

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

Jointly with the
PLANNING & OPERATIONS COMMITTEE

April 3, 2017, 8:30 a.m.
MWDOC Conference Room 101

P&O Committee:

Director Dick, Chair
Director Tamaribuchi
Director Yoo Schneider

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

Ex Officio Member: W. Osborne

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

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

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

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

ACTION ITEMS

1. UPDATE TO THE MUNICIPAL WATER DISTRICT OF ORANGE COUNTY CONTINUITY OF OPERATIONS (COOP) PLAN
2. TECHNICAL ASSISTANCE TO STAFF ON ELECTROMAGNETIC FLOWMETERS (MAG METERS) OR ULTRASONIC FLOWMETERS (SONIC METERS)

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.)

3. INFORMATION RELATED TO MET INSTALLING STEEL LINERS FOR NINE MILES OF PRESTRESSED CONCRETE CYLINDER PIPE FOR THE LOWER ALLEN MCCOLLOCH PIPELINE (AMP)
4. INFORMATION RELATED TO THE ORANGE COUNTY FLOOD CONTROL ENCROACHMENT UPDATE
5. DOHENY DESALINATION WORKSHOP ON MARCH 22, 2017
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

ACTION ITEM

April 19, 2017

TO: Board of Directors

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

Robert Hunter
General Manager

Staff Contact: Kelly Hubbard
WEROC Emergency Manager

SUBJECT: **Update to the Municipal Water District of Orange County Continuity of Operations (COOP) Plan**

STAFF RECOMMENDATION

Staff recommends that the Board of Directors approve the attached resolution approving the updated Municipal Water District of Orange County (MWDOC) Continuity of Operations (COOP) Plan, as presented.

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

The MWDOC COOP Plan was last taken to the Board for formal approval in 2007. The plan has had minor edits during this time that were provided to staff in their COOP Binders and within the Safety Center App on their phones. During the current update, Staff decided to complete more significant updates to formatting, content related to the current MWDOC Organizational Structure and a clean-up to references and appendices. Due to these changes and how long it has been since the last formal adoption of the plan by the Board, Staff thought it appropriate to have the Board review and approve the plan again. Typically Continuity Plans are reviewed and approved by elected bodies since they include response policies of an organization.

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

DETAILED REPORT

Continuity of Operations, as defined in the National Continuity Policy Implementation Plan (NCP/IP) and the National Security Presidential Directive-51/Homeland Security Presidential Directive-20 (NSPD-51/HSPD-20), is an effort within agencies to ensure that Primary Mission Essential Functions continue to be performed during a wide range of emergencies, including localized acts of nature, accidents and technological or attack-related emergencies.

The primary mission essential functions identified within the MWDOC Continuity of Operations Plan (COOP) are:

- Management/Policy – The ability to support and conduct governance of the board as necessary and required for the continued operations of MWDOC.
- Building Operations Recovery – The ability to restore business operations at the MWDOC Administrative offices or at a temporary alternative site.
- Finance/IT Recovery – The ability to restore financial accounting and IT operations for both WEROC and MWDOC.

In order to ensure that the COOP plan can meet these mission critical functions, it is crucial to maintain a comprehensive COOP plan that evolves with the organization. Additionally, the plan has general information for MWDOC Staff and Board Members in regards to employee preparedness, employee's roles in an emergency, safety actions to take in specific events, etc.

Below is a summary of the updates that were incorporated in the latest version of the COOP Plan.

General

- General clean-up of formatting, references and appendices.

Section 1: Introduction, Definitions and Basic Information

- Further clarification of differences in responsibilities between WEROC EOC response and MWDOC COOP response
- Alternative COOP locations were identified for a situation that results in the MWDOC Administrative Building being deemed unsafe.

Section 2: Incident Specific Response

- Items involving incident specific response were updated to reflect the most current information provided by disaster preparedness authorities (FEMA, DHS etc.).
- Responses were updated for the following hazards: Earthquakes, Fires, Chemical spills, Bomb threats, Workplace violence, and Flooding.

Section 3: Employee Assignments

- The COOP chain of command, staff assignments and organizational chart were updated.
- The MWDOC Daily Operations Organizational Chart was updated.

Section 4: Finance

- Updates were made to the data software backup protocols and accounting restoration priorities sections to reflect the most updated policies and procedures found in the IT Backup and Disaster Recovery Plan.

The update process has led to other discussions on forms, resources, and materials needed to support these primary missions further. For example, there has been an initial discussion on the further development of MWDOC staff's capabilities to conduct necessary financial operations from the WEROC South EOC and a possible test of these capabilities. Staff will keep the board informed of these activities as they are reviewed and addressed.

Attachments

Attached as part of the Board submittal are the following:

- MWDOC Continuity of Government and Operations Plan
- Resolution for Approval

**A RESOLUTION OF THE MUNICIPAL WATER DISTRICT OF ORANGE COUNTY ADOPTING THE
REVISED MWDOC CONTINUITY OF 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 _____; and

WHEREAS, with this revised emergency plan MWDOC continues to conform to State SEMS and now with 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 MWDOC Continuity of Operations Plan, dated _____.

Said resolution supersedes Resolution 1810 and was adopted on _____ by the following roll call:

AYES:

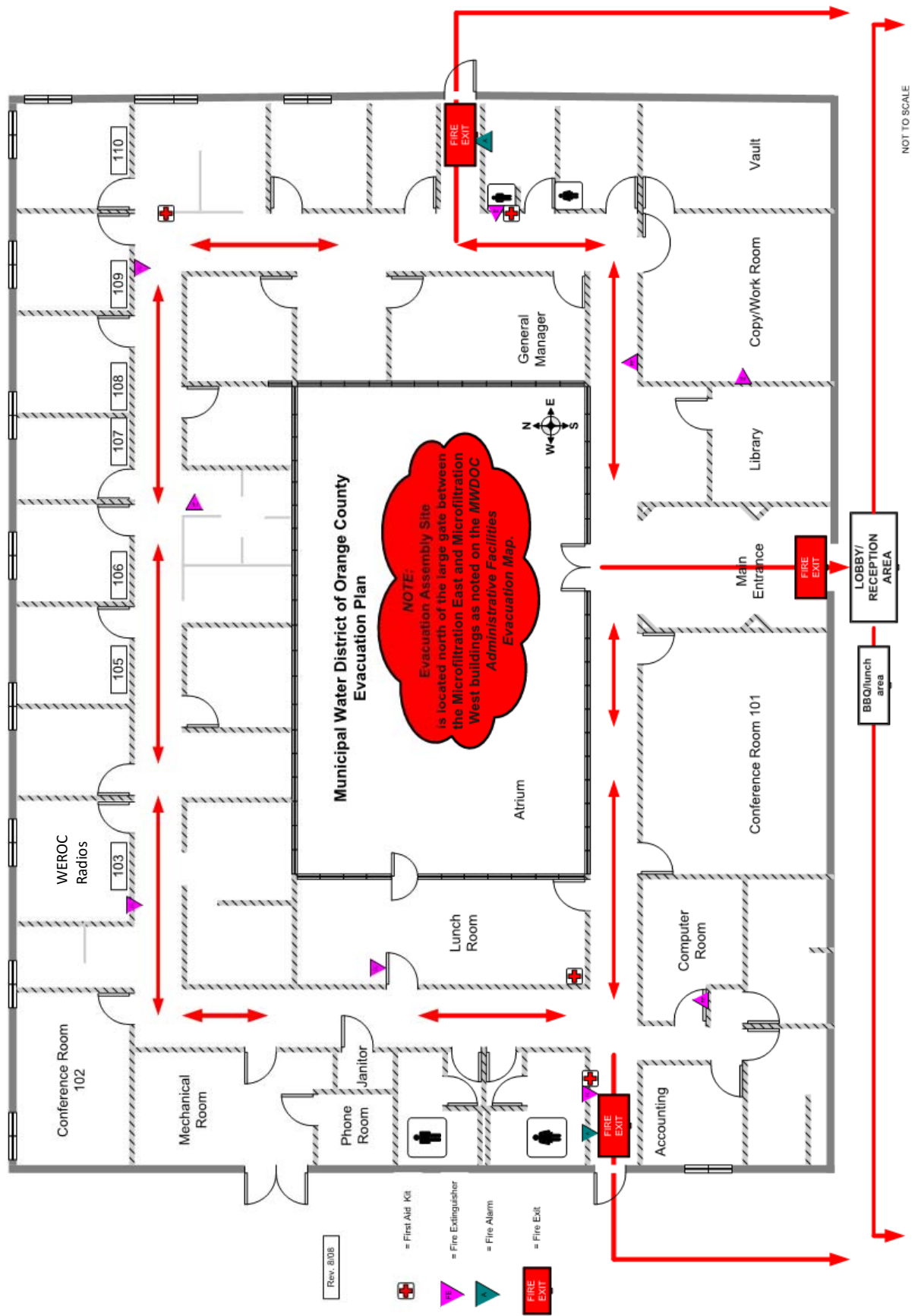
NOES:

ABSENT:

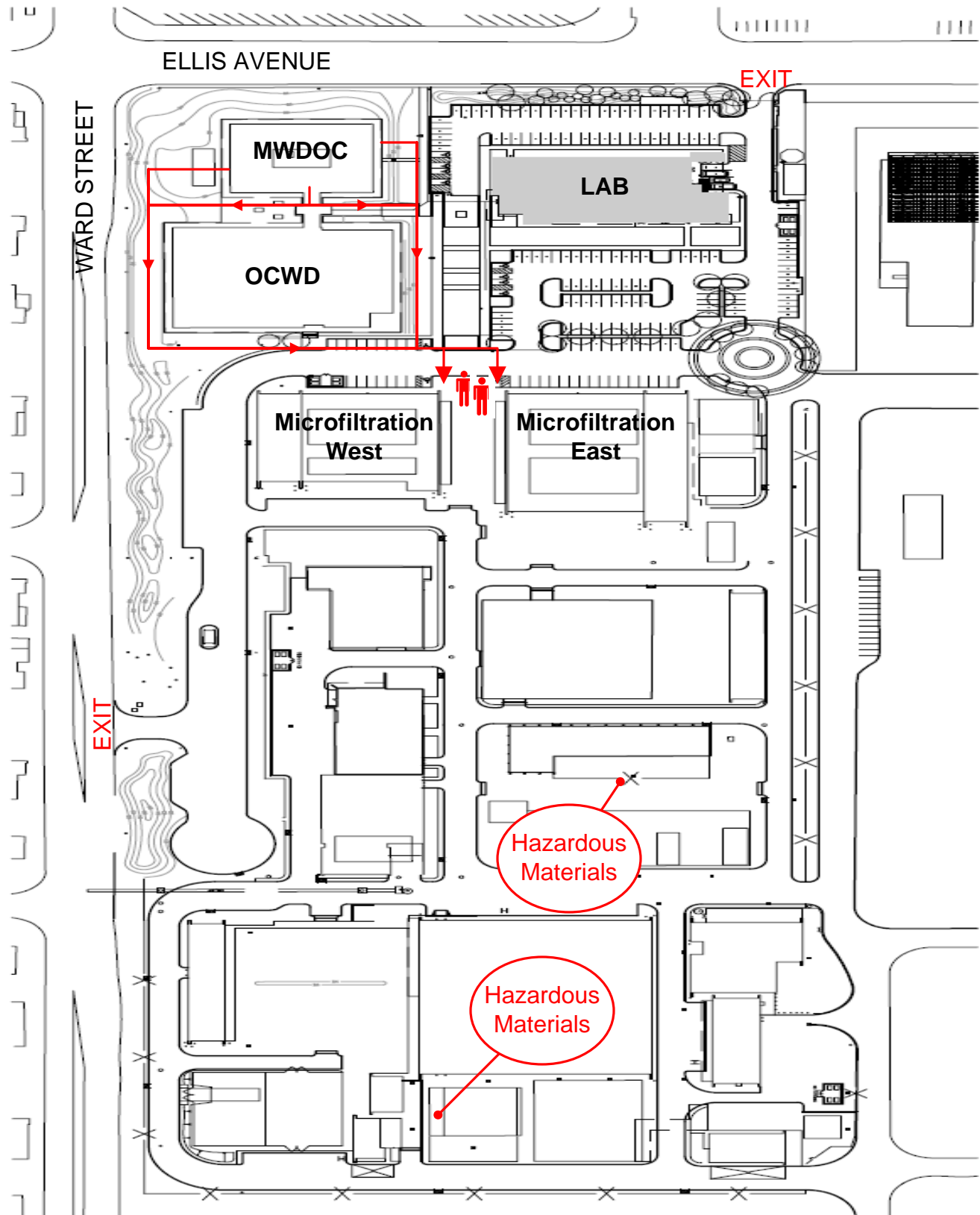
ABSTAIN:

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



MWDOC ADMINISTRATIVE FACILITIES EVACUATION MAP





CONTINUITY OF OPERATIONS PLAN

QUICK REFERENCE GUIDE

1. ASSESS THE SITUATION

What and where is the emergency incident located?

Is there a hazard?

Is a security breach involved?

Are Emergency Vehicles at the scene?

3. EMPLOYEE ROLL CALL & OFFICE SAFETY ASSESSMENT

Is everyone accounted for?

-Employee roll call sheets found at both emergency exits.

Are there any injuries?

Do you need to evacuate?

4. PLAN YOUR RESPONSE

Refer to the pre-planned responses in this plan.

5. REPORT TO YOUR COOP/EOC LOCATION:

- MWDOC Administrative Facility
18700 Ward Street
Fountain Valley, CA 92728
Phone: (714) 963-3058
- South EOC
26081 Via Pera Mission Viejo,
CA 92691
Phone: (949) 455-4456
- North EOC
9737 Peters Canyon Rd. Orange,
CA 92705
Phone: (714) 288-8200

*Maps (excluding MWDOC map)
found in Part V of this plan.

2. ACTIVATE NEEDED EMERGENCY SERVICES AND DISTRICT PERSONNEL

Emergency Response

911

Fountain Valley Building & Fire Safety

Fire Administration (714) 593-4436

Fountain Valley Fire Department (714) 962-4485

Fountain Valley Police Department (714) 962-4445
(714) 962-4483

Fountain Valley Regional Hospital (714) 966-7200
(714) 966-8100

Orange County OA EOC (714) 628-7060

OCWD Receptionists/24 hour number (714) 378-3200

WEROC North EOC Land Line (714) 288-8200

WEROC South EOC Land Line (949) 455-4456

	OFFICE	CELL
Robert Hunter	(714) 593-5026	(404) 557-5107
Kelly Hubbard WEROC 1 st Contact	(714) 593-5010	(714) 715-0283
Karl Seckel WEROC 2 nd Contact	(714) 593-5024	(714) 423-3361
Paula Bouyounes, OCWD Safety and Risk Manager	(714) 378-3310	(714) 392-2294



Continuity of Operations Plan

April 2017 Revision

Table of Contents

SECTION 1: INTRODUCTION, DEFINITIONS AND BASIC INFORMATION

1.0	INTRODUCTION	1-1
1.1	SITUATIONS AND ASSUMPTIONS.....	1-2
1.2	MWDOC GOALS DURING AN EMERGENCY	1-3
1.2.1	DISTINCTION BETWEEN MWDOC AND WEROC.....	1-4
1.3	DEFINITION OF AN EMERGENCY	1-6
1.4	EMPLOYEE PREPAREDNESS.....	1-8
1.5	ACTIVATION	1-11
1.6	AFTER HOUR RESPONSE.....	1-12
1.7	BUSINESS HOUR RESPONSE AND ALTERNATE LOCATIONS.....	1-13
1.8	EMPLOYEE ROLL CALL.....	1-14
1.9	WORK SHIFTS.....	1-14
1.10	PUBLIC INFORMATION.....	1-15
1.11	WATER QUALITY NOTICES.....	1-15
1.12	COORDINATION WITH THE OPERATIONAL AREA	1-16

SECTION 2: INCIDENT SPECIFIC RESPONSE

2.1	EVACUATION	2-1
2.2	EARTHQUAKE	2-2
2.2.1	DURING THE QUAKE	2-3
2.2.2	AFTER THE QUAKE	2-4
2.3	FIRE SAFETY.....	2-4
2.3.1	OFFICE FIRE	2-5
2.3.2	AFTER BUSINESS HOURS FIRE.....	2-6
2.4	CHEMICAL SPILLS	2-7
2.4.1	CHEMICAL RELEASE - SHELTER IN PLACE.....	2-7
2.4.2	DISCOVERING A CHEMICAL SPILL	2-8
2.5	POWER OUTAGE	2-9

2.6	BOMB THREATS	2-10
2.6.1	BOMB THREAT REPORT	2-12
2.7	WORKPLACE VIOLENCE	2-14
2.7.1	SEE SOMETHING SAY SOMETHING:	2-16
2.8	SPECIAL INTEREST DEMONSTRATION PICKET LINE	2-17
2.9	FLOODING	2-18
2.9.1	ORANGE COUNTY FLOOD CONTROL DISTRICT ALERT STAGES	2-19

SECTION 3: EMPLOYEE ASSIGNMENTS

3.0	EMPLOYEE ASSIGNMENTS	3-1
3.1	TEMPORARY/CONTRACT EMPLOYEES	3-2
3.2	COOP FUNCTION ASSIGNMENTS	3-2
3.2.1	COOP ASSIGNMENTS AND CHAIN OF COMMAND	3-3
3.2.2	WEROC ASSIGNMENTS	3-4
3.2.3	MWDOC DAILY OPERATIONS ORGANIZATIONAL CHART	3-5
3.2.4	MWDOC CONTINUITY OF OPERATIONS CENTER ORGANIZATIONAL CHART	3-6
3.3	COOP POSITION MISSIONS & CHECKLIST	3-7

SECTION 4: FINANCE

4.1	SUMMARY	4-1
4.2	DATA BACKUP	4-2
4.3	OFF-SITE FINANCIAL OPERATIONS CENTER	4-2
4.4	PURCHASING AUTHORIZATION	4-3
4.5	FINANCE DEPARTMENT DISASTER RECOVERY PLAN	4-3
4.6	FEMA/CAL OES DISASTER REIMBURSEMENT	4-6

SECTION 5: APPENDICES

5.1	EMERGENCY TELEPHONE CONTACT LIST	5-1
5.2	MWDOC TELEPHONE DIRECTORY	5-2
5.3	MWDOC TELEPHONE LIST	5-5
5.4	OCWD TELEPHONE LIST	5-6
5.5	MEDIA CONTACTS LIST	5-8
5.6	WEROC EOC E-MAIL INFORMATION	5-11
5.7	WEROC SOUTH EOC (MISSIONS VIEJO) MAP	5-12
5.7.1	WEROC NORTH EOC (ORANGE) MAP	5-13
5.8	ADMINISTRATION CODE 1103 CHAPTER 8 CONTRACTS EXHIBIT A	5-14
5.9	EMERGENCY PERSONNEL TRACKING FORM	5-15
5.9.1	OPERATIONAL AREA INITIAL DAMAGE REPORT FORM	5-16
5.9.2	SECTION UNITY ACTIVITY LOGS	5-17
5.10	LIST OF WEROC MEMBER AGENCIES	5-18
5.10	MWDOC AUTOMATED SECURITY GATE MANUAL OPENING PROCEDURES	5-19

SECTION 6: REFERENCES

6.1	SEMS/NIMS/ICS	6-1
6.1.1	STANDARDIZED EMERGENCY MANAGEMENT SYSTEM (SEMS)	6-1
6.1.2	NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS)	6-3
6.1.3	INCIDENT COMMAND SYSTEM (ICS)	6-4
6.1.4	AUTHORITIES	6-7
6.1.5	CA STATE GOVERNMENT CODE SECTION 8607	6-9
6.1.6	RESOLUTION TO REVISE CONTINUITY OF OPERATIONS PLAN	6-10
6.2	REVERSE NOTIFICATION SYSTEMS	6-11
6.3	DISASTER WORKER OATH	6-13



Section 1: Introductions, Definitions & Basic Information

April 2017

1.0 INTRODUCTION

It is to the benefit of the Municipal Water District of Orange County (MWDOC), employees, their families, and the water agencies in Orange County that each MWDOC employee recognize and understand the possible emergency and disaster situations that may affect them and what MWDOC expects of each employee under those conditions. This manual defines most of the possible emergency and disaster situations that could affect MWDOC employees. It is a flexible plan that should be used in all emergencies to facilitate response and short-term activities. Each employee should understand and routinely review this manual. One copy of this manual should be kept on file in each employee workspace. The plan is also available in the Safety Center Smart Phone App for all staff. MWDOC emergency preparedness and response will comply with the Standardized Emergency Management System (SEMS), the National Incident Management System (NIMS), and California State Government Code Section 8607 as appropriate (ref. Section 6.1.5). By **Resolution _____** (ref. Section 6.1.6), the Board of Directors of Municipal Water District of Orange County adopted this plan as of **_____**.

This manual will be of little use after a disaster strikes unless you understand and practice its contents before the emergency. If an employee is unclear about what actions to take during an emergency after reading this plan, that employee should ask their supervisor or the WEROC Emergency Manager for clarification. MWDOC's Quick Reference Guide can provide quick access to the basics of this plan.

1.1 SITUATIONS AND ASSUMPTIONS

A hazard analysis has indicated that MWDOC facilities may be at risk from numerous hazards associated with natural disasters, manmade hazards, and malicious events. A full hazards analysis can be found in the OC Regional Water and Wastewater Multi-Hazard Mitigation Plan. Due to the number of potential hazards and the dense population of Orange County, many of the hazards which exist in or adjacent to the county have the potential for causing disasters of such magnitude as to pose a credible threat to MWDOC's operations. The primary threats to the MWDOC Administration Building are earthquakes, liquefaction and flooding. This plan outlines the steps MWDOC staff should take to protect their health and safety during a potential event, as well as structure and protocols to recover the business operations of MWDOC.

1.2 MWDOC GOALS DURING AN EMERGENCY

It is MWDOC's mission to provide water from the Metropolitan Water District of Southern California (MET) to the MWDOC member agencies. It is the responsibility of MWDOC's member agencies to deliver quality water to their customers. MWDOC does not provide water directly to retail customers or operate water facilities.

During an emergency situation MWDOC will act as a Continuity of Government and Operations Center (COOP Center). In that endeavor staff assigned to the COOP will have the responsibility to:

- Inform the MWDOC Board of Directors of the current situation.
- Ensure appropriate staffing is identified for the COOP, even if WEROC is activated.
- Coordinate with the Board to enact and approve policies and priorities that may need to be determined at the time of the event.
- Ensure the fiscal continuity of MWDOC; including but not limited to the ability to bill and collect revenue and pay staff.
- Restore the operational capability of the MWDOC offices and programs.

Since MWDOC does not operate water facilities, MWDOC's normal office procedures and programs, with the exception of Finance functions, may be pre-empted to provide assistance to water purveyors in Orange County during major disasters.

1.2.1 DISTINCTION BETWEEN MWDOC AND WEROC

Employees should understand the distinction between MWDOC and the Water Emergency Response Organization of Orange County (WEROC). WEROC is an emergency program responsible for coordinating mutual assistance among the water and wastewater agencies in Orange County during disasters. MWDOC manages the day-to-day operations of the WEROC program, but MWDOC and WEROC are separate entities with different goals and responsibilities. During a major disaster and WEROC is activated, MWDOC will be a member of WEROC just as other water agencies. MWDOC, however, does not have a direct responsibility for delivering water to retail customers.

Further, when WEROC is activated, many of MWDOC's employees are pre-assigned to report to WEROC rather than MWDOC (ref. Section 3.2.2). Additionally, at the discretion of the General Manager or Assistant General Manager, MWDOC employees may be reassigned to support either WEROC or MWDOC depending on the greatest need. During a local emergency when MWDOC's COOP is activated and the WEROC Emergency Operations Center (EOC) is not activated, all MWDOC employees will be available to respond to MWDOC's needs according to the guidelines in this plan (ref. Section 3).

In 1983, the Orange County water community developed a Water Supply Emergency Preparedness Plan to respond effectively to regional water supply disasters. As a component of the plan, the Water Emergency Response Organization of Orange County (WEROC) was formed to coordinate effective emergency response on behalf of all Orange County water agencies. In 2007, WEROC added wastewater utilities as signatories to its Indemnification Agreement. A list of WEROC member agencies can be found in the Appendix (ref. Section 5.10).

During an emergency situation that impacts member agencies, WEROC will activate its Emergency Operations Center to assist its member agencies. In that endeavor MWDOC staff assigned to the WEROC EOC will have the responsibility to:

1. Coordinate the allocation of water resources to Orange County retail water agencies based on storage, supply and demand.
2. Collect and analyze damage assessments to determine resource priorities, and report this information to the Orange County Operational Area.
3. Coordinate mutual aid resources as needed.
4. Assist in the resumption of normal operations as soon as possible

1.3 DEFINITION OF AN EMERGENCY

Emergency is defined as: "An unexpected situation or sudden occurrence of a serious and urgent nature that demands immediate action."

A water-related emergency to MWDOC and WEROC could include the conditions listed below:

- Earthquake on a local or distant fault resulting in an interruption in water and wastewater operations in Orange County or causing heavy damage to the regional infrastructure.
- Flood in the Santa Ana River basin resulting in substantial water infrastructure damage.
- An uncontrolled release or failure of Prado Dam, Santiago Dam, San Joaquin Reservoir, and/or other local dams or reservoirs.
- An urban wildland fire detrimentally affecting the water infrastructure in Orange County.
- Any other impending or declared disaster causing heavy damage to Orange County water infrastructure that:
 1. Results in an interruption of water service;
 2. Requires a significant commitment of resources over an extended period of time requiring the activation of WEROC (ref. Section 4.4);
 3. Results in the Operational Area, WEROC member agencies or MET requesting the activation of WEROC.

In addition to water related emergencies, the MWDOC office staff may be affected by other local emergencies. Those emergencies include, but are not limited to:

- Fire in the MWDOC and/or OCWD office or a neighboring building;
- Chemical spills in the vicinity causing evacuation;
- Electrical power failure;
- Civil disorder, bomb threats, workplace violence, riots, vandalism, sabotage.

1.4 EMPLOYEE PREPAREDNESS

All MWDOC employees are considered to be disaster service workers under California State Code 3100-3109. Each employee signed the Disaster Worker Constitution Oath signifying that they understand their duties in a disaster situation and agree to the oath. The oath states that all government employees are required to report to work following a disaster to provide assistance in the continuity of government services to the general public.

MWDOC employees should be aware of and routinely review the layout of the MWDOC/OCWD facilities noting locations of: office exits, fire extinguishers, flashlights, first aid supplies, storage of tools, WEROC and MARS radios and emergency AM/FM/TV/Weather radio. Employees should also be familiar with where each employee works. This information can be found in the evacuation map/building layout, located in the quick reference guide.

Employees are encouraged to have a family communications and disaster plan, to ensure their family's safety during and following an event. Remember if you are at work at the time of an event, you may not be able to get home to make sure everyone is safe. MWDOC employees should practice taking cover for protection during an earthquake and routinely inspect predetermined paths for evacuation in the event of an evacuation. Employees and their families can sign up for AlertOC (www.alertoc.com) to receive emergency notifications from the county or cities in Orange County. If a staff member lives outside of Orange County, a list of emergency notification systems can be found in Section 6.11 of the Appendix.

Employees are expected to be familiar with the WEROC Emergency Operations Plan, the MWDOC COOP Plan, the Standardized Emergency Management System (SEMS), the National Incident Management System (NIMS), and their own emergency response positions and duties through training. WEROC will host an annual disaster exercise and occasional drills to ensure staff understands the above stated concepts.

Family Hotline

MWDOC recognizes that employees will be concerned with their family's welfare. If the disaster occurs after-hours staff should make sure their family is safe and cared for; once this is accomplished staff is expected to report to their designated location and position. If the disaster occurs during work hours family members can call the **Family Hotline at (714) 593-5035**. The answering machine will prompt the caller to indicate the family member's name, their own name, status, location, and a phone number where they can be reached. A COOP assistant will be assigned to record the messages and provide them to the appropriate employee.

EMERGENCY KITS AND SUPPLIES

MWDOC has purchased emergency supplies, including food, water and a first aid kit, which are stored in the kitchen. Additional supplies are located in the storage room. The purpose of MWDOC providing emergency supplies for their employees is to;

1. Ensure that each employee has the basic supplies needed to sustain life for approximately 3 days after a disaster where normal life services are interrupted;
2. Since MWDOC employees may be called upon to assist in restoration efforts to the Orange County water supply after a disaster occurs, MWDOC, in providing basic emergency supplies, will increase the response readiness of employees;
3. Encourage employees to continue emergency preparedness tasks in their workspaces and homes.

Very little maintenance is required for the emergency supplies. The supplies have an average shelf life of 3-5 years, depending on the item. The emergency supplies will be inspected by administrative staff yearly to ensure their readiness. Items will be replaced by the administrative staff in a timely manner.

Employees are also encouraged to follow best practices for emergency preparedness by storing a personal emergency kit in their home, vehicle and office and keeping a pair of comfortable, closed toed shoes at their work station. When building an emergency kit, employees should take into account any special needs that may not be addressed by a basic kit. These could include items such as contacts, extra glasses or dentures. Consult your doctor about storing prescription medications such as heart and high blood pressure medication, insulin and other prescription drugs. It is also recommended that employees store a minimum of \$30 in cash in 10s, 5s and 1s in a secure location for emergency use only. More information can be found at readyoc.com or RedCross.org.

1.5 ACTIVATION

The MWDOC COOP Center and the WEROC EOC can be activated under two conditions: automatic activation or by notification. Staff assigned to the WEROC EOC should review the complete WEROC activation guidelines in the WEROC Emergency Operations Plan.

1. **Automatic Activation during Business/after Hours.** 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, both the COOP and a WEROC EOC will be automatically activated with Staff responding to their assigned location without being notified.
2. **By Notification.** At the determination of the MWDOC General Manager or designee the COOP can be activated to support continuity of operations. AlertOC will be utilized to notify staff of activation and any actions that should be taken if the event is outside working hours.

1.6 AFTER HOUR RESPONSE

If an incident occurs outside of normal working hours, employees must determine their need to respond. Employees' perceptions of the severity of an earthquake or other regional event can vary widely with geographical proximity and may be misleading. Before making a determination on whether you are required to report to your assigned disaster response location after an event, consult available media sources for information regarding impacts to infrastructure. If the employee is in Orange County and interprets an earthquake or other disaster as having a strong impact, it is a safe assumption that they should report to their assigned disaster response location.

Once you determine you need to respond, or have been notified of activation, employees are expected to report to their assigned emergency response location and report to their supervisor as designated in, Tables 3.2.1 & 3.2.2.

Proceed to the designated emergency response location only after your family and home are secured and conditions are safe to do so. If you determine another location (ref. Section 1.7) is closer and safer to reach, report to that location. Notify MWDOC if you are unable to report to your designated location. Make sure you have the appropriate map(s) with you in your vehicle and sufficient fuel for a round trip including detours.

1.7 BUSINESS HOUR RESPONSE AND ALTERNATE LOCATIONS

After a disaster occurs, an initial building safety evaluation will be completed by the General Manager, Assistant General Manager or management staff to determine if the MWDOC Administration Office is safe to occupy. Management may consult OCWD as a component of the safety assessment. If there is any concern as to its safety, staff will wait for a building inspector from the City of Fountain Valley to clear the building for occupancy (Fountain Valley Building & Fire Safety Fire Administration: (714) 593-4436). If the MWDOC office is safe to occupy, the COOP staff will use Conference Room 101 as a Status and Briefing Room and Conference Room 102 as Policy Group Room. If it is determined that the MWDOC Fountain Valley office is unsafe, it will be posted unsafe and an alternate site will be determined by the General Manager. Staff should report to the following locations in the order indicated:

1. MWDOC/OCWD; 18700 Ward Street, Fountain Valley 92708
2. WEROC SEOC; 26081 Via Pera, Mission Viejo 92691
3. WEROC NEOC; 9737 Peters Canyon Road, Orange 92705
4. Member Agency Available Space; TBD

Staff will report to the above locations in the order indicated until a safe location for operations is determined. Accounting has established an alternate operating location at the WEROC South EOC in Mission Viejo (see Accounting Recovery Plan in Section 3.5).

If WEROC is activated and occupies the South EOC, the MWDOC COOP operations will move to the North EOC. Operations can be conducted using mobile hot spot devices and satellite data phones until phone/internet services can be established at the site. If this facility is not available, operations will be conducted at an alternative location, provided by the WEROC Mutual Aid Agreement. Computers and other supplies will be provided by private contractors.

1.8 EMPLOYEE ROLL CALL

If a disaster or emergency situation occurs during working hours employees should check in with their supervisor and/or fellow employees as soon as safely possible, whether inside or outside of the MWDOC office. Supervisors will then check in with the General Manager or Assistant General Manager. For the reason of employee accountability during emergencies, employees will always notify their supervisor when they are going to be away from the office and the approximate time of return.

If evacuation of the building is required please follow the currently posted evacuation map to the nearest exit and proceed to the meeting area as indicated. Check on your co-workers and encourage their exit as you pass other work areas. As you leave the building close doors as you pass. If a door is closed cautiously check the office for staff. **Pick up the Employee Roll Call Clipboard and two-way radio at the exit if someone has not already done so and conduct a roll call once everyone is safely evacuated.** Utilize the two way radio to conduct a full roll call if staff was required to evacuate to separate locations. Report any missing persons and their likely location to emergency personnel when they arrive on scene.

1.9 WORK SHIFTS

The MWDOC COOP work will generally be limited to eight or nine hour shifts with consideration to safety and exhaustion. The COOP Director will determine the work shifts, and staff needed to accomplish the COOP's mission.

Employees assigned to a WEROC Emergency Operations Center or another agency may be requested to work 12-hour shifts. Employees will be discouraged from working shifts longer than 16 hours regardless of the number of employees responding or extent of damages.

1.10 PUBLIC INFORMATION

During a major disaster when WEROC is activated, public information will be handled by the WEROC EOC and/or the WEROC representative at the Orange County Operational Area EOC. During local emergencies when WEROC is not activated, MWDOC's Public Affairs staff will be the point of contact for all media and public information.

Refer all questions received from the press and the public to the appropriate MWDOC Public Affairs Staff or WEROC, if activated. **Do not** provide information unless it has been confirmed and approved by the public affairs staff for distribution.

1.11 WATER QUALITY NOTICES

Some agencies may require and utilize water quality notices to inform the public of their water quality and possible need to treat or use alternate sources. MWDOC and WEROC do not issue water quality notices; however WEROC may assist an agency to coordinate with the California State Water Resource Control Board, Division of Drinking Water and that agency's public notification.

Staff should refer public inquiries to each specific water utility. The WEROC Public Information Officer (PIO) will provide all MWDOC Staff with a list of water quality notices and copies of press releases. **MWDOC staff can answer simple questions from the public, only as outlined by those press releases.** DO NOT answer questions that are outside of your subject matter knowledge, i.e. technical water quality questions.

1.12 COORDINATION WITH THE OPERATIONAL AREA

MWDOC is signatory to the Orange County Operational Area Agreement. All public political sub-divisions have been organized into Operational Areas (OA) by county jurisdictional lines to ensure coordination, communication and resource sharing. Additionally, MWDOC is separate from WEROC and is a member of WEROC when WEROC is activated. MWDOC, as a member of the OA, will coordinate through WEROC to the OA Emergency Operations Center (ref. Section 1.10).

The OA will notify WEROC staff of emergencies via email, reverse notification and fax. Any emergency communication via fax from the OA to WEROC needs to be hand delivered to the WEROC Program Manager as soon as possible. If the WEROC Program Manager is not available, then the notification should be hand delivered to the Assistant General Manager, or the General Manager (in this order), as soon as possible. The notification should never be left in an inbox. If a FAX or other communication is received by MWDOC from the OA while the WEROC EOC is activated, the information must be forwarded to the activated WEROC Operations Center by email, FAX, telephone (ref. section 5.8 and 5.8.1) or through the WEROC radio.



Section 2: Incident Specific Response

April 2017

2.1 EVACUATION

Be familiar with this evacuation plan prior to an event. If a disaster or emergency situation occurs during working hours employees should check in with their supervisor and/or fellow employees as soon as safely possible, whether inside or outside of the MWDOC office. Supervisors will then check in with the General Manager or Assistant General Manager. For the reason of employee accountability during emergencies, employees will always notify their supervisor when they are going to be away from the office and the approximate time of return.

If evacuation of the building is required please follow the currently posted evacuation map (ref. Quick Reference Guide) to the nearest exit and proceed to the meeting area as indicated. Determine in advance the exit nearest to your work location and the route you will follow to reach that exit in the event of an emergency. Consider an alternate exit in case the nearest exit is blocked or unsafe.

EVACUATE ONLY IF TOLD TO DO SO OR DANGER IS IMMINENT.

- Follow instructions of emergency personnel.
- If it is safe to do so, secure sensitive documents.
- WALK - do not run.
- Keep noise to a minimum.
- Remove high heels to avoid tripping, unless conditions make it unsafe to do so.
- Assist people with disabilities.
- If you are in a meeting, direct visitors to the nearest exit with you. Bring the sign in sheet with you.
- Check on your co-workers and encourage their exit as you pass other work areas. If a door is closed cautiously check the office for staff. As you leave the building close doors to empty offices.

- Pick up the Employee Roll Call Clipboard and two-way radio with the attached envelope containing the radio batteries (radio should be programmed to Channel 9) at either of the two emergency exits and conduct a roll call once everyone is safely evacuated.
- Front desk staff will take the Visitor's Log to the evacuation meeting point to be utilized during roll call to ensure all MWDOC staff and visitors are accounted for.
- Report to the designated area (ref. Quick Reference Guide) unless otherwise directed, and check in for roll call. Utilize the two way radio to conduct a full roll call if staff was required to evacuate to separate locations.
- If the two-way radios are needed, make sure batteries found within the envelope attached to the radio are correctly placed into the radio and turn the radio on. Tune into Channel 9 to communicate with the other MWDOC radio operator as to your location and what MWDOC staff are present at your location.
- Use the staff phone list in the envelope attached to the clipboard to check on any staff unaccounted for.
- Report any missing persons and their likely location to emergency personal when they arrive on scene. Utilize the Evacuation Map attached to the clipboard to show emergency personal where the missing person may be.
- Avoid talking to the Press if present. Refer them to Public Affairs personnel or senior management.

2.2 EARTHQUAKE

Refer to the Hazard Mitigation Plan for a complete hazards analysis for earthquakes in Orange County and Southern California.

2.2.1 DURING THE QUAKE

INDOORS



- DO NOT RUN, a large quake can knock you off of your feet and the building will be moving while you are trying to move.
- TAKE COVER UNDER YOUR DESK or a similar sturdy object AWAY FROM WINDOWS. Watch out for falling objects.
- HOLD ON to the object you are taking cover under. PROTECT YOUR HEAD AND NECK from objects that have been thrown or fallen.

OUTDOORS

- Watch for falling trees, debris and glass from windows.
- Move to an open area away from buildings, electrical wires, and tall objects.
- DO NOT ATTEMPT to run into or out of a building. There may be debris falling from the building.

IN A VEHICLE

- Carefully bring your car to a stop in a safe position in an open area.
- Avoid stopping under or on bridges and overpasses.
- Remain in your vehicle.
- Tune your radio to a news broadcast to hear details of the quake.
- Be cautious of other motorists (those who may panic and drive irrationally).

- Drive cautiously once shaking stops. **DON'T ASSUME THAT THE ROAD IS THERE** unless you can see the road. Remember to yield right of way to emergency vehicles. Traffic signals may not be working, requiring intersections to be treated as four way stop signs.

2.2.2 AFTER THE QUAKE

- If the Earthquake was significant, (falling items, lights out, etc) and there is a clear path to safety, evacuate the building. If it is unclear, management will make a determination.
- ATTEND TO INJURED PERSONNEL. A first-aid kit is in the lunch room.
- BE READY FOR AFTERSHOCKS.
- Monitor available sources for news (AM/FM radios in storage rooms).

2.3 FIRE SAFETY

MWDOC coordinates with the Orange County Water District and the City of Fountain Valley Fire Department to ensure the buildings fire safety mechanisms are in working order. These safety items include: fire extinguishers, fire alarms, and sprinkler systems. However, fire safety is everyone's responsibility. Staff should be sure to utilize electrical outlets properly, and report any fire safety hazards to the Administrative Services Manager.

Be aware of your office location, evacuation map, and safety mechanisms available prior to an event. Know in advance exactly how many doors you will have to pass along your evacuation route before you reach your nearest exit door. This tip will be very helpful in the event you encounter heavy smoke. Remember, when smoke is present, often exit signs above the doors may be covered by smoke. If you know in advance how many doors you will have to pass, you can then crawl and count the number of doors you pass.

2.3.1 OFFICE FIRE

If you discover the fire, alert others by **activating the fire alarm** (ref. Evacuation Map). When the fire alarm is activated the alarms sound in both the MWDOC and OCWD office buildings. Then **call 911** and report the location of the fire.

Small Fires: Use fire extinguisher only if safe to do so.

The fire extinguishers located throughout the MWDOC offices (ref. Evacuation Map) are A-B-C extinguishers and can be used on **any type of fire**.

Fire Extinguisher Instructions:

- P** PULL safety pin from handle.
- A** AIM (nozzle, cone, horn) at base of the fire.
- S** SQUEEZE the trigger handle.
- S** SWEEP from side-to-side. Watch for re-flash.

Large Fires: EVACUATE. Use the following evacuation procedures. Be ready to direct fire personnel.

1. Proceed to the nearest exit.
2. Do not open a door without first feeling if it is HOT (bottom and top of door, not the handle). If it is hot, there may be fire on the other side and you should NOT open the door. If the door is not hot, open the door slowly. Stand behind the door and to one side; be prepared to close the door quickly if fire or heavy smoke is present.
 - If the door is HOT to the touch DO NOT OPEN IT. Stay in your work area with the door closed. If possible call 911 to report your location and wait for fire response personnel to find you.

3. Stay low when moving through smoke. As heat and smoke rise, the cleanest air will move towards the floor. If smoke is abundant, drop to hands and knees and crawl. Breathe shallowly using a blouse, shirt, or jacket as a filter.
4. IF FORCED TO ADVANCE THROUGH FLAMES hold your breath, move quickly, cover your head/hair, and keep your head down and eyes closed as much as possible. If your clothing catches fire: STOP - DROP - ROLL.
5. Continue to follow the Evacuation procedures outlined in Section 2.1 of this plan.
6. Do not re-enter the MWDOC/OCWD buildings until fire officials have determined that it is safe to reenter.

2.3.2 AFTER BUSINESS HOURS FIRE

Usually, fires in office buildings occur during non-working hours. MWDOC staff will be notified via phone, text or email if MWDOC offices are unavailable with instructions on when/where to report for work. Possible alternate locations are designated in Section 1.7.

2.4 CHEMICAL SPILLS

OCWD and Orange County Sanitation District (OCSD) receives delivers, stores and uses hazardous chemicals. Since neither utilizes gaseous chlorine, many spills will be contained within the original spill location. If for some reason the spill is of a gaseous or aerosolized form, normal wind patterns should not carry a leak or spill to the MWDOC office. However, staff needs to be aware of chemical spill response actions.

2.4.1 CHEMICAL RELEASE - SHELTER IN PLACE

- OCWD/OCSD staff will call 911 to notify the Fire Department and Orange County HAZMAT Team.
- OCWD/OCSD staff will notify the OCWD receptionist.
- OCWD's receptionist will then notify all staff by intercom system what protective actions to take.

2.4.2 DISCOVERING A CHEMICAL SPILL

1. Do not touch the material and try not to breathe any vapors.
2. Move to a safe location upwind of the substance if possible. To determine the direction of the wind, use a flag or tree as a reference.
3. For uncontrolled flammable liquid spills, call 911. Provide information as required. Do not hang up the telephone until the 911 operator hangs up. Do not assume that someone else will call 911.
4. Inform the OCWD receptionist in person, or call the OCWD receptionist at 378-3200. The OCWD receptionist will notify the appropriate OCWD staff for response.
5. If it is before or after normal working hours and/or the OCWD receptionist is not available, call the OCWD Emergency Telephone Line at 378-3300 and the appropriate staff will be notified.
6. Follow instructions from the OCWD Hazmat Team or the Fire Authority once on scene.

2.5 POWER OUTAGE

To prepare, you should know the location of the office flashlights. Currently, there are flashlights in the storage room and the kitchen. Emergency lights have been installed in the bathrooms.

- If the office is dark move with extreme caution and verbally let other employees know where you are.
- Check and make sure, all staff and visitors are ok.
- Use available resources (battery powered radio, cell phones, WEROC/OA radio, etc.) to determine the cause extent and possible duration of the power outage.
- Turn off all electrical equipment including computers. When the power is restored there may be a surge and then go off again. These fluctuations can damage electrical equipment.
- Report to your supervisor. Management will determine if staff should continue working, proceed to emergency assignment or head home for the day.
- Most telephones found in the office require electricity to operate. There are three phones in the WEROC office shelf that work without electricity. They can be plugged in anywhere fax machines are plugged in, currently.

2.6 BOMB THREATS

Bomb threats are usually received by telephone or sometimes by a note or letter. Most bomb threats are made by callers who want to create an atmosphere of anxiety and panic. However, **all such calls must be taken seriously** and handled as a potential valid threat.

If you see a package or foreign object in an unusual place DON'T TOUCH IT. Isolate the package and secure the room by shutting all doors and windows and report the package to your immediate supervisor, the General Manager, or Assistant General Manager and call 911. One of these individuals will determine if it is necessary to evacuate the office. Follow their directions. Advise others of the situation and to avoid the area.

Features of suspicious packages include those with suspicious or threatening messages written on them, irregularly shaped, bulging or rigid packages, unprofessionally wrapped packages with excessive amounts of tape or other wrappings and packages with protruding wires or aluminum foil.

If you receive a bomb threat telephone call stay calm and be courteous to the caller. Try to stretch out the call as long as possible. Write down the time and incoming phone number of the call. While the caller is talking, take notes on the exact wording of everything said and on your observations about the character of the voice (cultural accent, man/woman, calm or nervous, yelling or soft) and background noises. Use the Bomb Threat Report form in the following section, or the MWDOC Employee manual to record information.

Try to signal a co-worker to call 911 while you are still on the phone. After 911 is called an immediate supervisor should be notified. If you are unable to notify a coworker, call 911 immediately after the caller hangs up and notify your supervisor, the General Manager or the Assistant General Manager. One of these individuals will determine if it is necessary to evacuate the office. Follow their directions.

After the caller hangs up, don't allow the phone line to be used again so that the call can be traced by law enforcement. If an explosion occurs at any time EVACUATE the building and call 911 immediately. Follow evacuation procedures as outlined in Section 2.1.

2.6.1 BOMB THREAT REPORT

Caller's Voice:

Calm	Raspy	Crying
Nasal	Rapid	Cracked
Angry	Deep	Distinct
Stutter	Soft	Accent
Excited	Ragged	Slurred
Lisp	Loud	Familiar
Slow	Deep Breathing	

Did the voice sound familiar? Who?

Questions to ask:

1. **When** is bomb going to explode?
2. **Where** is it right now?
3. What does it **look like**?
4. What **kind** of bomb is it?
5. What will cause it to explode?
6. Did you place the bomb?
7. Why?
8. What is your name?
9. What is your address?

(Continued on the following page)

Exact wording of the threat:

Sex of Caller: _____ **Age:** _____ **Length of Call:** _____

Number at which call was received: _____ **Time/Date:** _____

Background Sounds:

Street noises

Office Machines

Animal noises

Motor/Engine

Quiet

Household noise

Music

Voices

Heavy Machinery

Threat Language:

Well spoken (educated)

Incoherent

Foul

Taped

Irrational

Message read by threat mak

Remarks:

2.7 WORKPLACE VIOLENCE

Any threat of violence or concern about inappropriate behavior should be taken seriously and reported to your supervisor, the Assistant General Manager, General Manager, or Administrative Services Manager.

In the event that a co-worker or visitor demonstrates unusual behavior:

1. Do not ignore the behavior. If you believe it is unusual or concerns you, report it.
2. Always listen to co-workers and visitors; be empathetic and compassionate.
3. If the individual threatens violence towards you or others remain as calm and collected as possible. Your behavior will often influence the individual's behavior. Try to stay between the person and the door to allow for your escape.
4. If a person is brandishing a weapon, whether or not the person has hurt anyone, calmly get away from that person as soon as possible and assist others in fleeing.
5. If you need assistance, call 911 and report the incident. If you are unsure of the seriousness of the situation, report it to your supervisor.

If violence occurs:

1. Run:

- Have an escape route planned and in mind.
- Leave your belongings behind.
- Keep your hands visible.

2. Hide:

- Hide in an area out of the shooters view.
- Block entry to your hiding place and lock the doors.
- Silence your cell phone and/or pager.

3. Fight:

- As a last resort and only when your life is in imminent danger.
- Attempt to incapacitate the shooter.
- Act with physical aggression and throw items at the active shooter.

2.7.1 SEE SOMETHING SAY SOMETHING:

Report any suspicious behavior that could indicate terrorism or terrorism-related crime to your supervisor, General Manager, Assistant General Manager or to local law enforcement. Tips can be submitted to the Orange County Intelligence Assessment Center (<https://ociac.ca.gov>). Suspicious behavior can include but is not limited to:

1. Unusual items:

- Vehicles parked in odd locations.
- Unattended packages or luggage.
- Doors or windows left open that are usually closed.

2. Eliciting information:

- A person showing curiosity about a building or facility beyond casual or professional interest.
- A person eliciting information about a facilities purpose, operations, security procedures, personnel, or shift changes.

3. Observation/surveillance:

- A person loitering without explanation, especially in concealed areas.
- Unusual, repeated, or prolonged observation of a building.
- A person taking pictures, notes, measurements or sketching floor plans of a facility.

Some of this behavior could be innocent - It is ultimately up to law enforcement to decide which activities warrant investigation.

2.8 SPECIAL INTEREST DEMONSTRATION PICKET LINE.

It is possible that MWDOC and/or OCWD could experience a special interest demonstration picket line. Frequently, people participating in picket lines are emotionally highly-charged. They have their cause in mind and don't hear much outside of their current situation.

If you have to cross a demonstration picket line in order to enter the MWDOC office, assess the temperament of the demonstrators. Do not engage with the demonstrators. At the first sign of aggressive behavior, **RETREAT**. If the Press is present, try to avoid contact. Go to a telephone and notify the General Manager of the situation. An evaluation will be made by the General Manager, Assistant General Manager, or your Supervisor and you will be instructed on what actions to take.

ALWAYS REMEMBER TO MAINTAIN YOUR SAFETY!

In occurrences of **riots, vandalism, sabotage, civil disorder, etc., MAINTAIN YOUR SAFETY**. Do not expose yourself to any more risk than is necessary. No personal possession or District possession is worth the threat to your safety or life. If you notice a condition that may adversely affect your safety any time during working hours, find a safe location and notify the other MWDOC employees. If you are outside of the office call MWDOC staff inside to notify them of the situation. **DO NOT TAKE AGGRESSIVE ACTION**. If the situation warrants, call 911.

2.9 FLOODING

The MWDOC Admin Building is subject to potential flooding from several local dams and reservoirs. These include Prado Dam on the Santa Ana River in the Santa Ana Canyon, and Santiago and Villa Park Dams located on Santiago Creek which flows into the Santa Ana River. The MWDOC office is located about 1/2 mile west of the Santa Ana River.

Certain areas adjacent to the Santa Ana River are subject to flooding in the event of what is termed a 100-year flood. Usually, estimated peak flow of such a flood is developed from statistical analysis of stream flow, precipitation records and run-off.

The flooding in most situations may occur due to heavy prolonged storms, but adverse conditions such as high tides can impact the problem. Other situations which can cause flooding are hurricanes, high winds, waterspouts, and tsunamis.

A slow-rise flood situation will evolve through a series of seven stages as indicated below. This evolution of an emergency could begin with a minor problem, such as excessive rainfall, and culminate in a catastrophic event, such as a major levee break and flooding. These response stages are linked to Santa Ana River flow measured at the 5th Street Bridge in Santa Ana. The river elevations are intended to be guides for declaring the response stages. The Orange County Flood Control District will monitor the situation and determine the response stages based on a variety of circumstances, including weather forecasts, dam releases and levee conditions.

WEROC staff will monitor the OC Flood Control District Alert Stages. If a Stage III of the Orange County Flood Control District Alert Stages has been reached, coordination between MWDOC and OCWD will occur by the General Manager, Assistant General Manager or Administrative Services Manager to determine protective action.

2.9.1 ORANGE COUNTY FLOOD CONTROL DISTRICT ALERT STAGES

STAGE I (Watch Stage)

- Mild rainfall.

STAGE II

- Heavy rainfall or potential thereof. OC Public Works Department Operations Center activated and surveillance of flood control facilities in effect.
- MWDOC General Manager, Assistant General Manager or Administrative Services Manager notified of the conditions.

STAGE III

- Continuation of heavy rain or deterioration of facilities. County personnel assume assigned emergency duties.
- MWDOC General Manager, Assistant General Manager, or Administrative Services Manager evaluates whether COOP or WEROC EOC activation is necessary.

STAGE IV

- Conditions are or are likely to be beyond County control.
- Emergency declared by County.
- MWDOC General Manager, Assistant General Manager, or Administrative Services Manager determine the safety of staying in the MWDOC building or evacuating.

STAGE V

- Damage beyond local resources. Governor requested to proclaim state of emergency.

STAGE VI.

- Damage beyond State resources. President requested to declare Major Disaster.



Section 3: Employee Assignment

April 2017

3.0 EMPLOYEE ASSIGNMENTS

The MWDOC Office will be acting as the Continuity of Operations Center (COOP) during a disaster. The Policy Group, Finance/IT Recovery Section, and the Building Operations Recovery Section will be components of the COOP. Staff assignments and chain of command for the MWDOC COOP are listed in Table 3.2.1. All full-time and part-time employees and interns have assigned positions.

Traditional ICS functions will be convened at the WEROC Emergency Operation Center (EOC) in support of member agency response and recovery. Program staff (i.e. Engineering, Water Use Efficiency) are assigned to the WEROC EOC since many of their programs will be temporarily on hold during a major disaster. If the disaster does not require a WEROC EOC activation then program staff are assigned to the recovery and restoration of their own program's activities. Staff assignments to the WEROC EOC are listed in Table 3.2.2.

Staff will report to their assigned location (addresses below) unless it is unsafe. If there is any concern as to its safety, staff will wait for management or a building inspector to determine whether the facility should be occupied. If it is determined that the building is unsafe, it will be posted unsafe and an alternate site will be determined by the General Manager. A WEROC radio can be utilized to check the availability and safety of these facilities prior to moving on to the next location. Accounting has established an alternate operating location at the WEROC South EOC in Mission Viejo (ref. Section 4 Finance Section).

1. MWDOC/OCWD, 18700 Ward Street, Fountain Valley
2. WEROC SEOC, 26081 Via Pera, Mission Viejo
3. WEROC NEOC, 9737 Peters Canyon Road, Orange
4. Member Agency Available Space; TBD

3.1 TEMPORARY/CONTRACT EMPLOYEES

Temporary or contract personnel are not to report after a disaster unless called or have pre-assigned duties. Supervisors need to make this clear to all temporary/contract personnel under their direction.

3.2 COOP FUNCTION ASSIGNMENTS

These positions are intended to address both local disasters with the majority of the MWDOC employees' available and major disasters when many MWDOC staff will report to WEROC and will not be available to support the MWDOC office response. Assignments are listed in order of command if the primary staff person is unavailable.

These recommended position assignments are a guideline for MWDOC disaster recovery operations. Due to vacations, sick time, out of office meetings, etc., a reallocation of functions may be required. Referencing the MWDOC Daily Operations Organizational Chart (Table 3.2.3) will provide employee names associated with job titles. The COOP Director may reassign personnel at their discretion depending on the incident and personnel available.

Table 3.2.1 COOP ASSIGNMENTS AND CHAIN OF COMMAND

COOP Assignments and Chain of Command

Management		Primary	2nd	3rd	4th	5th
Policy Group		All Board Positions				
Director		General Manager*	Assistant General Manager*	Associate General Manager*	Accounting Manager	Sr. Exec. Assistant to Board
COOP Director Assistant		Sr. Executive Assistant	Sr. Exec. Assistant to Board			
Policy Group Assistant		Sr. Exec. Assistant to Board	Sr. Executive Assistant			
Radio Liaison		Water Resource Analyst*	Interns	Admin Assistants		
Finance/IT Recovery						
Finance/IT Recovery Chief		Accounting Manager	Financial Analyst*	Senior Accountant		
Accounting Unit Leader		Senior Accountant	Accountant			
IT Unit Leader		Network Systems Engineer	Financial Analyst*	Outsource/Mutual Aid		
Building Operations Recovery						
Building Operations Recovery Chief		Admin. Services Manager*	HR Sr. Executive Assistant	Records Coordinator		
Documentation Unit Leader		Admin Assistant**	Admin Assistant**			
Logistics Unit Leader		Admin Assistant**				
Records Recovery Unit Leader		Records Coordinator	Admin Assistant**			
Assistants		Admin Assistants	Interns			

*Primary assignment is to WEROC.

**As assigned by the Building Operations Recovery Chief

Note: Policy group will be asked to report to MWDOC if requested

Table 3.2.2 WEROC ASSIGNMENTS

MWDOC staff listed below should report to their designated locations upon automatic activation or notification from the WEROC EOC's. Upon arrival to the EOC, staff should refer to the WEROC Emergency Response Plan for their specific function assignment and duties. Check in with the EOC Director to receive further instructions.

MWDOC STAFF POSITIONS ASSIGNED TO WEROC EOC's:*

- General Manager
- Assistant General Manager
- Associate General Manager
- Director of Water Use Efficiency
- WUE Program Supervisor
- WUE Program Coordinators
- WUE Office Assistant
- WUE Program Specialist
- WUE Analyst
- WUE Program Assistant
- Director of Public Affairs
- Public Affairs Manager
- Public Affairs Supervisor
- Public Affairs Assistants
- Financial Analyst
- Governmental Affairs Manager
- Administrative Services Manager
- Principal Engineer
- Principal Water Resources Analyst
- Sr. Water Resources Analyst
- Water Resources Analyst
- WEROC Programs Manager
- WEROC Program Coordinator
- WEROC Administrative Assistant

*As positions change, all positions related to WEROC, WUE, Engineering and Public Affairs will be assigned to the WEROC EOC.

Table 3.2.3 MWDOC DAILY OPERATIONS ORGANIZATIONAL CHART

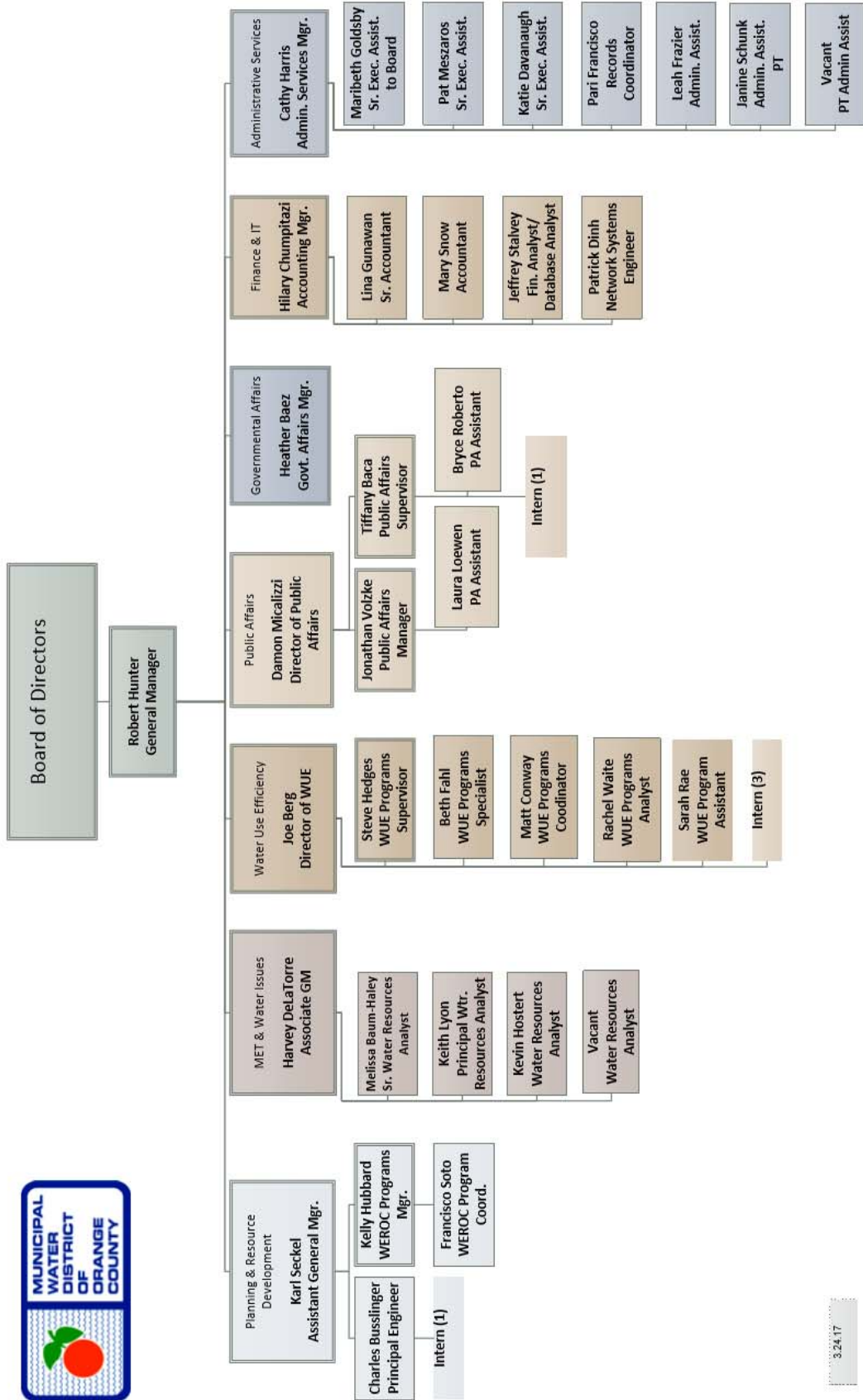
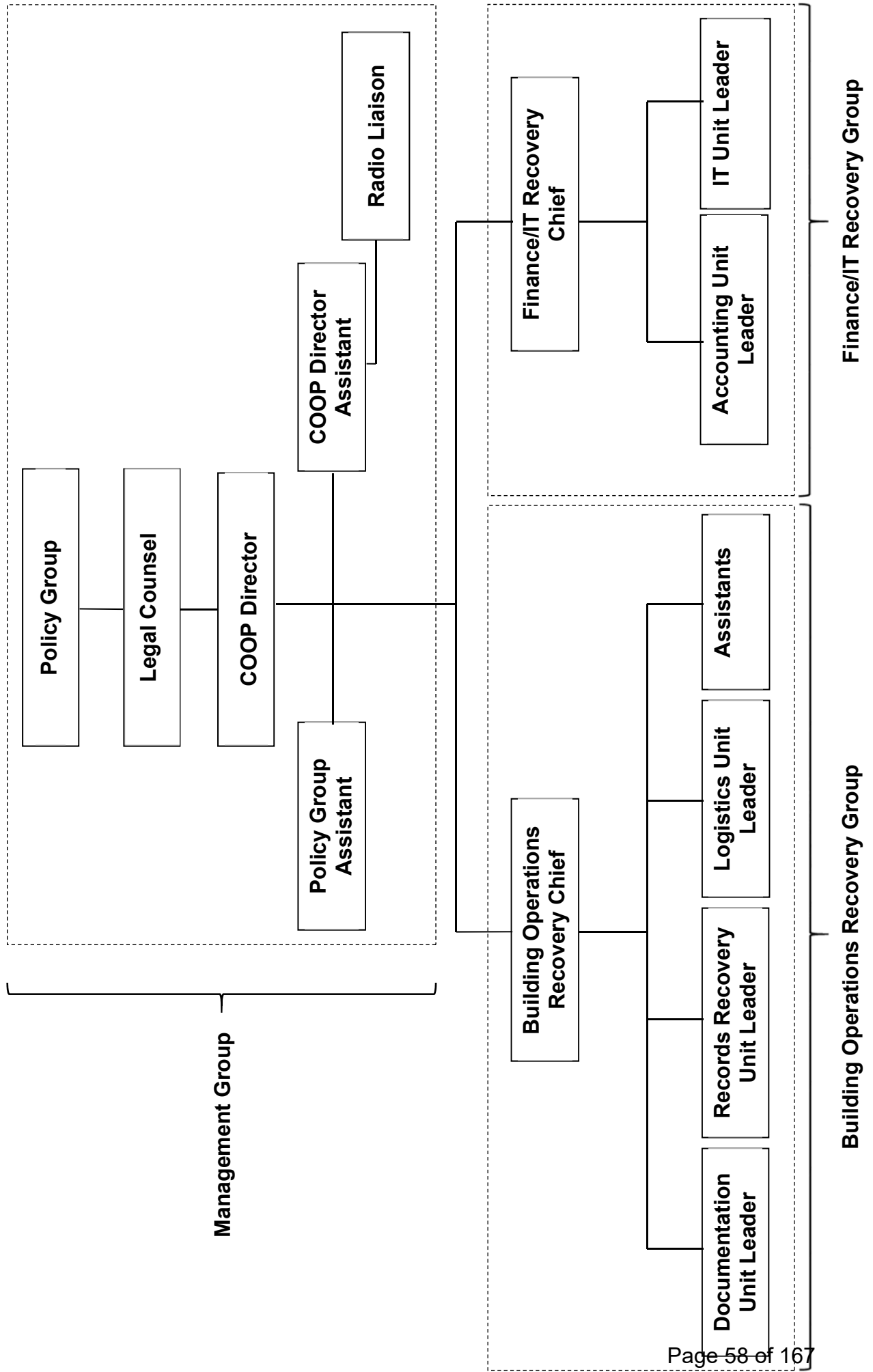


TABLE 3.2.4 MWDOC CONTINUITY OF OPERATIONS CENTER ORGANIZATIONAL CHART



3.3 COOP POSITION MISSIONS & CHECKLIST

Checklists for each COOP position are provided on the following pages. These checklists should be utilized by staff as a set of guidelines for their position. Included in the checklists are mission statements, who the position reports to, staff assignments and potential duties. Understand that other duties may be assigned to staff as required.

Management Group

The COOP Director oversees the overall implementation of the Continuity of Operations Plan to ensure continuity of government and to standard business operations. The Director determines the need to activate the COOP plan based on impacts to the MWDOC Administration building and business operations. Additionally, the Director determines which COOP Groups need to be staffed and should report to work.

Policy Group

The Policy Group will be asked to report to the MWDOC COOP Center if Board approval is required for response activities that are necessary to facilitate recovery efforts. The majority of policies and authorities required for response and recovery actions have been developed and approved through the MWDOC Administration Code, the MWDOC COOP and WEROC Emergency Response Plan (ERP). The Policy Group will be kept apprised by the MWDOC General Manager or designee of impacts and actions being taken. Depending on conditions, regular board meetings may be rescheduled, held via conference call, or relocated. Emergency Board meetings may also be called if needed. All Brown Act requirements will be adhered to.

Finance/IT Recovery Group

The Finance/IT Group's primary responsibility is the restoration of IT and accounting functions. The IT staff also support WEROC operations and may have to report to the WEROC EOC first.

Building Operations Recovery Group

The Building Operations Recovery Group is responsible for restoration of the physical work environment of MWDOC, including but not limited to document recovery, office supplies and work stations.

Policy Group

Mission: Approve operational policies and goals to direct MWDOC COOP and WEROC EOC disaster response and recovery.

Assigned Staff: All MWDOC Board Members

Coordinates with: COOP Director and Policy Group Assistant

Checklist:

- ☐ Report to the MWDOC COOP Center if requested and check in with Documentation Unit Leader.
- ☐ Report to the MWDOC Policy Room, Conference Room 102.
- ☐ Receive a briefing from the Policy Group Assistant.
- ☐ Establish contact with the MWDOC COOP Director.
- ☐ Support the WEROC EOC and EOC Director with policy and political support, as requested.
- ☐ Ratify the COOP Director's decision to declare an emergency for MWDOC and any expenditures requiring ratification.
- ☐ As required, approve staff recommended policies and guidelines required for fiscal continuity and continuation of governance to be implemented at the MWDOC COOP.
- ☐ As required, approve staff recommended policies and guidelines related to MWDOC's mission as a water resource management agency to be implemented at the WEROC EOC.
- ☐ Review and approve major contracts and purchases that are above the emergency authority of the MWDOC General Manager (COOP Director) and staff.
- ☐ Represent the interests of MWDOC and its member agencies to the County of Orange Board of Supervisors, MWD, and other outside agencies.

- ☐ Work with the WEROC EOC Public Information Officer to coordinate press conferences as needed.
- ☐ Do not release information or provide reports to entities outside the MWDOC without the concurrence of the COOP Director or General Manager.
- ☐ Ensure that all work accomplished is documented.
- ☐ Maintain a log of activities for this function (Activity Log, ref. 5.9.2).
- ☐ Upon deactivation, provide the completed function activities log and all other response related documentation to the Policy Group Assistant.
- ☐ Check out with Documentation Unit Leader.

COOP Director

Mission: Manage MWDOC's policy group, continuity of operations, and business recovery.

Assigned Staff: Primary: General Manager*
Second: Assistant General Manager*
Third: Associate General Manager*
Fourth: Accounting Manager

Reports to: Policy Group

Coordinates with: Legal Counsel (if needed)

Checklist:

- ☐ Check in with Documentation Unit Leader.
- ☐ Assign and manage COOP personnel as needed to perform the following roles:
 - Management Support.
 - Finance/IT Recovery and Support.
 - Building Operations Recovery and Support.
 - Radio Operators and Telephone Operators.
- ☐ Review status report from Section Chiefs.
- ☐ Issue a proclamation of Local Emergency, subject to ratification, if the Policy Group is not in session.
- ☐ Determine likely duration of event, operational needs, and work schedule.
- ☐ Determine priorities for restoration efforts of MWDOC operations.
- ☐ Approve requests for major resources.
- ☐ Conduct periodic strategy and briefing meetings.
- ☐ Inform Policy Group of disaster status and actions taken.

- ☐ Coordinate with the MWDOC Policy Group as needed for policy direction in the MWDOC COOP and the WEROC EOC.
- ☐ Coordinate information flow of policies and status to WEROC EOC.
- ☐ Develop and issue rules, regulations, proclamations and orders.
- ☐ Request the MWDOC Policy Group to ratify the declaration of a Local Emergency and any purchases as identified in Admin Code 1307.
- ☐ Recommend to WEROC that a request be sent through the OA to the Governor requesting a proclamation of State of Emergency in accordance with provisions of the California Emergency Services Act.
- ☐ Ensure that all work accomplished is documented.
- ☐ Maintain a log of activities for this function (Activity Log, ref. 5.9.2).
- ☐ Review and approve Section Recovery Plans.
- ☐ Upon deactivation or end of shift, provide the completed function activities log and all other response related documentation to the Documentation Unit Leader.
- ☐ Check out with Documentation Unit Leader.

COOP Director Assistant

Mission: Assists the COOP Director to manage MWDOC's policy group, continuity of operations, and business recovery.

Assigned Staff: Primary: Sr. Executive Assistant
Second: Sr. Executive Assistant to the Board

Reports to: COOP Director

Checklist:

- ☐ Check in with Documentation Unit Leader.
- ☐ Check in with COOP Director and receive briefing.
- ☐ Supervise WEROC / MARS / OA1 Radio Liaison.
- ☐ Relay critical incoming messages between the COOP Director and WEROC / MARS / OA1 Radio Liaison.
- ☐ Relay information between COOP Director and Section Chiefs.
- ☐ Ensure that all work accomplished is documented.
- ☐ On behalf of the COOP Director collect and organize documentation relating to COOP Director and Radio Liaison.
- ☐ Maintain a log of activities for this function (Activity Log, ref. 5.9.2).
- ☐ Upon deactivation, provide the completed function activities log and all other response related documentation to your supervisor.
- ☐ Check out with Documentation Unit Leader.

Policy Group Assistant

Mission: Assist the COOP Director in coordinating the efforts of the Policy Group.

Assigned Staff: Primary: Sr. Executive Assistant to the Board
Second: Sr. Executive Assistant

Reports to: COOP Director

Coordinates with: Policy Group

Checklist:

- ☐ Check in with Documentation Unit Leader.
- ☐ Check in with COOP Director and receive briefing.
- ☐ Coordinate board reports and paperwork.
- ☐ Make recommendations on emergency meeting procedures during a disaster as noted in Administrative Code §1103 Emergency Meetings.
- ☐ Coordinate public meeting notices as required. Share these with the WEROC EOC Public Information Officer for public amendments.
- ☐ Communicate and coordinate with the Policy Group.
- ☐ Facilitate and Document Policy Group meetings.
- ☐ Ensure that all work accomplished is documented.
- ☐ Maintain a log of activities for this function (Activity Log, ref. 5.9.2).
- ☐ Upon deactivation provide the completed function activities log and all other response related documentation to your supervisor.
- ☐ Check out with Documentation Unit Leader.

WEROC/MARS/OA1 Radio Liaison

Mission: Utilize the WEROC/MARS/OA1 Radios to facilitate emergency communications between the MWDOC COOP and outside agencies.

Assigned Staff: Primary: MWDOC Interns
Second: Administrative Assistants

ALL MWDOC PERSONNEL SHOULD BE FAMILIAR WITH THE WEROC PROGRAM. EVERYONE MUST BE ABLE TO OPERATE THE WEROC OPERATIONAL AREA AND MARS RADIOS, REGARDLESS OF RECOMMENDED ASSIGNMENT. OPERATION MANUALS FOR ALL RADIOS CAN BE FOUND IN THE WEROC OFFICE.

Reports to: COOP Director's Assistant

Checklist:

- ☐ Check in with Documentation Unit Leader.
- ☐ Check in with COOP Director's Assistant and receive briefing.
- ☐ Check all equipment in your Unit area to ensure its satisfactory operation.
- ☐ Review Radio function's operational folder located in the radio room at the WEROC EOC.
- ☐ Begin by monitoring radio traffic for a few moments to alert you to any WEROC / MARS / OA1 situation status/information being shared among agencies.
- ☐ Document all incoming information to relay to the COOP Director's Assistant.
- ☐ Confirm or relay critical information to and from affected water agencies experiencing difficulty when transmitting or receiving radio messages.
- ☐ Ensure that all work accomplished is documented.
- ☐ Maintain a log of activities for this function (Activity Log, ref. 5.9.2).

- ☐ Upon deactivation, ensure that all forms, communication logs, and all other response related documentation within your Radio Support Function (WERO/MARS/OA1) are turned in to the COOP Director's Assistant.
- ☐ Check out with Documentation Unit Leader.

Finance/IT Recovery Chief

Mission: Manage assigned resources to support MWDOC's continuity of operations and fiscal recovery efforts. Implement MWDOC's Finance Department Recovery Plan (ref. Section 4.5).

Assigned Staff: Primary: Accounting Manager
Second: Financial Analyst*
Third: Senior Accountant

Reports to: COOP Director

Checklist:

- ☐ Check in with the Documentation Unit Leader.
- ☐ Check in with the COOP Director and receive briefing.
- ☐ Assign tasks as necessary within the section and develop Finance/IT Recovery Plan.
- ☐ Activate Disaster Work Order accounting.
- ☐ Recover and secure last backup data.
- ☐ Notify all staff and WEROC EOC Finance & Admin. Chief of assigned work order number.
- ☐ Work with the Building Operations Recovery Chief to establish a purchase order system for tracking incident costs and providing needed resources.
- ☐ Maintain a log of activities for this section.
- ☐ Establish and manage an incident claims process incorporating each function's activities logs and response related documentation collected by the Documentation Unit Leader.
- ☐ Perform damage assessment of MWDOC's Finance Department
- ☐ Implement MWDOC's Finance Department Recovery Plan (ref. section 4.5).
- ☐ Facilitate IT Recovery.

- ☐ Determine banking and fiscal capabilities and identify alternative systems if needed.
- ☐ Coordinate with WEROC Finance and Administration Chief to file FEMA forms and attend required FEMA and OES meetings pertaining to disaster reimbursement (ref Section 4.6).
- ☐ Ensure that all work accomplished is documented.
- ☐ Maintain a log of activities for this function (Activity Log, ref. 5.9.2).
- ☐ Upon deactivation, collect all activity logs and all other response related documentation from the Finance/IT Section.
- ☐ Organize and sort Finance/IT Section documentation collected with the assistance of the WEROC Program Manager who will provide oversight and coordination.
- ☐ Check out with the Documentation Unit Leader.

***Primary assignment is the WEROC EOC.**

Accounting Unit Leader

Mission: Restoration of the MWDOC accounting operations and fiscal continuity.

Assigned Staff: Primary: Senior Accountant

Second: Accountant

Reports to: Finance/IT Recovery Chief

Checklist:

- ☐ Check in with the Documentation Unit Leader.
- ☐ Check in with the Finance/IT Recovery Chief and receive a briefing.
- ☐ At the direction of the Finance/IT Recovery Chief activate Disaster Work Order accounting.
- ☐ Coordinate with the Finance/IT Recovery Chief to determine banking and fiscal capabilities and identify alternative systems if needed.
- ☐ Restore MWDOC accounting procedures and processes. Including but not limited to:
 - ☐ Water Billing
 - ☐ Accounts Payable
 - ☐ Payroll Processing
- ☐ Expedite the purchasing process when possible and within District policy.
- ☐ Assist Finance/Recovery Chief with the FEMA Reimbursement Process.
- ☐ Ensure that all work accomplished is documented.
- ☐ Maintain a log of activities for this function (Activity Log, ref. 5.9.2).
- ☐ Upon deactivation provide the completed function activities log and all other response related documentation to the Finance/IT Recovery Chief.

- ☐ Collect and document all response costs for the purpose of FEMA reimbursement.
- ☐ Report Estimated cost of damages and staffing on the Initial Jurisdiction Damage Report Form J-1 Initial Jurisdiction Damage Report Form (ref. 5.9.1).
- ☐ Check out with the Documentation Unit Leader.

IT Unit Leader

Mission: Provide IT resources to support MWDOC's and WEROC's continuity of operations and fiscal recovery efforts.

Assigned Staff: Primary: Network Administrator
Second: Financial Analyst*
Third: Outsource/Mutual Aid

Reports to: Finance/IT Recovery Chief

Checklist:

- ☐ Check in with the Documentation Unit Leader.
- ☐ Check in with the Finance/IT Recovery Chief and receive a briefing.
- ☐ Address IT issues in the following order:
 1. WEROC internet, software, and hardware needs
 2. MWDOC Server Restoration
 3. Accounting / Finance software and hardware needs
 4. Restore remaining IT issues
- ☐ Identify IT section needs and obtain resources/equipment i.e. computers, phones, fax machines, printers, photocopiers, etc.
- ☐ Coordinate with OCWD IT for joint IT recovery.
- ☐ If unable to obtain IT resources/equipment independently, procure supplies through WEROC Logistics Chief ((949) 455-4457).
- ☐ Upon notification and with approval from COOP Director, report to WEROC EOC for WEROC IT restoration.
- ☐ Ensure that all work accomplished is documented.
- ☐ Maintain a log of activities for this function (Activity Log, ref. 5.9.2).
- ☐ Upon deactivation provide the completed function activities log and all other response related documentation to the Finance/IT Recovery Section Chief.
- ☐ Check out with the Documentation Unit Leader.

*Primary assignment is the WEROC EOC

Building Operations Recovery Chief

Mission: Overall responsibility for physical recovery efforts of MWDOC's facilities.

Assigned Staff: Primary: Administrative Services Manager*
Second: Human Resources Sr. Executive Assistant

Reports to: COOP Director

Checklist:

- ☐ Check in with the Documentation Unit Leader.
- ☐ Check in with the COOP Director and receive briefing.
- ☐ Perform safety and recovery assessment of MWDOC physical facilities. Report observed IT impacts to the IT Unit Leader
- ☐ Develop a Building Recovery Plan.
- ☐ Coordinate IT recovery needs with IT Unit Leader.
- ☐ Arrange for and manage the recovery efforts in accordance with the Building Recovery Plan.
- ☐ Establish and maintain contact with the OCWD maintenance lead supervisor.
- ☐ Assign personnel to recovery efforts as needed.
- ☐ Act as safety officer correcting all unsafe operations and ensuring prompt medical treatment of injured employees.
- ☐ Assign an available assistant to act as the Logistics Unit Leader.
- ☐ Coordinate with Accounting Unit Leader for any purchases needed to accomplish tasks.
- ☐ Ensure that all work accomplished is documented.
- ☐ Maintain a log of activities for this function (Activity Log, ref. 5.9.2).
- ☐ Upon deactivation, collect all activity logs and all other response related documentation from the Building Operations Recovery Section.

- ☐ Organize and sort Building Operations Recovery Section documentation collected with the assistance of the WEROC Program Manager who will provide oversight and coordination.
- ☐ Check out with the Documentation Unit Leader.

* Primary assignment is the WEROC EOC.

Documentation Unit Leader

Mission: Manage all information related to the incident and maintain documentation related to the incident.

Assigned Staff: Primary: Administrative Assistant*
Second: Administrative Assistant

Reports to: Building Operations Recovery Chief

Checklist:

- ☐ Sign in on the Emergency Personnel Tracking Form (ref. Section 5.10).
- ☐ Check in with the Building Operations Recovery Chief and receive briefing.
- ☐ Gather situation status and damage assessment from both Section Chiefs.
- ☐ Utilize MWDOC Conference Room 101 as a situation status and briefing room
- ☐ Responsible for Staff Check in/out.
- ☐ Use the MWDOC COOP Sign-in Sheet to track when staff report to and leave the COOP.
- ☐ When COOP has deactivated provide the Accounting Unit Leader with forms.
- ☐ Establish a method to track, display and document incident and resource status; utilize whiteboards, easels, and the projectors (Excel) to display and document information for records and dissemination.
- ☐ Collect and track information from all COOP positions.
- ☐ Ensure that all work accomplished is documented.
- ☐ Maintain a log of activities for this function (Activity Log, ref. 5.9.2).
- ☐ Upon deactivation ensure all response related documentation has been collected and sorted in a notebook for the FEMA reimbursement process.

*As assigned by the Building Operations Recovery Chief

Logistics Unit Leader

Mission: Provide office resources requested by other sections to support recovery efforts.

Assigned Staff: Administrative Assistant

Reports to: Building Operations Recovery Chief

Checklist:

- ☐ Check in with the Documentation Unit Leader.
- ☐ Check in with the Building Recovery Operations Chief and receive briefing.
- ☐ Identify resource needs.
- ☐ Confirm what resources are available.
- ☐ Locate and obtain resources as requested.
- ☐ Work with the Accounting Unit Leader to identify payment methods and processes.
- ☐ Track resource requests and fulfillment using the COOP Supply Request Form.
- ☐ Coordinate building needs (i.e. desks, chairs, office supplies) with Building Operations Recovery Chief.
- ☐ Coordinate needed meals and refreshments for extended event response.
- ☐ Ensure that all work accomplished is documented.
- ☐ Maintain a log of activities for this function (Activity Log, ref. 5.9.2).
- ☐ Upon deactivation provide the completed function activities log and all other response related documentation to your Building Operations Recovery Chief.
- ☐ Check out with the Documentation Unit Leader.

Records Recovery Unit Leader

Mission: Restore records management system, and assist staff to identify and recover documents vital to business continuity that have been lost or damaged during a disaster.

Assigned Staff: Primary: Records Coordinator
Second: Administrative Assistant

Reports to: Building Operations Recovery Chief

Checklist:

- ☐ Check in with the Documentation Unit Leader.
- ☐ Check in with Buildings Operation Recovery Chief and receive briefing.
- ☐ Determine the status of the electronic records management system, and what needs to be done to restore the system.
- ☐ Identify the extent of damage to official District records in the Library, what is missing and what may need to be replaced.
- ☐ Work with program staff to identify damaged and missing documents.
- ☐ If necessary, Identify and contract with a document recovery provider.
- ☐ Locate and provide staff with requested documents.
- ☐ Manage incoming and outgoing mail.
- ☐ Ensure that all work accomplished is documented.
- ☐ Maintain a log of activities for this function (Activity Log, ref. 5.9.2).
- ☐ Upon deactivation provide the completed function activities log and all other response related documentation to the Building Operations Recovery Chief.
- ☐ Check out with the Documentation Unit Leader.

Assistants

Mission: To assist as needed in completing the COOP response.

Assigned Staff: Primary: Administrative Assistants
Second: Interns

Reports to: Building Operations Recovery Chief

Checklist:

- ☐ Check in with the Documentation Unit Leader.
- ☐ Check in with Buildings Operation Recovery Chief and receive briefing.
- ☐ Assist in duties as assigned.
- ☐ Ensure that all work accomplished is documented.
- ☐ Family Hotline Responsibilities
 1. Change greeting to indicate MWDOC is operating under emergency conditions and update Family Check-in messages throughout emergency period, as needed.
 2. Check Family Hotline messages, then record and provide the messages to appropriate staff.
 - To access Family Check-In messages: Dial 593-5000, enter extension number 5035, hit the '#' sign and enter the password, "1111".
- ☐ Maintain a log of activities for this function (Activity Log, ref. 5.9.2).
- ☐ Upon deactivation provide the completed function activities log and all other response related documentation to your supervisor.
- ☐ Check out with the Documentation Unit Leader.



Section 4: Finance

April 2017

4.1 SUMMARY

This section of the MWDOC Continuity of Operations Plan deals with the emergency planning and recovery of the MWDOC Finance Department. MWDOC's Finance Department has priority within MWDOC's facilities and programs restoration after an emergency. It is desirable to restore MWDOC's Finance Department as soon as possible to ensure continued revenue to MWDOC, protect MWDOC's investments, provide employees with payroll and benefits, provide payment for emergency restoration services, and maintain positive communication with MWDOC's vendors.

These emergency preparedness methods represent an on-going routine by MWDOC employees to ensure that restoration after a disaster will occur with the least amount of inconvenience to the MWDOC employees, MWDOC agencies and companies that have financial interests with MWDOC.

Finance Department preparedness includes several different levels of data and program back-up, hardware and software back-up, facility back-up, financial protocols, and pre-arranged emergency services by suppliers.

Finance Department response includes the establishment of priorities by accounting function, restoration of IT servers, and implementation of alternative financial protocols as needed.

4.2 DATA BACKUP

The most important emergency preparedness item in the Finance department is routine on-site and off-site back-up of data and software applications. Details of the back-up policies and procedures are in O:\IT\Backups and Disaster Recovery Plan. A brief summary of the Finance Department back-up procedures are as follows:

Data and software applications are backed-up every night, Monday through Friday, to a Disk Network Attached Storage (on-site) and to an off-site Data Center (Cloud). The on-site and off-site back-ups are kept for 14 days.

4.3 OFF-SITE FINANCIAL OPERATIONS CENTER

The WEROC South Emergency Operations Center (ref. map in Section 5.7) has been designated as the MWDOC emergency off-site operations center. In the event that the MWDOC Fountain Valley office has sustained damages that will prohibit working in the building, an emergency MWDOC Finance Department may be established at the South WEROC EOC. A back-up server and two computers with financial applications, stored at the South WEROC EOC, will be used to restore data for the Finance Department.

4.4 PURCHASING AUTHORIZATION

By §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.

4.5 FINANCE DEPARTMENT DISASTER RECOVERY PLAN

The Finance Department, including IT, will have priority for restoration efforts among the departments within the MWDOC office. MWDOC Finance Department accounting staff will be dedicated to restoring MWDOC's accounting functions and ensuring business continuity. Refer to Section 3 for individual MWDOC staff assignments.

After a disaster, the following steps will be taken to restore the Finance Department functions as soon as possible while maintaining employee safety.

Restoration Priorities

1. Financial Operations Assessment and Documentation.
 - A. Survey Finance department equipment and records and document damages.
 - B. Determine if it is necessary to activate the Off-site Financial Operations Center at the WEROC south EOC.
 - C. Calculate an estimated cost of damages sustained and cost of recovery including the restoration of office functionality and staff time.
2. Disaster Accounting
 - A. Under direction of the General Manager activate Disaster Work Order Accounting. Notify all staff of the assigned work order number.
 - B. WEROC Finance/Administration Chief will utilize Disaster Work Order Number and FEMA financial forms at EOC.
 - C. Establish purchasing methods for emergency restoration efforts
3. Financial Restoration-Operations
 - A. Identify each restoration task with a job number.
 - i. Details for each task will include purchasing of materials and equipment and labor.
 - A. Assemble the necessary FEMA/California Office of Emergency Services (CAL OES) forms.
4. Make contact with primary MWDOC banking institution.
 - A. Determine whether the bank is in normal or modified operation.

5. Restore Revenues and Collections.

A. Investments.

- i. Identify maturing investments and contact the appropriate financial institutions.

B. Accounts Receivable.

- i. Develop a status report of received and outstanding water billing payments.
- ii. Contact agencies with outstanding accounts receivable to MWDOC to determine the status of their payment, i.e. was in the mail, or will be mailed.

6. Restore Revenue Billing and General Disbursements.

A. Restore employee payroll and benefits.

B. Restore Accounts payable and make contact with agencies/vendors if there will be difficulties in making payments.

C. Restore water and other receivables billing.

4.6 FEMA/CAL OES DISASTER REIMBURSEMENT

The response and recovery expenditures and activities of the MWDOC COOP and in support of the WEROC EOC need to be tracked thoroughly to provide the best possible documentation for FEMA/CAL OES Disaster Reimbursement. It is important to provide an initial damage assessment to the Orange County Operational Area and notify them of our disaster activation. If a Presidential Declaration is made the California Office of Emergency Services will initiate the Stafford Act Disaster Reimbursement Process. Staff will be expected to attend multiple meetings and file numerous FEMA reimbursement forms, most notably the Notice of Intent form. Recovery work needs to be initiated immediately so that the FEMA/CAL OES process can be completed as soon as possible. The FEMA/CAL OES process can be complicated and time-consuming, often taking several years.



Section 5: Appendix

April 2017

5.1 EMERGENCY TELEPHONE CONTACT LIST

Organization	Telephone Number
Emergency Assistance	911 (for emergencies only)
American Red Cross	(714) 481-5300 (business hours) 1-800-733-2767 (after hours)
Fountain Valley Building & Fire Safety Fire Administration	(714) 593-4436
Fountain Valley Police	(714) 593-4445 (714) 593-4483
Fountain Valley Fire Department	714-593-4436
CA DHS Drinking Water Program Oliver Pacifico, District Engineer	(714) 558-4997
Orange County Health Services	(855) 886-5400
MWD Diemer Plant	(714) 528-7231
MWD Eagle Rock Operation Command Center	1-800-555-5911 (24 hr)
MWDOC Office	(714) 593-3058
OCWD Chemical Safety, Bill Dunivin	(714) 378-3253
OCWD Operations Control Room	(714) 378-3240
OCWD Office Receptionists	(714) 378-3200
WEROC North Land Line Voice	(714) 288-8200
WEROC South Land Line Voice	(949) 455-4493
Orange County Operational Area EOC	(714) 628-7060
Fountain Valley Regional Hospital 17100 Euclid Ave.	(714) 966-7200,
	ER: (714) 966-8100

*Contacts and Phone Numbers are available through the safety center app on your cell phone.



5.2 MWDOC Telephone Directory

Address: 18700 Ward Street, Fountain Valley, CA 92708

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

Phone: (714) 963-3058 **Fax:** (714) 964-9389

Web: www.mwdoc.com



Twitter: <http://twitter.com/MWDOC>



Facebook: <http://www.facebook.com/pages/Municipal-Water-District-of-Orange-County/122742807774775>

Board Meetings

1st Wednesdays at 8:30 a.m. (Workshop w/Met Directors)

3rd Wednesdays at 8:30 a.m. (Regular Meeting)

Board of Directors

Brett R. Barbre <i>Vice President</i> Division One	Address: 21670 Waterford Drive, Yorba Linda, CA 92887 Phone: (714) 396-1350 Fax: (714) 779-2746 Email: brbarbre@mwdoc.com Represents: Brea, Buena Park, portions of Golden State Water Company, La Habra, La Palma, Yorba Linda Water District
Larry D. Dick Division Two	Address: 5223 East Playano, Orange, CA 92867 Phone: (714) 534-1224 Fax: (714) 534-2354 Email: ldick@mwdoc.com Represents: East Orange County Water District, portions of Garden Grove, portions of Golden State Water Company, Orange, Serrano Water District, Tustin, portions of Irvine Ranch Water District
Wayne S. Osborne <i>President</i> Division Three	Address: 18355 Santa Joanana Circle, Fountain Valley, CA 92708 Phone: (714) 963-1557 Email: wsosborne@mwdoc.com Represents: Cypress, Fountain Valley, Los Alamitos, Stanton, Westminster, and the western portion of Garden Grove
Joan C. Finnegan Division Four	Address: 258 Sherwood Street, Costa Mesa, CA 92627 Phone: (949) 548-3690 Fax: (949) 646-1685 Email: jfinnegan@mwdoc.com Represents: Huntington Beach, Mesa Consolidated Water District, Seal Beach
Sat Tamaribuchi Division Five	Address: 1 Sunlight, Irvine, CA 92603 Phone: (949) 422-2371 Email: stamaribuchi@mwdoc.com Represents: El Toro Water District, portions of Irvine Ranch Water District, Newport Beach
Jeffery M. Thomas Division Six	Address: 2831 Watson, Tustin, CA 92782 Phone: (714) 544-1352 Email: jmthomas@mwdoc.com Represents: portions of Tustin, Irvine Ranch Water District, Santa Margarita Water District, Trabuco Canyon Water District
Megan Yoo Schneider Division Seven	Address: 25522 Purple Sage Lane, San Juan Capistrano, CA 92675 Phone: (949) 278-5761 Email: mschneider@mwdoc.com Represents: Emerald Bay Service District, Laguna Beach County Water District, Moulton Niguel Water District, San Clemente, San Juan Capistrano, South Coast Water District

Staff

Robert J. Hunter General Manager	Office: (714) 593-5026 Email: rhunter@mwdoc.com
Karl W. Seckel, P.E. Assistant General Manager District Engineer	Office: (714) 593-5024 Cell: (714) 423-3361 Email: kseckel@mwdoc.com
Cathy Harris Administrative Services Manager	Office: (714) 593-5007 Cell: (714) 329-5412 Email: charris@mwdoc.com
Maribeth Goldsby Sr. Executive Assistant to the Board	Office : (714) 593-5006 Email : mgoldsby@mwdoc.com
Pat Meszaros Sr. Executive Secretary	Office : (714) 593-5025 Email : pmeszaros@mwdoc.com
Hilary Chumpitazi Accounting Manager	Office: (714) 593-5019 Email: hchumpitazi@mwdoc.com
Joe Berg Director of Water Use Efficiency	Office: (714) 593-5008 Cell: (949) 433-2626 Email: jberg@mwdoc.com
Heather Baez Government Affairs Manager	Office: (714) 593-5012 Email: hbaez@mwdoc.com
Harvey De la Torre Associate General Manager	Office: (714) 593-5027 Cell: (714) 878-4317 Email: hdelatorre@mwdoc.com
Jonathan Volzke Public Affairs Manager	Office: (714) 593-5029 Email: jvolzke@mwdoc.com

Legal Counsel

Best, Best & Krieger Joseph P. Byrne	300 South Grand Ave., 25 th Floor Los Angeles, CA 90071 Office: (213) 617-7496 Joseph.byrne@bbklaw.com
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Legislative Consultants

State Legislative Advocate	Federal Legislative Advocate
<p>Syrus Devers Director of Government Affairs 500 Capitol Mall Suite 1700 Sacramento, CA 95814</p> <p>(916) 325-4000 Office (916) 329-3681 Direct (916) 325-4010 Fax</p> <p>syrus.devers@bbklaw.com</p>	<p>James C. Barker 1050 Thomas Jefferson Street, NW 5th Floor Washington D.C. 20007</p> <p>(202) 293-4064 Office (202) 413-2986 Fax</p> <p>jimbarker@JCBDC.com</p>

NOTE: Due to confidentiality this page is not provided to the public and is distributed internally only.

5.3 MWDOC TELEPHONE LIST

First Name	Last Name	Job Title	Extension	Mobile Phone No.
Tiffany	Baca	Public Affairs Supervisor	5013	
Heather	Baez	Governmental Affairs Manager	5012	
Melissa	Baum-Haley	Sr. Water Resources Analyst	5016	352.871.3523
Joseph	Berg	Dir of Water Use Efficiency	5008	(949)433-2626
Charles	Busslinger	Principal Engineer	5003	
Hilary	Chumpitazi	Accounting Manager	5019	
Katie	Davanaugh	Sr. Executive Assistant	5005	
Harvey	De La Torre	Associate General Manager	5027	(714)878-4317
Patrick	Dinh	Network Systems Engineer	5020	714.724.7499
Ryan	Douglass	Student Intern	5036	
Colin	Eckerle	Student Intern	5028	
Beth	Fahl	WUE Program Coordinator	5015	
Ivan	Flores	Student Intern	5053	
Pari	Francisco	Records Coordinator	5002	
Leah	Frazier	Administrative Assistant	5001	
Maribeth	Goldsby	Sr. Executive Assist. to Board	5006	(714)309-9933
Lina	Gunawan	Sr. Accountant	5018	
Cathy	Harris	Administrative Services Mgr	5007	(714)329-5412
Steve	Hedges	WUE Program Supervisor	5023	
Kevin	Hostert	Water Resources Analyst	5034	
Kelly	Hubbard	WEROC Programs Manager	5010	(714)715-0283
Robert	Hunter	General Manager	5026	(404)557-5107
Jessica	Lieuw	Student Intern	5036	
Laura	Loewen	Public Affairs Assistant	5004	
Keith	Lyon	Principal Wtr Resrs Analyst	5009	
Pat	Meszaros	Sr. Executive Assistant	5025	
Damon	Micalizzi	Dir of Public Affairs	5014	
Sarah	Rae	WUE Program Assistant	5055	
Bryce	Roberto	Public Affairs Assistant	5017	
Janine	Schunk	Administrative Assistant	5063	
Karl	Seckel	Assistant General Manager	5024	(714)423-3361
Mary	Snow	Accountant	5030	
Francisco	Soto	WEROC Emergency Prog. Coord	5032	
Jeffrey	Stalvey	Fin Analyst/Database Analyst	5022	
Jonathan	Volzke	Public Affairs Manager	5029	(949)291-8098
Rachel	Waite	WUE Analyst	5011	
Conference Room 102	5033		Security OCWD	3310
Copy/Work Room	5052		Kitchen	5056
Director's Office	5037		OCWD-Emergency	3300
Paging Overhead	5100		Reception/Adrienne	3200
Computer Room	5050		OCWD Control Room	3240
Paging thru Phone	5101		MWDOC fax	714.964.9389

5.4 OCWD TELEPHONE LIST

Abrahamson, Ray	RHA	3335	Evans, Jeremy	JTE	3331	Leinart, Cindy	CGL	3265	Rodriguez, Grisel	GGR	3303
Adams, Alexander	AMA	8215	Ewing, Michael	ME	3240	Leon, Antonio	AL	3336	Roehler, Heinz	HZR	3240
Anguiano, Victor	VA	3312	Fagan, Darlene	DF	3294	Lerma, Jacqueline	JRL	4005	Ross, Mike	MLR	8255
Alvarez, Chris	CA	3255	Ferreira, Joaquin	JF	8255	Lewis, Patrick	PL	3251	Safarik, Jana	JAN	3282
Aragon, Jesse	JJA	3392	Fick, Randy	RF	3271	Li Li	LL	3351	Samples, Mike	MJS	8255
Arora, Ritu	RA	3342	Field, David	DMF	3237	Liang, Laura	LTL	3343	Sanchez, Lily	LVS	3344
Arrieta, Glen	GGA	3235	Flint, Joseph	JDF	8255	Libao, Hannah	HCL	3367	Sanders, Curtis	CLS	3240
Ayala, Gina	GMA	3323	Freeman, Betty	BF	3285	Liebert, Craig	CAL	3240	Saunders, Michael	MRS	8213
Barrera, Pedro	PXB	8255	Friberg, Chris	CF	3392	Lockhart, Ben	BDL	3293	Scott-Roberts, Sandy	SLS	3292
Bolin, David	DPB	3245	Fuller, Christina	CMF	3262	Lomeli, Ben	BL	3243	Sharma, Vishav	VRS	3212
Bonsangue, John	JDB	3353	Gamez, Jacob	JEG	3389	Lopez, Luis	LBL	8255	Sieg, Matthew	MXS	3249
Bott, Dan	DCB	3256	Garcia, Jaime	JXG	8257	Lucero, Erin	EJL	3345	Simala, Danny	DJS	3392
Bouley, Ryan	RCB	8207	Gautier, Eric	EG	3240	Lunch Room		4429	Simone, Frank	FAS	3261
Bouyounes, Paula	PAB	3310	Giraud, Stephanie	SG	3314	Macbeth, Cameron	CBM	8259	Skousen, Cathy	CS	3230
Boyd, Michelle	MB	3224	Goco, Joanne	JDG	3306	Mang, Alec	ASM	8262	Smith, Ben	BTS	3211
Bradberry, Bill	WB	3392	Gonzalez, Ana	ALG	3227	Manriquez, Mario	MXM	3240	Smith, James	JRS	3240
Brandon, Scott	SDB	3249	Gould, Christy	CG	3366	Mansell, Derrick	DEM	4479	Souza, John	JS	3240
Bruns, John	JAB	3341	Greening, Mark	MG	8242	Mark, Dave	DLM	3337	Sovich, Tim	TS	3226
Buis, Matt	MTB	3328	Griffie, Emma	ELG	3312	Markus, Mike	MRM	3305	Spade, Chuck	CMS	3240
Burcar, Jeffrey	JB	3249	Gu, Han	HG	3357	Masters, John Paul	JPM	4372	Sparks, Luke	LDS	3288
Bushay, Bryan	BTB	3240	Gutierrez, Juliette	JMG	3269	McKeever, Justin	JAM	3277	Stevens, Tim	TMS	3331
Camacho, Ray	RGC	8255	Haffke, Don	DEH	8264	McMichael, David	DOM	8211	Stevens, Tom	TSS	3334
Campbell, Adrienne	ALC	0	Hammersmith, Jim	JAS	8205	Morales, Linda	LXM	3321	Stolp, Dylan	DAS	3378
Carreira, Anthony	ARC	3240	Harrington, Philip	PH	3242	Mosher, Elizabeth	EM	8210	Strand, Stephen	SAS	3398
Casasola, Andre	AFC	3352	Hawkins, James	JLH	8213	Mudd, Becky	RRM	3362	Supernaw, Don	DFS	3240
Castro, Christian	CDC	3378	Haydock, Wes	JWH	8216	Murphy, Patrick	PGM	8247	Sutton, Russell	RWS	3240
Castro, Manuel	MHC	8255	Henry, David	DH	8256	Neel, Brendan	BRN	3231	Swanson, Dianne	DLS	3286
Caver, James	JC	3246	Hernandez, Josue	JAH	3249	Neely, Tyson	TLN	3241	Tan, Lo	LT	3368
Centro, Michael	MHC	8213	Herndon, Roy	RH	3260	Nettles, Crystal	CLN	3202	Torres, Eleanor	ET	3268
Cervantes, Alex	AC	8213	Higgins, Andrew	AGH	8255	Nguyen, Kim	KTN	3378	Torres, Luis	LUT	3240
Chae, Eugene	ELC	3340	Hill, Melissa	MAH	3359	Nguyen, Nic	NN	3350	Tran, Quyen	QDT	8206
Chavez, Frank	FXC	4470	Hintlian, Rita	RSH	3252	Nguyen, Tam	TN	3387	Truong, Vu	THT	3309
Chen, Leo	LC	3378	Hollender, Scott	SJH	3240	Nguyen, Thong	TKN	8246	Turcios, Elder	EAT	3378
Cirillo, Darla	DMC	3318	Hollinden, Patrick	PKH	3317	Nguyen, Vickie	VTN	3267	Uribe, Esmer	EU	3320
Clark, Steve	SMC	3240	Houlihan, Don	DH	3355	Nicholson, Thomas	TEN	3240	Valdez, Noe	NV	8271
Cohen, Dan	DRC	3238	Howard, Bonnie	BLH	3258	Norris, David	DJN	3316	Valdez, Ritchie	RNV	8255
Combs, Julie	JLC	3366	Hunt, William	WTH	8229	NWRI Main Line		3278	Valencia, Frank	FXV	3249
Conference Room C-2		4422	Hutchinson, Adam	ASH	3214	Nygren, Scott	PSN	8263	Vamvas, Sterling	SV	8218
Conference Room C-3		4425	Huynh, Yvette	YVH	3378	Ochoa, Melissa	MMC	3283	Versluis, Patrick	PV	8241
Conference Room C-4		4427	Ishida, Kenneth	KI	3290	Ojeda, Richard	RJO	3289	Villarreal, Leticia	LAV	3203
Conference Room C-5		4468	Jackson, Lorenzo	LJ	3208	Okey, Brian	BMO	3296	Vu, Chris	CDV	3240
Conference Room C-6		4474	Jacobs, Phil	PSJ	3240	Olsen, Chris	CSO	3232	Vue, Alex	AV	3295
Conference Room L-1		4475	Jamal, Jasmin	JSJ	4372	O'Toole, Kevin	KWO	3276	Warren, Karen	KW	3201
Crossno, Tyler	TKC	8212	Jaw, Jason	JDJ	3348	Owens, Chris	CJO	3240	Wedge, Marc	MJW	3249
Dadakis, Jason	JSD	3364	Jenkins, Jeremy	JMJ	8255	Patel, Mehul	MVP	8209	Weeratunga, Sumedha	SW	3356
Dang, Anhthu	AHD	3378	Johnson, Bonnie	BJ	8262	Patterson, Craig	CLP	3329	Wehner, Mike	MPW	3297
Dang, Shayla	SPD	3218	Kalinowski, Jay	JJK	3250	Patterson, Renee	RLP	3215	Westropp, Marsha	MAW	8248
Davidson, Scott	FSD	8216	Karlsen, Judy-Rae	JRK	3234	Pennella, Jimmy	JWP	3223	Wilke, Rose	RSW	3206
Davis, Jeremy	JMD	3244	Kelly, Jasper	JSK	8234	Perry, Audrey	AJP	8245	Wilson, Chris	CJW	8217
Dinh, Andrew	ATD	8221	Kennedy, John	JCK	3304	Petty, Mark	MDP	8226	Wimmerstedt, Patti	PLW	3274
Dobrev, Samantha	SLD	3323	Kha, Quan	QMK	3287	Pham, Christine	CDP	3247	Wirtz, Lisa	LTW	3280
Doplito, Pete	PMD	8274	Kirkwood, Jeff	JMK	3223	Pham, John	JDP	3264	Woodside, Greg	GDW	3275
Doshi, Natalia	NCD	8262	Koki, Linda	LK	3354	Phillips, Robert	REP	8224	Xu, Wei	WX	3291

OCWD TELEPHONE LIST (Continued)

Dosier, Bruce	BCD	3298	Kovacevic, Janice	JLK	3248	Pike, Donna	DRP	3308	Yamachika, Nira	NY	3281
Dosier, Stephanie	SD	3311	Krause, Rae	RAE	3349	Pinnick, Diane	DMP	3228	Yamaguchi, Donna	DLY	3225
Duarte, Frank	FJD	3386	Krejcik, Lane	LEK	8208	Plumlee, Megan	MHP	3270	Yamamoto, Mark	MY	3346
Dunivin, William	WD	3253	Lam, Phuong	PML	3272	Raley, Robert	RWR	8214	Yoo, Lee	LY	3347
Dunkin, Alicia	AD	8232	Lam, Thuy	TTL	8235	Ramirez, Juan	JMR	8255	Yoshiba, Gary	GTY	3205
Durant, Janice	JD	3233	Lane, Troy	TLL	3223	Reynoso, Octavio	OJR	3324	Young, Jeannie	JY	3361
Dusky, Kim	KND	3210	Langarica, Julio	JL	3355	Rich, Melany	MKR	3204	Zembal, Richard	RZ	3213
Elders, Christian	CJE	3338	Lau, Anny	ASL	3339	Riopka, Mick	MJR	3325	Zhang, Angel	AZ	3326
English, Randy	RE	8216	Le, Anh-Tu	ATL	3342	Roback, Shannon	SLR	8231	Ziadeh, Ahmad	ATZ	3249
Espinosa, Andrew	ALE	3236	Leddy, Menu	ML	3313						

5.5 MEDIA CONTACTS LIST

Newspapers

First Name	Last Name	Phone Number	Email	Comment
Orange County Register				
Susan	Vardon	714-796-7954	svardon@ocregister.com	Covers Central OC (Santa Ana Office)
Aaron	Orlowski	714-796-2390	aorlowski@ocregister.com	Covers Water Related Issues
LA Times				
Matt	Stevens	-	matt.stevens@latimes.com	Covers Water/Drought
Bettina	Boxall	-	bettina.boxall@latimes.com	Covers Water/ Environment
Robert	Vardon	-	robert.Vardon@latimes.com	Daily Pilot (Costa Mesa & Newport Beach)
LA Times OC Edition		714-966-5600	-	Costa Mesa Headquarters

Radio

First Name	Last Name	Phone Number	Email	Comment
KUCI-FM 88.9				
Kevin	Stockdale	949-824-4582	kevin@kuci.org	General Manager
General Contact Info.		949-824-6868	kuci@kuci.org	
KPCC-FM 89.3				
General Contact Info.		626-583-5100	-	NPR (Covers LA and Orange County)
KABC-AM 790				
General Contact Info.		310-840-4900	-	
KFI-AM 640				
General Contact Info.		818-559-2252	-	
KNX-AM 1070				
General Contact Info.		323-569-1070	-	

Television

First Name	Last Name	Phone Number	Email	Comment
KABC Ch. 7				
Gregory	Lee	-	gregory.A.Lee@abc.com	
Julie	Sone	-	julie.Sone@abc.com	
General Contact Info		877-777-6397	-	Breaking News
		818-863-7777	eyewitnessnews@myabc7.com	Main Line
KCBS Ch. 2 & KCAL CBS Ch. 9				
Chris	Ercoli	-	kcbstvnews@cbs.com	Video Reporter
Michele	Gile	-	mgile@cbs.com	Orange County Reporter
General Contact Info		818-655-2000	-	
KNBC Ch. 4				
Vikki	Vargas	714-288-0444	vikki.vargas@nbcuni.com	Reporter/OC Bureau Chief
General Contact Info		818-684-4444	-	Main
		818-684-3425	-	Breaking News
		714-288-0444	-	OC Bureau
KTTV Fox Ch. 11				
Sandra	Endo		Sandra.Endo@FOXTV.COM	
General Contact Info		310-584-2000	-	Main
		310-584-2025	-	Newsroom
KTLA Ch. 5				
General Contact Info		323-460-5500	-	Main
KOCE PBS Socal Ch. 50				
General Contact Info		714-241-4100	-	Main

5.6 WEROC EOC E-MAIL INFORMATION

Location	Computer	Login	Password
All	EOC Director	WEROCDirector@gmail.com	weroceoc
	EOC Manager	WEROCManager@gmail.com	weroceoc
	PIO	WEROCPIO@gmail.com	weroceoc
	Legal Advisor	WEROCLegal@gmail.com	weroceoc
	DPH Liaison	WEROCDPHLiaison@gmail.com	weroceoc
	OA Liaison	WEROCOA@gmail.com	weroceoc
	Finance Chief	WEROCFinance@gmail.com	weroceoc
	Documentation Processor	WEROCDocumentation@gmail.com	weroceoc
	Plans Chief	WEROCPlans@gmail.com	weroceoc
	Planning Unit Leader	WEROCPlansUnit@gmail.com	weroceoc
	Planning Unit Runner & Plotter	WEROCPlansplotterandrunner@gmail.com	weroceoc
	Situation Status Analyst	WEROCSitStat@gmail.com	weroceoc
	Events Analyst	WEROCEvents@gmail.com	weroceoc
	OA Analyst	WEROCOAAnalyst@gmail.com	weroceoc
	Major Infrastructure Analyst	WEROCMajorInfrastructure@gmail.com	weroceoc
	Intelligence Unit Leader	WEROCIntellUnit@gmail.com	weroceoc
	Intelligence Unit Runner & Plotter	WEROCIntellplotterandrunner@gmail.com	weroceoc
	WEROC Radio Operator	WEROCRadioOp@gmail.com	weroceoc
	MARS OA Radio Operator	MARSOARadioOp@gmail.com	weroceoc
	Logistics Chief	WEROCLogistics@gmail.com	weroceoc
	Water ICP Liaison	WEROCICPLiaison@gmail.com	weroceoc
	WEROC Liaison	WEROCLiaison@gmail.com	weroceoc
North EOC	Primary Email	NorthEOC@sbcglobal.net	N0rthe0c
South EOC	Primary Email	SouthEOC@sbcglobal.net	S0uthe0c

5.7 WEROC SOUTH EOC (MISSIONS VIEJO) MAP

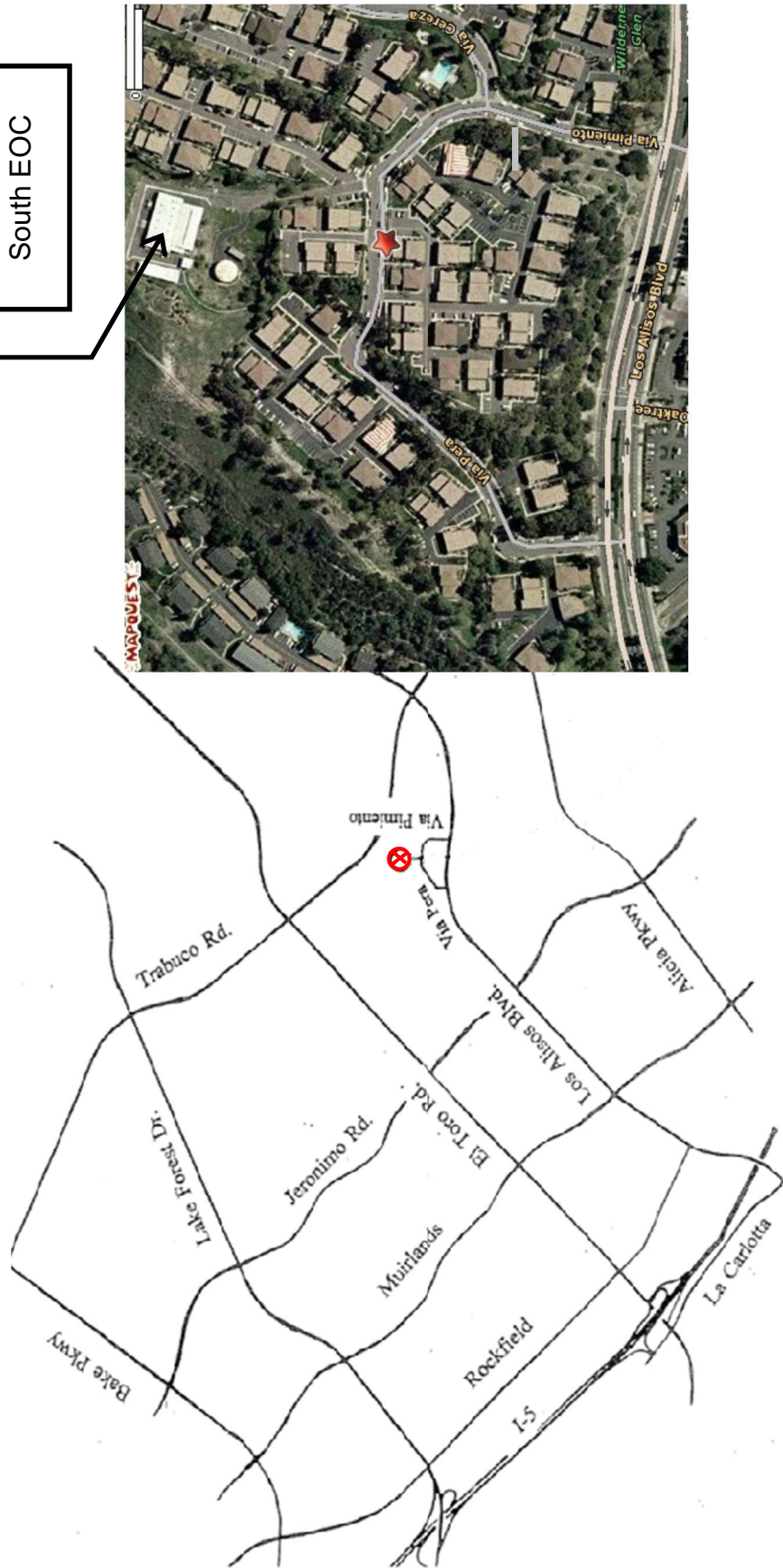
26081 Via Pera Mission Viejo, CA 92691

Phone: (949) 455-4493

Fax: (949) 455-4492

(At El Toro WD's Prothero Filtration Plant, behind condos)

WEROC
South EOC



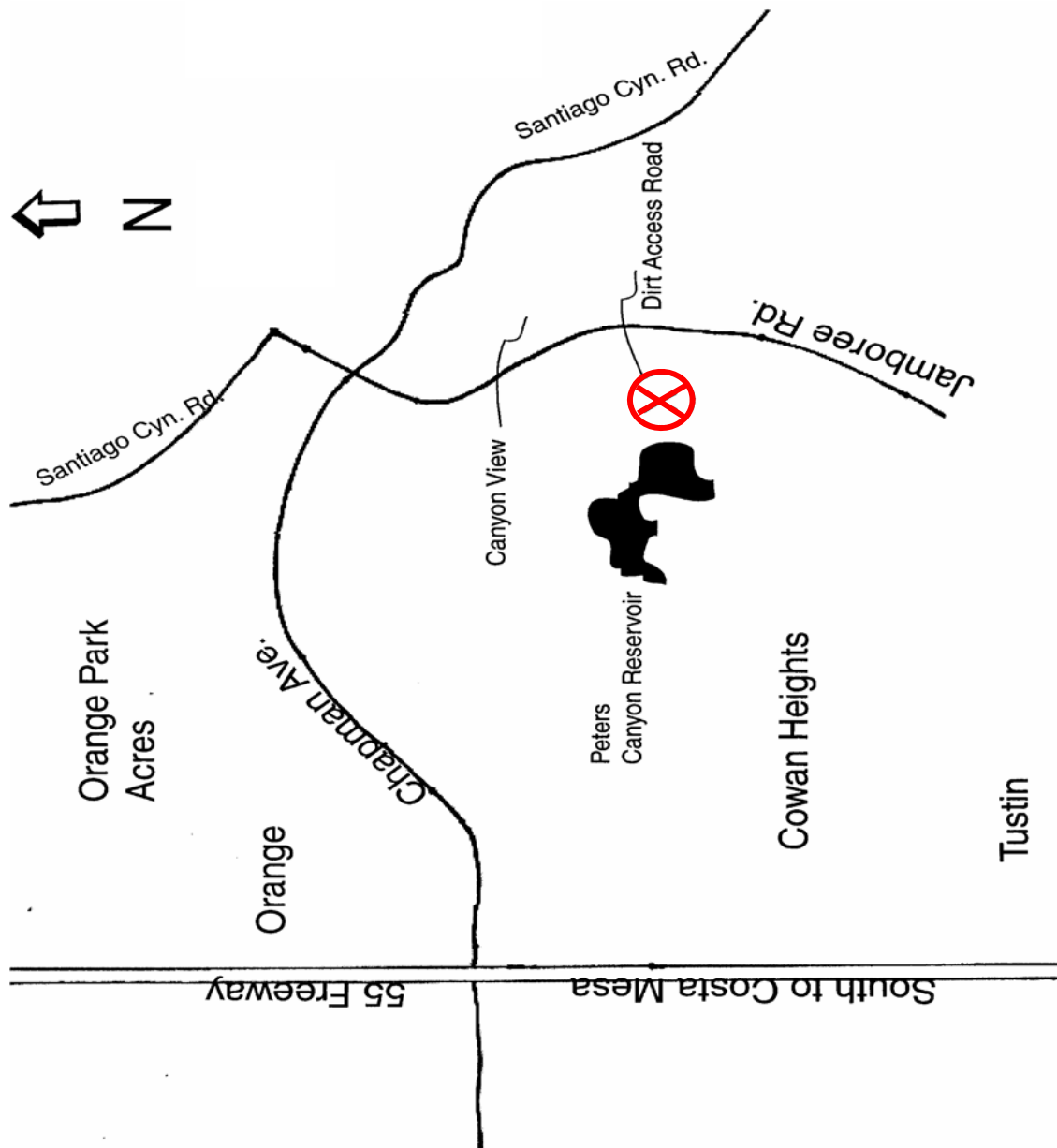
5.7.1 WEROC NORTH EOC (ORANGE) MAP

9737 Peters Canyon Road Orange, CA 92667

Phone: (714) 288-8200

Fax: (714) 288-8206

(Entrance is a dirt road found on the west side of Jamboree Rd.)



5.8 ADMINISTRATION CODE 1103 CHAPTER 8 CONTRACTS EXHIBIT A

Exhibit A

AUTHORIZATION PROCEDURES FOR PURCHASES, CONTRACTS, AND CONSULTING & PROFESSIONAL SERVICES

TABLE 1 – REGULAR SITUATIONS

Dollar Amount	Requires Preparation of	Signed By	Approving Authority
Up to \$3,000	<ul style="list-style-type: none"> 2 written quotes on purchases Selection based on qualifications for professional services 	Program Manager and Finance Manager	N/A
\$3,001-\$25,000**	<ul style="list-style-type: none"> Competitive bidding process on purchases Competitive proposals on professional services contracts (unless justification for sole source services is provided) 	Program Manager and GM	N/A
Over \$25,000	<ul style="list-style-type: none"> Request for competitive proposals or bidding appropriate 	General Manager	Committee and Board of Directors

*Any aggregate work that will exceed \$25,000 for any one consultant over a one year period requires a report of activities to be presented to the appropriate Committee and the Board of Directors for the work to be authorized.

**The General Manager shall have the authority to authorize Change Orders up to 10% or \$10,000, of the original authorization, whichever is greater, but in no event shall it exceed \$25,000, without Board approval.

Table 2- Emergency Situations**

Dollar Amount	Requires Preparation of	Signed By	Approving Authority
Up to \$100,000	Purchase Order/Agreement or Contract	General Manager	Board ratification at next regular meeting or earliest special meeting
Over \$100,000	Agreement or Contract	General Manager	Board of Directors

**Events requiring immediate extraordinary action to protect public health, safety, welfare and property (see §1307)

[illegible]

5.9.1 OPERATIONAL AREA INITIAL DAMAGE REPORT FORM

<input type="checkbox"/> This is a drill	<input type="checkbox"/> This is NOT a drill
--	--

**OPERATIONAL AREA REQUEST FOR
JURISDICTION STATUS REPORT**
 FROM: ORANGE COUNTY SHERIFF DEPARTMENT/ EMERGENCY MANAGEMENT

*****IMMEDIATE RESPONSE REQUIRED FROM EMERGENCY SERVICES COORDINATOR *****

Due to: _____ (emergency)
 the Operational Area EOC has been activated as of **Date:** _____ **Time:** _____

Acknowledgement of this report and the following
MANDATORY INFORMATION is needed by the Operational Area EOC

Jurisdiction Name: _____		
Date: _____	Time: _____	
Contact Name: _____	Title: _____	Phone: _____
24 Hr Contact: _____	Title: _____	Phone: _____
YOUR JURISDICTION'S EOC: <input type="checkbox"/> HAS <u>NOT</u> BEEN ACTIVATED <input type="checkbox"/> HAS BEEN ACTIVATED		

If your jurisdiction HAS BEEN impacted please continue completing this form

Overall Impact:	<input type="checkbox"/> Routine (green)	<input type="checkbox"/> Minor (yellow)	<input type="checkbox"/> Moderate (red)	<input type="checkbox"/> Major (black)
Prognosis:	<input type="checkbox"/> No Change	<input type="checkbox"/> Improving	<input type="checkbox"/> Worsening	
Number of Deaths: _____		Number of Injuries: _____		
Number of Missing: _____		Number of Evacuated: _____		

Brief Description of the Status: _____

THE FOLLOWING RESOURCES OR MUTUAL AID ARE:

NEEDED:	AVAILABLE:
<input type="checkbox"/> Shelter Human-Animal	<input type="checkbox"/> Shelter Human-Animal
<input type="checkbox"/> Staff EOC-Shelter-School	<input type="checkbox"/> Staff EOC-Shelter-School
<input type="checkbox"/> Medical-Mental Health	<input type="checkbox"/> Medical-Mental Health
<input type="checkbox"/> Public Works	<input type="checkbox"/> Public Works
<input type="checkbox"/> Building Inspectors	<input type="checkbox"/> Building Inspectors
<input type="checkbox"/> Transportation	<input type="checkbox"/> Transportation
<input type="checkbox"/> Dispatchers-Call Takers	<input type="checkbox"/> Dispatchers-Call Takers
<input type="checkbox"/> Public Information Officer	<input type="checkbox"/> Public Information Officer

(Submit a Resource Request Form or contact the OA) (OA will contact you as resources are needed)

FAX IMMEDIATELY TO THE OA EOC Fax: 714-628-7115
 General Phone: (714) 628-7055 – Activation Phone: (714) 628-7060
 CONTROL ONE SUPERVISOR/ 24 Hour Contact Phone: (714) 628-7008
Monitor Your EOC To EOC Radio

Instructions: Submit this form once, then send the Jurisdiction Situation Report(s) as needed.

.....
 Sit. Stat. Recorded _____ Sit. Stat. Plotted _____ Sit. Stat. Mapped _____ Sit. Stat. Filed _____ cc: Logistics _____

Jurisdiction Status Report Orange County Sheriff Department/ Emergency Management Last update: 3/8/2002 Form # J-1

5.9.2 Section Unity Activity Logs

Name/Function

This IS / IS NOT a Drill (Circle One)

[illegible]

5.10 List of WEROC Member Agencies

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

5.11 MWDOC/OCWD Automated Security Gate Manual Opening Procedures

These instructions can be used to manually open the automated security gates found at both the Ward Street entrance/exit and the Ellis Avenue exit. Do not attempt to close the gates after opening, OCWD staff will ensure gates are properly reset.

If in need of additional assistance contact OCWD On-Call staff at (714) 378-3240. Also, when it is known that MWDOC staff will be working afterhours or weekends it is good practice to notify the OCWD Control Room at extension 3240.





Section 6: References

April 2017

6.1 SEMS/NIMS/ICS

6.1.1 STANDARDIZED EMERGENCY MANAGEMENT SYSTEM (SEMS)

As a result of losing his home in the 1991 Oakland Hills firestorm and noticing a lack of coordination among public response agencies, Senator Petris introduced legislation to standardize emergency response and encourage coordinated efforts among public agencies. In 1992, the Governor signed the Petris legislation which required the development and use of the Standardized Emergency Management System (SEMS) by December 1996. The framework of SEMS as specified in the Petris legislation includes the Incident Command System (ICS), the Multi-Agency Coordination System (MACS), mutual-aid systems, and the Operational Area concept.

MWDOC, WEROC, cities and water agencies will use SEMS by December 1996. Therefore, with a good understanding of SEMS, MWDOC employees will be able to work for a variety of public agencies effectively during emergency/disaster responses.

SEMS provides a common management system and terminology and coordination of jurisdictions and resources involved in responding to incidents.

There are five response levels of SEMS:

- Field Response
- Local Government
- Operational Area
- Regional
- State

The response levels are briefly described below:

Field:

Where emergency response personnel and resources, under the command of an appropriate authority, carry out tactical decisions and activities in direct response to an incident. Many times these activities are coordinated at an Incident Command Center (ICC) very near to the incident.

Local:

Manages and coordinates the overall emergency response and recovery activities within their jurisdiction. This activity usually occurs within the local jurisdiction's Emergency Operations Center (EOC) some distance from the incident. MWDOC is a local agency without responsibility for water facilities.

Operational:

Manages and coordinates information, resources and priorities among local jurisdictions within the County and serves as a communication link between the local and regional levels. WEROC serves as an Operational Area for Orange County water, coordinating with the Orange County Operational Area and Metropolitan.

Regional:

Manages and coordinates information and resources among operational areas within the mutual aid region. The State has been divided into six mutual aid regions. The Orange County Operational Area is in Region 1.

State:

Manages State resources in response to the emergency needs of the other levels and coordinates mutual aid among the Regions and serves as the communication link to

6.1.2 NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS)

Homeland Security Presidential Directive (HSPD) 5 directed the U.S. Department of Homeland Security (USDHS) to lead a coordinated national effort with other Federal departments and agencies and State, local, and tribal governments to establish a National Response Plan (NRP) and a National Incident Management System (NIMS).

NIMS 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 Incident Command System (discussed below); multi-agency 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.

The SEMS and NIMS are compatible management systems. MWDOC recognizes these policies and utilizes the SEMS/NIMS as a basis for the Incident Command System (ICS) structure. The SEMS/NIMS create a standard incident management system that is scalable and modular, and can be used in incidents of any size-complexity. The SEMS/NIMS incorporate such principles as Unified Command (UC) and Area Command (AC), ensuring further coordination for incidents involving multiple jurisdictions or agencies at any level of government.

6.1.3 INCIDENT COMMAND SYSTEM (ICS)

The basics of ICS are used in SEMS/NIMS. The five basic functions are:

Command, Operations, Planning/Intelligence, Logistics, Finance

These five basic functions are used in the five levels of response to manage incidents. One response person may assume the responsibilities for more than one function. The functions required to be activated depends on the scope of the incident.

The following is a brief description of the responsibilities of each function.

Command:

Overall responsibility for the management of the response.

Operations:

Responsible for all tactical command and coordination of incident response.

Planning:

Provides organizational focus for all information or intelligence relative to the incident. Planning has the primary responsibility for the Action Plan to be developed in coordination with the other functions.

Logistics:

Responsible for providing all personnel, materials, etc. required to control the situation or support the response structure.

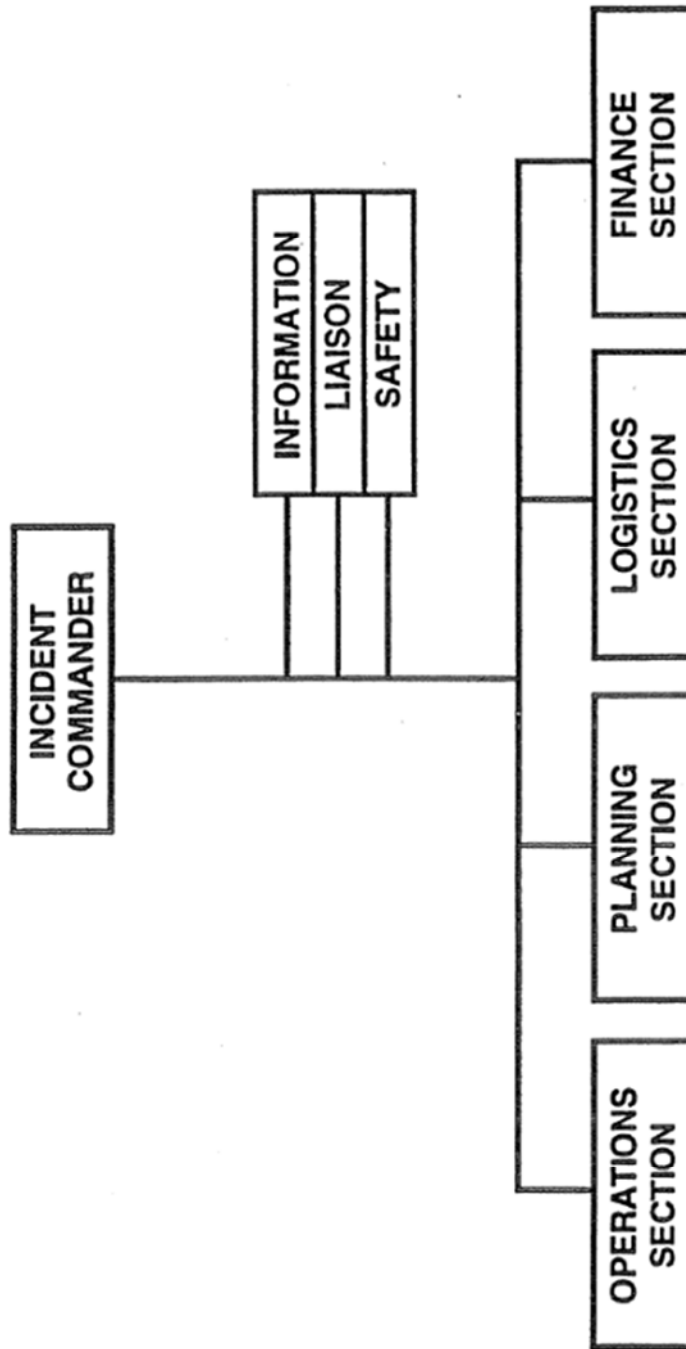
Finance:

Handle all the financial aspects of an operation, may also include handling claims information. This element is often not staffed until (too) late in the response.

The adoption of SEMS & NIMS creates a more 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.

These are merely the basics regarding SEMS/NIMS/ICS. 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 responders, commensurate with individual responsibilities. If you have any questions about SEMS/NIMS/ICS, contact the WEROC Programs Coordinator.

INCIDENT COMMAND SYSTEM



INCIDENT COMMAND SYSTEM (ICS): The combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, with responsibility for the management of assigned resources to effectively accomplish stated objectives pertinent to an incident. (Generic ICS Curriculum Glossary)

TABLE 14.1

6.1.4 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 MWDOC Board of Directors on behalf of its member agencies.

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)*

State

- California Emergency Services Act (Chapter 7 of Division 1 of Title 2 of the Government Code)
- Standardized Emergency Management System (SEMS) Government Code Section 8607.
- California Natural Disaster Assistance Act (Chapter 7.5 Division 1 of Title 2 of the Government Code).
- Orders and Regulations which may be Selectively Promulgated by the Governor during a **State of Emergency**.

Local

- County of Orange Resolution, November 28, 1950, adopting the California Master Mutual Aid Agreement
- WEROC Indemnification Agreement, December 19, 1994 by and between MWDOC
- General Manager's Emergency Expenditure Authority (Administration Code 1307 General Manager Section a. 6)
- Operational Area Agreement of the County of Orange and Political Subdivisions (to include Special Districts) October 3, 1995
- Resolution No. 1776, Approving the Adoption and Integration of the National Incident Management System into the Current MWDOC Emergency Preparedness and Response Program.
- §1103 Emergency Meeting Procedures
- Authorization Procedures for Purchases, Contracts, and Consulting & Professional Services (Administration Code Chapter 8, Contracts, Exhibit A)

6.1.5 CA STATE GOVERNMENT CODE SECTION 8607

Article 9.5 - Disaster Preparedness

8607. Standardized emergency management system

(a) By December 1, 1993, the Office of Emergency Services, in coordination with all interested state agencies with designated response roles in the state emergency plan and interested local emergency management agencies shall jointly establish by regulation a standardized emergency management system for use by all emergency response agencies. The public water systems identified in Section 8607.2 may review and comment on these regulations prior to adoption. This system shall be applicable, but not limited to, those emergencies or disasters referenced in the state emergency plan. The standardized emergency management system shall include all of the following systems as a framework for responding to and managing emergencies and disasters involving multiple jurisdictions or multiple agency responses:

- (1) The Incident Command Systems adapted from the systems originally developed by the FIREScope Program, including those currently in use by state agencies.
- (2) The multiagency coordination system as developed by the FIREScope Program.
- (3) The mutual aid agreement, as defined in Section 8561, and related mutual aid systems such as those used in law enforcement, fire service, and coroners operations.
- (4) The operational area concept, as defined in Section 8559.

(b) Individual agencies' roles and responsibilities agreed upon and contained in existing laws or the state emergency plan are not superseded by this article.

(c) By December 1, 1994, the Office of Emergency Services, in coordination with the State Fire Marshal's Office, the Department of the California Highway Patrol, the Commission on Peace Officer Standards and Training, the Emergency Medical Services Authority, and all other interested state agencies with designated response roles in the state emergency plan, shall jointly develop an approved course of instruction for use in training all emergency response personnel, consisting of the concepts and procedures associated with the standardized emergency management system described in subdivision (a).

(d) By December 1, 1996, all state agencies shall use the standardized emergency management system as adopted pursuant to subdivision (a), to coordinate multiple jurisdiction or multiple agency emergency and disaster operations.

(e) (1) By December 1, 1996, each local agency, in order to be eligible for any funding of response-related costs under disaster assistance programs, shall use the standardized emergency management system as adopted pursuant to subdivision (a) to coordinate multiple jurisdiction or multiple agency operations.

- (2) Notwithstanding paragraph (1), local agencies shall be eligible for repair, renovation, or any other nonpersonnel costs resulting from an emergency.

(f) The office shall, in cooperation with involved state and local agencies, complete an after-action report within 120 days after each declared disaster. This report shall review public safety response and disaster recovery activities and shall be made available to all interested public safety and emergency management organizations.

8607.1. Legislative intent

(a) It is the intent of the Legislature that a statewide system for fire hydrants be adopted so that all firefighters can respond to emergencies calling for the use of water at any location in the State of California. Without this statewide standardized system, the lives of firefighters and those they serve would be put in serious jeopardy in a mutual aid fire response effort stretching across city and county boundaries.

6.1.6 Resolution to Revise Continuity of Operations Plan

RESOLUTION NO. _____

**A RESOLUTION OF THE MUNICIPAL WATER DISTRICT OF ORANGE COUNTY
ADOPTING THE REVISED MWDOC CONTINTUITY OF 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 now with 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 MWDOC Continuity of Operations Plan, dated December 2016.

Said resolution supersedes Resolution 1810 and was adopted on December __, 2016, by the following roll call:

AYES:

NOES:

ABSENT:

ABSTAIN:

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 December __, 2016.

Maribeth Goldsby, Board Secretary
Municipal Water District of Orange County

6.2 Reverse Notification Systems

Below are the website links to Southern California Counties for their reverse notification systems. New county links updated 7/30/2014.

- Orange County:

www.alertoc.com

- Los Angeles County:

<http://www.lacounty.gov/emergency/alert-la>

- Riverside County:

<http://www.countyofriverside.us/emergencies/ews.html>

https://ucs.tfcci.com/cgi-bin/public/generic/riverside_county_ca_signup.cgi

- San Bernardino County:

<http://www.sbcounty.gov/SBCFire/Tens/TENSContact.aspx>

- San Diego County:

<http://www.readysandiego.org/alertsandiego/>

- Ventura County:

http://www.readyventuracounty.org/index.php?option=com_content&view=article&id=57&Itemid=11

- Santa Barbara County:

<http://www.sbsheriff.org/reverse911a.html>

- San Luis Obispo County:

<http://www.slocounty.ca.gov/OES/Reverse911.htm>

- Imperial County:

<http://www.imperialvalleyreverse911.com/PhonesR911.asp>

- Mono County:

[https://cne.coderedweb.com/Default.aspx?groupid=4%2fcfmFs%2fJlkP7wIIC
Tj%2b4w%3d%3d](https://cne.coderedweb.com/Default.aspx?groupid=4%2fcfmFs%2fJlkP7wIIC
Tj%2b4w%3d%3d)

- Inyo County: No System currently in place.

**Resource Via Verizon:*

http://www.verizon.com/about/community/ca_reverse911.htm

6.3 DISASTER WORKER OATH

(REQUIRED BY ARTICLE 20, SECTION 3, CALIFORNIA CONSTITUTION)

CALIFORNIA CONSTITUTION

ARTICLE 20 MISCELLANEOUS SUBJECTS

SEC. 3. Members of the Legislature, and all public officers and employees, executive, legislative, and judicial, except such inferior officers and employees as may be by law exempted, shall, before they enter upon the duties of their respective offices, take and subscribe the following oath or affirmation:

"I, _____, do solemnly swear (or affirm) that I will support and defend the Constitution of the United States and the Constitution of the State of California against all enemies, foreign and domestic; that I will bear true faith and allegiance to the Constitution of the United States and the Constitution of the State of California; that I take this obligation freely, without any mental reservation or purpose of evasion; and that I will well and faithfully discharge the duties upon which I am about to enter. "

And no other oath, declaration, or test, shall be required as a qualification for any public office or employment.

"Public officer and employee" includes every officer and employee of the State, including the University of California, every county, city, city and county, district, and authority, including any department, division, bureau, board, commission, agency, or instrumentality of any of the foregoing.

Employee Signature _____ Date _____

6.4 **GLOSSARY of TERMS**

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 MWDOC Staff and individual water 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 water 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.

Area Command (AC): Area Command is an organization established (1) to oversee the management of multiple incidents that are being handled by an 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.

C **Continuity of Operations Center (COOP):** The Policy Group, Finance/IT Recovery Section, and the Building Operations Recovery Section are components of the COOP.

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.

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

D **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.

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 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.

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

F **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/Admin.) used in the Incident Command System (ICS).

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.

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.

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 **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.

Multi-Agency or Inter-agency Coordination: 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.

O **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 **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.

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 member agencies in their public information efforts.

S 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.

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/Admin.

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.

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.

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.



ACTION ITEM

April 19, 2017

TO: Board of Directors

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

Robert Hunter
General Manager

Staff Contact: Karl Seckel

SUBJECT: **Technical Assistance to Staff on Electromagnetic flowmeters (mag meters) or ultrasonic flowmeters (sonic meters)**

STAFF RECOMMENDATION

Staff recommends the Board of Directors authorizes the General Manager to enter into a contract with Black & Veatch Engineers for technical assistance to support staff on a not to exceed basis of \$16,000.

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

Metropolitan Water District of Southern California (MET) will be starting a workgroup with its member agencies, including MWDOC, to discuss changes to MET's Administrative Code to allow expanded flow ranges at service connections using electromagnetic flowmeters (mag meters) or ultrasonic flowmeters (sonic meters). Historically, MET has typically used venturi meters at their service connections. In recent years they have begun using mag meters or sonic meters, but they still only allow a flow range turndown of 10:1 between the max flows and min flows allowed at a service connection (flows above the max or below the min involve penalty charges in accordance with the Administrative Code). MWDOC believes it will be extremely beneficial to retrofit certain service connection that use venturi meter locations to allow larger flow ranges based on the technical capabilities of mag meters.

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

MWDOC has been instrumental in pushing this issue at MET. MET's workgroup, which includes MWDOC, will be evaluating how to put new specifications and policy issues into operation. MWDOC's efforts will be led by Charles Busslinger and Kevin Hostert. Some of the policy and technical issues to be addressed are:

- Upstream and downstream lay lengths to ensure a high accuracy of metering
- Installation requirements:
 - To ensure a full flowtube,
 - Flowtube location relative to pumps and valves,
 - Requirements for minimum offset distance, grounding, and protection of the flow signal from electrical noise
- Meter piping to be stainless steel – will other types be allowed?
- Allowable meter designs: AC-driven, pulsed DC, hybrid
- Meters to be tested in a hydraulic lab prior to installation; to what specifications? Once a particular meter style/size has been tested, does it need to be tested for each new meter installed?
- Responsibility for electronics of the meter if problems occur or replacement is required
- What range of flows will be allowed? How will this be determined? Will it be on the accuracy of sensing low velocities on the lower range and maybe high velocities for piping on the upper range, or on other factors?
- What do other agencies use as standards? ASME-MFC-16-2014, ISO 13359:1998, or European EN 61000?

In February 2016, MWDOC staff sent out an **Invitation to Submit an SOQ and Input on Engineering and Operations of Pipelines in Orange County** to seven consultants who were prequalified and included on Metropolitan's list of engineering consultants and posted the notice on our website. Under this process MWDOC selected Black & Veatch Engineers. Based on the selection, Black & Veatch was awarded one previous contract not to exceed \$25,000 to provide services related to the East Orange County Feeder No. 2 and integration of the Poseidon water. Staff was satisfied with their performance under that contract. Staff recommends using Black & Veatch again under this request for technical assistance in design of flow metering installations.

MWDOC staff is requesting technical assistance in this process from a Consulting Engineering Firm with expertise in flow measurement devices including venturi meters, mag meters and sonic meters; and in design, construction and operation of flow control and flow metering stations. Background and expertise in MET standards for service connections, piping configurations and flow control or pressure control structures is important. Black & Veatch Engineers has all of these capabilities.

Attached is the proposal from Black & Veatch.

Mr. Karl W. Seckel, P.E.
Assistant General Manager/District Engineer
Municipal Water District of Orange County
18700 Ward Street
Fountain Valley, CA 92708

March 29, 2017

Subject: Proposal to Provide Engineering Consulting Services to Assist MWDOC with Evaluation of Metering Options for Member Agencies

Dear Mr. Seckel:

The Metropolitan Water District of Southern California (MET) will be starting a workgroup with its member agencies, including MWDOC, to discuss changes to MET's Administrative Code to allow expanded flow ranges at service connections with mag meter installations. Historically, MET has typically used venturi meters at their service connections. In recent years they have begun using electromagnetic flowmeters (mag meters) or ultrasonic flowmeters (sonic meters), but they still only allow a flow range turndown of 10:1 between the max flows and min flows allowed at a service connection (flows above the max or below the min involve penalty charges in accordance with the Administrative Code).

MWDOC believes it will be extremely beneficial to retrofit certain venturi meter locations to allow larger flow ranges based on the technical capabilities of mag meters. MET's workgroup, which includes MWDOC, will be evaluating how to put this into operation. Some of the policy and technical issues to be addressed are:

- Upstream and downstream lay lengths to ensure a high accuracy of metering,
- Installation requirements:
 - to ensure a full flowtube,
 - flowtube location relative to pumps and valves,
 - Requirements for minimum offset distance, grounding, and protection of the flow signal from electrical noise
- Meter piping to be stainless steel – will other types be allowed?
- Allowable meter designs: AC-driven, pulsed DC, hybrid
- Meters to be tested in a hydraulic lab prior to installation; to what specifications?
Once a particular meter style/size has been tested, does it need to be tested for each new meter installed?

- Responsibility for electronics of the meter if problems occur or replacement is required
- What range of flows will be allowed? How will this be determined? Will it be on the accuracy of sensing low velocities on the lower range and maybe high velocities for piping on the upper range, or on other factors?
- What do other agencies use as standards? ASME-MFC-16-2014, ISO 13359:1998, or European EN 61000?

SCOPE OF SERVICES

MWDOC has requested that Black & Veatch (B&V) provide assistance in this process. Black & Veatch provides expertise with the flow measurement devices under consideration, including venturi meters, mag meters and sonic meters. Black & Veatch also provides experience in design, construction and operation of flow control and flow metering stations. In fact, B&V is currently executing several planning and design contracts with MET involving flow metering and modification of service connections, therefore B&V brings expertise in MET standards for service connections, piping configurations and flow control or pressure control structures.

MWDOC desires to use existing service connections CM-10 and CM-12 in the discussions as potential locations for change-out of the venturi meter to a mag meter to allow flow metering of a wider range of flows. MWDOC is requesting technical guidance, recommendations, sketches and conceptual cost estimates for change-out of these two metering locations.

For budgeting purposes the following assumptions include:

1. Three 4-hour meetings are assumed with MWDOC staff and associated preparation to discuss the concepts involved and to share information coming out of the MET process. B&V will not be attending the MET meetings but will be providing input and suggestions to MWDOC staff directly.
2. B&V will prepare preliminary sketches and conceptual estimates of construction costs for a piping replacement and mag meter installation for both the CM-10 and CM-12 connections.
3. Ten (10) hours as assumed for discussions with various mag meter or sonic meter manufacturers to collect necessary technical information regarding the accuracy of meters and the appropriate installation of meters. Of interest is what symptoms occur when mag meters have error problems and what maintenance and repair activities are required to correct such problems.
4. Four (4) hours for contact with meter testing locations to understand what is involved in the accuracy and consistency testing of meters.
5. Ten (10) hours are assumed for documenting and corresponding with MWDOC staff and for responding to various questions.
6. Provide project management and administration, team coordination and supervision, and quality control.

BILLING RATE INFORMATION

B&V's 2016/2017 billing rates is provided in the table below.

Personnel Classifications	2016/2017 Billing Rate
Project Director/Vice President	\$250-300
Project Manager 1-3	\$200-250
Engineer 6-7	\$190-250
Engineer 4-5	\$135-185
Engineer 1-3	\$100-130
Engineering Technician 5-8	\$110-165
Engineering Technician 2-4	\$90-110
Word Processing Specialist*	\$90-110
Clerical and Finance*	\$90-110
Project Support Assistant*	\$90-110

- (1) Subconsultants will be billed at cost plus 5%.
- (2) An \$8.75 hourly surcharge will be added to the rates indicated above to cover basic computer charges, minor reproduction fees, long distance telephone charges, car mileage for company-owned vehicles and postage rates.
- (3) Other Direct Charges will be billed at cost. Allowable Other Direct Charges include the following:
 - Travel (transportation fares/tickets, vehicle rental & Fuel, lodging, meals, parking, tolls, IRS-approved mileage)
 - Delivery (courier, FEDEX/UPS/Express mail, US mail)
 - Major deliverable reproduction (photocopy, printing)
 - Field equipment and miscellaneous supplies
 - Temporary labor

FEES

Based on our understanding of the project, B&V will provide the services described above for a not-to-exceed fee of \$16,000.

CONFLICT OF INTEREST

Black & Veatch has been a successful company for more than 100 years. We carefully consider each project we undertake to ensure there is no conflict of interest. We are confident that MWDOC's proposed project poses no known or potential conflicts with other agencies or projects.

STANDARD CONSULTING AGREEMENT

During our 30 years in California, Black & Veatch has negotiated contracts with some of the State's most prestigious agencies. We anticipate no difficulties in the negotiation of a contract with MWDOC. If possible, we ask that the following revision to the Insurance Requirements section of Standard Consulting Agreement be considered:

- *Article VI.B requires that the Professional Liability policy includes a provision that requires the insurer to provide 30 days notice of cancelation to the District. Similarly Article VI. C states that CGL, auto, worker's compensation and employer's liability will contain similar clauses. Our insurance policies do not contain this provision. We request that this language be struck or modified to state that Black & Veatch will endeavor to provide thirty days notice of any cancellation.*

SUMMARY

Black & Veatch looks forward to an opportunity to work with MWDOC. Our core team is available to start this project immediately. If you have any questions, do not hesitate to contact me at 949-788-4250.

Yours truly,
BLACK & VEATCH CORPORATION



Matt Thomas, P.E.
Project Manager



INFORMATION ITEM

April 3, 2017

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

FROM: **Robert Hunter, General Manager**

Staff Contact: Karl Seckel

SUBJECT: **Information Related to MET Installing Steel Liners for Nine Miles of Prestressed Concrete Cylinder Pipe for the Lower Allen McColloch Pipeline (AMP)**

STAFF RECOMMENDATION

Staff recommends the Planning & Operations Committee receives and files the report

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

MET is beginning planning for the lining of about 9 miles of the lower AMP (from Irvine to Mission Viejo), including the section that of the AMP that feed water to the South County Pipeline. MET has put out an RFP to Engineering Firms and will select a firm to conduct the preliminary design and planning for the work. The actual construction work may not be performed for 5 to 10 years, but they want to conduct the planning now to get ready for the actual work.

To line this length of pipe will require likely two or more extended shutdowns of the Southern AMP with durations as long as the local agencies can withstand. This will essentially cut off the southern AMP and the South County Pipeline from imported supplies during the shutdown periods. MWDOC was contacted by a consultant interested in seeking the work from MET and staff met and provided some initial thoughts. MWDOC also needs input from the local agencies regarding what is possible and recently held a quick meeting

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

with the majority of the agencies receiving water from the Southern AMP or the SCP to get initial input and to ask them to think about how to approach an extended outage of the lower sections of the AMP. It is in the best interest of the agencies who receive water from these pipelines to help improve our reliability by helping MET fix the pipeline. MET's work will be made easier with longer periods of shutdowns to accomplish the work. We think it will be advantageous for us to get an early start on this work to see if there are facilities or improvements that will also help us sustain imported water interruptions for the long run, and maybe we can get them partially or entirely funded by MET.

Some information and thoughts are provided below. A map is also provided which shows the pipe to be relined highlighted in red.



Pipeline sections involved:

Following are the reaches of the AMP and the service connections involved.

AMP Reaches and Service Connections Involved			
Reach	Dia	Length (ft)	Service Connections
S4A	78	11,100	
S4B	69	17,800	
Line Valve			
S5	66	7,000	IRWD OC-74 ETWD OC-76 OC-88 South County Pipeline
S6A	66	7,400	IRWD OC-75
S6B	54	4,500	ETWD OC-77 MNWD OC-78,79
Downstream Connections			ETWD OC-80 MNWD OC-81 SMWD OC-82
Total		47,800	
Total		9.1 Miles	

Issues of Concern by our Agencies:

- Duration & number of shutdowns – maybe as few as 2-six month durations (wild guess at this time)
- Time of year (outside of the peak summer period)
- Dealing with water quality in the shutdown sections, if not dewatered
- Flows that cannot be delivered from other pipes such as the EOCF#2
- Primary concerns seem to be getting water to ETWD and getting water to SMWD (note that the Baker Treatment Plant can continue supplying water to agencies during the shutdown – this is a huge benefit). The question seems to be can water be pushed from the EOCF#2 delivery route to meet the non-summer demands for the agencies, particularly SMWD and ETWD.

Brainstorming Facilities that could assist agencies during the shutdown

Below are some initial ideas we would like to explore with the agencies and MET:

- The EOCF#2 deliveries to the Joint Transmission Main (max flow 88 cfs) and to the Aufdenkamp Transmission Main (max flow 38 cfs) will be reviewed to see if collectively they provide sufficient capacity to do without the Southern AMP for 6-months of the year or so; the second question has to do with distribution of that water to the right locations appropriate to meet the agencies' needs.

- Aufdenkamp Connection Transmission Main (from the Aufdenkamp Pipeline) normally provides up to 14 cfs to SMWD. Can this system be pushed to deliver more and can it be interconnected with the South County Pipeline where it crosses – it would need to be pumped to get into the South County Pipeline.
- Can the Baker Treatment Plant pump station to the South County Pipeline be modified to pump at greater than the existing at 33 cfs?
- Can MNWD serve water to ETWD and at what locations and what capacities? A new service connection to the South County Pipeline is being examined by MNWD and this may allow them to wheel water to ETWD
- A number of years ago, it was recognized that the IRWD system gets very close to the OC-88 South County Pump Station – can an interconnection be configured at this location?
- During the R-6 Reservoir expansion, MET allowed the third reach of the EOCF#2 at the Santiago Creek Pressure Control Structure and below to be operated at a higher pressure to push more water through the Joint Transmission Main and Aufdenkamp Transmission Main lines – should this be looked at again?
- Can the Eastern Transmission Main flow water back through the MNWD line in Oso Parkway to flow water into the South County Pipeline?
- What other facilities or interconnections would help?

We expect the next meeting to occur after MET has selected the consultant and put them under contract. No further actions are required at this time.



INFORMATION ITEM

April 3, 2017

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

FROM: Robert Hunter, General Manager

Staff Contact: Karl Seckel

SUBJECT: Information Related to the Orange County Flood Control Encroachment Update

STAFF RECOMMENDATION

Staff recommends the Planning & Operations Committee receives and files the report.

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

Staff is continuing to work with our agencies and the OC Flood Control staff on the concept of a "Cooperative Agreement" that would call for closer coordination on mapping issues for a limited period of time (1 to 3 years) to identify where areas of conflict might arise. Agencies wishing to take advantage of this concept would provide maps of their water and sewer pipelines where they cross the Flood Control Property in exchange for an exemption of their facilities from on-going encroachment fees. Discussions are only in the early stages.

Budgeted (Y/N):	Budgeted amount:	Core <input checked="" type="checkbox"/>	Choice <input type="checkbox"/>
Action item amount:	Line item:		
Fiscal Impact (explain if unbudgeted):			



INFORMATION ITEM

April 3, 2017

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

FROM: Robert Hunter, General Manager

Staff Contact: Karl Seckel

SUBJECT: Doheny Desal Workshop on March 22, 2017

STAFF RECOMMENDATION

Staff recommends the Planning & Operations Committee receives and files the report

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

On March 22, South Coast Water District held a “Value for Money” (VfM) workshop to examine the life-cycle costs and benefits for different methods of financing, building, and operating two different sized seawater desalination plants at Doheny State Beach. Although there are numerous ways to deliver the project, the main delivery methods for this analysis focused on Design-Build-Operate (DBO) and Public-Private-Partnership (PPP). One of the main topics was risk transfer particularly looking at who should or could take on the risk responsibility for problems that might arise with the slantwell intake system.

The workshop was conducted by GHD, the engineering Program Manager for Desalination at South Coast Water District and Professional Infrastructure Consulting Services, a company that specializes in infrastructure investments, project delivery and Public-Private-Partnerships (PPP). At the workshop the pros and cons of delivery methods and lifecycle project costs were presented. The DBO method tends to minimize project costs, as the owners take on an increased share of project risks (i.e. ownership, construction, and

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operations risks) including risks that the private company might not be willing to undertake or which would be undertaken at a high premium. PPP's in turn can reduce owners' risks by transferring additional risks to a private entity who is then compensated for assuming these risks. It was also noted that access to special financing mechanisms differ for the two methods as DBO's are eligible for Drinking Water State Revolving Funds (DWSRF) which are 20 year loans currently around a 2% interest rate and PPP's are eligible for up to 50% financing through the new WIFIA program.

Desalination plants are subject to economies of scale, therefore costs for a 5 Million Gallon per Day (MGD) and a 15 MGD plant were analyzed. It was noted that even a 5 MGD plant may produce more water than South Coast Water District needs on a base-loaded basis. The analysis indicated that the DBO method's ability to access lower rate DWSRF loans was a significant factor in the cost differential between DBO and PPP.

The table below summarizes some of the financial work as examples of project life cycle costs discounted to a present value basis. The next step in the process is for the Board to examine the various assumptions used in the modeling to inform their decision of which method of delivery to utilize. A number of questions were presented at the meeting which may change some of the assumptions and analyses. The table presents only several of a myriad of examples possible.

Various Financing Options*	5 mgd			15 mgd		
	DBO DWSRF Loan	DBO Municipal Bonds	PPP	DBO DWSRF Loan	DBO Municipal Bonds	PPP
Total Project Construction Cost	\$105 Million			\$244 Million		
Effective interest rate	2.0%	4.75 %	6.2%	2.0%	4.75 %	6.2%
Loan repayment period	20 years	30 years		20 years	30 years	
Net Present Cost of Project	\$198 M	\$232 M	\$262 M	\$504 M	\$584 M	\$644 M
Cost of water in 2020	\$1,503 /AF	\$1,886 /AF	\$2,289 /AF	\$1,240 /AF	\$1,526 /AF	\$1,811 /AF
Avg. Customer Increase (1)	\$10/month		\$20/month	\$5/month		\$10/month

* Including MET LRP Funding Option of \$475/AF for 15 years

(1) Rounded to the nearest \$5 per month increment

It should be noted that the above analysis does not include an apportionment of project risks. It should also be noted that the 15 MGD cost estimate includes an extra \$50 million as a "placeholder" for system integration costs to distribute the water. GHD has indicated that additional work is needed to determine the costs of moving this water into the local systems which has been made more difficult by the recent demand reductions experienced by agencies.

Additional work will also be needed to quantify and apportion inherent project risk and uncertainty for each delivery method, resulting in risk apportioned costs ranges for comparison. GHD presented one set of risk based cost assumptions which demonstrated that the PPP method provides a narrower range of costs (i.e. more certainty as to the final costs) as some of the projects risks and uncertainty under PPP are transferred to a private entity. However, the risk apportioned cost savings presented in the example scenario did not appear sufficient to counter the lower financing costs available with the DBO method through DWSRF funding (at least to MWDOC staff under the scenario presented).

South Coast will be conducting another workshop in the coming months and will include their reliability analysis in that meeting. The workshop was well attended. The workshop presentation was 52 slides and is available if any directors are interested.

Status of Ongoing MWDOC Reliability, Engineering, and Planning Projects

March 28, 2017

Description	Lead Agency	Status % Complete	Scheduled Completion Date	Comments
Baker Treatment Plant or Expansion of Baker Water Treatment Plant	IRWD, MNWD, SMWD, ETWD Trabuco CWD		On line date is January 2017	<p>The Baker Water Treatment Plant is a joint regional project by five SOC water districts for a 28.1 million gallon per day (mgd) [43.5 cubic feet per second (cfs)] drinking water treatment plant at the site of the former Baker Filtration Plant in the City of Lake Forest.</p> <p>On February 6, 2017, the Treatment Plant was officially on-line and operational 24-hours a day. MWDOC and the project participants are metering and invoicing for the water pumped into the South County Pipeline. During February and March, the Baker Plant treated Irvine Lake Water under a performance test protocol and also because of a MET Lower Feeder shutdown that took away the plants ability to treat MET Colorado River water.</p>
Doheny Desalination Project	South Coast Water District, Laguna Beach CWD			<p>South Coast Water District (SCWD) is continuing to move the project forward and to seek potential partners and grant funding. The CEQA process has been temporarily put on hold to evaluate the results of a recent geotechnical survey indicating a potentially wider and deeper alluvial channel that may allow for additional and/or alternative slantwell locations. The evaluation is scheduled to be completed by April 7, 2017.</p> <p>On March 22, 2017 SCWD held a ‘Value for Money’ workshop attended by Rob Hunter, and staff members Seckel and Busslinger. The workshop included a presentation of risks and benefits of different methods of financing, building,</p>

Description	Lead Agency	Status % Complete	Scheduled Completion Date	Comments
				and operating a potential seawater desalination plant at Doheny State Beach (a longer report is included in the P&O packet).
Poseidon Resources Ocean Desalination Project in Huntington Beach				On March 20, 2017 OCWD sent a letter to Santa Ana Regional Water Quality Control Board indicating the CEQA process for distributing water from a potential Huntington Beach Desalination Project (HBDP) would be placed on hold until the facility is permitted. Poseidon is continuing to work on permitting issues which are estimated to be completed in early 2018.
Orange County Reliability Study				Staff is currently working with CDM Smith to complete follow-up work on the 2016 study. The work is expected to be completed in 4 to 5 months.
MET Metering Work Group				MET has started a workgroup to evaluate criteria for installation of alternative flow meters (i.e. mag meters) that expand the flow measurement range to include lower flows than can currently be measured with existing meters (i.e. venturi meters). Staff will participate in the monthly workgroup meetings over the next six months (the P&O packet includes an item to authorize technical support for staff in this process). We believe the authorization to utilize the full range of metering allowed by mag meters will provide great flexibility to our member agencies.
OC-28 Flow Metering Issue with MET				MWDOC and OCWD are awaiting MET's analysis of the flow test to examine the metering issue from last summer. Preliminary results indicate that OCWD is owed about 700 AF of water.
Service Connection CM-1				Laguna Beach CWD and Newport Beach are continuing to study alternative methods

Description	Lead Agency	Status % Complete	Scheduled Completion Date	Comments
Cost Issues with MET				of delivery of the water to avoid complications with the CM-1 meter. We are awaiting the outcome of the studies.
North and Central Orange County Integrated Regional Watershed Management Area (IRWM) Plan Update				The County of Orange and OCWD have begun a stakeholder process to update and consolidate the 2011/2012 Integrated Regional Watershed Management Area (IRWM) Plans for North and Central Orange County. The new plan could be part of the Santa Ana Watershed Project Authority (SAWPA) One Water One Watershed (OWOW) Plan for the Santa Ana IRWM funding area. Or it could become the basis to separate the North/Central OC into a separate IRWM funding area for future grant funds, mirroring the South OC funding area within the San Diego IRWM funding area. Staff member Busslinger will participate in the newly formed Ad-Hoc committee to develop the goals and objectives of the plan.
Other Meetings/Work				
				Charles Busslinger attended the Multi-State Salinity Coalition Conference February 28 – March 3, 2017. The conference included a site visit to the Las Vegas Wash and Lake Mead to get an overview of the 380 cfs tertiary treated sewage base flow from the Las Vegas Valley back to Lake Mead; as well as erosion control and habitat restoration efforts in the Wash. The conference included several presentations on brackish water desalination projects including current efforts to find a replacement for the Colorado River Paradox Valley Project brine disposal injection well, as the current 20-year old well has reached

Description	Lead Agency	Status % Complete	Scheduled Completion Date	Comments
				<p>the end of its useful life after disposing of 2.2 million tons of salt.</p> <p>Also of note was a presentation on the May 2017 opening of a ‘full recovery’ desalination plant in El Paso which looks to ‘mine’ desalination brine discharges from the adjacent Kay Bailey Hutchison (KBH) Desalination Plant to produce gypsum, fertilizer, caustic solution, and bromide brine. This type of ‘zero discharge’ facility is technically feasible, but the economics are highly subject to transportation costs for the produced products.</p>
				<p>Charles Busslinger attended the March 14, 2017 San Juan Basin Authority (SJBA) meeting.</p> <p>Norris Brandt (formerly with IRWD and Elsinore Valley MWD) is the new SJBA Administrator.</p> <p>Groundwater pumping in the basin has resumed on a limited basis (90 Acre-Feet every two weeks for the City of San Juan Capistrano, and 36 Acre-Feet every two weeks for South Coast WD). In April the spring storage volume will be calculated and a new pumping allocation will be set based upon the 2016 Adaptive Management Plan.</p> <p>The EIR for the San Juan Watershed Project is currently being prepared by Santa Margarita WD. Phase 1, scheduled to be completed in the Summer of 2018, is designed to capture wet and dry weather runoff, while subsequent phases will look to introduce recycled water into San Juan Creek for Indirect Potable Reuse. The updated cost estimate for the Phase 1</p>

Description	Lead Agency	Status % Complete	Scheduled Completion Date	Comments
				Rubber Dams has been reduced from \$34 M to \$15 M.
				On March 23, 2017, Marilyn Thoms, Executive Officer of the South OC Watershed Management Area (SOCWMA) Executive Committee, met with SOCWMA Executive Committee member Director Yoo Schneider and staff members Seckel, Berg, and Busslinger to provide an overview of the goals and objectives of the organization.
				Karl Seckel and Charles Busslinger attended the Joint Board meeting between South Coast Water District and Santa Margarita Water District. Each agency provide an overview of upcoming efforts towards developing local projects as they examined areas of potential coordination between the organizations. The meeting was very productive in setting the future stage for closer relations between the two organizations.
				Rob Hunter, Karl Seckel and Harvey De La Torre met with Santa Margarita and their consultant Dudek & Associates to discuss options for delivering water from the upper Santa Ana Watershed based on the SMWD agreement with Cucamonga Valley Water District. Key to the discussion was how MET would account for the water under their Water Supply Allocation Plan, which would be as a “local supply” and not as an “extra ordinary supply”. Further work on the transfer will be conducted.
				Rob Hunter and Karl Seckel met with Scott Maloni and Andy Kingman to discuss the Poseidon Project and schedules for permitting and to discuss various aspects of whether MET would provide the LRP

Description	Lead Agency	Status % Complete	Scheduled Completion Date	Comments
				funding for the project. It was noted that MET is currently visiting the LRP discussions under its IRP Committee.
				Karl Seckel attended the Santiago Aqueduct Commission meeting where the budget was approved for the upcoming year. Karl discussed briefly the upcoming project whereby MET would be installing a steel lining of approximately 9 miles of the lower AMP in the next 5 to 10 years. After the meeting, Karl and Kevin Hostert conducted a short discussion with the staff of the various SAC agencies to examine options to supply water to all agencies with an extended outage of the lower AMP, possibly for as long as 6 months at a time. Once MET hires its project consultant for this project, further discussions will occur.
				Karl Seckel, Charles Busslinger, Joe Berg and Kevin Hostert met with Deborah Diep from CDR and Joe McDivitt from South Coast Water District to discuss the population estimates and housing vacancy rates for South Coast Water District. At issue is whether the population estimates fully account for the summer level of population influx and how much of a water demand remains when houses are left vacant for long periods of the year and how this impacts the measurement of gallons per capita per day. Further work is needed to quantify these issues for any coastal agency with a high influx of summertime population.
				Karl Seckel and MWDOC director Jeff Thomas presented the first draft of MWDOC's budget to the SMWD Board. It was a good exchange of information. Feedback from SMWD included:

Description	Lead Agency	Status % Complete	Scheduled Completion Date	Comments
				<ul style="list-style-type: none"> • They do not support the addition of the two Governmental Affairs positions; the SMWD request for seeking grant funds was originally made under the assumption that MWDOC could rearrange what we are currently doing to help the member agencies with seeking grants or other federal funds. • The Board felt that MWDOC could collect the appropriate information and share it with the member agencies with remaining actions by the member agency • Support for any new position would have to be based on an evaluation of “what missed or lost opportunities” are happening now to properly reflect the need for any new positions.

**Status of Ongoing WEROC Projects
March 2017**

Description	Comments
Coordination with WEROC Member Agencies	<p>Kelly Hubbard met with OCWD emergency coordination and public affairs staff regarding AlertOC and its potential use for notification during the Children's Water Festival. Kelly reviewed AlertOCs' various functions and how to get the system set-up for the festival.</p> <p>Kelly met with the cities of Garden Grove and La Habra on the process to update Hazard Mitigation Plans. WEROC will be facilitating an update of a joint plan for the water utilities in the coming year. The OC Regional Water and Wastewater Hazard Mitigation Plan is a 20 agency plan that includes information regarding these city's water and wastewater systems.</p> <p>Karl Seckel and Kelly met with Management Staff from the Orange County Sanitation District regarding the WEROC Budget & Program.</p> <p>Kelly pulled together a small group of MWDOC department managers to review the MWDOC Continuity of Operations (COOP) updated plan. The group discussed possible policies, responses and needs. Staff is asking for Board approval of this plan this month. See full staff report attached.</p>
Training and Programs	<p>Kelly provided Janine Schunk, WEROC Administrative Assistant, and Francisco Soto, WEROC Coordinator with WebEOC Training.</p> <p>Kelly facilitated a Continuity of Operations finance discussion for the MWDOC Finance team, Janine, and Francisco. The goal was to identify critical functions of finance, and what resources would be needed offsite to get these activities done.</p>
Coordination with the County of Orange	<p>Kelly attended the March Orange County Emergency Management Organization (OCEMO) meeting at John Wayne Airport. The speaker was the former Emergency Manager for LAX and he spoke about the 2013 LAX shooting and response.</p> <p>Kelly attended the Orange County Operational Area (OA) Executive Board Training, as a voting member for ISDOC and representative for water and wastewater utilities.</p> <p>The Operational Area Emergency Management is starting a 2-year revision of the Orange County Operational Area (OA) Agreement. The OA Agreement outlines how the County of Orange Emergency Management Division will</p>

	<p>operate the OA Emergency Operations Center on behalf of the 115 government jurisdictions within the geographic boundary of the county in order to coordinate emergency response information and resources. Janine attended the initial OA Agreement Kick-Off Meeting. The group will be meeting monthly for 2 years to complete this process. The intention of this process is to create an updated agreement that reflects current operational concepts and that all 115 jurisdictions would sign the revised agreement.</p> <p>Kelly and Francisco attended the OA WebEOC Meeting. The purpose of the meeting was to have an After Action discussion of how WebEOC worked during the winter storms. Kelly facilitated the After-Action discussion on behalf of the county staff. This process is critical to ensure the system will work as expected during events, especially larger events.</p>
Coordination with Outside Agencies	<p>Kelly is facilitating the California Water/Wastewater Agency Response Network (CalWARN) State-wide Steering Committee Election Process. CalWARN has not had a regional election process for many years and the group felt it was appropriate to have a full election process state-wide. Kelly helped to develop the protocols and set-up electronic ballots for the process. Results will be announced at the Annual Meeting on April 12.</p>
WEROC Emergency Operations Center (EOC) Readiness	<p>Staff participated in the February MARS and Operational Area radio test successfully. Staff continues to do individual tests with Member Agencies on the WEROC Radio system. Kelly met with County Communications Staff to further clarify radio system needs and processes. Kelly has a survey out to the member agencies to better understand their current communications systems and how that might impact the WEROC radio project.</p> <p>Janine Schunk, MWDOC/WEROC Administrative Assistant, met with a space consultant at the SEOC. The space consultant will assist staff will determining the best layout of the WEROC EOC and to manage the needed updates at the facility. This was an initial meeting to determine the consultant's services.</p> <p>A request for quotes for a seismic study of the WEROC South EOC has been sent out to multiple consultants. Quotes are due April 14th.</p> <p>Janine met with ATT Phone Repair staff to have 4 phone lines repaired at the WEROC South EOC. She also met with MET staff twice to have locks at the North EOC repaired.</p>

Status of Water Use Efficiency Projects

April 2017

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
Smart Timer Rebate Program	MWDSC	On-going	On-going	<p>In February 2017, 191 residential and 17 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	On-going	On-going	<p>In February 2017, 4,460 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	On-going	On-going	<p>In February 2017, 776 high efficiency clothes washers and 83 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	On-going	On-going	<p>In February 2017, 483 premium high efficiency toilets, 432 plumbing control valves, and 553 laminar flow restrictors were installed through this program.</p> <p>For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.</p>
Industrial Process Water Use Reduction Program	MWDOC	96%	September 2016	<p>A total of 41 Focused Surveys and 19 Comprehensive Surveys have been completed or are in progress. To date, 15 companies have signed Incentive Agreements. Updated discharger lists have been obtained, and outreach is continuing to sites with feasible water savings</p>

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
				potential. As a result of this program, 412 AFY of water savings is being achieved.
Turf Removal Program	MWDOC	On-going	On-going	<p>In February 2017, 91 rebates were paid, representing \$140,776.50 in rebates paid this month in Orange County. To date, the Turf Removal Program has removed approximately 20.6 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>
California Sprinkler Adjustment Notification System – Base Irrigation Schedule Calculator	MWDOC	On-going	On-going	<p>The California Sprinkler Adjustment Notification System (CSANS) will e-mail or “push” an irrigation index to assist property owners with making global irrigation scheduling adjustments. Participants voluntarily register to receive this e-mail at www.csans.net and can unsubscribe at any time.</p> <p>An annual support contract with Enterprise Information Systems, the original developer of CSANS, was recently executed. Support will include annual web hosting, technical support, functional refinements, and ongoing application health and maintenance.</p>
Spray to Drip Conversion Program	MWDOC	75%	October 2017	<p>This is a pilot program designed to test the efficacy of replacing conventional spray heads in shrub beds with low-volume, low-precipitation drip technology. Through a rebate program format, residential and commercial sites will be encouraged to convert their existing spray nozzles to drip.</p> <p>To date, 193 residential sites and 52 commercial sites have completed spray to drip conversion projects.</p>

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
Landscape Design Assistance Program (LDAP)	MWDOC	5%	December 2017	<p>This is a pilot program designed to offer FREE front yard landscape design assistance to customers who are participating in MWDOC's Turf Removal Rebate Program.</p> <p>To date, MWDOC has selected two (2) Consultants to provide landscape design assistance. A website that will provide sample templates and how-to-apply information is currently in the development phase.</p>
MWDOC Conservation Meeting	MWDOC	On-going	Monthly	This month's meeting was held on March 2, 2017. The next meeting will be on April 6, 2017 at MWDOC.
Metropolitan Conservation Meeting	MWDSC	On-going	Monthly	This month's meeting was held on March 16, 2017. The next meeting will be April 20, 2017 at Metropolitan.

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-17	776	2.23	2,894	34.86	111,677	3,853	23,796
Smart Timer Program - Irrigation Timers	2004	February-17	208	1.79	1,584	387.36	19,066	7,178	38,249
Rotating Nozzles Rebate Program	2007	February-17	4,460	17.83	33,774	135.04	555,132	2,727	11,158
SoCal WaterSmart Commercial Plumbing Fixture Rebate Program	2002	February-17	1,468	2.85	9,386	122.90	79,668	3,518	39,240
Water Smart Landscape Program [1]	1997	November-15	12,677	904.62	12,677	3,615.21	12,677	10,621	72,668
Industrial Process Water Use Reduction Program	2006	February-17	0	2.92	2	2.92	25	412	2,059
Turf Removal Program ^[3]	2010	February-17	70,992	0.83	624,678	65	20,651,347	2,892	7,223
High Efficiency Toilet (HET) Program	2005	February-17	83	0.29	901	38.37	59,486	2,199	14,150
Home Water Certification Program	2013	November-15	0	0.000	53	0.251	312	7,339	15,266
Synthetic Turf Rebate Program	2007						685,438	96	469
Ultra-Low-Flush-Toilet Programs ^[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				933	685,949	4,402	22,821,225	48,781	392,380

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

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

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

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

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

Agency	FY 08/09	FY 09/10	FY 10/11	FY 11/12	FY 12/13	FY13/14	FY14/15	FY15/16	FY16/17	Total	Current FY Water Savings Ac/Ft (Cumulative)	Cumulative Water Savings across all Fiscal Years	15 yr. Lifecycle Savings Ac/Ft
Brea	156	42	186	144	93	115	114	76	39	1,849	0.41	397.67	957
Buena Park	146	59	230	145	105	106	91	76	37	1,501	0.39	307.14	777
East Orange CWD RZ	17	3	23	10	10	8	8	8	1	190	0.01	43.38	98
El Toro WD	130	32	162	112	134	121	111	65	34	1,508	0.35	310.36	780
Fountain Valley	243	72	289	158	115	102	110	76	45	2,380	0.63	532.22	1,231
Garden Grove	332	101	481	236	190	162	165	251	98	3,534	1.17	745.47	1,829
Golden State WC	447	168	583	485	265	283	359	260	118	4,995	1.40	1,053.02	2,585
Huntington Beach	751	211	963	582	334	295	319	225	116	8,182	1.33	1,867.35	4,234
Invine Ranch WD	1,844	1,394	2,621	2,170	1,763	1,664	1,882	1,521	981	24,274	11.90	4,886.77	12,560
La Habra	83	22	179	128	82	114	87	66	39	1,313	0.41	268.65	679
La Palma	51	25	76	46	34	25	34	29	7	455	0.09	92.72	235
Laguna Beach CWD	77	27	96	57	38	37	39	32	9	922	0.06	204.57	477
Mesa Water	246	73	232	176	114	86	89	113	62	2,500	0.80	568.44	1,294
Moulton Niguel WD	742	250	1,127	679	442	421	790	688	405	9,751	5.23	1,968.04	5,045
Newport Beach	259	57	197	142	116	92	95	66	42	2,605	0.55	609.29	1,348
Orange	403	111	349	262	218	163	160	124	58	3,876	0.66	887.19	2,006
Orange Park Acres	-	-	-	-	-	-	-	-	-	12	0.00	3.42	6
San Juan Capistrano	127	43	190	110	76	73	92	63	23	1,449	0.32	310.94	750
San Clemente	278	63	333	206	140	94	141	75	38	2,588	0.53	564.03	1,339
Santa Margarita WD	740	257	1,105	679	553	662	792	466	265	9,414	3.22	1,927.46	4,871
Seal Beach	57	7	81	51	31	29	38	23	4	597	0.02	129.43	309
Serrano WD	23	7	21	20	13	10	26	8	10	356	0.13	81.13	184
South Coast WD	148	43	183	112	89	79	68	43	34	1,574	0.39	338.66	814
Trabuco Canyon WD	62	28	82	62	30	45	47	34	19	789	0.19	167.85	408
Tustin	144	45	174	97	78	59	80	66	31	1,599	0.47	358.02	827
Westminster	233	74	329	208	121	82	109	149	74	2,576	0.89	553.31	1,333
Yuba Linda	367	117	394	273	181	167	156	123	44	3,740	0.53	851.31	1,935
MWDOC Totals	8,106	3,331	10,686	7,350	5,365	5,094	6,002	4,726	2,633	94,529	32.09	20,027.83	18,263

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Anaheim	781	860	910	477	331	285	295	266	131	10,600	1.44	2,373.15	5,485
Foothill	330	69	397	270	200	186	211	165	74	3,662	0.81	726.05	1,895
Santa Ana	257	87	355	190	163	131	132	259	56	2,886	0.52	669.09	1,493
SD Non-MWDOC Totals	1,368	1,016	1,662	937	694	602	638	690	261	17,148	2.77	3,768.29	3,313

Orange County Totals	9,474	4,347	12,348	8,287	6,059	5,696	6,640	5,416	2,894	111,677	34.86	23,796.12	21,576
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SMART TIMERS INSTALLED BY AGENCY through MWDOC and Local Agency Conservation Programs

Agency	FY 09/10		FY 10/11		FY 11/12		FY 12/13		FY 13/14		FY 14/15		FY 15/16		FY 16/17		Total Program		Cumulative Water Savings across all Fiscal Years
	Res	Comm	Res	Comm	Res	Comm	Res	Comm	Res	Comm	Res	Comm	Res	Comm	Res	Comm	Res	Comm	
Brea	0	0	2	0	8	0	9	8	4	0	43	6	20	4	23	4	123	80	461.13
Buena Park	0	0	0	0	4	19	3	0	0	0	4	10	7	4	5	7	26	41	117.56
East Orange CWD RZ	0	0	1	0	5	0	2	0	0	0	2	0	1	0	4	1	18	1	7.14
El Toro WD	2	18	5	5	26	2	7	2	11	0	8	9	9	17	19	3	101	350	2,227.95
Fountain Valley	0	6	2	2	8	2	3	2	4	0	7	10	13	1	22	9	80	37	144.77
Garden Grove	6	0	5	4	7	0	5	2	9	0	10	14	13	11	13	0	86	38	141.85
Golden State WC	9	22	7	4	13	3	9	49	9	25	39	12	35	16	35	34	204	189	669.03
Huntington Beach	6	27	6	36	15	4	18	33	20	35	19	2	42	12	51	36	235	210	827.08
Invine Ranch WD	14	145	28	153	267	71	414	135	71	59	67	310	239	207	215	115	1,640	1,981	9,482.78
La Habra	0	21	0	0	3	0	4	7	2	0	4	7	3	1	7	7	31	44	171.53
La Palma	0	0	0	0	1	0	1	0	2	0	2	0	3	2	0	0	9	2	4.12
Laguna Beach CWD	2	14	4	1	109	2	76	2	71	0	86	0	86	1	4	0	474	20	197.49
Mesa Water	13	7	7	22	21	0	10	2	15	2	17	28	36	12	30	41	199	154	609.02
Moulton Niguel WD	17	162	36	60	179	31	51	74	40	45	46	95	163	100	169	39	847	711	2,929.51
Newport Beach	7	58	6	0	275	12	242	26	188	75	11	9	28	43	20	11	1,028	408	2,290.84
Orange	2	13	5	8	25	0	20	24	13	9	18	31	51	13	37	10	253	165	801.63
San Juan Capistrano	7	49	13	1	103	2	14	18	6	11	6	19	20	8	15	0	215	117	542.18
San Clemente	13	209	46	11	212	17	26	7	28	2	28	24	26	3	22	13	1,036	374	2,354.37
Santa Margarita WD	10	152	61	53	262	7	53	171	64	93	53	321	189	136	229	54	1,057	1,205	4,523.73
Santiago CWD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Seal Beach	0	1	0	0	0	3	1	0	1	36	1	12	2	2,446	2	4	7	2,502	3,435.01
Serrano WD	11	0	4	0	3	0	1	0	0	0	4	0	11	2	3	0	37	2	10.81
South Coast WD	3	10	13	3	78	10	13	16	8	4	104	73	9	11	2	0	273	212	991.82
Trabuco Canyon WD	2	0	2	10	12	0	6	0	2	0	6	1	16	50	7	3	97	157	839.54
Tustin	10	14	10	0	11	0	8	4	9	1	18	14	33	8	21	10	131	67	269.30
Westminster	3	0	1	1	2	0	1	1	2	0	13	17	7	1	12	7	60	39	160.76
Yorba Linda	5	21	25	0	22	0	20	0	12	5	32	2	61	27	43	71	309	183	686.25
MWDOC Totals	142	949	289	374	1,671	185	1,017	583	571	402	648	1,026	1,123	3,136	1,010	479	8,576	9,289	34,897.20

Anaheim	5	46	12	11	23	60	19	10	9	26	7	52	30	34	45	10	202	457	2,285.26
Fullerton	2	39	9	33	22	51	9	29	8	0	40	26	32	12	24	7	170	199	789.07
Santa Ana	1	8	8	0	6	5	8	19	7	8	9	27	22	26	7	2	74	99	277.93
Non-MWDOC Totals	8	93	29	44	51	116	36	58	24	34	56	105	84	72	76	19	446	755	3,352.26

Orange County Totals	150	1,042	318	418	1,722	301	1,053	641	595	436	704	1,131	1,207	3,208	1,086	498	9,022	10,044	38,249
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ROTATING NOZZLES INSTALLED BY AGENCY
through MWDOC and Local Agency Conservation Programs

Agency	FY 11/12				FY 12/13				FY 13/14				FY 14/15				FY 15/16				FY 16/17				Total Program				Cumulative Water Savings across all Fiscal Years	
	Small		Large		Small		Large		Small		Large		Small		Large		Small		Large		Small		Large		Small		Large			
	Res	Comm.	Comm.	Res	Res	Comm.	Comm.	Res	Res	Comm.	Comm.	Res	Res	Comm.	Comm.	Res	Res	Comm.	Comm.	Res	Res	Comm.	Comm.	Res	Res	Comm.	Comm.			
Brea	130	0	0	65	120	0	84	0	0	157	45	0	74	2,484	0	0	0	0	572	2,749	0	0	572	2,749	0	0	572	2,749	32.68	
Buena Park	32	0	0	65	0	0	53	0	0	248	0	0	45	98	0	0	0	0	509	173	2,535	0	509	173	2,535	0	509	173	453.42	
East Orange	340	0	0	55	0	0	30	0	0	221	0	0	0	0	0	0	0	0	751	0	0	0	751	0	0	751	0	751	10.83	
El Toro	357	76	0	23	6,281	0	56	3,288	0	1,741	28,714	0	730	4,457	0	730	4,457	0	3,369	46,222	890	0	3,369	46,222	890	0	3,369	46,222	820.63	
Fountain Valley	108	0	0	35	0	0	0	0	0	107	0	0	222	0	0	222	0	0	710	0	0	0	710	0	0	710	0	710	10.22	
Garden Grove	119	0	0	95	0	0	80	0	0	88	50	0	110	0	0	110	0	0	933	299	0	0	933	299	0	933	299	19.72		
Golden State	294	0	0	257	2,595	0	192	0	0	583	1,741	0	1,088	0	0	1,088	0	0	3,417	10,009	0	0	3,417	10,009	0	3,417	10,009	0	3,417	152.29
Huntington Beach	458	0	0	270	0	0	120	0	0	798	1,419	0	1,345	2,836	0	1,345	2,836	0	3,797	11,109	2,681	0	3,797	11,109	2,681	0	3,797	11,109	792.43	
Irvine Ranch	1,715	4,255	0	25,018	1,014	0	11,010	4,257	0	1,421	632	0	1,989	5,047	0	1,989	5,047	0	47,133	89,722	2,004	0	47,133	89,722	2,004	0	47,133	89,722	2,900.85	
La Habra	33	90	0	0	0	0	15	0	0	109	338	0	300	0	0	300	0	0	481	1,236	900	0	481	1,236	900	0	481	1,236	221.65	
La Palma	0	0	0	0	0	0	0	0	0	0	0	0	46	505	0	46	505	0	56	2,890	0	0	56	2,890	0	56	2,890	0	56	14.18
Laguna Beach	763	0	0	3,596	0	0	2,948	878	0	2,879	1,971	0	1,390	0	0	1,390	0	0	12,139	2,896	0	0	12,139	2,896	0	12,139	2,896	0	12,139	224.61
Mesa Water	297	277	0	270	0	0	361	0	0	229	0	0	166	0	0	166	0	0	1,987	385	343	0	1,987	385	343	0	1,987	385	121.99	
Moulton Niguel	1,225	0	0	512	1,385	0	361	227	0	1,596	4,587	0	5,492	1,441	0	5,492	1,441	0	11,874	20,252	2,945	0	11,874	20,252	2,945	0	11,874	20,252	1,016.47	
Newport Beach	640	3,273	0	25,365	50	0	19,349	6,835	0	460	3,857	0	348	670	0	348	670	0	46,678	21,413	0	0	46,678	21,413	0	46,678	21,413	0	46,678	1,178.02
Orange	343	0	0	264	0	0	245	120	0	304	668	0	631	91	0	631	91	0	3,170	1,072	0	0	3,170	1,072	0	3,170	1,072	0	3,170	69.27
San Clemente	4,266	117	1,343	631	172	0	415	5,074	0	326	0	0	426	0	0	426	0	0	9,989	7,538	1,343	0	9,989	7,538	1,343	0	9,989	7,538	415.75	
San Juan Capistrano	949	0	0	684	30	0	370	0	0	495	737	0	310	593	0	310	593	0	5,495	8,729	0	0	5,495	8,729	0	5,495	8,729	0	5,495	256.54
Santa Margarita	4,817	0	0	983	0	0	389	0	0	1,207	1,513	0	1,820	837	0	1,820	837	0	16,165	6,921	611	0	16,165	6,921	611	0	16,165	6,921	450.33	
Seal Beach	0	0	0	0	0	0	0	0	0	40	5,261	0	0	2,300	0	0	2,300	0	155	7,852	0	0	155	7,852	0	155	7,852	0	155	90.55
Serrano	58	0	0	190	0	0	105	0	0	377	0	0	695	0	0	695	0	0	3,405	0	0	0	3,405	0	0	3,405	0	3,405	55.23	
South Coast	688	359	0	435	0	0	70	0	0	4,993	13,717	0	1,421	2,889	0	1,421	2,889	0	8,130	18,870	0	0	8,130	18,870	0	8,130	18,870	0	8,130	323.31
Trabuco Canyon	379	0	0	34	0	0	0	0	0	56	0	0	130	0	0	130	0	0	2,086	5,130	0	0	2,086	5,130	0	2,086	5,130	0	2,086	70.87
Tustin	476	1,013	0	378	0	0	329	0	0	408	0	0	317	386	0	317	386	0	3,371	1,399	0	0	3,371	1,399	0	3,371	1,399	0	3,371	69.73
Westminster	26	0	0	15	0	0	0	0	0	54	0	0	73	0	0	73	0	0	464	0	0	0	464	0	0	464	0	464	6.53	
Yorba Linda	559	0	0	730	0	0	40	990	0	921	0	0	1,715	0	0	1,715	0	0	6,081	4,359	500	0	6,081	4,359	500	0	6,081	4,359	278.38	
MWDOC Totals	19,072	9,460	1,343	59,970	11,647	0	36,622	21,669	0	19,818	65,250	0	20,883	24,634	0	20,883	24,634	0	192,917	271,225	14,752	0	192,917	271,225	14,752	0	192,917	271,225	10,056.46	

Anaheim	742	38,554	0	459	813	0	338	0	0	498	712	0	794	5,221	0	147	3,953	0	4,020	49,799	105	0	4,020	49,799	105	0	4,020	49,799	630.16
Fullerton	409	0	0	119	0	0	107	0	0	684	1,196	0	521	7,015	0	65	3,034	0	2,910	11,309	1,484	0	2,910	11,309	1,484	0	2,910	11,309	386.40
Santa Ana	22	65	0	99	0	0	86	2,533	0	310	0	0	0	1,420	0	0	1,106	0	859	5,752	0	0	859	5,752	0	0	859	5,752	85.35
Non-MWDOC Totals	1,173	38,619	0	677	813	0	531	2,533	0	1,492	1,908	0	1,315	13,656	0	212	8,093	0	7,789	66,860	1,589	0	7,789	66,860	1,589	0	7,789	66,860	1,101.91
Orange County Totals	20,245	48,079	1,343	60,647	12,460	0	37,153	24,202	0	21,310	67,158	0	22,198	38,290	0	1,690	32,084	0	200,706	338,085	16,341	0	200,706	338,085	16,341	0	200,706	338,085	11,158.37

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

INSTALLED BY AGENCY

through MWDOC and Local Agency Conservation Programs

Agency	FY 07/08	FY 08/09	FY 09/10	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	Totals	Cumulative Water Savings across all Fiscal Years
Brea	27	113	24	4	1	234	0	10	91	0	631	394
Buena Park	153	432	122	379	290	5	23	56	591	0	2,356	1,070
East Orange CWD RZ	0	0	0	0	0	0	0	0	0	0	0	0
El Toro WD	0	92	143	1	137	0	212	6	268	35	1,062	587
Fountain Valley	17	35	0	2	314	0	0	1	249	0	872	584
Garden Grove	5	298	130	22	0	4	1	167	676	310	2,351	1,480
Golden State WC	46	414	55	68	135	0	1	0	1,008	53	2,865	1,896
Huntington Beach	48	104	126	96	156	104	144	7	783	162	2,475	1,547
Irvine Ranch WD	121	789	2,708	1,002	646	1,090	451	725	11,100	3,701	25,609	7,281
La Habra	191	75	53	4	0	0	0	0	340	0	883	544
La Palma	0	140	21	0	0	0	0	0	0	509	675	103
Laguna Beach CWD	20	137	189	0	0	0	27	0	0	0	446	312
Mesa Water	141	543	219	669	41	6	0	79	661	765	4,237	2,068
Moulton Niguel WD	9	69	151	6	0	0	0	3	413	92	1,088	814
Newport Beach	98	27	245	425	35	0	0	566	0	0	1,834	1,279
Orange	18	374	67	1	73	1	271	81	275	2,250	4,429	1,784
San Juan Capistrano	2	1	1	0	0	0	14	0	0	0	260	397
San Clemente	2	18	43	0	19	0	0	1	0	0	432	381
Santa Margarita WD	6	23	11	0	0	0	0	2	90	0	207	206
Santiago CWD	0	0	0	0	0	0	0	0	0	0	0	0
Seal Beach	1	2	124	0	0	0	0	0	0	184	538	427
Serrano WD	0	0	0	0	0	0	0	0	0	0	0	0
South Coast WD	9	114	56	422	84	148	0	382	0	0	1,320	509
Trabuco Canyon WD	0	4	0	0	0	0	0	0	0	0	11	15
Tustin	115	145	25	230	0	0	0	75	358	82	1,272	817
Westminster	40	161	16	63	35	1	28	0	146	79	1,040	995
Yorba Linda	10	24	8	30	0	1	0	0	226	84	595	559
MWDOC Totals	1,079	4,134	4,537	3,424	1,966	1,594	1,172	2,161	17,275	8,306	57,488	26,048
Anaheim	766	3,298	582	64	48	165	342	463	3,072	309	13,753	6,901
Fullerton	133	579	29	4	0	94	0	178	476	541	2,698	1,624
Santa Ana	493	815	728	39	12	16	17	5	1,293	230	5,729	4,667
Non-MWDOC Totals	1,392	4,692	1,339	107	60	275	359	646	4,841	1,080	22,180	13,192
Orange County Totals	2,471	8,826	5,876	3,531	2,026	1,869	1,531	2,807	22,116	9,386	79,668	39,240

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

Water Smart Landscape Program

Total Number of Meters
in Program by Agency

Agency	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	Overall Water Savings To Date (AF)
Brea	0	0	0	0	22	22	22	22	22	0	64.37
Buena Park	0	0	17	103	101	101	101	101	101	0	462.69
East Orange CWD RZ	0	0	0	0	0	0	0	0	0	0	0.00
El Toro WD	352	384	371	820	810	812	812	812	812	0	4,856.93
Fountain Valley	0	0	0	0	0	0	0	0	0	0	0.00
Garden Grove	0	0	0	0	0	0	0	0	0	0	0.00
Golden State WC	14	34	32	34	32	32	32	32	32	0	200.59
Huntington Beach	0	0	31	33	31	31	31	31	31	0	148.43
Irvine Ranch WD	708	1,008	6,297	6,347	6,368	6,795	6,797	6,769	6,780	0	38,304.89
Laguna Beach CWD	0	57	141	143	141	124	124	124	124	0	733.07
La Habra	0	23	22	24	22	22	22	22	22	0	136.72
La Palma	0	0	0	0	0	0	0	0	0	0	0.00
Mesa Water	165	286	285	288	450	504	511	514	515	0	2,943.57
Moulton Niguel WD	180	473	571	595	643	640	675	673	661	0	4,120.71
Newport Beach	58	142	171	191	226	262	300	300	300	0	1,501.19
Orange	0	0	0	0	0	0	0	0	0	0	0.00
San Clemente	227	233	247	271	269	269	299	407	459	0	2,368.77
San Juan Capistrano	0	0	0	0	0	0	0	0	0	0	0.00
Santa Margarita WD	945	1,571	1,666	1,746	1,962	1,956	2,274	2,386	2,386	0	14,178.10
Seal Beach	0	0	0	0	0	0	0	0	0	0	0.00
Serrano WD	0	0	0	0	0	0	0	0	0	0	0.00
South Coast WD	62	117	108	110	118	118	118	164	164	0	829.91
Trabuco Canyon WD	12	49	48	62	60	60	60	60	60	0	350.52
Tustin	0	0	0	0	0	0	0	0	0	0	0.00
Westminster	10	18	18	20	18	18	18	18	18	0	116.46
Yorba Linda WD	0	0	0	0	0	0	0	0	0	0	0.00
MWDOC Totals	2,733	4,395	10,025	10,787	11,273	11,766	12,196	12,435	12,487	0	71,316.9
Anaheim	0	0	142	146	144	190	190	190	190	0	1,351.53
Fullerton	0	0	0	0	0	0	0	0	0	0	0.00
Santa Ana	0	0	0	0	0	0	0	0	0	0	0.00
Non-MWDOC Totals	0	0	142	146	144	190	190	190	190	0	1,351.53
Orange Co. Totals	2,733	4,395	10,167	10,933	11,417	11,956	12,386	12,625	12,677	0	72,668.45

INDUSTRIAL PROCESS WATER USE REDUCTION PROGRAM

Number of Process Changes by Agency

Agency	FY 09/10	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	Overall Program Interventions	Annual Water Savings[1]	Cumulative Water Savings across all Fiscal Years[1]
Brea	0	0	0	0	0	0	0	0	0	0	0
Buena Park	0	0	0	0	0	0	1	0	2	54	442
East Orange	0	0	0	0	0	0	0	0	0	0	0
El Toro	0	0	0	0	0	0	0	0	0	0	0
Fountain Valley	0	0	0	0	0	0	0	0	0	0	0
Garden Grove	0	0	0	0	0	0	1	0	1	0	0
Golden State	0	0	0	0	0	0	0	0	1	3	26
Huntington Beach	0	0	0	2	0	1	2	0	5	132	419
Irvine Ranch	2	1	1	1	1	0	2	0	8	102	508
La Habra	0	0	0	0	0	0	1	0	1	0	0
La Palma	0	0	0	0	0	0	0	0	0	0	0
Laguna Beach	0	0	0	0	0	0	0	0	0	0	0
Mesa Water	0	0	0	0	0	0	0	0	0	0	0
Moulton Niguel	0	0	0	0	0	0	0	0	0	0	0
Newport Beach	0	0	0	0	0	1	0	0	1	21	48
Orange	0	0	0	0	0	0	1	2	4	88	402
San Juan Capistrano	0	0	0	0	0	0	0	0	0	0	0
San Clemente	0	0	0	0	0	0	0	0	0	0	0
Santa Margarita	0	0	0	0	0	0	0	0	0	0	0
Seal Beach	0	0	0	0	0	0	0	0	0	0	0
Serrano	0	0	0	0	0	0	0	0	0	0	0
South Coast	0	0	0	0	0	0	1	0	1	0	0
Trabuco Canyon	0	0	0	0	0	0	0	0	0	0	0
Tustin	0	0	0	0	0	0	0	0	0	0	0
Westminster	0	0	0	0	0	0	0	0	0	0	0
Yorba Linda	0	0	0	0	0	0	0	0	0	0	0
MWDOC Totals	2	1	1	3	1	2	9	2	24	401	1845
Anaheim	0	0	0	0	0	0	0	0	0	0	0
Fullerton	0	0	0	0	0	0	0	0	0	0	0
Santa Ana	0	0	0	0	0	0	1	0	1	11	214
OC Totals	2	1	1	3	1	2	10	2	25	412	2059

[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 MWD OC and Local Agency Conservation Programs

Agency	FY 11/12		FY 12/13		FY 13/14		FY 14/15		FY 15/16		FY 16/17		Total Program		Cumulative Water Savings across all Fiscal Years
	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	
Brea	3,397	9,466	7,605	0	5,697	0	71,981	30,617	118,930	404,411	4,478	0	212,088	444,494	209,57
Buena Park	0	0	0	0	0	0	11,670	1,626	77,127	16,490	3,741	0	92,538	18,116	32,32
East Orange	0	0	0	0	1,964	0	18,312	0	27,844	0	0	0	48,120	0	16,59
El Toro	4,723	0	4,680	72,718	4,582	0	27,046	221,612	63,546	162,548	6,804	23,019	111,381	479,897	232,62
Fountain Valley	1,300	0	682	7,524	4,252	0	45,583	5,279	65,232	0	418	0	117,467	12,803	48,90
Garden Grove	14,013	0	4,534	0	8,274	0	67,701	22,000	177,408	49,226	11,504	0	283,434	117,403	167,57
Golden State	42,593	30,973	31,813	3,200	32,725	8,424	164,507	190,738	310,264	112,937	0	0	581,902	346,272	377,04
Huntington Beach	27,630	48,838	9,219	12,437	20,642	0	165,600	58,942	305,420	270,303	9,560	21,534	538,872	415,705	355,17
Irvine Ranch	6,450	1,666	32,884	32,384	36,584	76,400	234,905	317,999	782,844	2,675,629	156,929	38,722	1,256,019	3,155,594	1,361,58
La Habra	0	8,262	0	0	0	0	14,014	1,818	49,691	72,164	0	0	63,705	90,019	53,33
La Palma	0	0	0	0	0	0	4,884	0	10,257	59,760	0	0	15,141	59,760	21,66
Laguna Beach	2,533	0	2,664	1,712	4,586	226	13,647	46,850	47,614	0	0	0	72,022	48,788	47,58
Mesa Water	6,777	0	10,667	0	22,246	0	131,675	33,620	220,815	106,896	3,006	42,848	395,186	183,364	193,22
Moulton Niguel	4,483	26,927	11,538	84,123	14,739	40,741	314,250	1,612,845	889,748	1,059,279	174,565	0	1,410,279	2,840,054	1,520,68
Newport Beach	3,454	0	3,548	2,346	894	0	33,995	65,277	76,675	375,404	953	0	119,519	443,027	175,93
Orange	12,971	0	15,951	8,723	11,244	0	120,093	281,402	289,990	106,487	3,247	2,366	453,496	398,978	314,88
San Clemente	21,502	0	16,062	13,165	18,471	13,908	90,349	1,137	215,249	438,963	3,950	0	365,583	467,173	278,80
San Juan Capistrano	22,656	103,692	29,544	27,156	12,106	0	101,195	32,366	197,290	143,315	2,624	40,748	365,415	347,277	310,13
Santa Margarita	1,964	11,400	10,151	11,600	17,778	48,180	211,198	514,198	534,048	550,420	8,822	28,094	788,444	1,169,453	686,70
Seal Beach	0	0	3,611	0	0	0	15,178	504	17,349	15,911	0	0	36,138	16,415	18,43
Serrano	0	0	0	0	2,971	0	41,247	0	127,877	4,403	2,539	0	174,634	4,403	56,38
South Coast	6,806	0	9,429	4,395	15,162	116,719	84,282	191,853	181,102	128,290	3,312	0	300,093	457,581	308,31
Trabuco Canyon	272	0	1,542	22,440	2,651	0	14,771	0	42,510	88,272	0	0	61,746	110,712	61,32
Tustin	0	0	9,980	0	1,410	0	71,285	14,137	232,697	33,362	9,043	0	324,415	47,499	119,41
Westminster	0	0	0	0	0	0	14,040	34,631	71,833	23,902	5,894	0	91,767	58,533	48,07
Yorba Linda	0	0	0	0	0	0	112,136	12,702	360,279	116,985	15,958	0	499,722	129,687	199,42
MWD OC Totals	183,524	241,224	216,104	303,923	238,978	304,598	2,195,544	3,692,153	5,493,639	7,015,357	427,347	197,331	8,779,126	11,863,007	7,217,62

Anaheim	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Fullerton	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,16
Santa Ana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Non-MWD OC Totals	0	0	0	0	0	9,214	0	0	0	0	0	0	0	9,214	5,16

Orange County Totals	183,524	241,224	216,104	303,923	238,978	313,812	2,195,544	3,692,153	5,493,639	7,015,357	427,347	197,331	8,779,126	11,872,221	7,223
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(1) Installed device numbers are listed as square feet

HIGH EFFICIENCY TOILETS (HETs) INSTALLED BY AGENCY through MWDOC and Local Agency Conservation Programs

Agency	FY05-06	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	Total	Cumulative Water Savings across all Fiscal Years
Brea	0	2	7	43	48	8	0	0	38	146	154	4	450	77.50
Buena Park	0	1	2	124	176	7	0	0	96	153	112	10	681	156.66
East Orange CWD RZ	0	0	10	12	1	0	0	0	13	26	24	0	86	16.77
EI Toro WD	0	392	18	75	38	18	0	133	218	869	264	12	2,037	437.55
Fountain Valley	0	69	21	262	54	17	0	0	41	132	220	8	824	207.94
Garden Grove	0	14	39	443	181	24	0	0	63	350	363	6	1,483	348.18
Golden State WC	2	16	36	444	716	37	80	2	142	794	512	5	2,786	638.90
Huntington Beach	2	13	59	607	159	76	0	0	163	1,190	628	3	2,900	574.76
Irvine Ranch WD	29	1,055	826	5,088	2,114	325	0	1,449	810	1,777	2,798	535	16,806	4,559.74
Laguna Beach CWD	0	2	17	91	28	11	0	0	45	112	81	-1	386	84.65
La Habra	0	3	18	296	34	20	0	0	37	94	83	2	587	165.43
La Palma	0	1	10	36	26	13	0	0	21	59	52	0	218	46.77
Mesa Water	0	247	19	736	131	7	0	0	147	162	162	4	1,615	511.99
Moulton Niguel WD	0	20	104	447	188	46	0	0	400	2,497	1,939	48	5,689	856.54
Newport Beach	0	5	19	163	54	13	0	0	49	168	243	6	720	145.85
Orange	1	20	62	423	79	40	0	1	142	978	416	10	2,172	422.19
San Juan Capistrano	0	10	7	76	39	11	0	0	35	140	202	3	523	94.48
San Clemente	0	7	22	202	66	21	0	0	72	225	246	13	874	181.22
Santa Margarita WD	0	5	14	304	151	44	0	0	528	997	1,152	111	3,306	509.22
Seal Beach	0	678	8	21	12	1	0	2	17	50	69	-1	857	348.77
Serrano WD	2	0	1	13	5	0	0	0	2	40	55	3	121	18.39
South Coast WD	2	2	29	102	41	12	23	64	102	398	235	9	1,019	178.96
Trabuco Canyon WD	0	0	4	23	23	0	0	0	10	108	169	1	338	48.26
Tustin	0	186	28	387	479	17	0	0	64	132	201	13	1,507	460.79
Westminster	0	17	25	541	167	23	0	0	35	161	359	2	1,330	346.69
Yorba Linda WD	0	14	89	323	96	18	0	0	40	280	379	8	1,247	281.36
MWDOC Totals	38	2,779	1,494	11,282	5,106	809	103	1,651	3,330	12,038	11,118	814	50,562	11,719.53
Anaheim	0	255	78	2,771	619	114	0	0	156	1,188	614	56	5,851	1,691.55
Fullerton	0	4	28	286	60	23	0	0	61	293	286	11	1,052	223.22
Santa Ana	0	11	25	925	89	23	0	0	33	602	293	20	2,021	515.52
Non-MWDOC Totals	0	270	131	3,982	768	160	0	0	250	2,083	1,193	87	8,924	2,430.29
Orange County Totals	38	3,049	1,625	15,264	5,874	969	103	1,651	3,580	14,121	12,311	901	59,486	14,149.83

HOME WATER SURVEYS PERFORMED BY AGENCY

through MWDOC and Local Agency Conservation Programs

Agency	FY 13/14		FY 14/15		FY 15/16		Total		Cumulative Water Savings
	Surveys	Cert Homes	Surveys	Cert Homes	Surveys	Cert Homes	Surveys	Cert Homes	
Brea	1	0	2	0	0	0	3	0	0.16
Buena Park	0	0	1	0	0	0	1	0	0.05
East Orange	19	0	1	0	0	0	20	0	1.39
El Toro	0	0	3	0	0	0	3	0	0.14
Fountain Valley	3	0	4	0	1	0	8	0	0.42
Garden Grove	0	0	6	0	1	0	7	0	0.31
Golden State	0	0	0	0	0	0	0	0	0.00
Huntington Beach	2	0	5	0	2	0	9	0	0.42
Irvine Ranch	1	0	3	0	6	0	10	0	0.35
La Habra	0	0	1	0	0	0	1	0	0.05
La Palma	0	0	0	0	0	0	0	0	0.00
Laguna Beach	4	0	8	0	1	0	13	0	0.68
Mesa Water	0	0	0	0	0	0	0	0	0.00
Moulton Niguel	4	0	4	0	0	0	8	0	0.47
Newport Beach	2	0	8	0	6	0	16	0	0.66
Orange	2	0	18	0	1	0	21	0	1.01
San Clemente	15	0	13	0	0	0	28	0	1.67
San Juan Capistrano	4	0	13	0	2	0	19	0	0.94
Santa Margarita	15	0	40	1	14	0	69	1	3.27
Seal Beach	0	0	1	0	2	0	3	0	0.09
Serrano	0	0	2	0	0	0	2	0	0.09
South Coast	6	0	4	0	1	0	11	0	0.64
Trabuco Canyon	0	0	4	0	0	0	4	0	0.19
Tustin	0	0	10	0	5	0	15	0	0.59
Westminster	0	0	0	0	0	0	0	0	0.00
Yorba Linda	0	0	13	0	10	0	23	0	0.85
MWDOC Totals	78	0	164	1	52	0	294	1	14.44

Anaheim	0	0	0	0	0	0	0	0	0.00
Fullerton	0	0	17	0	1	0	18	0	0.82
Santa Ana	0	0	0	0	0	0	0	0	0.00
Non-MWDOC Totals	0	0	17	0	1	0	18	0	0.82
Orange County Totals	78	0	181	1	53	0	312	1	15.266

SYNTHETIC TURF INSTALLED BY AGENCY^[1] through MWDOC and Local Agency Conservation Programs

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

Anaheim	4,535	0	7,735	20,093	13,555	65,300	4,122	0	29,947	85,393	69.18
Fullerton	4,865	876	5,727	0	6,223	0	105	0	16,920	876	12.36
Santa Ana	0	0	2,820	0	525	0	0	0	3,345	0	2.27
Non-MWDOC Totals	9,400	876	16,282	20,093	20,303	65,300	4,227	0	50,212	86,269	83.81

Orange County Totals	142,220	18,909	198,130	109,735	118,109	73,924	24,411	0	482,870	202,568	468.63
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[1] Installed device numbers are calculated in square feet

ULF TOILETS INSTALLED BY AGENCY
through MWDOC and Local Agency Conservation Programs

Agency	Previous Years	FY 95-96	FY 96-97	FY 97-98	FY 98-99	FY 99-00	FY 00-01	FY 01-02	FY 02-03	FY 03-04	FY 04-05	FY 05-06	FY 06-07	FY 07-08	FY 08-09	Total	Cumulative Water Savings across all Fiscal Years
Brea	378	189	299	299	122	144	867	585	341	401	26	48	17	4	0	3,720	1,892.64
Buena Park	361	147	331	802	520	469	524	1,229	2,325	1,522	50	40	18	9	0	8,347	3,498.37
East Orange CWD RZ	2	0	33	63	15	17	15	50	41	44	19	18	13	2	0	332	138.23
El Toro WD	1,169	511	678	889	711	171	310	564	472	324	176	205	61	40	0	6,281	3,091.16
Fountain Valley	638	454	635	858	1,289	2,355	1,697	1,406	1,400	802	176	111	58	32	0	11,911	5,383.10
Garden Grove	1,563	1,871	1,956	2,620	2,801	3,556	2,423	3,855	3,148	2,117	176	106	67	39	0	26,298	12,155.41
Golden State WC	3,535	1,396	3,141	1,113	3,024	2,957	1,379	2,143	3,222	1,870	167	116	501	43	0	24,607	11,731.47
Huntington Beach	3,963	1,779	2,600	2,522	2,319	3,492	3,281	2,698	3,752	1,901	367	308	143	121	0	29,246	13,854.70
Irvine Ranch WD	4,016	841	1,674	1,726	1,089	3,256	1,534	1,902	2,263	6,741	593	626	310	129	0	26,700	11,849.23
Laguna Beach CWD	283	93	118	74	149	306	220	85	271	118	32	26	29	6	0	1,810	845.69
La Habra	594	146	254	775	703	105	582	645	1,697	1,225	12	31	6	7	0	6,782	2,957.73
La Palma	65	180	222	125	44	132	518	173	343	193	31	27	20	17	0	2,090	927.52
Mesa Water	1,610	851	1,052	2,046	2,114	1,956	1,393	1,505	2,387	988	192	124	56	14	0	16,288	7,654.27
Moulton Niguel WD	744	309	761	698	523	475	716	891	728	684	410	381	187	100	0	7,607	3,371.14
Newport Beach	369	293	390	571	912	1,223	438	463	396	1,883	153	76	36	16	0	7,219	3,166.77
Orange	683	1,252	1,155	1,355	533	2,263	1,778	2,444	2,682	1,899	193	218	88	53	4	16,600	7,347.93
San Juan Capistrano	1,234	284	193	168	323	1,319	347	152	201	151	85	125	42	39	0	4,663	2,324.42
San Clemente	225	113	191	65	158	198	667	483	201	547	91	66	37	34	0	3,076	1,314.64
Santa Margarita WD	577	324	553	843	345	456	1,258	790	664	260	179	143	101	29	0	6,522	3,001.01
Seal Beach	74	66	312	609	47	155	132	81	134	729	29	10	6	12	0	2,396	1,073.80
Serrano WD	81	56	68	41	19	52	95	73	123	98	20	15	14	2	0	757	338.66
South Coast WD	110	176	177	114	182	181	133	358	191	469	88	72	32	22	0	2,305	990.05
Trabuco Canyon WD	10	78	42	42	25	21	40	181	102	30	17	20	12	14	0	634	273.02
Tustin	968	668	557	824	429	1,292	1,508	1,206	1,096	827	69	89	26	12	0	9,571	4,423.88
Westminster	747	493	969	1,066	2,336	2,291	2,304	1,523	2,492	1,118	145	105	70	24	0	15,683	7,064.28
Yorba Linda WD	257	309	417	457	404	1,400	759	1,690	1,155	627	158	136	81	41	0	7,891	3,409.49
MWDOC Totals	24,256	12,879	18,778	20,765	21,136	30,242	24,918	27,175	31,827	27,568	3,654	3,242	2,031	861	4	249,336	113,878.61

Anaheim	447	1,054	1,788	3,661	1,755	7,551	4,593	6,346	9,707	5,075	473	371	462	341	1	43,625	18,359.52
Fullerton	1,453	1,143	694	1,193	1,364	2,138	1,926	2,130	2,213	1,749	172	77	44	23	2	16,321	7,435.23
Santa Ana	1,111	1,964	1,205	2,729	2,088	8,788	5,614	10,822	10,716	9,164	279	134	25	5	0	54,644	22,887.95
Non-MWDOC Totals	3,011	4,161	3,687	7,583	5,207	18,477	12,133	19,298	22,636	15,983	924	582	531	369	3	114,590	48,682.70

Orange County Totals	27,267	17,040	22,465	28,348	26,343	48,719	37,051	46,473	54,463	43,556	4,578	3,824	2,562	1,230	7	363,926	162,561.30
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