effective treatment alternatives at the Lake Mission Viejo Advanced Water Treatment Plant
- Working with consultant team on ground water travel times in both lower and upper San Juan Basin
- Possible modification(s) to current legislation
- Possible Reservoir Augmentation if combined with RMVMWC groundwater
- Recycled water available from
 - 3A WRP
 - City of San Clemente WRP

For our friends and neighbors here, this is not all the recycled water available, so we can have partners

Program VII, Doheny Desalination Recommendation: Continue Review Of SCWD Project And EIR

- SCWD is proposing 5 to 15 MGD Ocean Desalination Plant
 - Operational 2021 per current schedule
 - Cost at project site of \$1,900 to \$2,300/AF
 - Additional cost of \$200 to \$300/AF for delivery to the District
 - May be attenuated through annexation with San Juan Capistrano
- Two options
 - Agreement to participate in project
 - Agreement to purchase water from the project

| | Program | Description | Amount of Water (AFY) |
|----------|------------|--|-----------------------|
| Recycled | 1 | Expand the 3A WRP and Convert RSM to Recycled Water | 2,250 |
| | 2 | San Clemente Intertie | 2,200 |
| | Total | | 4,450 |
| Potable | 3 | City of San Juan Capistrano Supply | 1,274 |
| | 5 | Convert RMV Mutual Water to Potable | 2,500 |
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| | 3 and/or 6 | Potable Reuse through Phase 2 and/or 3 of San Juan Watershed and/or Direct Potable Reuse | 2,666 |
| | 7 | Doheny Desal | 1,000 |
| | Total | | 8,000 |

Financial Presentation

- Interactive Model developed to analyze the overall cost of water to the District
- Inputs include
 - *Estimated unit cost of water*
 - *Proposed amount of water*
 - *Start date*
- Output summarizes total cost by year in comparison to MWD cost

Recommendations for District's Fiscal Year 2018-2019 Integrated Resource Plan

1. Recycled Water
 1. Authorize 3A Expansion & Conversions
 2. Complete Agreement with the City of San Clemente
 1. Design intertie
2. Potable Water
 1. Continue discussions with the City of San Juan Capistrano for utility annexation
 2. Complete Phase I San Juan Watershed CEQA and begin final design and permitting
 3. Initiate preliminary design of treatment plant for conversion of RMV Mutual Water to potable
 4. Continue research On cost-effective treatment alternatives and groundwater recharge alternatives
 5. Continue to review SCWD project and EIR
3. Storage
 1. Continue to discuss the storage potential of Irvine Lake and/or other alternative
4. Community Outreach
 1. Develop polling around the proposed project and overall education plan to ensure ratepayers are informed

| | Program | Description | Amount of Water (AFY) |
|----------|------------|--|-----------------------|
| Recycled | 1 | Expand the 3A WRP and Convert RSM to Recycled Water | 2,250 |
| | 2 | San Clemente Intertie | 2,200 |
| | Total | | 4,450 |
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| | 7 | Doheny Desal | 1,000 |
| | Total | | 8,000 |

| ENGINEERING & PLANNING | |
|---|---|
| Orange County Reliability Study | <p>MWDOC staff and consultant CDM Smith continue to work on the 2018 OC Reliability Study update which looks at both supply (drought supply) reliability and system (emergency) reliability. The update uses modeling assumptions based on more recently available information on future assumptions for the Colorado River, and State Water Project (SWP). The update looks to include modeling of SWP supplies once the California WaterFix volumes are determined. MWDOC staff will be meeting with MET staff to secure the needed yield estimates for whatever configuration of the WaterFix project is moved forward.</p> <p>A meeting was held on March 5th at MET with Brandon Goshi and Bill Hasencamp regarding some of the climate work, IRP assumptions and Colorado shortage assumptions relative to the Reliability update.</p> <p>A final SUPPLY reliability report is expected in the Spring 2018; the SYSTEM reliability report timing is linked to evaluation of the ability of IRWD to expand or extend the existing SOC Interconnection capacity (see RFP below).</p> |
| South Orange County Emergency Service Program | <p>A Request For Proposals (RFP) was released on February 23rd, as part of a possible renewal/extension of the SOC Interconnection Agreement with IRWD. The RFP is to study the ability/constraints of IRWD's system to move water through their system to SOC agencies into the future.</p> <p>The current Emergency Services Program Agreement is in effect through 2029. The agreement defines minimum monthly flow rate 'reservations' through IRWD's system for SOC agencies in the event of a planned or emergency short term outage. The agreement acknowledges IRWD has a diminishing ability to deliver water to SOC over time as IRWD's service area is built out; with zero flow available in the months of July through September beginning in 2020.</p> <p>Three proposals were received and are currently being evaluated by MWDOC and IRWD staff. A recommendation to award the study contract will be brought to the MWDOC Board for consideration at the April P&O Committee meeting.</p> |
| North and Central O.C. Integrated Regional Watershed Management Area | <p>A stakeholders meeting for the IRWM Plan (OC Plan) was held on March 13th to provide a status report on the Plan project list. Next steps are to finalize scoring as required by the Department of Water Resources (DWR) and then submit the projects to Santa Ana Watershed Project Authority (SAWPA) for inclusion under the One Water One Watershed (OWOW) Plan.</p> <p>The OC Plan is a sub-regional plan for the Santa Ana Funding Area. As the OC Plan is not a DWR-approved plan for the Santa Ana Funding Area, all</p> |

| | |
|---|---|
| | projects submitted to the OC Plan will be submitted to the SAWPA under the OWOW Plan. |
| San Juan Basin Authority | <p>The March 13th SJBA Board meeting included results from the Bedrock Barrier Investigation which is looking at a near-surface geologic feature in the lower San Juan Basin. This feature may serve as a barrier to ground-water flows between the City of San Juan Capistrano's and South Coast WD's well fields. If verified, this could allow the two agencies to operate independently of each other in different portions of the basin with this feature separating the two areas. The investigation found that the barrier exists on the west side of San Juan Creek but additional work is needed on the east side of the creek to make a complete determination.</p> <p>The SJBA discussions also included a short discussion regarding input received from the prior month's workshop meeting on what key issues the SJBA should be focusing on. At the next SJBA meeting Executive Director Norris Brandt will provide further input and recommendations regarding the input received.</p> |
| Service Connection CM-1 Cost Issues with MET | A meeting was held on February 8 th between staff from MWDOC and senior MET staff to discuss a series of alternatives for CM-1 and the concurrent ability to deliver MET water and groundwater to LBCWD through Newport Beach's water system. MWDOC staff will continue to work with MET staff to identify/explore alternatives. |
| Use of East Orange County Feeder No. 2 for Conveyance of Groundwater | MWDOC has been discussing concepts for pumping groundwater into the EOCF No. 2 for conveyance to SOC during an emergency event. MET staff are currently reviewing the concepts. |
| Scheduled Rialto Pipeline Shutdown | MET has scheduled an 8-day shutdown of the Rialto Pipeline begin April 23 rd to perform repairs to the Devil Canyon facility. OC-59 (serving OCWD) will be out of service during the shutdown. |
| Doheny Ocean Desalination Project | <p>Department of Water Resources (DWR) released the draft funding awards for the fourth round of Proposition 1 Desalination Grants (Water Desalination Grant Program). 8 projects out of 30 proposals are recommended for funding to receive a total of \$34.4 million of available funds. Doheny is listed as one of three projects to receive the maximum of \$10 million each for construction funding.</p> <p>GHD is developing a Scope of Work for a 3rd party legal firm to assist with Design-Build-Operate (DBO) contract development. A Request For Proposals (RFP) for 3rd party legal firms is anticipated to be released in April 2018.</p> <p>The release of the draft South Coast Water District EIR for public comments is anticipated in March 2018 with the final adoption scheduled for June:</p> |

| | |
|--|--|
| | <ul style="list-style-type: none">• 3/5/18 - 4/15/18 Draft EIR Production• 4/16/18 - 6/15/18 60-day Public Review Period•• May 2018 - Public Workshop• 6/16-7/15/18 Prepare Final EIR (Response to Comments)•• 7/26/18 South Coast WD Board Meeting |
| | <p>Rob Hunter, Director Sat Tamaribuchi, and Karl Seckel participated in the continuing discussion regarding the fisheries habitat issues associated with the Bay Delta and the California WaterFix. The final report by Dr. Peter Moyle for Orange County Coastkeeper ‘Making the Delta a Better Place for Fishes’ has been published and is available at: https://www.coastkeeper.org/white-paper/ A session is also being planned for the Spring ACWA meeting.</p> |

**Status of Ongoing WEROC Projects
February 2018**

| Description | Comments |
|--|---|
| Coordination with WEROC Member Agencies | <p><i>Ongoing: WEROC, with Michal Baker as the lead consultant, is facilitating 19 agencies through the process of updating the Orange County Water and Wastewater Multi-Jurisdictional Hazard Mitigation Plan. Update: Francisco met with the City of Orange Water Department to discuss the update to their capabilities assessment and the previous mitigation action items.</i></p> <p>Francisco Soto has received a first draft of the plan. A complete first draft will be distributed to the planning team on March 27.</p> <p>Kelly Hubbard had a conference call with Claris Strategies to discuss their update of Irvine Ranch Water District's Emergency Operations Plan and to provide input on how WEROC is incorporated into the plan.</p> <p>Kelly met with Orange County Sanitation District (OCSD) to discuss filling their vacant Emergency Coordinator position. They discussed what they wanted to get out of the program in the future and what kind of candidates would be good for the position.</p> |
| Training and Programs | <p>WEROC hosted an Exercise Design meeting at the end of February. The purpose of the meeting is to get individuals to work together to develop their own internal exercises. The March meeting has been canceled.</p> <p>Kelly provided two WebEOC (Disaster Computer system) trainings and two EOC Section Specific trainings that were for Plans & Intelligence, and one on Management. They were both well attended and were received well.</p> <p>Kelly attended the Women in Water Breakfast hosted by MWDOC this month.</p> |
| Coordination with the County of Orange | <p>Francisco attended the March Orange County Emergency Management Organization (OCEMO) meeting and Exercise Design meeting that took place in Laguna Beach. Lt. Joe Torres of the Laguna Beach Police Department presented on the impacts the 2005 Laguna Beach Landslide had on the City and the lessons learned from the incident. Staff also attended the OCEMO Exercise Design meeting.</p> <p><i>Ongoing: WEROC staff participation in the OA Agreement Revision Working Group. Update: Staff participated in this meeting and is</i></p> |

| | |
|---|---|
| | providing input on the final couple of areas. They expect to finish review in the next monthly meeting. |
| EOC Readiness | <p>Kelly and Francisco met with a Finance Recovery expert to clarify and discuss issues related to Special District Emergency Declaration, Public Assistance reimbursement claims, and MWDOC's emergency purchasing authority. Once clarified, these concepts were discussed with MWDOC management and incorporated into the Emergency Operations Plan as appropriate.</p> <p>Janine Schunk completed the 2018 update of the contact lists for California Water and Wastewater Agency Response Network (CalWARN) Region 1 and WEROC Member Agency. This includes updated that information into AlertOC, Safety Center and the physical EOC Phone books.</p> |
| Emergency Plan | Francisco is currently working on updating the Emergency Operations Plan (EOP) and hazard specific annexes. The update includes a streamlined approach, update to current information, and the incorporation of corrective actions from previous WEROC training and exercises. |
| Coordination with Outside Agencies | <p>Francisco attended a tour of Lake Mathews in Riverside, California to look at the facility's chlorination operation and various other components.</p> <p>Staff participated in the MET MARS radio test and the OA Radio Test.</p> |

Status of Water Use Efficiency Projects

March 2018

| Description | Lead Agency | Status % Complete | Scheduled Completion or Renewal Date | Comments |
|--|-------------|-------------------|--------------------------------------|--|
| Smart Timer Rebate Program | MWDSC | Ongoing | Ongoing | <p>In February 2018, 141 residential and 30 commercial smart timers were installed in Orange County.</p> <p>For program water savings and implementation information, see MWDOC Water Use Efficiency Program Savings and Implementation Report.</p> |
| Rotating Nozzles Rebate Program | MWDSC | Ongoing | Ongoing | <p>In February 2018, 884 rotating nozzles were installed in Orange County.</p> <p>For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.</p> |
| SoCal Water\$mart Residential Indoor Rebate Program | MWDSC | Ongoing | Ongoing | <p>In February 2018, 307 high efficiency clothes washers and 21 premium high efficiency toilets were installed through this program.</p> <p>For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.</p> |
| SoCal Water\$mart Commercial Rebate Program | MWDSC | Ongoing | Ongoing | <p>In February 2018, 202 premium high efficiency toilets were installed through this program.</p> <p>For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.</p> |

| Description | Lead Agency | Status % Complete | Scheduled Completion or Renewal Date | Comments |
|---|-------------|-------------------|--------------------------------------|---|
| Industrial Process/ Water Savings Incentive Program (WSIP) | MWDSC | 30% | June 2020 | <p>This program is designed for non-residential customers to improve their water efficiency through upgraded equipment or services that do not qualify for standard rebates. Incentives are based on the amount of water customers save and allows for customers to implement custom water-saving projects.</p> <p>Total water savings to date for the entire program is 582 AFY and 2,764 AF cumulatively.</p> |
| Turf Removal Program | MWDOC | Ongoing | Ongoing | <p>In February 2018, 22 rebates were paid, representing \$30,416.40 in rebates paid this month in Orange County. To date, the Turf Removal Program has removed approximately 21.3 million square feet of turf.</p> <p>For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.</p> |
| Spray to Drip Conversion Program | MWDOC | Ongoing | Ongoing | <p>This is a rebate program designed to encourage residential and commercial sites to convert their existing conventional spray heads to low-volume, low-precipitation drip technology.</p> <p>To date, 222 residential sites and 55 commercial sites have completed spray to drip conversion projects.</p> |
| Landscape Design Assistance Program (LDAP) | MWDOC | 90% | April 2018 | <p>This is a pilot program designed to offer free front yard landscape design assistance to customers who are participating in MWDOC's Turf Removal Rebate Program.</p> <p>To date, MWDOC has received and approved 101 questionnaires, and 92 site consultations have been</p> |

| Description | Lead Agency | Status % Complete | Scheduled Completion or Renewal Date | Comments |
|---|-------------|-------------------|--------------------------------------|---|
| Landscape Design Assistance Program (LDAP) (cont.) | | | | performed. Of the 92 sites, 87 have received their custom designs and have been sent their Letters To Proceed to begin their projects. MWDOC will be visiting these sites to take photos once each project is complete. Photos will also be taken at six and twelve months after installation. |
| Recycled Water Retrofit Program | MWDSC | 40% | September 2018 | This program provides incentives for commercial sites to convert dedicated irrigation meters to recycled water. To date, Metropolitan has provided a total of \$145,596.85 in funding to 21 sites irrigating over 60 acres of landscape, and MWDOC has paid a total of \$21,950.50 in grant funding to 10 of those sites. The total potable water savings achieved by these projects is over 149 AFY. |

Orange County

Water Use Efficiency Programs Savings and Implementation Report

Retrofits and Acre-Feet Water Savings for Program Activity

| Program | Program Start Date | Retrofits Installed in | Month Indicated | | Current Fiscal Year | | Overall Program | | |
|---|--------------------|------------------------|-----------------|---------------|---------------------|---------------|-----------------|-------------------------|-----------------------------|
| | | | Interventions | Water Savings | Interventions | Water Savings | Interventions | Annual Water Savings[4] | Cumulative Water Savings[4] |
| High Efficiency Clothes Washer Program | 2001 | February-18 | 307 | 0.88 | 2,735 | 36.68 | 115,647 | 3,990 | 26,960 |
| Smart Timer Program - Irrigation Timers | 2004 | February-18 | 171 | 2.26 | 1,769 | 128.17 | 22,254 | 7,956 | 46,482 |
| Rotating Nozzles Rebate Program | 2007 | February-18 | 884 | 3.53 | 2,090 | 8.36 | 564,908 | 2,766 | 18,328 |
| Commercial Plumbing Fixture Rebate Program | 2002 | February-18 | 202 | 0.62 | 4,207 | 60.66 | 89,486 | 4,835 | 44,269 |
| Industrial Process/Water Savings Incentive Program (WSIP) | 2006 | February-18 | 0 | 0.00 | 0 | 0.00 | 28 | 582 | 2,764 |
| Turf Removal Program ^[3] | 2010 | February-18 | 17,585 | 0.21 | 427,846 | 23.03 | 21,333,447 | 2,987 | 10,245 |
| High Efficiency Toilet (HET) Program | 2005 | February-18 | 21 | 0.07 | 356 | 10.21 | 60,003 | 2,218 | 16,723 |
| Water Smart Landscape Program ^[1] | 1997 | | | | | | 12,677 | 10,621 | 72,668 |
| Home Water Certification Program | 2013 | | | | | | 312 | 7,339 | 15,266 |
| Synthetic Turf Rebate Program | 2007 | | | | | | 685,438 | 96 | 469 |
| Ultra-Low-Flush-Toilet Programs ^[2] | 1992 | | | | | | 363,926 | 13,452 | 162,561 |
| Home Water Surveys ^[2] | 1995 | | | | | | 11,867 | 160 | 1,708 |
| Showerhead Replacements ^[2] | 1991 | | | | | | 270,604 | 1,667 | 19,083 |
| Total Water Savings All Programs | | | 8 | | 439,003 | 267 | 23,530,597 | 51,337 | 422,277 |

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

^[2] Cumulative Water Savings Program To Date totals are from a previous Water Use Efficiency Program Effort.

^[3] Turf Removal Interventions are listed as square feet.

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

Item 6d

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

| Agency | FY 11/12 | FY 12/13 | FY 13/14 | FY 14/15 | FY 15/16 | FY 16/17 | FY 17/18 | Total | Current FY Water Savings Ac/Ft (Cumulative) | Cumulative Water Savings across all Fiscal Years | 15 yr. Lifecycle Savings Ac/Ft |
|---------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---|--|--------------------------------|
| Brea | 144 | 93 | 115 | 114 | 76 | 57 | 38 | 1,905 | 0.41 | 449.84 | 986 |
| Buena Park | 145 | 105 | 106 | 91 | 76 | 54 | 39 | 1,557 | 0.52 | 351.88 | 806 |
| East Orange CWD RZ | 10 | 10 | 8 | 8 | 8 | 3 | 1 | 193 | 0.01 | 48.58 | 100 |
| El Toro WD | 112 | 134 | 121 | 111 | 65 | 47 | 39 | 1,560 | 0.43 | 354.25 | 807 |
| Fountain Valley | 158 | 115 | 102 | 110 | 76 | 65 | 35 | 2,435 | 0.49 | 598.14 | 1,260 |
| Garden Grove | 236 | 190 | 162 | 165 | 251 | 127 | 57 | 3,620 | 0.80 | 845.78 | 1,873 |
| Golden State WC | 485 | 265 | 283 | 359 | 260 | 138 | 118 | 5,133 | 1.55 | 1,196.84 | 2,656 |
| Huntington Beach | 582 | 334 | 295 | 319 | 225 | 180 | 106 | 8,352 | 1.38 | 2,088.79 | 4,322 |
| Invine Ranch WD | 2,170 | 1,763 | 1,664 | 1,882 | 1,521 | 1,373 | 939 | 25,605 | 12.83 | 5,642.74 | 13,249 |
| La Habra | 128 | 82 | 114 | 87 | 66 | 53 | 40 | 1,367 | 0.53 | 307.95 | 707 |
| La Palma | 46 | 34 | 25 | 34 | 29 | 10 | 9 | 467 | 0.16 | 106.38 | 242 |
| Laguna Beach CWD | 57 | 38 | 37 | 39 | 32 | 19 | 15 | 947 | 0.23 | 229.00 | 490 |
| Mesa Water | 176 | 114 | 86 | 89 | 113 | 80 | 35 | 2,553 | 0.51 | 637.69 | 1,321 |
| Moulton Niguel WD | 679 | 442 | 421 | 790 | 688 | 575 | 391 | 10,312 | 5.06 | 2,257.43 | 5,336 |
| Newport Beach | 142 | 116 | 92 | 95 | 66 | 61 | 40 | 2,664 | 0.53 | 679.32 | 1,378 |
| Orange | 262 | 218 | 163 | 160 | 124 | 80 | 53 | 3,951 | 0.72 | 993.58 | 2,044 |
| Orange Park Acres | - | - | - | - | - | - | - | 12 | 0.00 | 3.76 | 6 |
| San Juan Capistrano | 110 | 76 | 73 | 92 | 63 | 33 | 23 | 1,482 | 0.34 | 351.29 | 767 |
| San Clemente | 206 | 140 | 94 | 141 | 75 | 70 | 66 | 2,686 | 0.91 | 636.73 | 1,390 |
| Santa Margarita WD | 679 | 553 | 662 | 792 | 466 | 367 | 216 | 9,732 | 2.82 | 2,200.24 | 5,036 |
| Seal Beach | 51 | 31 | 29 | 38 | 23 | 9 | 15 | 617 | 0.21 | 146.20 | 319 |
| Serrano WD | 20 | 13 | 10 | 26 | 8 | 11 | 6 | 363 | 0.06 | 90.54 | 188 |
| South Coast WD | 112 | 89 | 79 | 68 | 43 | 44 | 31 | 1,615 | 0.44 | 381.06 | 836 |
| Trabuco Canyon WD | 62 | 30 | 45 | 47 | 34 | 28 | 17 | 815 | 0.22 | 189.86 | 422 |
| Tustin | 97 | 78 | 59 | 80 | 66 | 44 | 35 | 1,647 | 0.44 | 402.58 | 852 |
| Westminster | 208 | 121 | 82 | 109 | 149 | 84 | 43 | 2,629 | 0.62 | 623.95 | 1,360 |
| Yorba Linda | 273 | 181 | 167 | 156 | 123 | 56 | 42 | 3,794 | 0.54 | 952.77 | 1,963 |
| MWDOC Totals | 7,350 | 5,365 | 5,094 | 6,002 | 4,726 | 3,668 | 2,449 | 98,013 | 32.76 | 22,767.17 | 18,936 |

| | | | | | | | | | | | |
|-------------------------|------------|------------|------------|------------|------------|------------|------------|---------------|-------------|-----------------|--------------|
| Anaheim | 477 | 331 | 285 | 295 | 266 | 213 | 132 | 10,814 | 1.81 | 2,607.07 | 5,595 |
| Fullerton | 270 | 200 | 186 | 211 | 165 | 107 | 72 | 3,767 | 0.97 | 809.74 | 1,949 |
| Santa Ana | 190 | 163 | 131 | 132 | 259 | 141 | 82 | 3,063 | 1.14 | 776.50 | 1,580 |
| Non-MWDOC Totals | 937 | 694 | 602 | 638 | 690 | 461 | 286 | 17,634 | 3.92 | 4,193.31 | 3,407 |

| | | | | | | | | | | | |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|--------------|------------------|---------------|
| Orange County Totals | 8,287 | 6,059 | 5,696 | 6,640 | 5,416 | 4,129 | 2,735 | 115,647 | 36.68 | 26,960.48 | 22,343 |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|--------------|------------------|---------------|

SMART TIMERS INSTALLED BY AGENCY

through MWDOC and Local Agency Conservation Programs

| Agency | FY 11/12 | | FY 12/13 | | FY 13/14 | | FY 14/15 | | FY 15/16 | | FY 16/17 | | FY 17/18 | | Total Program | | Cumulative Water Savings across all Fiscal Years |
|-----------------------------|--------------|------------|--------------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|------------|---------------|---------------|---|
| | Res | Comm | Res | Comm | Res | Comm | Res | Comm | Res | Comm | Res | Comm | Res | Comm | Res | Comm. | |
| Brea | 8 | 0 | 9 | 8 | 4 | 0 | 43 | 6 | 20 | 4 | 31 | 4 | 30 | 0 | 161 | 80 | 521.72 |
| Buena Park | 4 | 19 | 3 | 0 | 0 | 0 | 4 | 10 | 7 | 4 | 10 | 7 | 13 | 3 | 44 | 44 | 147.67 |
| East Orange CWD RZ | 5 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 11 | 1 | 6 | 0 | 31 | 1 | 18.80 |
| El Toro WD | 26 | 2 | 7 | 2 | 11 | 0 | 8 | 9 | 9 | 17 | 33 | 8 | 22 | 4 | 137 | 359 | 2,476.50 |
| Fountain Valley | 8 | 2 | 3 | 2 | 4 | 0 | 7 | 10 | 13 | 1 | 33 | 12 | 17 | 12 | 108 | 52 | 178.65 |
| Garden Grove | 7 | 0 | 5 | 2 | 9 | 0 | 10 | 14 | 13 | 11 | 28 | 0 | 22 | 0 | 123 | 38 | 173.20 |
| Golden State WC | 13 | 3 | 9 | 49 | 9 | 25 | 39 | 12 | 35 | 16 | 56 | 37 | 68 | 6 | 293 | 198 | 812.43 |
| Huntington Beach | 15 | 4 | 18 | 33 | 20 | 35 | 19 | 2 | 42 | 12 | 88 | 94 | 42 | 30 | 314 | 298 | 1,061.60 |
| Irvine Ranch WD | 267 | 71 | 414 | 135 | 71 | 59 | 67 | 310 | 239 | 207 | 344 | 420 | 337 | 61 | 2,106 | 2,347 | 11,330.93 |
| La Habra | 3 | 0 | 4 | 7 | 2 | 0 | 4 | 7 | 3 | 1 | 12 | 7 | 4 | 0 | 40 | 44 | 203.18 |
| La Palma | 1 | 0 | 1 | 0 | 2 | 0 | 2 | 0 | 3 | 2 | 1 | 0 | 3 | 0 | 13 | 2 | 5.98 |
| Laguna Beach CWD | 109 | 2 | 76 | 2 | 71 | 0 | 86 | 0 | 86 | 1 | 27 | 0 | 9 | 0 | 506 | 20 | 235.04 |
| Mesa Water | 21 | 0 | 10 | 2 | 15 | 2 | 17 | 28 | 36 | 12 | 149 | 41 | 36 | 0 | 354 | 154 | 733.07 |
| Moulton Niguel WD | 179 | 31 | 51 | 74 | 40 | 45 | 46 | 95 | 163 | 100 | 236 | 129 | 237 | 36 | 1,151 | 837 | 3,577.28 |
| Newport Beach | 275 | 12 | 242 | 26 | 168 | 75 | 11 | 9 | 28 | 43 | 30 | 12 | 21 | 0 | 1,059 | 409 | 2,615.40 |
| Orange | 25 | 0 | 20 | 24 | 13 | 9 | 18 | 31 | 51 | 13 | 69 | 10 | 50 | 13 | 335 | 178 | 936.09 |
| San Juan Capistrano | 103 | 2 | 14 | 18 | 6 | 11 | 6 | 19 | 20 | 8 | 22 | 8 | 21 | 5 | 243 | 130 | 642.45 |
| San Clemente | 212 | 17 | 26 | 7 | 28 | 2 | 28 | 24 | 26 | 3 | 37 | 13 | 26 | 0 | 1,077 | 374 | 2,655.49 |
| Santa Margarita WD | 262 | 7 | 53 | 171 | 64 | 93 | 53 | 321 | 189 | 136 | 326 | 221 | 236 | 164 | 1,390 | 1,536 | 5,671.10 |
| Santiago CWD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| Seal Beach | 0 | 3 | 1 | 0 | 1 | 36 | 1 | 12 | 2 | 2,446 | 2 | 4 | 5 | 0 | 12 | 2,502 | 5,119.58 |
| Serrano WD | 3 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 11 | 2 | 4 | 0 | 3 | 0 | 41 | 2 | 13.96 |
| South Coast WD | 78 | 10 | 13 | 16 | 8 | 4 | 104 | 73 | 9 | 11 | 7 | 0 | 11 | 2 | 289 | 214 | 1,147.62 |
| Trabuco Canyon WD | 12 | 0 | 6 | 0 | 2 | 0 | 6 | 1 | 16 | 50 | 13 | 3 | 17 | 0 | 120 | 157 | 950.38 |
| Tustin | 11 | 0 | 8 | 4 | 9 | 1 | 18 | 14 | 33 | 8 | 33 | 23 | 22 | 1 | 165 | 81 | 339.47 |
| Westminster | 2 | 0 | 1 | 1 | 2 | 0 | 13 | 17 | 7 | 1 | 17 | 12 | 17 | 0 | 82 | 44 | 197.20 |
| Yorba Linda | 22 | 0 | 20 | 0 | 12 | 5 | 32 | 2 | 61 | 27 | 72 | 71 | 54 | 11 | 392 | 194 | 827.01 |
| MWDOC Totals | 1,671 | 185 | 1,017 | 583 | 571 | 402 | 648 | 1,026 | 1,123 | 3,136 | 1,691 | 1,137 | 1,329 | 348 | 10,586 | 10,295 | 42,591.78 |
| Anaheim | 23 | 60 | 19 | 10 | 9 | 26 | 7 | 52 | 30 | 34 | 87 | 10 | 42 | 0 | 286 | 457 | 2,606.44 |
| Fullerton | 22 | 51 | 9 | 29 | 8 | 0 | 40 | 26 | 32 | 12 | 53 | 7 | 42 | 0 | 241 | 199 | 933.90 |
| Santa Ana | 6 | 5 | 8 | 19 | 7 | 8 | 9 | 27 | 22 | 26 | 15 | 3 | 8 | 0 | 90 | 100 | 350.07 |
| Non-MWDOC Totals | 51 | 116 | 36 | 58 | 24 | 34 | 56 | 105 | 84 | 72 | 155 | 20 | 92 | 0 | 617 | 756 | 3,890.41 |
| Orange County Totals | 1,722 | 301 | 1,053 | 641 | 595 | 436 | 704 | 1,131 | 1,207 | 3,208 | 1,846 | 1,157 | 1,421 | 348 | 11,203 | 11,051 | 46,482 |

**ROTATING NOZZLES INSTALLED BY AGENCY
through MWDOC and Local Agency Conservation Programs**

| Agency | FY 13/14 | | | FY 14/15 | | | FY 15/16 | | | FY 16/17 | | | FY 17/18 | | | Total Program | | | Cumulative Water Savings across all Fiscal Years |
|---------------------|----------|--------|-------|----------|--------|-------|----------|--------|-------|----------|--------|-------|----------|-------|-------|---------------|---------|--------|--|
| | Small | | Large | Small | | Large | Small | | Large | Small | | Large | Small | | Large | Comm. | Comm. | | |
| | Res | Comm. | | Res | Comm. | | Res | Comm. | | Res | Comm. | | Res | Comm. | | | | Res | |
| Brea | 84 | 0 | 0 | 157 | 45 | 0 | 74 | 2,484 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 572 | 2,749 | 0 | 49.46 |
| Buena Park | 53 | 0 | 0 | 248 | 0 | 0 | 45 | 98 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 509 | 173 | 2,535 | 813.11 |
| East Orange | 30 | 0 | 0 | 221 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 781 | 0 | 0 | 19.29 |
| El Toro | 56 | 3,288 | 0 | 1,741 | 28,714 | 0 | 730 | 4,457 | 0 | 55 | 242 | 0 | 0 | 0 | 0 | 3,369 | 46,222 | 890 | 1,191.53 |
| Fountain Valley | 0 | 0 | 0 | 107 | 0 | 0 | 222 | 0 | 0 | 0 | 0 | 0 | 35 | 0 | 0 | 745 | 0 | 0 | 17.35 |
| Garden Grove | 80 | 0 | 0 | 88 | 50 | 0 | 110 | 0 | 0 | 55 | 98 | 0 | 0 | 0 | 0 | 933 | 299 | 0 | 32.52 |
| Golden State | 192 | 0 | 0 | 583 | 1,741 | 0 | 1,088 | 0 | 0 | 207 | 6,008 | 0 | 103 | 0 | 0 | 3,551 | 11,316 | 0 | 242.19 |
| Huntington Beach | 120 | 0 | 0 | 798 | 1,419 | 0 | 1,345 | 2,836 | 0 | 149 | 3,362 | 0 | 0 | 0 | 0 | 3,797 | 12,526 | 2,681 | 1,310.95 |
| Irvine Ranch | 11,010 | 4,257 | 0 | 1,421 | 632 | 0 | 1,989 | 5,047 | 0 | 335 | 9,511 | 0 | 286 | 535 | 0 | 47,423 | 95,096 | 2,004 | 4,747.76 |
| La Habra | 15 | 0 | 0 | 109 | 338 | 0 | 300 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 481 | 1,236 | 900 | 365.97 |
| La Palma | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 505 | 0 | 0 | 2,385 | 0 | 0 | 0 | 0 | 56 | 2,890 | 0 | 26.08 |
| Laguna Beach | 2,948 | 878 | 0 | 2,879 | 1,971 | 0 | 1,390 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12,139 | 2,896 | 0 | 301.19 |
| Mesa Water | 361 | 0 | 0 | 229 | 0 | 0 | 166 | 0 | 0 | 113 | 0 | 0 | 36 | 0 | 0 | 2,066 | 385 | 343 | 195.29 |
| Moulton Niguel | 361 | 227 | 0 | 1,596 | 4,587 | 0 | 5,492 | 1,441 | 0 | 153 | 5,872 | 0 | 511 | 0 | 0 | 12,385 | 20,515 | 2,945 | 1,690.45 |
| Newport Beach | 19,349 | 6,835 | 0 | 460 | 3,857 | 0 | 348 | 670 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 46,723 | 21,413 | 0 | 1,584.28 |
| Orange | 245 | 120 | 0 | 304 | 668 | 0 | 631 | 91 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,170 | 1,072 | 0 | 109.25 |
| San Juan Capistrano | 370 | 0 | 0 | 495 | 737 | 0 | 310 | 593 | 0 | 75 | 123 | 0 | 59 | 0 | 0 | 5,554 | 8,852 | 0 | 445.73 |
| San Clemente | 415 | 5,074 | 0 | 326 | 0 | 0 | 426 | 0 | 0 | 0 | 0 | 0 | 146 | 0 | 0 | 10,135 | 7,538 | 1,343 | 800.17 |
| Santa Margarita | 389 | 0 | 0 | 1,207 | 1,513 | 0 | 1,820 | 837 | 0 | 15 | 0 | 0 | 224 | 0 | 0 | 16,389 | 6,921 | 611 | 824.85 |
| Seal Beach | 0 | 0 | 0 | 40 | 5,261 | 0 | 0 | 2,300 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 155 | 7,852 | 0 | 127.44 |
| Serrano | 105 | 0 | 0 | 377 | 0 | 0 | 695 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3,405 | 0 | 0 | 93.29 |
| South Coast | 70 | 0 | 0 | 4,993 | 13,717 | 0 | 1,421 | 2,889 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 8,130 | 18,870 | 0 | 472.75 |
| Trabuco Canyon | 0 | 0 | 0 | 56 | 0 | 0 | 130 | 0 | 0 | 0 | 4,339 | 0 | 0 | 0 | 0 | 2,086 | 5,130 | 0 | 131.59 |
| Tustin | 329 | 0 | 0 | 408 | 0 | 0 | 317 | 386 | 0 | 65 | -341 | 0 | 30 | 0 | 0 | 3,401 | 1,058 | 0 | 120.83 |
| Westminster | 0 | 0 | 0 | 54 | 0 | 0 | 73 | 0 | 0 | 105 | 0 | 0 | 50 | 0 | 0 | 514 | 0 | 0 | 11.18 |
| Yorba Linda | 40 | 990 | 0 | 921 | 0 | 0 | 1,715 | 0 | 0 | 213 | 0 | 0 | 0 | 0 | 0 | 6,081 | 4,359 | 500 | 460.06 |
| MWDOC Totals | 36,622 | 21,669 | 0 | 19,818 | 65,250 | 0 | 20,883 | 24,634 | 0 | 1,556 | 31,599 | 0 | 1,555 | 535 | 0 | 194,550 | 279,368 | 14,752 | 16,184.55 |

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| | | | | | | | | | | | | | | | | | | | |
|-----------------------------|---------------|---------------|----------|---------------|---------------|----------|---------------|---------------|----------|--------------|---------------|----------|--------------|------------|----------|----------------|----------------|---------------|------------------|
| Anaheim | 338 | 0 | 0 | 498 | 712 | 0 | 794 | 5,221 | 0 | 147 | 3,953 | 0 | 0 | 0 | 0 | 4,020 | 49,799 | 105 | 1,350.45 |
| Fountain | 107 | 0 | 0 | 684 | 1,196 | 0 | 521 | 7,015 | 0 | 65 | 3,034 | 0 | 0 | 0 | 0 | 2,910 | 11,309 | 1,484 | 668.74 |
| Santa Ana | 86 | 2,533 | 0 | 310 | 0 | 0 | 0 | 1,420 | 0 | 0 | 1,106 | 0 | 0 | 0 | 0 | 859 | 5,752 | 0 | 124.46 |
| Non-MWDOC Totals | 531 | 2,533 | 0 | 1,492 | 1,908 | 0 | 1,315 | 13,656 | 0 | 212 | 8,093 | 0 | 0 | 0 | 0 | 7,789 | 66,860 | 1,589 | 2,143.65 |
| Orange County Totals | 37,153 | 24,202 | 0 | 21,310 | 67,158 | 0 | 22,198 | 38,290 | 0 | 1,768 | 39,692 | 0 | 1,555 | 535 | 0 | 202,339 | 346,228 | 16,341 | 18,328.20 |

COMMERCIAL PLUMBING FIXTURES REBATE PROGRAM^[1]
INSTALLED BY AGENCY
through MWDOC and Local Agency Conservation Programs

| Agency | FY 11/12 | FY 12/13 | FY 13/14 | FY 14/15 | FY 15/16 | FY 16/17 | FY 17/18 | Totals | Cumulative Water Savings across all Fiscal Years |
|-----------------------------|--------------|--------------|--------------|--------------|---------------|---------------|--------------|---------------|--|
| Brea | 1 | 234 | 0 | 10 | 91 | 734 | 0 | 1,365 | 494 |
| Buena Park | 290 | 5 | 23 | 56 | 591 | 133 | 0 | 2,489 | 1,217 |
| East Orange CWD RZ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| El Toro WD | 137 | 0 | 212 | 6 | 268 | 35 | 0 | 1,062 | 655 |
| Fountain Valley | 314 | 0 | 0 | 1 | 249 | 0 | 557 | 1,429 | 665 |
| Garden Grove | 0 | 4 | 1 | 167 | 676 | 410 | 0 | 2,451 | 1,644 |
| Golden State WC | 135 | 0 | 1 | 0 | 1,008 | 53 | 70 | 2,935 | 2,086 |
| Huntington Beach | 156 | 104 | 144 | 7 | 783 | 641 | 0 | 2,954 | 1,753 |
| Invine Ranch WD | 646 | 1,090 | 451 | 725 | 11,100 | 5,958 | 1,717 | 29,583 | 8,565 |
| La Habra | 0 | 0 | 0 | 0 | 340 | 42 | 0 | 925 | 605 |
| La Palma | 0 | 0 | 0 | 0 | 0 | 509 | 0 | 675 | 131 |
| Laguna Beach CWD | 0 | 0 | 27 | 0 | 0 | 0 | 0 | 446 | 342 |
| Mesa Water | 41 | 6 | 0 | 79 | 661 | 782 | 0 | 4,254 | 2,307 |
| Moulton Niguel WD | 0 | 0 | 0 | 3 | 413 | 281 | 0 | 1,277 | 908 |
| Newport Beach | 35 | 0 | 0 | 566 | 0 | 0 | 0 | 1,834 | 1,414 |
| Orange | 73 | 1 | 271 | 81 | 275 | 2,851 | 0 | 5,030 | 2,035 |
| San Juan Capistrano | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 260 | 427 |
| San Clemente | 19 | 0 | 0 | 1 | 0 | 0 | 0 | 432 | 412 |
| Santa Margarita WD | 0 | 0 | 0 | 2 | 90 | 743 | 0 | 950 | 283 |
| Santiago CWD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Seal Beach | 0 | 0 | 0 | 0 | 0 | 184 | 0 | 538 | 471 |
| Serrano WD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| South Coast WD | 84 | 148 | 0 | 382 | 0 | 0 | 0 | 1,320 | 577 |
| Trabuco Canyon WD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 16 |
| Tustin | 0 | 0 | 0 | 75 | 358 | 212 | 2 | 1,404 | 913 |
| Westminster | 35 | 1 | 28 | 0 | 146 | 177 | 0 | 1,138 | 1,093 |
| Yorba Linda | 0 | 1 | 0 | 0 | 226 | 84 | 0 | 595 | 616 |
| MWDOC Totals | 1,966 | 1,594 | 1,172 | 2,161 | 17,275 | 13,829 | 2,346 | 65,357 | 29,631 |
| Anaheim | 48 | 165 | 342 | 463 | 3,072 | 309 | 1,005 | 14,758 | 7,665 |
| Fullerton | 0 | 94 | 0 | 178 | 476 | 621 | 274 | 3,052 | 1,821 |
| Santa Ana | 12 | 16 | 17 | 5 | 1,293 | 238 | 582 | 6,319 | 5,153 |
| Non-MWDOC Totals | 60 | 275 | 359 | 646 | 4,841 | 1,168 | 1,861 | 24,129 | 14,638 |
| Orange County Totals | 2,026 | 1,869 | 1,531 | 2,807 | 22,116 | 14,997 | 4,207 | 89,486 | 44,269 |

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

INDUSTRIAL PROCESS/WATER SAVINGS INCENTIVE PROGRAM

Number of Projects by Agency

| Agency | FY 11/12 | FY 12/13 | FY 13/14 | FY 14/15 | FY 15/16 | FY 16/17 | FY 17/18 | Overall Program Interventions | Annual Water Savings[1] |
|---------------------|----------|----------|----------|----------|-----------|----------|----------|-------------------------------|-------------------------|
| Brea | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Buena Park | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 54 |
| East Orange | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| El Toro | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fountain Valley | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 23 |
| Garden Grove | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Golden State | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| Huntington Beach | 0 | 2 | 0 | 1 | 2 | 0 | 0 | 5 | 132 |
| Irvine Ranch | 1 | 1 | 1 | 0 | 2 | 1 | 0 | 9 | 115 |
| La Habra | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| La Palma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Laguna Beach | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mesa Water | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Moulton Niguel | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Newport Beach | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 21 |
| Orange | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 4 | 88 |
| San Juan Capistrano | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| San Clemente | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Santa Margarita | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Seal Beach | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Serrano | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| South Coast | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 134 |
| Trabuco Canyon | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tustin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Westminster | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yorba Linda | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MWDOC Totals | 1 | 3 | 1 | 2 | 9 | 5 | 0 | 27 | 571 |
| Anaheim | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fullerton | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Santa Ana | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 11 |
| OC Totals | 1 | 3 | 1 | 2 | 10 | 5 | 0 | 28 | 582 |

[1] Acre feet of savings determined during a one year monitoring period.
If monitoring data is not available, the savings estimated in agreement is used.

TURF REMOVAL BY AGENCY⁽¹⁾
through MWDOC and Local Agency Conservation Programs

| Agency | FY 13/14 | | FY 14/15 | | FY 15/16 | | FY 16/17 | | FY 17/18 | | Total Program | | Cumulative Water Savings across all Fiscal Years |
|---------------------|----------------|----------------|------------------|------------------|------------------|------------------|----------------|----------------|----------------|----------------|------------------|-------------------|--|
| | Res | Comm. | Res | Comm. | Res | Comm. | Res | Comm. | Res | Comm. | Res | Comm. | |
| Brea | 5,997 | 0 | 71,981 | 30,617 | 118,930 | 404,411 | 8,354 | 479 | 3,459 | 26,214 | 219,423 | 471,187 | 306.86 |
| Buena Park | 0 | 0 | 11,670 | 1,626 | 77,127 | 16,490 | 3,741 | 0 | 4,108 | 0 | 96,646 | 18,116 | 48.39 |
| East Orange | 1,964 | 0 | 18,312 | 0 | 27,844 | 0 | 0 | 0 | 0 | 0 | 48,120 | 0 | 23.32 |
| El Toro | 4,582 | 0 | 27,046 | 221,612 | 63,546 | 162,548 | 13,139 | 48,019 | 6,408 | 0 | 124,124 | 504,897 | 325.07 |
| Fountain Valley | 4,252 | 0 | 45,583 | 5,279 | 65,232 | 0 | 3,679 | 0 | 6,631 | 0 | 127,359 | 12,803 | 68.98 |
| Garden Grove | 8,274 | 0 | 67,701 | 22,000 | 177,408 | 49,226 | 11,504 | 0 | 4,487 | 0 | 287,921 | 117,403 | 224.31 |
| Golden State | 32,725 | 8,424 | 164,507 | 190,738 | 310,264 | 112,937 | 0 | 0 | 0 | 0 | 581,902 | 346,272 | 506.98 |
| Huntington Beach | 20,642 | 0 | 165,600 | 58,942 | 305,420 | 270,303 | 9,560 | 21,534 | 10,045 | 6,032 | 548,917 | 421,737 | 491.06 |
| Invine Ranch | 36,584 | 76,400 | 234,905 | 317,999 | 782,844 | 2,675,629 | 231,483 | 46,725 | 58,124 | 47,467 | 1,388,697 | 3,211,064 | 2,017.09 |
| La Habra | 0 | 0 | 14,014 | 1,818 | 49,691 | 72,164 | 0 | 0 | 1,450 | 0 | 65,155 | 90,019 | 77.05 |
| La Palma | 0 | 0 | 4,884 | 0 | 10,257 | 59,760 | 0 | 0 | 0 | 0 | 15,141 | 59,760 | 32.14 |
| Laguna Beach | 4,586 | 226 | 13,647 | 46,850 | 47,614 | 0 | 3,059 | 0 | 589 | 0 | 75,670 | 48,788 | 65.44 |
| Mesa Water | 22,246 | 0 | 131,675 | 33,620 | 220,815 | 106,896 | 4,173 | 77,033 | 9,189 | 10,490 | 405,542 | 228,039 | 286.86 |
| Moulton Niguel | 14,739 | 40,741 | 314,250 | 1,612,845 | 889,748 | 1,059,279 | 220,749 | 0 | 70,579 | 0 | 1,527,042 | 2,840,054 | 2,138.53 |
| Newport Beach | 894 | 0 | 33,995 | 65,277 | 76,675 | 375,404 | 2,924 | 0 | 861 | 6,499 | 122,351 | 449,526 | 256.27 |
| Orange | 11,244 | 0 | 120,093 | 281,402 | 289,990 | 106,487 | 12,847 | 2,366 | 9,377 | 0 | 472,473 | 398,978 | 438.23 |
| San Clemente | 18,471 | 13,908 | 90,349 | 1,137 | 215,249 | 438,963 | 4,267 | 0 | 24,655 | 0 | 390,555 | 467,173 | 398.93 |
| San Juan Capistrano | 12,106 | 0 | 101,195 | 32,366 | 197,290 | 143,315 | 2,624 | 40,748 | 0 | 0 | 365,415 | 347,277 | 409.91 |
| Santa Margarita | 17,778 | 48,180 | 211,198 | 514,198 | 534,048 | 550,420 | 17,010 | 28,094 | 47,441 | 25,000 | 844,073 | 1,194,453 | 973.24 |
| Santiago | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| Seal Beach | 0 | 0 | 15,178 | 504 | 17,349 | 15,911 | 1,234 | 0 | 752 | 0 | 38,124 | 16,415 | 26.23 |
| Serrano | 2,971 | 0 | 41,247 | 0 | 127,877 | 4,403 | 5,450 | 0 | 0 | 0 | 177,545 | 4,403 | 82.26 |
| South Coast | 15,162 | 116,719 | 84,282 | 191,853 | 181,102 | 128,290 | 14,967 | 0 | 10,795 | 7,806 | 322,543 | 465,387 | 420.25 |
| Trabuco Canyon | 2,651 | 0 | 14,771 | 0 | 42,510 | 88,272 | 1,465 | 0 | 2,579 | 0 | 65,790 | 110,712 | 86.24 |
| Tustin | 1,410 | 0 | 71,285 | 14,137 | 232,697 | 33,362 | 11,173 | 0 | 8,646 | 0 | 335,191 | 47,499 | 173.29 |
| Westminster | 0 | 0 | 14,040 | 34,631 | 71,833 | 23,902 | 11,112 | 0 | 6,540 | 0 | 103,525 | 58,533 | 71.49 |
| Yorba Linda | 0 | 0 | 112,136 | 12,702 | 360,279 | 116,985 | 19,420 | 0 | 7,927 | 3,696 | 511,111 | 133,383 | 290.13 |
| MWDOC Totals | 238,978 | 304,598 | 2,195,544 | 3,692,153 | 5,493,639 | 7,015,357 | 613,934 | 264,998 | 294,642 | 133,204 | 9,260,355 | 12,063,878 | 10,238.54 |

| | | | | | | | | | | | | | |
|-------------------------|----------|--------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------------|-------------|
| Angelsheim | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| Rederton | 0 | 9,214 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9,214 | 6.45 |
| Shasta Ana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |
| Non-MWDOC Totals | 0 | 9,214 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9,214 | 6.45 |

| | | | | | | | | | | | | | |
|-----------------------------|----------------|----------------|------------------|------------------|------------------|------------------|----------------|----------------|----------------|----------------|------------------|-------------------|---------------|
| Orange County Totals | 238,978 | 313,812 | 2,195,544 | 3,692,153 | 5,493,639 | 7,015,357 | 613,934 | 264,998 | 294,642 | 133,204 | 9,260,355 | 12,073,092 | 10,245 |
|-----------------------------|----------------|----------------|------------------|------------------|------------------|------------------|----------------|----------------|----------------|----------------|------------------|-------------------|---------------|

(1) Installed device numbers are listed as square feet

HIGH EFFICIENCY TOILETS (HETs) INSTALLED BY AGENCY

through MWDOC and Local Agency Conservation Programs

| Agency | FY 11-12 | FY 12-13 | FY 13-14 | FY 14-15 | FY 15-16 | FY 16-17 | FY 17-18 | Total | Cumulative Water Savings across all Fiscal Years |
|---------------------|------------|--------------|--------------|---------------|---------------|------------|------------|---------------|--|
| Brea | 0 | 0 | 38 | 146 | 154 | 4 | 3 | 453 | 96.91 |
| Buena Park | 0 | 0 | 96 | 153 | 112 | 13 | 2 | 686 | 186.07 |
| East Orange CWD RZ | 0 | 0 | 13 | 26 | 24 | 0 | 0 | 86 | 20.43 |
| El Toro WD | 0 | 133 | 218 | 869 | 264 | 12 | 4 | 2,041 | 524.58 |
| Fountain Valley | 0 | 0 | 41 | 132 | 220 | 7 | 8 | 831 | 243.61 |
| Garden Grove | 0 | 0 | 63 | 350 | 363 | 7 | 4 | 1,488 | 411.72 |
| Golden State WC | 80 | 2 | 142 | 794 | 512 | 9 | 10 | 2,800 | 758.66 |
| Huntington Beach | 0 | 0 | 163 | 1,190 | 628 | 4 | 3 | 2,904 | 698.52 |
| Irvine Ranch WD | 0 | 1,449 | 810 | 1,777 | 2,798 | 638 | 193 | 17,102 | 5,300.18 |
| Laguna Beach CWD | 0 | 0 | 45 | 112 | 81 | 1 | 4 | 392 | 101.59 |
| La Habra | 0 | 0 | 37 | 94 | 83 | 5 | 1 | 591 | 190.75 |
| La Palma | 0 | 0 | 21 | 59 | 52 | 4 | 0 | 222 | 56.39 |
| Mesa Water | 0 | 0 | 147 | 162 | 162 | 7 | 2 | 1,620 | 581.14 |
| Moulton Niguel WD | 0 | 0 | 400 | 2,497 | 1,939 | 49 | 33 | 5,723 | 1,101.56 |
| Newport Beach | 0 | 0 | 49 | 168 | 243 | 11 | 5 | 730 | 177.34 |
| Orange | 0 | 1 | 142 | 978 | 416 | 17 | 3 | 2,182 | 515.48 |
| San Juan Capistrano | 0 | 0 | 35 | 140 | 202 | 3 | 2 | 525 | 116.91 |
| San Clemente | 0 | 0 | 72 | 225 | 246 | 11 | 3 | 875 | 218.50 |
| Santa Margarita WD | 0 | 0 | 528 | 997 | 1,152 | 114 | 29 | 3,338 | 652.64 |
| Seal Beach | 0 | 2 | 17 | 50 | 69 | -1 | 0 | 857 | 385.24 |
| Serrano WD | 0 | 0 | 2 | 40 | 55 | 3 | 0 | 121 | 23.54 |
| South Coast WD | 23 | 64 | 102 | 398 | 235 | 11 | 5 | 1,026 | 222.92 |
| Trabuco Canyon WD | 0 | 0 | 10 | 108 | 169 | 2 | 0 | 339 | 62.73 |
| Tustin | 0 | 0 | 64 | 132 | 201 | 12 | 5 | 1,511 | 525.26 |
| Westminster | 0 | 0 | 35 | 161 | 359 | 3 | 4 | 1,335 | 403.72 |
| Yorba Linda WD | 0 | 0 | 40 | 280 | 379 | 12 | 7 | 1,258 | 335.37 |
| MWDOC Totals | 103 | 1,651 | 3,330 | 12,038 | 11,118 | 958 | 330 | 51,036 | 13,911.75 |

| | | | | | | | | | |
|-------------------------|----------|----------|------------|--------------|--------------|------------|-----------|--------------|-----------------|
| Anaheim | 0 | 0 | 156 | 1,188 | 614 | 70 | 19 | 5,884 | 1,941.76 |
| Fullerton | 0 | 0 | 61 | 293 | 286 | 14 | 7 | 1,062 | 268.25 |
| Santa Ana | 0 | 0 | 33 | 602 | 293 | 20 | 0 | 2,021 | 601.53 |
| Non-MWDOC Totals | 0 | 0 | 250 | 2,083 | 1,193 | 104 | 26 | 8,967 | 2,811.54 |

| | | | | | | | | | |
|-----------------------------|------------|--------------|--------------|---------------|---------------|--------------|------------|---------------|------------------|
| Orange County Totals | 103 | 1,651 | 3,580 | 14,121 | 12,311 | 1,062 | 356 | 60,003 | 16,723.29 |
|-----------------------------|------------|--------------|--------------|---------------|---------------|--------------|------------|---------------|------------------|