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Acknowledgements

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ANNEX J

Construction and Engineering Operations



Unified San Diego
County Emergency
Services Organization
And
County Of San Diego

Operational Area
Emergency Operations Plan

September 2014

GENERAL

Introduction

This annex is created and intended to be an integral part of the San Diego County Operational Area Emergency Operations Plan (OA EOP). In addition, it identifies the implementation procedures for mutual aid and other support.

Construction and Engineering Operations is structured to provide public works and engineering-related support for the changing requirements of domestic incident management to include preparedness, prevention, response, recovery, and mitigation actions. Activities within the scope of this function include conducting pre and post-incident assessment of public works and infrastructure; executing emergency contract support for life-saving and life-sustaining services; providing technical assistance to include engineering expertise, construction management, and contracting and real estate services; and providing emergency repair of damaged infrastructure and critical facilities.

The construction and engineering operations section of Annex J describes the basic concepts in coordinating and organizing the capabilities and resources of local government to facilitate the delivery of services, technical assistance, engineering expertise, construction management, and other support to prevent, prepare for, respond to, and/or recover from an incident of extreme significance. While local agencies have individual construction and engineering responsibilities, Annex J serves as a unifying document in the event of a major disaster.

Intent

No single community or agency has the ability or resources sufficient to cope with any and all emergencies for which a potential exists. This annex is designed to meet the anticipated needs of local agencies and to access the resources of other agencies to meet the needs of emergency incidents. Agencies that are members of the Unified Emergency Services Organization have agreed to assist each other with resources, if they are available, provided their own recovery operations are not compromised. In addition, some special districts have signed Mutual Aid agreements with other districts throughout Southern California. The State of California Fire and Rescue Emergency Mutual Aid Plan has been signed by most, if not all, Cities within the State.

EXECUTIVE SUMMARY

This annex defines the role of public works departments at the County and City levels. Tasks include providing supervision for the repair, modification, and/or construction of emergency facilities and housing, inspecting damaged structures, and restoring, maintaining and operating essential services.

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Purpose

This annex establishes the organizational responsibilities and prescribes actions and procedures required for the provision of restorative services and Mutual Aid during a disaster or extreme emergency within the San Diego County Operational Area (OA).

- Coordination and support of infrastructure risk and vulnerability assessments.
- Provide the basis for the coordination of operations for Public Works Agencies and other special districts within the OA.
- Provide assistance in the monitoring and stabilization of damaged structures and the demolition of structures designated as immediate hazards to public health and safety.
- Coordinate and provide structural specialists expertise to support inspection of mass care facilities and urban search and rescue operations.
- Execution of emergency contracting support for life-saving and life-sustaining services, to include providing potable water, ice, emergency power, and other emergency commodities and services. This may be in conjunction with other annex activations.
- Managing, monitoring, and/or providing technical advice in the clearance, removal, and disposal of contaminated and uncontaminated debris from public property. This may include waste sampling, classification, packaging, transportation, treatment, demolition, and disposal of contaminated debris and soil. This shall be general debris/rubble and only performed to support clearing roads or public property.
- Providing emergency repair of damaged infrastructure and critical public facilities. This may include but is not limited to:
 - Transportation systems - roads, bridges, airports, railway and shipping systems.
 - Environmental systems - waterways, habitats, coastal erosion and landslides.
 - Domestic utilities - water, electrical, natural gas, and sewer systems.
 - Structural systems – foundation, building components and contents.
- Restoration of critical navigation, flood control, and other water infrastructure systems.



Scope

This annex is structured to provide public works and engineering-related support for the changing requirements of domestic incident management to include preparedness, response, recovery, and mitigation actions. Activities within the scope of this function

include conducting pre-incident and post-incident assessments of public works and infrastructure; executing emergency contract support for life-saving and life-sustaining services; providing technical assistance to include engineering expertise, construction management, and contracting and real estate services; and providing emergency repair of damaged public infrastructure and critical facilities.

Planning Basis

- No community has resources sufficient to cope with any and all emergencies for which potential exists.
- Construction and Engineering coordinators must preplan emergency operations to ensure efficient utilization of available resources.
- Basic to California's emergency planning is a statewide system of mutual aid in which each local jurisdiction relies first upon its own resources.
- Agencies that are members of the Unified Emergency Services Organization have agreed to assist each other with resources if they are available.
- The California Disaster and Civil Defense Master Mutual Aid Agreement (MMAA) between the State of California, each of its counties and those incorporated cities and special districts signatory thereto:
 - Creates a formal structure for provision of mutual aid.
 - Provides that no party shall be required to unreasonably deplete its own resources in furnishing mutual aid.
 - Provides that the responsible local official in whose jurisdiction(s) an incident occurs requiring mutual aid shall remain in charge at such incident including the direction of personnel and equipment provided through mutual aid plans pursuant to the agreement.
- Per the Standardized Emergency Management System (SEMS), Mutual Aid requests from jurisdictions and special districts within the OA must be sent to the Operational Area Emergency Operations Center (OA EOC). The Logistics Section at the OA EOC will coordinate requests for mutual aid and will keep track of who needs what and where assets have been sent. The Logistics Section coordinates and forwards the requests to other jurisdictions, or the State Office of Emergency Services (Cal OES).
- When the Mutual Aid assets are ordered, the requester will provide a staging area where the resources will be sent, and a point of contact. It is the responsibility of the requesting jurisdiction to provide any additional logistical support, i.e., food, water, fuel and sleeping accommodations, for the additional resources.
- The state is divided into six mutual aid regions to facilitate the coordination of mutual aid. San Diego County is located in Mutual Aid Region VI. Through this



system, Cal OES is informed of conditions in each geographic and organizational area of the state and is informed of the occurrence of an imminent threat of disaster.

- In addition to Public Works resources, this annex includes both public and private agencies with support capability and/or emergency responsibility.
- Certain types of resources may be considered outside the mutual aid agreement by the responding agency and therefore may be subject to a pre-established agreement, which may be available only on a reimbursement basis.
- This annex, as part of the OA EOP, should be distributed to and discussed with management, command, operational, and support level personnel within each jurisdiction.
- This annex must be continuously reviewed, revised when necessary, and tested to encompass change and refinement consistent with experience gained through disaster operations and training, and changes in resource availability.

Whole Community Approach

The whole community concept is a process by which residents, emergency management representatives, organizational and community leaders, and government officials can understand and assess the needs of their respective communities and determine the best ways



to organize and strengthen their resources, capacities, and interests. Engaging in whole community emergency management planning builds a more effective path to societal security and resilience. This annex supports the following whole community principles:

- Understand and meet the needs of the entire community, including people with disabilities and those with other access and functional needs.
- Engage and empower all parts of the community to assist in all phases of the disaster cycle.
- Strengthen what works well in communities on a daily basis.

In keeping with the whole community approach, this annex was developed with the guidance of representatives from the OA Cities and representatives from County departments, law enforcement, fire services, emergency management, the access and functional needs communities, and various other stakeholders. The effectiveness of the emergency response is largely predicated on the preparedness and resiliency of the community.

Community Resiliency Consists of Three Key Factors:

1. The ability of first responder agencies (e.g. fire, law and Emergency Medical Services (EMS) to divert from their day-to-day operations to the emergency effectively and efficiently.
2. The strength of the emergency management system and organizations within the region, to include EOCs, mass notification systems and communication systems.
3. The civil preparedness of the region’s citizens, businesses and community organizations.

Focusing on enhancing all three of these components constantly focuses the OA on improving the region’s resiliency.

CONCEPT OF OPERATIONS

Policies and Procedural Guidelines

The following general procedures have been developed to provide guidance in the implementation of this annex:

Emergency Work Station

- All Public Works Agency personnel should have a designated emergency workstation. This will generally be the station they normally report to during regular work hours unless a different emergency workstation has been previously assigned.

Alternate Emergency Work Station

- In the event that Public Works’ normal or emergency work stations are inoperable as a result of the disaster, or staff cannot get to their normal or emergency work stations, the following is a guide used by County Department of Public Works (DPW) for reporting to alternative stations:

Regular or Emergency Work Station	Alternate Work Station
Co. Operations Center-San Diego	Div. I Headquarters-Jamacha
Div. I Headquarters-Jamacha	Co. Operations Center, San Diego
Div. II HQ San Marcos	Ramona Road Maintenance Station
Maintenance Stations Countywide	Appropriate Division HQ
Wastewater Division-Kearny Mesa	Wastewater Operations/Spring Valley
Gillespie Field El Cajon	Ramona Airport
Palomar Airport Carlsbad	Ramona Airport
Ramona Airport	Gillespie Field, El Cajon

Reporting Procedures during Plan Activation

- Unless assigned to an emergency station, personnel will report to their regular workstation. When assigned to an emergency workstation prior to the emergency, or if telephone communications are disrupted, personnel will report in person to their workstation.

Operational Area

- The OA covered under this annex is the entire county and all cities. County DPW responsibilities are within the unincorporated areas of San Diego County. When requested by proper authority, mutual aid services within incorporated cities and adjacent counties can be provided.

Departmental Operations Centers (DOC's)

- All Public Works Agencies should designate alternate locations for their Departmental Operations Centers (DOCs) in the event that the primary location is inoperable. For example, the County DPW is headquartered at the County Operations Center in Kearny Mesa. In the event this facility was damaged to the extent that it could not serve as a DOC, the DOC would be located at Division I Headquarters in Spring Valley, as first choice, and then to Division II Headquarters in San Marcos, as second choice.

ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES

Organization

Most Cities within the OA have Public Works Departments. In the event of a major emergency or disaster, the Director(s) of Public Works in the affected jurisdiction(s) will coordinate the implementation of this annex. In unincorporated areas of the county, this responsibility falls upon the County Public Works Director. In many instances because of size and complexity of the incident, some agencies/jurisdictions may not have the personnel to fill all the positions at the EOC as shown at the OA level. This may require the assistance of all affected and non-affected agencies and special districts for additional resources.

Assignment of Responsibilities/Responsibilities of Local Agency

Activities include but are not limited to the following:

- Reasonably exhaust local resources before calling for outside assistance.
- Render the maximum practicable assistance to all emergency stricken communities, under provisions of the San Diego County Mutual Aid Plan.
- Provide for receiving and disseminating



information, data and directives.

- Maintain a call-back list of primary response personnel.
- Coordinate and conduct necessary training to adequately perform functions and responsibilities during emergencies.
- Provide department personnel to staff the OA EOC.
- Provide department personnel to support public information officers with accurate messaging.
- Coordinate all interdepartmental contacts with other Deputy Directors.
- Coordinate with OA EOC Construction and Engineering Branch.
- Develop and maintain current records of road and flood conditions throughout their jurisdiction.
- Provide engineering and public service work. Tasks (where applicable) include:
 - Restore, maintain and operate essential services within their jurisdiction:
 - Roads and bridges and/or traffic control devices
 - Storm drainage facilities
 - Wastewater disposal plants, trunk sewers and laterals
 - Airport facilities
 - Rural transportation facilities
 - Repair, modify and/or construct emergency facilities and housing:
 - Bridges
 - Alternate road access
 - Alternate airport landing strips
 - Temporary solid waste collection areas
 - Temporary wastewater transmission lines
 - Temporary housing
- Provide engineering expertise and equipment to assist in search and rescue operations. Additional personnel for engineering assistance will be drawn from other public and private sectors.
- Maintain an inventory of heavy equipment and equipment operators. Additional equipment and personnel may be drawn from other public and private sectors.
- Manage and coordinate contracted transportation vehicles and facilities.
- Maintain an inventory of resources and provide for procurement and allocation of transportation resources.



Responsibilities of County Public Works Administrator

The County Deputy Director of Public Works/Transportation Division has the primary responsibility to respond for the department in the event of an emergency. During disaster conditions, the Deputy Director shall:

- Reasonably exhaust county resources before calling for outside assistance.
- Render the maximum practicable assistance to all emergency stricken communities, under provisions of the San Diego County Mutual Aid Plan.
- Provide for receiving and disseminating information, data and directives.
- Maintain a callback list of primary response personnel.
- Coordinate and conduct necessary training to adequately perform functions and responsibilities during emergencies.
- Provide department personnel to staff the OA EOC.
- Provide department personnel to staff the County Joint Information Center (JIC).
- Coordinate all interdepartmental contacts with other Deputy Directors.
- Coordinate with City EOCs.
- Develop and maintain current records of road and flood conditions throughout their jurisdiction.
- Provide engineering and public service work.

Tasks (where applicable) include:

- Restore, maintain and operate essential services within their jurisdiction:
 - Roads and bridges and/or traffic control devices
 - Storm drainage facilities
 - Wastewater disposal plants, trunk sewers and laterals
 - Airport facilities
 - Rural transportation facilities
- Repair, modify and/or construct emergency facilities and housing:
 - Bridges
 - Alternate road access
 - Alternate airport landing strips
 - Temporary solid waste collection areas
 - Temporary wastewater transmission lines
 - Temporary housing



- Provide engineering expertise and equipment to assist in search and rescue operations. Additional personnel for engineering assistance will be drawn from other public and private sectors.
- Maintain an inventory of heavy equipment and equipment operators. Additional equipment and personnel may be drawn from other public and private sectors.
- Manage and coordinate contracted transportation vehicles and facilities.
- Maintain an inventory of resources and provide for procurement and allocation of transportation resources.
- Utilize established emergency construction contracts and basic order agreements for services and supplies to assist in emergency response and recovery efforts.

California Department of Transportation (Caltrans)

Dispatch field crews accordingly to assist the California Highway Patrol (CHP), other emergency responders, and the public with State highway closures, signage, and/or clearance activities in an effort to maintain and/or restore the State highway transportation network to safe and normal operating conditions.



The Caltrans EOC will be activated and staffed accordingly to provide centralized coordination, communication, command, and control of emergency operations and the management of resources. This would include monitoring and providing status of state highways within the region, communicating damage reports, and initiating emergency contracts where appropriate for repairs on the State highway system.

San Diego Gas and Electric (SDG&E)

Provide initial and updated SDG&E damage assessments to include: number of gas and electric outages, areas impacted and number of customers affected, overall estimated restoration time as well as estimated restoration times for each outage, workforce status including use of mutual assistance crews and any critical operational issues or conditions.



Initiate and coordinate SDG&E requests for assistance from the region via the OA EOC.

San Diego County Water Authority

In an emergency in which the county's water supply or quality is affected, the Water Authority and its member agencies, Department of Environmental Health (DEH), California Department of Public Health (CDPH), County Public Health Officer (PHO), and OES will act in concert to:



- Conduct damage assessments and provide situation status
- Restore water systems and supply
- Ensure the quality of the water
- Determine need for supplemental drinking water
- Provide public notifications on the safety of the water

For additional information on Water Operations, see **Appendix W**.

Support Functions

Department of General Services

- Provide vehicles as needed.
- Provide vehicle maintenance, repair and fueling services.
- Provide architects, engineers, electricians and plumbers.
- Provide communications support in the form of personnel and/or equipment.

Parks and Recreation Departments

- Provide miscellaneous construction equipment and operators.
- Provide staff for damage assessment activities, as well as for recovery efforts.

Planning and Development Services

- Provide structural engineers and building inspectors for damage assessment activities, as well as for recovery efforts.
- Provide geologists for technical support.

Construction Industry

- Provide structural engineers and building inspectors for damage assessment activities, as well as for recovery efforts.

Transportation Industry

- Provide ground and rail transportation, including operators, for emergency transportation and evacuation, including transportation for people with disabilities and others with access and functional needs.

- Provide additional vehicular support.

Fire and Life Safety Department

- Respond to requests for rescue and treatment following Annex B and the California State Mutual Aid Plan.
- Provide emergency structural stabilization and hazard abatement for damage assessment activities, as well as for recovery efforts.

DIRECTION, CONTROL, OR COORDINATION

Activation and Termination

Activation and termination of this annex shall be by the direction of:

- The County Chief Administrative Officer (CAO) as the Coordinator of Emergency Services for disasters/emergencies in the OA and the Director of Emergency Services for disasters/emergencies in the unincorporated area..
- A designated Deputy CAO.
- The Director of OES or a designated representative.
- The Director of DPW.

Activation normally occurs based on: notification by OES that the scope of an emergency will exceed local resources; a disaster which by its nature or severity automatically initiates activation of the plan; and/or a public media announcement that a disaster has occurred and that all personnel are to report to their disaster assignments.

Deactivation is normally accomplished by a phase-down procedure and a return to normal, pre-disaster operations. Operations then revert to activities for reconstituting local government activities, as needed and as directed by the Unified Disaster Council (UDC) in accordance with standing policies and unified agreements.

INFORMATION COLLECTION AND DISSEMINATION

Types of Information to Be Relayed

Certain information should be relayed immediately to respective division and administration offices, to Station M, to the Public Information Office (619-595-4633), and to the OA EOC if activated (858-565-3490). Pertinent information to be relayed includes:

- Road closures and re-openings
- Inoperative wastewater pumping stations
- Inoperative water pollution control facilities



- Closed airports or runways, and re-openings
- Flooded dip crossings
- Isolated communities
- Closed, isolated or blacked out County facilities
- Major slides, washouts or culvert failures
- Major snow operations

IF IN DOUBT, REPORT IT!

COMMUNICATIONS

Effective Communications

Quick and effective communication is vital to the Department's emergency response and recovery operations. The communications system provides the basis for effectively coordinating these efforts, and to provide timely damage assessment information.

Communications Maintenance Responsibility

The Wireless Services Unit of the Sheriff's Department has responsibility for operation and maintenance of all Public Works communications equipment. They should be contacted for information or problems regarding the system.

Elements of Public Works Communications System

The primary elements of DPW's communications system are the telephone system and radio network. Additionally, numerous DPW staff have cellular phones which provide other methods of contact. Support for the communications systems in the event of breakdown consists of messenger traffic, and the Radio Amateur Civil Emergency Services (RACES) network. They may be used to supplement or back up the phone and radio systems. Phone number: 858-565-3490, RACES: <http://www.races.sandiego.ca.gov>.

Individual Responsibility for Communicating Emergency Status

It is the responsibility of all emergency response personnel to establish communications with their respective divisions, the Public Information Officer (PIO), and the OA EOC (if activated) as quickly as possible to keep them informed. If the phone system is inoperative, use your radio. If the phone and radio systems are inactive, utilize messengers to relay information.

ADMINISTRATION, FINANCE, AND LOGISTICS

Under SEMS, special districts are considered local governments. As such, they are included in the emergency planning efforts throughout the OA. The OA Emergency Organization, in accordance with SEMS, supports and is supported by:

- Cities within the OA
- The County of San Diego
- Special districts
- Other Counties
- The State of California
- The Federal Government

NIMS provides a consistent nationwide template to enable Federal, State, local, and tribal governments and private-sector and nongovernmental organizations to work together effectively. NIMS also enables these entities to efficiently prepare for, prevent, respond to, and recover from domestic incidents, regardless of cause, size, or complexity, including acts of catastrophic terrorism.

Mutual aid, including personnel, supplies, and equipment, is provided in accordance with the California Master Mutual Aid Agreement, and other OA Mutual Aid Agreements.

The private sector is an important part of the emergency organization. Business and industry own or have access to substantial response and support resources. Community Based Organizations (CBOs) or Non-Governmental Organizations (NGOs) provide valuable resources before, during, and after a disaster. These resources can be effective assets at any level. OES has established the ReadySanDiego Business Alliance. The Alliance will have a virtual connection to the OA EOC via a social networking system fed through an RSS feed from WebEOC.

There are some City and County personnel who do not have specific task assignments. They are automatically designated by State Law as Disaster Service Workers (DSWs) during a disaster, and serve in the response effort.

- "All public employees and all registered volunteers of a jurisdiction having an accredited disaster council are Disaster Service Workers," per Government Code Title I, Division 4, Chapter 8, and Labor Code, Part I, Division 4, Chapters 1 and 10.
- The term public employees includes all persons employed by the State, or any County, City or public district.
- Other personnel including volunteers can be quickly registered by OES as DSWs, which provides Workers Compensation and liability coverage.

OES maintains a list of pre-registered volunteers affiliated with volunteer organizations that have been signed up as DSWs.

It is imperative that local government maintain duplicate records of all information necessary for restoration of normal operations. This process of record retention involves offsite storage of vital computerized and paper-based data that can be readily accessible.

Vital records of the Unified Organization are routinely stored in records storage rooms at OES in printed hard copy form, on CD-ROM, and electronically. Computer records are routinely backed up and stored separately from the hard drives. All personnel records are stored by the County Department of Human Resources at several locations throughout the OA.

ANNEX DEVELOPMENT AND MAINTENANCE

This annex is a product of the OA Emergency Operations Plan (EOP). As such, the policies, procedures, and practices outlined in the OA EOP govern this annex. OES coordinates the maintenance and updates of this annex every three to four years, in accordance with the maintenance schedule established for the OA EOP. Record of changes, approval, and dissemination of the OA EOP will also apply to this annex.

Updates to this annex can be made before such time for multiple reasons, including but not limited to changes in policy/procedure, improvements and recommendations based on real life events or exercises, etc. Recommended changes should be submitted to OES at oes@sdcounty.ca.gov

AUTHORITIES AND REFERENCES

- A. Unified San Diego County Emergency Services Organization, Fifth Amended Emergency Services Agreement, 2005.
- B. County of San Diego Emergency Services Ordinance No. 8183, dated December 15, 1992.
- C. County of San Diego Resolution adopting the California Master Mutual Agreement, dated December 11, 1950.
- D. California Emergency Services Act, Chapter 7 of Division 1 of Title 2 of the Government Code.
- E. California Emergency Plan (June, 2009) and sub-plans.
- F. Governor's Orders and Regulations for a War Emergency, 1971.
- G. Article 9, Emergency Services, Section 8605 of the Government Code, Operational Areas.
- H. Petris (SEMS) SB 1841 Chapter 1069 - Amendments to the Government Code, Article 7, California Emergency Services Act.
- I. California Master Mutual Aid Agreement.

- J. California Fire and Rescue Emergency Plan.
- K. Incident Command System, Field Operations Guide, ICS 420-1.
- L. San Diego County Mutual Aid Agreement for Fire Departments.
- M. San Diego County Animal Control Mutual Aid Agreement.
- N. California Law Enforcement Mutual Aid Plan.
- O. California Coroners Mutual Aid Plan.
- P. Public Works Mutual Aid Plan.
- Q. San Diego County Multi-Jurisdictional Hazard Mitigation Plan, August 2010.
- R. San Diego Urban Area Tactical Interoperable Communications Plan, February 2006.
- S. San Diego County Terrorist Incident Emergency Response Protocol, Draft, October 2010.
- T. Unified San Diego County Emergency Services Organization Recovery Plan, January 2014.
- U. Unified San Diego County Emergency Services Organization Resolution adopting the National Incident Management System dated September 15, 2005.

All Authorities and References listed are on file at the Office of Emergency Services. Also on file are other agreements with voluntary organizations and other governmental and private organizations.

WATER OPERATIONS

Introduction

The Water Sector in San Diego County consists of public departments, public agencies, private companies, tribal governments, and other individual suppliers of water to the San Diego region's population. Water is imported into the county by the San Diego County Water Authority (Water Authority) providing approximately 90-percent of the county's water through wholesale transportation and distribution to its 24 member agencies. The 24 member agencies deliver water to approximately 97-percent of the county's population and are made up of six cities, one military installation, one authority representing a city and an irrigation district, two irrigation districts, and 14 water districts. Approximately 165 small water systems serve 3-percent of the population, principally located in the unincorporated areas of San Diego County. The owners and operators of small and large water systems have a responsibility to consumers to provide a safe and reliable supply of water.

Authorities

The principal federal law that ensures safe drinking water for the public is the Safe Drinking Water Act (SDWA). The Environmental Protection Agency (EPA) sets the standards for drinking water quality and oversees all states to ensure that the standards are met. EPA delegated implementation of the SDWA to California. The California SDWA is contained in the Health and Safety Code, which also contains the statutory responsibilities and requirements defined for the California Department of Public Health, Drinking Water Program. The Drinking Water Program and any regulations developed must be equal to or more stringent than the federal program. The regulations are contained in Title 22 California Code of Regulations. The Drinking Water Program's District Engineer is the regional representative of the primacy agency for all water suppliers in the county. Through the Local Primacy Agreement issued to the County of San Diego, the Department of Environmental Health regulates small water systems with 199 or less service connections (California Safe Drinking Water Act, Article 1, Section 116330).

Objectives

The primary objective of the Water Sector in an emergency is to maintain or restore water systems function in order to deliver a safe and reliable water supply. Functional objectives of the Water Sector are:

- Provide situational awareness to the OA EOC.
- Coordinate drinking water safety and environmental health issues with the appropriate regulatory agencies.
- Facilitate the use of mutual aid agreements in restoring water systems.

Organizations and Responsibilities

In an emergency, the roles and responsibilities are as follows. A diagram of the Water Sector is shown in **Attachment A**.

A. California Department of Public Health, Drinking Water Program, San Diego District Office (CDPH)

CDPH is the primacy agency for all California water systems. CDPH staff act as disaster service workers in response to natural disasters and emergencies. The primary role for CDPH staff from the onset of an incident is to conduct water system damage assessments and determine the necessity of issuing water quality advisories. Water system assessments are performed by contacting water system personnel by phone, e-mail, or other available forms of communication and by obtaining water system status reported through the Water Authority. In addition, field survey teams can be dispatched to affected public water systems and integrate into the local emergency operations center established for the incident. In these instances, CDPH staff report as a CDPH representative and technical specialist. CDPH staff coordinates with the San Diego District Engineer, Regional Engineer, San Diego County Department of Environmental Health and water systems on water supply and water quality issues. CDPH staff work with public water systems during restoration operations to determine appropriate actions to be taken for the lifting of water quality advisories. Only CDPH, or its delegate for small water systems (DEH), can lift a water quality advisory.

B. San Diego County Department of Environmental Health (DEH)

CDPH has delegated authority to DEH as the primacy agency for small public water systems. Small water systems are defined as those having more than 4 and fewer than 200 connections. Small water systems supply water to approximately 3-percent of the population and typically use groundwater wells as a source of water. A map of the small public water systems is shown in Attachment B. DEH staff act as disaster service workers in response to natural disasters. The Land and Water Quality Division is responsible for monitoring the small water systems, responding to small water systems, and providing assistance in an emergency. The Land and Water Quality Division conducts water system damage assessments through field survey teams and coordinates assistance for its regulated water systems through the department's Operational Center and County Emergency Operations Center. See Annex H Environmental Health Operations for more information.

C. San Diego County Water Authority

The Water Authority, a wholesale water agency, purchases both treated and untreated water from Metropolitan Water District of Southern California and delivers the water to 24 member agencies through a system of pipelines and facilities. Each member agency then delivers water directly to consumers through its own retail distribution system. A map of the 24 member agencies is shown in Attachment D. More information about the Water Authority and its member

agencies is available at www.sdcwa.org and on the individual member agency websites.

In an emergency, the primary responsibility of the Water Authority and the member agencies is water system restoration in order to deliver a safe and reliable water supply. The Water Authority sends a representative to the OA EOC to assume the Water Unit Liaison position under the Construction and Engineering Branch. The Water Unit Liaison provides situational awareness and coordination for the Water Sector and the OA EOC.

D. San Diego County Health and Human Services Agency (HHS), Public Health Services (PHS)

Specific roles and responsibilities of Public Health Services include:

- Public Health Officer: In accordance with state water quality regulations will assist in enforcing water restrictions; may impose a higher level of restriction than regulations require if deemed to be protective of the public health
- Public Health Laboratory: Bacteriological testing of drinking water for potability, environmental testing, especially food, water and sewage.

See Annex E Public Health Operations for more information.

Concept of Operations

In an emergency in which the county's water supply or quality is affected, the Water Authority and its member agencies, DEH, CDPH, County Public Health Officer, and OES will act in concert to:

- Conduct damage assessments and provide situation status
- Restore water systems and supply
- Ensure the quality of the water
- Determine need for supplemental drinking water
- Provide public notifications on the safety of the water

Water Supply

Up to 90-percent of the region's water is imported from the Colorado River and Northern California by a single supplier, the Metropolitan Water District of Southern California (Metropolitan). The water is delivered by the Water Authority through two aqueducts containing five large-diameter pipelines. The pipelines have a maximum capacity to carry 925 million gallons a day and bring both treated and untreated water into San Diego County. The remaining 10-percent comes from local water sources including groundwater, local surface water, recycled water, seawater desalination and conservation. Overall, there is capacity to store up to 700,000 acre feet of surface water spread between 25 reservoirs owned by 12 agencies.

As of June 2014, 165 small water systems serve a population of approximately 25,500 in rural north and east areas of the county. These water systems service residences, schools, workplaces, businesses, restaurants, recreational vehicle parks, and county parks.

Available supply in an emergency is dependent upon many factors. Most small water systems have a single source of supply and minimal water storage capacity that may last one to two days. Water Authority member agencies have the ability to remain off the aqueduct for a ten-day period through storage, conservation, and other means. The Water Authority's Emergency Storage Project (ESP) is system of reservoirs, interconnected pipelines, and pumping stations. ESP is planned to supply enough water for two-months, if there is no water from Metropolitan, and up to six months, if there is some water available from Metropolitan. Metropolitan plans for a six-month emergency water storage supply. As water systems are being restored, strategies for supplying water to the population may include establishing temporary connections, rerouting water, conservation, and distribution of bottled water.

1. Treated and Untreated Water

The Water Authority purchases treated and untreated water from Metropolitan for delivery to its member agencies. The untreated water is either processed by the Water Authority at its Twin Oaks Valley Water Treatment Plant or sold to agencies with their own reservoirs and treatment facilities. All treated water served in San Diego County meets or exceeds rigorous state and federal water quality regulations. Water Authority member agencies that own and operate water treatment plants within the county are:

- City of Escondido – joint ownership with Vista Irrigation District
- Helix Water District
- City of Oceanside
- Olivenhain Municipal Water District
- Pendleton Military Reservation
- City of Poway
- Ramona Municipal Water District
- City of San Diego
- Santa Fe Irrigation District – joint ownership with San Dieguito Water District
- Sweetwater Authority (operating for South Bay Irrigation District and National City)
- Yuima Municipal Water District

2. Public Notifications

Public water systems, CDPH Drinking Water Division, DEH, and the County's Public Health Officer can independently or jointly issue water quality advisories. However, it is the public water system's and the small water system's responsibility to make public notifications to their consumers in accordance with their emergency response and/or emergency notification plan. Notices are delivered door to door, signposted, announced by the media, and through public notification systems such as AlertSanDiego and Accessible Alert San Diego (See Annex L, Emergency Public Information).

Following public notification of a water quality advisory, a series of laboratory tests and evaluation will be conducted. Lifting the water quality advisory is the sole responsibility of the CDPH, Drinking Water Division or its delegate for small public water systems (DEH). Once the water quality advisory is lifted, then the public water system makes the public notification in a similar manner to the original public notification.

3. Drinking Water Distribution

In the event of an insufficient water supply due to a water quality advisory or outage, a drinking water distribution plan coordinated by the OA EOC will be implemented. Water agencies will provide information about the affected service area to the OA EOC. Close coordination between the San Diego County Public Health Officer, the CDPH, Drinking Water Program, District Engineer, DEH, and the OA EOC are crucial to the safety and health of the public when distributing drinking water. Guidance for distribution of emergency drinking water is located in the CAL OES publication Multi-Agency Response Guidance for Emergency Drinking Water Procurement & Distribution.

Water Sector Mutual Aid Agreements

In non-emergency times, water suppliers operate as independent entities. During emergencies, each entity continues to operate independently until it determines that outside resources are necessary. Depending upon the extent of the incident, the entity may request mutual aid through established mutual aid agreements or through the OA EOC. Requests and coordination of resources will first be made at the local level, and when necessary, requests will be forwarded to the Regional Emergency Operations Center (REOC) located in Los Alamitos and then to the State Operations Center's (SOC) Business and Utility Operations Center (BUOC).

The Water Sector maintains several mutual aid/assistance agreements that can be activated in an emergency when water related resources are exhausted or nearing exhaustion. These agreements are generally used to obtain materials, equipment, and personnel required for system restoration.

1. California Water/Wastewater Agency Response Network (CalWARN)

Signatories to the CalWARN agreement (members) can request resources from other CalWARN members. CalWARN is a standard omnibus mutual assistance

agreement consistent with other statewide mutual aid programs, the Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS).

This statewide mutual aid agreement provides a contractual relationship under which public and private water agencies can share resources such as equipment, materials, and staff during emergencies at the discretion of each participating agency. The agreement also provides liability and workers compensation protection and includes repayment provisions for agencies that choose to loan resources. Access www.calwarn.org to see which agencies participate in CalWARN and to request resources. The Water Authority and other participating water agencies in San Diego County are listed on the Southern OES Region VI section of the map of California. The core of the CalWARN website is its emergency equipment database that matches utility resources to a member's needs during an emergency. A member can locate emergency equipment such as pumps, generators, chlorinators, excavators, and trained personnel such as treatment plant operators.

Requests for emergency assistance under the agreement are directed to the appropriate designated official(s) from the list of participating water and wastewater agencies. There is no requirement for issuance of a state of emergency by the Governor before making requests for assistance.

2. The Metropolitan Water District of Southern California Member Agencies Response System (MARS)

The Water Authority entered into the Metropolitan Water District of Southern California Member Agency Response System Indemnification Agreement with certain other Metropolitan Water District of Southern California agencies. This agreement has a mutual aid component in addition to an alternate means of communication in emergencies component. Make requests directly to MWD and the participating agencies when it is determined that needs may not or cannot be met within San Diego County. Requests may be made over the Member Agency Response System (MARS), or by phone, fax, and email. It is important to determine, when the request is made, whether reimbursement is expected from the borrowing agency.

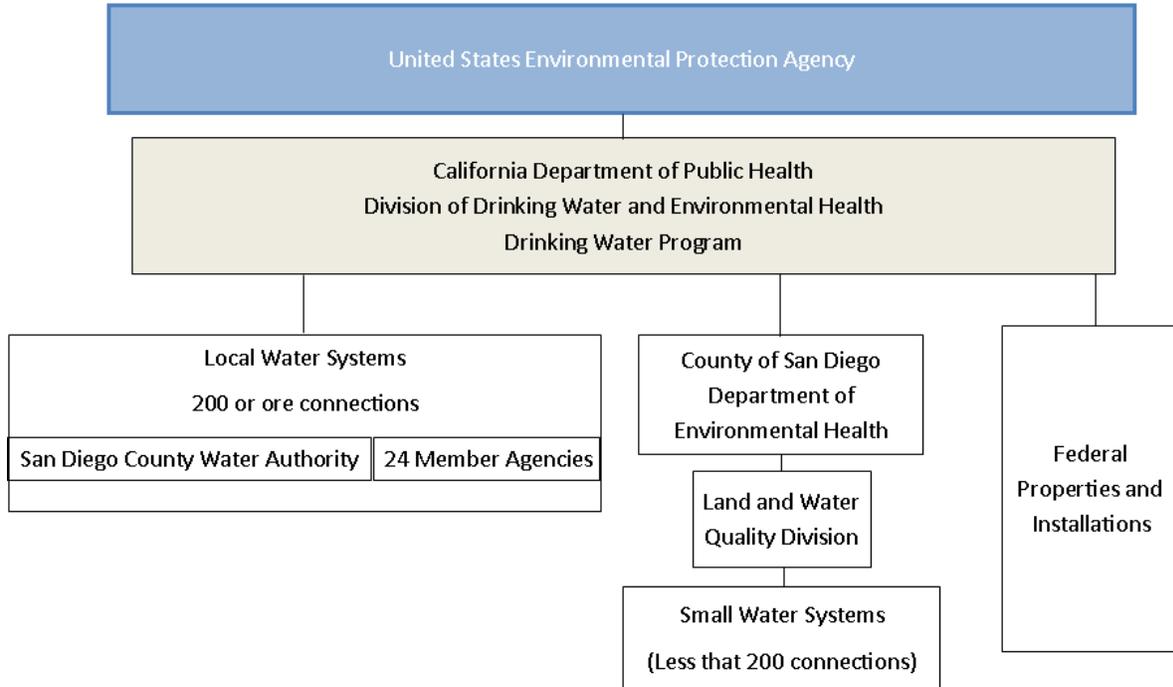
3. Mutual Aid Agreement Providing for Emergency Assistance among the Member Agencies

In 1992 the Water Authority established a mutual aid agreement among its member agencies. The Mutual Aid Agreement Providing for Emergency Assistance Among the Member Agencies of the San Diego County Water Authority provides for the interchange of materials, facilities, services, equipment, and personnel to cope with problems that may arise in the event of an emergency. This agreement was renewed in 2002. The agreement outlines when and how each member agency will voluntarily aid and assist each other. Assistance may be given when the member agency's resources are exhausted or about to be exhausted. The Water Authority, in cooperation with the member

agencies, maintains an inventory list of resources in WebEOC. Attachment D Mutual Aid Matrix shows the participation of Water Sector entities in the water-related mutual aid agreements.

ATTACHMENT A

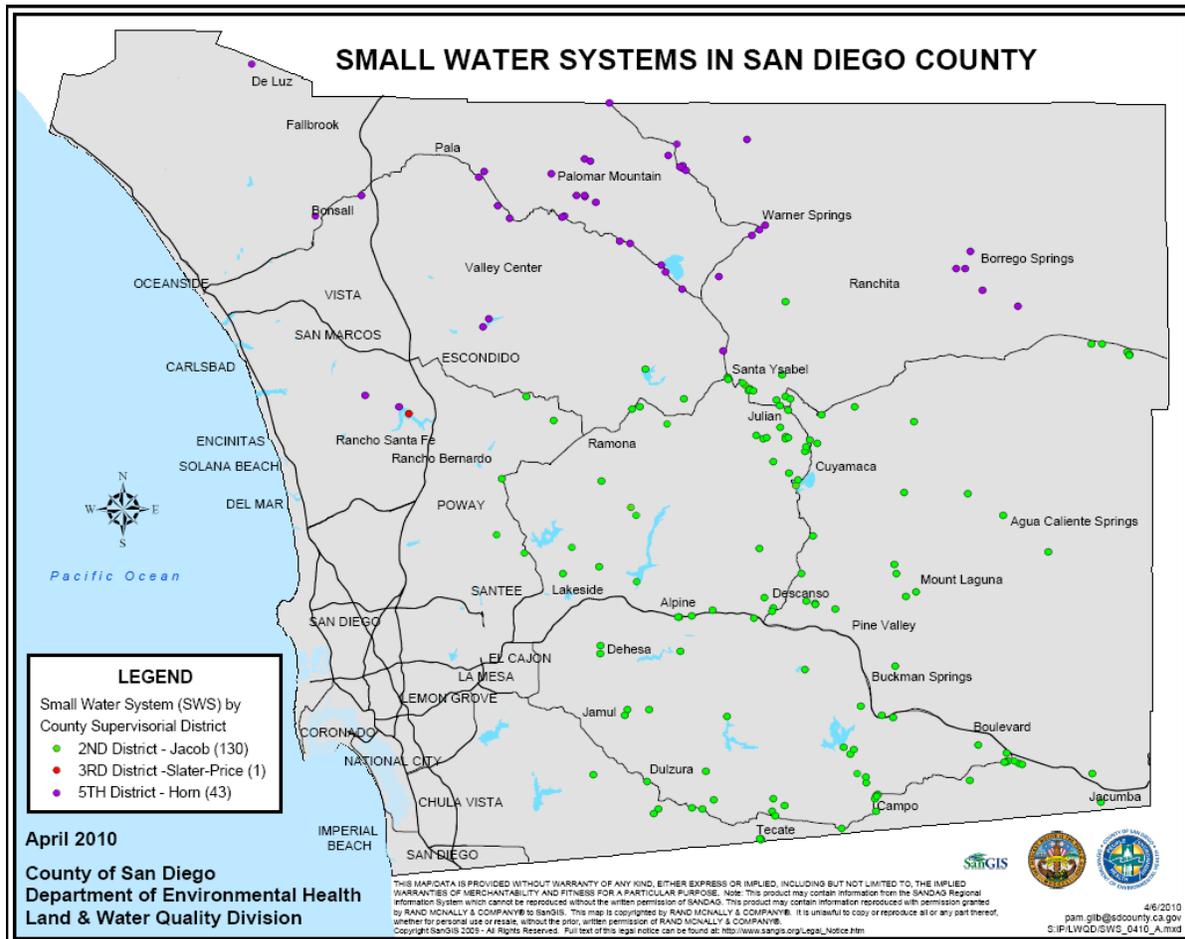
Water Sector



Primacy Agency Relationships

ATTACHMENT B

Small Public Water Systems



ATTACHMENT D

Mutual Aid Matrix

Agency	Member Agency Agreement w/ Water Authority	Cal WARN	MARS (Metropolitan Water District of Southern California)	Other
San Diego County Water Authority	Y	Y	Y	
Carlsbad Municipal Water District	Y			
Del Mar, City of	Y			
Escondido, City of	Y			
Fallbrook Public Utility District	Y			
Helix Water District	Y	Y		*
Lakeside Water District				*
Oceanside, City of	Y			
Olivenhain Municipal Water District	Y			
Otay Water District	Y			*
Padre Dam Municipal Water District	Y	Y		*
Camp Pendleton Marine Corps Base				
Poway, City of	Y			
Rainbow Municipal Water District	Y	Y		
Ramona Municipal Water District	Y	Y		
Rincon del Diablo Municipal Water District	Y	Y		
San Diego, City of	Y			
San Dieguito Water District	Y	Y		
Santa Fe Irrigation District	Y			

Sweetwater Authority for the City of National City and South Bay Irrigation District	Y	Y		*
Vallecitos Water District	Y	Y		
Valley Center Municipal Water District	Y	Y		
Vista Irrigation District	Y	Y		
Yuima Municipal Water District	Y	Y		
Current as of June 2014				
*Shared services with Padre, Helix, Otay, Sweetwater, and Lakeside				